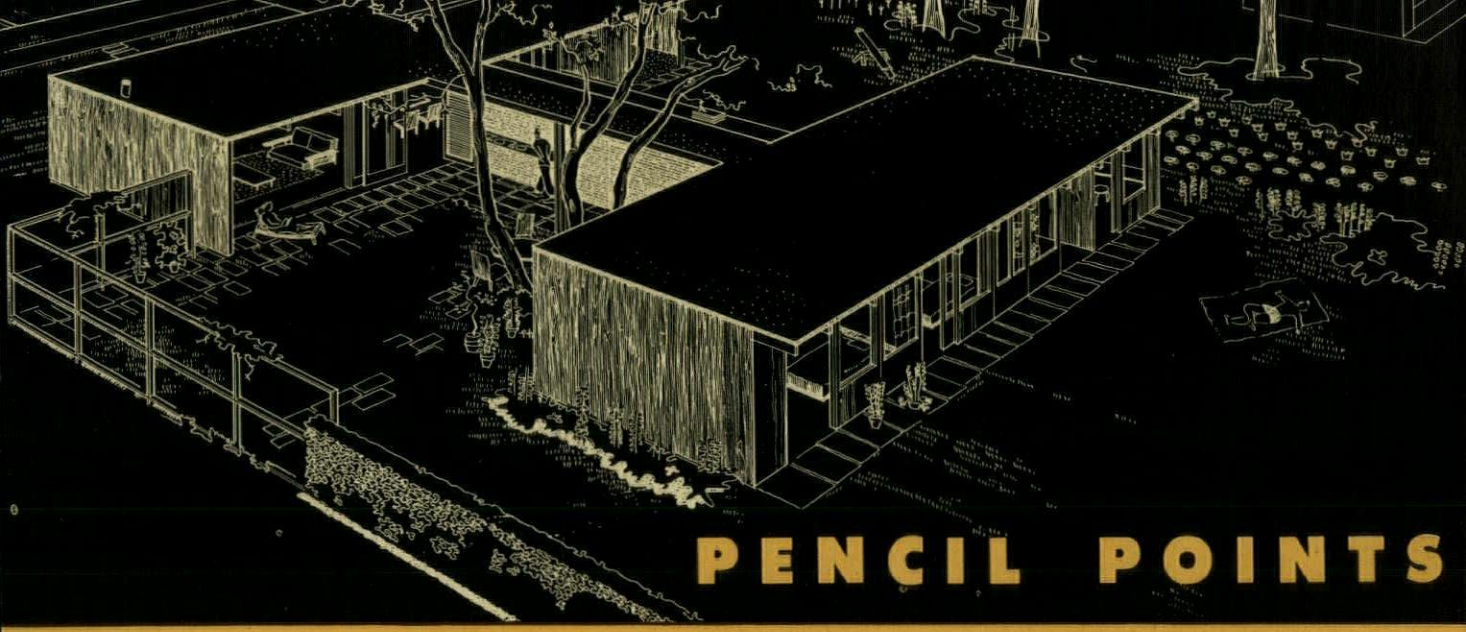
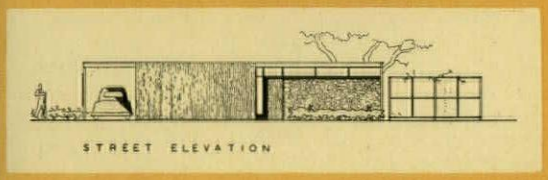
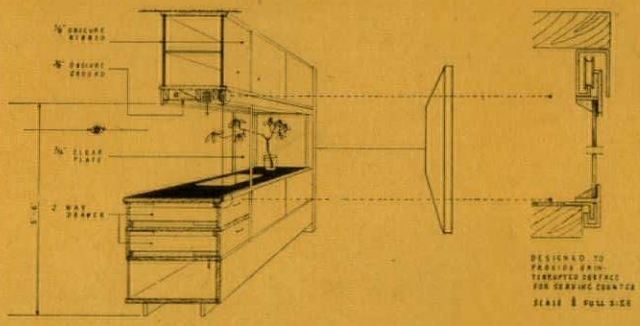


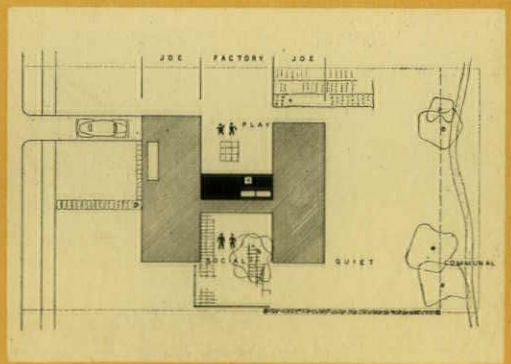
PENCIL POINTS

PROGRESSIVE ARCHITECTURE

COMPETITION WINNERS







5

May 1945

Your Silent Partner

on Store-Front work!

THE Kawneer MAN

PRACTICAL assistance on store-front work is yours for the asking. A Kawneer man will be located near you soon. He's a trained specialist on store-fronts—ready to work with you in a consulting capacity, equipped with useful data and retail merchandising information.

Merchants will spend money to make money. The Kawneer program is selling the merchants of America on the *value of proper design* in the creation of store-fronts as "Machines For Selling". The Kawneer man will bring you and the merchants in your territory together for your mutual benefit.

Details of the Kawneer "Standard" line are available for your use on jobs now on your boards. A complete new line is in the offing—with new ideas, new products, new time-saving features to help you. It will pay you to get the full information on the Kawneer Program. Write today for booklet, "The Architect and Machines For Selling". THE KAWNEER COMPANY, 305 FRONT STREET, NILES, MICHIGAN.

✓ *THERE'S NEW OPPORTUNITY FOR ARCHITECTS IN THE STORE-FRONT FIELD!*

Kawneer

STORE-FRONTS

MACHINES FOR SELLING!

PENCIL POINTS
PROGRESSIVE
ARCHITECTURE

Report on the Competition

The PENCIL POINTS—Pittsburgh Competition is now officially over and your Professional Adviser wishes to record his sincere gratitude to all whose participation made it a success. This applies not only to every architect, draftsman, designer, or student who sent in a design, but to every one of the Judges who contributed so generously of their time and professional skill.

The weeks between the closing date and the conclusion of the Judgment were among the most strenuous of our editorial life. The job of preparing for and running a National architectural competition entails a lot of sustained intensive work, even with as few as two or three hundred designs. When, as in this case, there are over nine hundred designs submitted, our duties to all parties concerned mount to staggering proportions.

We take these things very seriously. Each design must receive concentrated simultaneous scrutiny by all the Judges and none may be passed over without a fair examination and appraisal. This means hour after hour of going through the pile, one by one, eliminating the less competent designs; sifting, sifting, sifting, until only the top quality remains. The survivors are then gone over in great detail, weaknesses and strengths spotted, comparisons made and argued back and forth until at last the collective mind of the Jury is made up and its ultimate decisions reached.

All this demands attentive and devoted service by the Judges, who are held on the job morning, afternoon, and until late at night, not by any imposed force but by their own interest in the problem and their professional sense of responsibility to the competitors. The task, though exhausting, has its compensations, however. As one Judge put it, "I never spent three harder days in my life—but I had a wonderful time!" (This corresponds closely with the spirit of the competitors as expressed by one of them who wrote, "Spent one hell of a lot of time on this competition—and enjoyed every minute of it.")

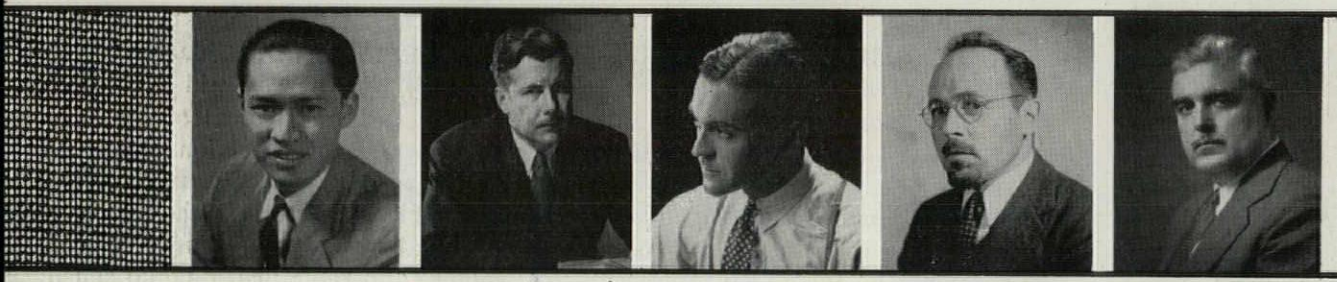
Over 40 percent of the drawings came from registered architects, the list including some of the most distinguished men in the profession. It is fair to say that the winners reflect the preponderant trend in architectural thinking as indicated throughout the whole set of submissions. Not surprisingly, that trend is in the direction of planning better accommodations for the needs of contemporary living and away from attempted conformity with the fashions and fetishes of the last century.

The results are spread on the following pages. We believe them to be of educational value to both competitors and non-competitors. There are many excellent and even brilliant plan ideas (as well as some faults) incorporated in the Prize and Mention designs. They represent the considered choice of a sincere and enlightened group of architects who thought in terms of what would constitute the sort of improved living environment to which "G. I. Joes" should be entitled rather than of what returning soldiers themselves might accept under the influence of their war-born dreams of times past. We hope "Joe" gets the benefit of the study that went into this competition. He deserves it.

Kenneth Reid

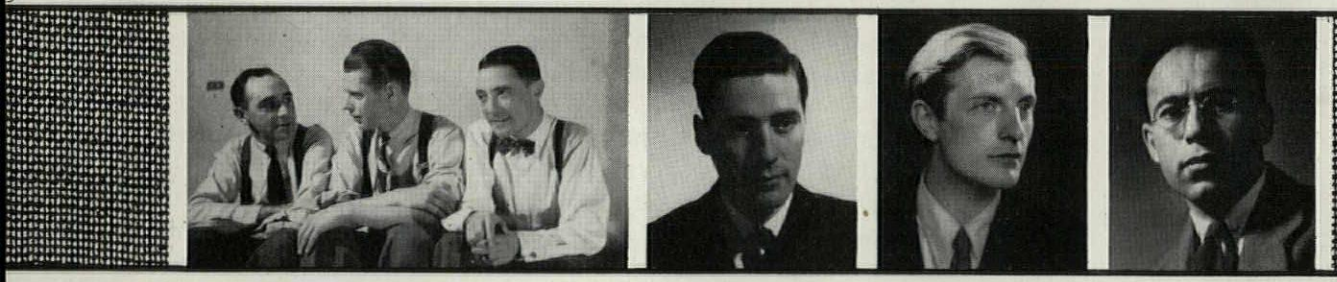
Fletchers | Pei | Roth | Rapson | Catalano

Babb | Barthelme | Dekker & Belser | Biggs | Campbell | Cavin

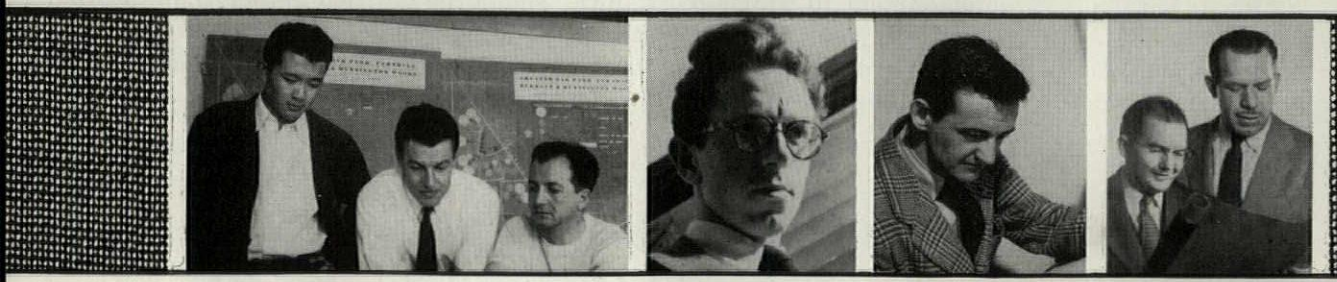


Chau | Cooling | Dukelski | Hyzen | Fordyce

Joseph | Kazdailis | Kling | Lundquist | Marshall | Perkins



Harris, Schmiderer & De Felice | Simpson | Elliott | Stein



Matsumoto, Granger & Waugh | Weiss | Wiley | Kline & Dixon

THE WINNERS

Jean Bodman Fletcher, 30. Attended Smith College and Smith College School of Arch. B. Arch., 1944, from Harvard Grad. School of Design. Summer work 1943 with FPHA. Now with Saarinen & Swanson, Birmingham, Mich.

Norman Fletcher, 28. Yale School of Arch. Yale Traveling Fellowship in Regional Planning and Arch. in U. S. Worked with FSA in San Francisco, and in offices in New London, New York, and Washington. Now with Saarinen and Swanson.

I. M. Pei, 28. Came here from China in 1935. Studied at M.I.T. and won Fellowship, 1940. Also Wheelwright Fellow at Harvard, 1943. Has worked for Bemis Foundation, Stone & Webster, and Walter Gropius. Now with Nat'l. Defense Research Committee at Princeton. Winner of numerous medals and prizes.

Frederick G. Roth, 30. A.B., Carthage College. B. Arch., U. of Minn. Grad. Scholarship to M.I.T.; M. Arch., M.I.T., 1941. Taught at Kansas State. Worked in Milwaukee and Kansas City. Now with National Defense Research Committee at Princeton.

Ralph Rapson, 30. Attended U. of Mich. Coll. of Arch. Studied at Cranbrook under Eliel Saarinen. Work has been chiefly in residential and housing fields; also furniture design. Now head of Arch'l. Dept., Inst. of Design, Chicago. Member of C.I.A.M. Winner of numerous prizes.

Eduardo Fernando Catalano, 27. Degree from U. of Buenos Aires. M. Arch., U. of Pa. Fellowships: Ministry of Public Works, 1941; U. of Pa. and Department of State, 1943. Studied with Walter Gropius at Harvard. Practicing architect in Buenos Aires. Now in U.S. to study university curricula.

Maj. Thomas J. Biggs, C.E. B.S. Arch., Georgia Tech., 1933. Worked in East and South with various architects and engineers, 1933-40. In army since 1940. Now Major, representing Baltimore District Engineer, in charge of design and construction at Aberdeen Proving Ground and Edgewood Arsenal, Md.

Bernard L. Campbell. B. S. Arch., U. of Mich., 1932. Worked in Pennsylvania with Myers and Johnson, Lawrie and Green, and Edwin Howard; with Cyril Tucker and Roland Yaeger in Rochester, N. Y. Now designer with Austin Co., New York.

W. Brooks Cavin, Jr. M. Arch., Harvard University, 1941. Worked with Alfred Kastner, Louis Justement, Saarinen and Swanson. Now with Faulkner and Kingsbury, Washington, D. C.

Elmer Babb, 43. Studied design in Beaux Arts ateliers. Paris Prize finalist, 1922, 1924. Industrial designer in New York, 1933-40. Has worked in Cleveland and New York, and on several war projects. Now with Walker & Weeks, Cleveland.

Donald Barthelme, A.I.A., 38. Degree from University of Pennsylvania, 1930. Has practiced architecture in Houston, Texas, since 1939, engaging in housing and related war projects.

Karl J. Belser, 43, B. S. Arch., U. of Mich., 1925. M. Arch., Harvard, 1927. Booth Traveling Fellow 1928-29. Taught at Va. Polytechnic Inst., 1930-41, and at U. of Mich., 1941-42. Analyst, Detroit City Planning Dept., 1942-44. Now Planning Architect with Los Angeles City Planning Dept.

Karel H. Dekker, 39. B. Arch., Grad. School of Arch., U. of Southern Calif., 1931. Worked with L. A. County Regional Planning Commission, 1941. Now Planning Landscape Architect Associate with Los Angeles Dept. of City Planning. Member of "Telesis."

C. N. Chau. Studied civil engineering, Lingnan University, Canton, China. Studied arch. at U. of Mich. Taliesin Fellowship, 1941-42. Practiced 1942-43. Now studying at Ill. Institute of Tech., Graduate School of Architecture.

A. Albert Cooling. Studied architecture at U. of Illinois. Worked with Holabird & Root, Chicago. Taught E.S.M.W.T. classes at Calif. Inst. of Tech. Now with C. E. Noerenberg, and teaching at Los Angeles Art Center. Won Grand Prize in recent Colotyle Competition.

Alexis Dukelski, 40. B. S. Arch., M.I.T., 1928. M. A. Arch., M.I.T., 1929. Fontainebleau Scholarship, M.I.T. Traveling Fellowship, M.I.T., 1929. Practiced in New Jersey until 1940. Architect with FPHA, 1941-43. Now artist for M-G-M Studios, Culver City. Winner of several prizes.

Leon Hyzen. B. Arch., M.I.T., 1933. M. Arch., M.I.T., 1934. Rotch Traveling Scholarship. Technical Director, State Board of Housing, Boston. Worked on several FHA projects. Site planner and assistant construction manager on war projects. Now City Planner with Raymond Loewy Associates.

Allmon Fordyce. U. of Ill. and Yale. Fontainebleau prize, 1927. Has worked with McKim, Mead and White, Goodhue, Ely Kahn, and Shreve, Lamb & Harmon. Practiced in New York, 1931-40. General service manager, Fairchild Engine and Airplane Corp., 1942. Now with Raymond Loewy.

Seymour R. Joseph, 31. A.I.A. B.A. Arch., N. Y. U., 1941. After designing for architectural firms, 1932-1943, has practiced architecture in New York. Winner of various prizes, medals, and awards, including First Prize, Pencil Points-Kawneer, 1943.

Stanley A. Kazdailis. Second-year architectural student under Ralph Rapson at Institute of Design, Chicago, and typographical designer for Cuneo Press.

Lt. Vincent G. Kling, USNR, 29. B.Arch. Columbia, 1940. M. Arch., M.I.T., 1941. Practiced in East and in Florida, 1938-42. Design for N. J. beach house selected by Museum of Modern Art as one of 15 best modern American residences. Now with Air Force Staff, Atlantic Fleet.

Oliver Lundquist, 28. Studied architecture at Columbia and N.Y.U. Now in Presentation Branch, Office of Strategic Services, Washington, D. C. (Photo by Betty Lundquist.)

Charles G. MacDonald. B.A.Arch., U. of Wash., 1934. Worked in Los Angeles and Seattle on commercial buildings. With U.S. Army Engineers, on engineering design and procurement for war construction program in Alaska, 1940-44. Now studying at Harvard.

Patricia Aloe Marshall, 22. Attended Goucher College and Art Institute of Chicago. Now studying Industrial Design and Architecture at Institute of Design, Chicago.

C. Stuart Perkins, 32. B.A.Arch., U. of Minn., 1938. Began with Hewitt & Brown, Minneapolis. Later in private practice, specializing in mechanical equipment, and with Smith, Hinchman & Grylls, Detroit. Now design draftsman, Aero Division, Minneapolis-Honeywell.

Simon Schmiderer. Educated in Vienna. Austrian States Prize, 1937. Since coming to U.S. in 1938, has worked for architects in New York and Philadelphia. Now with Harrison, Fouilhoux & Abramovitz, New York.

Michael M. Harris, R.A. Graduate of Cornell College of Arch., 1930. Worked for various New York architects. Now with Harrison, Fouilhoux & Abramovitz, and instructor at Columbia U. School of Architecture.

Torquato De Felice, R.A. Graduate, Syracuse School of Arch., 1934. A.I.A. Medal and Medary Scholarship. Worked with E. Burton Corning, Washington. Was associate of office of Dwight James Baum. With Harrison, Fouilhoux & Abramovitz, New York, since 1942.

Douglas C. Simpson, 29. M.R.A.I.C. Graduate, U. of Manitoba. Worked with Winnipeg architects. With R.C.A.F. on Air Training Plan and Chief Architect's Branch, Dominion Pub. Works, 1940. Enlisted, 1941, in RCNVR as Construction Liaison Officer, specializing in hospitals. Now with Gov't. Construction Controller. Original member A.R.G.O.

Edward P. Elliott, 28. A.R.I.B.A. B.Arch., Liverpool U., 1939. Cranbrook Research Fellowship from England, 1939. Specialized on hospital design under Saarinen. Worked on housing and hospitals in United States. Now lieutenant, R.C.N. Original member Arch. Research Group of Ottawa.

Joseph Allen Stein, 33. U. of Illinois, Cranbrook Academy, Fontainebleau. Worked in offices of Ely Kahn, William Gerhon, Hervey Clark. Now site planner on war housing in San Francisco.

George Matsumoto, 23. Attended U. of Calif. B.S.Arch., Washington U., 1944. Worked with George Keck, and Fuhrer and Fuhrer, Chicago. Now holds Graduate Fellowship in Civic Design at Cranbrook.

Charles T. Granger, 32. A.I.A. B. S. Arch., U. of Texas, 1936. Worked for Neutra, 1936-37. Practicing architect with Arthur Fehr in Austin, Tex., 1938-42. Worked with Frank T. Drought, San Antonio engineer, 1942-43. With Consolidated-Vultee, 1943-44. Now Graduate Fellow in Civic Design at Cranbrook.

Edward Walter Waugh, 32. A.R.I.B.A. Graduate, Edinburgh Coll. of Art, 1938. Cranbrook Arch. Fellowship. Worked in Edinburgh and had own practice in So. Africa. 2 years with So. African Armed Forces. Aircraft layout for Hughes Aircraft Co. Set-designer for Columbia Pictures. Now studying city planning at Cranbrook.

Frank Weiss, 26. B. Arch., U. of Pennsylvania, 1942. M. Arch., Harvard, 1945. Now working with Stonorov and Kahn, Philadelphia.

Charles D. Wiley, 29. B. Arch., U. of Minn., 1940. M. Arch., Harvard, 1941. Appleton Traveling Fellowship, Harvard, 1941. Two years in service. Worked with Gropius, Breuer, Hugh Stubbins, Carl Koch. Now with Saarinen and Swanson.

Louis C. Dixon, 38. A.I.A. Graduate U. of So. Calif., 1929. Designer and draftsman in Los Angeles since 1929. During war, with H. L. Gogerty Organization and with Austin Co. on war plants. Now practicing in association with Lee B. Kline.

Lee B. Kline, 31. A.I.A. Graduate U. of So. Calif., 1937. Draftsman and designer in Los Angeles. During war in Navy Design office at Terminal Island, Calif., and Plant Layout Dept. of No. Amer. Aviation. Now associated with Louis C. Dixon.

REPORT OF THE JURY

PENCIL POINTS — PITTSBURGH ARCHITECTURAL COMPETITION

A pretty fair reflection of the actual and potential architectural design performance in the United States today was evident in the nine hundred odd drawings submitted in the PENCIL POINTS-Pittsburgh Plate Glass Company Competition.

To the Jury it seemed that entirely too many were of such inferior quality as to suggest a discouraging outlook for G. I. Joe's postwar home. Although almost half of the designs came from registered architects, who should be presumed competent to do good architecture, there was a pronounced lack of good taste and sound realism. Of course, it must be admitted that the same observation applies to the general quality of existing houses throughout the country.

There may be several reasons for the prevalence of this distressingly low standard of house design. For one thing, many capable young men are now at war, and for another, there is a definite lack of understanding among many of the older architects as to the nature of the new trends in architecture. Many of them seem to think that modern design is just another "style."

The Jury felt a deep responsibility not only to the competitors but to the public as well. Their goals and guideposts were pretty well stated in the preamble of the Program. "To bring up to date, in line with recent technical advances, the general understanding of the ever present problem of planning the small homes of the nation." "To discover and give recognition to new design talent."

Since it was planned that the premiated designs were to be widely publicized, the Jury conscientiously tried to select not only the best solutions to the problem as stated, but also the best in planning, in taste, and in detail. Established public prejudices, what would sell more easily, etc., were not considered pertinent. We sought rather to find what came closest to solving in a better, more realistic, and sympathetic way the problem of planning the small home.

One cannot say that the premiated designs *completely* solve this problem, because there are many important factors that a competition drawing cannot possibly include; especially when so little time and space are available.

From the Program requirements, it was obvious and right that there would be a limitation as to the scope and size of the house. With the exception of the square footage restriction, this limitation was not strict, but rather flexible. On costs, wide latitude was given, on the theory that increased use of new construction methods and materials might bring substantial reductions.

A consensus statement as to what the Jury was looking for in the house designs might be something like this: A simple direct solution which would give to the average small family a place in which it could live with greater comfort and freedom from drudgery than ever before. Several ideal characteristics agreed upon were:

(a) Lack of pomposity.
(b) Economy, both in initial and maintenance costs.
(c) Provision for better facilities and amenities than the conventional type of house has heretofore supplied.

The question of "undue conspicuousness" and homogeneity of architectural "character" were discussed at length. We decided that the prevalent idea that a building in order to be in harmony with neighboring structures must be of the same "style" or "period" is erroneous.

The true *tradition* of all great periods in architecture has been *not* to copy past styles. For instance, in Pisa an unfinished Gothic chapel was completed during the Renaissance. The architects had such great respect for the work of the original designer that they didn't think of trying to imitate existing work. They completed the building in the Renaissance manner with such a sympathetic understanding and appreciation of what the original started out to be that only an archaeologist could detect today the difference between the two parts of the building.

Florence is noted for its homogeneity of architecture. Her buildings of many centuries—eleventh to twentieth—exist side by side harmoniously and inconspicuously. There are many historic examples of this sort.

In the average American neighborhood a very well designed house might be unduly conspicuous simply because it would be so much better than the usual mediocre average. There seems no good reason why a well designed contemporary house cannot fit in harmoniously with well designed houses of other periods, provided both are essentially good, and provided the materials used are homogeneous. The important things are not picayune uniformity or dull authenticity but the successful application of the good things at hand, similarity of materials and scale rather than of forms or details, and a genuine honesty of expression regarding our own times and our own lives.

In the Jury's discussions there arose the perennial question about the prohibitive expense of curtaining material for large glass areas. We take this opportunity to spike this shibboleth of the archeologist and interior decorator. Satisfactory curtains need not be expensive. Burlap, cotton sacking, unbleached sheeting, and mattress ticking are used extensively by those who are not taken in by the fabric industry. These materials, costing from twelve cents to thirty-five cents a yard, can be dyed or used as they come and are capable of most successful results. Curtains can be easily made at home, or can be made up outside at low cost. In fact, their

cost on the whole is lower than that of window shades. The total cost of a glass wall properly detailed with such economical draw curtains is no more than the ordinary outside wall of the same area including a small window, shade, and chintz draperies.

All drawings submitted were considered at least twice. Those that remained in the last one hundred were studied many times. In making their selections the Jury considered the following:

(1) The use of the site.
(2) Simpler housekeeping.
(3) Improved facilities for daily family activities.
(4) The relation between the needs of children and adults.
(5) Orientation and relation of indoor to outdoor space.
(6) Privacy.
(7) Appropriate use of materials.
(8) Equipment.
(9) Cost indication including initial cost versus maintenance.
(10) Suitability to particular climate indicated.
(11) A better "living surrounding" for the average small family.

JURY COMMENTS ON THE PRIZE DESIGNS

1. The organization of this plan and its relation to the site are outstanding, and the Judges were unanimous in awarding it the prize.

The living and indoor "work-play" areas are nicely separated though still convenient to each other. Each has its own outdoor space.

The kitchen is actually in the heart and center of the house from which both the active outdoor areas can be surveyed. This permits easy supervision of children's play, easy access to service and drying yard, and to the social court.

The bedroom wing, which includes the study, is logically placed at the rear, where it opens out onto a less active environment. The solid walls are nicely arranged to give privacy from neighboring lots, the street, and even from the naturally noisy areas within the scheme itself.

Thus, the three separate functions of a house—activities, work, and relaxation —are clearly defined and arranged in a very practical form.

2. This house exhibits the quality of an easy directness and of purposeful planning.

The roof plan is essentially a square. Thus the outline of the building's shape is simple and interest is obtained by undercutting for the car shelter, piercing the roof for a court on the front, and extending it slightly for the outdoor play porch.

The plan is generally well conceived. The large area facing the rear of the lot is cleverly divided, retaining the inherent spaciousness, yet using the space for varied purposes. Fireplace and desk separate the study from the living room. The kitchen has a double outlook—onto the attractive entrance court and through the dining area to the rear garden by means of an open-top counter wall. A sliding glass arrangement screens the living room from cooking odors and kitchen noises.

Family play and hobby space is nicely segregated by the kitchen projection and by the depressed wall for the planting area.

3. The whole conception of this house is as brilliant as it is unusual. It makes use of a simple rectangular plan with various undercuts and screen projections. The central core, consisting of kitchen and heater room flanked by two bathrooms, is located on the side of the house nearest the lot line, with high windows for privacy. The relationship of the master bedroom and living area makes it possible to open the bedroom into the living room, thus giving larger visual space. The children's bedrooms, their indoor and outdoor play space, are well located for supervision although separated from the general living area.

The glass wall along the southeast side is intended to have obscure and semi-obscure panels. It might have panels made of wood or fabric or screens, which could be interchanged at various seasons of the year, thus giving either open space or closed-in privacy. The structure, although somewhat dubious in engineering, could certainly be made practical if structural members were slightly heavier. The use of stone, wood, and corrugated asbestos called for would make for an interesting and pleasing effect. Contrasts between the irregular rubble, the rigid rhythm of the corrugated material, and the transparency and smoothness of the glass give an unusual and desirable variation in texture.

4. Basically, this plan should be the most economical of all. It is a square with the mechanical core in the center. Thus, there is more floor area in proportion to outside wall area. Actually, with the materials called for, it would be costly to construct today.

The plan arrangement is good. The children's sleeping and play room is large and is under direct supervision from the kitchen. The adult sleeping and dressing room is equally large and well arranged. Certainly the relationship of adult's and children's activities has been well thought out.

The varying, receding planes and the subtle relationship of textures, of open and closed walls, give a sense of space that is unusual in a house of this size.

It was felt that, although this house was in no way limited to this or any other piece of property, it might be prefabricated and built anywhere in the U. S. on a site with any orientation; but even though this is a valuable asset, the orientation in this instance is wrong—possibly not so much from the sunlight point of view (since it is designed for Southern California) but because the house is placed too close to the street for this to be excusable. As one dissenting member of the Jury put it, "The designer completely ignored the site."

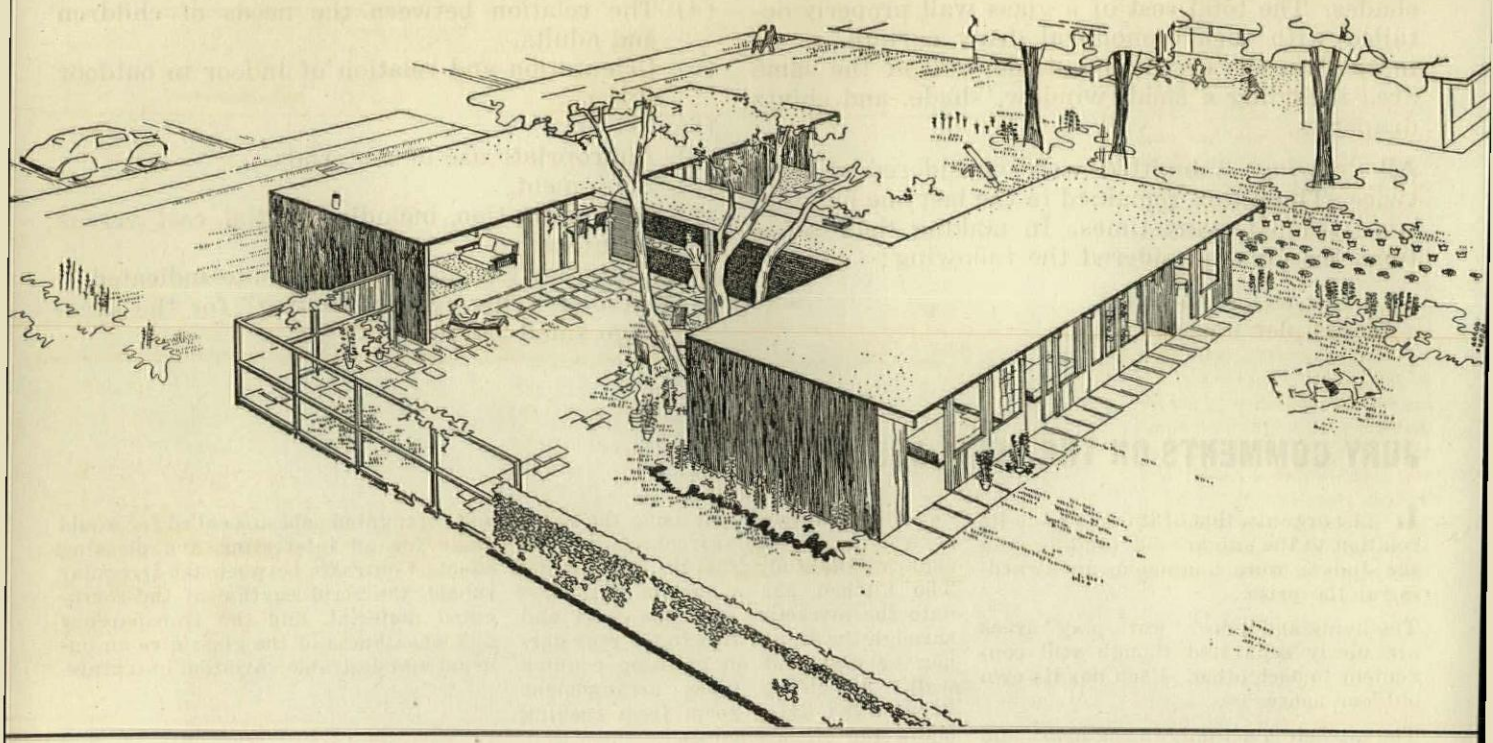
Respectfully submitted,

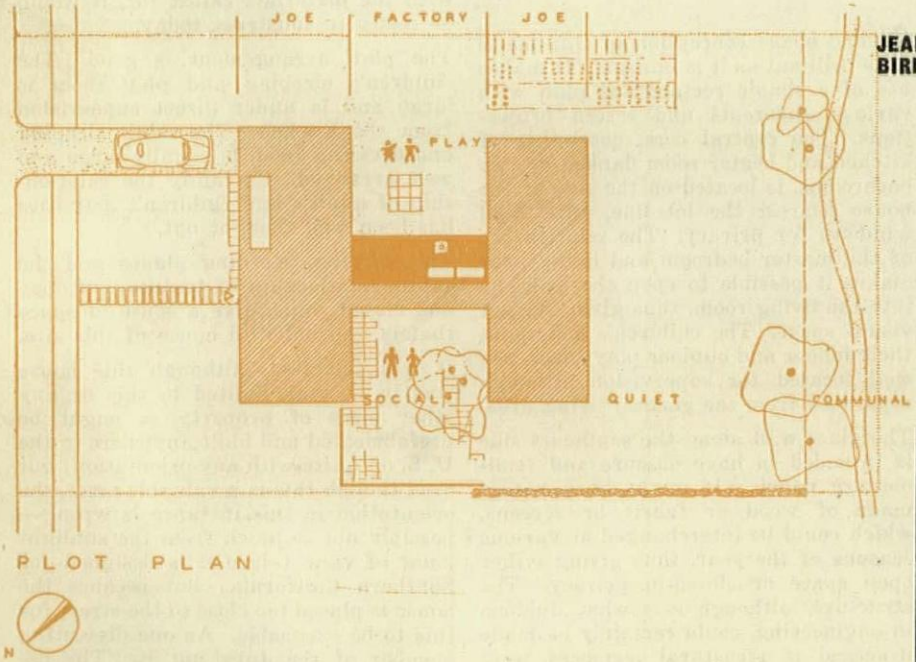
JURY OF AWARD

Pietro Belluschi
Ralph Flewelling
J. Byers Hays
Robert M. Little
Louis Skidmore
Philip Will, Jr.
Hugh A. Stubbins, Jr.,
Chairman

Additional comments and criticisms by the Jury will be found on the following pages, along with reproductions of the Prize and Mention designs. In the case of the Mentions, the captions were written by the editors, but are based on comments made in the Jury room during the Judgment.

On following pages M signifies Mention, SM signifies Special Mention, SP signifies Special Prize for Detail. Prizes are designated as 1, 2, 3, and 4.



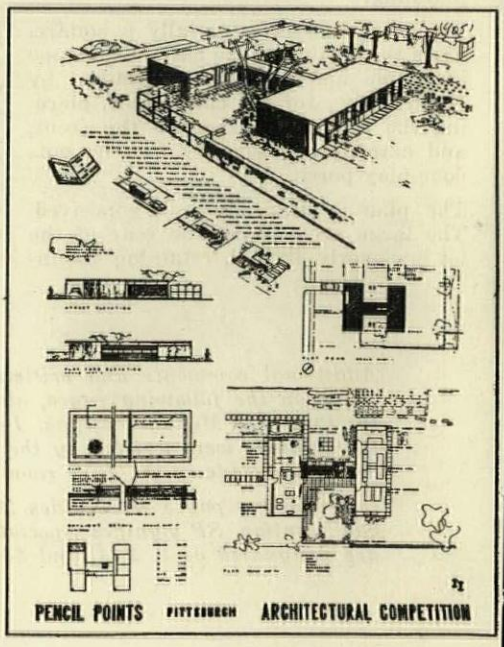


PLOT PLAN

N

JEAN BODMAN FLETCHER AND NORMAN FLETCHER
BIRMINGHAM, MICH.

1st



ADDITIONAL JURY COMMENT

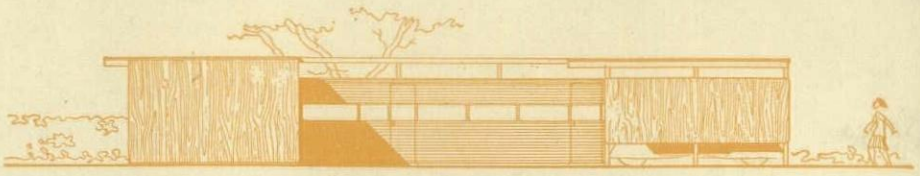
"The design is sympathetically done; it is simple, direct, and has a definite American flavor that is refreshing.

"The method of building—that of purchasing a prefabricated mechanical core and adding the other amenities—is not a new idea. It is reasonable and cleverly done, but was not a deciding factor.

"The open passageway between living and sleeping areas was questioned. This is conceivably all right for some California locations, and the addition of a glass wall would eliminate any objection.

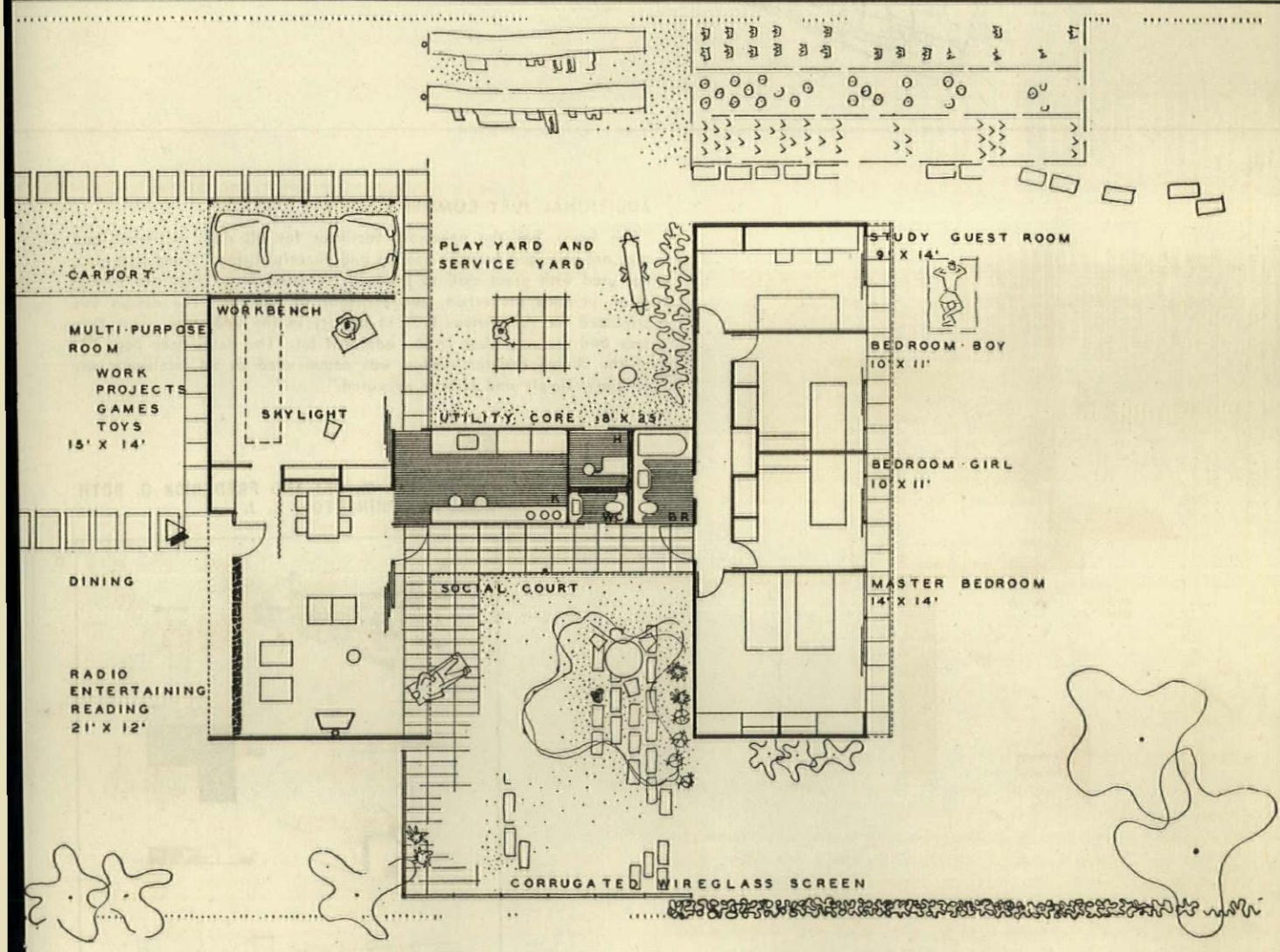
"Perhaps the lavatory would have been more useful had it been placed where the heater room is, thus allowing children to reach it more easily from the play yard. Also, the addition of a door from play yard into the bedroom corridor would be useful. As in a number of the designs chosen for awards, there is a lack of adequate storage space."

The authors say of their design, which is intended for Salinas, California, "Joe wants to help build his own house, but also wants it technically up-to-date, so with the aid of an architect, a building supervisor, and a special booklet he starts. He has chosen this plan out of a group of plans similar in idea. First he goes to the factory to get the 'mechanicore' which has all the latest conveniences, and then to the mill for lumber. Joe can use stud construction or simple plywood panels. The core is attached to the street utilities, the concrete slab is poured, and Joe can start erecting the walls. The neighbors help Joe, and later Joe helps them. Joe and family can now start making the house a home."

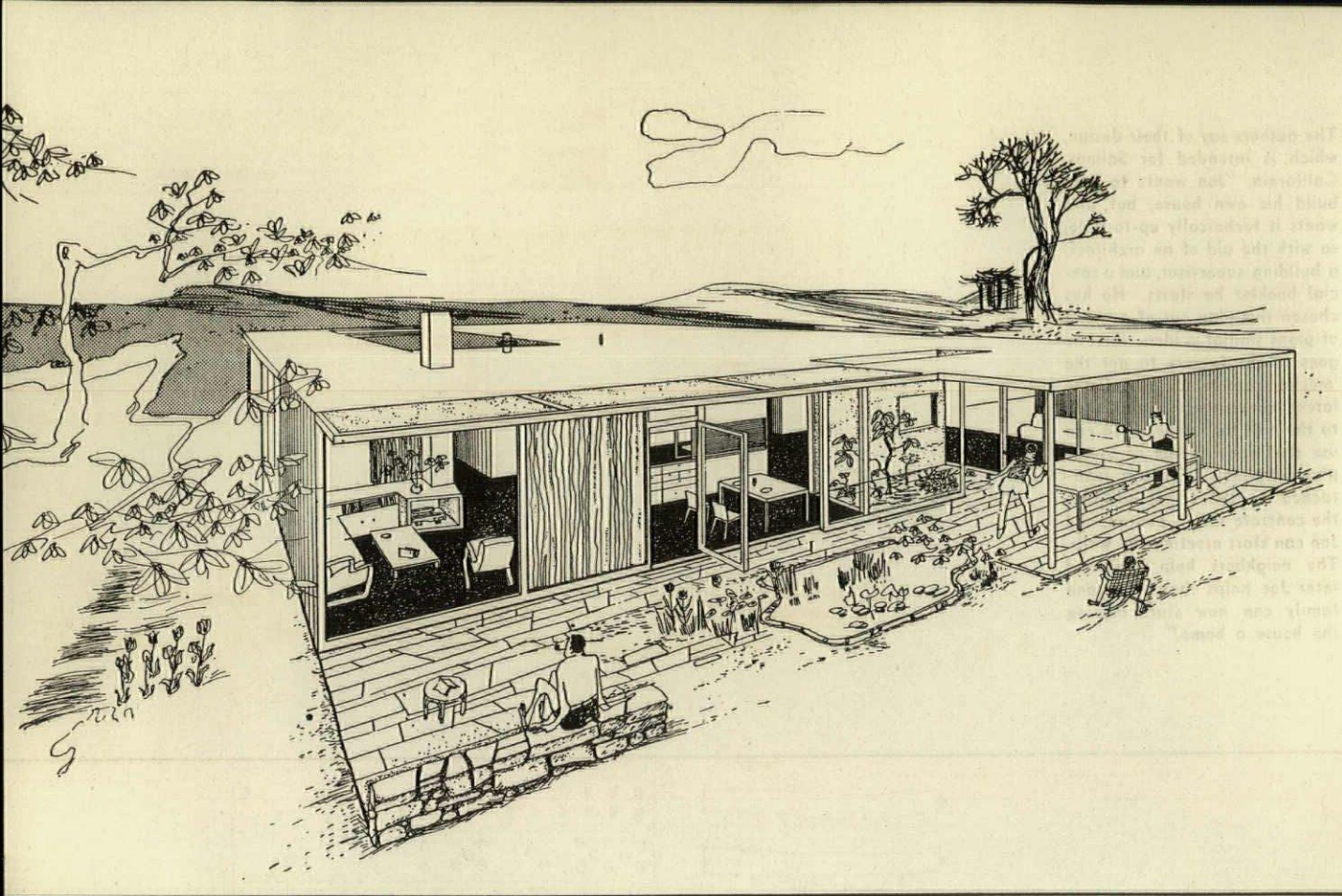


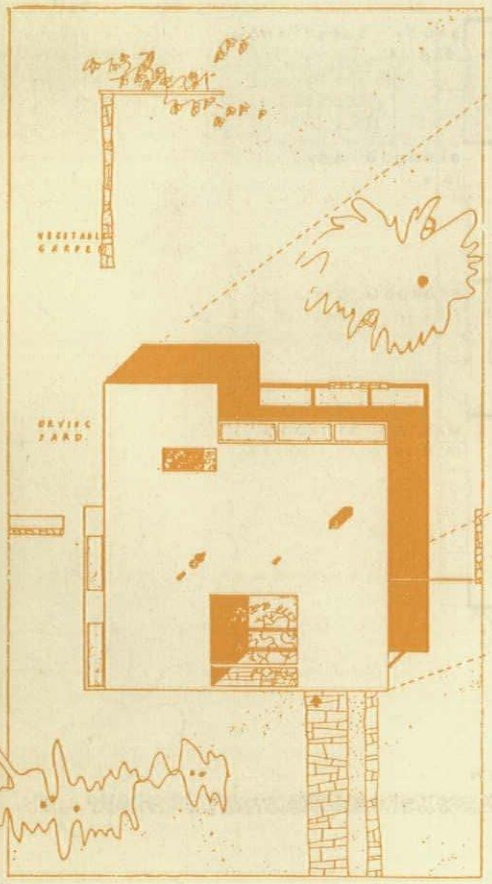
PLAY YARD ELEVATION

STREET ELEVATION



KITCHEN EQUIPMENT
SINK
BENDIX
STOVE
REFRIGERATOR
DEEP FREEZE

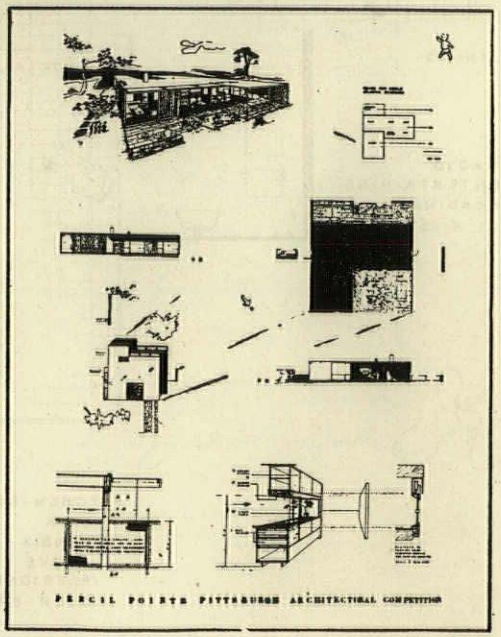




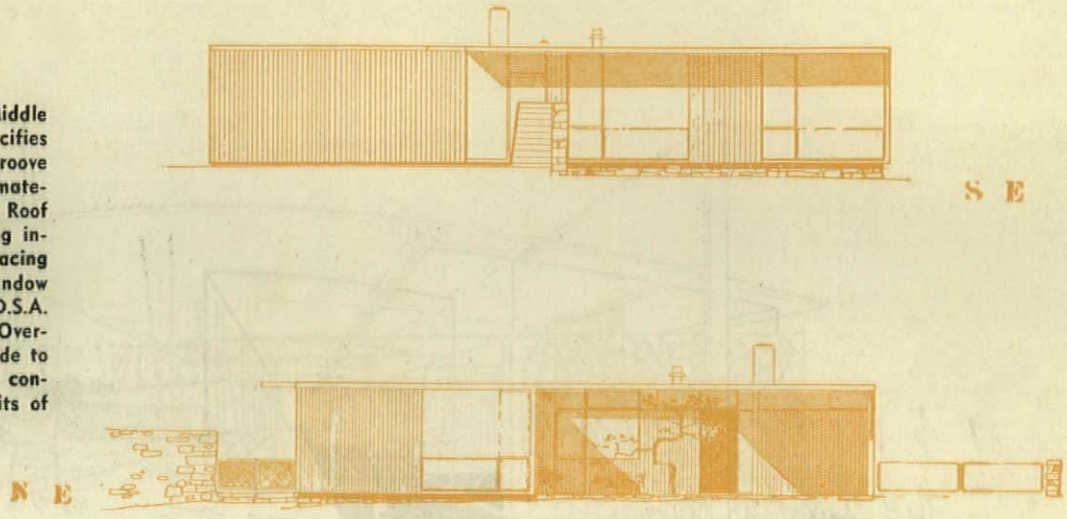
ADDITIONAL JURY COMMENT

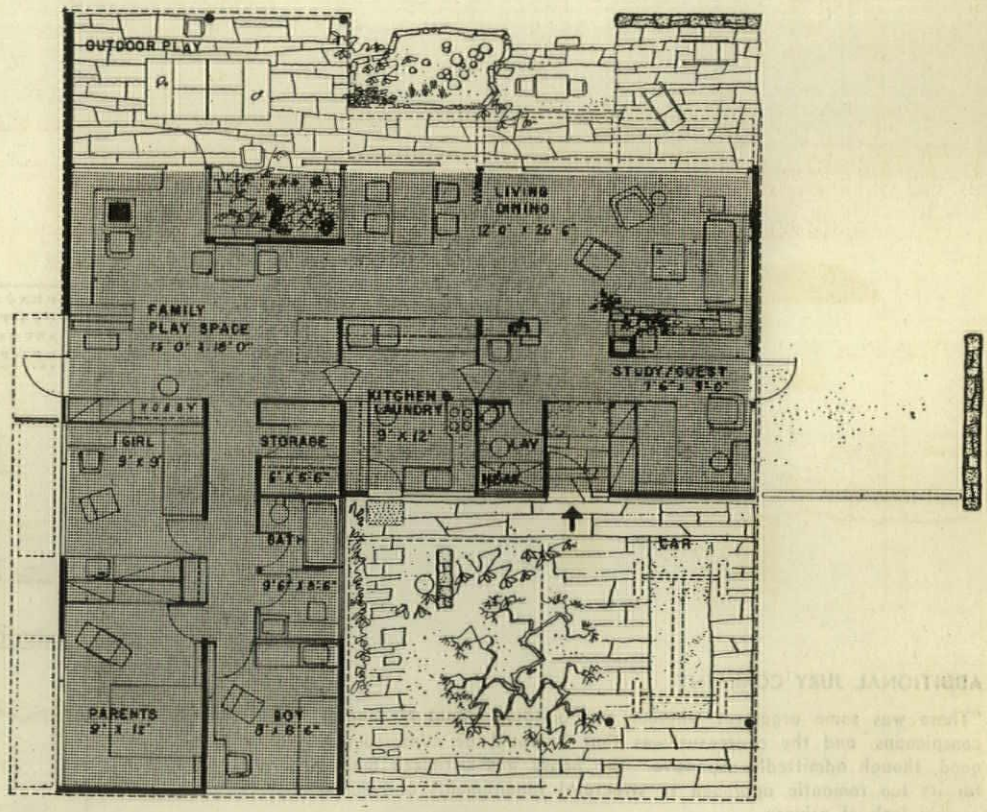
"This house has the necessary facilities for all daily activities and they are arranged for easy upkeep and cheerful living. Wood and glass are used with great skill to produce elevation forms that are strong, clear, in good proportion, and pleasant to look at. The design was criticized for the obvious lack of privacy in the bedrooms, since they face and are very close to the adjacent lot. The detail (see page 91) of the sliding counter window was commended as an intelligent use of glass, simply and cleanly executed."

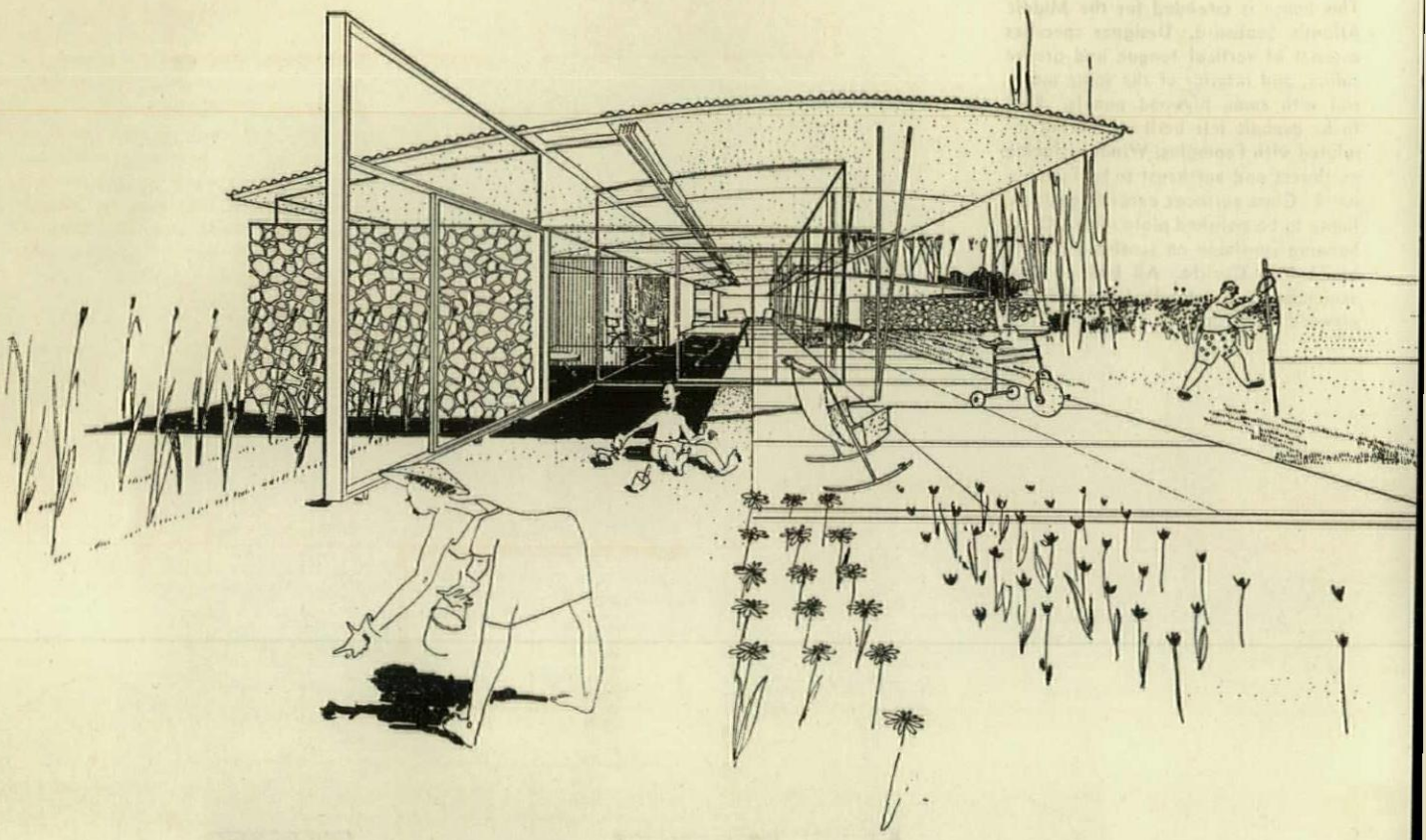
2nd I. M. PEI AND FREDERICK G. ROTH PRINCETON, N. J.

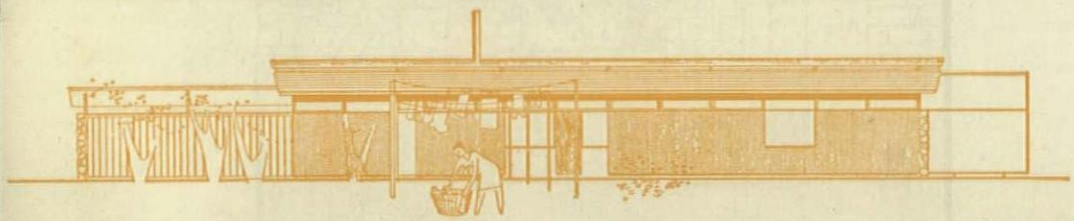


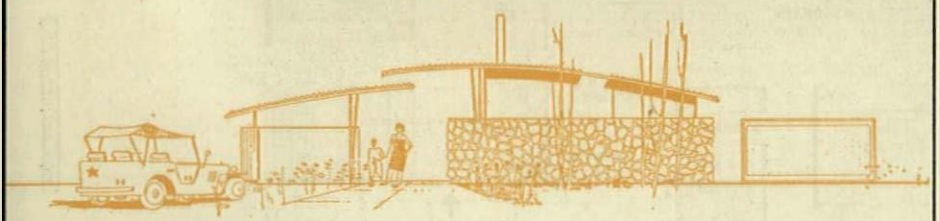
This house is intended for the Middle Atlantic Seaboard. Designer specifies exterior of vertical tongue and groove siding, and interior of the same material with some plywood panels. Roof to be asphalt felt built-up roofing insulated with Foamglas. Windows facing northwest and northeast to be Twindow units. Glass surfaces exceeding D.S.A. limits to be polished plate glass. Overhanging sunshade on southerly side to be ¼ inch Coolite. All built-in conveniences to be standardized units of plywood construction.

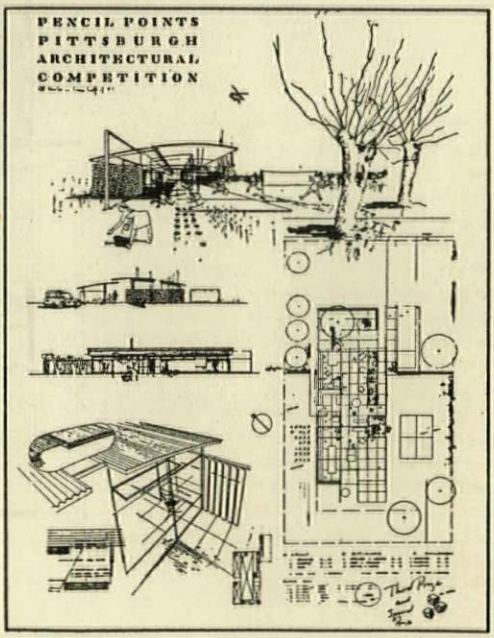








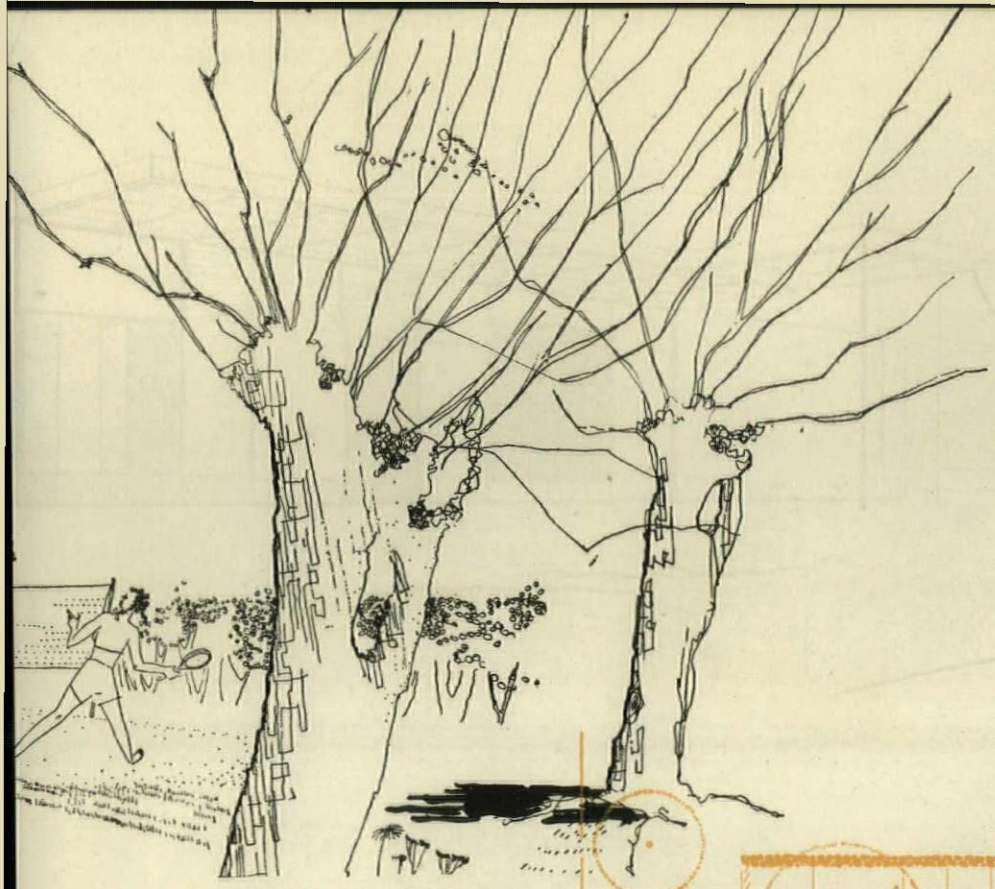




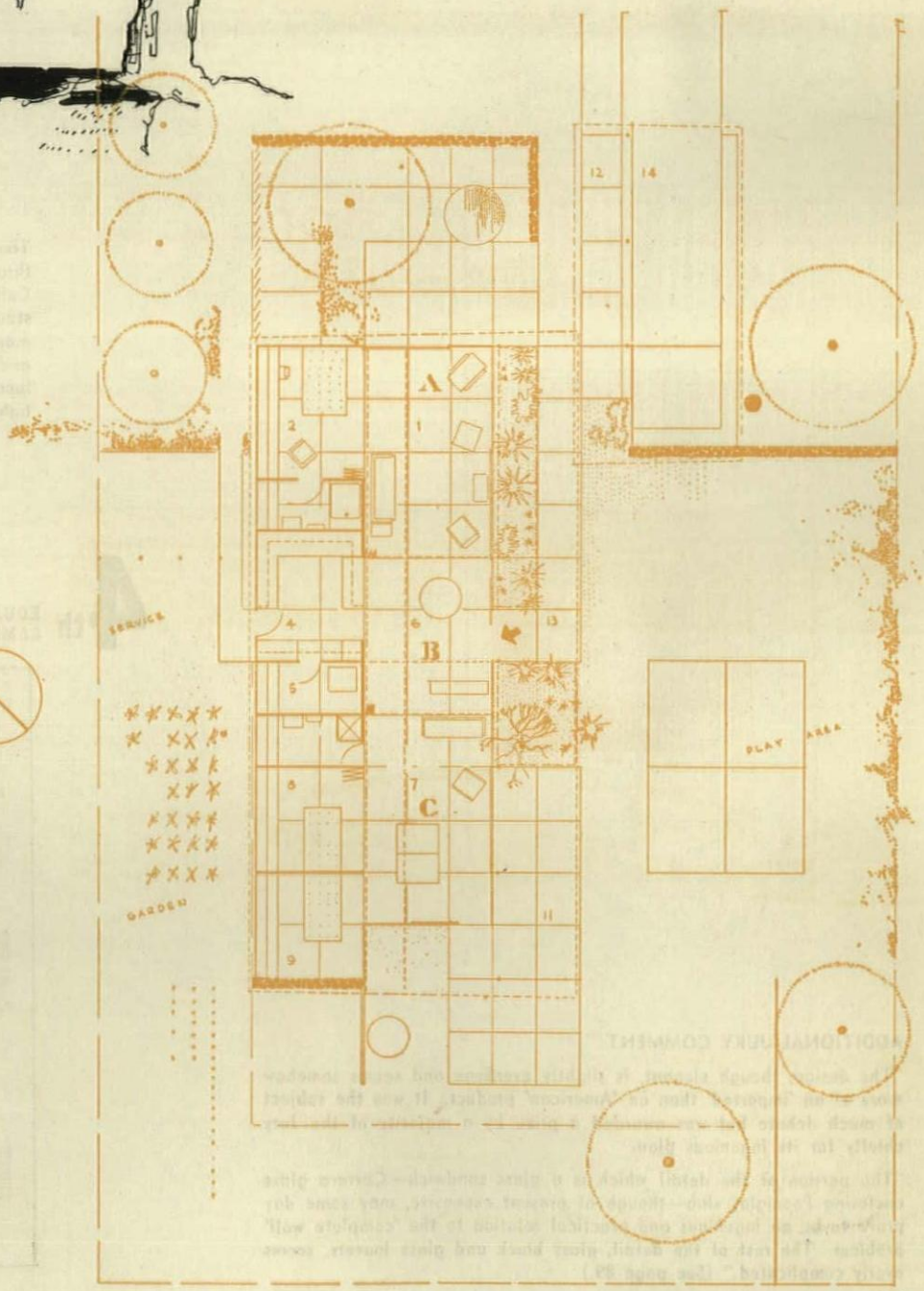
ADDITIONAL JURY COMMENT

"There was some argument whether this building would be unduly conspicuous, and the consensus was that it would be conspicuously good, though admittedly expensive. The house was criticized mainly for its too romantic approach to structural requirements and for a certain lack of privacy.

"The bent solex glass detail for the skylight (see page 92) was considered a practical and intelligent application of glass for its purpose under the conditions."

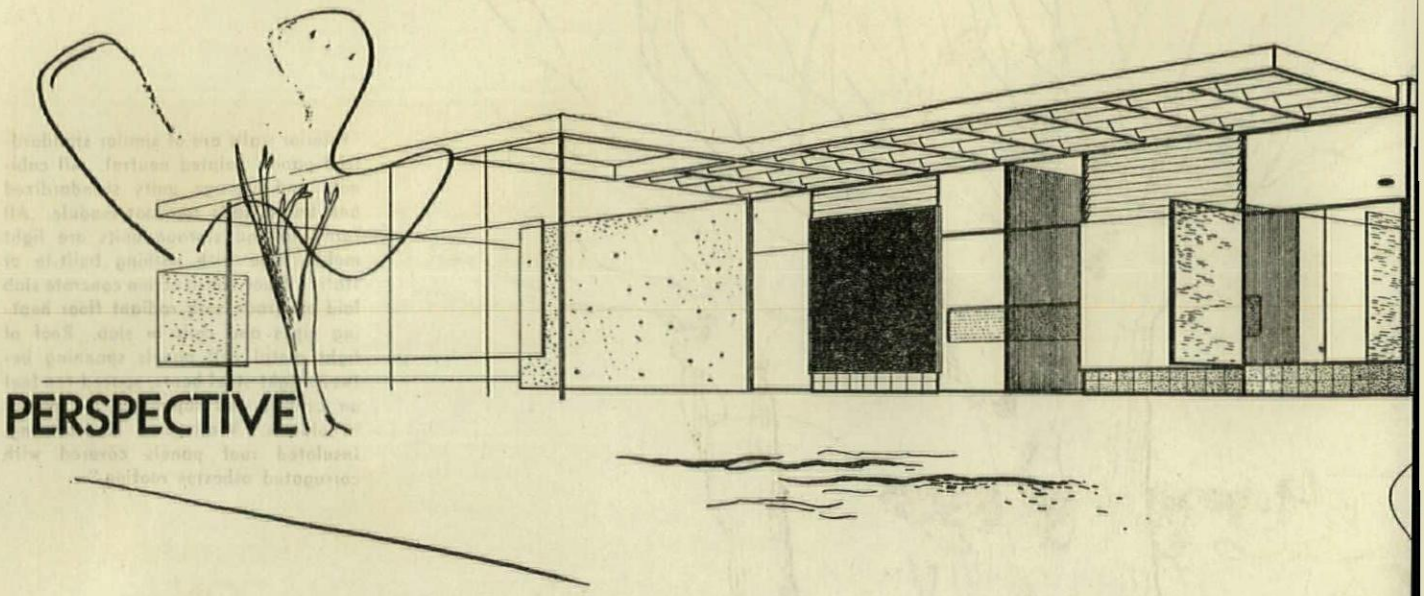


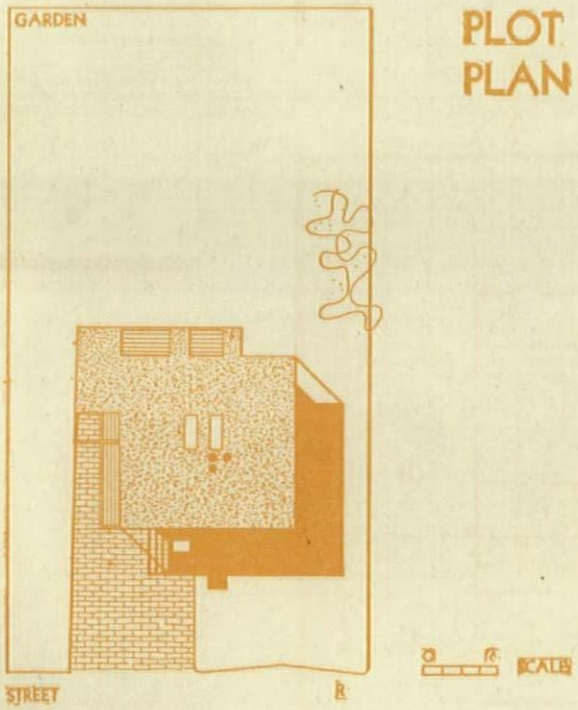
"Interior walls are of similar standardized panels painted neutral. All cabinets and storage units standardized and based on a ten-foot module. All furniture and storage units are light mobile type with nothing built-in or static. Floor construction concrete slab laid on grade with radiant floor heating pipes and coils in slab. Roof of light metal cell panels spanning between light steel bents, spaced ten feet on centers and supported by tubular V-columns. Walls non load-bearing. Insulated roof panels covered with corrugated asbestos roofing."



3rd RALPH RAPSON CHICAGO, ILL.

This design is intended for any locality in the southern half of the United States. The designer says, "This plan and the plot are an integrated unit. The plan is predicated on these basic considerations: that there is need for separate yet closely interlocking quarters for adults and growing children; that food preparation and its consumption are the 'heart' of the living activities and should form the interlocking link between the adult and children areas, thus evolving three basic areas with the possibility of one large uninterrupted space or three separate functional units; that the indoor and outdoor activities should be fused, with emphasis being laid on a healthy active type of living rather than a passive one."

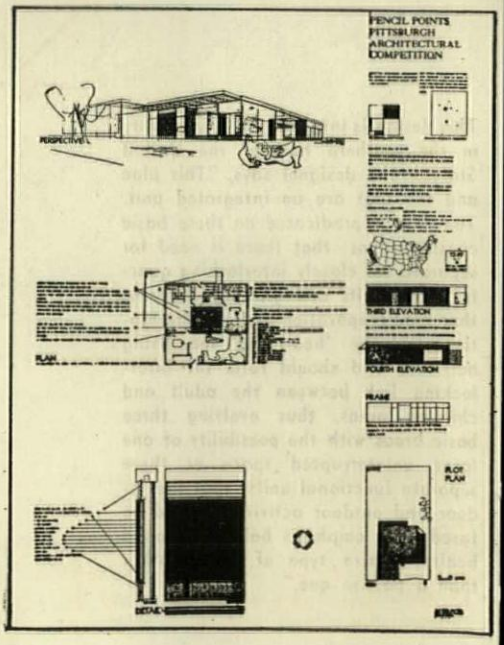




PLOT PLAN

The designer calls attention to cross-ventilation through the whole house, which is intended for the California climate. The house is based in part on studies in the field of abstract art, involving the manipulation of space by interpenetration, division, and the use of color combined with opaque, translucent, and transparent materials to control spatial light and shadows.

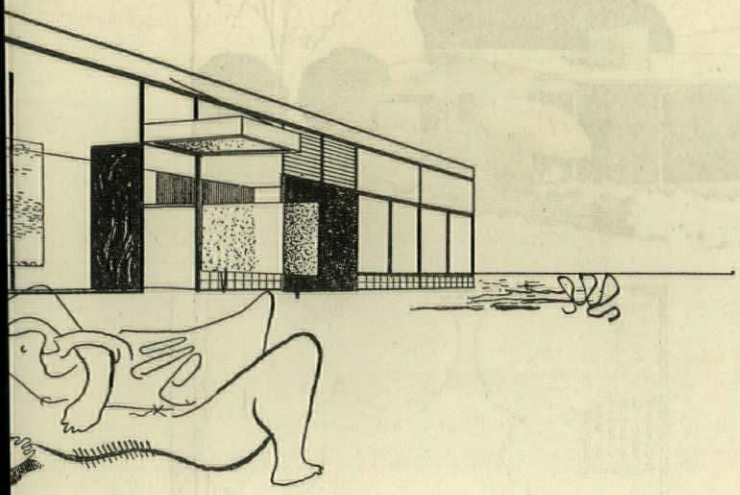
4th EDUARDO FERNANDO CATALANO CAMBRIDGE, MASS.



ADDITIONAL JURY COMMENT

"The design, though elegant, is slightly overdone and seems somehow more of an 'imported' than an 'American' product. It was the subject of much debate but was awarded a prize by a majority of the Jury chiefly for its ingenious plan.

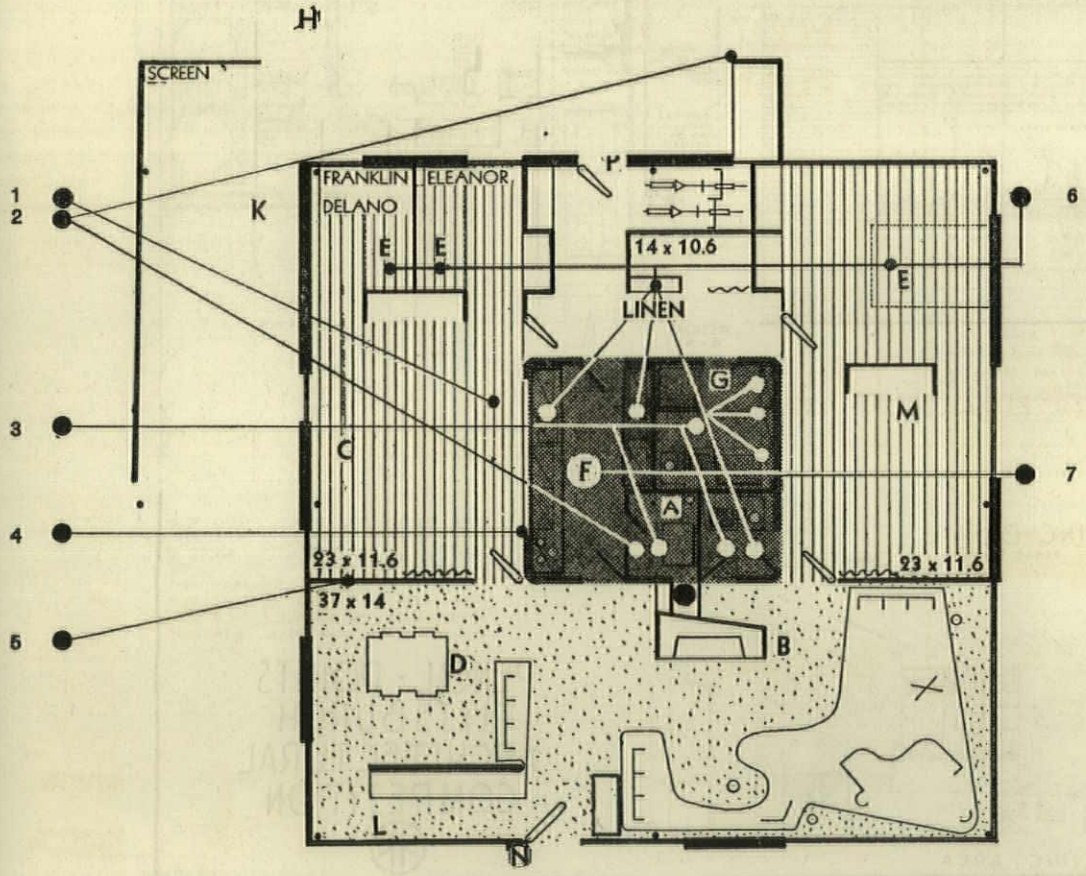
"The portion of the detail which is a glass sandwich—Carrara glass enclosing Foamglas slab—though at present expensive, may some day prove to be an ingenious and practical solution to the 'complete wall' problem. The rest of the detail, glass block and glass louvers, seems overly complicated." (See page 89.)



THIRD ELEVATION

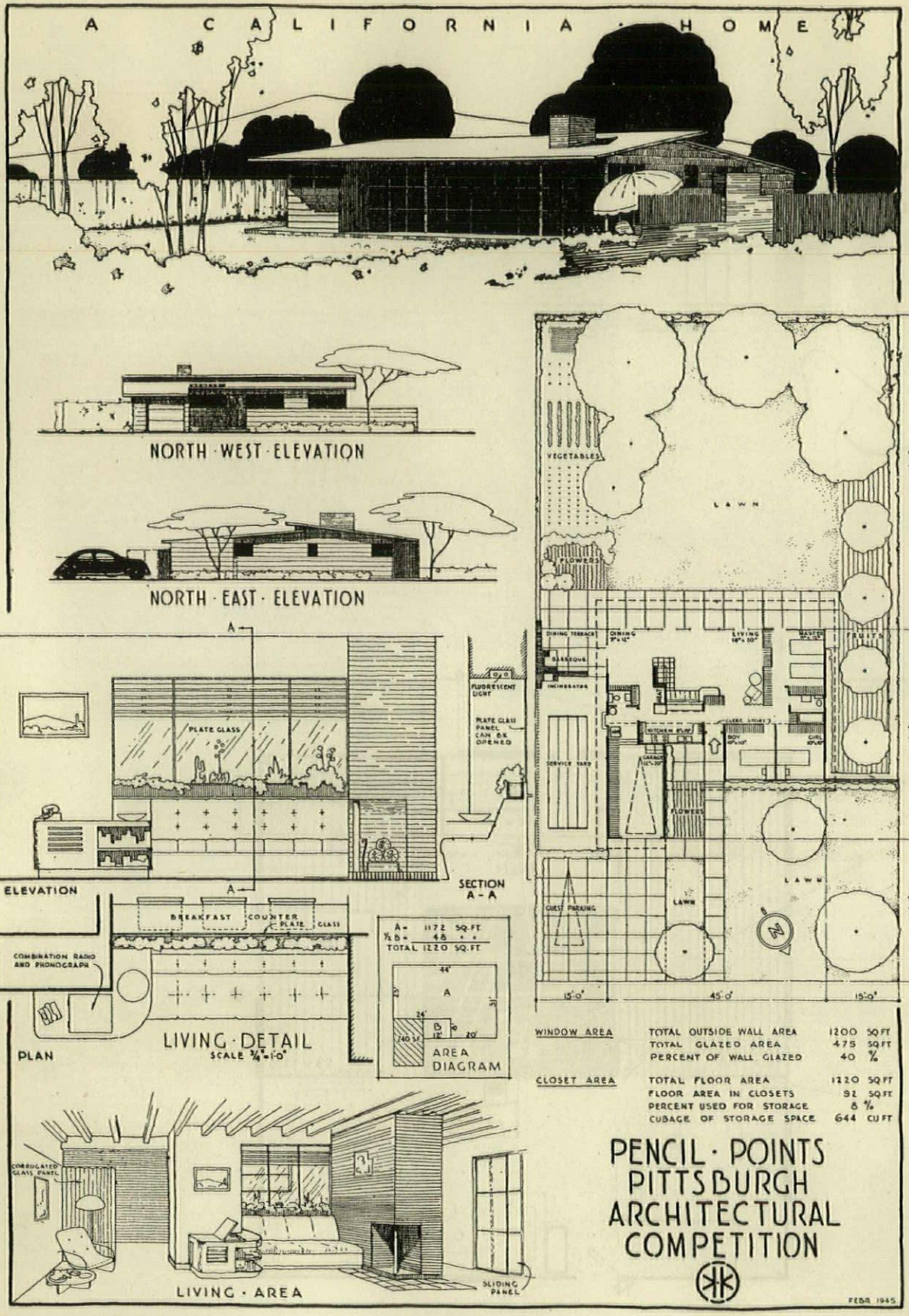
THE ELEVATIONS ARE BASED UPON THE DIVISION OF THE SURFACE OF A STANDARD STEEL FRAME, INTO SUBORDINATE RECTANGLES OF WHITE, BLACK AND PURE COLORS ACCORDING TO LIFE REQUIREMENTS

FOURTH ELEVATION



KEY TO PLAN

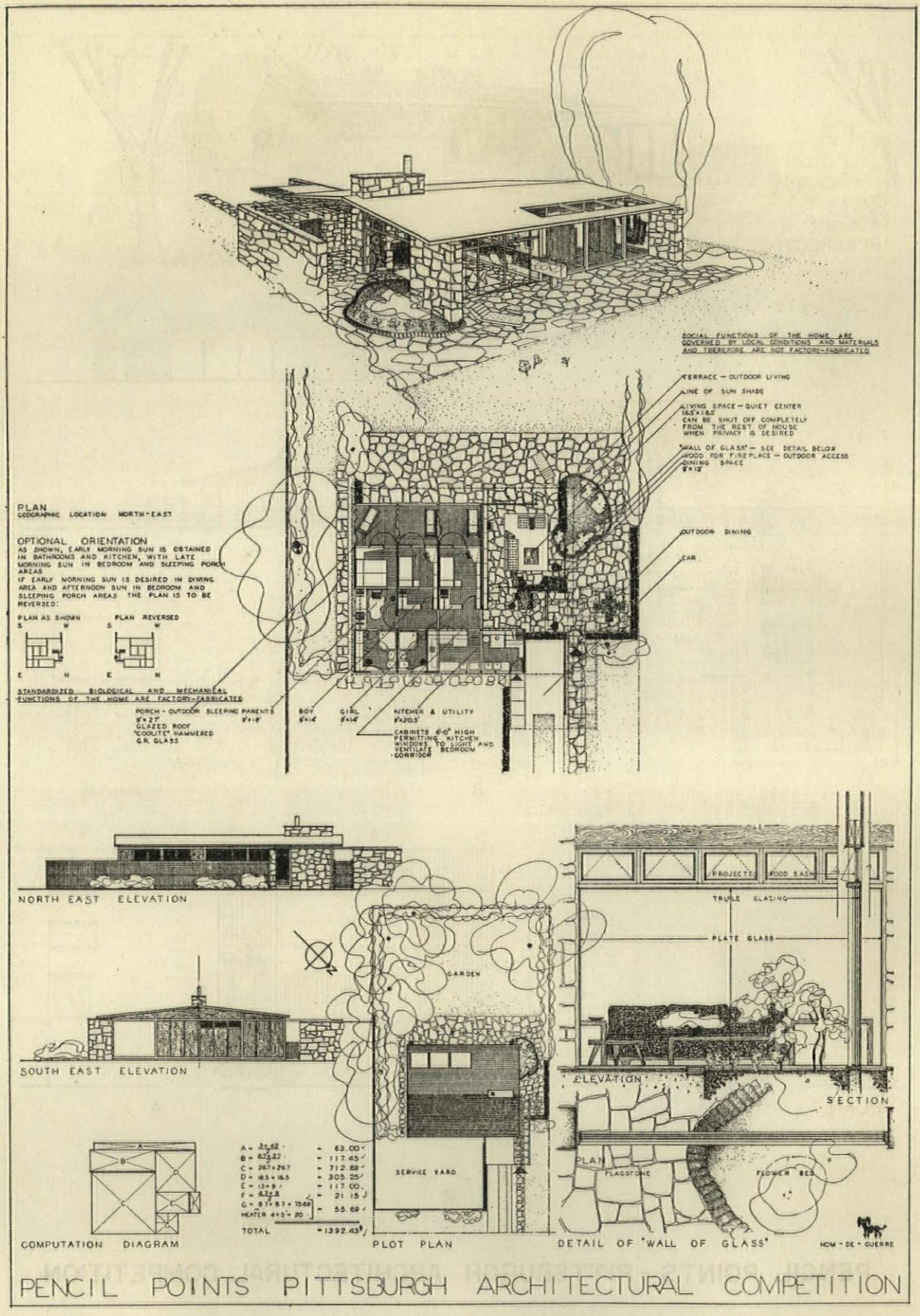
1. Supplementary space for breakfast. 2. Space for refuse and cleaning tools inside the house. Provision for refuse and gardening implements outside the house. 3. Kitchen, laundry, bathroom form one unit with the boiler room, which is placed in the middle of the house and has a common smoke stack with the fireplace, as well as access from the kitchen. 4. Uses of glass to create space. In the kitchen wall it produces an illusion of space and serves in a practical way as a control over children's activities. 5. A flexible view through this wall is regulated by curtains. 6. Laundry, bedrooms, bathroom, and ironing unit with easy access to linen supply. Separation between living and sleeping areas. Back door provides exclusive access to sleeping area. 7. Light from skylight. A Boiler. B Living room. C Study and place for children's games. D Dining room. E Bedroom. F Kitchen laundry 11.6 x 7.6. G Bathroom 6.6 x 7.9 4.6 x 4. H Garden. K Garage. L Interior gallery. M Dressing room. N Main entrance. P Rear entrance. R Street.



Highlights noted in this design for a California home; compact plan, minimum waste hall space to clean; economical to build and maintain; most partitioning made up of useful storage space; fine, large related living and dining space on southern garden front; side walls and windows thoughtfully worked out for privacy from neighbors; well planned plot, thoroughly put to use; clerestory for cross ventilation and lighting of bath, hall, and kitchen. Criticisms: kitchen not well placed for supervising children's outdoor play; exterior lacks "positive" character.

SM

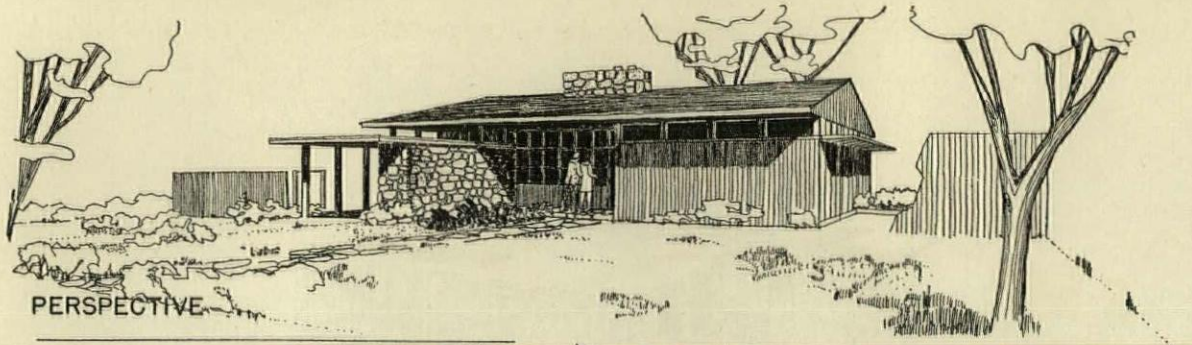
KARL J. BELSER AND KAREL H. DEKKER LOS ANGELES, CALIF.



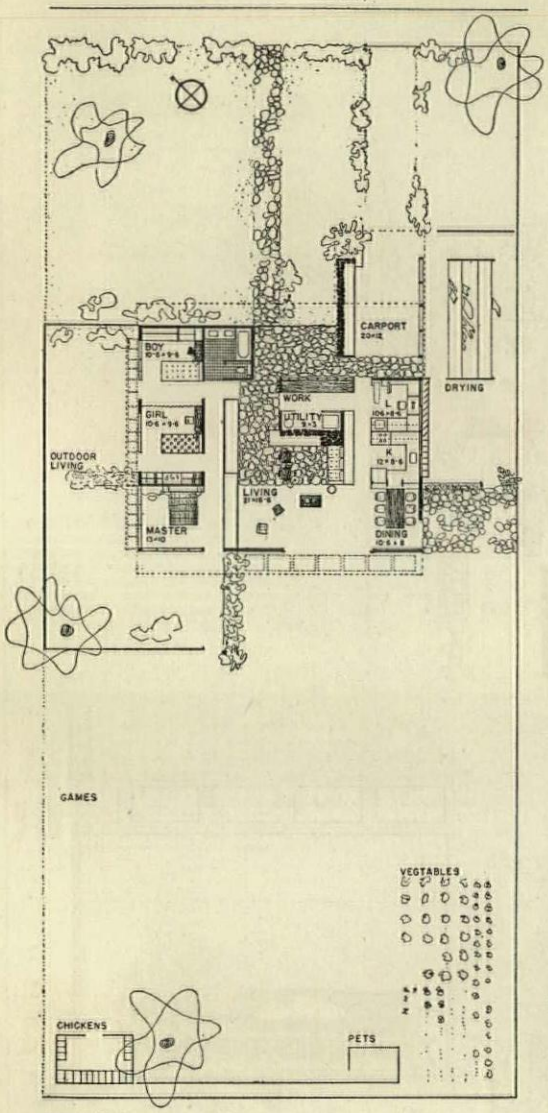
ALEXIS DUKELSKI
WEST LOS ANGELES, CALIF.

SM

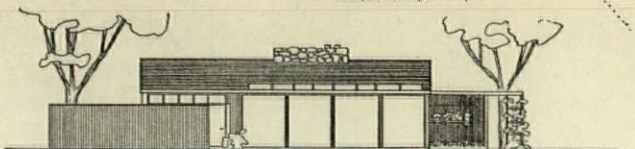
"The plan has many delightful ideas," one juror said, "but the designer made it most difficult for the jury to discover the good points by much too much complicated indication." Among the good points: outdoor porches off the bedroom suites (the latter seem cramped in area, however); the walled outdoor dining room for use in summer (the house is for the Northeast); the "human quality" of the design; the basic economy of arrangement for a normal family's activities; provisions for privacy. "Too much stone" on both horizontal and vertical planes was a criticism.



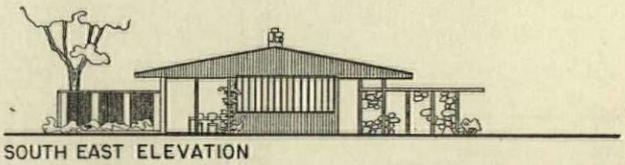
PERSPECTIVE



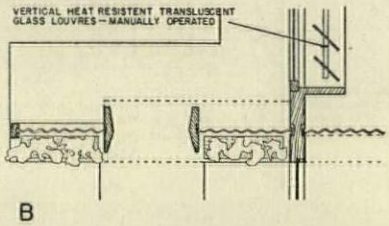
PLAN



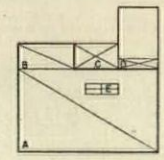
SOUTH WEST ELEVATION



SOUTH EAST ELEVATION

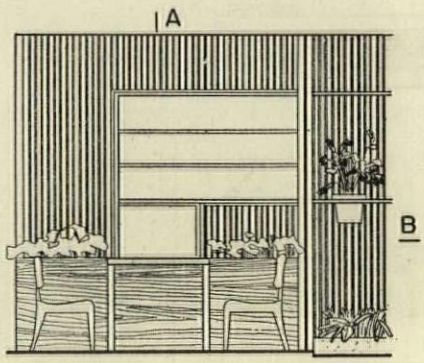


B

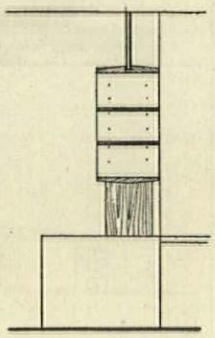


COMPUTATION

A	44×27	=	1188
B	175×85	=	149
C (½)	13×8	=	52
D (½)	14×3	=	21
E	10 3	=	30
TOTAL		=	1380 SQ FT



DETAIL



A

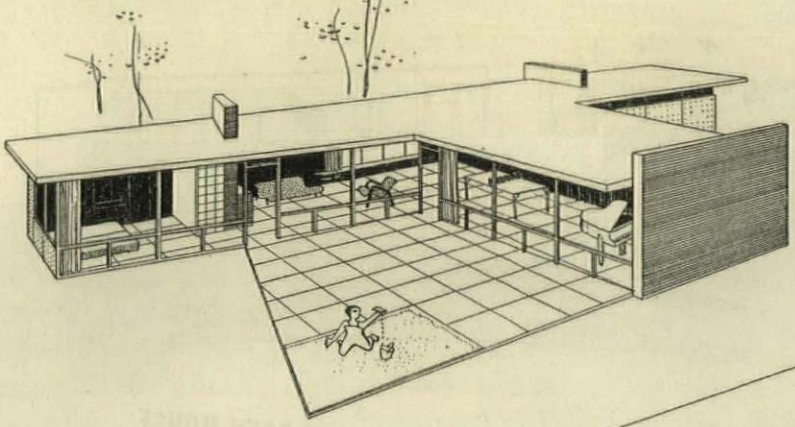
REGION: NORTH-EAST

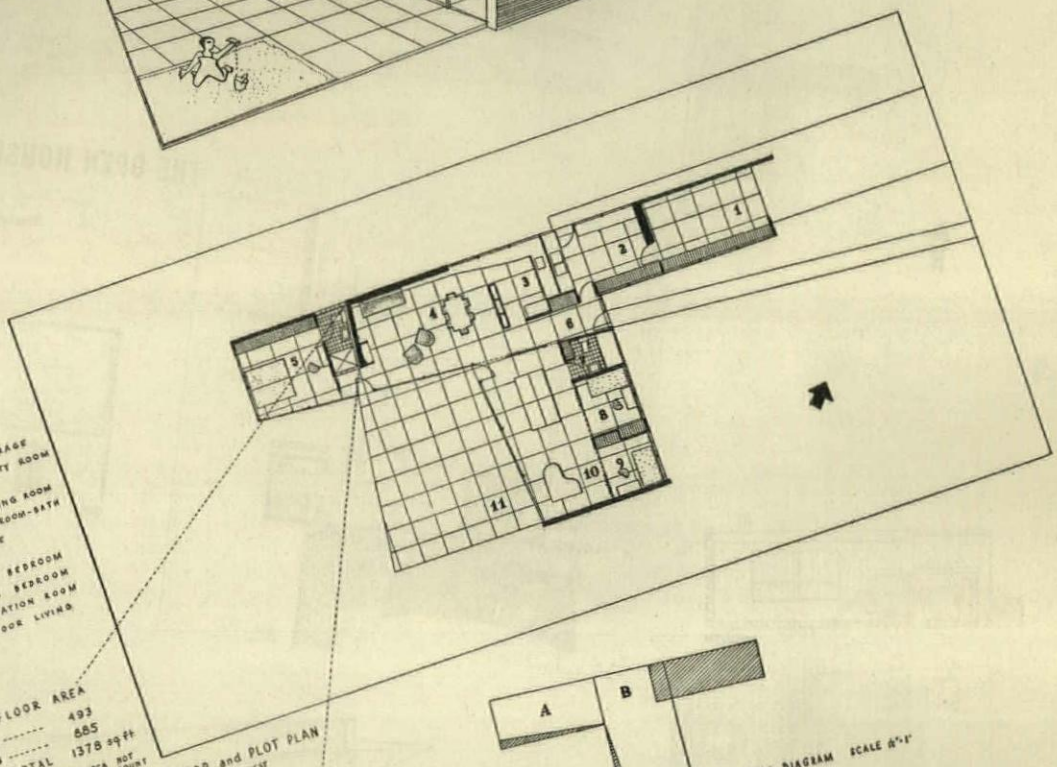
PENCIL POINTS - PITTSBURGH ARCHITECTURAL COMPETITION

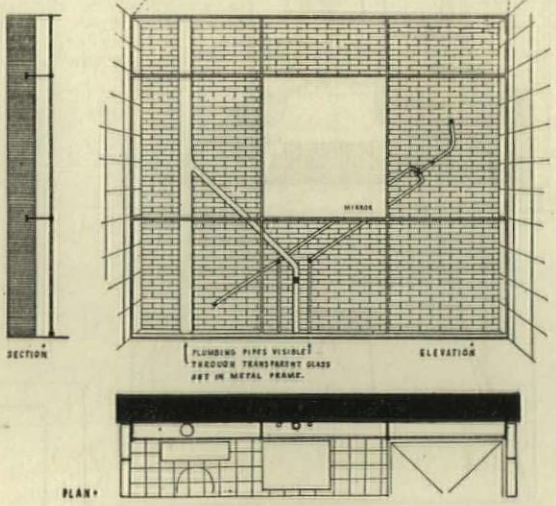
The one that just missed a prize award. The best of several drawings that used a similar basic plan, the design was admired by the jury for its domestic quality, the economical arrangement of living, kitchen-utility, and sleeping areas, and the simple, unaffected approach to the problem. Criticized were the many shapes and sizes of windows which, some jurors felt, resulted in lack of harmony. Arrangement of plot and relation of outdoor areas to separate indoor functions were praised. For the Northeast.

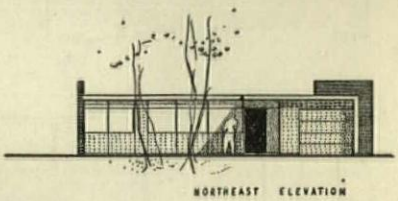
SM

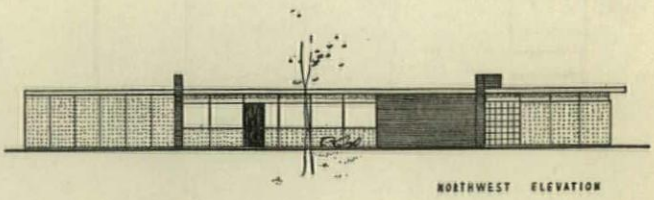
LEON HYZEN AND ALLMON FORDYCE NEW YORK, N. Y.







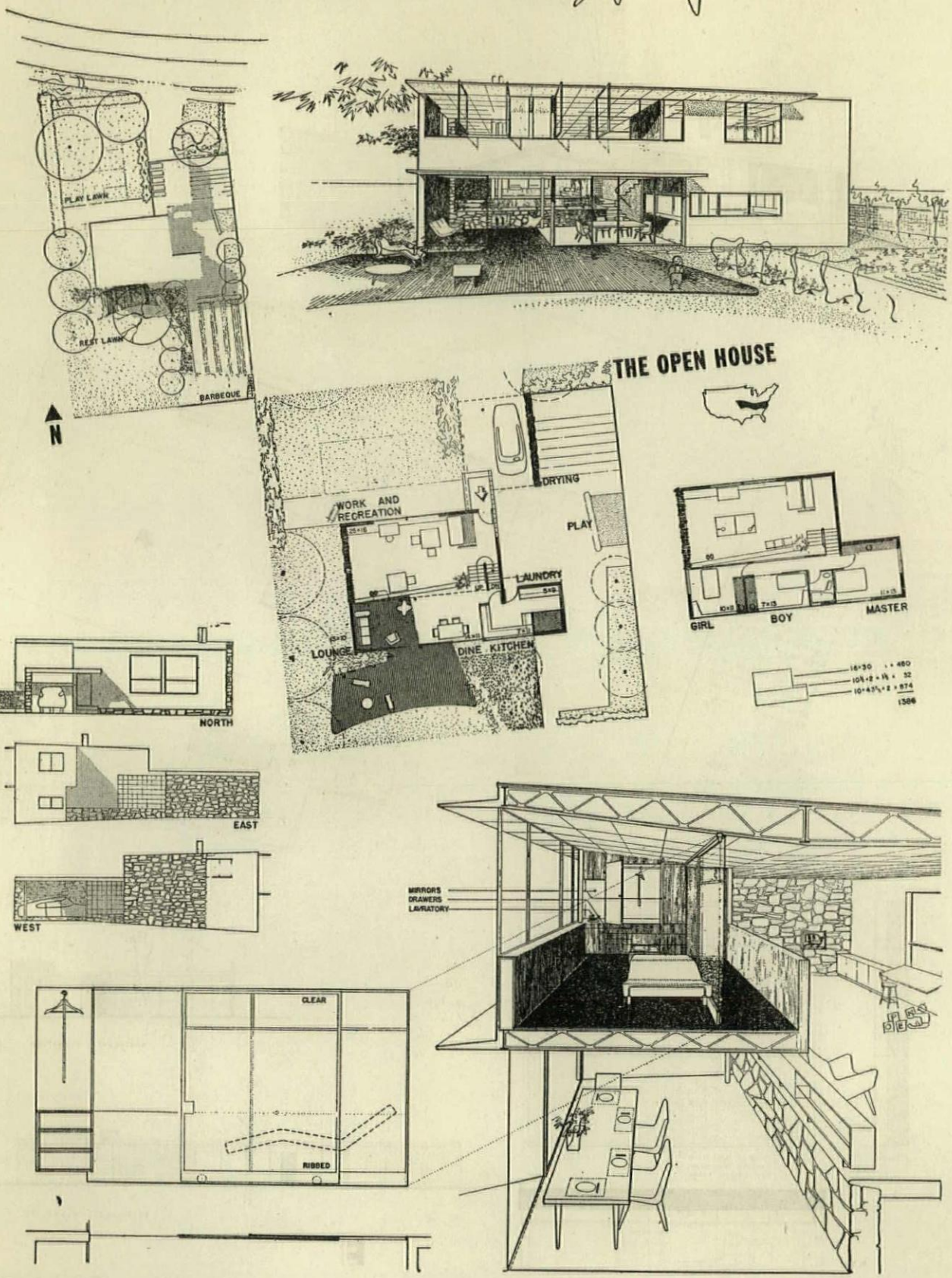




STANLEY A. KAZDAILIS
CHICAGO, ILL.

SM

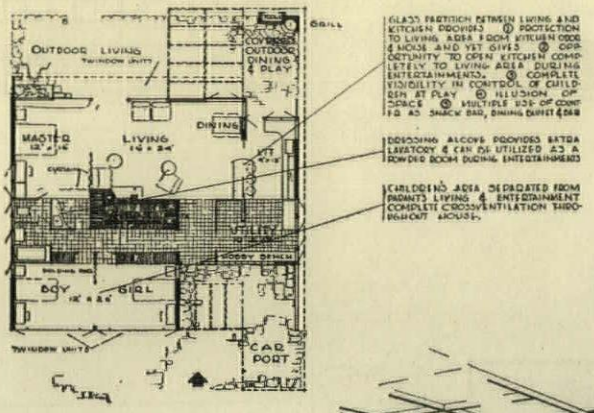
Things admired in this design for living in the central Midwest were the separate provisions for adult and children's needs, including physical separation of the bedrooms; the domestic scale of the design and the simple exterior character. Things questioned or deplored: the service area was not planned for child supervision; poor disposition of land, with unnecessarily wasted front lawn; and (lacking any plan indication to the contrary) no provision for privacy from view of next-door neighbors. The detail of open plumbing, openly arrived at, raised several eyebrows.

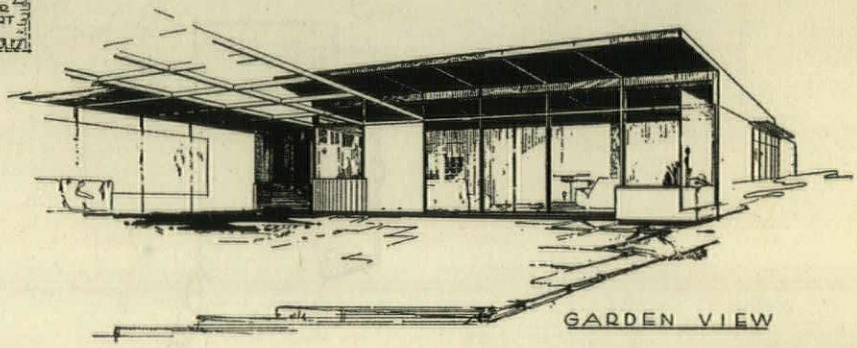


Designed for the central eastern states, this scheme on three half-levels results in a small house with an extraordinary sense of spaciousness; but, as one juror put it, despite the fact that the designer specified acoustical surface treatments, "the lounge and the children's bedrooms could never be quiet if the work and recreation area was used intensively enough to justify the amount of space given to it." Also criticized was what appears to be the quite arbitrary introduction of stonework on exterior walls. Location of family rooms toward rear garden would ensure privacy.

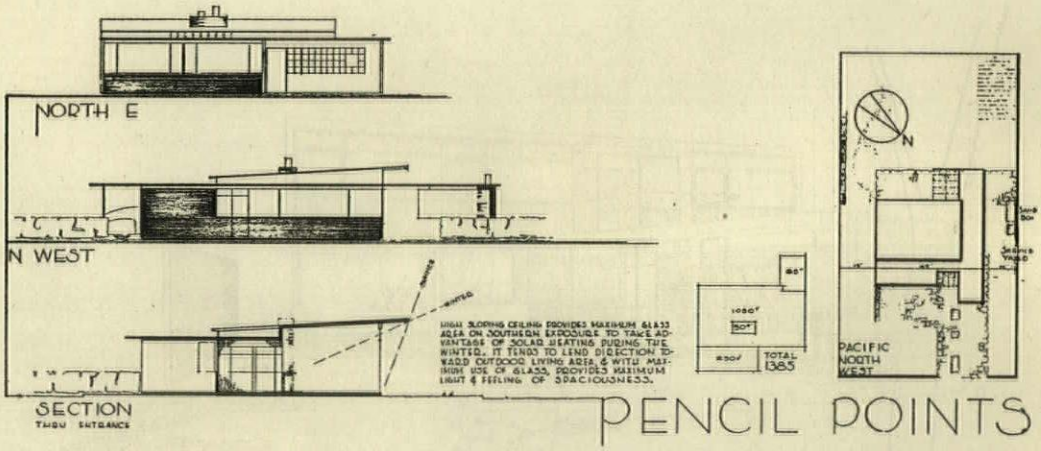
SM

OLIVER LUNDQUIST
WASHINGTON, D. C.



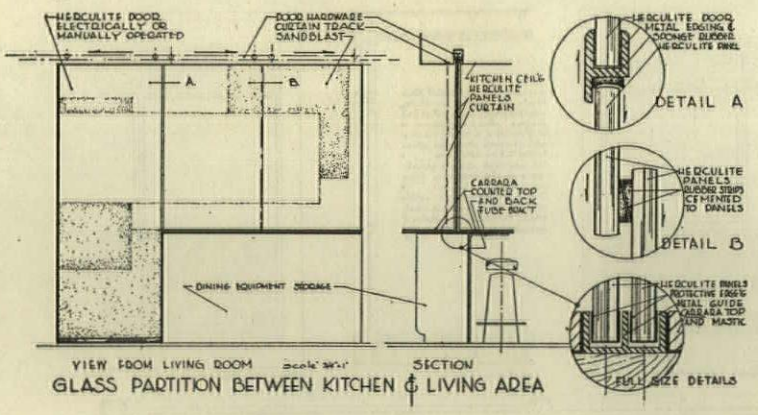


GARDEN VIEW

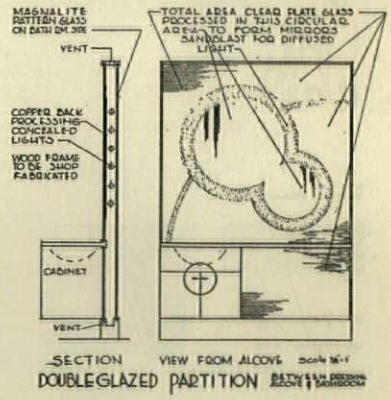


PENCIL POINTS

PITTSBURGH ARCHITECTURAL COMPETITION



GLASS PARTITION BETWEEN KITCHEN & LIVING AREA

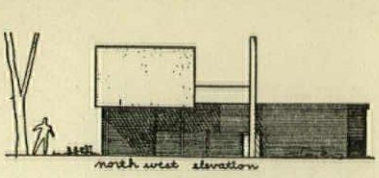


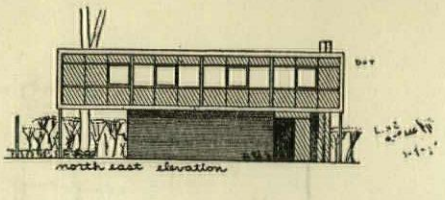
DOUBLEGLAZED PARTITION

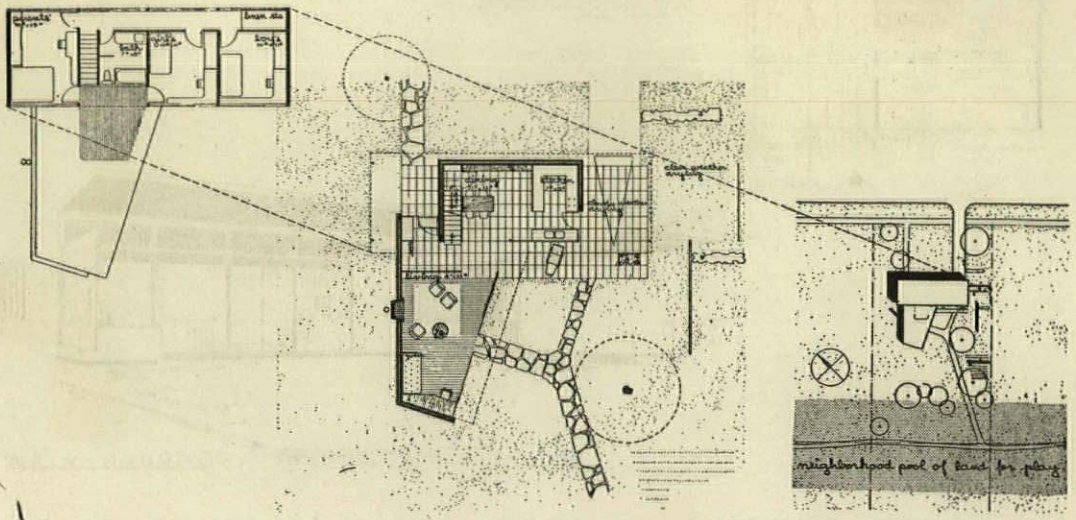
CHARLES G. MacDONALD
CAMBRIDGE, MASS.

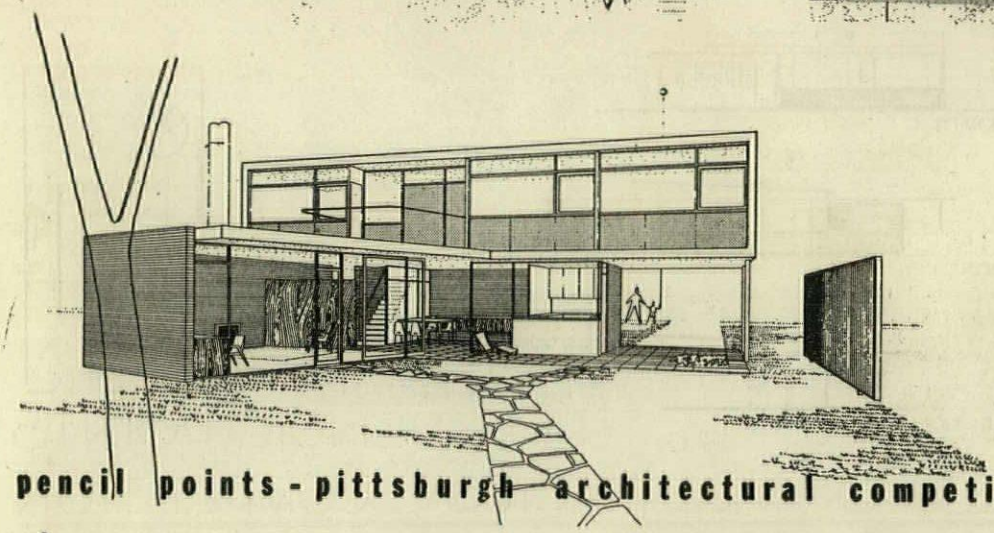
SM

Compact and convenient, this Pacific Northwest house was designed for economical construction. Main openings occur either toward front or rear; windows toward neighbors are all in utility areas. Master sleeping room, partitioned by curtain, becomes increased daytime living space; panel between children's rooms folds back to form indoor playroom. Outdoor play space poorly related to children's rooms, on opposite side of the house

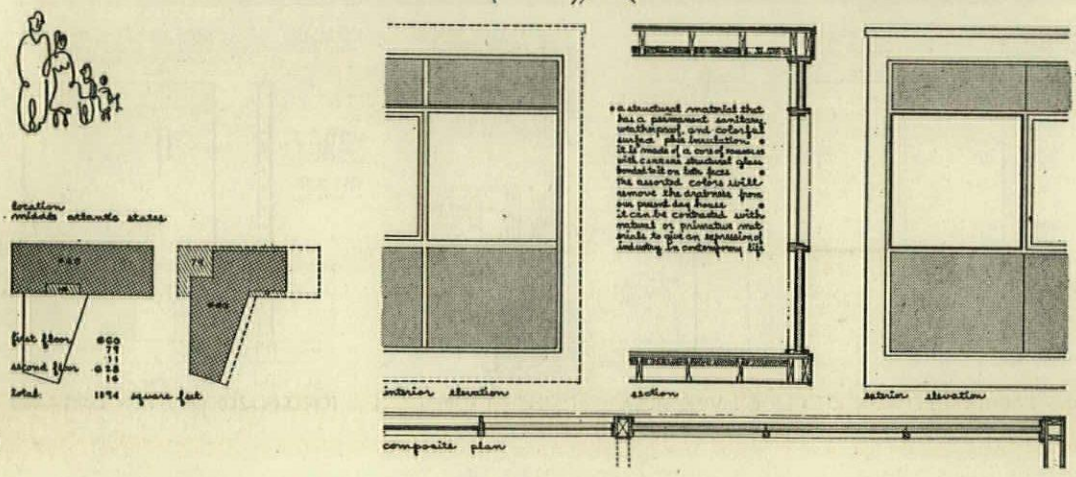








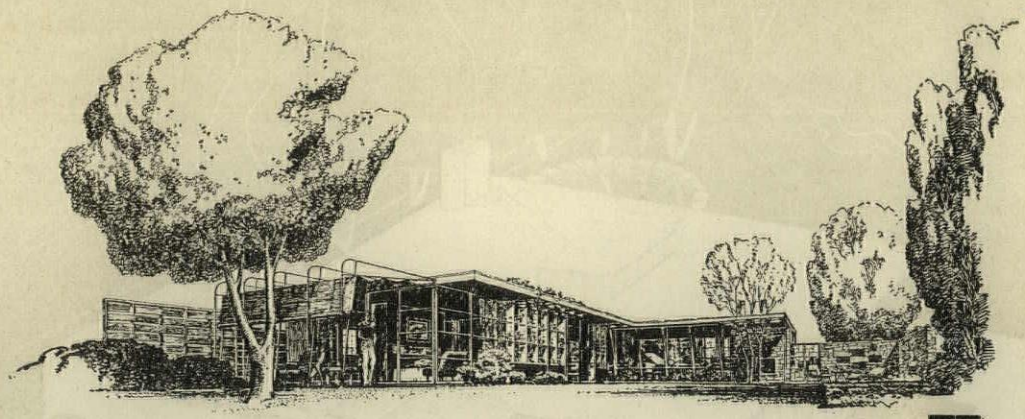
pencil points - pittsburgh architectural competition



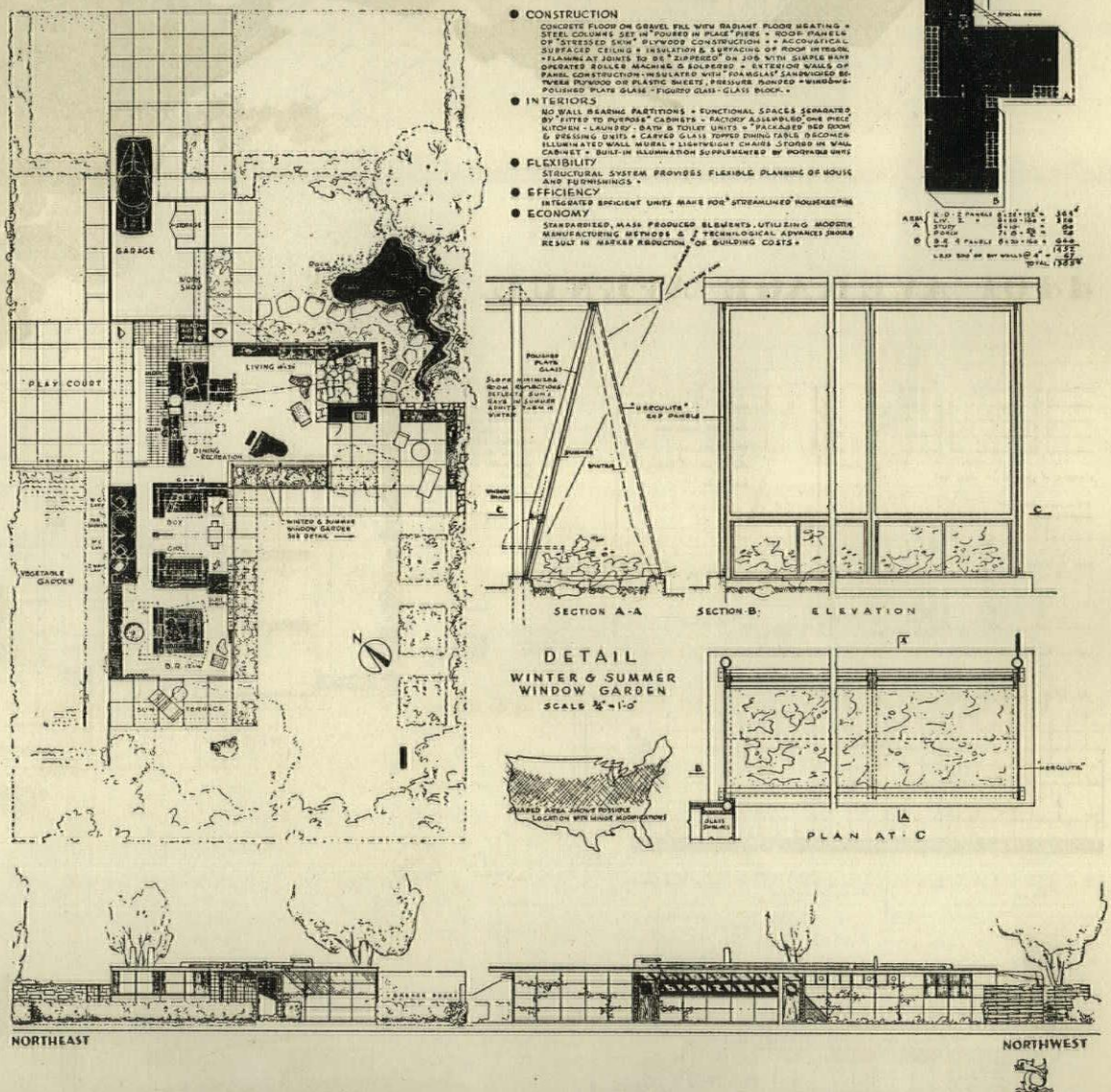
Main rooms sheltered from street and northwest by barrier walls on first floor and (on second) by hallway location; toward the southeast, walls are glazed. Splayed living room wall increases southern exposure; screen fence gives privacy from neighbors. Kitchen has full view of terrace and yard. Abbreviated partitioning limits indoor privacy but simplifies housework. Bedrooms have desk and shelf space as well as closets; the deck is for sunbathing. Storage and heater in basement. Middle Atlantic climate.

SM

CHARLES D. WILEY
BIRMINGHAM, MICH.



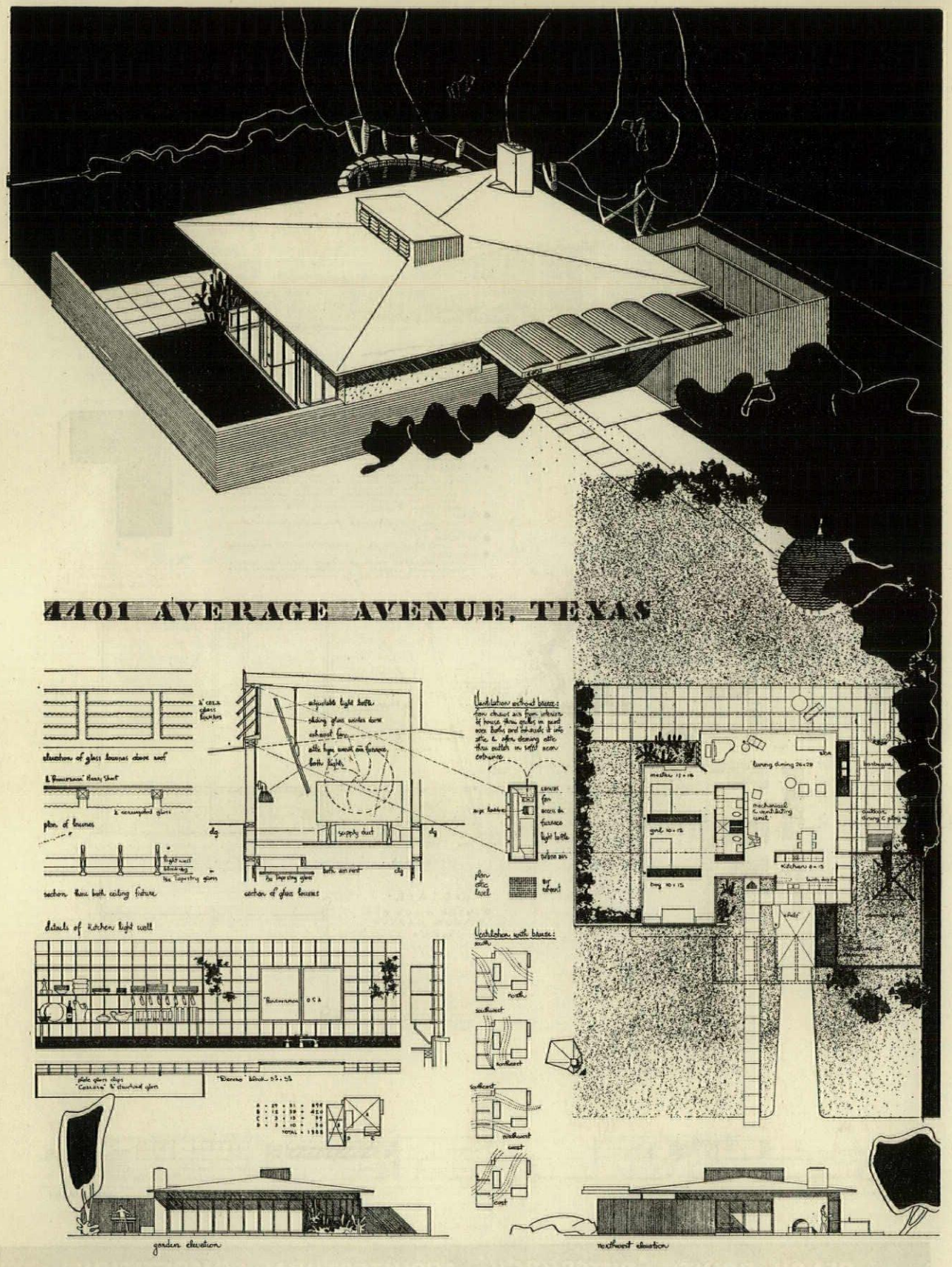
INTEGRATED FUNCTIONAL SPACE



PENCIL POINTS "PITTSBURGH" ARCHITECTURAL COMPETITION

ELMER BABB
CLEVELAND, OHIO

Planned for construction (with modification) throughout the central U. S., this scheme organizes all main living rooms around south and garden exposures. A sensible provision is a separate children's playcourt, under direct supervision from kitchen; main living room and outdoor terrace, well screened from the neighbors. Circulation from entrance door to bedroom wing, however, seems unnecessarily awkward and circuitous.



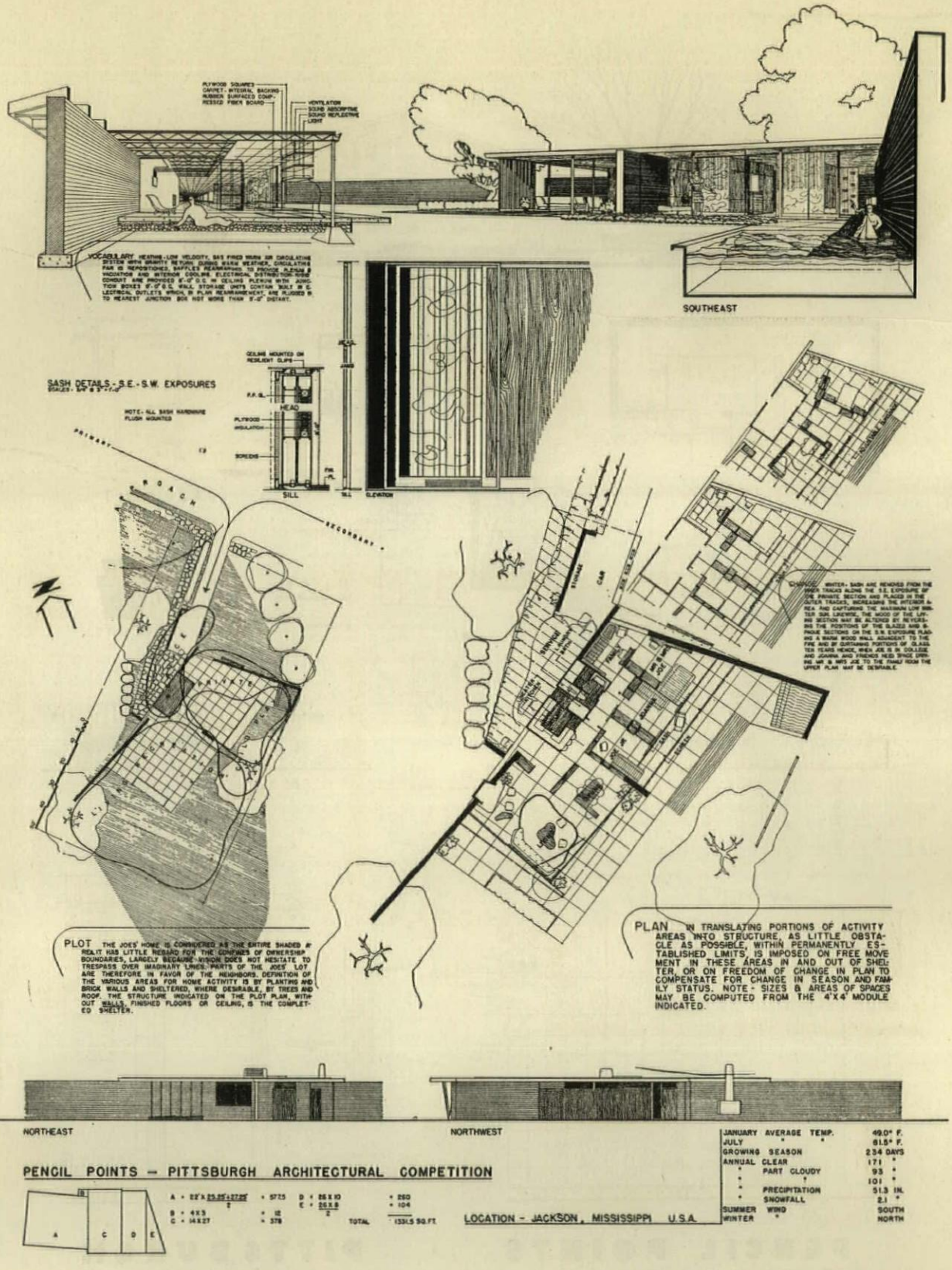
4401 AVERAGE AVENUE, TEXAS

PENCIL POINTS PITTSBURG ARCHITECTURAL COMPETITION

Location of entrance provides direct circulation to living area, kitchen, and bedroom wing. Minimum partitioning reduces housekeeping drudgery, while central location of baths shields children's bedrooms from living room sounds. Roof overhangs precisely calculated to screen out excessive sun. Exhaust fan draws house air through grilles above baths into plenum; hence into attic space and eventually to outlet in roof soffit near entrance. Good general storage space along garage wall. Designed for Texas climate.

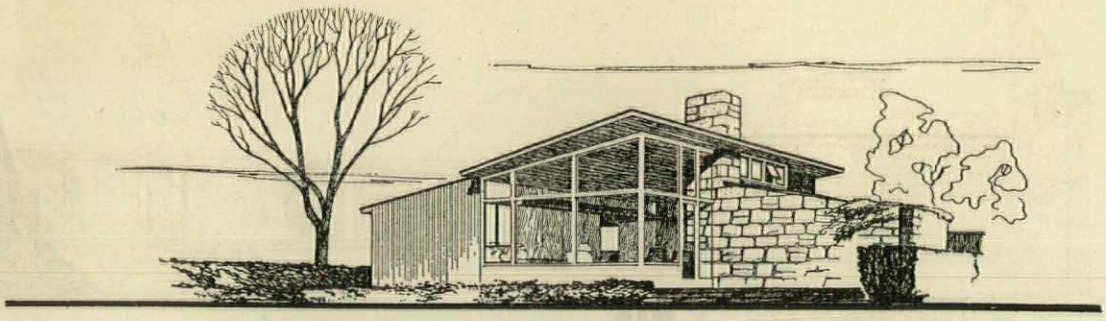
M

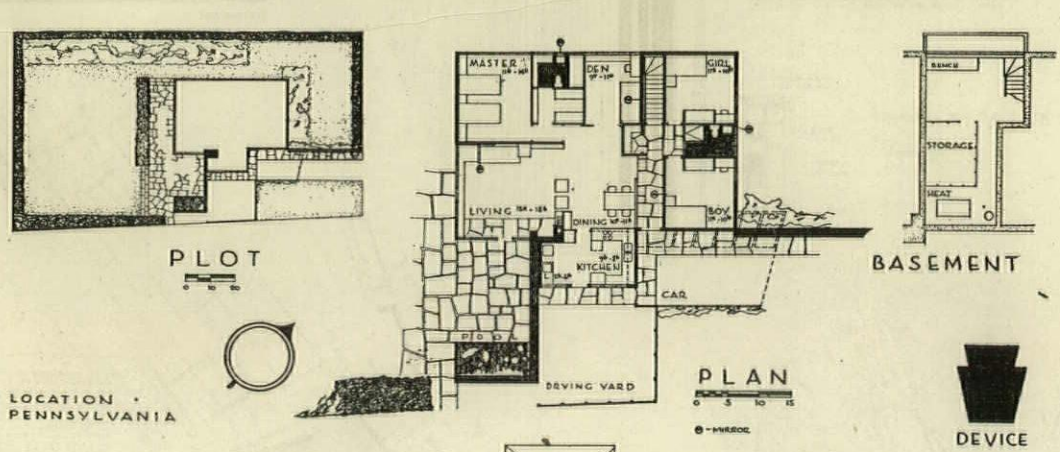
DONALD BARTHELME
HOUSTON, TEX.

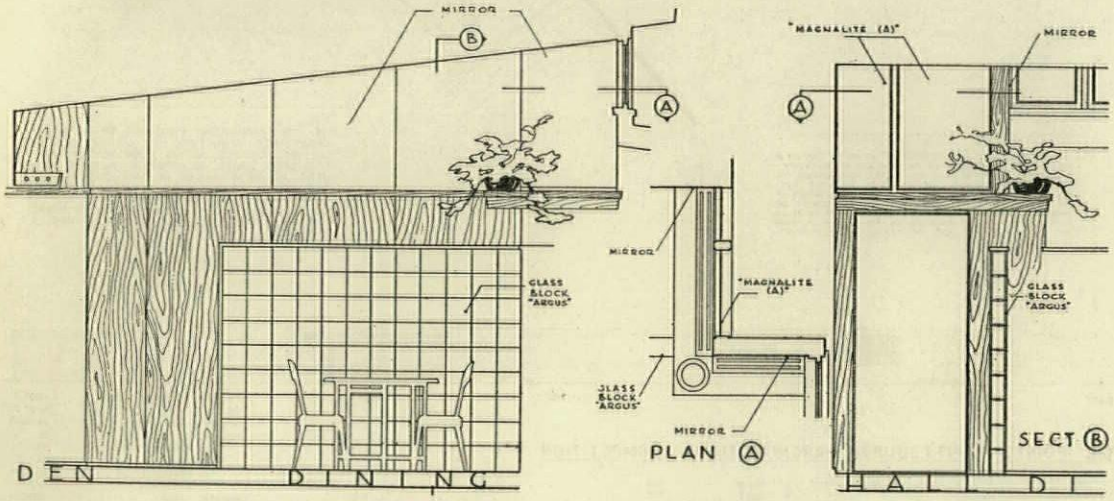


MAJ. THOMAS J. BIGGS, C.E.
ABERDEEN PROVING GROUND, MD.

Windows and screens of this Mississippi house are supported in a pair of tracks bordering garden frontages. In winter, screens are removed and window panels placed in the outer tracks, increasing interior living space and luring maximum sun within. Cleverness of concept has resulted in rather forced room shapes, as in parents' room; thoughtful provisions include future partition rearrangements to suit changed family needs.





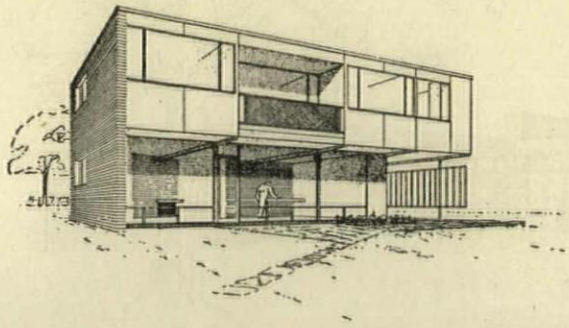


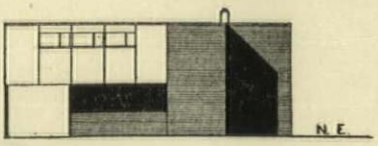
PENCIL POINTS ARCHITECTURAL · PITTSBURGH COMPETITION

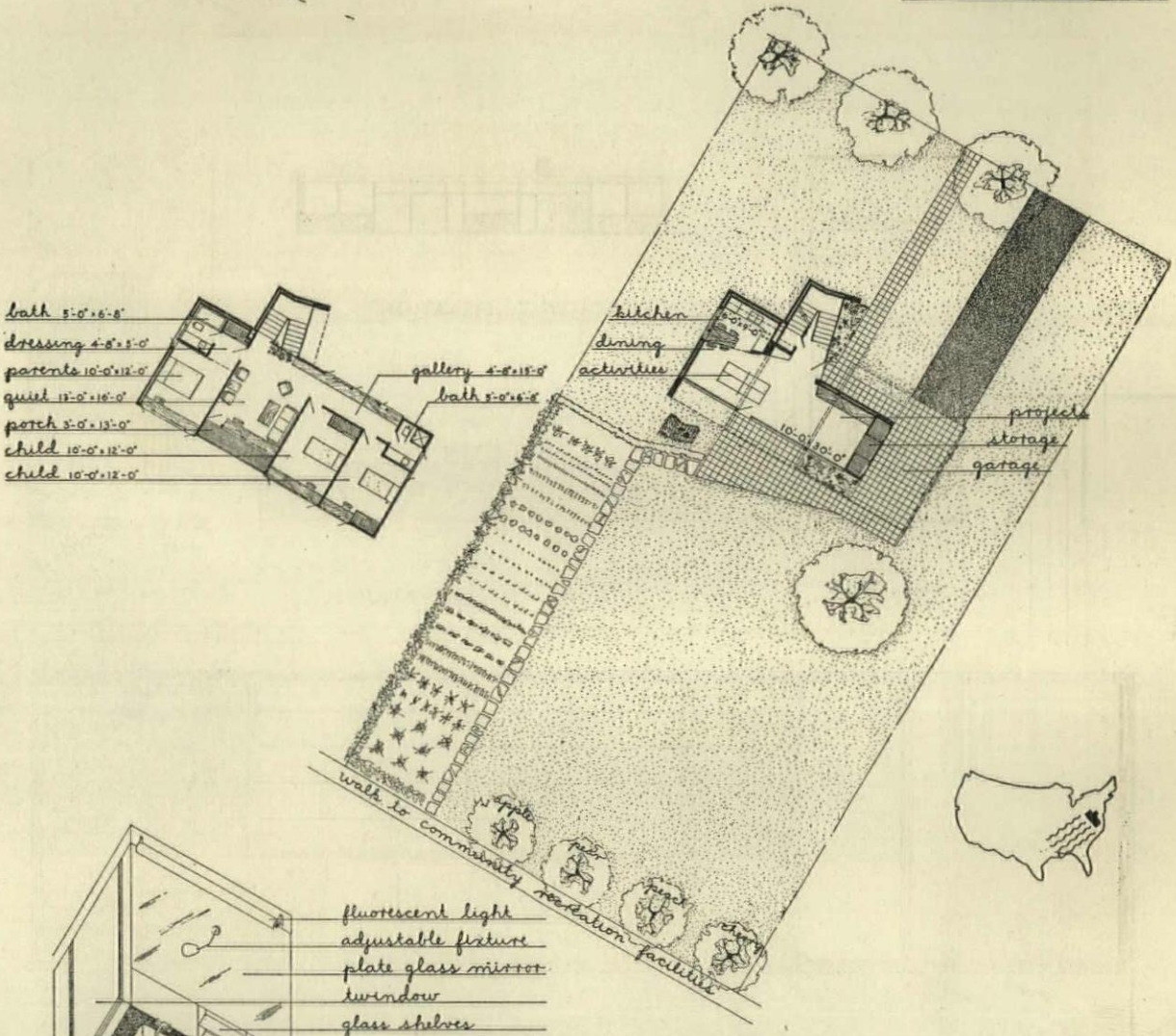
In this house designed for Pennsylvania, the arrangement of the entrance hall and stair to the basement effectively separates children's rooms from living quarters. The huge corner window walls flood living area with light and sun, automatically controlled by roof projection; interior corner placement of dining space, although lighted by clerestory and borrowed light from hallway, seems unfortunate; the efficient kitchen-laundry might also have been better placed for serving terrace and supervision of play.

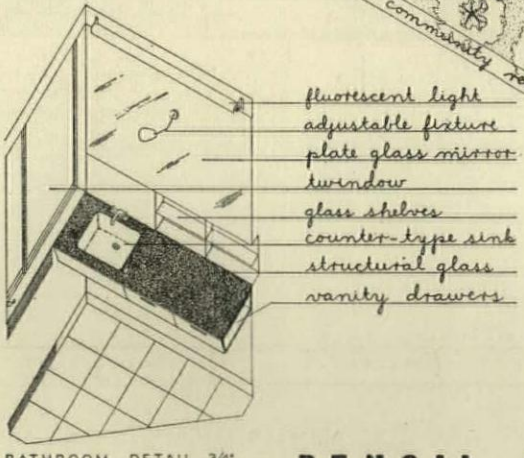
M

BERNARD L. CAMPBELL
PLAINFIELD, N. J.

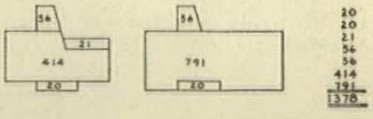








BATHROOM DETAIL 3/4"



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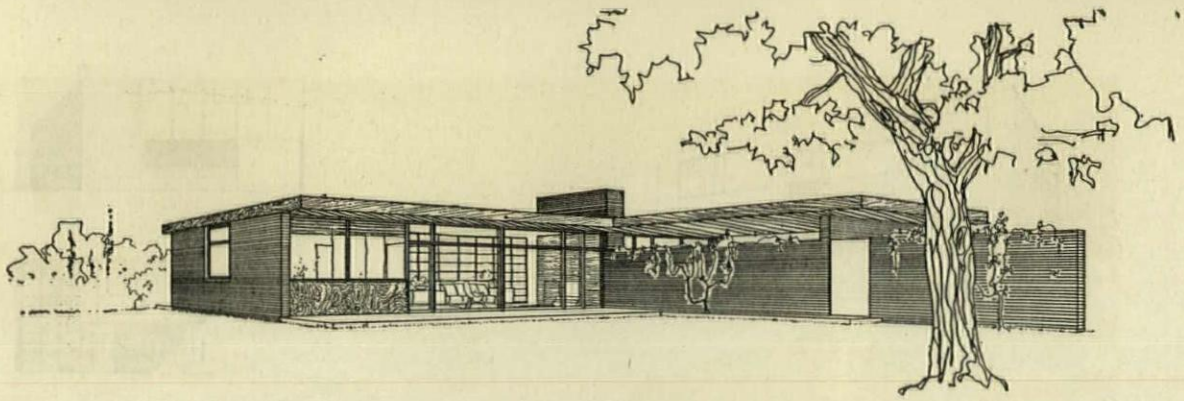
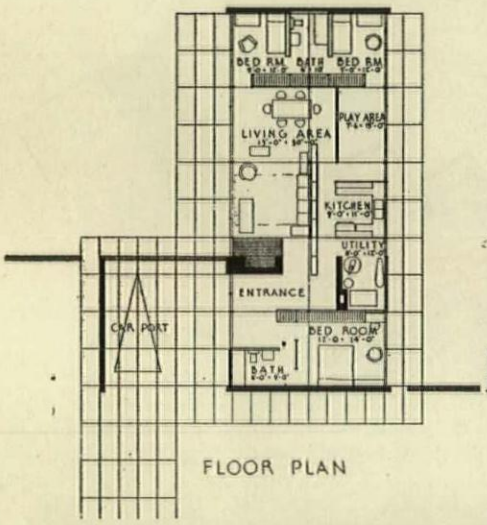
PENCIL POINTS PITTSBURGH ARCHITECTURAL COMPETITION

W. BROOKS CAVIN
SILVER SPRING, MD.

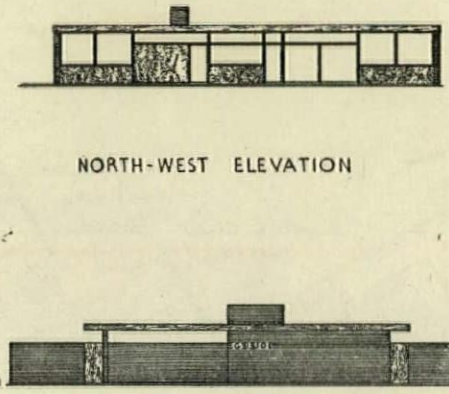
M

In this two-story solution (leaving maximum land for outdoor living), planned for the middle Atlantic states, interior living space is divided into dining-kitchen, and play space on the ground floor, and a quiet family sitting room upstairs. The latter seems too enclosed; one end is merely a passage which children would have to use to reach bedrooms. The first floor suffers by too great recessing to gain overhangs at front and back; also exterior lacks "human quality" found in some of the other designs.



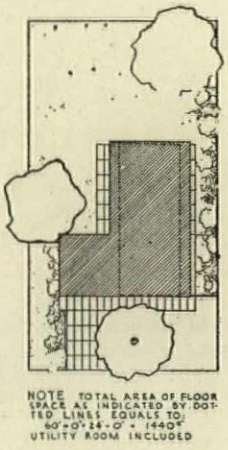


FLOOR PLAN



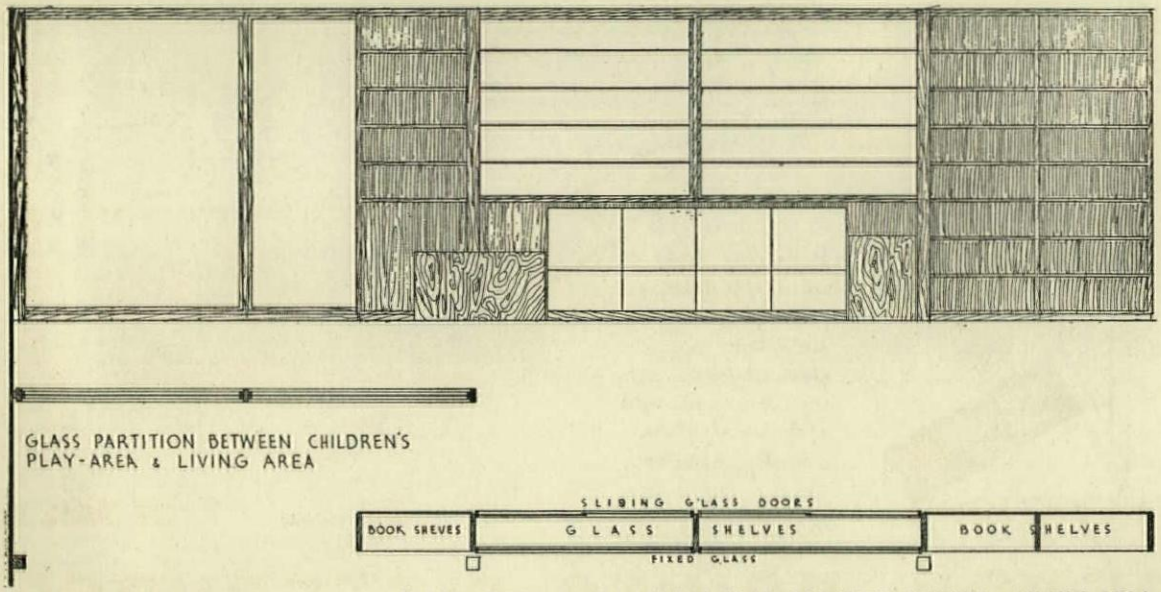
NORTH-WEST ELEVATION

NORTH-EAST ELEVATION



NOTE TOTAL AREA OF FLOOR SPACE AS INDICATED BY DOTTED LINES EQUALS TO: 60'-0" × 24'-0" = 1440 SQ. FT. UTILITY ROOM INCLUDED

PLOT PLAN



GLASS PARTITION BETWEEN CHILDREN'S PLAY-AREA & LIVING AREA

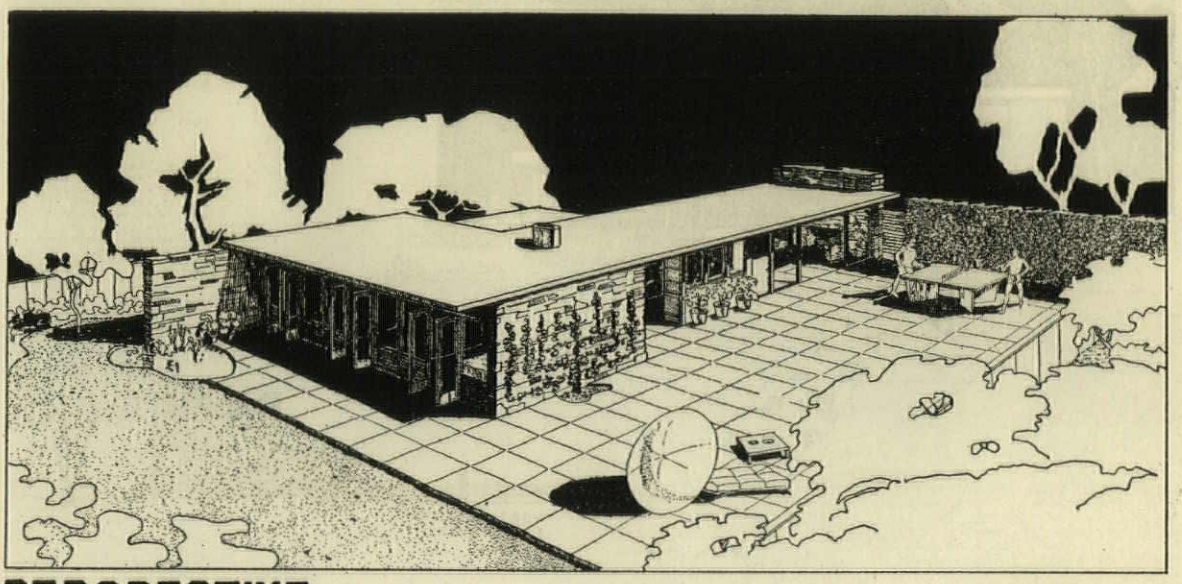
PLAN - BOOK CASE & GLASS CASE BETWEEN KITCHEN & LIVING AREA

PENCIL POINTS PITTSBURGH - ARCHITECTURAL COMPETITION

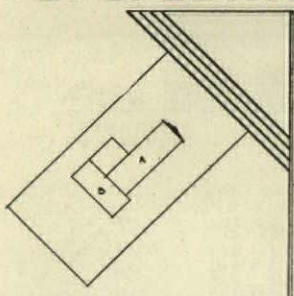
Non-bearing interior divisions are made up of storage units or incidental screens which can be arranged with relative ease. The children's play area may be supervised either from the kitchen or (through a glass screen) from the dining end of the living area. Separation of adults' bedroom and children's quarters would appeal to many; placement of the children's rooms just the other side of the wall of the living area, however, suggests noise difficulties. The plan fails to indicate how the owners would obtain privacy from near neighbors. Designed for northern California.

M

C. N. CHAU
CHICAGO, ILL.



PERSPECTIVE

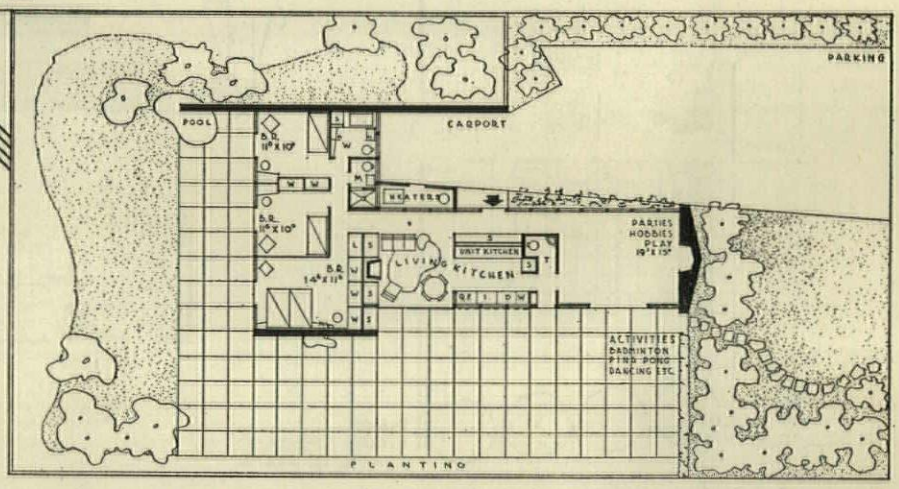


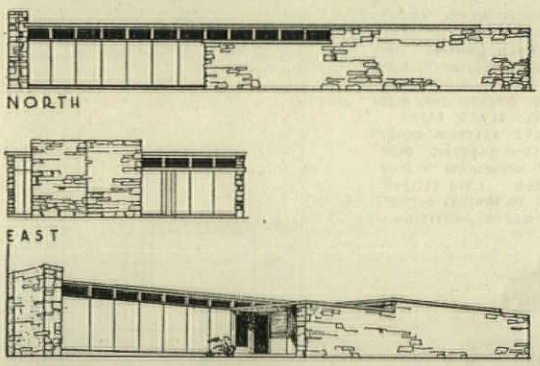
COMPUTATIONS

A-15-0 X 48-0 = 720 SQ FT
B-35-0 X 19-0 = 665 SQ FT
TOTAL 1385 SQ FT.

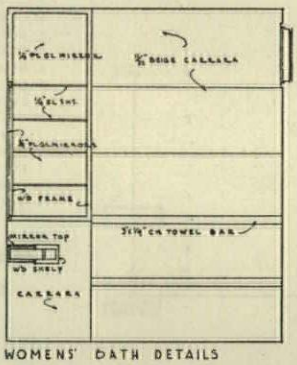
"MAKE THE SAN FERNANDO VALLEY MY HOME"

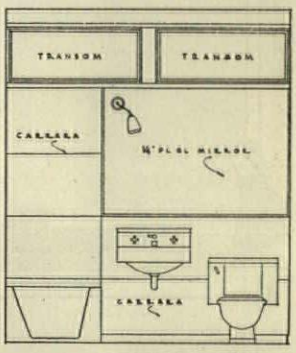
PLANS





ELEVATIONS





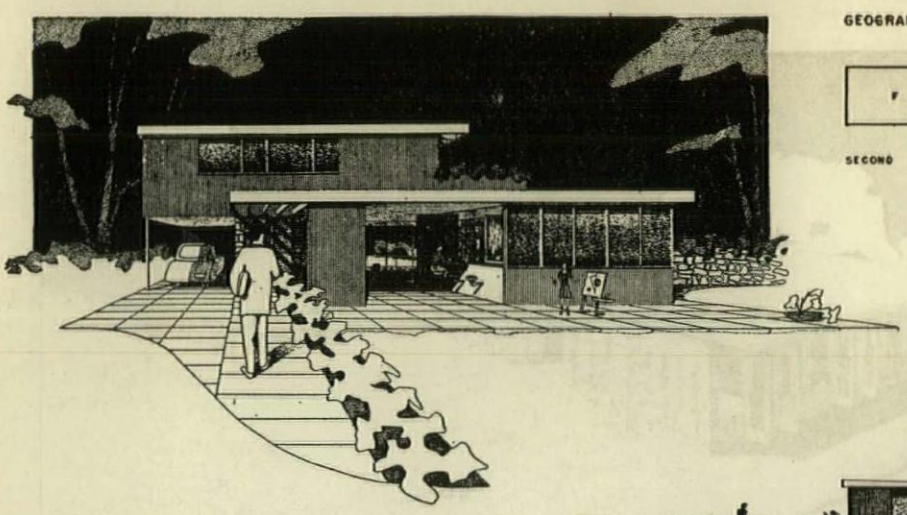
DETAILS

PENCIL POINTS PITTSBURGH ARCHITECTURAL COMPETITION

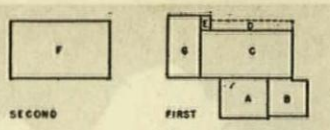
A. ALBERT COOLING
LOS ANGELES, CALIF.

M

The large amount of corridor space was criticized. Combination living-dining-kitchen-laundry, admitted as an acceptable plan for many families. Despite laundry-dryer equipment, however, some outdoor drying yard should probably have been provided. Large hobby-playroom with fireplace adjoining terrace, a fine facility seldom found in the "average" house. Interesting bedroom-window detail: fixed central sash, ventilating louvers below, operable transoms above. Planned for a southern California site.

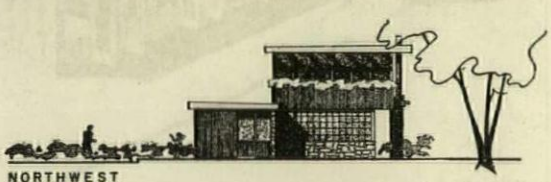


GEOGRAPHIC LOCATION • SOUTHWEST

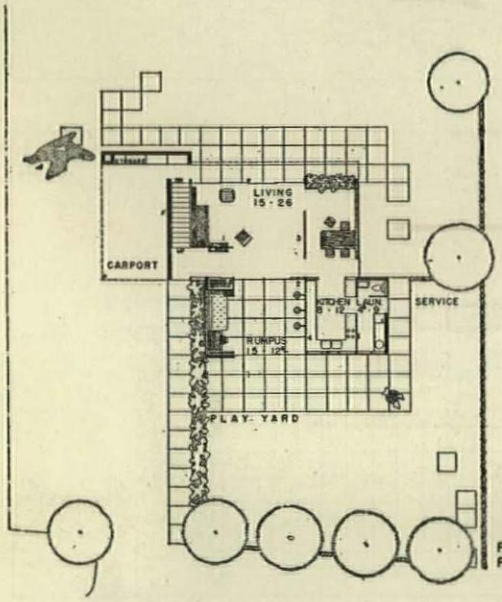


AREA TABULATIONS

A	12' × 15	=187.5
B	12' × 12-(5'×4')½	=147.0
C	15 × 29	=435
D	3' × 25+½	= 455
E	3 × 5	= 15
F	18' × 31	=563
G	NOT INCLUDED	
TOTAL		1393.0

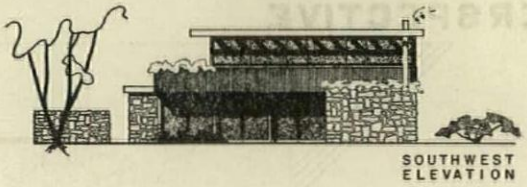


NORTHWEST ELEVATION

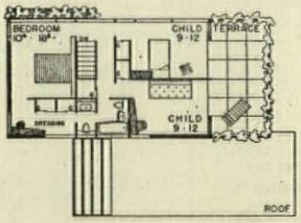


FIRST FLOOR 1

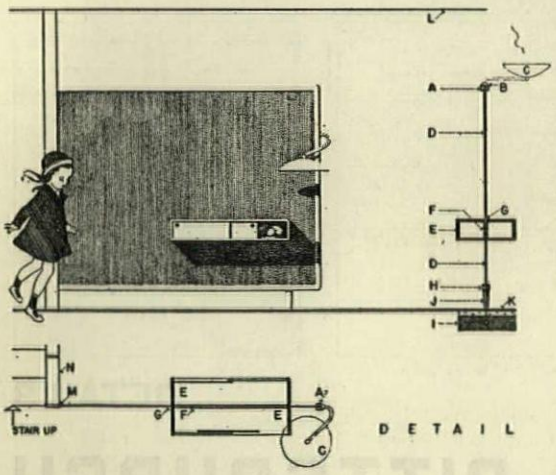
1 TRANSLUCENT SCREEN
2 ACCORDION PARTITION
3 FOLDING GLASS SCREEN
4 ROLL-UP PLASTIC SHADE



SOUTHWEST ELEVATION



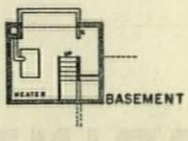
SECOND FLOOR



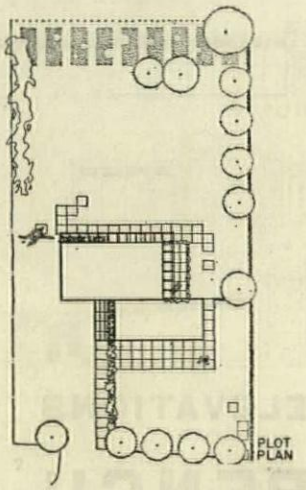
A LIGHTWEIGHT METAL FRAME.
B CONTINUOUS PLUG-IN. STRIP.
C ADJUSTABLE LIGHTING UNIT.
D TEMPERED TRANSLUCENT GLASS.
E CABINET WITH SLIDING DOORS.
F STEEL T's SCREWED THRU GLASS.
G EVERSEAL GLASS TAPE.
H CONCEALED ELECTRIC CONDUIT.
I SUB-FLOOR ELECTRIC DUCT.
J SUPPORT-CONNECTION TO DUCT.
K FIN. FLOOR L FIN. CEILING.
M CONNECT. TO UPRIGHT SUPPORT.
N GLASS BLOCK PARTITION.

DETAIL

NOM-DE-PLUME



BASEMENT

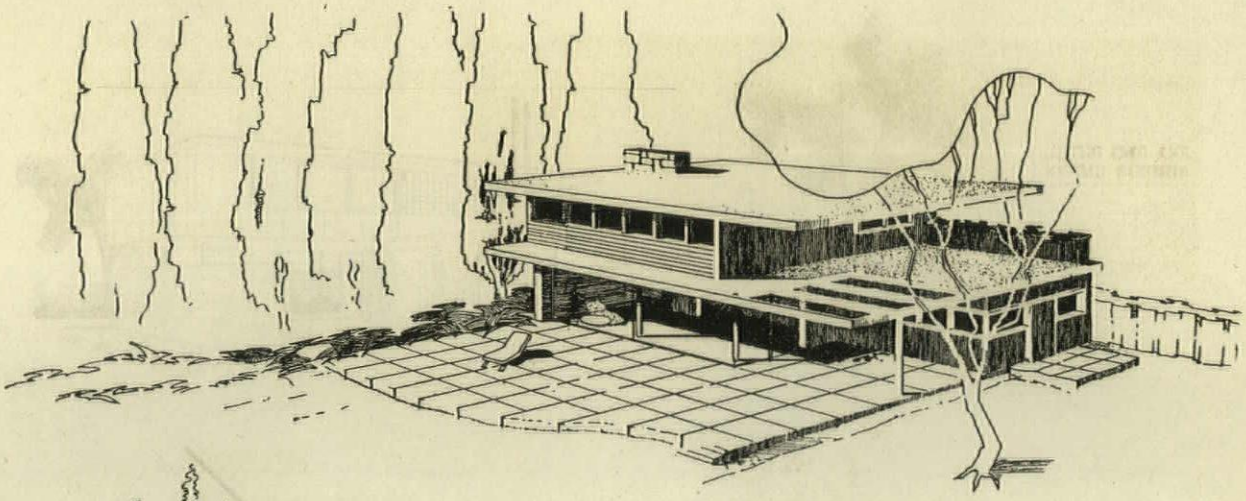


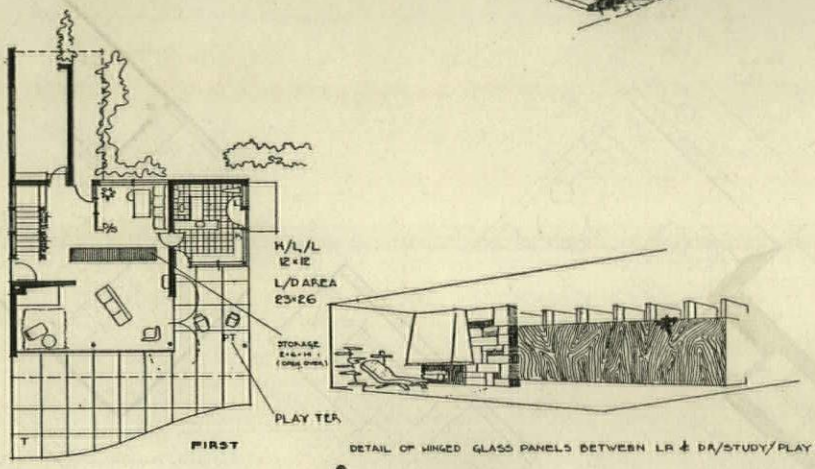
PENCIL • POINTS
PITTSBURGH ARCHITECTURAL COMPETITION

Designed for the Southwest, this house has a compact and well related arrangement of living, dining, and play areas, with a conveniently located kitchen-laundry-service unit. Second floor plan is good but likely to be expensive. Flaws include inadequate storage space, scattered plumbing, and poorly located heater room with questionable stair head-room. Exterior is to be of rough redwood boards and battens. Rumpus space and children's rooms to be closed against weather by sliding glass doors.

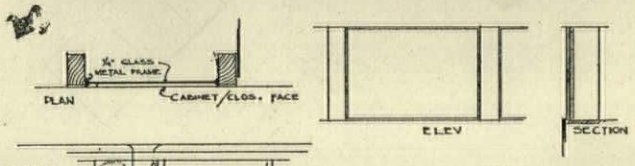
M

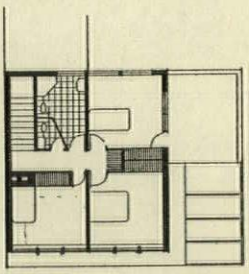
SEYMOUR R. JOSEPH
NEW YORK, N. Y.



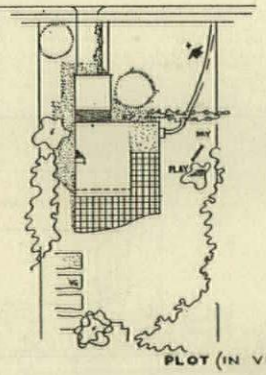


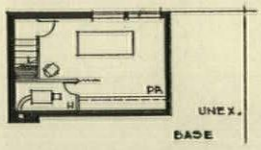
DETAIL OF HINGED GLASS PANELS BETWEEN LR & DR/STUDY/PLAY AREA



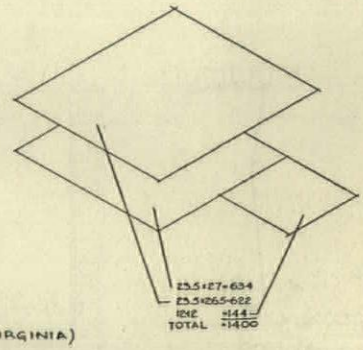


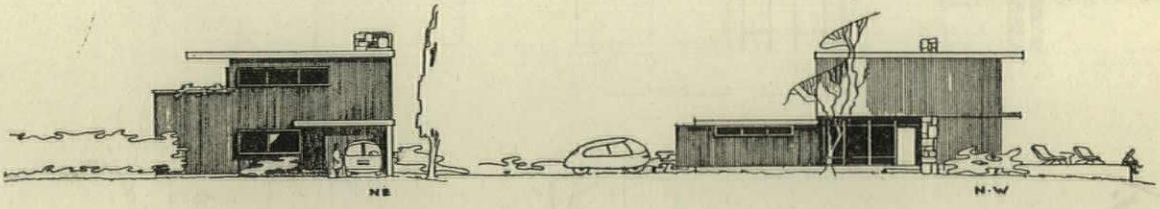
BED ROOMS
11-6 × 12
11-6 × 12
9-6 × 12
BATHS
11-6 × T6





GAME 3+
23×15



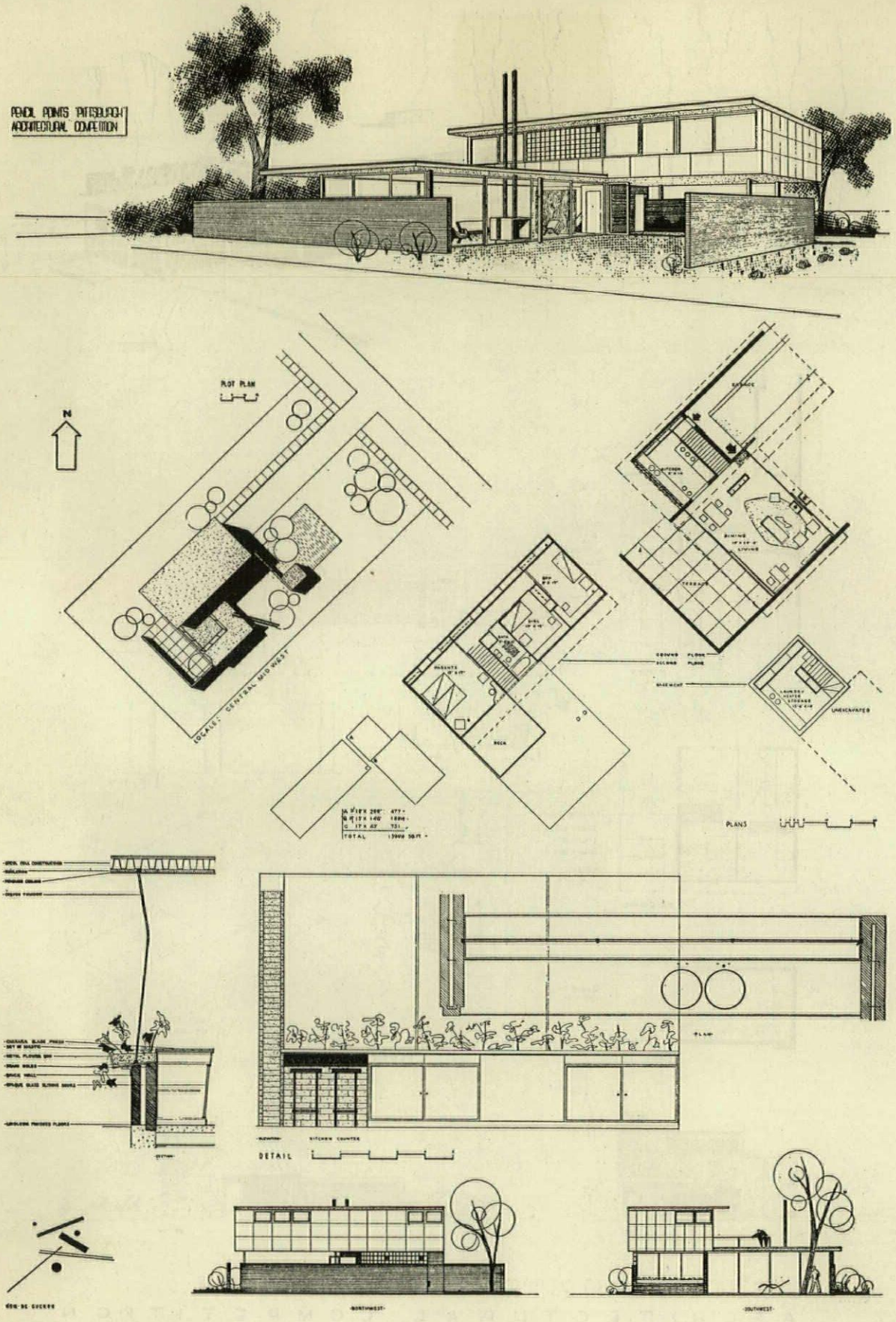


PENCIL POINTS — PITTSBURGH ARCHITECTURAL COMPETITION

LT. VINCENT G. KLING, U.S.N.R.
NORFOLK, VA.

M

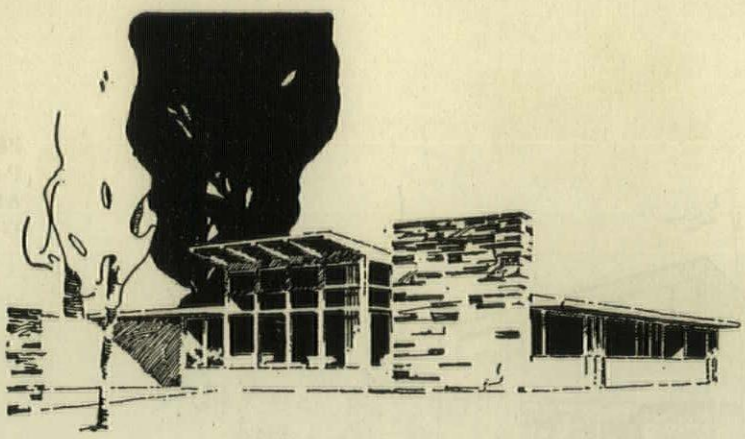
This house planned for a Virginia location is one of comparatively few that included a basement for the heating equipment. The living room is screened from the front door, and even the stairs can be used without disturbing living room activities. Kitchen-laundry well located for access to dining space, terrace serving, and drying yard. The house also appealed to the jurors as being agreeably domestic in both scale and character.



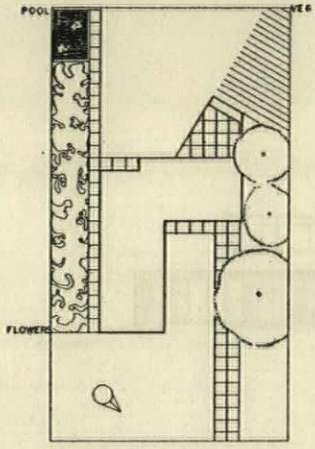
No clear purpose seems served by placing house so far to rear of plot. Northeast living room window wall, shielded from street by brick garden wall, admits morning sun; firm clear light, rest of day. Toward neighbors, high wall (for privacy) surmounted by window band; on southwest, sliding-panel windows with deep roof overhang admit afternoon sun in varying degrees, depending on season. Floor plan, simple; general character, unnecessarily severe. Designed for construction in central Midwest.

M

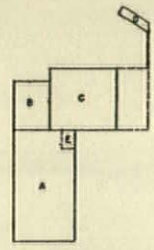
PAT MARSHALL
CHICAGO, ILL.



PERSPECTIVE FROM SOUTH

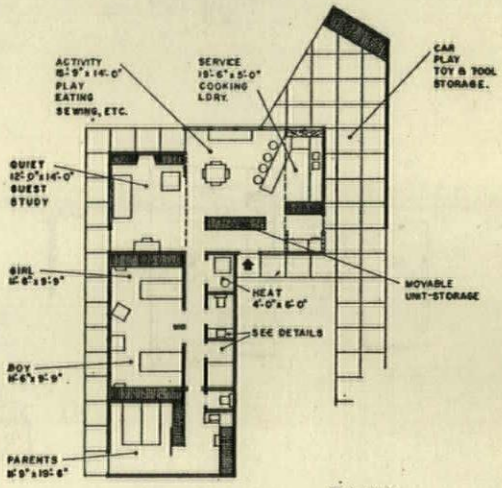


PLOT PLAN



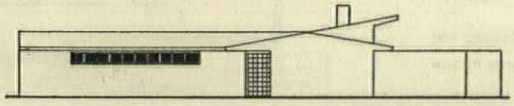
A 36'-0" x 19'-6" = 702
B - 12'-0" x 15'-6" = 186
C 19'-6" x 22'-9" = 424
D 12'-0" x 3'-0" = 36
1348
LESS
E 6'-0" x 4'-0" = 24
TOTAL 1324

AREA

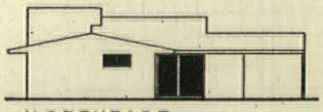


PLAN

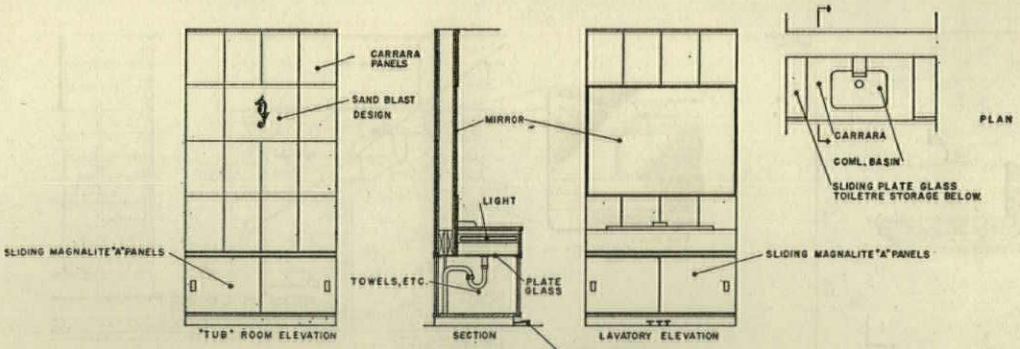
LOCATION MIDCENTRAL STATES



NORTHWEST



NORTHEAST



BASIN & BATH STORAGE DETAIL

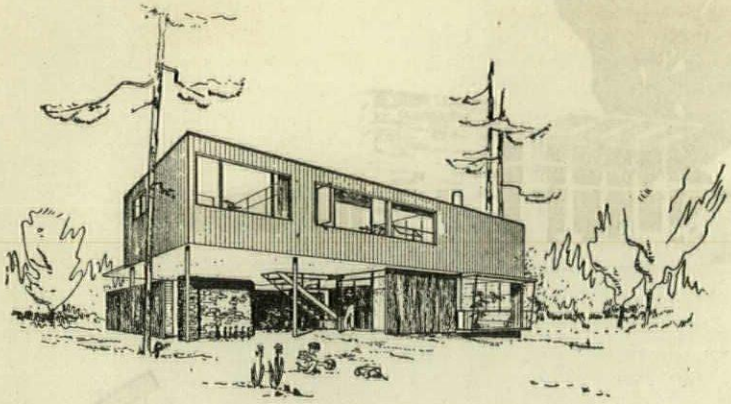
PENCIL POINTS–PITTSBURGH ARCHITECTURAL COMPETITION

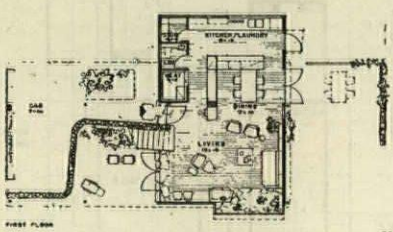
C. STUART PERKINS
WAYZATA, MINN.

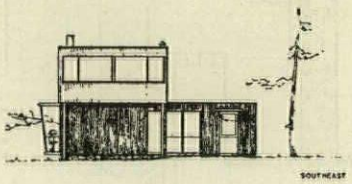
M

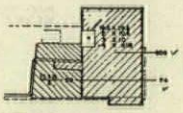
One of the more imaginative of several designs with similar basic scheme. Centralized entrance and heater room; separation of living areas into active and quiet (the latter further separable for use as guest room); flexible two-in-one treatment of children's rooms, and greatly increased bathroom facilities provided by partitioning and inclusion of one added piece of equipment; all were admired. Questioned was location considered for outdoor laundry drying; planting on northeast and carport wall on southwest seemed ample screen from neighbors. For midcentral states.

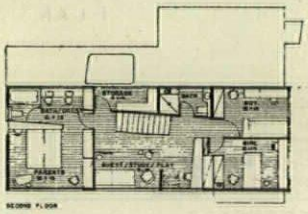
PENCIL POINTS PITTSBURGH ARCHITECTURAL COMPETITION



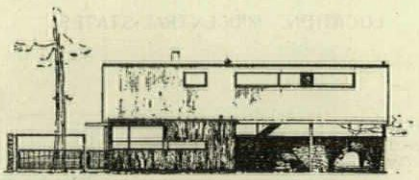


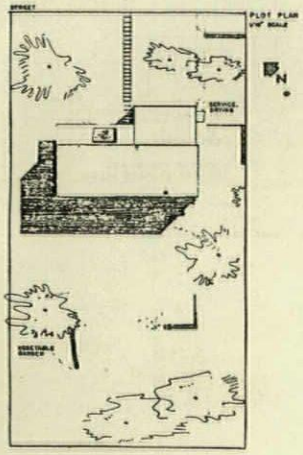


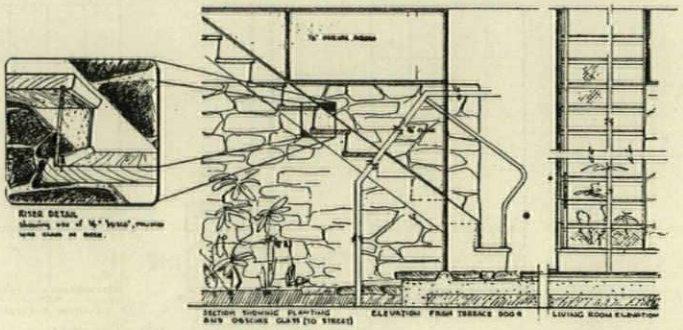




HOUSE DESIGNED FOR THE GREAT LAKES REGION





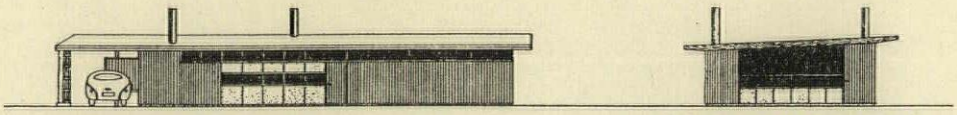


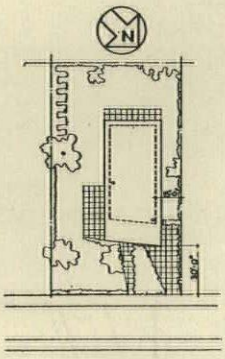
NOM-DE-GUERRE

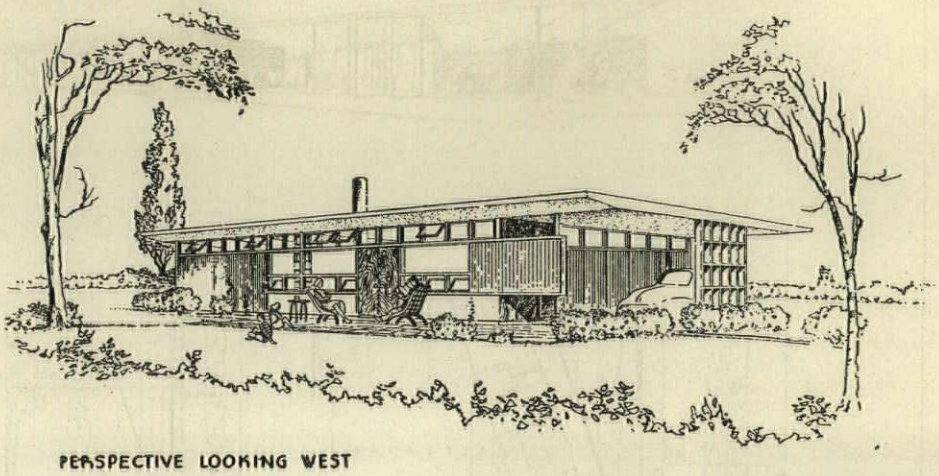
Planned for Great Lakes region, this spacious, small house was considered one of the better two-story solutions (in general, the jury considered one-story schemes better answers to the program). Projecting second floor, probably expensive, produced gracious sheltered entrance by either car or foot on street front and loggia toward garden. Arresting features: glass-enclosed stairway; projecting living room window, including plant bay, view window, and solar-heat advantages. Guest-study-play room at top of stairs gives added livability; storage, ample and well located.

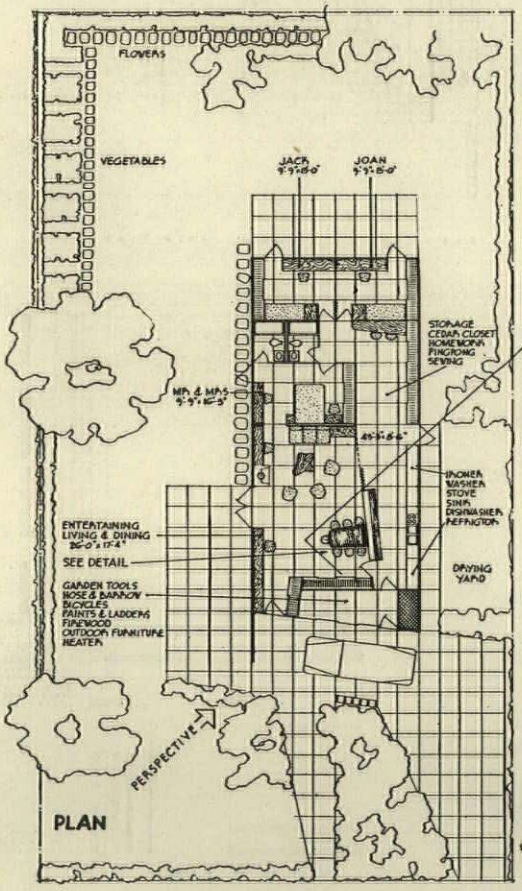
M

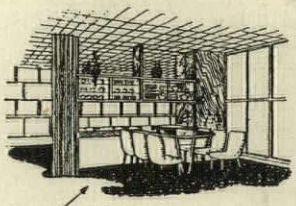
F. G. ROTH AND I. M. PEI
PRINCETON, N. J.

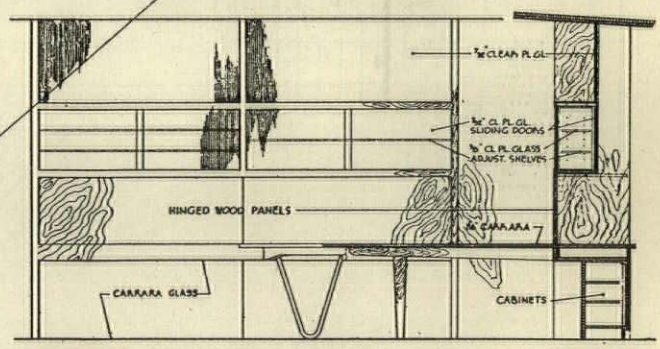


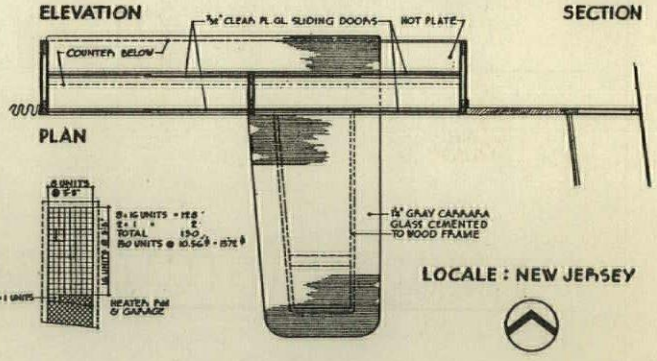












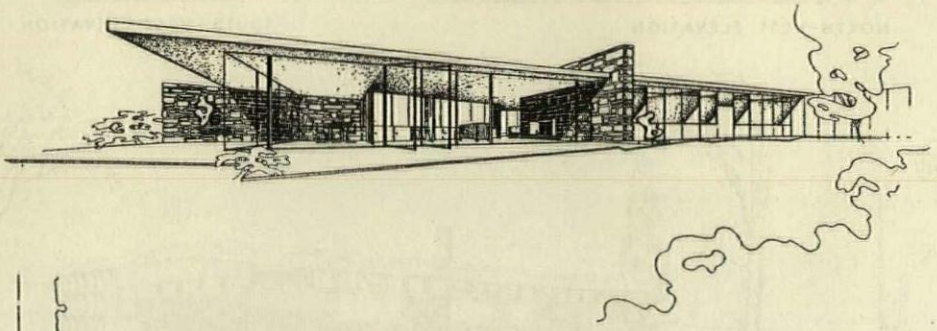
LOCALE : NEW JERSEY

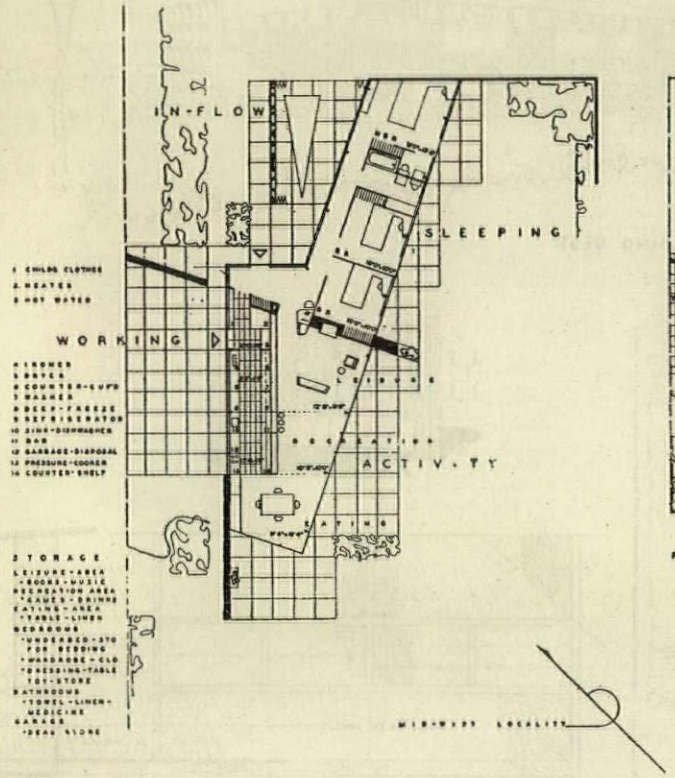
PENCIL POINTS - PITTSBURGH ARCHITECTURAL COMPETITION

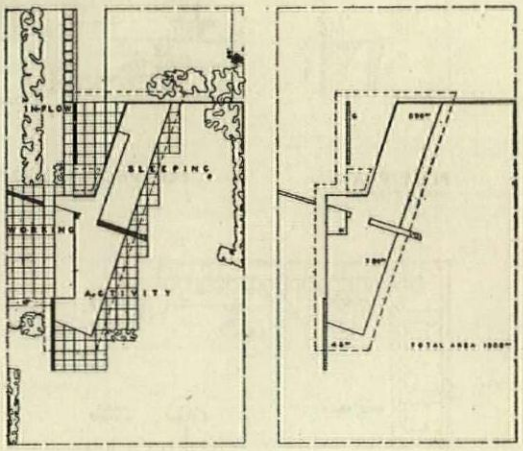
SIMON SCHMIDERER, TORQUATO DE FELICE AND MICHAEL M. HARRIS
NEW YORK, N. Y.

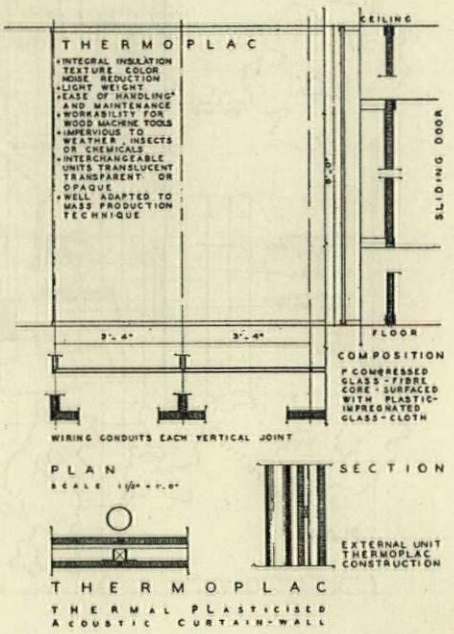
M

Schemed within a simple rectangle, this forthright plan proposed for New Jersey was particularly admired for its space organization, location of children's rooms well separated from sound and distractions of the living room, and extraordinary provisions for storage where needed. Fixed window sash, with operable panels above and below, considered a well-thought-out ventilating solution. Height of windows from floor allows case work and furniture placement beneath them. The forward location of living room was criticized because sunlight would leave this area too early.







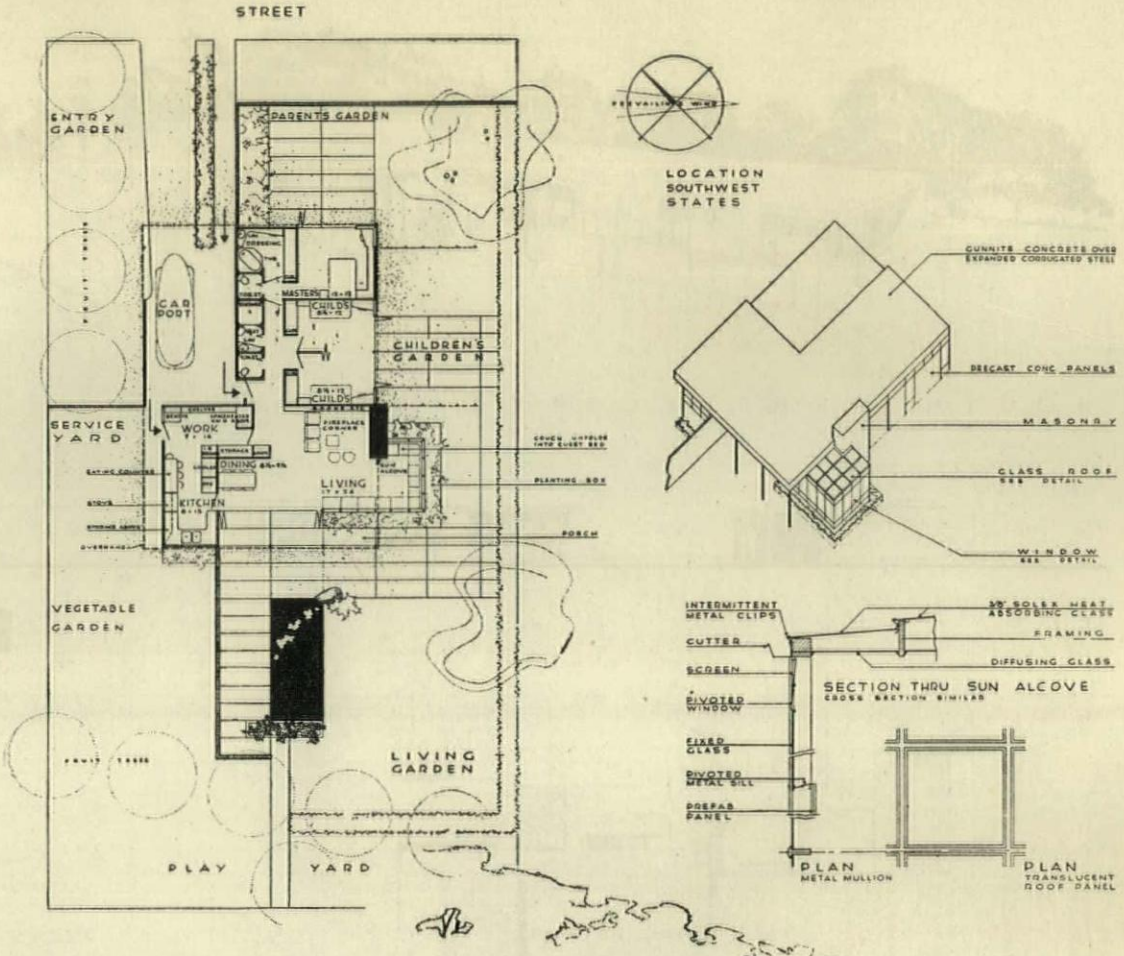


PENCIL POINTS
PITTSBURGH ARCHITECTURAL COMPETITION

The angling of the plan to catch maximum southern sun was admitted, but the resultant awkward shapes of master bedroom and living room were criticized. The plan provides barrier between activity and sleeping areas; the kitchen and laundry equipment is complete—and expensive. Amount of window wall appealed to the jurors as excessive and was sharply criticized (lacking plot plan indication) for lack of privacy from neighbors. Nonetheless, logical separation of areas for "in flow," working, sleeping, and activity kept this design constantly to the fore. Midwest location.

M

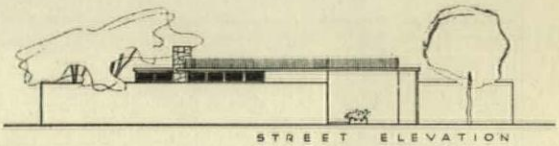
DOUGLAS C. SIMPSON AND EDWARD P. ELLIOTT
OTTAWA, CANADA



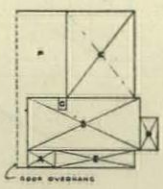
LOCATION
SOUTHWEST
STATES

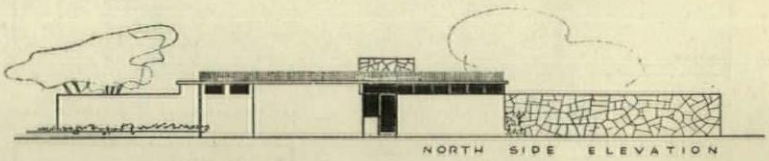
SQ FOOTAGE:

A	15'-8" × 5'-4"	83.6
B	17'-0" × 23'-8"	402.6
C	21'-4" × 28'-8"	614.4
D	5'-6" × 16'-5"	90.1
E	7'-4" × 5'-3" × 23'-0"	71.9
F	CAR SHELTER	
G	HEATED SPACE SUBTOTAL	876
TOTAL		1349.9



STREET ELEVATION





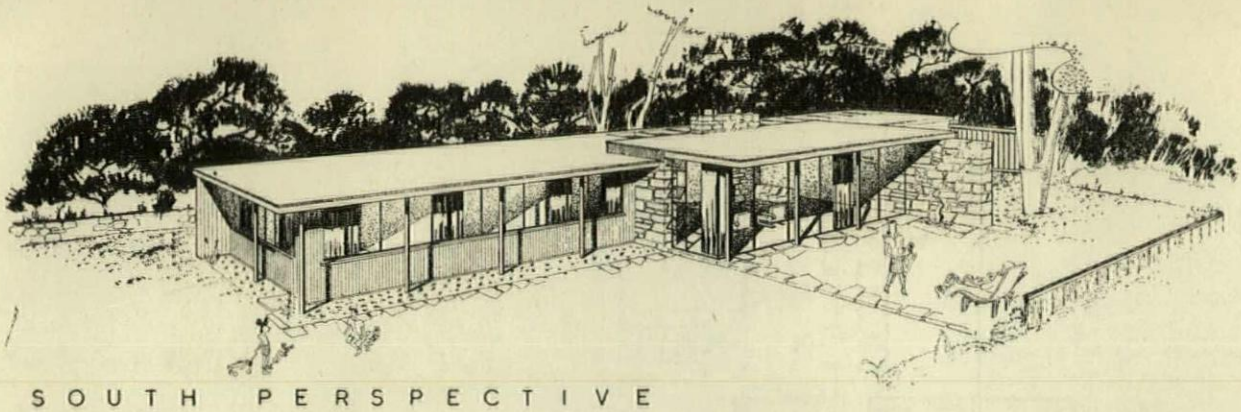
NORTH SIDE ELEVATION

PENCIL POINTS *PITTSBURGH* ARCHITECTURAL COMPETITION

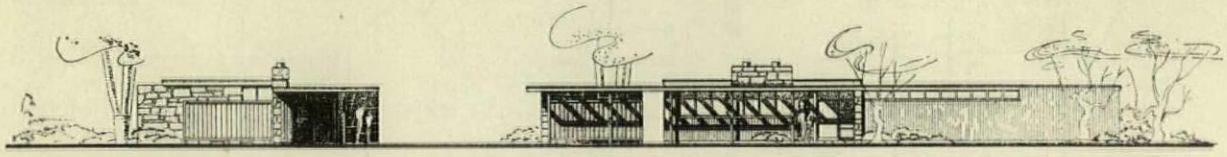
JOSEPH ALLEN STEIN
MILL VALLEY, CALIF.

M

While admiring the plan organization and living amenities of this house proposed for the Southwest, the jury felt that the provisions and equipment were more costly and elaborate than the program specifications would permit. Praised were the variety and spaciousness developed in the living-dining area; kitchen and workroom immediately adjacent to a service yard; the provision of private gardens as well as a family living garden (all screened for privacy by fences, walls, or planting), and the attention given to relating interior space to the outdoors and growing plants.

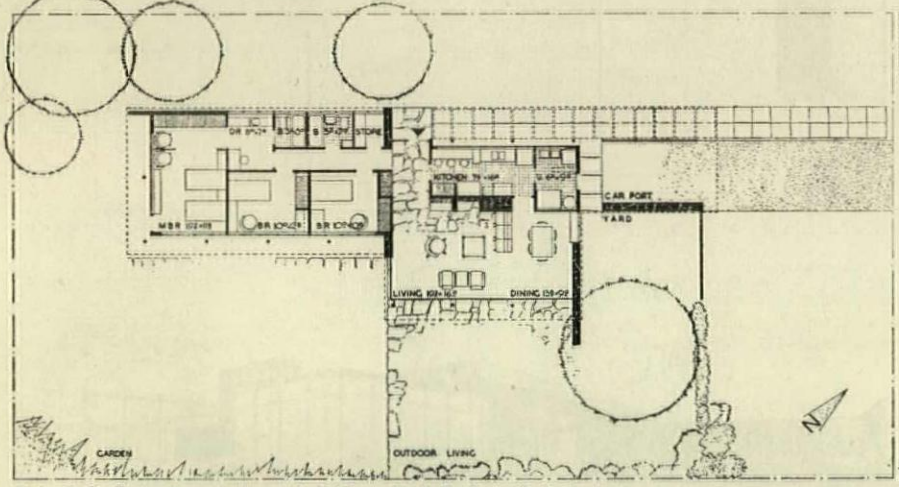


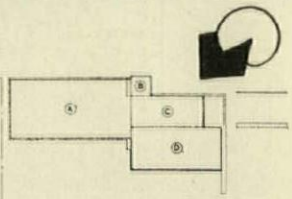
SOUTH PERSPECTIVE



NORTH EAST ELEVATIONS

NORTH WEST





PLAN SCALE

TABLE OF AREAS

A — 19'2" × 38' = 728.08

B — $\frac{6'6" \times 6'0"}{2}$ = 19.5

C — 10' × 23'2" = 231.6

D — 13'8" × 29'0" = 396.14

1375.32

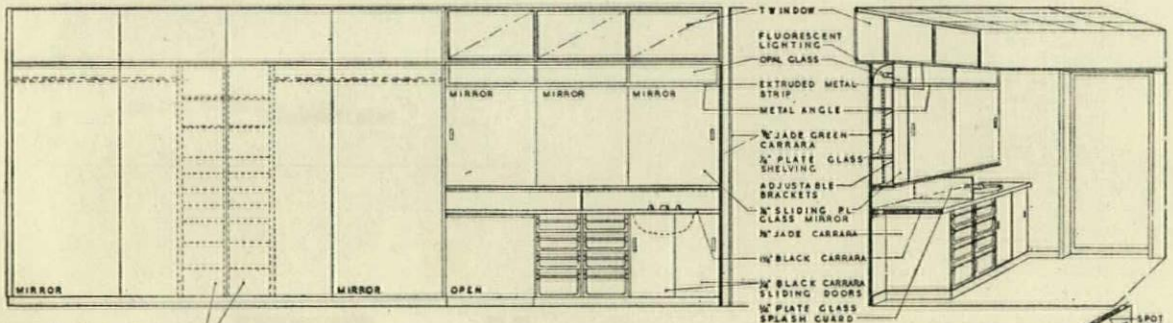
TOTAL AREA 1376 SQ FT

FLOOR PLAN AND PLOT PLAN

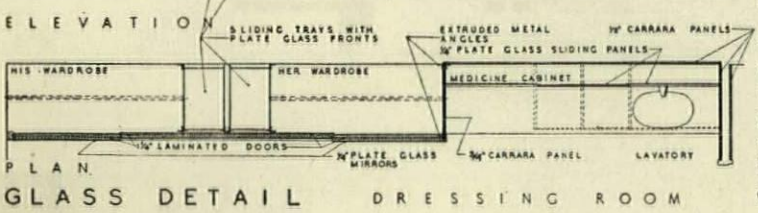
PLAN SCALE

HOUSE IN SOUTHERN CALIFORNIA

AREA CHART



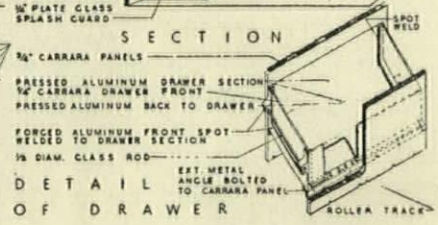
ELEVATION



PLAN

GLASS DETAIL DRESSING ROOM

SECTION



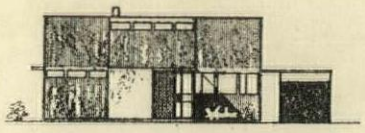
DETAIL OF DRAWER

PENCIL POINTS PITTSBURGH ARCHITECTURAL COMPETITION

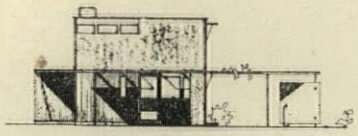
A "good, conservative plan," it was nevertheless criticized for having more circulation space than a house of this size should afford. All main living rooms would have excellent orientation, and the fence and planting indications suggest that the designer has planned for sufficient privacy. A criticism was that no interior play space was provided, and it was not clear if children's outdoor play could be supervised from the kitchen window. The modest scale, simple detail, and contrast of materials in the elevations were particularly admired. Designed for southern California.

M

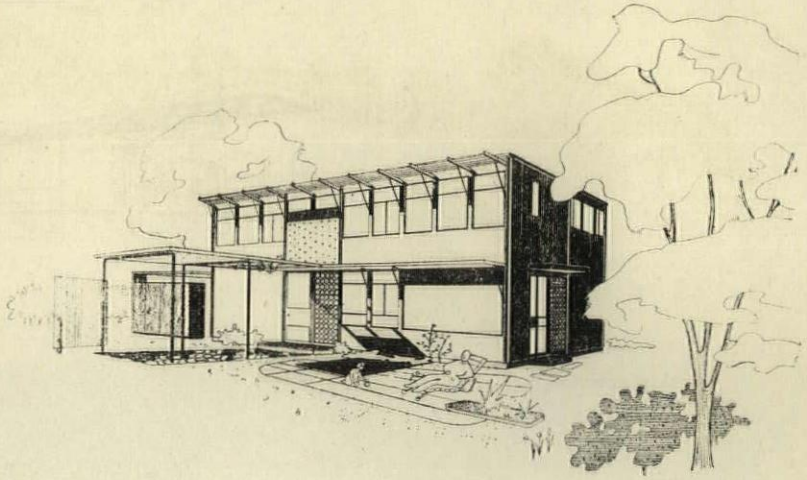
E. W. WAUGH, GEORGE MATSUMOTO, AND CHARLES T. GRANGER
BLOOMFIELD HILLS, MICH.



NORTHEAST ELEV.



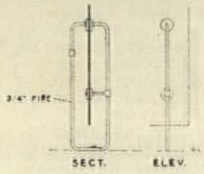
NORTHWEST ELEV.

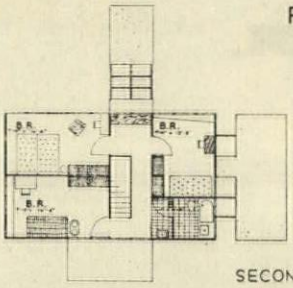


PRE-FABRICATED HOUSE - THE PACKAGED BUILDING SYSTEM

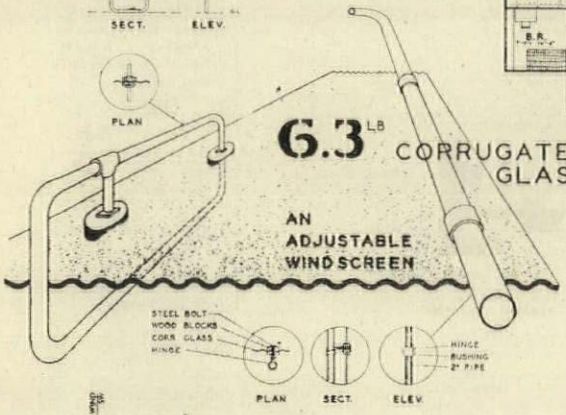
REGION

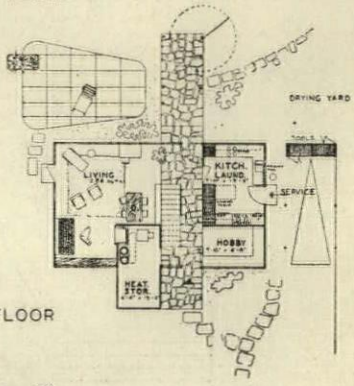
NE



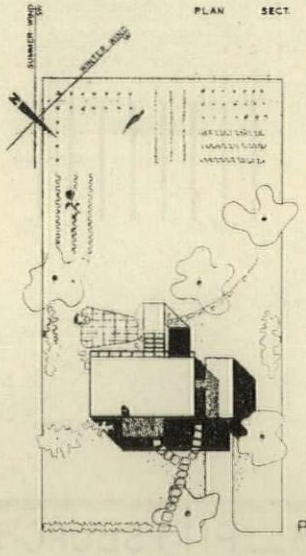


SECOND FLOOR

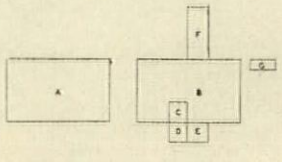


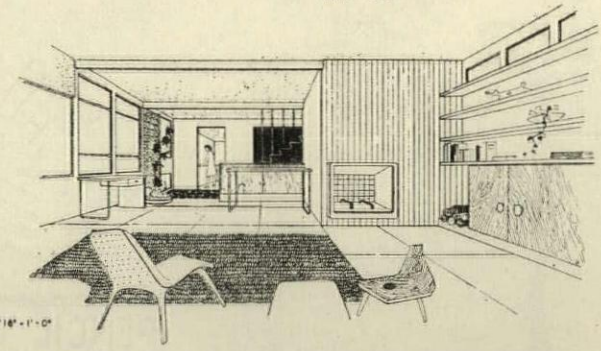


FIRST FLOOR



PLOT PLAN



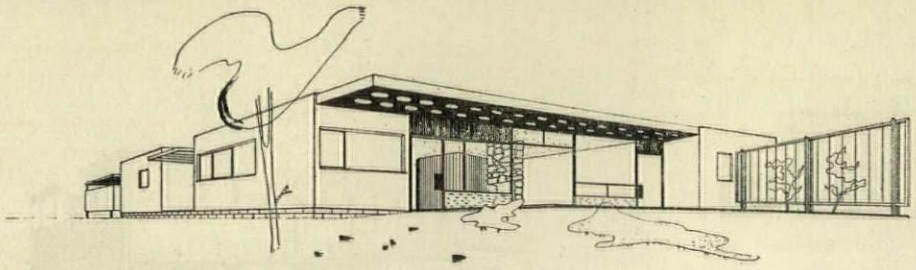


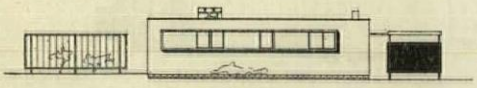
PENCIL POINTS - ARCHITECTURAL COMPETITION

FRANK WEISS
PHILADELPHIA, PA.

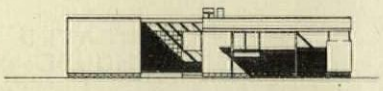
M

An economical, two-story plan, this house was designed for the Northeast. Some jurors felt that inclusion of so many types of prefabricated panels—some with glass lenses or block; others of plywood, plywood covered with canvas, or vertical wood sheathing—resulted in rather confused elevations. In general, plan elements are well disposed, but challenged were the cross-hall relation between kitchen and dining area and the living room's lack of protection from the front door. The large storage-heater room is a sensible provision—one, surprisingly, that many other designs lacked.





SOUTH EAST



NORTHEAST

A HOUSE IS A SOCIO - LOGICAL THING.
IT IS A WEN OF DEMO--- CRACY IT IS ALSO AN OUTPOST

TO THE HOUSE COME THE PRODUCTS OF SOCIETY: DRAMA, FACTORY, THE ASSEMBLY. THE TRAFFIC IS VERY HEAVY.

THE AIM IS TO HEIGHTEN THE DEGREE OF AWARENESS OF THE CO-EXISTENCE OF THOUGHT (PURPOSE) AND ACTION (SENSUALITY)

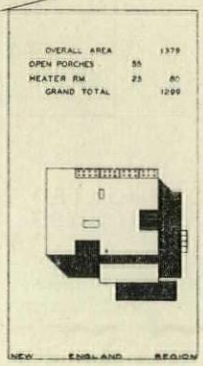
THE ARCHITECT AS SOCIOLOGIST SEEKS, SELECTIVELY, TO FORM THE APPROACH TO A HIGHER REALIZATION OF THE CULTURAL IMAGE

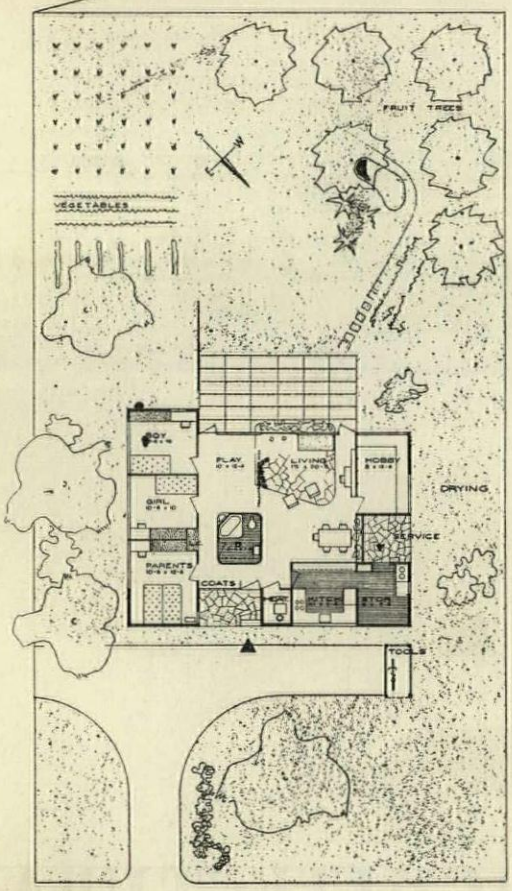
DYNAMISM
FREEDOM
COMMUNALITY

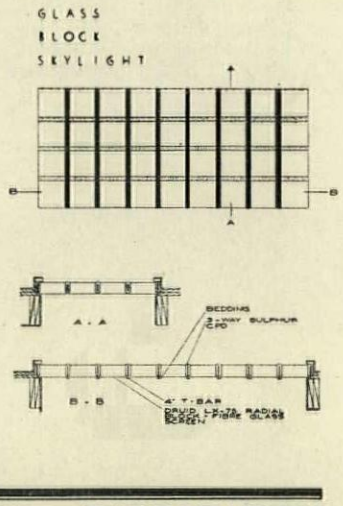
CONTEMPORY REQUISITES

THE SHAPING OF SPACE TO PERMIT SEPARATE AGE-GROUP ACTIVITY, COMMUNAL GATHERINGS AND THE FIREPLACE.
A WORKSHOP, FOOD GARDENING - THE HOME BECOMES A MICROCOSM
A WEDDING OF ART AND LIFE

MAN IS THE MEASURE OF ALL THINGS







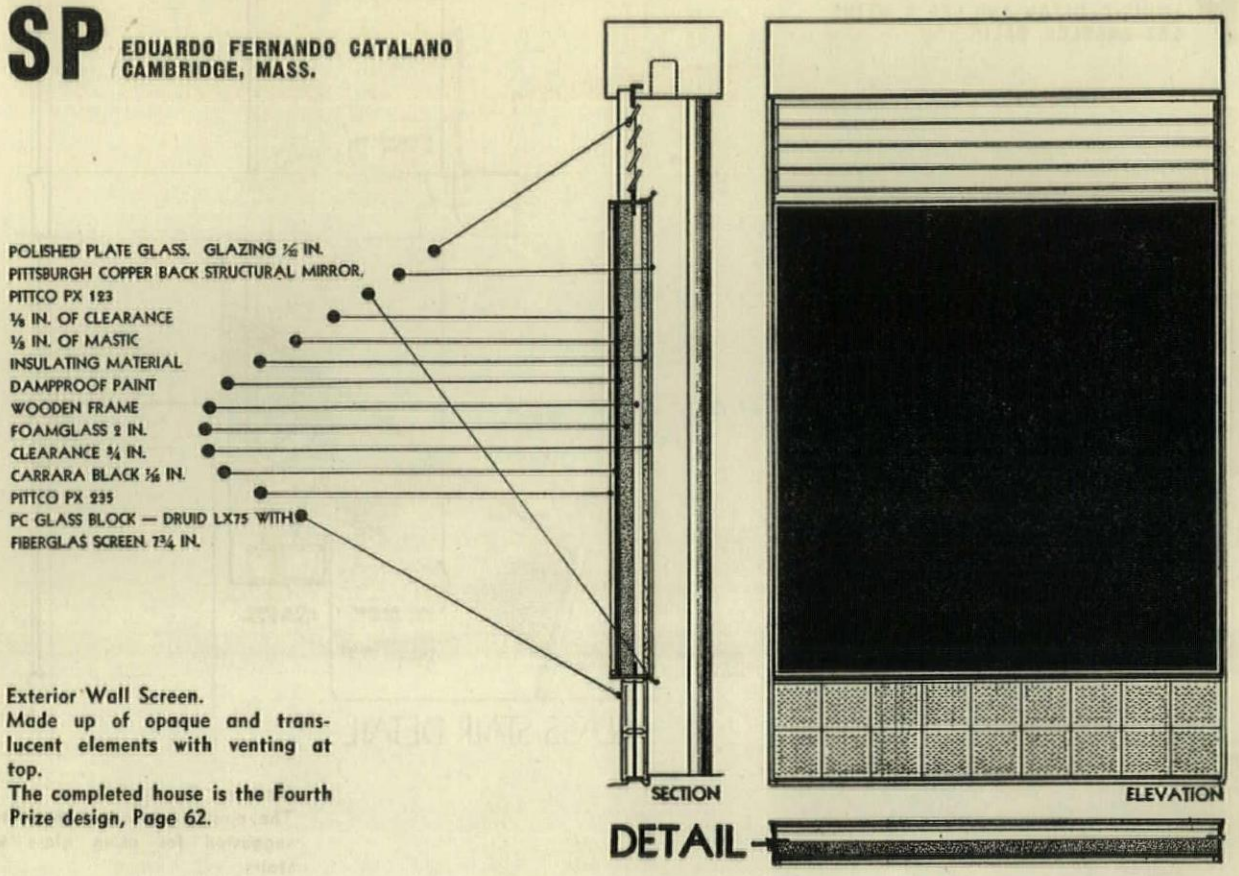
PENCIL POINTS—PITTSBURGH ARCHITECTURAL COMPETITION

In this compact plan, for New England, the designer managed to include an extraordinary number of living facilities—play and hobby space in addition to the usual functional areas. But, in detail, the jury found many things to criticize: lack of privacy for individual members of the family; the fact that the dining space overlooks the service yard; the apparent use that would have to be made of the living room as a corridor, and the very questionable placement of the bathroom which "creates more corridor space than it saves" and which is "screened from view but not from sound."

M

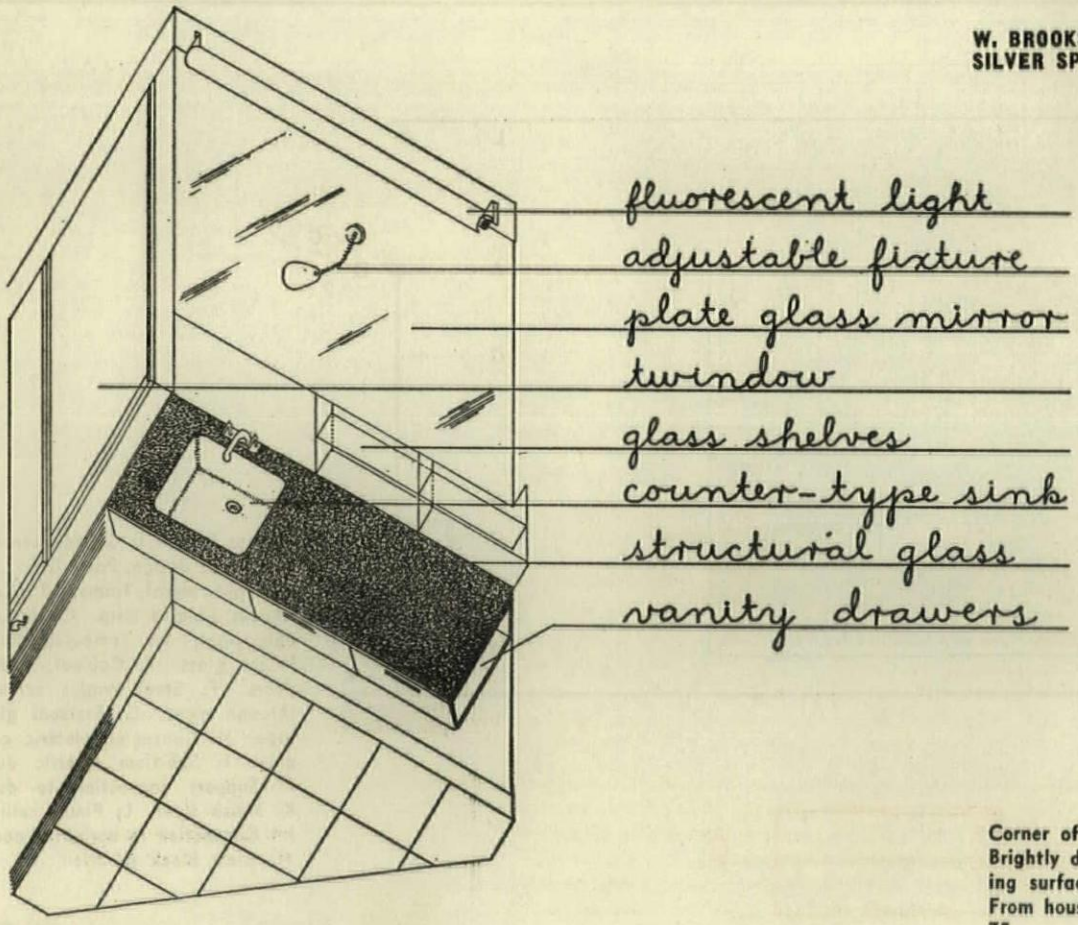
FRANK WEISS
PHILADELPHIA, PA.

SP EDUARDO FERNANDO CATALANO
CAMBRIDGE, MASS.



Exterior Wall Screen.
Made up of opaque and translucent elements with venting at top.
The completed house is the Fourth Prize design, Page 62.

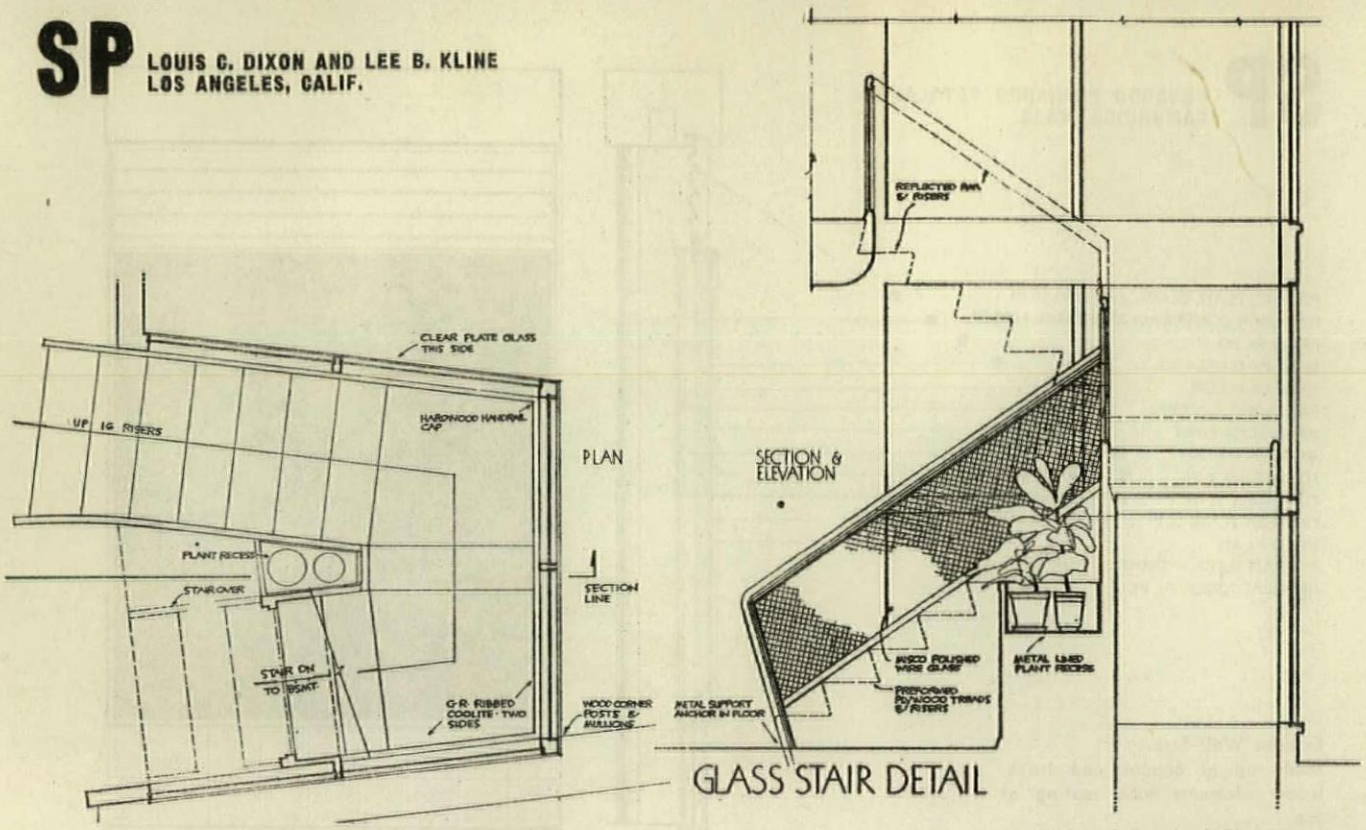
W. BROOKS CAVIN
SILVER SPRING, MD. **SP**



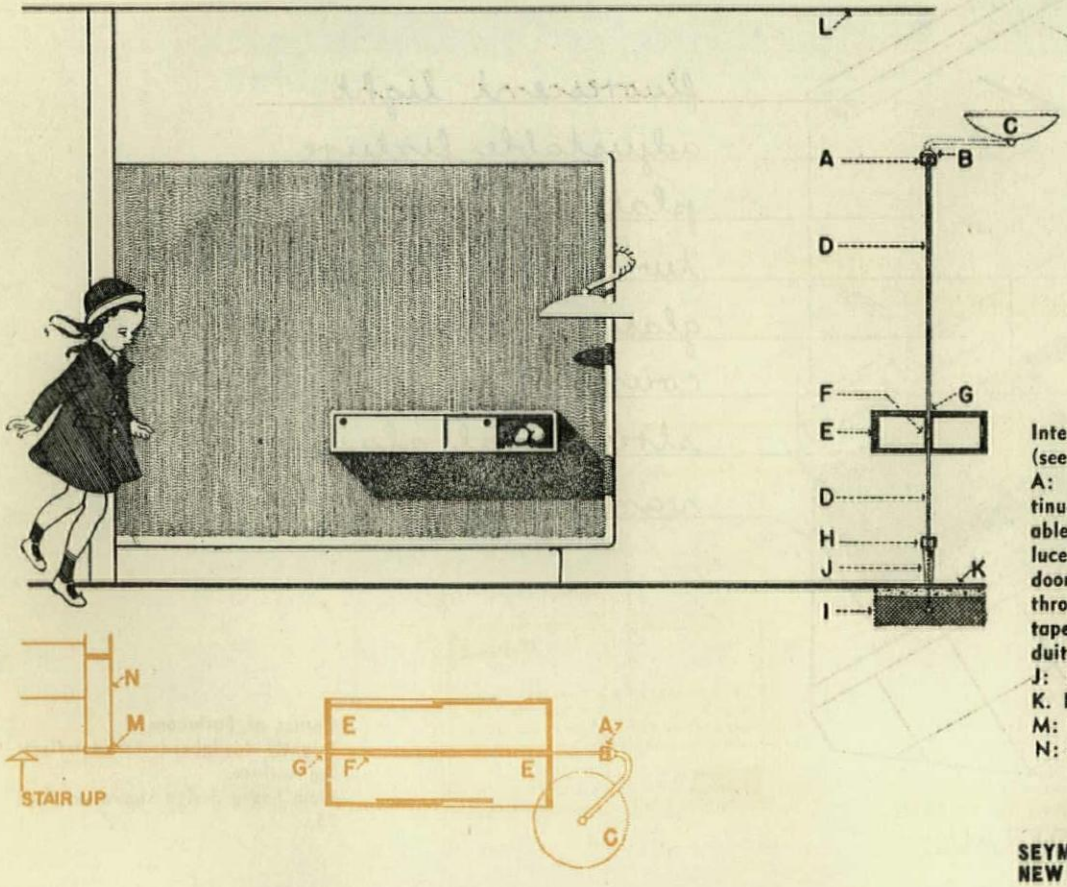
BATHROOM DETAIL

Corner of Bathroom.
Brightly daylighted; broad reflecting surface.
From house design shown on Page 75.

SP LOUIS C. DIXON AND LEE B. KLINE
LOS ANGELES, CALIF.



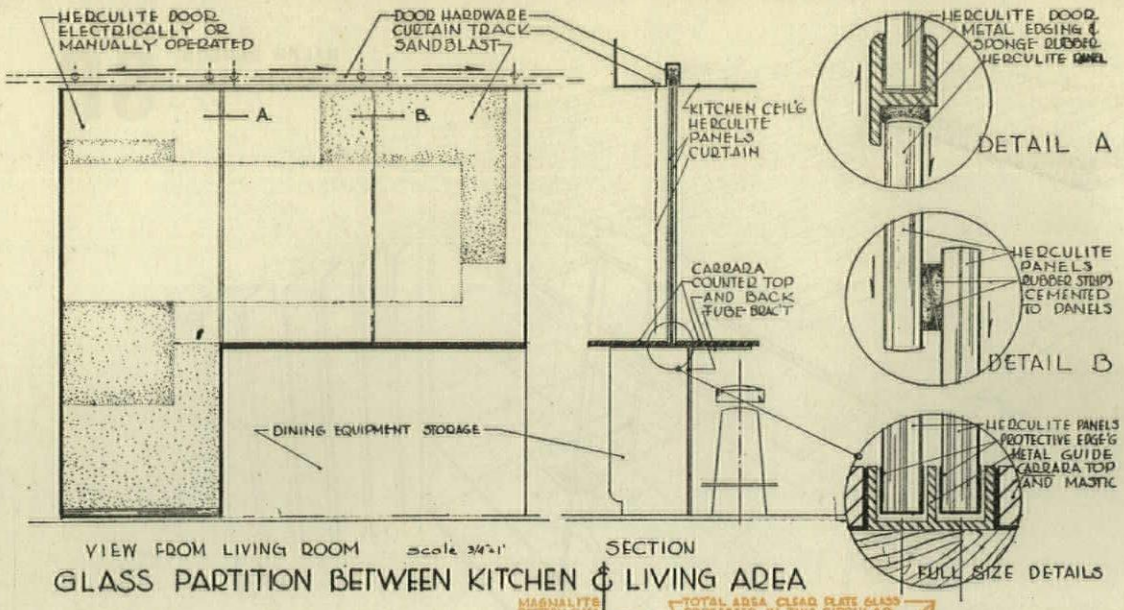
Stair-rail Panel of Glass.
The most arresting of the details suggested for using glass with stairs.



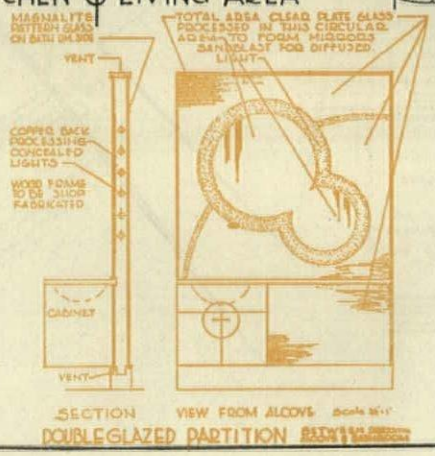
Interior Screen to Shield Entrance
(see house design, Page 78)
A: light metal frame. B: Continuous plug-in strip. C: Adjustable light. D: Tempered translucent glass. E: Cabinet; sliding doors. F. Steel angles screwed through glass. G: Everseal glass tape. H: Concealed electric conduit. I: Sub-floor electric duct. J: Support connection to duct. K. Finish floor. L: Finish ceiling. M: Connection to upright support. N: Glass block partition.

SEYMOUR R. JOSEPH
NEW YORK, N. Y.

SP



GLASS PARTITION BETWEEN KITCHEN & LIVING AREA

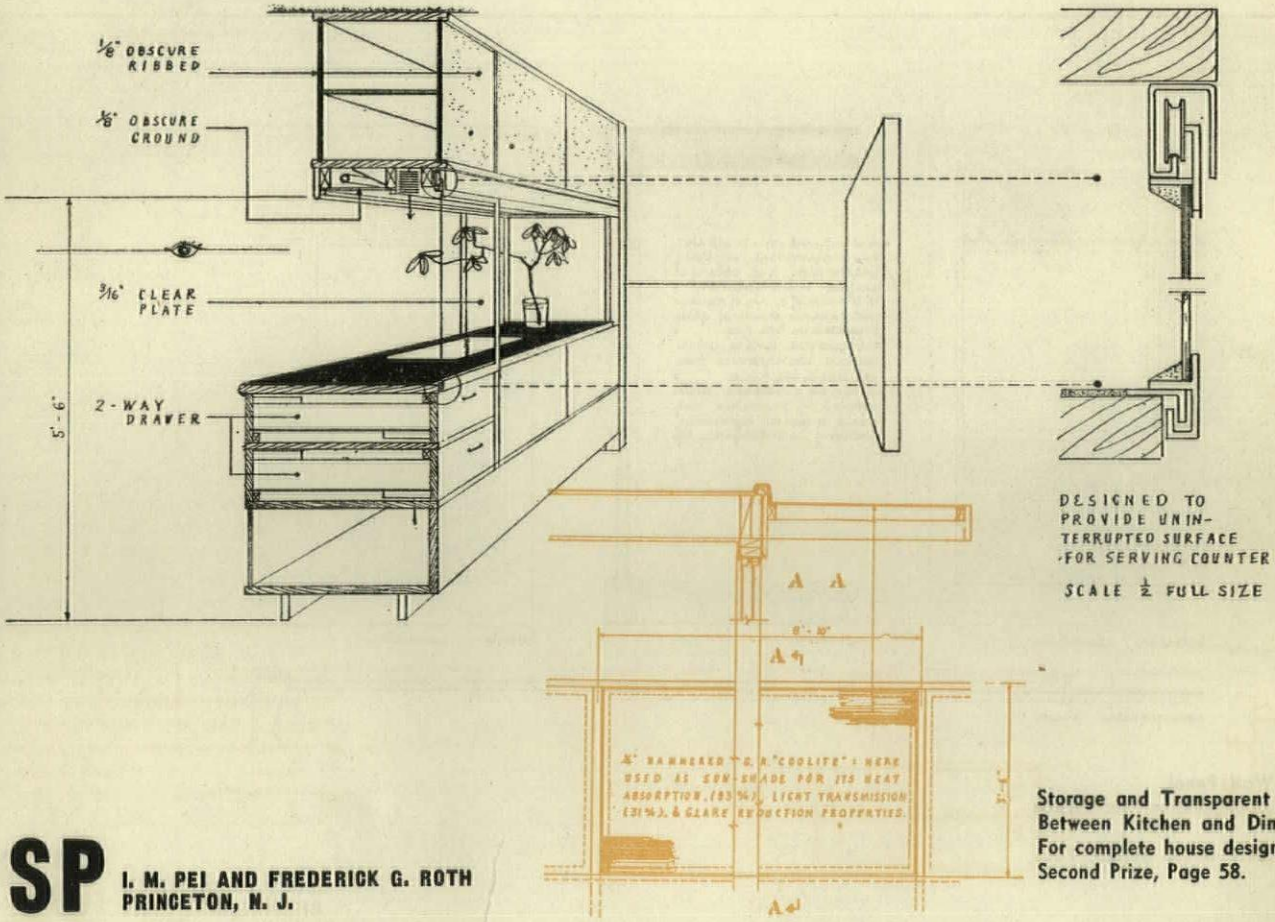


DOUBLE GLAZED PARTITION

Two types of Partitions Exploiting Characteristics of Glass
For finished house of which this is a detail, see Page 69.

CHARLES G. MacDONALD
CAMBRIDGE, MASS.

SP



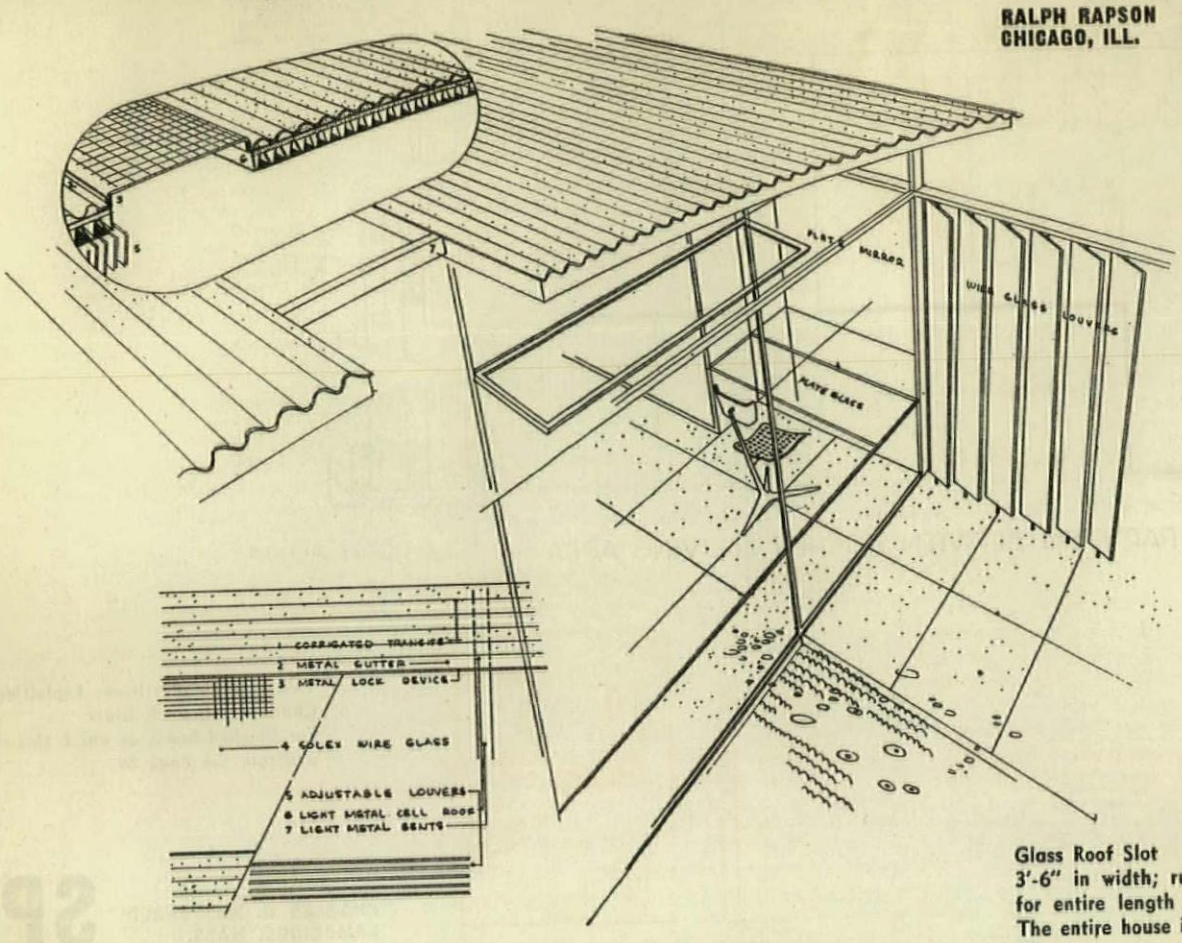
Storage and Transparent Partition Between Kitchen and Dining Area
For complete house design, see the Second Prize, Page 58.

SP

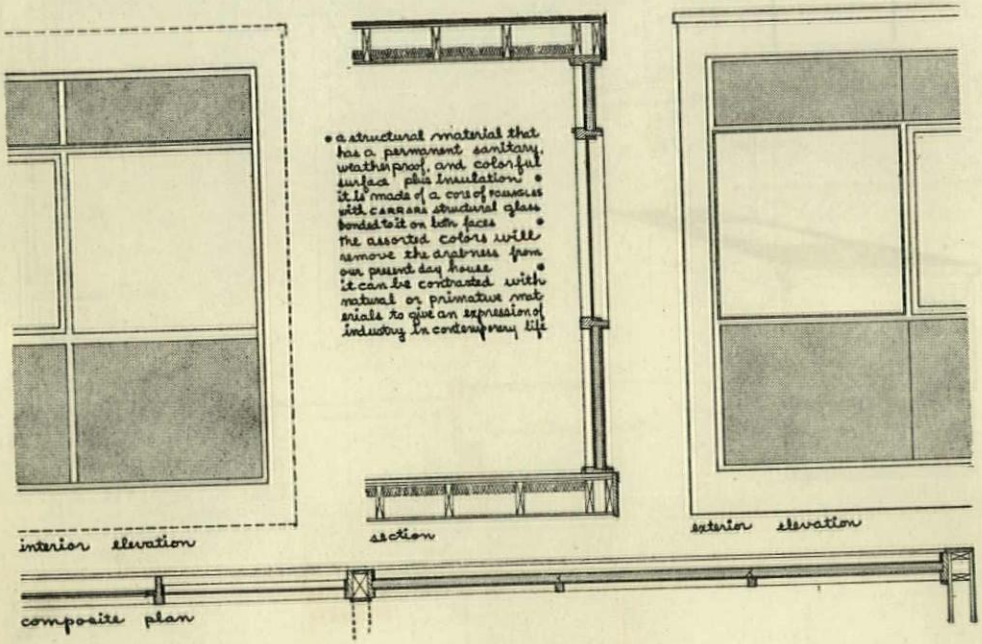
I. M. PEI AND FREDERICK G. ROTH
PRINCETON, N. J.

RALPH RAPSON
CHICAGO, ILL.

SP



Glass Roof Slot
3'-6" in width; runs along center for entire length of house.
The entire house is shown on Page 60.



Exterior Wall Panel.
A colorful suggestion; technically feasible.
See complete house design, Page 70.

CHARLES D. WILEY
BIRMINGHAM, MICH.

SP

GLASS IN HOUSE DESIGN

BY FRANK G. LOPEZ

As long as glass is considered principally as a hard, brittle sheet, translucent or transparent, proof against water and wind but not very effective in stopping heat transfer, the designer is seriously limited in the uses to which he may put it and the manufacturer is limited in the amount he can sell. The limits help to keep its cost high, and that in turn helps to make the limitations self-perpetuating. It is true that most manufacturers are wary of experimental design; they aren't in business for their collective health, as they inversely put their position.

The job of the designer—and particularly the house designer—then, is to show them and the world at large what can be done with their material, and by thus whetting not only the manufacturers', but also the public's, appetite prove the existence of a great potential market for the better houses which can result. The public has always lapped up any new development which led to truly better houses. The job has always been to convince the suppliers of materials and the builders, along with building regulation enforcement agencies.

NEW PROPERTIES

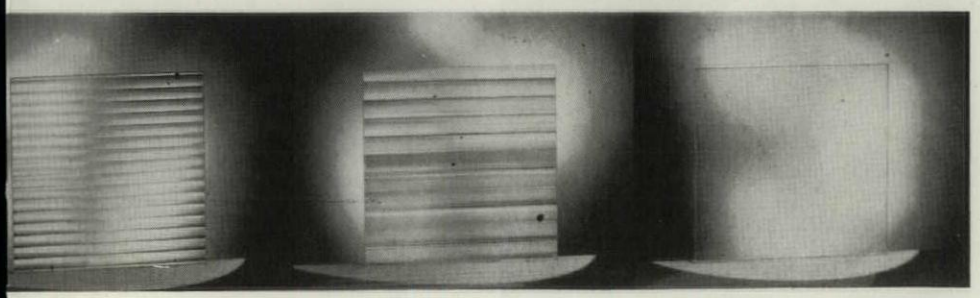
Here is a list of the properties which glass was generally recognized to possess a few years ago. Glass could:

1. Admit light while excluding weather (but not heat);
2. Admit light while obstructing vision;
3. Reflect light rays (as in mirrors);
4. Direct light rays (as in lenses);
5. Add color to the light admitted or reflected;
6. Insulate electrically (as in knob insulators); and act, probably, in a few more similar capacites. It could be blown, rolled, drawn, cast, bent, surface-treated, colored, rendered opaque.

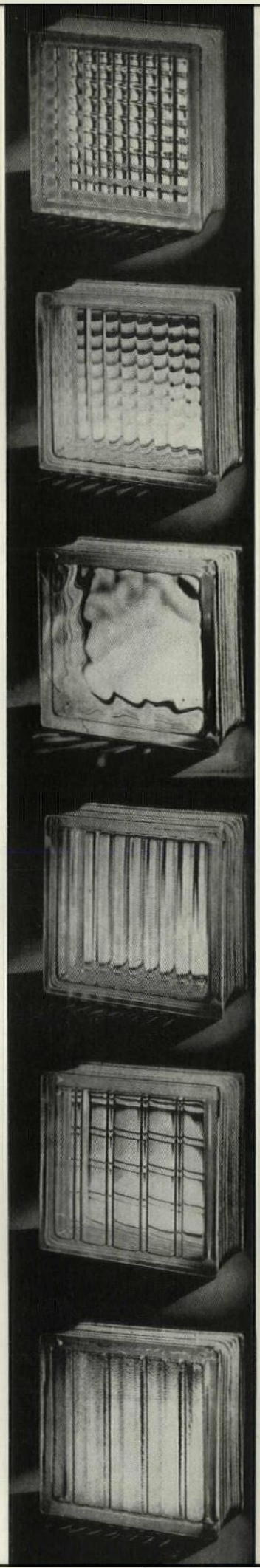
The development of glass block started the parade of new forms in which glass was to appear, and many an architectural abomination resulted from its improper use. Nevertheless, and even though the block was only a development of the familiar casting technique, it stimulated the imagination. We had heard something about ultraviolet waves, and how a new glass transmitted more of them than the old; but that was a material primarily for greenhouses. No one knows how many children might have grown up more healthily had it been intelligently applied to houses.

Today, glass has a myriad of properties, including the following list of the more obvious. Glass can:

7. Admit light, exclude glare and infrared (heat) radiation;
8. Admit light, admit ultraviolet (germicidal) radiation;
9. Admit light, permit vision, exclude X-rays;
10. Admit and redirect light rays;



Above, three of the innumerable patterns available in sheet glass; right, light-directive, diffusing, and patterned glass block. Photos courtesy Blue Ridge Glass, Owens-Illinois Glass.



Cellular glass slabs, extremely light, designed for building into floors or roofs (left) or as cores of walls (right) to provide thermal insulation; photos courtesy Pittsburgh Plate Glass.

11. Admit light and insulate thermally;

12. Insulate a structure thermally;

13. Insulate a structure acoustically;

14. Provide flexible electrical insulation;

15. Eliminate dust from the atmosphere;

16. Withstand greater degrees of physical or thermal shock;

17. Reduce fire hazard;

18. Act in a semi-structural capacity (supporting its own weight);

19. Perform the functions of a fiber or yarn;

20. Perform the functions of a cellular material;

21. Combine intimately with other materials (such as fabrics, metals, plastics, masonry, asbestos, etc.).

This means that glass can be sawed, knife-cut to size; woven, tied, twisted, felted, coated; bonded to other materials. It would appear to be something more than a weatherproof light-transmitter.

NEW FORMS

Whereas glass was once available only as a solid, it can now be obtained as a cellular or fibrous material, and even the solid often appears in strange guise. The forms, some old, some new, group about as follows:

Solid Glass: Sheet Forms

Flat drawn ("window" glass, clear or colored)

Diffusing (surface-treated)

Obscure (pressed or patterned)

Opaque

Plate (ground and polished, clear or colored)

Laminated ("safety," bullet-resistant)

Laminated (with thermal-insulating air space)

Mirrored (clear or colored)

Extra strong (wire-glass,* corrugated, or both)

Extra strong (heat-tempered)

Block Forms

Insulating

Light-directional (many types)

Special purpose (for curves, light diffusion, skylights, etc.)

Cellular Glass

Insulating masonry unit

Insulating unit faced with impervious surfacing (metal, wood, etc.; in experimental stages)

Fibrous Forms

Batts (for thermal, acoustic insulation)

Curtains (primarily acoustic)

Loose fill (thermal, acoustic insulation for buildings and appliances)

Filters (air cleaning, etc.)

Board forms (asphalt enclosed insulating building board)

Preformed thermal insulation (for pipes, etc.)

Laminated, with plastics

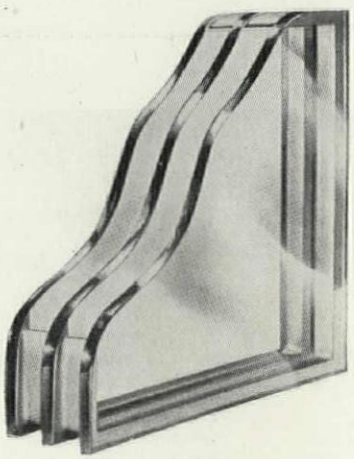
Fabrics, decorative (fireproof, can be dyed, sometimes interwoven with asbestos)

Fabrics, coated (for greater durability)

Electrical insulation (wire-covering, etc.)

APPLICATIONS

Thorough consideration of only a few of these properties and products will lead to some startling conclusions. Such developments as heat- and glare-resistant sheet glass have obvious potentials in what is popularly called "solar" house design. Most "solar" house promotion has been based on the rather questionable advantages to be derived from sun heat; although manufacturers are quite cagey about actual statements that "solar" design results in lower fuel bills, they manage to imply pretty directly that such is the case. It may be, provided the house is designed to take full advantage of insolation (penetration of sunlight), is properly insulated, ventilated, laid out as to openness of plan to permit radiant sun heat to rebound from surface to surface within the house shell—and if the mechanical heating system is coordinated as to type, size, and layout. Proponents have also spoken fulsomely, although with an apparent lack of scientific accuracy, of the advantages to the eyesight of those fortunate ones who dwell in "solar" houses. Judging by the experience of men in the U. S.



Army, men who have been transplanted from sedentary indoor life, in which they were restricted visually by enclosing walls that had a few, too-small windows punched in them, to active outdoor life which necessitated that their eyes focus alternately close at hand and on distant horizons—well, at least a few of these men have discarded the spectacles they used to wear. There's probably a great deal of truth behind such claims. Yet glass manufacturers —and other "solar" house protagonists —have overlooked another, very important, bet in "solar" design.

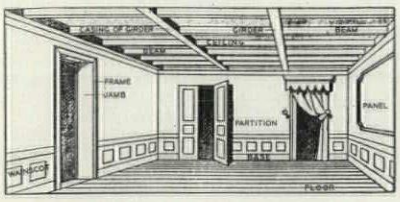
No one speaks of the tremendous advantages that accrue to health when sunlight is permitted to flood a house. Doctors here and abroad have proof that less cross-infection exists in hospital wards which are opened up to admit as much sunlight as possible than in wards equipped with the usual "windows." Can't you imagine the great—and legitimate!—glass advertising campaign which could be built on such a factual basis? Again, considering that the preceding statement applies to sunlight admitted through ordinary window glass, what about the use of ultraviolet-transmitting glass, which admits germicidal as well as light rays? It is true that no one knows precisely, yet, how extensive are the germ-killing benefits, what amount of glazing is justifiable from this point of view, or what germicidal qualities remain in sunlight after it has passed through two or more thicknesses of glass and one or more heat-insulative air spaces.

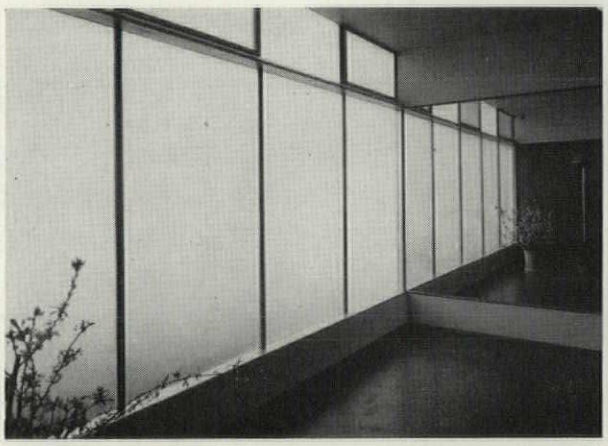
While we speak of great wall expanses of transparent sheet glass in house design, we may as well mention some negative factors. One has to do with privacy. Most postwar houses will probably be built on relatively small lots, pretty close to neighbors. Since no reputable housewife wants to expose all her daily routine to her neighbors, these transparent walls we seem to advocate will have to be carefully safeguarded. Screen planting is one answer; solid, or at least non-transparent, walls on undesirably exposed sides are another. Plans arranged to shelter a glass wall by means of a projecting wing of the house, or extensions of solid house walls to serve the same purpose, or garden walls, are still others; but in the last-mentioned case, beware of antique building regulations prohibiting "spite" fences.

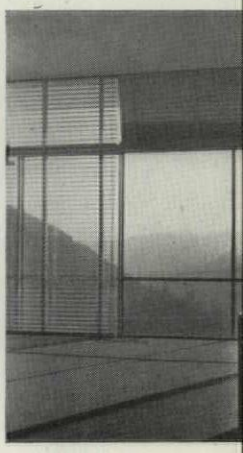
Again, there is the problem of fading of draperies and upholstery fabrics when too much sun hits them for too long. The chances are 10 to 1 that even drapes advertised as "sunfast" aren't sunfast. You see, they're meant to be sunfast in rooms equipped with windows, not with glass walls. Simplicity in pattern, color, and quantity of such materials is one answer to this problem. Perhaps the glass people have another answer: it is a fact that glass drapery fabrics, woven of glass fiber and dyed in all sorts of patterns and colors, do not change color when exposed to direct flame, except where the flame actually touches the fabric—and even then, they suffer apparently from fusion of the glass fiber, not by fading. But we haven't seen any test results on the effects of that powerful bleaching agent, sunlight.

Some of the newer glass block developments are of great interest. Since each glass block encloses a partial vacuum, a wall of them is a pretty good thermal insulator—not as perfect as some other types of wall construction, but much better than a single thickness of sheet glass. They are also excellent acoustical insulators, although their polished surfaces can cause the same type of reverberation Pop enjoys when he sings in the bathtub. But not much sound gets through them. And for interior use they can be laid up dry—that is, with wood strips instead of mortar in the joints. Interior partitions to lighten what would otherwise be gloomy interior rooms—if you must have such rooms—are one possibility. Walls close to property lines or adjacent buildings, bathroom walls, all would seem to call for such a material. If there is a problem of getting light directed from exterior walls to remote interior areas, there are glass blocks with prismed faces for the purpose.

Cellular glass insulation is nothing but glass in bubble form, the bubbles small and massed together in extremely lightweight blocks which can be built into walls, floors, and roofs exactly as any solid insulating material is employed. Cellular glass can be bonded with flexible agents directly to masonry; it won't deteriorate due to the contact. It can be cut with a saw and is so "normal" a material in application and predictable results that its use should be widespread immediately building becomes possible again. There is one potential development—the bonding to it, with some of the newly developed adhesives, of a surfacing material—which may have spectacular results. The effort is to produce an eventual material which, though not truly structural in that it cannot support more than its own weight due to the difference between its rate of thermal expansion and that of other building materials, can provide an almost homogeneous wall which requires support only at relatively wide intervals. Such a material would in itself be an insulator, would possess a durable surface finish, impervious to weather, and if a proper material forms the surface, would require less attention after erection than the average brick wall. Its weight





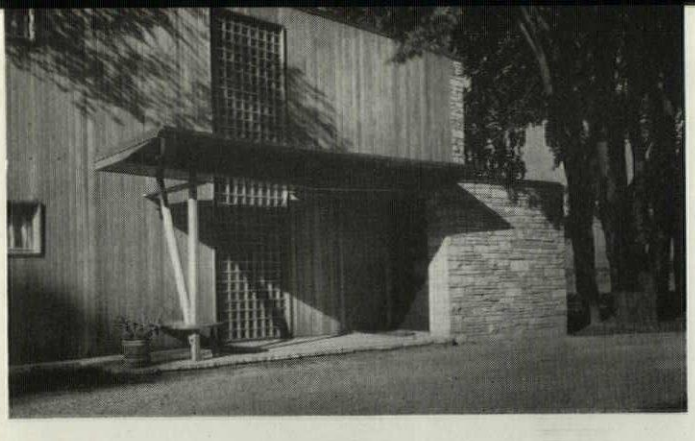


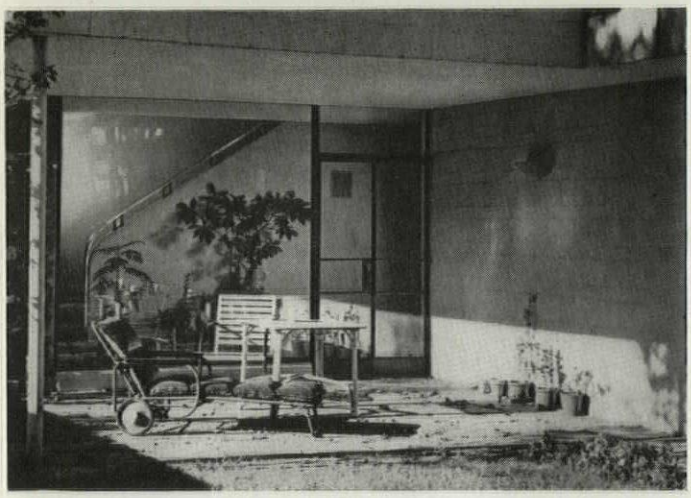
Top sketch, small diamond panes, larger rectangular panes, store windows, cheek-by-jowl in existing Nantucket houses. Below, structural considerations in a house of yesterday: windows are mere holes punched in the fourth wall. At right, houses with glass walls, by (left to right) Richard Neutra, R. M. Schindler. Notice Neutra's adept use of mirrors to supplement the window-wall.

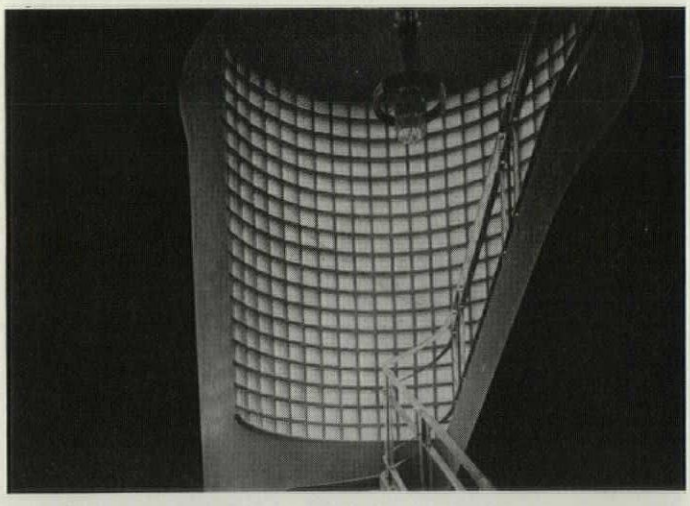
On facing page, newer forms of glass (left to right): fibrous glass in batt form, for insulation; fibrous glass woven into drapery materials used to make theater fire-curtain; tempered glass used where strength, acid-resistance are needed; triple-thickness insulating glazing (also available double thickness). Photos courtesy U. S. Gypsum, Thortel Fireproof Fabrics, Pittsburgh Plate Glass, Libbey-Owens-Ford.

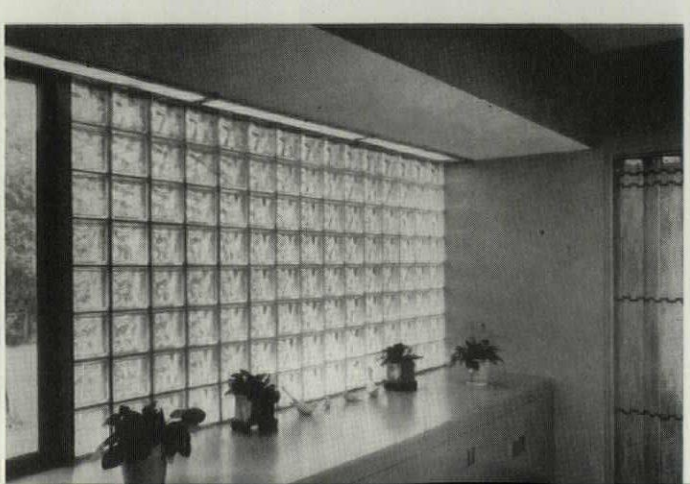
On this page, top to bottom: transparent glass wall, Koch residence, E. D. Stone & Carl Koch, architects; house in Pittsburgh, Pa., Mitchell & Ritchey, architects; corner window with ventilating sections, house in South Carolina, E. D. Stone, architect. Photos courtesy Pittsburgh Plate Glass.

On facing page, top to bottom: glass block in wood wall, house in Wisconsin, George Fred Keck, architect; exterior, Koch residence, showing close relationship between outdoor and indoor living spaces; curved glass block stair wall to admit maximum light, maintain privacy; glass block and ventilating sash combined over a counter, with built-in lighting to help produce same effect at night, Winston Elting, architect. Photos courtesy Owens-Illinois, Pittsburgh Plate Glass.









would be considerably less than substantial walls built of the common materials, so structural supports could be lightened. It might be made in voussoir shapes, to form arched roofs without interior support.

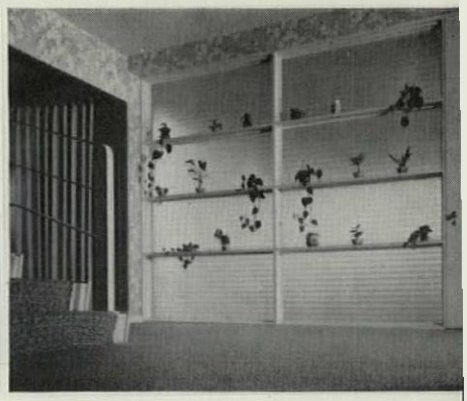
EVOLUTION OF HOUSE DESIGN

All these potential applications of glass —and we have hardly begun to explore them—will probably be very bothersome to those of us who revere "Colonial" house design without understanding it. The reason such advances are troublesome, of course, is that to apply them logically, to make the fullest possible use of them in order to achieve the greatest practical benefits, is to produce a house design for which not even the most diligent head-scratching can conjure up an antique name. In any other field of art, even in any other branch of architecture than house design, such a criticism would be considered complimentary; but a lot of people seem to think only the faithful copyist is a good house architect. Of such a reader we might ask, "Will you provide your Colonial home with a two-holer, an unsanitary well, a wash basin on a shelf near the kitchen door, and an unlined chimney flue?"

The truth about the "spirit" of Colonial design seems quite a different thing. Of course, coming to this land from another, and being occupied for many years with its development, our forefathers built houses in their own version of the examples they had left behind, as influenced by materials available and new purposes at hand. In early American houses, both windows and the panes of glass which composed them had to be small. Glass wasn't available in any quantity, and the house was as much a fort as a dwelling. But as glass became available, as wealth increased and people ceased to fear for their lives, both the windows and panes of glass increased in size. In respect to glass, as well as in respect to all manner of technological advance, our house designers and builders have, time and again, changed their mode without even a temporary qualm. Some new thing worked better, so they used it.

Thus the understanding seeker will find that "Colonial" covers a multitude of facades: log cabin, blockhouse, saltbox, Georgian, Greek revival, and whatnot, all carefully labeled long after the technical developments which led to their establishment had been outmoded. At the climax of its development the house of classic prototype expressed a loving craftsmanship in construction and detail, a gracious way of living, a civilization based upon the expansion and development of new land. Today our way of living can be even more gracious, our insistence upon perfection in detail should be more pressing, because our civilization is consolidating upon the advances our forefathers made, and we have machines to help us progress. Our houses should reflect our times.

One means of realizing such aims is to make full use of all that machines can give us, and glass in its myriad forms



Interior partitions of patterned glass; that at left, George Fred Keck, architect, slides back into wall. Photos, Libbey-Owens-Ford.

is a machine product. If a glass wall protects health and eyesight, floods an interior with sunlight, makes possible a more direct, gracious relationship between nature and artificiality, let us employ the glass wall. Our forefathers would have, and they would have done it in such a way that the resulting house harmonized with its locale, its climate, above all with its occupants.

GLASS AND OTHER DESIGN PHASES

Proper use of glass in house design depends partly upon consideration of its potentialities in relation to site conditions, to orientation of the house, to placement of various functioning organisms (the kitchen, laundry, bath, home workshop, etc.), to organization of the spaces within the house, and to the various types of mechanical equipment. Where to use transparent glass, where translucent; where thermal or acoustical properties are important; where high reflectivity is desirable; what happens to the heating problem—all these are considerations.

It is a mistake to decide, "This is going to be a *glass* house! Whoopee!" The approach might better be: "Here's a family who want such-and-such in their house. How can we best use the materials available today? The family expects a swell garden—shall we open up that south wall? Then what happens in summer? We'd better shade the glass—best do it on the outside, so they won't have to pull shades and cut off their view when all they want to do is keep out the heat and glare. Speaking of glare, I'll omit that concrete sidewalk outside the glass wall; it would be most uncomfortable to look at through a glass wall. They'll want to be protected from neighbors—" and so on.

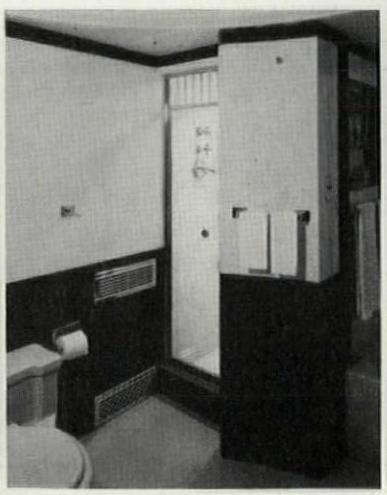
The point is that glass, albeit a most attractive material, is only one of many, each of which has its own purpose. And the heating system, the ventilating means, even the plumbing and electrical systems, may have to be radically altered if they are to function well in conjunction with glass construction. It is rather hard to install wiring in a glass wall.

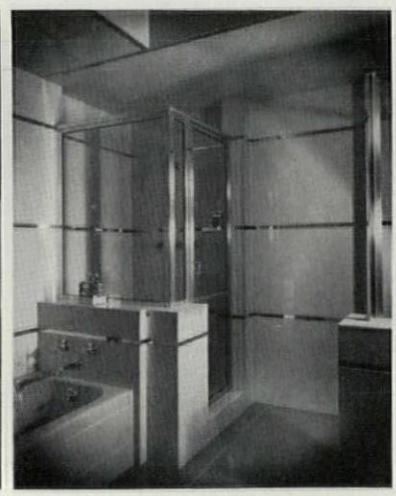
TODAY, TOMORROW, AND THE DAY AFTER

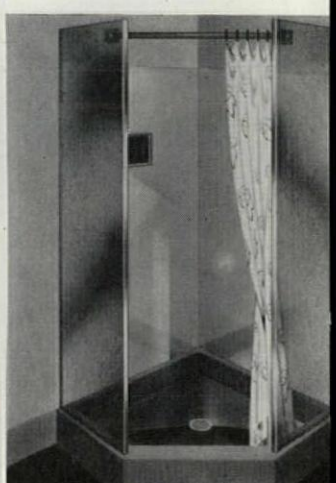
If we venture here into predictions for tomorrow, please understand that the suggestions are merely logical extensions of common glass applications. Unless it is specifically so stated, none of these suggestions is backed by a manufacturer's promise to produce.

In the field of sheet glass, the development of "tempering" processes, to make glass less subject to shattering when physical force or heat is applied, open some very interesting avenues. Suppose you want a glass wall in Junior's bedroom or playroom—Junior may run his tricyle into it and—presto!—no glass. But use one of the tempered glasses, and Junior will have to work pretty hard to destroy it. You can use tempered glass for wainscots, too, where easy cleaning and warmth are essential. Warmth? Yes; coat the back of a sheet of tempered glass with metallic

Glass in bathrooms, left to right: glass block wall for privacy, ventilating sash above; opaque sheet glass (often miscalled "structural") as an easily cleaned wall surfacing; similar walls and ceiling with inlaid strips of colored mirrored glass, shower stall plate glass in metal frame; possible prefabricated shower stall of rough plate glass, or of tempered glass. Photos, Owens-Illinois, Pittsburgh Plate Glass.









electrical resistances in strips, wire them to an electrical source, turn a switch, and the sheet becomes a heat source. The whole wainscot can be comfortably warm. Apply the same principle, and you have a hot plate for grilling sandwiches, frying eggs, etc. Or use the principle in making glass draft-deflectors for windows, and your deflector will heat incoming cold air. One manufacturer has experimented with this material, using atomized aluminum for the resistance. A wide range of surface temperatures is contemplated, from 70° to 575° F.

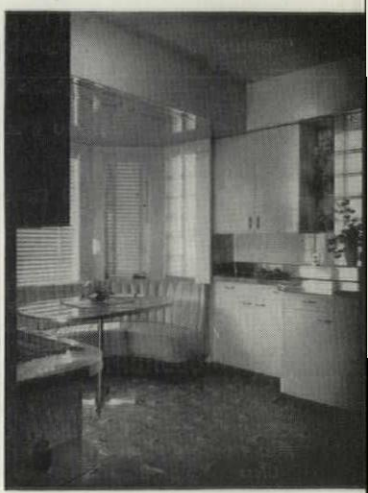
Just one other example: If glass fiber can be felted into insulating board form, it ought to be possible to make out of it a complete wall-to-ceiling panel, one with all the advantages of glass except translucency, and without its disadvantage of brittleness. (Perhaps some other material than glass might do this better, but remember we're considering glass potentialities.) Now suppose this felted board is so manufactured that its surface is refused into a solid, easily cleaned, even capable of being polished. It could be colored, printed, patterned, molded, etc. Perhaps one of the new adhesives could be employed to bind to the board a special surface finish, of wood, plastic, etc.

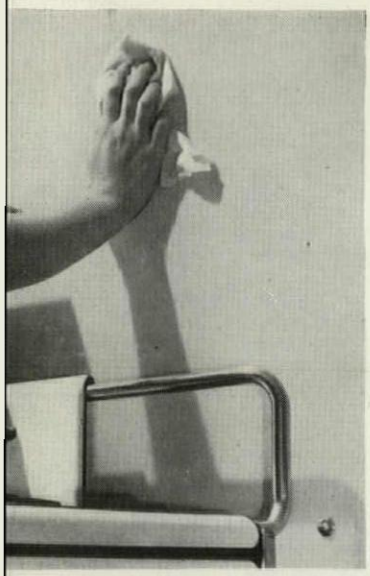
There are still a thousand and one potentialities. Some of them will turn out to be unsound, either technically or commercially; some will result in pretty atrocious domestic architecture; and some will take their place in pretty darn good houses.

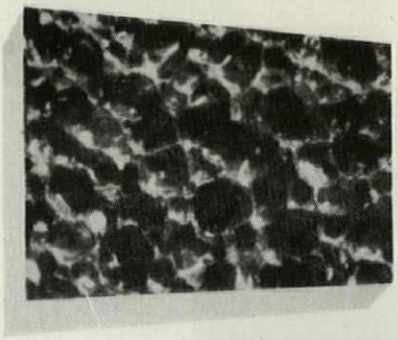
Mirrors (left to right): overmantel, house in Florida, Henry Corse, architect; overmantel, Granville Keith, architect; wall composed entirely of mirrors, plate glass table top, Leo Sharps, architect. Photos, Pittsburgh Plate Glass.

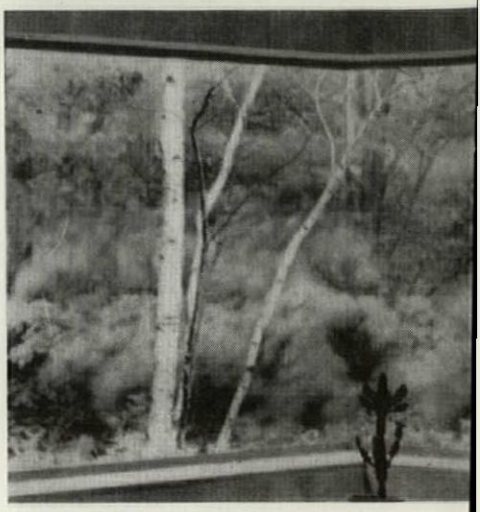
Above, glass block wall continuous behind cabinets; photo, Owens-Illinois. Below, left to right: patterned glass fronts for storage spaces; "structural" glass wall-surfacing around kitchen work spaces; transom sash used above and below kitchen wall cabinets; "structural" glass surfacing and glass block walls. Photos, Libbey-Owens-Ford, Pittsburgh Plate Glass.



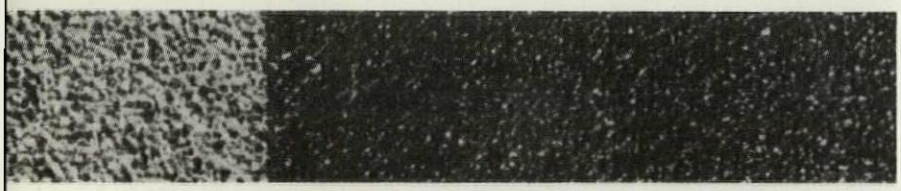









Properties to remember in using glass: easy cleaning, reflectivity, insulative value, transparency or translucency —and many more. Photos courtesy Libbey-Owens-Ford, Pittsburgh Plate Glass.



TYPES OF GLASS COMMERCIALLY AVAILABLE

BULLET-RESISTANT GLASS

"Armor-Lite"	American Window Glass Co.
Bullet-Resisting Glass	Libbey-Owens-Ford Glass Co.
"Multiplate"	Pittsburgh Plate Glass Co.

CORRUGATED GLASS

"Misco"	Mississippi Glass Co.
Corrugated Wire Glass	Pennsylvania Wire Glass Co.
Corrugated Wire Glass	Sergeant Wire Glass Corp.
"M-R Corrugated Wire Glass"	Robertson, H. H., Co.

DECORATIVE GLASS

"Flint" & "Cathedral" Glass	Mississippi Glass Co.

DIFFUSING (Figured) GLASS

"Magnalite"	American 3-Way-Luxfer Prism Co.
"Magnalite"	Mississippi Glass Co.
"Magnalite"	Richards, J. Merrill
Many types & patterns	Blue Ridge Glass Corp.
Many types & patterns	Mississippi Glass Co.
Many types & patterns	Pressed Prism Plate Glass Co.
"Tapestry"	Pittsburgh Plate Glass Co.
Many types, plain or wire	Pennsylvania Wire Glass Co.
Many types, plain or wire	Sergeant Wire Glass Corp.

FABRICS OF GLASS

"Fiberglas"	Thortel Fireproof Fabrics Corp.

GLASS BLOCK

"3-Way Insulating Blocks" (skylights)	American 3-Way-Luxfer Prism Co.
"Insulux"	Owens-Illinois Glass Co.
"P-C"	Pittsburgh Corning Corp.

HEAT-ABSORBING (glare-reducing) GLASS

"Lustrablu"	American Window Glass Co.
"Akio"	Blue Ridge Glass Corp.
Heat-Absorbing Plate Glass	Libbey-Owens-Ford Glass Co.
"Coolite," "Misco"	Mississippi Glass Co.
"Type H Actinic Glass" (plain or wired)	Pennsylvania Wire Glass Co.
"Solex" Plate Glass	Pittsburgh Plate Glass Co.

HEAT-RESISTANT GLASS

"Securit"	Blue Ridge Glass Co.
"Pyrex"	Corning Glass Works

INSULATION OF GLASS

"Fiberglas"	Owens-Corning Fiberglas Corp.
"Fiberglas"	U. S. Gypsum Co. (sales)
"Foamglas"	Pittsburgh Corning Corp.

(See also "Glass Block," "Insulating Glazing," etc.)

INSULATING GLAZING

"Lustratherm"	American Window Glass Co.
"Thermopane"	Libbey-Owens-Ford Glass Co.
"Twindow"	Pittsburgh Plate Glass Co.

MIRROR GLASS, MIRRORS

Clear and colored	American Window Glass Co.
Clear and colored	Libbey-Owens-Ford Glass Co.
Cabinet mirrors	Columbia Metal Box Co.
Cabinet mirrors	Hess Warming & Ventilating Co.
Cabinet mirrors	Lawson, F. H., Co.
Cabinet mirrors	Parker, Charles, Co.
Clear, colored, copper-backed, "structural"	Pittsburgh Plate Glass Co.
"Flexglas"	U. S. Plywood Corp.

PLATE GLASS

"Regular," "Color Clear," "Colored"	Libbey-Owens-Ford Glass Co.
"Clear," "Vista," "Heavy," "Flesh-tinted," "Blue"	Pittsburgh Plate Glass Co.

SAFETY GLASS

"Plexite," "Supratest"	American Window Glass Co.
"Hi-Test"	Libbey-Owens-Ford Glass Co.
"Multiplate"	Pittsburgh Plate Glass Co.

SHEET (Window) GLASS

"Crystal Sheet Glass," "Lustraglass," "Lustrablu," "Lustragold," "Lustrawhite"	American Window Glass Co.
"Clearlite"	Fourco Glass Co.
Window Glass	Libbey-Owens-Ford Glass Co.
"Pennvernon"	Pittsburgh Plate Glass Co.
"Robertson Flat Glass"	Robertson, H. H., Co.

"STRUCTURAL" GLASS

"Vitrolite"	Libbey-Owens-Ford Glass Co.
**"Glastone" (glass bonded to concrete)*	Libbey-Owens-Ford Glass Co.
"Carrara"	Pittsburgh Plate Glass Co.

TEMPERED GLASS

"Securit"	Blue Ridge Glass Corp.
"Tuf-flex" Tempered Plate Glass	Libbey-Owens-Ford Glass Co.
"Herculite" and "Herculite Doors"	Pittsburgh Plate Glass Co.

ULTRA-VIOLET-TRANSMITTING GLASS

"Lustraglass"	American Window Glass Co.
"Vitaglass"	Mississippi Glass Co.

WIRE GLASS

Polished or patterned	Blue Ridge Glass Corp.
Polished, patterned, corrugated	Mississippi Glass Co.
Polished, patterned, corrugated	Pennsylvania Wire Glass Co.
Patterned	Richards, J. Merrill
Patterned, corrugated	Sergeant Wire Glass Corp.
"M-R Corrugated Wire Glass"	Robertson, H. H., Co.

X-RAY-RESISTANT GLASS

"Bar-Ray" Glass	Bar-Ray Products, Inc.
"X-Ray-Resisting Lead Glass"	Kelley, O. G., & Co.
"X-Ray Lead Glass"	Pittsburgh Plate Glass Co.
"Ray-Proof Glass"	Ray Proof Corp.

* Manufacture suspended for duration of the war.