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COVER:
DEVELOPMENT HOUSE
Cape Cod, Massachusetts; Robert Damora, Architect and Photographer.

BUILDING TYPES STUDY 307:
TWENTY HOUSES OF THE YEAR

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Contemporary in the Grand Manner. PAUL RUDOLPH, Architect. Mr. and Mrs. R. A. Liggett, Owners. Location: Tampa, Florida


Modern to Fit a Traditional Code. KRAMER & KRAMER, Architects. Residence in Teaneck, New Jersey

Casual Retirement House Gets Big Space with Folding Walls. ROBERT B. BROWNE, Architect. Mr. R. S. Barrows, Owner. Location: Marathon Shores, Key Vaca, Florida

Tract House in Bay Region Style. ROGER LEE ASSOCIATES, Architects. Residence in Berkeley, California

A Modern House Reflects Its Tudor Neighborhood. JOHN TERENCE KELLY, Architect. Dr. and Mrs. Harold McDonald, Owners. Location: Gulf Farms, Elyria, Ohio

$15,500 Buys Civility and Comfort. ELROY WEBBER ASSOCIATES, Architects. Dr. Virginia Galbraith, Owner. Location: South Hadley, Massachusetts


Curving House Designed for Sweeping View. GEORGE FRED KECK-WILLIAM KECK, Architects. Mrs. Frank E. Payne, Owner. Location: Pleasant Valley, Bucks County, Pennsylvania

Urbanity and Rusticity are Skillfully Combined. NEWTON E. GRIF-FITH, Architect and Owner. Location: Edina, Minnesota


Art and Craft Combined in Simple Structure. NORMAN F. CARVER JR., Designer. Mr. and Mrs. Donald Probasco, Owners. Location: Kalamazoo, Michigan

Builder House of Concrete Offers Budget Luxury. KUHN & DRAKE, Architects. Residence for R & S Builders. Location: South Plainfield, New Jersey

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KITCHENS: EFFICIENCY IS NOT ENOUGH

by EDWARD D. STONE

Progress can be a limiting factor and, in fact, the kitchen and the bathroom are its particular victims. It is obvious that the architect can fit three required fixtures into a bathroom which is only about 5 ft 6 in. by 8 ft. However, when this space has to serve a family of two or three or four, as it very often does, it becomes in effect a closet containing all the specialized paraphernalia that the family accumulates.

So it is with the kitchen. Actually one can have a range, a refrigerator, a sink, and some storage space in a very tiny space indeed. However, I think this approach of hygienic efficiency is really not the most satisfying nor the correct one.

Though I live in New York where one does not have the folksy approach to life, we find that, even with help in the kitchen, we still gravitate there. I have ideas on cooking and always have drinks to mix and odds and ends to do myself, which I rather enjoy. But this is a hopeless task in the tiny, modern efficient kitchen. The kitchen is a room that should be attractive.

It would be interesting to do a time study to see how many hours the housewife actually spends in the kitchen, and how many hours the children and the husband are there. I think that if we clocked the waking hours of a family we would find that a good deal more time is spent in the kitchen than in the living room. Therefore, it quite rationally seems more important that this room should be spacious enough to be comfortable. It should be well lighted and have a few attractive amenities—a Kennedy rocker, or a place for the housewife to do her accounts, and certainly a telephone. My belief that a kitchen can be a very attractive space and even have a little elegance is illustrated in the kitchen I designed for our house in New York. We have white marble flooring throughout the first floor of our house and it is carried right into the kitchen. We have glass from floor to ceiling which enables us to look out on the street; the glass is screened by a grill for privacy during the day. I must say visitors in our house really are taken aback that a kitchen can be so attractive.

I think also about a house I did for Mr. A. Conger Goodyear, who is a great art collector. Everyone was surprised at his de luxe bathroom with its marble counters (quite a new thing in 1937) and sculptures, paintings and murals. It looked, and
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still looks, wonderful. In the Celanese house kitchen we have a beautiful abstract painting by Joseph Albers, and we could very well have suspended sculptures, paintings or other decorative amenities. In my own kitchen we have trays, pitchers and other useful objects, which are also beautiful, on display. There is no practical objection to including beautiful things if they are placed carefully. Of course, I would not endorse putting an oil painting above the range!

Of course, I would not endorse putting an oil painting above the range!

The kind of kitchen you plan does depend, naturally, on the type of dwelling you are building. I am now working on my own country house. I am remodeling a house built about fifty years ago, and have arranged the kitchen with a fireplace where we can sit around the fire. Of course, we have breakfast there in the morning; ideally, there should be a place in every kitchen where one can dine informally and have breakfasts and late-night suppers.

Our country house kitchen will be a great big old-fashioned kitchen where the family can gather. It is really fine to encourage everyone to participate in the preparation of the meal and have everybody contribute his or her opinion about what should be done.

However, I think that if one is planning a large house, there should be a dining room where one can have either a few for dinner or a great many, as he elects. There are, of course, architects who open the kitchen completely to the living room and even design it as a counter right in the living room. Though I admire their ideas, from my own experience of life with a wife and children, this would not work for us. I feel strongly that one should have a separate dining room. I would not have said this twenty years ago when modern architecture was exploring the open plan so extensively, but now I would rather see a better assignment of space which would include a kitchen where a family could have informal meals, and a dining room—even if it were provided at the sacrifice of the living space. I do not see any objection to combining the dining and living space.

There is another reason why the kitchen which is simply a counter in the living room is impractical: the kitchen odors can go all through the house, and this is not pleasant.

While we are on the subject of space and planning, I think the women's magazines got us all tied up in knots and complicated the pattern of circulation within a house by demanding that one had to get from the kitchen to the front door readily without going through the living room. In other words, when one must get from the front door to the kitchen and to all the bedrooms independently of the living room, the house plan is tied up in a knot; the demand for this circulation pattern is an unnecessary refinement in the small house.

It is much more spacious and gracious to plan around a big central room.

My most recent houses have a great open space through the house, and from that great space you can get to the kitchen, to the bedrooms, and so on. In a sense, it is a revival of the inner court or atrium principle, but it is actually more like a Palladian house, where there is a great hall extending throughout the house in each direction, and where the four corners are occupied by the kitchen, bedrooms, and the dining space.

The Celanese house in New Canaan, Connecticut, illustrates clearly what I am talking about. The plan works well. From the kitchen one can walk to the front door without going through the living room, and one can also walk around to the bedrooms. It is very spacious and nice compared to the type of plan in which one comes into a little vestibule with the kitchen on one side and the bedrooms off to the other. The plan is arranged so that the kitchen opens out to a terrace which is protected from the weather. That terrace room couldn't be nicer for outdoor dining. (It is important that you can serve food and drink out-of-doors.) The dining room, which is an alcove off the living room, is directly adjacent to the kitchen and it also opens to the covered terrace room.

For the average family I think the kitchen does not need to be any larger than about 15 ft square.

Of course, the kitchen could be a little more spacious and have a fireplace and lounge area; a small but comfortable seating area. Some years ago I designed the Knoll house in Fayetteville, Arkansas, where the

The Celanese house has a kitchen with an island counter to add work space

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The kitchen in the Knoll house is a family area with a fireplace. They have a fireplace and enough space for a couple of rockers where they can sit by the fire. One cannot deny that that is a very attractive idea. It is in the good American tradition and harks back to the country farmhouses where they fed the harvest hands, the family, the household animals and everyone else in the big area of the country kitchen.

The kitchen can serve other purposes, too. I have designed houses where the kitchen functioned as a watch post: it was placed right in the middle of everything so that the housewife could look toward every point of the compass and see if children were up to any destructive activity. It is an important consideration in a family with young children that they can be supervised at the same time the mother is doing her housework. That is probably the origin of the so-called all-purpose room, where children can plan and store their toys, and the mother can watch and supervise them. It works out very nicely.

Generally, I think, a square kitchen rather than a galley type is most successful. The galley type of kitchen immediately precludes the spacious kitchen, and most of my recent houses have kitchens which are U-shaped in plan with an island. This provides a generous amount of counter space, which is always at a premium. The island counter serves excellently as a separation or divider between the dining portion and the work portion of the kitchen. The island counter can be occupied either by the sink or by the range. I would offer the U-shaped kitchen with an island as one of our ideal kitchens, and one which has another atmosphere altogether from that of the family-room kitchen.

We should also plan our kitchens' functions more thoughtfully. For example, combining the laundry room's functions with the kitchen's functions is not the most attractive nor the most useful situation at best. This is a housekeeping problem that perhaps I should not express a view on, but I think the laundry is better in a separate space which is adjacent to the kitchen. Or, depending on the size of the house, I have even put laundry rooms on the second floor. This arrangement works well as most laundry originates on the second floor and thus does not have to be carried downstairs and then back up.

A strong generous light is wonderful in the kitchen. A luminous ceiling would be absolutely fatal in some rooms of the house—such as the living room or the dining room, where one wants a softer atmosphere which must be provided by light from various low sources. It would, of course, be fatal in the bedroom where one only wants lights at the bed and, perhaps, at a desk. But I think of kitchens and bathrooms in a different way. All of the bathrooms we do now have luminous ceilings. The light is wonderful, and women especially love it because they can see so well to make-up their faces. The wattage can be increased to a very high level, and the room can still be made attractive in appearance with some handsome design in the arrangement of the ceiling panels. I think this could apply with equal force to a kitchen, as in the house for Fred Jones. Naturally, if we were designing the living room-kitchen with a fireplace and lounging area around it, we would want to modify the lighting design. In general, however, strong, general light is desirable in the kitchen.

In the Celanese house, the whole ceiling was, in effect, a lighting fixture. We designed a square room with a conical ceiling and a skylight right at the apex, and it gave wonderful general light.

And then, too, in the Celanese house we have an entire wall of windows rather than wall cabinets under a high or small window. We put the storage cabinets on the other three walls, and allow light to enter through the sliding glass panels. These floor-to-ceiling panels also open to the terrace room, providing easy access to the out-of-doors, an important feature in modern life with so much outdoor entertaining.
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Just as the cabinetwork in any part of the house becomes a very important element in its furnishings, so it is with the kitchen. It is susceptible to the same attention that the architect might give to cabinetwork in a library or elsewhere. My personal predilection at the moment is for fine, elegantly finished wooden or metal cabinets, though earlier in my career I wanted all natural finished, wooden cabinets.

It is extremely important to have nice looking equipment which is appropriate to the house. If one is doing a very informal house of natural wood interiors and open-roof framing and brick floors, then anything except wooden cabinets would be wrong. On the other hand, if one is doing a more sophisticated house, like my own town house in New York, where the floors are marble and the walls are prepared for modern paintings, then either baked enamel or metal cabinets are fine and perfectly fitting. Cabinets with a wood finish which are detailed like modern cabinetwork are also very nice.

The kitchen should be planned so that it looks like an integral part of the house, not like a laboratory or a secondary work area. Speaking of materials, we have found in our own kitchen that there is nothing more elegant than marble as a flooring material. We have found it extremely practical. Travertine could be used or I see no reason why one could not have wood parquetry floors in the kitchen either. I think these materials are infinitely more attractive, and marble and travertine are certainly more permanent, than the composition floors. I believe wood or marble are perfectly easy to maintain, and we have learned that marble flooring presents no problem.

As a result of streamlining, which was a big notion along in the Twenties, architects for a while were neglecting certain functional aspects of kitchen design. For instance, in the effort to streamline kitchen equipment, ovens and even refrigerators were placed under counters where they were difficult to reach and cumbersome to use.

I remember that back in the Thirties I was one of several architects selected from all over the country to judge a cookstove competition. The competition was arranged by one of the professional journals, and we architects assembled to select the best range. We had been briefed beforehand by our distaff consultants who advised us to get the oven out from under the counter. Among the entries there, we saw for the first time the idea of the cookstove being separated into components—the oven and the range. Now, a couple of decades later, this is a standard design and one which is mass produced. It is no longer unusual to see a separate oven built into the wall at the proper height and the separate cooking elements set on a counter where they belong.

I have accepted the idea that all the sinks, refrigerators, dishwashing and laundry equipment should be built-in. My esthetic requirements in this matter make me accept the idea of built-in equipment as opposed to the old-fashioned wood burning range out in the open and the icebox on the back porch. I like the appearance of the built-in equipment, and I assume that it can be designed so that its moving parts are readily accessible. In my own kitchen, we have a wall-hung refrigerator which we can easily look into. It's marvelous.

The idea of movable equipment is an interesting one. Because the refrigerator is a bulky object and the sink is immobile, I don't see really too much chance of moving these things around. Of course, one could have a grill that could plug in elsewhere, and a heating element that would keep vegetable, casseroles and chafing dishes warm. This would really facilitate our outdoor living habits since we could then do indoor-outdoor mobile cooking.

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The bathroom is rapidly becoming the most favored retreat in the American home. It is getting more focus and attention as an important room in the house than it has ever been given before. Up until now the home builder considered the bathroom a well coordinated unit if the plumbing fixtures were in matching colors. On occasion he extended himself and added contrasting wall and floor colors. The results were usually dreary combinations, such as dubonnet-colored fixtures and washed out yellow beige walls and floors. The prospective home owner, in past days, was easily satisfied if he found the expected sink, toilet, tub and shower. Floor space was usually at a minimum and little thought was given to lighting. From a builder's viewpoint, in those years, the kitchen was his big selling point. Times have changed.

Houses Now Have More, Bigger Baths

Since World War II the trend toward relaxation and leisure has grown. The general average income is higher, and families have more money to invest in comforts for themselves. As a result the bathroom has become a more luxuriously furnished room. The increased income has given people the incentive and wherewithal to indulge themselves. According to a recent National Association of Home Builders survey, the number of baths in new homes has increased dramatically.

Marcel Breuer, A.I.A., keeps this bathroom functional; making use of all tile walls, floors, counters, and plastic chair, for easy maintenance. He saves the lush feeling for a private patio, that would be any interior designer's delight to furnish with the new aluminum lounge chairs and rockers.

When architect and interior designer work together from the beginning, it is to the client's advantage. In this ideal situation it is possible to have an interior that is designed and coordinated with the architectural concept of the house. In the photo at right George Nemeny, A.I.A., designed the bathroom and selected all materials used. Evelyn Jablow, A.I.D., color coordinated the tile, selected the marble for the counter and specified a blue lacquer finish on the cabinets.

continued on page 15
Travertine Beauty

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cally. In the New York area alone, the percentage of homes being built with one- and one-half baths has doubled in one year. The number of new homes with two complete bathrooms is also increasing. It is evident to architects and builders that the bathroom is coming into its own. This hitherto practical and utilitarian room is now getting full attention from manufacturers and interior designers alike.

Teamwork aids in advances

Architects and interior designers are working together, and in many instances with builders, to make the bathroom a useful, relaxing, and attractive place in the house. Good lighting for shaving and make-up areas, flat surfaces for setting down bottles and brushes, acoustic ceilings, quiet fixtures, good ventilation, air conditioning, moisture-proof and waterproof surfaces are all part of the new good planning. While the architect works on new designs and space planning, the interior designer has begun to make the bathroom pleasing to the eye. Color, towels as pretty as table linen, furniture that could be used in any part of the house, elegant lighting fixtures, beautiful wall coverings began to make their appearance in this long neglected room. At the same time builders are able to carry out these designed bathrooms by using good-

The skilled interior designer knows that a long, narrow area must be handled with special materials to create a feeling of greater spaciousness. Thus, using interesting glass for a wall and door can effectively compartment the toilet area, giving privacy but at the same time keeping an open feeling. Incandescent bulbs done in the “old-theatre-dressing table” style make for simple but dramatic lighting. Cotton wall-to-wall carpet lends warmth and color repeated in towels and flowers.
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"Home buying prospects immediately recognize the extra value in these FILON features," states Mr. Ince, "and we merchandise them with great success. We have tested FILON in our laboratory and found that it not only meets the claims made for it, but surpasses them. Superior quality and application versatility...this combination continually leads us to new FILON installations—new sales features."

The FILON covered patios, optional features on the homes, are sold from $600 to $1200 depending on the style and size. The patio feature is so popular that over two-thirds of the buyers purchase and conveniently finance it with the home at a reasonable average profit to the builder.

John F. Long salesmen pull no punches when dramatizing the shatterproof safety of FILON shower enclosures. At left, Research Director Charles Ince demonstrates the impact test conducted for each home buying prospect.

When buying a home, the right kitchen is a bright kitchen for the real decision-maker in the family. Especially for her, this FILON luminous ceiling transmits softly diffused illumination, eliminates shadows and dark corners—an irresistible effect with an appealing look of spaciousness.

BUILDING WITH FILON: Get the facts about FILON for new construction and remodeling, the complete product story. Write: FILON, Dept. 41, 333 N. Van Ness Ave., Hawthorne, California.
looking, ready-made storage cabinets with built-in hampers in decorator finishes and colors, shower enclosures that are standard, tubs in rectangular and square shapes, and medicine cabinets with sliding doors.

New Fixtures and Products Abound

Almost every room in the house has gone through a variety of styles and periods. At each innovation or trend the manufacturers have risen to the occasion and flooded the market with new floor coverings, wall coverings, lamps, lighting fixtures, furniture and accessories.

Elegant Materials Add New Look

Today the bathroom is "it." The long list of materials and devices which are used to make this old room have a new sumptuous look include marble, terrazzo, mosaics, glass mosaic, stained glass windows, carpeting, fine cabinetwork, paintings, sculpture, music, garden areas, gold and crystal fixtures, sun lamps, massage tables, sunken tubs, and modern or antique furniture and appointments.

Compartmented Baths Add Usefulness

Where space will allow, the toilet, tub, lavatory, and even the shower are all compartmented. The long counter with two and even three sinks has become popular. Many bathrooms have connecting dressing continued from page 15

This is a combination bedroom-bathroom, done in one, large open area. Suspended closets act as room dividers, and Evelyn Jablow, A.I.D., designed these to open on both sides of the room. The bathroom can also be used as a full dressing room

Elegant is the word for this bath-boudoir designed by Tim and Agnes Gray, A.I.D. White marble is used on the floors, tub, vanity and sink. Directoire moldings, silk draperies, a chaise, a writing table and aubusson rug, transform a small dressing area into a beautiful sitting room

For more data, circle 11 on Inquiry Card
Just add Flintkote

and you've got it made.

Make sure your houses are solid Flintkote and you're sure to make a solid hit with your clients. Quality is built into every Flintkote product. Client appeal is built in, too. One example: fabulous Designer's Solids—the most advanced color concept in floor tile. Another: brilliant new ceiling tile designs selected by a panel of women! It's the same story all down the line. And nobody makes a more complete, thoroughly advanced line of building products. But nobody! For roofing, siding, walls, floors, ceilings, chimneys—virtually everything but the front door—depend on Flintkote, America's broadest line of building products.

THE FLINTKOTE COMPANY, 30 ROCKEFELLER PLAZA, NEW YORK 20, NEW YORK

For more data, circle 12 on Inquiry Card
Give your kitchen **That Frigidaire Touch!**

NEW! The beautiful **Compact 30"** Ranges!

Don't plan your new kitchens until you've seen them. New combination built-in electric ranges with a spacious 23" wide oven. Easiest ever to build in—no critical dimensions, no complicated cuts. Fits most any size base cabinet or fits between cabinets (with a filler backsplash and filler or 6" drawer below). Two models—one with electric clock and Cook-Master oven control. Choice of colors plus White or Brushed Chrome.

The dazzling **Flair** Wall Oven!

Looks like a picture in your kitchen... cooks like the electrical marvel it is. Counter-balanced see-through door glides up to permit easy access to oven interior for stretch-free cooking and easiest up-close cleaning. Two models fit standard 33-inch cabinets.

Choice of colors for most appliances: Mayfair Pink, Sunny Yellow, Turquoise, Aztec Copper, Snowcrest White, Brushed Chrome.

---

**Make your choice... new 1962 FRIGIDAIRE APPLIANCES**

* OVEN-COOKING WITH A FLAIR
* FROST-PROOF FOODKEEPING
* ONCE-A-DAY DISHWASHING
* SOLID COMFORT AIR CONDITIONING
* 15-YEAR LIFE TEST CLOTHES WASHING
* FLOWING-HEAT CLOTHES DRYING

If they own any Frigidaire Appliance, they KNOW why they'll love the new 1962 models from Frigidaire!

Millions and millions of families now own Frigidaire Appliances. They know of the outstanding quality, features, and performance. They know, too, that factory-trained dealer service is available everywhere, if they should ever need it. Appeal to these pre-sold millions who look for Frigidaire Appliances in the homes they want! You'll find sizes and dimensions of the whole Frigidaire Family of Dependable Appliances on these pages.

**Drop-Leaf and French Door Wall Ovens**

Fit standard 24-inch cabinets. 8 double and single oven models, one with Pull 'N Clean lower oven and three with glass doors. All available in 4 colors, White and Brushed Chrome.

Custom Imperial RBE-99

Imperial RBE-90

---

<table>
<thead>
<tr>
<th>A.</th>
<th>Model</th>
<th>Exterior Dimensions—Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Height</td>
<td>Width</td>
</tr>
<tr>
<td>A. Super RBE-93, RBE-94A</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>A. Deluxe RBE-94*</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>A. Imperial RBE-90, RBE-G95</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>B. Custom Imperial RBE-99*</td>
<td>44 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>C. Flair Wall Oven (Custom Imperial RBSB-335 and Deluxe RBSB-330)</td>
<td>27 1/2</td>
<td>30 1/4</td>
</tr>
<tr>
<td>D. Compact 30 Range RBE-530, RBE-533</td>
<td>25 1/4</td>
<td>30 1/4</td>
</tr>
</tbody>
</table>

*Specifications also apply to glass window door models RBE-G94 and RBE-G99

---

**Model**

**Installation Opening—Inches**

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Super RBE-93, RBE-94A</td>
<td>28 1/4</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>E. Deluxe RBE-94*</td>
<td>28 1/4</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>E. Imperial RBE-90, RBE-G95</td>
<td>28 1/4</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>F. Custom Imperial RBE-99*</td>
<td>44 1/4</td>
<td>23 1/4</td>
<td>23 1/4</td>
</tr>
<tr>
<td>G. Flair Wall Oven (Custom Imperial RBSB-335 and Deluxe RBSB-330)</td>
<td>26</td>
<td>30 1/4</td>
<td>18 1/4</td>
</tr>
<tr>
<td>H. Compact 30 Range RBE-530, RBE-533</td>
<td>24 1/4</td>
<td>30</td>
<td>20 1/4</td>
</tr>
</tbody>
</table>

*Specifications also apply to glass window door models RBE-G94 and RBE-G99

| For optional Rotisserie, add $4 N to depth. |
For glamorous cooking in any kitchen
choose the Frigidaire Flair Range!

Flair is the most beautiful thing to happen to kitchens in years. This free-standing electric range moves right into opening for a free-standing range, giving your kitchen that "built-in" look. Cooks at your "comfort level" and features See-Level Ovens and Controls, exclusive See-In Glide-Up Oven Doors, Roll-To-You Cooking Top, Cook-Master Automatic Oven Control. Custom Imperial models offer every advanced Frigidaire cooking feature, including Spatter-Free Broiler Grill, Heat-Minder Surface Unit, Speed-Heat Surface Unit, Automatic Meat Tender. Four models to choose from—both 30 and 40-inch sizes. Available with side panels in Mayfair Pink, Sunny Yellow, Aztec Copper, Turquoise or White. Base cabinet, exhaust hood and rotisserie optional.

If you prefer a conventional free-standing range... choose a Frigidaire Automatic Electric Range, available in 30 and 40-inch sizes. All Frigidaire cooking features available. Some models have the revolutionary Pull 'N Clean Oven that lets you clean without slaving! Four colors on some models.

Frigidaire Cooking Tops match Wall Oven beauty

BUILT-IN COOKING TOPS match Wall Ovens perfectly—in styling, performance and convenience. Models for every budget in colors and Brushed Chrome. Four models include combinations of features such as 6" and 8" units; Speed-Heat Units; Heat-Minder Units; Infinite Heat Switches; Remote Controls; shallow depth for maximum drawer space and easy installation.

Easy-cleaning Electric Ranges slide into place

PULL 'N CLEAN OVENS (on 7 models) glide out at a finger's touch for cleaning while standing. Speed Heat and Heat-Minder Units on many models make cooking easier, too. Infinite Heat Switches allow choice of the exact heat desired. Cook-Master Control lets you bake or roast completely automatically. Single or double oven models; three sizes to choose from. White or colors.
Breakfast dishes! Luncheon dishes! Dinner dishes!

Many families can do them all at once with a FRIGIDAIRE DISHWASHER

End garbage-handling forever! FRIGIDAIRE DISPOSERS
Ideal companion to your Frigidaire Dishwasher! 30% to 50% faster. Quieter, too—thanks to insulated jacket (FDZ-1 shown), rubber-cushioned connections. Fits sinks with 3½" drain opening. Two models.

For thorough cleaning, fast drying—FRIGIDAIRE WASHERS, DRYERS

15-YEAR LIFETIME TEST of Frigidaire Washers. Right now, 1962 Frigidaire Washers are being run continuously in tests simulating 15 years of operation. Some of these washers will require repair—others will not. But as a result of these tests, improvements are continually being made . . . your assurance that Frigidaire is determined to "make it better"—to build the most dependable Automatic Washer. Patented 3-Ring Agitator bathes deep dirt out without beating—plus many other features. Include a perfectly matched Frigidaire Dryer with Flowing Heat. No-Vent models available with exclusive Filtrol to eliminate plumbing and venting expense. Most models available in color.

DISHWASHER DIMENSIONS—Inches

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Width</th>
<th>Depth Over Hardware</th>
<th>Depth Door Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deluxe Under-counter OW-DUB</td>
<td>34½”</td>
<td>23½”</td>
<td>25½”</td>
<td>45½”</td>
</tr>
<tr>
<td>Custom Imperial Under-counter DW-1UB</td>
<td>34½”</td>
<td>23½”</td>
<td>25½”</td>
<td>45½”</td>
</tr>
</tbody>
</table>

Architectural Record Houses of 1962 25
Now offer guaranteed* no defrosting with Frigidaire
Frost-Proof
REFRIGERATORS,
FREEZERS

Yes, it's guaranteed*. Frost never forms in the freezer or refrigerator sections of Frost-Proof Refrigerator-Freezers... never forms in Frost-Proof Upright Freezers. As shown at left, some refrigerators and freezers match perfectly as a recessed, built-in pair. Many models available in four colors plus white. Models to suit every family size and budget.

FRIGIDAIRE REFRIGERATORS
Conventional Refrigerators—D-14-62, D-12-62, DA-12-62, D-10-62

FRIGIDAIRE UPRIGHT FOOD FREEZERS
• Frost-Proof models—UFPI-17-62, UFPI-12-62, UFPI-21-62, UFPI-15-62
• Full-width door shelves—all models
• Sliding-basket drawers—UFPI-17-62, UFPI-21-62, UFPI-15-62
• Choice of 4 colors—UFPI-17-62
• Ask about the Food Spoilage Warranty
*Frigidaire Frost-Proof Guarantee. Without any cost to owner or user, at any time within one year from date of delivery, Frigidaire will make all necessary adjustments to the Frost-Proof Refrigerator-Freezer or Food Freezer to prevent accumulation of frost.

And for cool, dry air in every room
SOLID COMFORT Frigidaire Room Air Conditioners

Solid Comfort means full capacity, fast cooling, real dehumidifying, quiet operation... and that's what you enjoy with Frigidaire Room Air Conditioners. Eleven window-mount models plus others for Thru-the-Wall installation—some that both cool and heat. Do-it-yourself installation; removable, washable filters.

For more information, see Frigidaire Appliances at your Frigidaire Built-In or Appliance Dealer, or write FRIGIDAIRE DIVISION, CINC., Dayton, Ohio.
rooms fitted out with specially designed storage space. In the development of the bathroom-dressing room area, the interior designer finds more and more work to do. The designing, styling and decorating he does throughout the client's house now includes the bathing-dressing space. The interior designer is being called upon to use his skill to change the once prosaic functions of the bathroom into a room where the client can relax and restore himself in comfort and style.

Get Expert Advice Early in Planning

The role of the professional interior designer is an increasingly important one today in the initial home planning stage. The professional interior designer is called in with growing frequency by architects and builders to coordinate the interiors in the preliminary planning of the house. In a country where there is the largest market of all kinds of building and hard goods, the variety of products and styles makes selection extremely difficult for the consumer. In the home furnishing field the trained interior designer knows how to lay out interior space and place furniture to the best advantage, has a knowledge of today's trends, is aware of new products on the market, is a color expert, and has the talent and ability to create a well-designed and integrated interior.

John Wisner, A.I.D., has brought an oriental influence into a bathroom which he has called a "restful living area." The use of wood paneling, shoji screens and a garden area behind the tub make for a serene and unusual bathroom. A tile floor and specially designed tub with sitting ledges illustrate how the most practical of materials can be combined with stylish furnishings to make a bathroom a place to relax in.

Melanie Kahane, A.I.D., has kept the handsome oval tub in the center of the room as a focal point. She has designed built-in closets on one wall, and has used walnut for the storage cabinets under the marble sink and counter top. An antique prayer chair adds an individual note.
When you're selling prospects up the quality ladder, the weathertight features of RoWay Doors help you make it to the top. Exclusive Taper-Tite Track and Seal-A-Matic Hinges effectively seal out snow, rain and dust. All units are fitted with galvanized, rust-resisting hardware for complete weather protection. Buyers also respond instantly to the quick, effortless lifting action made possible by "Power-Metered" springs. Every door is counterbalanced with a custom-wound spring—an advantage gained through RoWay's single-plant fabrication of all components. All RoWay Doors can be fitted with motor operators. To help you beat deadlines, hardware and door sections are shipped from the factory at the same time. For your next sale, let RoWay features help you open the door to bigger sales in the quality home market.
YEAR ROUND AIR CONDITIONING: A NEW WAY TO COMPUTE HEAT LOADS

by JAMES D. NOLAN, National Warm Air Heating and Air Conditioning Association

If significant dates in the progress of the home building industry can be earmarked, certainly the past few months can be pinpointed as the period when indoor comfort in the United States came of age.

The heating and cooling industry has been moving swiftly toward the ultimate day when every one of the 58-million-plus dwellings would have year-round temperature, humidity, air movement and cleaning, humidification and de-humidification as an essential component properly designed, for the well being of the home dweller.

While this absolute achievement will not be part of our life until many years to come, several significant happenings during the last few months signal that a change is happening in the air-ducted heating and cooling industry. Changes that are suddenly exciting architects and builders to the merchandising possibilities of providing indoor living conditions that will bring true comfort, not just heat or warmth to prevent icicles from clinging to the people that dwell within.

Basically the design of a heating or cooling system is determined on how many Btu's are needed in each room to do the job. From that point the duct work must be designed to move the air, and the equipment must be sized properly.

For years there have been a multitude of methods to calculate and design a heating system. And for years architects, builders, and heating and cooling contractors have been plagued by the wide variation of end results if you apply the different methods to the same house.

The industry has not been unaware of this, but sometimes it takes a nudge to bring conformity or unification out of honest difference of engineering opinions.

The Federal Housing Administration furnished the push. They said, in effect, that the heating and cooling industry should get together and bring about a "universal" method for calculating heat loss. Thousands of hours of engineering time went into the project with the National Warm Air Heating & Air Conditioning Association working together with The Institute of Boiler & Radiator Manufacturers and the Air Conditioning & Refrigeration Institute.

Publication by National Warm Air of the new "universal" method has perhaps marked the moment of change. Now there is no longer a heating industry alone, instead it has become an air conditioning industry whose concern is total year-round comfort.

This claim has existed for years,
Accent on Record Houses  RIMCO Windows
THIS RECORD HOUSE is another example of the compatibility of RIMCO wood windows with distinctive architecture. Only windows of wood could complement the integration of various elements and materials into an exciting design that merges with natural terrain. RIMCO wood windows are at home in any surrounding. Fenestration possibilities are as wide and varied as your imagination when you create with RIMCO. Select from a complete range of styles and sizes. You're assured of achieving the required aesthetic and functional characteristics when you specify wood windows by RIMCO.
Heat Loads 2: by James D. Nolan

Table 2

<table>
<thead>
<tr>
<th>Table 2</th>
<th>HEAT TRANSFER MULTIPLIERS (Heating)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Design Temperature Difference, Degrees</td>
</tr>
<tr>
<td>WALLS</td>
<td></td>
</tr>
<tr>
<td>No. 1 Frame and veneer-on-frame</td>
<td>(a) No insulation</td>
</tr>
<tr>
<td></td>
<td>(b) Less than 1-in. insulation, or one reflective air space</td>
</tr>
<tr>
<td></td>
<td>(c) 1-in. or more, but less than 2-in. foam, or two reflective air spaces</td>
</tr>
<tr>
<td></td>
<td>(d) 2-in. or 3-in. insulation inclusive, or three reflective air spaces</td>
</tr>
<tr>
<td></td>
<td>(e) More than 3-in. insulation</td>
</tr>
<tr>
<td>No. 2 Masonry walls, 6-in., 8-in., or 12-in. block or brick</td>
<td>(a) Plastered or plain</td>
</tr>
<tr>
<td></td>
<td>(b) Framed, no insulation</td>
</tr>
<tr>
<td></td>
<td>(c) Framed, with less than 1-in. insulation, or one reflective air space</td>
</tr>
<tr>
<td></td>
<td>(d) Framed, with 1-in. to 2.5-in. insulation inclusive, or two reflective air spaces</td>
</tr>
<tr>
<td></td>
<td>(e) Framed, with more than 3-in. insulation, or three reflective air spaces</td>
</tr>
<tr>
<td></td>
<td>(f) Ceiling or roof, 1-in. or less perlite insulation</td>
</tr>
<tr>
<td></td>
<td>(g) Same as (f), for crawl-space planking</td>
</tr>
<tr>
<td></td>
<td>(h) Below grade</td>
</tr>
<tr>
<td>No. 3 Partitions</td>
<td>(a) Frame, finished one side only, no insulation</td>
</tr>
<tr>
<td></td>
<td>(b) Frame, finished both sides, no insulation</td>
</tr>
<tr>
<td></td>
<td>(c) Frame, finished both sides, more than 1-in. insulation, or two reflective air spaces</td>
</tr>
<tr>
<td></td>
<td>(d) Masonry, plastered one side, no insulation</td>
</tr>
<tr>
<td>DOORS</td>
<td>No. 4 Wood</td>
</tr>
<tr>
<td></td>
<td>No. 5 Ceilings under naturally ventilated attic or ventilated flat ceiling</td>
</tr>
<tr>
<td></td>
<td>(a) Uninsulated (unvented attic)</td>
</tr>
<tr>
<td></td>
<td>(b) Less than 1-in. insulation, or one reflective air space</td>
</tr>
<tr>
<td></td>
<td>(c) 1-in. or more, but less than 4-in. insulation, or two reflective air spaces</td>
</tr>
</tbody>
</table>

continued from page 35

forms for each operation were necessary.

An added benefit of the new Manual "J," besides space and time savings resulting from the new presentation method, is decision making—always an important consideration. Now the loads can be determined quicker and easier.

Construction details are described in general, recognizable terms, instead of laborious details which have been in the past time-consuming. Yet all of the simplification has been accomplished without affecting the overall accuracy so essential to calculating heating and cooling design.

Broadened information on heat transmission through glass, more accurate and easier to use, is also found in Manual "J." Glass transfer tables are presented in a more lucid manner and represent the first time this information has been made readily available to builders, architects, and air conditioning contractors as well as engineers.

continued on page 43

RAYLON

Aluminum and Fiberglass Garage Doors

by Raynor

*Lightness...for special Raylon handling ease...weighs 1/3 the weight of a wood door.

*Lightness...created by translucent Raylon fiberglass panels for brighter, "natural light" garage interiors.

*Lightness...of Raylon-type construction creates smart blending lines to match any architectural design.

Choice of three colors—Dover White, Desert Tan and Nile Green. Maintenance-free—no painting—wash with garden hose in seconds. Available in one-or two-car sizes to fit any standard opening.

RAYLON MFG. CO. Dixon, Illinois • Hammonton, New Jersey

For more data, circle 19 on Inquiry Card
The Princess phone adds to the appeal of this indoor-outdoor bedroom. For help in telephone-planning your homes, call your local Bell Telephone Business Office. See Sweet's Light Construction File, 11c/Be, for other residential telephone installation ideas.

**PLAN** for enough telephones and you make homes more livable, more salable. Built-in outlets with wiring concealed keep telephone service flexible and protect the beauty of home interiors. **Bell Telephone System**

For more data, circle 20 on Inquiry Card
designed to be built in....

HALL-MACK®

BATHROOM ACCESSORIES

RECESSED UNITS

For that extra touch of delightful luxury and comfort in your bathroom, there's nothing to equal the classic styling of Hall-Mack built-in accessories.

Their quiet dignity blends harmoniously with any decor... saves precious space... provides extra convenience for every member of your family.

The traditional fine quality of Hall-Mack accessories brings lifetime beauty to your bathroom... combines discriminating concealment with full utility.

Accessories make the bath, so to be sure to specify Hall-Mack when you build or remodel.

HALL-MACK COMPANY
division of Textron Inc.
1380 W. Washington Blvd.,
Los Angeles 7, Calif.

Please send your free color booklet on bathroom planning!

AR-562
Name
Address
City Zone State

Sold by leading plumbing, tile and hardware dealers everywhere

For more data, circle 21 on Inquiry Card

1 For more data, circle 22 on Inquiry Card
THIS IS CHARTER PECAN

...an exciting new Weldwood® paneling. A tawny, gold-and-brown kind of wood, rich in burls and figures, Charter® Pecan is ideal for a wall you make the center of interest. It lights up a room with an informal atmosphere of luxury. It's only one of 70 different types of Weldwood paneling you can choose from to establish the character and mood you want in a room. Make your choice among specially selected veneers of such woods as teak, rosewood, butternut—and have Weldwood Algoma panels made to your specifications. Or pick panels from stock, including Charter Pecan. For the complete story, send for full-color illustrated booklets, “Weldwood Architectural Grade Paneling” and “Weldwood Prefinished Paneling For Fine Interiors.” Address: United States Plywood, Dept. ARR 5-62, 55 West 44th Street, New York 36, N. Y.

WELDWOOD REAL WOOD PANELING

Products of United States Plywood
SKYDOME® ACRYLIC SKYLIGHTS
BRIGHTEN TODAY'S BEST-DESIGNED HOMES*

More and more architects are including unique skylighting applications in advanced home design. With Skydome acrylic skylights, you can bring in soft, evenly diffused daylight to permit fuller use of such interior areas as kitchens, hallways and inside bathrooms. Skydome daylighting permits more complete use of living space, eliminates dark corners, provides a bright, open atmosphere in work areas. And the low, graceful Skydome silhouette provides an interesting design element. It blends with any type of house design, can be installed on any type of roof. Made of shatterproof, weatherable acrylic plastic, Skydome units are guaranteed watertight... permanently. They are available in many standard and custom shapes, sizes and densities enabling the architect to control light diffusion and heat gain. For details, contact your Skydome representative listed at the right.

BUILDING PRODUCTS DIVISION  CYANAMID  5 BAY STATE ROAD, CAMBRIDGE 38, MASS.

*5 RECORD HOUSES IN 1962 FEATURE SKYDOME DAYLIGHTING. Five award-winning architects designed Skydome acrylic skylights into their Record Houses — selected by a panel of architectural editors as "the finest achievements by architects in the field of house design."
Heat Loads 3: by James D. Nolan
continued from page 38

for Table 1, see pages 46, 148, 151
for Table 2, see pages 38, 46, 148, 151

PROCEDURE FOR DETERMINING BtuH HEAT LOSS FROM ROOMS

A. Determine outside design temperature from Table 1.
B. Select inside design temperature for rooms to be heated.
C. The design temperature difference is the difference in temperature between inside and outside at design conditions. If the outside temperature is above 0°F, the design temperature difference is equal to indoor design temperature minus outside design temperature.
D. From Table 2 locate construction of exposed walls, windows, doors, and cold type of exposure.
E. Obtain area of exposed walls, including cold partitions, cold ceilings, and cold floors.
F. Obtain areas of windows and doors. Enter on worksheet for each room.
G. Obtain areas of windows and doors. Enter on worksheet for each room.
H. Subtract areas of windows and doors from gross exposed wall area for each room. This is the net exposed wall area. Enter on worksheet.
I. Obtain the area of cold ceilings and cold floors exposed to outside temperature or to cold spaces.
J. From Table 2, locate construction of windows, doors, and other cracks. Enter construction number and HTM in appropriate column of worksheet.
K. Find the total length, in feet, of the crackage of the windows and outside doors for each room. Obtain the linear feet of crackage for all types of windows.
L. The design heat loss through each window, cold ceiling and cold floor equals its area times the HTM for the construction. The infiltration heat loss around each window and door equals its length of crack times the HTM for the construction.
M. Obtain total heat loss for each room by adding heat losses for walls, windows, cold partitions, cold ceilings, cold floors and infiltration. Repeat this procedure for each room including the basement.
N. Obtain total heat loss for the entire house by adding the heat losses of the individual rooms in the structure. This value is later used in the selection of the furnace size.
Designed by Paul Hayden Kirk

An unusual combination of stacked Andersen Beauty-Line Windows was selected by Architect Paul Hayden Kirk, F.A.I.A., for this Bellevue, Washington home. Finished to harmonize with cedar panels, they contribute to an over-all exterior design that emphasizes delicacy, vertical lines and interesting texture.

Andersen Windows offer you maximum design flexibility for any light construction project. There are 7 kinds of windows, 30 different types, 685 cataloged sizes, thousands of combinations.

With Andersen Windows you get all the natural insulating qualities of wood, plus weathertightness that is 5 times industry standards. And the wood in all Andersen Windows is Penta-treated for lasting protection against termites and decay.

Andersen Windows

America's most wanted windows
ANDERSEN CORPORATION • BAYPORT, MINNESOTA

For more data, circle 24 on Inquiry Card
FOR THIS "RECORD HOUSE"

**PLAN:** Forty feet square. Only fixed members are the four supporting columns allowing maximum design flexibility.

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The home that states a new tradition in wood. Photo courtesy of Living for Young Homemakers Basic Materials, Research and Design Program.
In-Sink-Erator gave birth to the idea of garbage-free living in 1927!

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Name
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City Zone State

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ARCHITECTURAL RECORD's seventh annual Awards Of Excellence For House Design are proudly presented to the twenty houses in this issue. As before, they were selected with the widest range of design, cost, geography and structure. To point up increasing evidence of better design in tract houses, five of them are included, and this issue is going to 20,000 builders to help foster a trend that can only be of benefit to everyone, as Mr. Lethbridge states below. Reprints will again be available in bookstores. A new feature is the Record Houses Reader Service Department for added product information (see p. 177). HERBERT L. SMITH JR.

"It is still possible, as these pages testify, for a prospective home owner to find a piece of land that suits his fancy, to retain an architect in whose ability he has confidence, and under whose guidance a builder-craftsman may construct his house with great skill and care. It is still a process of dedication, design and construction that will repay our careful study, and is a matter of social as well as artistic significance; for it must be conceded that the influence of the relatively few outstandingly good individual homes that are built each year is far out of proportion to their numbers. This small percentage of architect designed homes has traditionally acted as a catalyst in the process of changing standards of architectural taste and construction science, and even today there are more advances and new departures in construction techniques, as well as in design, made by these few rugged individualists than are developed by the combined resources of the great homebuilding industry as a whole • But most houses built in any year are built by the merchant builders, whose collective efforts make up the finished products of the homebuilding industry. As is the case with the products of many other industries, there is bound to be a wide range of quality in design and construction—in this instance far too little that is very good, surprisingly little that is totally bad, and far too much that is merely mediocre in design, if not in construction. We can ill afford to be unconcerned about an inadequate level of design in housing for we cannot easily ignore it, nor can we disregard its influence upon us all • We must all expect and demand—consumers, architects and builders alike—a higher level of beauty as well as utility in our communities of houses. The measure of our success in residential planning will be how well we can develop and use a greater degree of industrialization of production and of standardization of well-designed housing units, without sacrificing a sensitive and painstaking approach to the relation of each dwelling to its immediate neighbors, to the neighborhood as a whole, and to the nature of the site itself. Substantial progress will be made only after the weight of aroused and informed public opinion is brought to bear on the people who, directly or indirectly, plan, design, build and finance new communities of houses, wherever they may be built • There is no short cut method to achieve a high level of design, or even a satisfactory level. There are certain steps that must be followed, and the work must be coordinated by a qualified professional from beginning to end. It is futile to become involved in arguments at this point on the subject of exactly who it is who is to carry out this coordination of design and construction. The most important point is that it must be done, and, in fact, is done today too frequently by someone who is not qualified to do the work •"
ROBERT DAMORA, ARCHITECT

Development house for New Seabury, Cape Cod, Massachusetts

Sepp Firnkas, Structural Engineer

Werner, Jensen & Korst, Mechanical Engineers

Emil Hanslin Associates, Inc., Builder

Suzanne Sissen, Landscape Architect

Robert Damora and Melanie Kahane, Interior Design

PHOTOS: ROBERT DAMORA
AN ARCHITECT'S ANSWER TO THE PRE-FAB TRACT HOUSE PROBLEM

The onus of monotony, a burden of all too many of our large tract house developments, has been vigorously shed in this novel scheme. The architect and builder, working in close cooperation, have devised a moderate-priced house made of a minimum number of prefabricated component parts, which can be speedily put together in an endless variety of ways. No house need be identical to another; each may be adapted to individual requirements of family planning and site topography. Thus, for the projected 1000-house development, the effect will be that of homogeneity rather than repetition. Some architectural advice will be available on each house to insure a good plan arrangement, and to obtain a quality of fresh and spirited design parallel to the pilot model shown in the photographs and drawings on these pages.
STEP A

STEP B

STEP C

DECK

DECK

DECK

DECK

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0 5 10 15 20
Planning for this New Seabury house is based on a grid of 16-by-16-ft units. These units interlock into adjacent units in four directions, and may be stacked vertically. Any number desired may be erected, and in any of a variety of patterns.

Within this structural framework, floors, roofs and walls may be added or eliminated to achieve a livable complex of enclosed rooms, covered or open courts and terraces or gardens. A standardized utility core, designed to fit in one of the spaces, contains all mechanical equipment.

The pilot model (larger plan at left) has five rooms and four terraces set in a pergola of 15 frame units. In volume production, it is expected to sell for $20,000.

Besides the endless initial arrangements possible with the scheme, it also offers a design that can be easily expanded. The three plans shown at far left illustrate one way the house could be enlarged as the family needs grow. By building the entire network of frames at the outset, the house would have an air of size and interest even at its tiny beginning.
The architect of this New Seabury house states that, "concrete was used throughout in an effort to utilize the masonry fabrication plants during their slow winter months; the component parts are mass-produced and stockpiled in the winter, and are then available for speedy erection—two to three days—during the rest of the year."

There are six basic structural parts: (1) column or column blocks, (2) beam for floor and roof, (3) floor panel—poured concrete topping is added, (4) flat roof panel, (5) folded plate roof panel, (6) sun or trellis joist.

All members are hollow; voids in the floor panels serve as ducts for heating and utilities.

THE BASIC STRUCTURAL GRID IS ASSEMBLED FROM ONLY SIX PREFABRICATED COMPONENTS
In addition to the panels for floors and roof, rooms are enclosed by a curtain wall system (used for exterior and interior) assembled from three interlocking component panels: (1) fixed glass panel, (2) fixed sandwich-insulating panel, and (3) operating (sliding) glass or solid panel.

These wall panels connect to the concrete structure through a watertight key and slot system, as shown in the above detail. The panels snap in place and, at least in theory, could be quickly removed and snapped back into other sections of the channel frame to create a larger space (which remains unheated) for summer weekend visitors.
Basic to the planning and economy of the New Seabury house is a utility core with all the mechanical equipment for the house. The same wall panels described on the opposite page are assembled to make walls for kitchen, bath, closets, heater and utility room. As the panels are waterproof, their use for bath and shower areas eliminates the need for more costly tile or other superimposed bathroom waterproofing.

In the detail plan shown at right, the kitchen opens onto the dining area, and is shielded by a work-counter-bar; behind this is the heater space; and next is a compartmented bath and two closets opening on the hall.
As the house itself sits on a sort of platform, attractive natural sites can easily be preserved as shown in these photographs. The pilot model is built with cast columns, but it is projected that mass-produced houses would be constructed with columns made of concrete blocks strung together to give greater flexibility for site adaptation.

Trees and other existing landscaping can also be easily preserved as desired with this adaptable house; several such examples can be noted here. In this first house, various levels of terraces and gardens are being developed in the "void" areas of the structural frame grid. It is also projected that a plastic swimming pool will be suspended in one such area.
The lean elegance of this house forms a focal point for a truly spectacular site: a 30-year-old orchard of 35-ft high orange trees, with a central allée 1000 ft long opened up to a lake. The house is placed on axis at a level approximately 25 ft above the lake, an item unusual for the flatlands of Florida. A podium-like terrace on the lake side further dramatizes the importance of the house. The scale of the house is a deceptive one: big as it is, lack of ordinary sized fenestration and openings offers no comparison for scale and makes the house seem even larger than it is.

The basic design motif of the house, inside and out, is one that is becoming more and more typical of Rudolph's work—an almost sculptural concern for the interplay of rectangular forms and voids, and of both the horizontal and vertical planes. It is a design which must be walked around to be really seen, and the entrance approach is designed for this.
CONTEMPORARY IN THE GRAND MANNER

PAUL RUDOLPH, ARCHITECT

*Residence for Mr. and Mrs. R. A. Liggett*
Tampa, Florida
Charles T. Healy & Associates, Mechanical Engineers
Sidney L. Barber, Consulting Structural Engineer
Prentiss French, Landscape Architect
R. S. Stevens & Sons, Contractor

PHOTOS: ALEXANDRE GEORGES
OPENNESS AND UNDERFURNISHING ADD TO SPACIOUSNESS

THE PLAN has all major rooms facing long vistas through the orange grove, with the exception of the master bedroom on the first floor, which has its own walled-in garden, terrace and pool. Rooms for the children and for guests are on the upper floor. The plan centers on a roofed and screened center courtyard, which will be filled with exotic planting.

THE STRUCTURE is framed with concrete block, steel beams and 10-in. bar joists. Floors are 2½-in. concrete slabs on bar joists, finished with carpet, terrazzo or rosewood. Exterior walls are brick treated with silicone.

THE INTERIORS were in large part designed by the architect to emphasize the sense of space: note especially the furnishing of the living area, with built-in leather seats flanking a rosewood-floored sunken conversation area. Interior finishes are brick, glass and plaster. Living room and library ceilings are two stories high.

THE COST of the house was approximately $108,000.

THE EQUIPMENT includes air conditioning for all the house except the central patio. The system uses ceiling diffusers, floor and sidewall returns.

PHOTOS: ALEXANDRE GEORGES
PHOTOS: MORLEY BAER
This handsome house-for-sale is a pilot project for a subdivision of one acre lots adjoining the newly completed Corral de Tierra Country Club, in a valley of the Santa Lucias between Monterey and Salinas, California. The problem for the architects was to design a large house, with a powerful and suitable identity, which would be attractive to as wide a variety of buyers as possible. Thus, a plan was required which would suit clients with young children, older children, or no children, with or without servants, for formal or informal living—in other words, for almost any kind of family. The scheme as built goes far in achieving this adaptability in a very comfortable and sophisticated fashion. A strong identity was set by using a basically simple rectangle with a high, top-lighted center space.

Rooms and terraces are arranged around this central room in such a manner that their uses could be easily varied to suit different occupants. Thus, the center area could be furnished as a formal room, or opened (as shown on the next page) informally into the other living areas. The area to the east of the center room can function as a formal dining room, or as a family room with a barbeque. The central bedroom, adjoining the master bath, can serve as a study, or as part of a master suite for an older couple; it can also share the front divided bath with the front bedroom if it is to be occupied by children or guests. A fourth bedroom, adjoining the garage, is planned for a servant, guest house, or for older children in a large family. All these major rooms have adjoining outside decks.
THE STRUCTURE of this California builder house is of 2 by 4 Douglas Fir, 16-in. O.C. set on foundations of reinforced concrete. Exterior walls are painted plywood and redwood battens. The roof is of cedar shingles.

INTERIORS are finished with plastic walls, acoustical plaster ceilings and oak or vinyl floors. The fireplace wall is adobe. Baths are plaster and mosaic tile. A folding door divides living and dining rooms.

EQUIPMENT includes two furnaces of 100,000 and 80,000 BTU respectively, plus a separate wall heater in the garage. There is a concrete septic tank, stainless steel sink, counter-top range, dual wall oven, built-in dishwasher and refrigerator, counter blender, and garbage disposer.

THE COST was about $60,000.
DRAMATIC CLERESTORIED ROOM IS HUB OF ADAPTABLE PLAN
AN INTERPLAY OF
PAVILION SHAPES
GIVES RESIDENCE
CHANGE OF PACE

ULRICH FRANZEN AND ASSOCIATES,
ARCHITECTS

House in New London, Connecticut
William Atlas, Structural Engineer
John Prieto, Mechanical Engineer
George C. Field, and
F. W. Brown Co., Contractors

This extremely dramatic house is constructed on a small but historic piece of rock adjoining the 18th Century Lighthouse of New London. Here, Ulrich Franzen has further developed his well-known umbrella-roofed pavilion into a form that presents a series of curves in one façade (photo, left) and a series of triangles in the other (see next page). This unit is surrounded by three rectangular structures and a round dining porch (photo, above) to form a varied and interesting compound. The umbrella-roofed unit is placed on a platform for further emphasis and protection from high tides. The compound was arranged on the lot to create a series of courts, terraces and beach.
THE PLAN of this house in New London treats the living area as a sort of “great hall,” flanked by a service-dining wing and a bedroom wing. Pantry and bath areas make extensive use of skylights for daylighting. A detached two-story unit serves as a boys’ bunkhouse and garage; this unit can be shut down during the winter when the children are away at school.

THE SITE required much concern to fend off the sea and waves. Walls were located and existing rock utilized as much as possible to minimize wave damage and salt spray. The location of the pool, in the open ocean, serves as a buffer toward the worst weather. The beach is of pebbles.
STRUCTURAL SHAPES ARE ALSO DOMINANT IN THE INTERIORS

THE STRUCTURE of the house in New London has a light steel frame set on concrete foundations. The roof is wood decking on a steel frame; ceilings are cypress strips and plaster. Exterior walls are silicone-treated brick over lightweight concrete block. Sliding glass doors have aluminum frames, 1-in. insulating glass.

THE INTERIORS rely largely on exposed and painted or stained structural finishes, painted plaster and tile in baths. Floors are walnut strip, vinyl tile or cork tile. Doors are painted or veneered plywood. Kitchen counters are stainless steel.

THE EQUIPMENT includes silent switches and recessed ceiling lights. The house has year-round air conditioning. Kitchen appliances are electric, including water heater, counter top range, refrigerator and garbage disposer.

THE COST of the house itself was about $22 per sq ft, exclusive of landscaping, seawalls, fill or custom-built cabinets.

LANDSCAPING was designed by the architects to create a change of pace from the big seascapes to intimate views toward carefully paved and underscaled planting off one end of the living room, and off all bedrooms. Much of the site had to be made by means of seawalls and rockfill.
MODERN TO FIT A TRADITIONAL CODE

Two fairly difficult design problems were solved with considerable finesse in this house: (1) the site was an attractive, wooded one, yet afforded little level buildable area, as the land sloped sharply in two directions; (2) the zoning requirements contained rigid specifications originally intended to outline a two-story Colonial design.

The codes called for a specific height for a house in the area, and for the larger part of the roof to be sloping. To further complicate matters, the owners’ requirements seemed best served by a basically one-level, contemporary scheme that provided good separation between the adults’ and the children’s areas.

As can be noted in the photograph at left, and on the plan on the next page, the final design solves each of these problems. To preserve the trees and avoid cutting and filling the plot, one portion of the house was dropped to a lower level on the site. This wing, devoted to children’s and service rooms, was made two stories high, and sized to the maximum square footage allowed by code for a flat roofed wing. Major rooms are on the top floor of this wing, at the same level as the rest of the house. Height requirements were met in the upper, adults’ wing, by a dramatic roof sloping up to an 18-ft ceiling peak in the living area. A tiny “penthouse” on the roof top ventilates long sloping planes to prevent condensation.

KRAMER & KRAMER, ARCHITECTS

Residence in Teaneck, New Jersey
Aaron Hitter, Structural Engineer
Blauvelt Construction Co., Contractor
THE PLAN of this New Jersey house does a nice job of separating age groups, while at the same time permitting groups of rooms to be used together for family group activities, or for entertaining. The children's bedrooms are grouped together with the kitchen and family room for ease of supervision. The playroom on the lower level is remote enough for sound isolation from the living area. Also on the lower level are the carport, and a bedroom for servants or guests. The major traffic area of the house at the entry is screened from the living area by cabinets; the high roof carrying through greatly increases the sense of spaciousness.

THE STRUCTURE of the house is of douglas fir, with foundations of concrete block and brick walls, poured concrete footings. The exterior is surfaced with cypress siding and common brick. The roof is built-up 5-ply tar and marble chip. Thermal insulation is 4-in. glass fiber batts.

INTERIORS have plaster walls and ceilings, floors of plywood finished with carpet, vinyl tile or ceramic tile. Cabinets and panels are teak.

EQUIPMENT includes year-round heating and air conditioning.
CASUAL RETIREMENT HOUSE GETS BIG SPACE WITH FOLDING WALLS

ROBERT B. BROWNE, ARCHITECT
G. F. REED, ASSOCIATE

Residence for R. S. Barrows
Marathon Shores, Key Vaca, Florida
Albert Halquist, Contractor

Modern techniques and materials mingle with tropical romance in the design for this house set on coral rocks jutting into the Atlantic Ocean. The owners, retired after a busy industrial career near Chicago, desired a small, durable home, which would provide simple comfort and uncomplicated relaxation. Its otherwise idyllic location posed the big problem of hurricanes.

The result is essentially a large screen porch under a great overhanging metal roof. Rooms are created, for the most part, by folding wood jalousies which can permit complete openness when desired and ventilation control at all times. After the famous hurricane Donna, the house was undamaged in a town 50 per cent leveled.
THE PLAN of the Barrows house gains maximum living area in fine weather by opening all rooms to the screen porches. Plastic storm shutters can be snapped in place for cool or well spells.

THE STRUCTURE, except for the roof, is all pine and is pressure-treated against insects and mildew. Creosoted posts support floor beams set 3½ ft above grade and two roof beam bands, one at the perimeter and the other inside at the roof break. Floors are two by fours spiked solid over the beams. The roof is of two by fours on edge, spaced 3½ in. o.c., and covered with a standing-seam membrane of galvanized iron sheet coated with white epoxy.

EQUIPMENT includes an oil-fired, forced air heating system, with glass fiber ducts under the floor. All closets have dehumidifiers. The kitchen includes built-in range, oven, refrigerator, dishwasher, garbage disposer and washer-dryer. Piping is plastic.
Though small, this house (in each of its three versions) gains apparent size by a number of well thought-out devices: the two-story living room, and the two-story glass wall which lights it; a small deck outside the second-floor master bedroom; other decks and patios, at ground level, for sitting and dining, and for looking out on; folding doors which, when opened, allow the living room space and space from the upstairs bedroom and the downstairs study-guest room to merge.

The internal planning of the house is characterized also by flexibility so that it may accommodate a variety of family arrangements. The two rooms at the end of the living room might serve as bedrooms, study, recreation room, guest room, or an extension of the living room.
ROGER LEE ASSOCIATES, ARCHITECTS

William Forgensi, Project Architect
H. H. Wang, Structural Engineer
Rena Lee Interiors, Interior Designers
A. L. Muzzini Construction Co., Contractor

PHOTOS: ROGER STURTEVANT
INGENUITY APPLIED TO PLANNING CREATES SPACE IN SMALL HOUSE

PHOTOS: ROGER STURTEVANT

THE STRUCTURE is wood frame on a concrete foundation. The exterior walls are stained cedar, and the interior walls, in all rooms including the bathrooms, are mahogany plywood. Ceilings are exposed cedar beams and planks on the second floor and in living room; gypsum board in study, kitchen and dining room. Flooring in downstairs living area is cork tile; in baths, kitchen and dining room, it is vinyl tile, and upstairs is carpeting. Built-ins include bookshelves and storage cabinets along the entire length of the fireplace wall downstairs, and dressers in both upstairs bedrooms and in upstairs bath. Folding doors are mahogany.

COST of each house was about $23,000.
THREE HOUSES MADE A COMMUNITY BY ADROIT PLANNING

THE SITE PLAN for these three houses creates a small and well organized community. The houses are very nearly identical, except for minor variations in the placement of garages and patios. But the arrangement of the houses shows considerably more finesse than is usual among tract houses. By not setting the houses in a straight line, and by placing windows with care, the architect has contrived to give each house a degree of privacy. The hilly topography has cooperated in this contrivance, as have the Monterey pines and other trees left standing on the site.
This striking house is constructed of intersecting wood A-frames, its gables filled entirely with glass. Conforming to the spirit, if not exactly to the letter, of the neighboring houses—all of Tudor revival design—the architect observed the pitch of their roofs, then repeated it and carried it to the ground. Still in the spirit, the mullions are of dark-stained wood composed rather as half-timbers are; the in-filling, however, is glass instead of stucco.

Though the structure is of primary interest, a livable plan has been ingeniously inserted into it. Adult areas—living room, master bedroom and a dining room—are on the upper floor; children and family activities are housed on the ground floor.
UNUSUAL STRUCTURE
AFFORDS SPACES OF
VARIED CHARACTER

THE STRUCTURE of the McDonald house is of wood frame, resting on eight points, anchored by concrete piers 8-ft deep. The roof is covered with wood shakes. The ground floor is slate, set on a concrete slab. Interior walls are smooth dry wall, ceilings are sand-finished plaster.

To secure privacy from the road in front of the house, a masonry garden wall will be built in the near future. Behind it will be a gravel-covered central court and a carport. The carport will be connected to the playroom by a covered walk.

THE PLAN places formal areas and the master bedroom on the second floor, and family activities and children’s rooms on the first floor. The house has two dining rooms: one for the family on the first floor, another for more formal occasions on the second. The upstairs dining room is served by a dumbwaiter.

On the first floor, bedrooms for the children—a college-age daughter, two young sons and an infant—can be shut off at night by doors folding out from the closet partitions to the outside wall. The master bedroom is open to the living room, but is closed at the balcony end by a folding Japanese screen.

Upstairs windows will be provided with triangular blinds on rollers mounted on the spandrel; the blinds will be hoisted from the peaks “like sails.”
Modest in both size and budget ($15,500), this house pays large dividends in pleasant space and in intelligent exploitation of its site.

The owner is a young college teacher, single, whose domestic requirements and wishes encompassed some contradictions. The architect’s solution to these opposing needs was a plan which he likens to “two interlocked boxes—one solid, one open,” with utilities furnishing the connective.

As a social adjunct to her profession, Dr. Galbraith needed space to entertain both fellow faculty members and students in groups
of varying sizes. The relatively large living-dining room can comfortably accommodate quite a large company, while the sitting area within the room seems at once spacious and intimate.

For study and sleep, a sense of protection and privacy not provided by the glass walls of the living area was wanted. The study-bedroom, the "solid" box, is therefore windowless on three sides. The fourth wall is of sliding glass, opening onto a fenced patio.

To take advantage of the site, glass walls on all four sides of the living area allow views of the thick woods growing close to the house. They also admit a great deal of sunlight. In the summertime, the trees are sufficient to control both light and heat, obviating any necessity for artificial sun control or for air conditioning. In the wintertime, natural light and heat are both welcome.

Dr. Galbraith also wanted a house which would demand a minimum of housekeeping chores. The easily kept galley-type kitchen, the expanses of uninterrupted, clutter-free floor, and the virtually maintenance-free landscaping were designed to this end.
THE STRUCTURE of the Galbraith house is entirely wood frame, except for concrete foundation walls. The exterior, where not glazed, uses rough-sawn pine siding stained dark, with pine trim painted white. The roof is three-ply tar and gravel.

THE INTERIOR FINISH relies on simple, conventional materials: plaster for walls, ceiling and fireplace; vinyl tile for floors; Philippine mahogany for doors and one wall. The kitchen can be closed off entirely by folding wood doors.

LANDSCAPING was held to a minimum to reduce the necessity for extensive maintenance. Trees and shrubs were left, as nearly as possible, as found. That part of the land disturbed during construction was later graded, planted with meadow grasses, and "allowed to return to original woodland."

THE COST of the house was $15,500, excluding the cost of the land. Not including the partial basement, its area is 1040 sq ft.
The usually pleasant and rhythmic repetitions of a post and beam structure can sometimes verge on monotony in such a large one-story house as this. However, the architects have skillfully solved the problem in this case by several devices: (1) the plan and structure of the house were divided into three distinct units, connected by glassed-in entrys; (2) the use of a folded plate roof added further to give varied scale to the building; (3) close integration of terraces, courts and
landscaping with the house gives outdoor rooms of different aspects.

The site is on a lakeside, and approached down a steep hill to a motor court at the front of the house. The diversity of shapes in the house noted above thus gives additional design impact as one first glimpses the house from the road above.

All major rooms are oriented to face the attractive lake front, and to take advantage of the outdoor living areas.

THREE-PART PLAN GIVES GOOD SCALE

BASSETTI & MORSE, ARCHITECTS

Residence for Steven P. Wertheimer
Mercer Island, Washington
Erwin L. Weber, Mechanical & Electrical Engineer
S. P. Wertheimer, Contractor
Eckbo, Royston & Williams, Landscape Architects
BRIGHT SPATIAL VARIETY TYPIFIES INTERIORS

PHOTOS: DEARBORN-MASSER
THE PLAN of the Wertheimer house puts living, library and study areas in a high-ceilinged wing, dining and service functions in the center unit, and bedroom and children's play areas in the third section. It is an arrangement well suited to the many simultaneous activities of a family.

THE STRUCTURE is of laminated posts and beams, with exterior wall panels of corrugated cement asbestos board, interior panels of plaster board. The long center hall of the middle section of the house is given a bright, cheerful appearance by a series of plastic skylights along its entire length (photo top left). Floors are carpet or vinyl, ceramic tile in the baths.

EQUIPMENT includes a heat pump heating system which circulates water through coils in the floor slab.

THE COST was about $128,000.
CURVING HOUSE DESIGNED FOR SWEEPING VIEW

This dramatic curving façade was designed to take fullest advantage of a superb view of Bucks County to the north and west of the house. All of the rooms on the main floor share this view. Thanks to the length of the house and to the gentleness of the curve, the rooms are very nearly rectangular, rather than wedge-shaped. Since the owner wanted, in addition to the view, a rather formal house in which to display a large collection of furniture, she has managed to have the best of both worlds.

The neat, symmetrical exterior reflects the character of the interior. Built with “indigenous” materials (slate is quarried locally, and structural steel is manufactured nearby), it is enclosed with a pattern of modular panels which has become almost a trademark of the architects: solid panels, fixed and sliding glass, louvered strips used both for ventilation and for definition of the curtain wall.
THE SITE of the Payne house is a "determined" slope, providing very little level space for parking and access. Though the house is projected from the side of the hill primarily for other structural and design reasons, this device also frees this minimal level area for the accommodation of automobiles. Mrs. Payne, an enthusiastic gardener, has taken great interest in the impressive in-season planting.

STRUCTURE is welded steel frame; the exterior walls are exposed white-painted steel and slate panels, both smooth and rubble. The foundation is reinforced concrete. Shutters are aluminum with a baked-on white finish.

Interior finish is plaster on walls and ceilings. Flooring is parquet in the living areas, vinyl in the kitchen, and tile in the bathrooms. The double-paned windows are set in wood sashes. Daylighting is augmented by a number of plastic skylights.

EQUIPMENT includes air conditioning and a radiant heating system.

THE COST of the house was $225,000.
LOWER FLOOR

PHOTOS: JOSEPH W. MOLITOR

UPPER FLOOR
URBANITY AND RUSTICITY ARE SKILLFULLY COMBINED

This is very much a country house. Its rough-sawn cedar siding is stained charcoal, so that its weathered walls might appear to have stood in the countryside for a long time. But any first impression of primitive rusticity is dispelled when one takes a second look and recognizes the suavity of design and detail that is evident even in photographs.

Built on a sharply sloping site, the house is entered on the upper, and main, level. This level is in effect one large room. Functional areas—living, dining and study—revolve around the central stairway and free-standing fireplace. The areas are each well defined, but borrow visual space from each other and from an extremely generous view of the Minnesota country.
NEWTON E. GRIFFITH, ARCHITECT

Residence for Mr. and Mrs. Newton E. Griffith
Edina, Minnesota
Gerald F. Paulson, Structural Engineer
Richard Peterson, Mechanical Engineer
RESPECT AND IMAGINATION ARE APPLIED TO TRADITIONAL MATERIALS

THE PLAN of the Griffith house places all main living areas on the upper floor. This solution, because of the site's sharp drop-off, allows easy access from the front of the house. It also allows dramatic exploitation of the view.

Central to both the house's appearance and its interior circulation is the "circular stairway which is really square." The architect-owner feels that "it is a very strong sculptural shape as well as being extremely functional."

On the ground floor are the master bedroom, the children's room and the guest room. An unusual amount of space for bulk storage has been provided; a large laundry-cum-storage room on the ground floor, and an outsized coat closet with built-in storage units on the upper level.

THE STRUCTURE is laminated wood frame with stained cedar siding. Floors are oak in living areas and kitchen, slate in the entrance and upstairs lavatory. On the lower level, all floors are finished with vinyl. Ceilings are wood decking on the upper floor, acoustic tile on the lower. Interior walls and partitions are painted drywall.

The house has no windows, properly speaking. All openings are pairs of wood-framed sliding doors. All glass, both sliding and fixed, is insulating.

EQUIPMENT includes two oil-fired furnaces supplying the forced air system.

COST was approximately $43,500.
The problem of designing a large house for an extremely narrow lot has been solved here by splitting the plan into two pavilions, each offset from the other, with the long axis of each following that of the site. One unit is devoted to living, dining and kitchen, with service quarters below; the other contains bedrooms, library, laundry and storage. The two units are connected by an interior corridor on the lower level, and by an open terrace above (see plan on next page).

The site is 100 ft above a "fjord" type of inlet, and offers very dramatic views. The offset plan of the two pavilions allows views from all rooms—and the major view over the water is capitalized on by the spectacular raised living pavilion shown here. It projects out over the edge of the cliff, giving the effect of being built in the trees, and sheltering a terrace below. The design of this one unit is based on an early sketch of Mies van der Rohe's, with diagonal truss-like members crossing in front of the glass walls.
CLASSIC SIMPLICITY PROVIDES A HOUSE OF GREAT STYLE

LOWER LEVEL

ARCHITECTURAL RECORD HOUSES OF 1962
THE PLAN of this Long Island house gives excellent separation for living and bedroom areas—an especially useful item for the sea-side location where entertaining may be more frequent than in less pleasant locales. The big living area and terraces can accommodate a large number of guests.

THE STRUCTURE is a very nicely proportioned one, with a frame of exposed, and painted, structural steel on concrete foundations. Exterior walls are of brick and glass; interiors are painted plaster, on wood studs. All ceilings are plaster except for acoustic tile in the playroom. The roof is built-up tar and gravel.

INTERIORS are simply but well finished. Flooring for the various rooms includes: mosaic tile in living areas, rubber tile in kitchen and playroom, ceramic tile in baths.
Built like a fine cabinet, this house was constructed with scrupulous attention to joinery. Essentially a simple post and beam structure, it has been highly refined for appearance's sake. Each beam and column has been extended beyond the joint to exaggerate the visual impact of the trabeation. The slim paired columns seem at once impossibly light and insistently structural. The result is a building of considerable sophistication and deceptive simplicity.

The architect has made no attempt to merge the house with nature. He has, rather, deliberately left the landscaping rough in contrast to the building's precision. This contrast is emphasized by raising the house on a low pedestal, approached by rough-hewn steps, and surfaced with smooth white gravel.

The plan, following a solution which seems increasingly popular, places the major living areas on the second floor in the fashion of the old piano nobile.

NORMAN F. CARVER JR., DESIGNER
Residence for Mr. and Mrs. Donald Probasco
Kalamazoo, Michigan
David Spaulding, Contractor
THE STRUCTURE of the Probasco house is Douglas fir frame with a concrete foundation. Siding is scored Douglas fir plywood, which is also used on interior walls, along with mahogany plywood and plaster board. Ceilings are Douglas fir decking. Floors are finished with carpeting in the living areas and with vinyl in bathrooms and kitchen. Fixed glass panels are stopped directly into wood posts.

THE PLAN puts the carport, by special permission of the zoning board, close to the street. This also serves as a bridge entering the upper story directly. The ground floor contains rooms for two children of college age; it has its own entrance, and can be closed off entirely when not in use. A grill across the front of the house assures a degree of privacy while allowing a view outward.

THE DECOR opposes rich colors to the natural materials of the structure. The owners, who have a fabric shop, have hung burnt orange draperies in the living room, and turquoise draperies in the entrance.
BUILDER HOUSE
OF CONCRETE OFFERS
BUDGET LUXURY

PHOTOS: BILL MARGERIN
A great deal of well organized and pleasant living space is packed into this budget development house for a typical family of four. Its spaciousness-at-a-price can largely be attributed to skilled handling of a compact, rectangular shape, simplicity of design, and use of low cost materials. A two-story scheme (with entry at mid-level) also frees a large part of the fairly standard suburban lot for use as outdoor living areas. Concrete walls enclose these outside spaces to create a variety of private courts for family relaxation and entertainment.

To achieve individuality in a development of these houses, the basic cube form would remain constant, but the exterior features such as fencing and car shelter would be varied.

The house was awarded the first place national prize in the Concrete Industries' Horizon Homes Program.
OPEN-PLAN UPSTAIRS AREAS GIVE GOOD FLEXIBILITY FOR FURNITURE PLACEMENT

THE PLAN is arranged with bedrooms on the lower level, with each opening onto the pool terrace for breakfast and a morning dip. Upper-level living areas are expanded by a balcony and a dining porch.

THE STRUCTURE uses concrete block bearing walls, with the rest of the frame of wood. Roofing is built-up tar and gravel. Interiors are finished with painted concrete block and redwood; ceilings are gypsum board. Floors in living areas are carpeted, those in the kitchen and on the lower floor are vinyl asbestos.

THE COST of the house is $20,000, without lot, pool or garden walls.

PHOTOS: BILL MARGERIN
A hilltop site with a fine view, but no trees, is capped here by a house of appropriately strong and handsome design. Big and well-handled window areas make the most of the panorama, and are flanked by "view balconies" leading from the sides of the house. Considerable visual interest is given to the house itself by placing the post and beam structural frame well outside the brick and glass curtain walls.

The owners are a childless couple whose stated program was a "one room house." As can be seen on the following pages, the architect has created some extremely interesting and dramatic interior areas by level changes within a two-story, rectangular structural volume. The plan orients the big main living space to the view through a wall of two-story-high windows. Bedroom areas are on a higher level, and open onto small back balconies (photo, below left). A two-car, drive-through garage is placed below the bedrooms.

The only major partition in the interior is a curving, brick fireplace wall which helps to define the unusual elliptical "conversation pit" in the living area.
Residence for Dr. Roger Ewert
St. Paul, Minnesota
Hauble and Behm, Contractors
LEVEL CHANGES DEFINE AREAS IN "ONE-ROOM HOUSE"

THE STRUCTURE of the Ewert house is completely exposed, inside and out: 2-in. roof decking is installed over double 3- by 14-in. beams, which frame on either side of the supporting columns. The roof is surfaced with pitch and gravel. Exteriors are 10-in. cavity walls, with brick exposed inside and out. All operating windows are 8-ft-wide sliding glass doors, double glazed; solid doors are used at the entrance and leading to the balconies.

INTERIOR finishes, as noted, are basically the same as on the outside of the house, with the addition of some walnut paneling. Floors in the living areas are terrazzo; bath floors are ceramic tile, those in bedrooms are oak. Ceilings are fir.

EQUIPMENT includes a warm air heating system, kitchen and bath exhausts, and kitchen appliances built into plastic-topped cabinets.

THE COST of the house was approximately $40,000, excluding lot, landscaping and furnishings.
Unrestrained by stringent budgetary limits, this large house nonetheless exhibits commendable self-restraint in its courtesy to its site and its neighborhood.

The architect had an esthetic responsibility to conform to the existing milieu: large turn-of-the-century houses surrounded by well-kept lawns, within sight of Long Island Sound. In addition, the owners' domestic requirements demanded a great deal of space, and a variety of well-defined areas—rooms for sitting and entertaining, room for study, separate sleeping and recreation areas for adults and for three teen-age children.

To accommodate these requirements within the local code limit of a 95-ft frontal width, and to minimize the apparent volume of the house, the architect filled the lot, creating an artificial hill. The lower floor, containing the children's room, is tucked behind the hill; the upper floor thus gives the impression, from the front, of being a single-story house.

Exterior materials—taupe-colored brick and clapboard siding—were chosen in agreement with local usage.
THE PLANNING of the Faile house places living areas and the parents' suite on the upper floor, for the reasons mentioned on the previous page, and in order to exploit the view of the water. The long hall on this floor is central to circulation, connecting as it does all rooms except the kitchen. A deck opening off of the dining room can be used for dining and for sitting, and is connected by a curved stairway to the swimming pool terrace below.

The playroom now shared by the children (two boys and a girl) is designed to become eventually part of an apartment, in preparation for the day they will bring their own families to visit.

The house reflects to a considerable degree the experience of Mr. and Mrs. Faile, who have a background in residential design and construction; many elements were developed by them, including a number which they had tried out previously.

THE STRUCTURE is conventional wood frame, except for the laminated wood beams supporting the raised roof over the living room. The foundation is reinforced concrete frame on wood piles. Exterior finish is of brick and 6-in. redwood clapboards. Interior walls are mostly unpainted plaster, with tile finish in the bathrooms. Flooring is wood in dining room and hall, vinyl tile in the kitchen, ceramic tile in bathrooms, and quarry tile in the playroom. Ceilings throughout the house are sand plaster, except in the playroom, which is finished with acoustic tile.
CAREFUL ATTENTION TO DETAILS AND FINISHES YIELDS A POLISHED INTERIOR
This attractive house is an excellent example of a high quality tract house resulting from the close cooperation of developers and architects. Designed for the Monarch Bay section of the Laguna Niguel Community, the house is one of three basic floor plans (which have some nine exterior variations) set to serve as a standard for the community.
THE SITE of the Monarch Bay development is on a bluff overlooking the Pacific Ocean on one side, and distant mountains on the other. The area is about 70 acres, with 171 home sites 85 by 120 ft. Some of the lots will be used for individual custom designed homes.

THE PLAN of this house gains its sense of space by the use of a dramatic entrance court which opens in turn to a gallery, then to the living room with its wide window wall framing a vista of the sea. This central portion of the house has high ceilings which follow the roof line for further emphasis of size. Four bedrooms are grouped in a wing to one side of the living area; one bedroom off the court can double as a study or guest room. Dining and service areas are placed in a flanking wing.

THE STRUCTURE of the house is wood frame on concrete floor slabs. Exteriors and interior walls and ceilings are painted plaster. The roof is shingled. Floors are oak parquet, carpet or vinyl tile. Heating is a forced air system, with perimeter distribution.

THE COST of the house is $51,500, including a sprinkler system and landscaping in the front.

PHOTOS: MAYNARD PARKER
SPACE AND OPENNESS HIGHLIGHT THIS PLEASANT DESIGN
A more tropical approach is used in this scheme, with its broad, double-pitched roof and textured wood siding. The plan preserves many of the basic room relationships of the preceding house, but places the living room in a wing at the front to give privacy to the patio and swimming pool.

The kitchen is treated here more as a family room, with an island counter-bar and wide sliding doors opening onto the gallery.

The bedrooms have easy access to the patio, and to the gardens at the back, via sliding glass doors.

The living room opens onto the swimming pool patio through a covered terrace; the fireplace is backed by a barbecue pit for outdoor dining.
A trim and straightforward modern design is used for this smaller, three-bedroom scheme.

Here, the entrance court is developed as a playful water garden, screened from the street by a wall and gate. The long vista through entry and living room to the sea beyond is preserved.

A covered outdoor dining terrace adjoins the dining room, and overlooks the swimming pool at the back.

Though somewhat similar in basic plan arrangement to the first of the houses shown from this development, the flat roof and equally well designed, but blanked-off façade give an entirely different appearance.

PHOTOS: MAYNARD PARKER
A MULTI-LEVEL HOUSE WITH SERVICE TOWERS

ROBERT ERNEST, ARCHITECT

Residence for Mr. and Mrs. Robert Ernest
Atlantic Beach, Florida
Register & Cummings, Structural Engineer
L. L. Abbott, Contractor

An unusual amount of living space for a small, lower cost house has been developed here by the architect for his own family. Three major design devices served to gain this goal: (1) a multi-level scheme minimizing roof and foundation area; (2) use of simple, low-cost materials—especially concrete block; (3) the placement of all utilities in a "service tower" to minimize piping, venting, etc.

The end result of these items, plus the placement of the stairs in a second "tower" to balance the service one, has been to free the interior for a number of open living spaces with a wide variety of sizes and views. As added height improved views of the ocean at the back of the site, and also gave better air circulation, major rooms were placed on higher levels, with the lowest floor devoted to stair entry, carport, workshop, and a laundry. The master bedroom, for example, has a clear view of the ocean across the upper portion of the porch.

As the lot is a long and narrow one, the side walls of the house were left blank, with no windows, for privacy from neighbors. The front and rear elevations are kept as open as possible for maximum light, air and view.
FRANK STRUCTURE, NATURAL FINISHES GIVE LOW COST

THE STRUCTURE of the Ernest house is principally of lightweight concrete block bearing walls, with concrete lintels and bond beams; roof and floor framing is wood. The "service towers" flanking the structure also serve as buttresses.

FINISHES include clear silicone on the concrete block, gray stain and creosote treatment for wood. With the addition of some stained cypress walls, the interior walls are the same as the outside. Floors are wood covered with ship deck matting in living areas, sheet vinyl in the kitchen, and mosaic tile in the bath areas. All ceilings are wood with exposed beams.

THE COST of the house was $22,050, without lot, landscape, furnishing.
SPACE SERVES BOTH ART AND FUNCTION

PHOTOS: JOSEPH W. MOLITOR
This house has, to start with, a great deal of space, and this space has, to go on with, been visually expanded to quite generous proportions. It is not this apparent expansion, however, which distinguishes the house; it is the extremely sophisticated manipulation of space, both functionally and esthetically.

Esthetically, the space is handled in terms of vistas, sometimes extended, sometimes ending abruptly, or opening out sideways. This interpenetration of voids and solids always indicates that there is more space, and space of a different character, around the corner.

Functionally, the space has been arranged so that private and utility areas, well separated from one another, occupy the four corners of the house. The center of the house is thereby freed for living and entertaining.
THE SITE of the Thrower house is generally sloping. By cutting into the hill on the north side, the architect was able to provide a terrace on the service side, giving outdoor space to the dining and breakfast rooms. Fill on the south side, held by a high retaining wall, yielded a private terrace for the bedrooms. The house is sited happily, for two enthusiastic golfers, next to a golf course.

THE STRUCTURE is hard-pressed brick and wood siding on a foundation of split-block concrete with reinforced concrete footings. Interior walls are plaster and plywood, and ceilings are plaster. Floors are oak in the major areas, ceramic tile in baths and kitchen. Sliding glass doors are aluminum-framed; all fixed panes are double-glazed.

The warm air heating system is supplied by two heat pumps.
COURTS AND TERRACES EXTEND SPACE FOR LIVING AND LOOKING

PHOTOS: JOSEPH W. MOLITOR

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THE PLAN of the Thrower house was designed for the frequent entertainment of guests. Occasional visits of the owners' grown children with their families, as well as of business associates, demanded the large guest suite. The owners also wanted space to entertain groups of up to 150 guests.

The mild climate calls for usable outdoor space, and the owners make liberal use of the interior court and three large terraces for living and for entertaining.

Since the client is the owner of a furniture company, he also wanted a house which would display a collection of fine furniture. To accomplish this, the house was kept extremely simple as a backdrop; materials and details were especially carefully finished to complement the furniture.

COST was about $85,000.
Designers of the Record Houses of 1962

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

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<td>94 ELROY WEBBER ASSOCIATES, INC.</td>
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### Table 2 (cont'd)

| Design Temperature Difference, Degrees | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 200 |
|----------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| No. 18 Glass block, 3/4-in. thick      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| (b) Average fit, not weatherstripped   | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 200 |
| or poor fit with storm door            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| No. 19 Cored glass structural Member   | 40 | 50 | 60 | 70 | 80 | 90 | 100| 110| 120| 130| 140| 150| 160| 170| 180| 190| 200| 200| 200| 200|

### Table 1

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### 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.

**WOODBRIDGE ORNAMENTAL IRON CO.**

2715 N. Clybourn Ave.  
Chicago 14, Ill.
Case adds a smaller one-piece closet at a smaller price... $9990*

with all these luxury features:

- Positively will not overflow bowl or tank
- Quieter by far with the famous Case Whispering Flush
- More efficient rim wash—employs jet pump principle to aspirate tank water
- Uses one third less flush water—only 13 quarts
- Widest color choice in the industry—including sparkling black
- Simplified brass is adjusted in minutes for local pressure
- Fixture is lighter to handle and easier to install
- Lowest minimum pressure requirements

*Suggested consumer price in white.

For more details please turn the page
Homeowners and Builders will appreciate these Silhouette features:

 Quieter by Far ... Has the famous Case Whispering Flush.

 Wide Color Choice ... Case has the largest selection of vitreous china colors in the industry, including sparkling black.

 More Efficient Flushing Action ... New Case ballcock (Pat. Pend.) employs the jet pump principle to aspirate tank water, thus supplying more than double the usual amount for rim flush.

 Plumbing Contractors will recognize the extra value of these Silhouette features:

 Water Saving ... The Silhouette uses only 13 quarts per flush.

 Simplified Anti-Syphon Ballcock ... Has very few parts. Only one volume control adjustment.

 Simple Installation ... The Silhouette one-piece is designed for a standard 12 inch rough. It has a 8" undertank clearance. As little as 15 pounds water pressure or as much as 150 pounds or more, at the fixture will give satisfactory operation.

 Easier to Handle ... The Silhouette can be maneuvered even in close quarters because it weighs only 70 pounds and is just 25" in length.

 Positively Will Not Overflow ... Neither the bowl nor the tank will overflow even if the trapway is completely clogged, because levels in the tank and bowl equalize. Incoming water is automatically shut off before overflowing.

 Architects and Specifying Engineers will further appreciate these Silhouette features

 No Pressure Problems ... The Silhouette can be specified for high-rise buildings with no worry about minimum pressure. It operates satisfactorily with as little as 15 pounds or more than 150 pounds.

 Meets Anti-Syphon Requirements ... Including the most rigid plumbing codes in the nation.

 Styled for Today's Bathrooms ... The bowl rim is a low 14" from the floor and extends only 25" into the room. Overall height is 19½". Contoured tank, sculptured base, and absence of bulk give this one-piece fixture a look of distinction.

 Tailored Seat ... High impact polystyrene seat has a 10½" spread between posts to provide a firmer mounting. Also has a free-standing check hinge.

 SPECIFY: Water closet shall be Case #4000 non-overflow one-piece floor type with riser pipe housed in dry channel separately from tank water. Ballcock shall be Case #62 employing jet pump principle to aspirate tank water and prevent back-syphonage. Complete with tailored high impact polystyrene seat.

 Case distinctive one-piece water closets are available through leading plumbing wholesalers everywhere.
<table>
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Table 2 (cont'd)

No. 29 Architectural projected or bayment windows

(a) Poor fit, not weatherstripped... 137 166 185 205 229 251 274 296 319 342 365 389 410 433 466 499
(b) Poor fit, with storm sash... 63 95 127 159 191 223 255 287 319 351 383 415 447 479 511
(c) Poor fit, with storm sash... 29 51 73 95 117 139 161 183 205 227 249 271 293 315 337

No. 30 Residential casement windows

(a) Average fit, not weatherstripped... 29 35 41 48 55 62 69 76 83 90 97 104 111 118 125
(b) Average fit, weatherstripped or with storm sash... 17 23 29 35 41 48 55 62 69 76 83 90 97 104 111
(c) Poor fit, not weatherstripped... 81 96 110 125 140 155 170 185 200 215 230 245 260 275 290
(d) Poor fit, with storm sash... 25 29 34 38 42 46 50 54 58 62 66 70 74 78 82

No. 31 Fixed or picture window

(a) Average fit... 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
(b) Poor fit... 22 26 29 32 36 40 44 48 52 56 60 64 68 72 76

No. 32 Heavy casement window

(a) Average fit, not weatherstripped... 21 25 29 32 35 39 42 46 50 54 58 62 66 70 74
(b) Average fit, weatherstripped or with storm sash... 13 17 19 23 27 31 35 39 43 47 51 55 59 63 67
(c) Poor fit, not weatherstripped... 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115
(d) Poor fit, with storm sash... 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76

No. 33 Jalousie window

(a) Average fit, not weatherstripped... 76 91 106 121 136 151 166 181 196 211 226 241 256 271 286 301
(b) Average fit, weatherstripped or with storm sash... 42 57 72 87 102 117 132 147 162 177 192 207 222 237 252 267
(c) Poor fit, not weatherstripped... 197 212 227 242 257 272 287 302 317 332 347 362 377 392 407 422
(d) Poor fit, with storm sash... 95 110 125 140 155 170 185 200 215 230 245 260 275 290 305 320

No. 34 Industrial pivoted window

(a) Average fit, not weatherstripped... 64 79 94 109 124 139 154 169 184 199 214 229 244 259 274 289
(b) Average fit, weatherstripped or with storm sash... 32 47 62 77 92 107 122 137 152 167 182 197 212 227 242 257
(c) Poor fit, not weatherstripped... 256 271 286 302 317 332 347 362 377 392 407 422 437 452 467 482
(d) Poor fit, with storm sash... 140 155 170 185 200 215 230 245 260 275 290 305 320 335 350 365

No. 35 Between Foundation and sill

(a) Frame buildings... 38 45 52 59 66 73 80 87 94 101 108 115 122 129 136 143
(b) With crawlspace pium... 38 45 52 59 66 73 80 87 94 101 108 115 122 129 136 143
(c) Poor fit, with storm sash... 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55 58
(d) Poor fit, with storm sash... 122 136 150 164 178 192 206 220 234 248 262 276 290 304 318 332

Footnotes:
1. The U values are expressed in Btuh per sq ft per degree, F.
2. Heat loss through doors is figured the same as windows. See Construction No. 15.
3. Calculated per running foot of perimeter.
4. Infiltration factors are expressed in terms of Btuh per foot of crack per degree of design temperature difference.
5. HTM for Constructions 22, 23, and 25 are expressed in terms of Btuh per person entering the building in an hour.
6. Storm sash which cover only glass areas do not reduce infiltration, and the infiltration should be figured as if storm sash were not used.
7. The above formulas are for the 1962 Code.
8. Use only crack or form sash when it is used; otherwise figure crackage.
9. HTM is in terms of Btuh per CFM.
Would your client like living in a steel-framed house?

*If your client likes crisp, contemporary design . . . if he likes outdoor-indoor living along with absolute privacy, a steel-framed house might be his cup of tea. Here’s why.*

**STEEL PERMITS FREEDOM OF DESIGN.** The limitations of other materials disappear when you design with steel. It’s just right for contemporary architecture. It allows big, open areas, 30, 40 or more feet wide without any interior supports whatsoever. Steel framing also permits flexible interiors, often with movable partitions instead of fixed walls. Steel-framed houses can easily be expanded to meet future family needs, too. And you can design generous overhangs outside for sunshade effects, for patios, or covered walkways.

**CURTAIN WALLS OFFER DRAMATIC POSSIBILITIES.** When a house is framed with steel, the walls do not carry weight. Exterior walls need be designed only to provide insulation and security. Many types of panel materials can be put in place for less than the cost of conventional wall systems. For instance, huge glass panels and sliding glass doors can be placed between the steel columns to bring the outdoors in. Where opaque wall materials are preferred, you can use anything you like—porcelain-enameded steel, plastics, wood, brick, or stone.

**PROBLEM SITES.** With steel you can build on the side of a steep hill, or on top of rock formations. You can even build *over* the terrain—elevating the house on steel stilts. This makes “impossible” sites usable. Such lots can often be bought at bargain prices, and save on grading, too. And if the “problem” site is rugged but attractive, its natural beauty needn’t be bulldozed away. Save the trees, the shrubs, the rocks.

**HOW ABOUT THE COST?** With “problem” sites, steel commonly *saves* clients money. But even on level lots a steel-framed house need not cost a penny more than any other.
HOW ABOUT TIME? Once you complete the design of a steel-framed house, it can be ready for occupancy faster than any other type. A fabricating shop can prepare the steel in a few days; most likely the entire frame can be put up in a matter of hours—and quickly roofed over—compared with many days required for a carpenter-built house.

FREE LITERATURE AVAILABLE. We'd be happy to send you a new booklet showing what other skilled architects and builders have done for clients just like your own. Write to Publications Department, Bethlehem Steel Company, Bethlehem, Pa.
NEW PRODUCTS FOR THE HOUSE

These developments are a few of the new products presented here and on following pages:

- PORTABLE ELECTRONIC POLLEN AND DUST REMOVER
- CENTRAL PUSHBUTTON CONTROL FOR ALL ELECTRIC CIRCUITS
- WIND-RESISTANT SHINGLES SEALED BY SUN'S HEAT
- SPACE-SAVING FREEZER WITH HIGH-EFFICIENCY INSULATION
- LIGHT-SENSITIVE THERMOSTAT CUTS HEAT AUTOMATICALLY AT NIGHT

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 175-176.

Luxury Sink Features
Built-in light source

Built-in conveniences are part of a luxury sink, the Cuisine Console, which has a light source as an integral part of the sink. Also included are electrical outlets, a built-in spray under the water faucet, remote control pop-up drains, and a vegetable basket and cutting board. One model has a power unit built into the counter top, with a food mixer, blender and electrical knife sharpener available as standard equipment. Elkay Mfg. Co., 2700 S. 17th Ave., Broadview, Ill.

Circle 222 on Inquiry Card

Built-in Range
Easy to install

A compact built-in electric range is designed for quick, inexpensive installation. This 30-in. model can be mounted in any 33-in. wide cabinet, or suspended from a 30-in. countertop opening between two base cabinets. Instead of a back panel, controls for surface units and oven are positioned in a recessed panel at the front. The range is available with or without automatic oven controls, in a choice of brushed chrome or porcelain enamel finish. Frigidaire Div., Dayton 1, Ohio

Circle 224 on Inquiry Card

Fiber Tubes
Add strength to partition

High-strength Structicore partition system has non-load bearing panels with face layers of fireproof sheetrock gypsum wallboard, separated by heavy fiber tubes. The tubes give structural stability and easy access for wiring. The panels are 3 1/4 in. thick and can be joined without face nailing. Mill-installed top and bottom plates make attachment to floors and ceiling simple. Panels are joined with spline tubes and a special joint stabilizing compound. The system is expected to give lower costs than conventional construction methods because of faster erection, and elimination of wood studs and face nailing. U.S. Gypsum Co., 300 W. Adams St., Chicago 6, Ill.

Circle 225 on Inquiry Card

More products on page 158
Providing Subdivision Utilities In Growth Areas

Across the nation, large-scale subdividers and builders are obviously obliged to utilize undeveloped acreage.

Complete utility systems—particularly for water and sewer—are required, burdening the subdivider with financial, legal, tax and operating problems.

We solve these problems. Citizens Utilities Company purchases, constructs, owns and operates subdivision utilities at more locations than any other public utility company in the nation.

A partial list of major subdividers for whom we provide or from whom we have bought utilities includes the following:

- ARTZ & COOK
- BRICKMAN HOUSE BUILDERS
- CAMPANELLI BROS., INC.
- DOVER CONSTRUCTION CO.
- EXHIBIT HOMES, INC.
- F & S CONSTRUCTION CO.
- HITCHCOCK & CHAMBERLAIN, LTD.
- LOUIS LESSER ENTERPRISES
- LINCOLN DEVELOPMENT COMPANY
- THE LUSK CORPORATION
- ARTHUR T. McINTOSHI & COMPANY
- MOSS & MOSS
- PRICE & REYNOLDS BUILDERS
- DEL E. WEBB CORPORATION

Water and sewer utilities tie up your cash, your time and your efforts which you could use for more productive purposes.

You will be served by writing us about the present and projected size of both your current and contemplated subdivision, and enclosing financial statements for existing utilities that you wish to sell.

CITIZENS UTILITIES COMPANY
ADMINISTRATIVE OFFICES
RIDGEWAY CENTER STAMFORD, CONNECTICUT
Imagine it—standard divider doors to fit non-standard room openings! Now, the Kennavider door and matching hardware package makes short work of such room division problems.

Kennatrack engineers have pre-figured most room opening requirements. They’ve designed the right doors and matching hardware to fill each such opening—fashionably and economically. Further, they’ve put the doors, necessary hardware and full instructions in one package and made it available to you in one-stop shopping. The Kennavider plan makes you the specialist in room divider problems; gives you the package to conquer unlimited room divider sales in today’s building market. Be sure to read the next page for full details.

KENNATRACK CORPORATION
3949 E. JACKSON BLVD., ELKHART 10, IND.
A Subsidiary of (KNO) Products Co.
KENNAVIDER package includes two-door units, track, hangers, factory-mortised hinges, jamb set, door guide, screws, instructions. All hardware is Kennatrack's heavy-duty Custom 1300 Series.

Now... all in one package!

Kennavider Philippine mahogany doors install with snap-on ease, save immensely on assembly and installation time. Door panels and all hardware necessary for a finished installation are included in the Kennavider package (hinges mortised and assembled at the factory). Two-door units (separate jamb and intermediate sets) are completely interchangeable. Add as many as you want to fill any width opening. Two styles—traditional flush panels and a classic combination of louvered top with raised-panel bottom. Warm mahogany finish on all six sides. Available in 6'8" and 8'0" heights and in standard panel widths.
NEW PRODUCTS
continued from page 154

RANDOM WIDTH PATTERN
IN GROOVED WALL PANELS

Lamidall plastic laminate panels are available in five wood grains with random grooves. Panels are 16-in. wide or 4-ft wide, in 8- and 10-ft lengths for installation over studs, furring strips, or any solid backing. Woodall Industries, Inc., 3500 Oakton St., Skokie, Ill.

CIRCLE 226 ON INQUIRY CARD

AIR PURIFIER REMOVES
DUST, POLLEN, SMOKE

Smoke, pollen, dust and dirt particles are removed from the air through electrostatic precipitation by Airclean, room air purifier. No ozone is produced, and there are no filters to be replaced. Permanent collector plates are easily removed for washing. The unit comes in a choice of four models—portable unit, recessed-wall unit, wall surface unit, and window-mounted unit. Progress Webster Corp., Rochester 21, N.Y.

CIRCLE 227 ON INQUIRY CARD

VINYL TILE IN SQUARES AND STRIPS

Wide decorative range and durability are features of NoScrub Deluxe vinyl tile, available in both 9- by 9-in. tiles and 6-ft-wide strips. Both types can be laid directly on concrete slabs. Five patterns are offered in several colors. Goodyear Tire & Rubber Co., Akron 16, Ohio

CIRCLE 228 ON INQUIRY CARD

EASY-OPENING GARAGE DOOR
HAS BAKED ENAMEL FINISH

A lightweight garage door with horizontal aluminum panels is available in white, beige, yellow, coral, and green. The overhead opening hardware is balanced at lifting points so that only an 8-lb lift is needed to open the door. The finish coat of baked enamel has an estimated life expectancy of at least 10 years. Also available is epoxy primer coat for custom finishing. Liteline, Inc., 1808 Abalone Ave., Torrance, Calif.

CIRCLE 229 ON INQUIRY CARD

PUSHBUTTON DOOR LOCK
ELIMINATES KEYS

To operate Combo Lock, a pushbutton mechanism for opening doors, you push one or more of five buttons in a pre-set order and turn the knob to release the lock. The combination can be changed only by the owner. It is available with or without keys. Emerson Electric Co., 8100 Florissant Ave., St. Louis 36, Mo.

CIRCLE 230 ON INQUIRY CARD

Burnham Quality Hydronic Heating...Best Answer to Homebuyer's Needs!

BASE-RAY®, the first and still the best radiant baseboard, provides the ultimate in comfortable, healthful hydronic heating. Leading architects choose its inconspicuously slim design for easy adaptability to the modern concept of home design. BASE-RAY®'s clean, quiet, draft-free performance permits full, comfortable use of every floor-plan area. Best in cast-iron construction for lifetime service, trouble-free performance. When you team BASE-RAY with a Burnham quality cast-iron packaged boiler in Burnham's F.H.A. approved series loop system, you provide the kind of heating that satisfies your clients best!

*Hydronics—the science of heating with warm water

Base-Ray

Attractive, space-saving boiler for gas or oil
Learn how Burnham helps your builder clients sell homes faster. Write for 6-page folder.

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HEATING & COOLING DIV.
IRVINGTON, N.Y.

Send me your new 6-page folder on Burnham Hydronic Heating.

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Address
City State

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For more data, circle 43 on Inquiry Card

RANDOM WIDTH PATTERN
IN GROOVED WALL PANELS

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*Hydronics—the science of heating with warm water

Base-Ray

Attractive, space-saving boiler for gas or oil
Learn how Burnham helps your builder clients sell homes faster. Write for 6-page folder.

BURNHAM CORPORATION
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IRVINGTON, N.Y.

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For more data, circle 43 on Inquiry Card
DISHWASHER FEATURES

AUTOMATIC HEAT BOOSTER

Three-way washing action in the Imperial 900 electric dishwasher insures full scrubbing and rinsing of all items, regardless of their positions in either upper or lower baskets. An automatic heat booster system is provided for use whenever there is not enough hot water. Five dishwashing cycles are possible. Waste King Corp., 3300 E. 50th St., Los Angeles, Calif.

CIRCLE 231 ON INQUIRY CARD

FREE-STANDING FIREPLACE

CAN GO INDOORS OR OUT

Free-standing silicon carbide ceramic fireplaces formed on a potter's wheel have simple lines and a rough, rich surface texture. Their light weight makes them safe to set on any light, non-flammable hearth anywhere in the home. No masonry support is required. Wood, charcoal, or coal can be burned. Protective screens fit openings. Strawberry Bank Craftsmen, Inc., Box 475, Little Compton, R.I.

CIRCLE 232 ON INQUIRY CARD

PUSHBUTTONS OPERATE

REMOTE CONTROL SYSTEM

A pushbotton system is designed for remote control of any or all electrical devices in a home. The Swepe system uses low-voltage magnetic relays mounted on decorative control strips energized by an electronic power pack. Indicator lights on the control panel show the condition of each circuit at all times. A programming device allows circuits to go on and off at predetermined times. Reiner Industries, Inc., 4811 Telegraph Rd., Los Angeles, Calif.

CIRCLE 233 ON INQUIRY CARD

MAHOGANY AND VINYL

SHADES, FOLDING DOORS

Philippine mahogany and vinyl are used together to achieve multi-tone designs for folding doors and window shades. The material can be cleaned with a damp cloth. American Accordion-Fold Doors, Inc., 175-35 Liberty Ave., Jamaica 35, N.Y.

CIRCLE 234 ON INQUIRY CARD

LIGHT CONTROL GIVES

FULL-RANGE DIMMING

The Luxtrol SBD 500 light control gives uninterrupted dimming from full brightness to off. It is the same size as an on-off switch, and can control 500 watts of incandescent lighting. Superior Electric Co., Bristol, Conn.

CIRCLE 235 ON INQUIRY CARD

more products on page 168

Acme-National Refrigeration Co., Inc.

 Offices and Factory: 19-26 Hazen Street, Astoria 5, N. Y.
 Mailing Address: P. O. Box 188, Astoria 5, N. Y.
 See our Catalog in Sweet's

For more data, circle 44 on Inquiry Card

Architectural Record Houses of 1962 159
BEFORE YOU COMPLETE PLANS FOR YOUR NEXT PROJECT, TAKE ADVANTAGE OF THE CREATIVE VIEW PROGRAM

If you're one of the many architects who work with project builders, CARADCO's Creative View Program can be helpful to you. The basic purpose of CARADCO's Creative View Program is to enhance the "curb appeal" of new houses by placing special design emphasis on Windows and Entrances. Working from your sketches, CARADCO's product engineers, together with the Living Design Center of House & Garden Magazine, will submit appealing Creative View treatments incorporating CARADCO Window and Entrance components. Each treatment will be shown in a full color perspective rendering which you can present to your client.
HERE'S HOW CARADCO CAN HELP YOU AND YOUR BUILDER NAIL DOWN THE SALE

CREATIVE VIEWS ARE CUSTOM-TAILORED, ARCHITECTURALLY CORRECT, PROVIDE MAXIMUM LIGHT...AIR AND BEAUTY. Creative Views illustrate how you can achieve attractive, sales-compelling design variations in Entrance and Window treatments with the added distinction given by inserts and surrounds. You can offer these Creative View renderings to your builder-clients to help them interest Prospective Homebuyers.

CARADCO OFFERS A COMPLETE BUILDER MERCHANDISING PROGRAM. National and local consumer advertising, effective display material for Model Houses and a training program for builders' sales force. These are just part of a comprehensive and powerful plan to make buyers out of prospects through the Creative View Program.

For complete information, call your Caradco Distributor or write Caradco, Inc., Box 658, Dubuque, Iowa.

Manufacturers of Creative Building Products

For more data, circle 45 on Inquiry Card
AGE OLD SLATE—
IN A 1962 RECORD HOUSE

A striking combination of slate panels from the Stephens-Jackson quarry and a white steel frame combine to make this an award-winning house.

Stephens-Jackson has been filling exacting slate specifications for architects for 82 years, and will be happy to supply your needs for roofing, blackboards, panels, window sills and sidewalks.

STEPHENS-JACKSON COMPANY
Pen Argyl Pennsylvania

NEW PRODUCTS
continued from page 159

VINYL CLOTH SHADES
IN MANY PATTERNS

Window shades of vinyl-impregnated shade cloth are offered in a choice of eight stock patterns, including delft, poppies, gentian flowers, paisley, and awning strips, all in a variety of colors. The designs are printed in vinyl ink.

Howard & Schaffer, Inc., 22 E. 55th St., New York 22, N.Y.
CIRCLE 236 ON INQUIRY CARD

RANDOM PLANK LOOK
IN WOOD PANELING

Prefinished hardwood panels are 4 ft wide and 7, 8, 9, and 10 ft long with deep lengthwise grooves to give a random plank effect. Finish is resistant to dirt and grease. Six available woods are walnut, cherry, elm, oak, birch, and maple. Alternate color tones are tawny oak, platinum birch, and antique elm.

Weyerhaeuser Co., Tacoma, Wash.
CIRCLE 237 ON INQUIRY CARD

BUILT-IN COFFEE MAKER
BREWS COFFEE QUICKLY

A built-in coffeemaker automatically brews from 2 to 12 cups of coffee in less than four minutes. A quick recovery water system means large amounts can be brewed for parties, etc. The hot water storage tank fits inside any standard kitchen cabinet. The control assembly consists of a small control panel, plus the coffee brewing cartridge and serving decanter. A push of a button gives instant hot water for other beverages.

Cory Corp., 3300 W. Peterson, Chicago 45, Ill.
CIRCLE 238 ON INQUIRY CARD

PARQUET PANELS FOR WAINSCOTS

Parquet blocks, in a choice of four woods, are laminated to a resilient base to provide a new wainscot material. Each Flexstrip unit has four 6-in. square blocks mounted on a 1-ft square panel for application on existing walls or to furring strips.

Homasote Co., Trenton 3, N. J.
CIRCLE 239 ON INQUIRY CARD

FIREFLACE STANDS
ON ITS OWN LEGS

The Tucsonan steel fireplace can be used either free-standing or built-in, in almost any interior setting. It is 35-in. high, 22-in. deep, and 34-in. wide, with pedestal legs to remove the fire chamber from the floor. Included is a brass framed fire screen which locks into the fireplace body for added safety.

Space-Planner Co., Inc., Tucson, Ariz.
CIRCLE 240 ON INQUIRY CARD
SELF-SEALING SHINGLES
RESIST WIND, RAIN

Super 300 Seal-O-Matic shingles are heavyweight, self-sealing asphalt shingles with high resistance to damage from storms and wind. After application, shingle edges seal automatically from the sun’s heat. There is a choice of colors. Johns-Manville, 22 E. 40th, New York 16, N.Y.

CIRCLE 241 ON INQUIRY CARD

WIDE ALUMINUM SIDING
SHORTENS ERECTION TIME

A 16-in.-wide vertical aluminum board and batten siding shortens erection time compared with standard 12-in. panels. The Alumature baked-enamel finish is expected to last up to 30 years and is available in all regular Alcoa siding colors. Aluminum Co. of America, 1501 Alcoa Bldg., Pittsburgh 19, Pa.

CIRCLE 242 ON INQUIRY CARD

COLORFUL MOSAICS
WITH CERAMIC TILE

Six new patterns, designed by color expert Howard Ketcham, have been added to the line of Vicco KJA mosaic ceramic tiles, making 13 colorful patterns now available. Since the tile is impervious to water and is easy to clean, it can be used both indoors and outdoors. The %-in. square tiles are mounted on 1-ft square sheets on a mesh backing. Amsterdam Corp., 285 Madison Ave., New York 17, N.Y.

CIRCLE 243 ON INQUIRY CARD

ELECTRIC BASEBOARDS
FORM HYDRONIC SYSTEM

A hot water heating system uses baseboard radiators which contain electric heating elements immersed in non-circulating water. Water supply and expansion tanks fit between joists. A central control plan permits individual zone or room temperatures to be controlled through wall-mounted thermostats. Room temperatures are said to remain constant within one-quarter of a degree. Aqua-Lectric, Inc., 5724 W. 36th St., Minneapolis 16, Minn.

CIRCLE 244 ON INQUIRY CARD

FOAM INSULATION
CUTS FREEZER SIZES

Foam insulation for food freezers allows more food to be stored in less space than before. One example is a 25-cu-ft freezer which occupies the same floor space as a 20-cu-ft model. It holds 828 lbs of food in large gliding baskets. A two-door upright freezer has 18-cu-ft that stores 616 lb of food, but occupies the same floor space as many 12-cu-ft freezers. Hotpoint, 5600 W. Taylor St., Chicago 44, Ill.

CIRCLE 245 ON INQUIRY CARD

more products on page 166

SATISFACTION
WARRANTY

The Air Conditioned Range is of the finest in cooking equipment and provides the best cooking fume and odor control that you have ever experienced. If you are not entirely satisfied, range may be returned within 90 days after purchase for full refund.

Residential Division • Dept. 108
JENN-AIR PRODUCTS COMPANY, INC.
1107 Stadium Drive • Indianapolis 7, Indiana

Please send me complete information on The Air Conditioned Range and the name of my Jenn-Air Distributor.

Name ____________________________

Street ____________________________

City _______ Zane __________ State ______

For more data, circle 47 on Inquiry Card
NEW WINDOWS IN TRUSCON CURTAIN WALLS INCREASE DESIGN POSSIBILITIES

New Aluminum Vertically Pivoted Windows (illustrated) and Top-Hung Inswing Windows in Curtain Walls by Truscon, a division of Republic Steel Corporation, provide welcome new freedom in design and application.

Vision-Vent® and Grid-Vue are Truscon’s Curtain Walls with the windows already in place. Their built-in, pre-engineered economies, combined with an ever wider choice of aluminum window types, make Truscon first choice for more and more outstanding new buildings.

Truscon Curtain Walls are available in many window sizes, with a choice of high-gloss panel colors, porcelain enamel, stainless steel, or aluminum. For all the advantages of modern curtain wall construction (fast erection, reduced weight on foundation, more usable interior space, excellent insulation and ventilation), investigate Truscon Vision-Vent and Grid-Vue. See your Truscon representative or send coupon.
THE NEW KOPPERS RESEARCH CENTER, east of Monroeville, Pa., is doubly striking with its tall Aluminum Vertically Pivoted Windows in Truscon's Vision-Vent Curtain Wall. Panel shapes complement perfectly the clean, crisp lines of other wall materials and decor.

REPUBLIC'S NEW HIGH STRENGTH STRUCTURAL STEEL TUBING provides needed strength in columns, posts, lintels, spondrels, and other structuralss—for fewer dollars. Lightweight strength cuts cost of footings and foundation; simplifies handling, fabrication, and erection. Easily joined, highly adaptable. Send coupon for Republic's new specifications booklet about ELECTRUNITE® Structural Steel Tubing with 36% more strength.

SAVE CONSTRUCTION TIME with Republic's New Heavy Head High Strength Bolt Assemblies. Two-man team replaces costly erection crews. When wrenches up tight, Republic High Strength Bolts provide a vise-like clamping force which transfers loads by friction to the structural members. Fatigue life is improved. Joints are stronger than connections where loads are carried in shear. Send coupon for illustrated folder.

THE NEW CANTON CITY HALL, CANTON, OHIO, takes full advantage of Republic's ENDurO® Stainless Steel in mullions, column sheathing, curtain wall panels, rooftop equipment, doors, windows, elevator interiors, soffits, fasciae, and curtain wall back-up members. Need for painting was eliminated, cleaning reduced, maintenance minimized. For further information contact your nearest Republic representative or check Sweet's.

REPUBLIC STEEL CORPORATION
DEPT. AR-4194-A
1441 REPUBLIC BUILDING • CLEVELAND 1, OHIO

Please send more information on:
☐ Truscon Vision-Vent Curtain Walls
☐ Republic High Strength Structural Bolt Assemblies
☐ ENDurO Stainless Steel for architectural applications
☐ ELECTRUNITE Steel Architectural Tubing

Name_____________________________Title_____________________________
Company______________________________
Address______________________________
City_____________________________Zone____State________________________
Let's light in! Sculptured design, in 5 colors

The **FILUMA**

**Light new look in Garage Doors**!

Weighs only \( \frac{1}{3} \) as much as wood doors!

It's new. It's translucent. It's Filuma! The overhead type door with panels of colorful translucent fiberglass, reinforced by a strong extruded aluminum frame. Transforms the darkest garage into cheery light! No windows necessary. Light in weight, easy to install. Operation is touch-easy. Choose from five smart colors—yellow, green, tan, coral, or white. Filuma is warp-proof, shatterproof, weatherproof. Never needs painting or glazing! Sizes to fit one and two car garages. See your local lumber or building supply dealer now!

**Filuma** is warp-proof, shutterproof, weatherproof. Never needs painting or glazing! Sizes to fit one and two car garages. See your local lumber or building supply dealer now!

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**NEW PRODUCTS**

*continued from page 163*

**HARDWOOD ON FOAM PLANKS GLUED DIRECTLY TO WALLS**

Hardwood veneers are laminated to a semi-rigid base of compressed polystyrene foam and prefinished with clear vinyl to make lightweight planks, 8-ft long, in random widths from 4 to 10 in. The planks can be applied to any dry, firm surface with special glue. A matching line of flexible wood veneers has aluminum foil backing. Plywood International Corp., 160 Centre St., Brooklyn 31, N.Y.

**CIRCLE 246 ON INQUIRY CARD**

**BATTERY-POWERED FIRE ALARM**

A home fire alarm which looks much like a round thermostat rings long and loud when room temperature rises above a level set by the owner. The battery-powered device is installed by simply placing it on the wall. Win-Check Industries, Moonachie, N.J.

**CIRCLE 247 ON INQUIRY CARD**

**PREBUILT SHOWER STALL OF STRONG PLASTIC**

Polyester resin reinforced with glass fiber, the same plastic used for impact-resistant boats, is used in a one-piece, pre-built shower stall. It has walls of American Cyanamid's Laminae with a hard, lustrous finish which resists mildew and fungus growth. Ceralyte Corp., 165 Social Hall Ave., Salt Lake City, Utah

**CIRCLE 248 ON INQUIRY CARD**

**RANGE HOOD HIDES FAN TO SAVE CABINET SPACE**

Cabinet-Sav'R is a low-cost range hood with a pre-wired fan concealed beneath the hood in order to save headroom and cabinet space. The single-speed fan can be used with both horizontal and vertical discharge. Under the hood is a range-illuminating light with separate switch. Berns Air King Corp., 3050 N. Rockwell St., Chicago 18, Ill.

**CIRCLE 249 ON INQUIRY CARD**

**SWITCH CONTROLS CHANGE FROM HEATING TO COOLING**

A switch on the thermostat changes a gas-fired furnace to a summer air conditioning unit. Both systems use the same ductwork, and change-over is made possible by an interchangeable single- or multi-speed blower arrangement. Sixteen units, designed for installation versatility, are available in the line. American Furnace Co., 1300 Hampton Ave., St., Louis, Mo.

**CIRCLE 250 ON INQUIRY CARD**

For more data, circle 51 on Inquiry Card

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**THE IGLOO**

A FREE-STANDING FIREPLACE

*for*
- Heating
- Looking
- Cooking

*made of*
- Silicon Carbide
- Easy to Install
- Burns Wood, Coal, Charcoal

**27 X 30 X 33' high**

Robert Damora • Architect • Hanslin Associates • Builders

For more information write:
**STRAWBERRY BANK CRAFTSMEN, INC.**
BOX 475 • LITTLE COMPTON • RHODE ISLAND

For more data, circle 50 on Inquiry Card
NEW PRODUCTS  
continued from page 166

FREEZER CHANGES TO REFRIGERATOR
Flexible usage is a feature of a built-in combination refrigerator-freezer which can be converted to all refrigerator either temporarily or permanently. The frost-free "convertible" provides either an 11-cu-ft refrigerator with a 5-cu-ft freezer, or a 16-cu-ft refrigerator. Revo, Inc., Deerfield, Mich.

CIRCLE 251 on Inquiry Card

VINYL WALL COVERINGS FROM SWEDEN
Vinyl wall covering fabrics from Sweden can be used on any smooth surface. Patterns include embossed linen, homespun weave, Baltic Seagrass with vertical lines, embossed leather, and Swedish woodgrains. All patterns come in a variety of durable colors. Galon Fabrics, Inc., 281 Fifth Ave., New York 16, N. Y.

CIRCLE 252 on Inquiry Card

CANE BETWEEN VINYL SHEETS  
FORMS DECORATIVE PANELS
Layers of rigid vinyl surround cane which is handwoven in a variety of patterns. The clear or translucent sheets can be used for furniture panels, doors, screens, and decorative lighting. Polyplastex United, Inc., 870 Springfield Road, Union, N. J.

CIRCLE 253 on Inquiry Card

RADIANT GLASS HEATING PANELS
Laminated glass is said to increase radiant heat and prevent shattering in electric panel heating units. The panels are available in baseboard, wall and ceiling models, and in portable units. Baseboard and wall models may be surface mounted or recessed. Gar Wood Industries, Inc., 800 Lowell St., Ypsilanti, Mich.

CIRCLE 254 on Inquiry Card

ROUND BOWL IS ADDED TO KITCHEN SINK

CIRCLE 255 on Inquiry Card

For more products on page 176
Now there's no kitchen to design-in a dishwasher...

Washes, dries place settings for 10 people.* It gets dishes really clean with General Electric 2-Way Dishwashing Action. Power Tower washes out from the middle, Power Arm washes up from the bottom. And with exclusive Flushaway Drain, there's no need to scrape or hand-rinse.

Slides right under the sink. General Electric's flexibility of installation allows you to put SS202 in either 24" or 36" of space. And there's no problem about sink bowls either. General Electric has arranged with many top manufacturers to have sink bowls specifically designed for use in conjunction with the SS202. You can get the list from your General Electric representative.

Yes, you can design-in a Disposall®, too. In kitchens where a food-waste disposer is desired, the sink bowl may be located 12" to the right or left of the center of the dishwasher. This allows the dishwasher and Disposall® to be installed in only 36" of cabinet space.

*National Electrical Manufacturers' Association Standards

There is nothing just as good as General Electric

Progress Is Our Most Important Product

GENERAL ELECTRIC
too small

General Electric's revolutionary new built-in goes right under the sink!

Not a miniature . . . not a portable . . . but a built-in, family-size dishwasher with features that have made General Electric the biggest selling dishwashers on the market.

Undersink Model SS202 puts an end to the question architects, builders and consumers ask these days: "How can I get a dishwasher into a compact kitchen?"

Here's the answer—and only General Electric has it. General Electric Model SS202 fits in the space under the sink bowl that now is wasted or used inefficiently for storage of odds and ends.

Model SS202 is just one in a complete line of General Electric dishwashers and Disposalls®. There's one for every kitchen, one for every need.

Undersink Dishwasher Rough-In

1 1½" THICK COUNTERTOP

10" MAX.

12" MIN.

36" MIN.

34½" MAX.

20½" MAX.

6" MAX.

22" MAX.

16½" TO BACK WALL

12" --i

4" --i

FRONT VIEW

SIDE VIEW

(1) Install Hand Valve in Dishwasher Supply Line in Area C

(1) Water lines to faucet may be run through area "A" (2) Hot-water line and power to dishwasher may be run through area "B" (3) High drain-line air gap, sink drain and trap should be in area "C".

Send in this coupon for the story of Undersink Model SS202, complete with blueprints, installation instructions, sink-bowl manufacturers. Or contact your General Electric representative.

General Electric Company
Dishwasher & Disposal Dept., Building 3
Appliance Park - Louisville, Ky.

Please send me full details on the SS202 Undersink Dishwasher.

NAME__________________________

ADDRESS________________________

CITY________________________STATE_____

For more data, circle 54 on Inquiry Card

ARCHITECTURAL RECORD HOUSES OF 1962 171
In their constant search for a design Focal Point, many of the nation's leading architects have turned to ceramic tile—Pomona's Sculptured Tile. A new concept in a proven material. Used sparingly as an insert or lavishly as solid panels, Sculptured Tile becomes the Focal Point in entry or living room; in kitchen or bath. Wherever men of imagination wish to use it.

*FOCAL POINT...*
A REDWOOD DECK MAKES A HOME MORE LIVABLE. Here it integrates house and garden in an outdoor living area—at a fraction of the cost of an added room. Adding a deck or patio of redwood costs only $2 to $4 a square foot, and the initial cost is the only cost. Natural chemicals in redwood heartwood protect it from decay and termite attack, so it can be left unfinished to weather beautifully. Write Department A-13 for your copy of an idea-stimulating booklet, "REDWOOD DECKS".

Architect: John Lord King, A.I.A.

CRA

All the wonderful warmth of wood...lastingly yours in redwood

CALIFORNIA REDWOOD ASSOCIATION • 576 SACRAMENTO STREET • SAN FRANCISCO 11

CRA-TRADEMARKED CERTIFIED KILN DRIED REDWOOD

The California Redwood Association coordinates the research, forest management and consumer service activities of these member mills: THE PACIFIC LUMBER CO., MPSON TIMBER CO. • UNION LUMBER COMPANY • WILLITS REDWOOD PRODUCTS CO. • ARCATA REDWOOD COMPANY • GEORGIA-PACIFIC CORPORATION
Every day 4,684 more families install GAS HEAT

...If you own your own home... or plan to, you'll want to know why.

Everybody wants the heating system that delivers the most comfort—that's why, where natural gas is available, people prefer it. Over 4 times more new homeowners choose Gas Heat than all other heating systems combined.

With a modern Gas system, you enjoy whole-house comfort. Every room gets its share of healthy warmth. Clean, fresh air from the outdoors can be circulated constantly; changed in every room, every hour.

Bills are surprisingly low with “Fresh-air” Gas heat. Over the life of your mortgage, you can save thousands of dollars. And there is no need to keep some rooms colder than others or close them off to conserve heat. That means less likelihood of youngsters becoming chilled when they move from one “zone” to another!

Air conditioning extra: The ducts of a Gas heating system can be planned so you can easily have whole-house cooling with Gas. You can install it initially or it can be added on later economically. AMERICAN GAS ASSOCIATION

LIVE MODERN FOR LESS WITH GAS

VISIT THE CENTURY 21 GAS EXHIBIT AT THE SEATTLE WORLD'S FAIR, APRIL 21 TO OCTOBER 21, 1962

For more data, circle 57 on Inquiry Card
YOUR GLAMOROUS SERVANT

Fashion that whispers wonderful things about you!
Function that serves you around the clock...giving precious extra time for family and guests. Crafted of nickel bearing stainless steel with incomparable lifetime beauty finish.

Write for literature detailing advanced features: fluorescent light, disposer switch, remote controlled drains, appliance outlets, dual faucet flow and spray.

ELKAY MANUFACTURING CO., 2700 S. 17th AVE., BROADVIEW, ILL.

For more data, circle 58 on Inquiry Card
NEW PRODUCTS

continued from page 169

FREEZER REFRIGERATOR
FITS IN SMALL SPACE
Frostless Foodarama is only 41-in.
wide, but it has a refrigerator with a
capacity of 11.8 cu ft and a freezer with
5-cu-ft capacity. Doors on both units
open wide, with shelves providing extra
storage flexibility. An air circulation
system assures uniform temperatures
in both freezer and fresh food compart­
ments. Kelevinator Div., American Mo­
CIRCLE 256 ON INQUIRY CARD

STAINLESS STEEL
USED FOR FURNITURE
Stainless steel residential furniture in­
cludes three table designs, two chan­
deliers, and frames for upholstered
pieces. All pieces are welded with no
visible screws or nails. Warm colors
are used in the upholstery materials of
velvet, satin and silk. Evelyn Jablow,
250 E. 52nd St., New York, N.Y.
CIRCLE 257 ON INQUIRY CARD

RANGE AND OVEN
WITH FUME CONTROL
The Air Conditioned Range is a built-in
cooking surface with its own fume con­
trol system which removes cooking
odors, smoke and heat before the fumes
escape into the room. During cooking,
fumes are sucked through a pull-off slot
in the raised cover. Operation is quiet
because power unit is suspended on a
resilient mounting in a cabinet.

TERRAZZO PATTERNING
IN VINYL ASBESTOS TILE
Terrazzo patterning in vinyl asbestos
floor tile is achieved with chips of mar­
ble that are encased in translucent
vinyl. The tile has the monolithic ap­
presentation of actual terrazzo. The chip
patterning is deeply imbedded for long
life and resistance to wear. The tile can
be installed on, above or below grade
over most subfloors. Asrock Products,
Box 531, San Antonio, Tex.
CIRCLE 260 ON INQUIRY CARD

PULL TO START
WATER WITH WASHERLESS FAUCET
An easy pull on a faucet without wash­
ers starts the water flow, while push­
ing stops the water. Turn the Push­
Pull control knob to the right for cold­
er water; to the left for hotter water.
With the control knob mounted on the
front of the spout, wet hands do not
drip over the fittings. There are fittings
for bath, shower, and lavatory. Ameri­
can-Standard, 40 W. 40th St., New
York 18, N.Y.
CIRCLE 261 ON INQUIRY CARD

TEMPERATURE GOES DOWN
WHEN LIGHTS GO OFF
A light-sensitive thermostat automati­
cally adjusts room temperature to ei­
ther a higher or lower setting, with a
differential of up to 10 degrees. The
higher temperature is maintained dur­
ning the day and when artificial light at
night indicates the room is occupied.
When lights are turned off, the tem­
perature drops to the lower setting.
Federal Pacific Electric Co., 50 Paris
St., Newark, N.J.
CIRCLE 262 ON INQUIRY CARD
NEW LITERATURE for home-planning

For more information . . . circle the key numbers of the literature you want (see number below each literature item) on the Inquiry Card, pages 177-178.

DECORATIVE LAMPS
(A.I.A. 31-F-23) New designs in lighting fixtures are illustrated in three catalogs which present floor lamps, table lamps, and ceiling fixtures. Habitat Inc., 336 Third Ave., New York 10, N.Y.

CIRCLE 274 ON INQUIRY CARD

PLAY EQUIPMENT
Concrete play equipment designed to please children’s eyes in addition to allowing a variety of activities is presented in a 12-page booklet, Form, Inc., 12900 W. Ten Mile Rd., South Lyon, Mich.

CIRCLE 275 ON INQUIRY CARD

WATER SOFTENERS
(A.I.A. 28-D-32) Water softeners, both automatic and manually-controlled, are described in an eight-page booklet which includes installation information. Culligan Inc., Northbrook, Ill.

CIRCLE 276 ON INQUIRY CARD

DECORATIVE PANELS

CIRCLE 277 ON INQUIRY CARD

END CAP FOR PARTITIONS
A five-page folder gives diagrams and installation details of a metal cap which fastens to the end stud of gypsum wallboard or gypsum lath partitions to replace conventional wood back-up strips. Allmetal Co., 1911 Ridge Ave., Evanston, Ill.

CIRCLE 278 ON INQUIRY CARD

VENTILATING FANS
(A.I.A. 30-D-1) A new kitchen wall ventilating fan which is designed to move air fast with minimum noise is the highlight of a four-page folder. Ventrola Mfg. Co., Owosso, Mich.

CIRCLE 279 ON INQUIRY CARD

COLORFUL LIGHTING
Decorative lighting using hand-blown colored glass over glass or free-form plastic fixtures is described in an eight-page booklet. Thomas Industries Inc., 207 E. Broadway, Louisville 2, Ky.

CIRCLE 280 ON INQUIRY CARD

AIR CONDITIONERS
(A.I.A. 30-F-1) New publications from Chrysler Airtemp include a 14-page booklet designed to help select room air conditioners; a six-page folder on 1962 residential products; and a four-page folder with application data on central cooling systems. Chrysler Airtemp, Box 1037, Dayton 1, Ohio

CIRCLE 281 ON INQUIRY CARD

METAL FOLDING DOORS
A 12-page catalog gives details and installation pictures of metal folding doors for closets. Float-Away Door Co., 1173 Zonolite Road, Atlanta 6, Ga.

CIRCLE 282 ON INQUIRY CARD

WINDOW PLANNING
Architects’ sketches illustrate design ideas for both interiors and exteriors of wood windows. The Malta Mfg. Co., 120 Mill Street, Gahanna, Ohio

CIRCLE 283 ON INQUIRY CARD

USING HARDBOARD

CIRCLE 284 ON INQUIRY CARD

ELECTRIC EQUIPMENT
“Westinghouse Products for Residential Builders” is a 32-page catalog of the company’s full line. Westinghouse Electric Corp., P.O. Box 2099, Pittsburgh 30, Pa.

CIRCLE 285 ON INQUIRY CARD

LIGHT CONTROL
Details are given on a one-button, dimming and on-off light control for both fluorescent and incandescent lights. Hunt Electronics Co., Dallas 20, Texas

CIRCLE 286 ON INQUIRY CARD

USING MARBLE
Full color photographs of actual houses show advantages of using marble for decorating almost every room in the house. The 20-page booklet also discusses such features as durability and long-term economy. Marble Institute of America, Inc., 32 S. Fifth Ave., Mount Vernon, N.Y.

CIRCLE 287 ON INQUIRY CARD

KITCHEN DECORATING
“Dream a Kitchen” has 16 pages of kitchen decorating ideas using inlaid linoleum flooring. Full-color photographs of eight kitchens and many linoleum patterns are shown. Armstrong Cork Co., Lancaster, Pa.

CIRCLE 288 ON INQUIRY CARD

DECORATIVE DOORS
(A.I.A. 19-E-1) Designs possible with the Symphonic line of flush, bifold, and stile and rail doors are shown in an eight-page illustrated booklet. Simpson Timber Co., 2046 Washington Bldg., Seattle, Wash.

CIRCLE 289 ON INQUIRY CARD

CERAMIC TILE
Ceramic tile for residential interiors is illustrated by sketches showing use of the tile in kitchen, family room, home bar, and bathroom. Amsterdam Corp., 285 Madison Ave., New York 17, N.Y.

CIRCLE 290 ON INQUIRY CARD

COFFEE BREWER
Coffee Butler can automatically brew and serve a cup of fresh (not instant) coffee every 12 seconds. The appliance can be installed with water supply, drain and electrical connections, in either a wall or cabinet. Face of the unit is 12 by 22 in. Booklets give details. Havajava Mfg. Co., 711 W. Ivy St., Glendale 4, Calif.

CIRCLE 291 ON INQUIRY CARD

LAYING OAK FLOORS

CIRCLE 292 ON INQUIRY CARD

DISPOSER DETAILS
In-Sink-Erator’s complete line of residential garbage disposers is presented in a six-page folder featuring automatic reversing action and a plastic detergent shield. Both lock-cover and continuous-feed models are available. In-Sink-Erator Mfg. Co., Racine, Wis.

CIRCLE 293 ON INQUIRY CARD

BATHROOM CABINETS
Both metal and wood are used for bathroom cabinets and accessories, shower stalls, vanities, and kitchen cabinets described in a 16-page catalog. Standard Steel Cabinet Co., 3701 Milwaukee Ave., Chicago 41, Ill.

CIRCLE 294 ON INQUIRY CARD

DOORS AND WINDOWS
A 12-page booklet gives illustrations and specifications for a complete line of aluminum windows and doors. Sketches show interior construction, extruded aluminum members, and mounting requirements. Roger Industries, Inc., 205 Watts Road, Jackson, Mich.

CIRCLE 295 ON INQUIRY CARD

more literature on page 193

ARCHITECTURAL RECORD HOUSES OF 1962 179
The last word in kitchens gets the right word from wood, with tongue and groove ceiling and walls, wood cupboards above and below the counters—all cheerfully brightened by well-placed windows and wood-encased cove lighting overhead.
For known values in unusual home design

use WOOD . . . and your imagination

New departures in design break with tradition in many ways. But the traditional warmth of wood always remains to work to your advantage in contemporary and conventional homes alike. Whether applied as a weathered shingled roof or a plank and beam ceiling, wood's beauty is appealingly apparent; its durability, undeniable.

A capacity to grace any site, compatibility with every material . . . these are the virtues of wood's varied grains, tones, and textures. Sound controlled from room to room, cold and heat held comfortably in check from season to season . . . these, too, are among wood's numerous natural abilities. You'll find all of wood's generous qualities make it welcome wherever it goes. For more data on designing with wood, write:

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

Exposed laminated beams and post supports, in concert with a plank­ed ceiling and paneled bookcase-wall, set the tone for comfort in this modern living room; uphold wood's accord with other materials.

Snug in its sloping site, this contemporary's shingled roof and planked siding demonstrate some of wood's natural hillside manner. Note how the beauty of weathered wood suits this low, rambling residence designed by Rex Lotery, A.I.A., architect.
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, editor of the Dow Building Cost Calculator and Valuation Guide, an F. W. Dodge Corporation service. 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 representative geographic areas of the United States. The figures 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 abnormal conditions prevail in one locale or another. However, over a period of 35 years the Dow Calculator has established a good record and we believe 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 lo-

## RECORD HOUSES 1962 Comparative Building Costs

<table>
<thead>
<tr>
<th>NAME OF HOUSE</th>
<th>WHERE BUILT</th>
<th>CONSTRUCTION COST*</th>
<th>COST TO BUILD IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEKES House</td>
<td>Seattle, Wash.</td>
<td>$128,000</td>
<td>$43,000</td>
</tr>
<tr>
<td>PROUCHE House</td>
<td>Kansas City, Mo.</td>
<td>129,200</td>
<td>40,800</td>
</tr>
<tr>
<td>KERNER House</td>
<td>Kansas City, Mo.</td>
<td>129,750</td>
<td>42,300</td>
</tr>
<tr>
<td>HUNTER House</td>
<td>Kansas City, Mo.</td>
<td>134,750</td>
<td>42,300</td>
</tr>
<tr>
<td>NEW YORK, N.Y.</td>
<td>New York, N.Y.</td>
<td>134,550</td>
<td>42,500</td>
</tr>
<tr>
<td>NEW YORK, Calif.</td>
<td>New York, Calif.</td>
<td>132,500</td>
<td>41,250</td>
</tr>
<tr>
<td>NEW YORK, N.Y.</td>
<td>New York, N.Y.</td>
<td>132,100</td>
<td>41,750</td>
</tr>
<tr>
<td>NEW YORK, N.Y.</td>
<td>New York, N.Y.</td>
<td>129,100</td>
<td>40,800</td>
</tr>
</tbody>
</table>

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

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 building 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.
Designed for Open World

The kinds of glass to employ in a house depend in large measure on its geographical location, site orientation and your objectives. Your L-O-F Glass Distributor or Dealer can be of great assistance. Call him. He's listed under "Glass" in your phone book Yellow Pages. Or get in touch with the nearest Libbey-Owens-Ford District Office.

To reduce sun glare and heat, Parallel-O-Grey® plate glass was used in these window walls and sliding glass doors. It excludes approximately 50% of natural daylight. Ray Ellison residence, San Antonio, Texas. Architects: R. Roberts Associates, San Antonio.

To assure year 'round comfort and reduce heating and air-conditioning costs, Thermopane® insulating glass was used in this Moreland Hills, Ohio, home. Architects: Rowley, Payer, Huffman, Leithold, Cleveland, Ohio.
FOR TRUER REFLECTIONS, these sliding mirror doors are made with Parallel-O-Plate®—finest plate glass, twin ground to remove surface waviness. Residence of A.H. Davidson, Scottsdale, Arizona. Decorator: Dee Boynton, AID.

MADE IN U.S.A.
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Toledo 2, Ohio

TO KEEP INTERIORS COOLER, L·O·F Heat Absorbing Plate Glass was used in the Phoenix home of Senator Barry M. Goldwater. It excludes more than 40% of the sun’s radiant energy. Architect: Paul Yeager, Phoenix.

FOR BEST VISIBILITY, clear Parallel-O-Plate glass was used in this protected window wall. Parallel-O-Plate is twin ground to remove surface waviness that could cause distortion. James A. Richards residence, Scottsdale, Ariz. Designer: Alfred N. Beadle, Phoenix.

For more data, circle 60 on Inquiry Card
A RECORD SPECIAL REPORT: F. W. DODGE HOUSING CHARACTERISTICS SURVEY

Today's new one-family house, on the average, is larger, has more floor area with more bedrooms and more baths, and more have garages than was the case in 1956, according to the results just announced by F. W. Dodge Corporation in its recent Housing Characteristics and Material Use Survey of New Nonfarm One-Family Houses. It is the only comprehensive survey of the type prepared since 1956.

The Dodge study consists of two parts. Part one is concerned with housing characteristics—the highlights of this part follow. Part two deals with materials and types of construction. The survey revealed the dynamic changes taking place in the materials, component parts and in the method of constructing one-family houses.

According to the survey, the median selling price of a one-family house today is $17,790, up $3,490 from 1956. Regionally, the highest selling price is in the Northeast at $19,490. In the West the price is $19,000, in the North Central Region $18,000, and in the South $15,925.

The Dodge study shows that nearly all one-family houses are detached; only one per cent are semi-detached or row houses and these are mostly in the Northeast.

Although one-family houses are predominantly houses of one story, the survey showed that the percentage of one-story houses dropped from 87 per cent of the total in 1956 to 82 per cent in 1961. Moreover, the number of split-level houses increased from 6 to 8 per cent in the five year period. Regionally, the South had 92 per cent one-story houses, the West 90 per cent, the Northeast 63 per cent, and the North Central Region 81 per cent. The greatest per cent of two-story houses, namely 19, was in the Northeast.

In the Dodge survey the average floor area in new houses in 1961 was 1,448 sq ft, up substantially from 1956. Floor area also reflected a regional difference. In the South, the selling price is less than the national average, but square footage of floor area is above the national average, namely, 1,506. The other figures are West—1,497, Northeast—1,442, North Central—1,358.

Although the number of houses with basements (full or partial) increased only slightly in five years—from 43 to 45 per cent—the number of houses built on slabs increased substantially, going from 16 to 26 per cent. The other houses had crawl space only (27 per cent), or combination crawl space and slab (2 per cent). Geographically, in the Northeast 80 per cent of the houses have basements, in the North Central Region 73 per cent, in the South only 10 per cent, and in the West 16 per cent. The number of houses built on slabs in the South has increased from 31 to 51 per cent; in the West from 9 to 36 per cent.

Although the percentage of houses with three bedrooms remained about the same, 68 per cent compared to 70 per cent in 1956, the percentage of houses with four bedrooms or more increased to 17 per cent of the total. (In 1956 it was 8 per cent.) The increase in houses with four bedrooms was found to be common to all areas.

The survey showed that nearly half (46 per cent) of the houses have two or more baths compared with 28 per cent in 1956. Only one-third of the houses had just one bath.

For Enduring Charm . . . Specify Architectural METAL WORK by Fiske Aluminum, Bronze, Stainless Steel and Iron

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If you are planning to spend $10,000 or more to build or modernize a home for your own occupancy, you need the ideas and information in the Home Planners' Digest.

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For more data, circle 71 on Inquiry Card

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America's Foremost Supplier of Ornamental Metalwork
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Berkeley 8, California

NORMAN F. CARVER JR. 114
3201 Lorraine Avenue
Kalamazoo, Michigan

ROBERT DAMORA 52
Pound Ridge Road
Bedford Village, New York

DEARBORN-MASSAR 98
49 West 92nd Street
New York 25, New York

ALEXANDRE GEORGES 62
94 South Mountain Road
New City, New York

ANDRÉ KERTESZ 94
31 Union Square
New York, New York

BILL MARGERIN 118
118 East 30th Street
New York, New York

JOSEPH W. MOLITOR 80, 102, 136
P. O. Box 549
112 Pine Avenue
Ossining, New York

ED NANO 90
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Cleveland 15, Ohio

MARC NEUHOF 76
207 East 43rd Street
New York 17, New York

MAYNARD PARKER 180
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Los Angeles, California

WARREN REYNOLDS 106, 122
Infinity Inc.
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Minneapolis 3, Minnesota

EZRA STOLLER 70, 110, 126
Kirby Lane North
Rye, New York

ROGER STURTEVANT 84
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San Francisco 14, California

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—styled especially for today's architect-designed homes
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PINE WINDOWS
"Accent on Windows" has 20 pages of sketches and specifications about windows of ponderosa pine, with both interiors and exteriors shown. Rock Island Millwork Co., Rock Island, Ill.
CIRCLE 296 ON INQUIRY CARD

BATHROOM ACCESSORIES
Medicine cabinets, vanity and lavatory mirrors, and bathroom accessories are illustrated in a 32-page catalog. Details, materials, and dimensions are included. The F. H. Lawson Co., Dept. P, Cincinnati 4, Ohio
CIRCLE 297 ON INQUIRY CARD

LIGHTING FIXTURES
(A.I.A. 31-F-2) Both multiple and single lighting fixtures are included in a 12-page booklet. Metropolitan Lighting Fixture Co., Inc., 16 E. 39th St., New York 16, N.Y.
CIRCLE 298 ON INQUIRY CARD

FOOD WASTE DISPOSERS
(A.I.A. 29-H-61) A four-page folder gives details on six models of food waste disposers, all designed for quiet operation and one-man installation. National Rubber Machinery Co., 920 Lafayette Road, Medina, Ohio
CIRCLE 299 ON INQUIRY CARD

OVERLAY PLYWOODS
(A.I.A. 19-F) Overlay plywood s for siding and other uses are described in a four-page folder. The plywood s have two layers of prime paint. Four types of siding are available. Evans Products Co., 1029 S. W. Alder Street, Portland 5, Ore.
CIRCLE 300 ON INQUIRY CARD

WOOD CABINETS
Eight pages of full-color photographs show wood cabinets designed for kitchens, bathrooms, bedrooms, dining rooms, and family rooms. The I-XL Furniture Co., Inc., Goshen, Ind.
CIRCLE 301 ON INQUIRY CARD

GARAGE DOORS
A four-page folder illustrates how garage doors can gain a distinctive appearance with applied, inset, or painted designs. Crawford Door Co., Detroit 5, Mich.
CIRCLE 302 ON INQUIRY CARD

LAWN WATERING
Details on an automatic control system with indoor timer console for watering the lawn are given in a folder. Straza Industries, 790 Greenfield Drive, El Cajon, Calif.
CIRCLE 303 ON INQUIRY CARD

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Write for Bulletin No. T-410, or give us the details of your application and we will supply specific data.
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American Gas Association

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PORTLAND CEMENT ASSOCIATION  A national organization to improve and extend the uses of concrete

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