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BEHIND THE BLUEPRINTS

LUDWIG MIES VAN DER ROHE, 68, world-famed German-born architect, designed his first house in Berlin in 1907, his best known house, the Farnsworth House (p. 156), last year. Renowned for his brilliant handling of space, materials, and for the absolute, almost ascetic purity of his design, Van der Rohe has achieved his international reputation without formal architectural training. He is, nevertheless, a gifted teacher, is former Director of the Bauhaus, current head of Illinois Tech’s Department of Architecture.

Forty-six year old MILTON RYAN is an arch- sans architectural degrees. Born in Rockdale, Texas, he earned a degree in Business Administration at Texas University and promptly got a bookkeeping job with a San Antonio lumber company. From the ledgers to the drafting table was a short jump and in a few years Ryan was a registered architect. That same year, 1938, he opened his present office in San Antonio, devoting it largely to the design of simple, functional houses well suited to his native southwest. His such structure is published this month (p. 1).

HARWELL HAMILTON HARRIS, newly-appointed architectural dean of Texas University, is a designer who couples originality with war turns out houses in the best tradition of American woodcraft. Son of an architect, Harris was born in California in 1903 and educated at Pomona College and the Otis Art Institute. Though not a registered architect in his native state, Harris won countless awards for superlative design in his Los Angeles office. In the best Harris style are the group of houses (p. 166), published this month.

Cornell-trained architects GEO NEMENY (40) and A. W. GELLER (48) were partners in a diversified New York practice from 1947 to 1954. In addition to 50 handsome country houses like the group featured in this month (p. 175), they designed a community of 300 modern homes for a speculator, an FHA 608 rental project, plus a quota of nonresidential structures. Earl Geller had worked for William Lescaze, Marcel Breuer, Nemeny for Emery Roth and Albert Mayer.

Harvard alumni WILLIAM NOR BREGER (31) and STANLEY R. S. MAN (28) were scholarship students at the Graduate School of Design. They have won three coveted prizes since forming their New York partnership in 1946. Prior to the present alliance, Breger worked for Walter Gropius and Salzer for Skidmore, Owings & Merrill. Though dominantly residential designers with a specialty for adroitly-planned suburban homes (p. 190), they have also done recreational designs: beach clubs, swimming pools and night clubs, and more recently, school planning. Both currently teach architectural design at New York’s Pratt Institute.
The seven architects who have designed these 11 houses for individual clients have shown great inventiveness in working out ideas that builders, owners and other architects will borrow. Moreover, these architects have clearly manifested in their work the wide divergencies of basic attitude with which a mature modern architecture can meet an industrial civilization.

Here are some of the innovations:

The house on stilts variously provides breezy upstairs living, or a usable open basement or clear air-born architectural form (House Nos. 1, 8 & 10).

The central service core frees the valuable periphery of the house, concentrates mechanical equipment (1, 7 & 11). The associated idea of the redesigned roof lets daylight into these central areas, while it enriches the design with picturesque roof structures (3) or pleasant geometric patterns (7).

The middle buffer zone gives expanded scope alternately to children or parents, to indoor or outdoor activities (7 & 11).

And the architects have created a whole new range of kitchens (see especially 1 & 4).

The use of that rare and historical material, steel, in some cases is only auxiliary: to help out in a wood house with problems of spanning or alignment (9); in other cases it is radical: to create an entirely new vocabulary of house architecture (1 & 8) beautifully classical or elegantly functional.

More important is the diversity in the architects' basic orientation.

Mies van der Rohe's house (1) is modern and classical; he has embraced industry, translated the steel skeleton frame into a house "language," provided impersonal but beautiful space to be personally arranged by those willing to live in the modern equivalent of the Doric order.

Harwell Harris (2, 3 & 4) is modern and romantic, serving above all the individual client in an individual landscape, climate, and tradition; he softens industry with a wood carpentry which is none-the-less strongly modular in rhythm, fitted to the power saw and stock sizes.

Robert Kennedy (9) is modern and colloquial: his polite house carries its high breeding without ostentation and, like a well cut suit, has a wide appeal and makes a high degree of sophistication in design appear casual.

Milton Ryan (8) is modern and functional: compared to Mies his use of steel is that of a sensitive engineer rather than a modernized mason, and accordingly fresh, airy and delightful.

The other houses fall within areas which these four sharp types have bounded. Even those that might be accused of that supposedly frightful crime of the cliche modern prove in their inventiveness of plan that modern civilization possesses a negotiable architectural language, fluent, rich, and many-sided.
This is the First House Built by Ludwig Mies van der Rohe

Since he came to America in 1938. To some it may look like "nothing much"—just a glass-sided box framed in heavy, white steel; but to many partisans of great architecture it is the most important house completed in the U.S. since Frank Lloyd Wright built his desert home in Arizona a dozen years ago. For the Farnsworth House near Chicago has no equal in perfection of workmanship, in precision of detail, in pure simplicity of concept.

Quite obviously that concept is very special and selective in its appeal. It has little to say to those whose ideal is an informal setting for family living, or to those who seek first to express the individual personality of a client, or finally to those who concentrate on devices of climate control and scientific management of environment. The Farnsworth House was designed for something else to which all these things are equally irrelevant.

The intense and special appeal of this glass prism even for those who do not at first understand it (and can imagine no direct personal use for it) is addressed directly to the spirit. The house is above all a work of art of supreme integrity, unity and perfection. Simple as it may seem, it took five long years to design and build. It is intended to challenge not only the standards of architecture; it challenges, also, the standards by which most men work and live—for it restates certain simple and lasting values that have sometimes been lost in the shuffle.
"Less is more"

No Mies axiom has been quoted more often than his assertion that "less is more." It is a succinct description of the disciplined world in which Mies works and by whose laws he abides; and the Farnsworth House is a part of that world expressed in glass and steel and marble.

The finished house is practically a one-room gloss shell, 77'-3" long and 28'-8" wide, suspended between eight structural steel columns that hold it as if by magnetic force about 4' above the ground. Set off to one side and overlooking the nearby Fox River is a lower terrace-platform, 55'-3" by 22'-8", hung between short steel posts. (Since the Fox River occasionally overflows its banks, the house may become a gloss boat for a few days out of the year, accessible only by canoe.)

Sandwiched between roof and floor planes are three major elements: a porch (soon to be screened) at the terrace end; a gloss-enclosed room; and—in the middle of that room—a long and narrow service core containing bathrooms, utilities, a large kitchen and fireplace. The service core is like an island in the living space; its short spur walls at each end suggest dividing lines so that the living space appears clearly articulated with separate areas for dining, sleeping, relaxation and conversation.

"A special kind of order"

The eight structural steel columns that hold the gloss prism between them are set 22' on centers. They are strong enough (8" WF) to support a much heavier structure, and some have misinterpreted their use as a functional impurity. They have not realized, perhaps, that there are demands of architectural expression quite as compelling as the demands of pure engineering, that the visual relationship of column thickness to depth of facia and of column thickness to thickness of mullion can make or break a work of art as precise as this house. When Mies says that "every decision leads to a special kind of order," he also warns that architecture should not "overemphasize the materialistic and functionalistic factors in life... (but rather) emphasize the organic principle of order... and the successful relationship of the parts to each other and to the whole."

The columns are welded to steel channel facias at floor and roof levels. Welding marks were ground flush after assembly. Mies did not like the texture of the structural steel next to the grinding marks and so the entire steel frame was sandblasted down to a smooth, mat silver before it was painted white!

This fascinating touch most clearly conveys the jewel-like perfection of the house. Mies has handled his materials here as only the finest Japanese cabinet-makers know (or knew) how to handle wood. The three coats of white paint were so carefully brushed onto the steel that they appear sprayed. The 2' by 2'-9", 1¼" thick Italian travertine slabs that form the floors of house and terrace were fitted into the steel frame with a precision equal to the finest incastro stonework. The plaster ceiling has the smoothness of a high-grade factory finish. The primavera panels of the service core were matched with infinite patience. And the steel frame was welded to such precise dimensions and so tautly that the column flanges seem almost in tension. When you strike them with the palm of your hand, they sing like a tuning fork.

Yet this is not all: Even where the eye will never penetrate, Mies has pursued his quest for a "special kind of order." The floor, for example, is framed with I-beams 5'-6" apart. Between them span precast concrete planks, resting on the bottom flanges of the I-sections, so that the underside of the house is as smooth as the belly of a plane! On top of the precast planks Mies put a light-weight fill, slab, cement grout and the 1¼" travertine finish.

Mechanically the house is just as clean. Natural ventilation comes only from the tall double-doors toward the porch and the two hopper-type windows at the opposite end. To supplement these openings, Mies placed
a blower exhaust in the kitchen floor (so as not to spoil his ceiling and roof lines); bathrooms are ventilated through a central, monitor-like shaft that penetrates the roof, contains all flues and vents; and water-supply and drainage pipes were neatly packaged in a compact stack directly beneath the service core—a short "umbilical cord" that ties the house to the earth. There are radiant heating coils in the floor all around the periphery of the house, just inside the glass walls; but the principal heating system is forced warm air. If necessary, an air-cooling unit may be attached to this system later.

"The will of an epoch translated into space"

Many will try to compare the steel and glass Farnsworth House with the steel and glass house of Mies-disciple Philip Johnson in New Canaan, Conn. (Nov. issue, '49), which was designed a couple of years after the Farnsworth house, but finished sooner. Yet whatever their surface similarities, no two houses could be more dissimilar in philosophic concept.

Here are the principal differences: Johnson's house is symmetrically balanced, almost like a Roman pavilion; it is framed by heavy corner columns; it rests on the ground and is firmly anchored down by its massive brick cylinder; its steel is painted dark gray to blend in tone with the surrounding tree trunks; it is a delightful clearing in the woods; and you can look out of it in all directions wherever you are.

Mies' house is asymmetrical, dynamically balanced; it is a floating cage almost completely divorced from the ground; it is joined to the earth by the slimest of plumbing stocks; its steel is painted white so as to frame the view, draw out and accentuate all its colors (subtle shades of green, yellow, red and white as the seasons change); it is a viewing stand raised above the grass and the river; and you can look out in only three directions out of four, since the service core always forms one opaque wall to back up against.

And there are more differences: Johnson's structure is quite classical, quite traditional with post and lintel construction and high (10'-6") ceilings; Mies' structure is startlingly modern, cantilevered at two ends, seemingly held up by some new structural magic, between magnetized steel pylons. Johnson, Ohio-born, produced something strangely reminiscent of the Old World; Mies, born in the Old World, came up with a sleek, low-slung (ceiling heights: 9'-2"), very American product—an optimistic flight of fancy.

"Life is what is decisive"

To Architect Mies van der Rohe all this is important. But even more important to him is the Farnsworth House as a statement of the relative importance of things—of the importance of architecture on the one hand, and of the individual human being on the other.

Mies is convinced that architecture should be no more than the shell within which each occupant produces his or her own dwelling. To put it another way: no romantic self-portraits of the architect, no inflexible portrayals of clients (who, in the long view, may turn out to have been only temporary tenants). Mies believes that his architecture must be objective, impersonal, a quiet and simple space, a backdrop against which each individual and all human life in its great complexities can develop freely—and develop in changing ways, from generation to generation, long after such striking clients as Dr. Edith Farnsworth are gone.

Obviously, such serenely beautiful spaces make heavy demands upon those who live in them; and, just as obviously, there will be many men and women in each generation who neither could nor should meet such demands of discipline. But for those who are willing to enter Mies van der Rohe's world, there are experiences as rich and rewarding as those in the realm of the most romantically subjective architecture.

For while Mies subtracts and keeps on subtracting until all is skin and bones, the result is much like the reduction of a substance, in chemical analysis, to its crystalline parts. What remains after Mies' subtraction is a concentration of pure beauty, a distillation of pure spirit. Mies' buildings only seem to have a kind of nothingness at first glance; as time goes on, their subtle, indirect influence becomes increasingly apparent. It may be that the people who live in Mies' architecture will change, that new generations with new customs and traditions will occupy the "shell." But this subtle influence is likely to remain—the influence of a great artist, of a great work of art, of a great discipline, of a great belief that man in architecture should be free.