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Winners Second Annual Small House Competition

Case Study House #1
the problem

* In stating the problem of this, the first of the eight CASE STUDY HOUSES, which the magazine, Arts and Architecture, will build as soon as practicable after restrictions are lifted, it is only necessary to invent a fairly typical American family of a type that has, in large numbers, indicated its wish to enter the postwar building market. Let us then presuppose a Mr. and Mrs. X, both of whom are professional people with mutual business interests, the family consisting of one teen-aged daughter away at school and a mother-in-law, who is an occasional welcome guest in the house. In this case, we must suppose that the joint income is sufficient to provide ample but not elaborate living standards.

While the guest will enter the normal life of the household, it is desired that some separation be provided, if possible, quarters to be in the nature of a small separate apartment in which privacy can be achieved when desired.

Provision for the daughter, whose schooling will necessarily develop into longer periods away from home as her education proceeds, must be on the basis of space usable to the parents when not given over to the child. We might assume a variety of interests in activities related to the work of the parents, provision for indulgence in gardening as exercise and recreation, and also arrangements for an indoor hobby in which they both might share.

Inasmuch as it might be presumed that this will be a servantless house, it must be designed in such a way that care and upkeep do not interfere with the professional activities of the occupants.

The house is to be a simple and straightforward expression of the living demand of modern-minded people wishing to cope with their living problems on a contemporary basis.

We now place all this neatly in the lap of Mr. J. R. Davidson. —THE EDITOR.

the solution by J. R. Davidson

* In my approach to this problem I found it necessary to make a thorough investigation of building materials and technical innovations that would be available immediately upon the lifting of restrictions. I have found myself necessarily limited to those
materials that are specifically scheduled for use in postwar building and have, therefore, not felt it a legitimate part of this problem to use anything in building that is not to be a part of the immediate future. However, the task of designing this particular house for the purpose of solving this particular problem is not only a practical and ingenious assembling of structural parts, it is also of necessity a transmutation of moods and sympathies into forms. It is with this general objective in mind that I have approached the problem.

The property is a fairly level lot with frontage of 210 ft. along the southerly side of a private street with a depth of 70 ft., the south and north line being at an angle of 45° on the street front. It is assumed that the clients wish a simple, efficient, and comfortable house and that they want to take the fullest advantage of the climate that makes inside-outside living possible in this area. Provision, therefore, is to be made for outdoor eating, and the interior is to provide ample space for entertaining on an informal and friendly basis. On the supposition that the clients wish to be surrounded by a few good pictures and space for an expanding library, wall space and ample storage space is to be provided.

Inasmuch as the site is in a district where a limited number of rental units on the same property will be allowed, provision is made in the design for the additional building of two income units. These have been planned in such a way that complete privacy will exist for all living on the property.

The house is planned on a two-foot square module, and is set, as nearly as possible, diagonally across the lot in order to gain maximum exposure to the sun. This placing, and the shallow depth of the lot, determined the development of a rather long, rectangular plan which is the preferred arrangement in these circumstances. All bedrooms have cross-ventilation. As the man and wife leave together in the morning, dressing activities have been provided for with two separate dressing-bathrooms. The kitchen is adjacent to the dressing-bedroom wing, and by this arrangement, Mrs. X can attend easily the preparation of breakfast and quick meals while dressing or working at the bedroom desk. One of the two garages is close to the kitchen, and the kitchen opens to a brick-paved court with a view to the orchard. This court provides a convenient and informal outdoor eating space, and the wall to the south-west-south gives protection against the prevailing wind.

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case study house

CONTINUED FROM FEBRUARY ISSUE

J. R. DAVIDSON, DESIGNER  •  GRETA DAVIDSON, COLLABORATOR

Additional investigation of building materials and appliances has shown that manufacturers, with a few exceptions, for obvious reasons are not yet in a position to release definite information concerning their postwar plans. Because of this, my specifications will be open to change and, I hope, improvement (with permission of the sponsors of the Case Study House Program—thank you!)

Floors on the concrete slab will be finished with natural buff colored cement in a not too smooth surface. With occasional waxing, the floor will acquire a pleasant gloss; it will be easily cleaned and cool in summer. Small rugs will be used at seating groups. Bedrooms will be carpeted entirely. Kitchen, laundry, and bathrooms will have asphalt tile.

Walls in bedrooms and hall, as well as the wall over the fireplace in the living room, are to be of improved insulation board, painted. Where built-in furniture is not used, all other walls in the living room will be glass or naturally finished plypanels matching the built-in furniture. This plywood treatment will be extended to the east wall of the large terrace and outdoor living space.

A choice of colored structural glass, plastic bakelite panels, or porcelain enameled steel sheets is proposed for the bathroom walls. These materials have integral color finishes, glossy or semi-glossy, and need little attention. Installations are made in large panels with a minimum of joints.

Ceilings will be of the same painted insulation boards as the walls with heat insulation material in blanket form above the ceiling. The attic space is to be 100% ventilated. The predominant part of the ceiling in the master bath-dressing rooms (from window-wall to the south and line of the wardrobes) will be of a translucent plastic with fluorescent light tubes over the plastic installation. The remainder of the ceiling (over tub, shower, and toilet compartment) will be of a sound absorbing material. The same acoustic material will be used in the kitchen and laundry.

The color scheme should be subdued to avoid glare and to provide a background for living rather than for color itself. It is suggested that the furniture and plywood walls be left natural, perhaps slightly stained with a protective transparent coating. Doors located in painted walls should be painted to match. All curtains in general will blend with other colors used. Accents will be achieved through the color used on seat covers. Curtains throughout will be of fire-resistant spun glass weave, and upholstery materials will be of a new plastic—washable, mothproof, and resistant to many deleterious influences.
CASE STUDY HOUSE NO. 1
continued
A silver-screen will be located on the wall above the piano (high enough to avoid the head of a piano player and at a slanting angle allowing spectators to relax on settee at the north wall and couches). This location is directly opposite a built-in television and home movie projector. Where not in use, the screen disappears into a pocket behind the piano.

Fresh air fireplace units in both fireplaces are engineered to draw fresh air from outside directly into rear of the firebox. This will avoid the dissipation of oxygen, and will circulate warmed air in addition to the radiation of heat from the open fire. All sliding room and wardrobe doors will be equipped with space-saving and quiet gliding hardware. Automatic garage doors which open and close bath upon arrival and departure by pressing a button either in the car or in the house. An exhaust fan will be used in kitchen and bathrooms to eliminate steam and odors. All wardrobes will have air vents to air clothing. Foam glass blocks will be used as insulation under floor slab and radiant heating pipes which will eliminate heat loss through the ground and give protection against moisture and cold. All lavatories and sinks to have foot or knee control in accordance with the conditions around the fixture in question.

A soundtrack connecting future home talking to loudspeaker of radio by separate switch will be installed. The lighting system will be shown in detail later. In general, diffused indirect lighting with additional ample light concentration for reading and working areas is planned. In areas requiring protection against insects, rust-proof plastic screens, which eliminate stains on surrounding finish, will be used. At this point, no consideration can be given to those radical changes and innovations, which despite understandable enthusiasm, are still in the talking stage. If and when they are made available to the commercial market, serious consideration will be given them in the necessary re-planning of details when the time to build is at hand.

LIVING ROOM: wood of grey oak. Wall over fireplace very soft grey-blue. Ceiling and light cove, light warm grey.
ENTRANCE HALL: grey-blue, matching living-room, on both walls and ceiling, and continued on soffit of light cove.
KITCHEN: lower part of cabinets of steel will be finished in white porcelain enamel to match built-in range and sink. All working surfaces and splashback reaching to bottom line of upper cabinets are to be of stainless steel with pebbled, glareless, and scratch-proof finish. Upper cabinets in pale dune blue. Ceiling in darker blue. Walls and built-in furniture of breakfast area in pale lemon yellow for cheerfulness.