NEUTRA

PENCIL POINTS

JULY 1937

PLAN FOR TOMORROW *Today*

WITH TRUSCON OPEN TRUSS STEEL JOISTS

In designing the new office building of the Columbus Show Case Company, Columbus, Ohio, deciding factors in the use of Truscon Open Truss Steel Joists were explained, briefly, by M. K. Teach, Architect.

Said Mr. Teach . . . "We were very much interested in making the display room on the first floor as free as possible from projections, beams, columns, etc. Truscon Open Truss Steel Joists made this possible as well as permitting the rearrangement of office partitions in the future without being confronted with any building construction problems and unnecessary expense."

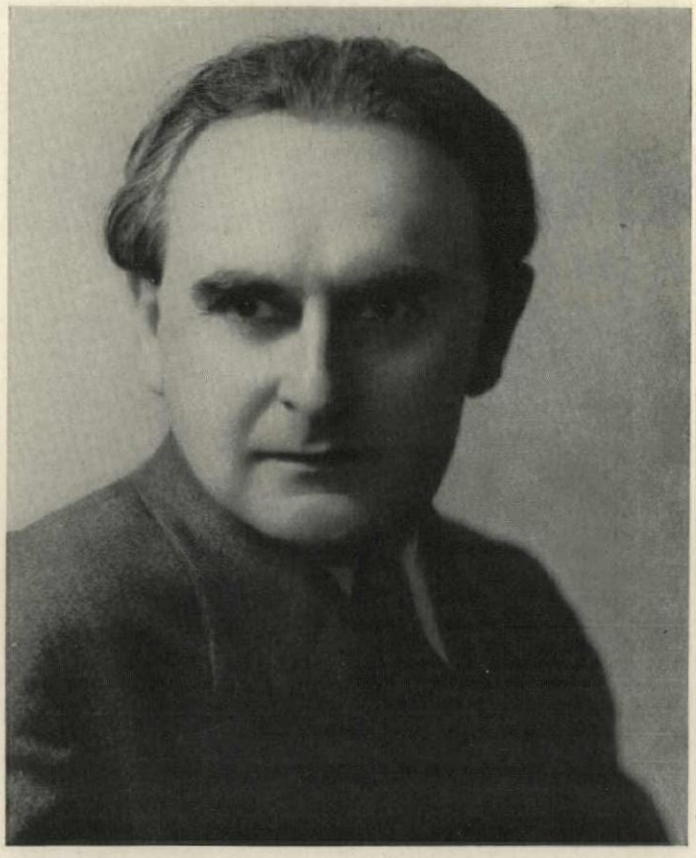
"Furthermore," continued Mr. Teach, "Truscon Open Truss Steel Joists permitted us to place steam lines, electric lines and automatic sprinkler system pipes in the concealed space between ceiling and floor. Speed of erection in any kind of weather was another important factor."

Truscon Open Truss Steel Joists are engineered to provide for future contingencies as well as present requirements of all types of light occupancy structures. See Truscon's 80-page catalog in "Sweet's" for complete details or write today for separately bound catalogs which will be forwarded immediately at no cost to you.

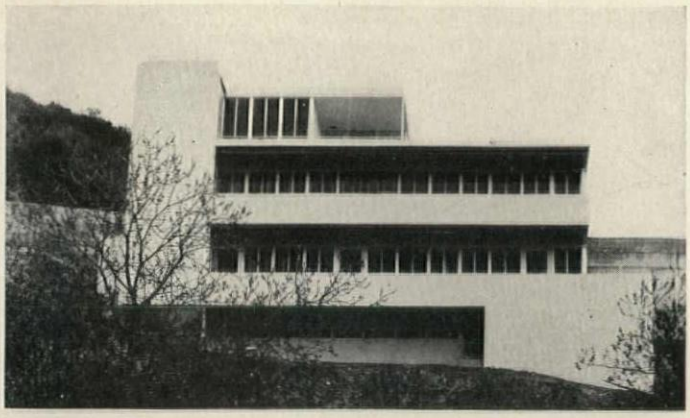
TRUSCON STEEL COMPANY

MAIN OFFICE: YOUNGSTOWN, OHIO • 57 SALES-ENGINEERING OFFICES

RICHARD J. NEUTRA, whose work as architect and designer has won him world-wide recognition as an individual and as an influence on his times

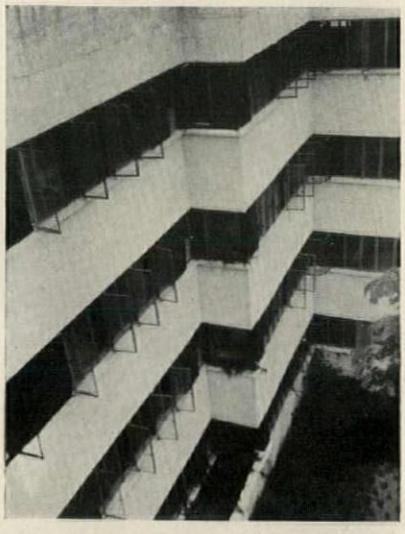


While concerned with city planning, prefabrication, and the technical and scholarly evaluation of new construction, Richard Neutra has executed projects which comprise a wide range—from public and private schools to multiple dwellings, residences, commercial structures, offices, stores, interiors, furniture for small production, and landscaping plans. During his practice he has taken pains to train collaborators; among them Peter Pfisterer, Otto Winkler, Gregory Ain, Harwell Harris, and others who have faithfully assisted him in his strenuous work. His collaborator of longest standing is Mrs. Dione Neutra



House Kun *from South*

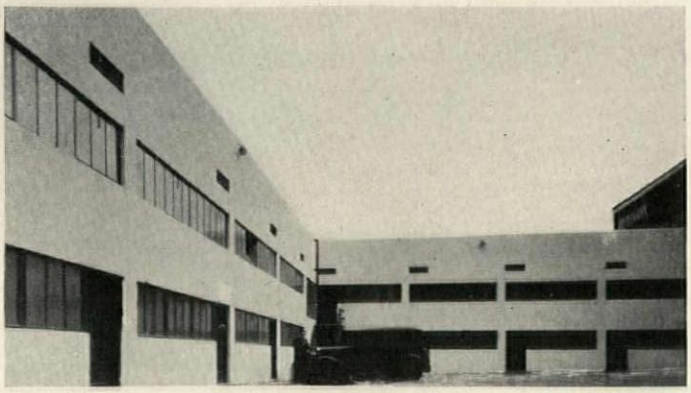
Landfair Dwellings *from East*



Garden Apartments, 1927

Landfair Dwellings *from South*

Coco Tree Café

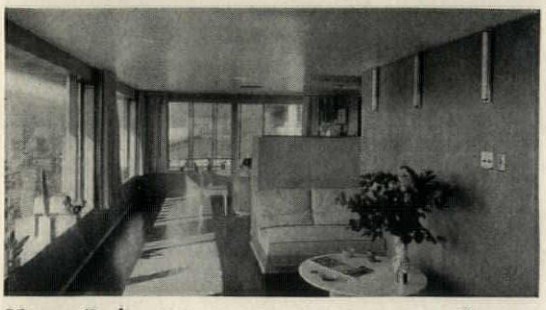


Universal Picture Building *from North*

Photographs illustrating this article, unless otherwise noted, are by Luckhaus Studio

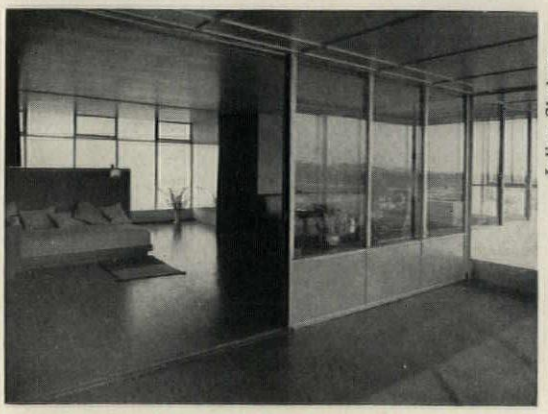
Gardenhouse Malcolmson

House Ruben *from West*



House Ruben *Lounge*

House Koblick *from West*



House Mensendieck *Interior*

Julius Shulman

New Dwelling Architecture, thinks Neutra, means a rejuvenation of living habits and a significant conditioning of the growing generation which will furnish the active and receptive adults of tomorrow.

The new materials and structural methods available today permit, when used unadulterated, a natural and more intimate relation to the out-of-doors and a consequent full benefit of its health factors.

Wide spans, slender supports, liberal openings, and transparency of enclosures where desired have for centuries attracted designers and consumers of buildings. Space feeling and aesthetic satisfaction—always the important architectural objective—may now be enriched by these ingredients which were not commonly obtainable in historic building periods.

On the other hand, much of the structural regularity and non-individualistic quality of classical composition meets with the practical demands of modern fabrication—and equally with the general trend toward harmonious integration of the community rather than toward the solo playing of millions of rugged individuals. Communal spirit in architecture, ensemble performance rather than independent monologues, however stunning, are found to yield beauty best—in the mediaeval town, in the Japanese village, in the metropolitan suburb.

Architecture at its height avoids romantic revivals, sensational novelties, and those fluctuations of yearly fashion which may be the essence of the ladies' apparel business but are not commensurable with a steady and sound development of building design extending over decades and amortization periods.

Conditions, when concretely analyzed as basis for design, are sufficiently diversified to avoid monotony without indulging in arbitrariness.

RICHARD J NEUTRA

A CENTER OF ARCHITECTURAL STIMULATION

BY HENRY ROBERT HARRISON

DR. SIGFRIED GIDEON, secretary of the International Congress of Modern Architecture, and perhaps the foremost critic in the world today, conducted—only a few years ago—a fine pictorial record of today's architecture. He felt justified in excluding, almost completely, U. S. A. from his review.

This in itself would be unimportant to us if it were not for the fact that it represents the prevailing sentiment, not only of the same European masters we so recently studied but of the best thought here among our own American critics as well.

It is a depressing attitude toward American design ability and, unfortunately, either not realized by our too-busy-to-read profession or maliciously ridiculed sans understanding.

Unless we are prepared to have history record so damning an indictment of American culture, through continued apathy, a sober effort to understand the reason for such criticism is a duty—no less—of every architect.

The fact that Neutra's architectural family tree embodies, by direct contact, the almost century-old European modern through Loos and Wagner, as well as his connection with our Americans, Sullivan and Wright, makes the study of his work of great importance.

Mr. Richard J. Neutra, architect, of Los Angeles, is indeed some consolation to us; for whatever is said of the volume of our modern work, its quality and significance, exemplified in his work, are unsurpassed — as even our most caustic critics admit, who avidly publish photos and articles about his work in magazines from Tokio to Buenos Aires.

Though born and educated in Vienna, Austria, he became a cosmopolite through long wandering and work all over the world, to finally chose America as his home after serving with Frank Lloyd Wright and in all sizes and styles of offices throughout the country.

His office today reflects the same efficient wide-awake atmosphere so typical of American business; *but* there is a deep undercurrent of modest, serious, idealistic scholarship —a devotion to its work—which business efficiency somehow misses.

Perhaps it is the European apprentice system, the basis of his organization, which is responsible; but whatever it is, this tall, serious, yet quietly humorous master gets results.

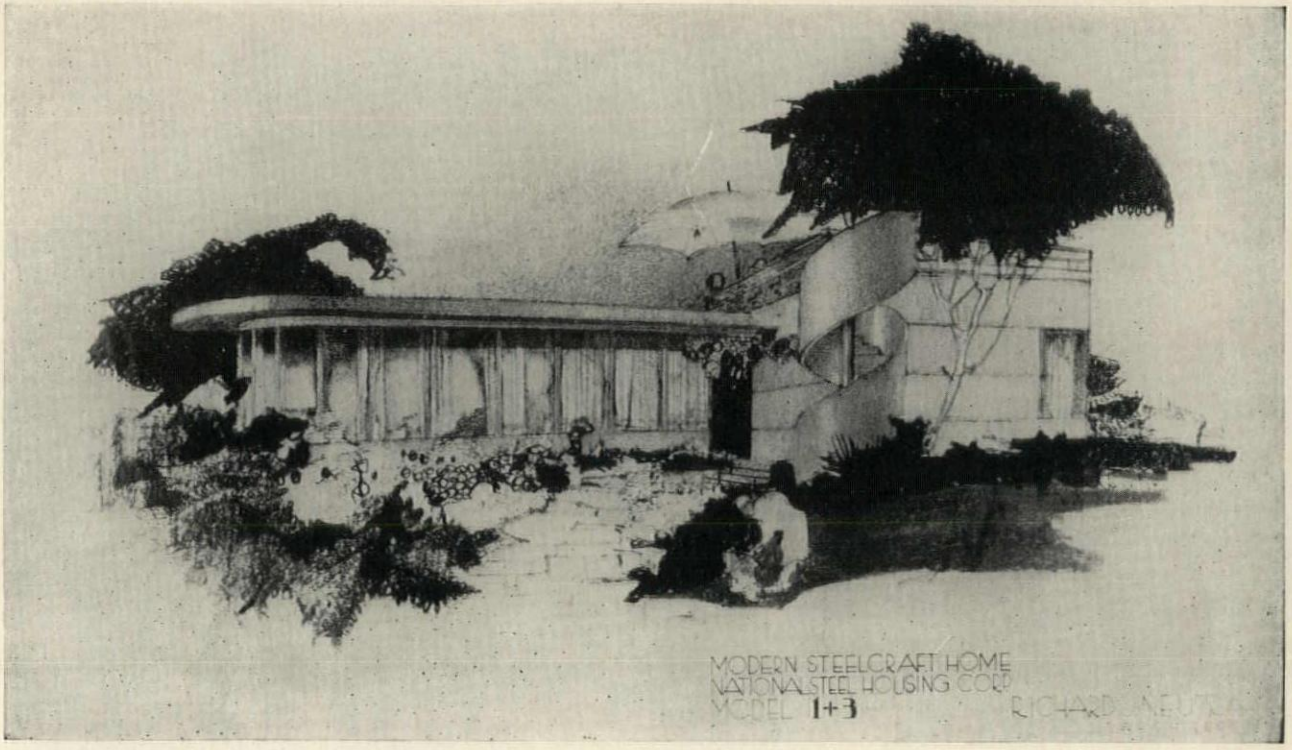
He works always at top speed, emanating an amazing energy and drive as he threads his way through the tremendous amount of work incident to a practice whose novelty demands the most careful detailing. A stream of conferences, a closed afternoon for his own drawing, and the after-dinner business routine with his secretary, keep him busy from early morning to late night. Yet somewhere he must find time for music, painting, and literature, for he talks with familiar ease the jargon of the many masters of the other arts who frequently "drop in on their way through town."

His home—just a flight of stairs above the busy office—is a quiet refuge with deep inviting couch-seats, long shelves of books, and windows opening on all sides to the beautiful lake and park they overlook.

Here in a house of his own design he can withdraw, with his wife and two sons, to an unbelievably restful atmosphere; or entertain anyone from a movie star in regal glamour to an impromptu bull session of the entire office staff, or a committee of unemployed.

The photographs convey some idea of the material elements of his architecture; but they can only hint at the spirit, the liberating feeling, which is the "forte" of all modern design in space (rather than in mass).

It has been said that all of his designs are deeper than just buildings. His houses, more than domiciles, point the way to a new and fuller life; his schools, more than good classrooms, are the expression of a newer and finer thought in education; his town planning, more than a clever solution of traffic, zoning, and parks, crystallizes the best thought in the economics of today's civilization. Behind the



Exhibition house of National Steel Housing Corporation 1934. Insulated hollow steel walls. Plan consisting of 4 transmutable units. *R. J. Neutra, Architect*

simplicity of plans lies years of deep research; behind the architect, a philosopher; BEHIND THE ARCHITECT, A PHILOSOPHER—not a bad pocket definition of any creative architecture.

The two books Neutra wrote on America are a case in point.* They opened the eyes of a scornful Europe to the potential design fertility of a country with all of the raw materials and the systematic methods so essential to modern building. They unrolled a picture of American cultural life, as a whole, in relation to a specific progressive technology; and are the most widely studied data on America which Europe has.

Rather a man-sized job for any literary man. I wondered how an architect could tackle a job like this and finish even one such volume; so, using this interview as an excuse, I asked him: "How did you, Mr. Neutra, find the time to write books?"

Said he: "I did not write my books sitting at a desk. I did not want to and could not afford it. During the day I worked my way through a goodly number of American offices —from one-man places where I did everything down to sweeping the floor, to the biggest one where I was sharing with a large team and was number 216, as at Holabird and Roche's. However I was blessed with a liking of and for my bosses. My first book I wrote on my knees in commuters' trains. The best publishers took to it, to my surprise, and sold it well. The second book I thought out at the steering wheel—I was motorized then—driving an old Franklin from one end of a decentralized metropolis to the other, wherever my jobs were located."

Q. "Why did you, a confirmed modernist, choose America? Is this country so interesting to the modernist?"

N. "You know my belief was that having fine ideas for marble architecture where there are no marble quarries would not do much good. Timber buildings and timber materials would flourish not in Mesopotamia, where there is no timber, but in Scandinavia where there is plenty of it. In other words, wherever is found the raw materials for a certain technical style of construction, there such a style will exfoliate to its best. America, according to my convictions, is endowed with the "new raw material" for building—the grand and diversified output of a widespread building material and supply industry. 'Sweet's Catalogue' looked to me and my readers as inspiring as a healthy forest to a Norwegian carpenter. So at the time, when there was nothing much to show of accomplishment—except the magnificent work of Mr. Wright and a few then lesser known works of Root, Sullivan, and Gill—I dug out these specimens and made the most optimistic but carefully

* *"America, New Building in the World," Ant. Schroll, Vienna, 1929. "How America Builds," Jul. Hoffmann, Stuttgart, 1926*

detailed prediction that just this very country would be the stage for consequential happenings in the newest renaissance of building design. This was the substance of my books."

Q. "I know that you were interested in this industrial side of building and particularly in mass production — prefabrication — ten years ago. Do you think it will sweep the country?"

N. "Only emotional outbursts sweep a country. Prefabrication is too sound and logical an outgrowth of American building industry and manufacturing methods to have anything but a sound and step-by-step development; a technical one—and parallel to it one of ACCEPTANCE. The consumer of that commodity—housing—must be educated to the new qualities and economies. Plenty of prejudices must be gently dissolved until our 'UNHOUSABLES' get housed.

"New architecture and its industrial ambitions are not a fashionable fad of today, but have a pedigree long and intelligent. Let me read to you a few quotations.

"Here—*1849*, a man named Gobard writes in the French *Revue Generale d'Architecture*, 'Glass is determined to play a grand role in metal architecture in lieu of heavy walls, where the strength and safety is reduced by many perforations. Our houses will have practically continuous openings with single and double translucid and transparent glass.'

"In *1850*, Theophile Gautier—just after the third Napoleon had established his empire, which looks to us now so old-fashioned—says in the Paris newspaper *La Presse*, 'one will create a new architecture in that moment when one makes use of the new means offered by industry. Their application permits and forces to new forms.'

"In *1867*—the civil war just over in U. S. A. —Beaux Arts architects read in amazement an article by Cesar Daly, again in the *Revue*, 'Will the architect one day be replaced by the engineer? . . . Where are we led by eclecticism? An eclectic atmosphere wraps in the entire modern world, all its respiratory organs absorb it . . . it affects our heart and brain.'*

"You see these questions, new to us, were threshed over long ago in Europe."

Q. "These are indeed amazing statements. They look almost up to date. But will the engineer do any such thing? What are we poor architects to do?"

N. "Don't worry! I told you the prophecy was of 1867. It has not yet come true, and what is an engineer and what an architect anyway? Brunelleschi got his job building the big dome of Santa Maria dei Fiori by winning a competition on the false work and scaffolding for that task. WAS HE AN ENGINEER OR AN ARCHITECT? These are merely names. The American architect is in many cases a systematic fellow; he will fit in. For I believe particularly today, *nothing is done by one man alone;* he must have his crew. He must acknowledge his instructive predecessors; he must be grateful to his collaborators and his young assistants for what they are worth.

"You know yourself that I am proud of whatever a young man gets out of an association with me as: Peter Pfisterer from Switzerland, Gregory Ain and Harwell Harris from Los Angeles, Stanley Vallet from St. Louis, Raphael Soriano from Greece, Elbert Brown from Texas, Carl Conrad from Pennsylvania, Marshall Shaffer, and yourself.

"But to get back, at least no ocean liner or China Clipper is designed as a soft-pencil sketch by an individual independent genius, and the architect in modern industry works similarly."

Q. "But, Mr. Neutra, I have noticed that you make very lovely sketches. Are they not important—the medium of the architect?"

N. "An architect sketches as he talks, to push *building*. He talks and sketches for the client, the building inspector, the foreman on the job. He talks and sketches in a confidence-inspiring manner. Therefore his talking and drawing will be varied to suit his many different audiences. *But* the architect is neither a drafting artist nor a talking orator. He must be very adjustable, yet stick to his convictions. He must have angelic patience; some kind of diplomatically gifted angel." Mr. Neutra smiled, wistfully.

Q. "Well, Mr. Neutra, one more question. Which of your jobs most appealed to you? No interview ends without such a question."

N. "Very many jobs were interesting to me. But the most consequential appeared to me my school projects. You see I have the idea that an architect is an educator, in a way; educating not by preaching, but by the environmental influence, which he creates. It is all right to influence adults, but how far can you do it? The plasticity, 'educability,' is gone a good deal. To design a school building which furnishes the educators with the tool to implant cooperative spirit into an active group of children, instead of producing another group of fighting competitors—this looked to me a truly inspiring task for an architect."

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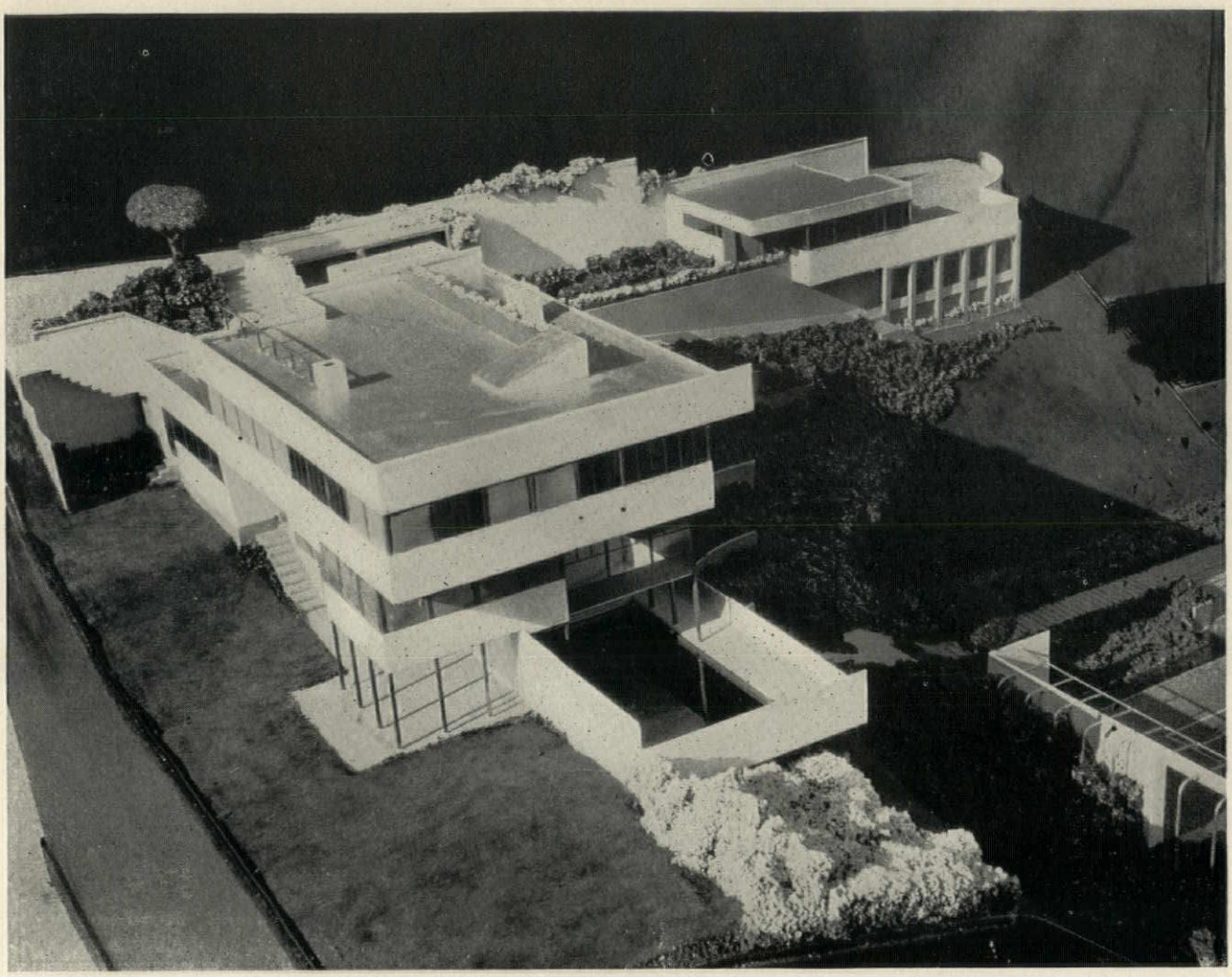
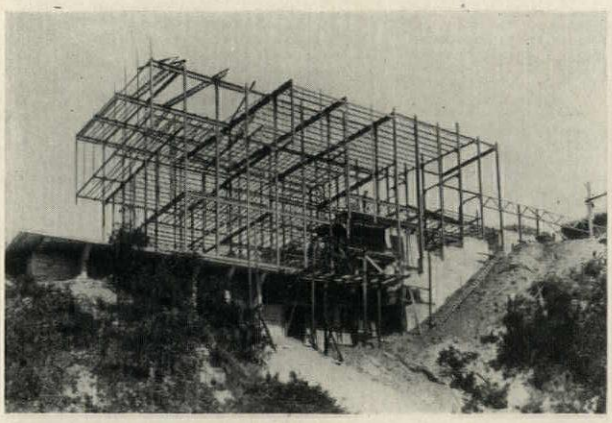
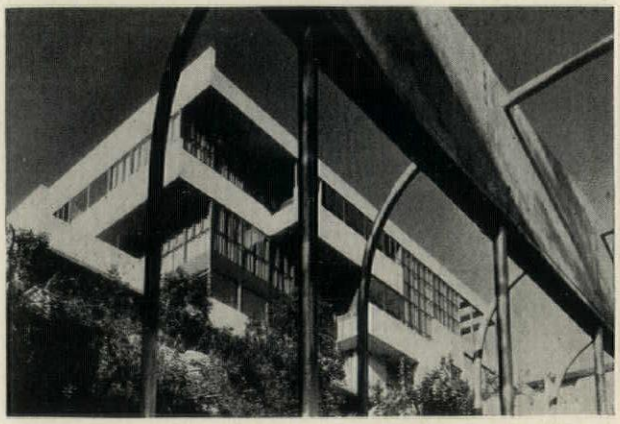
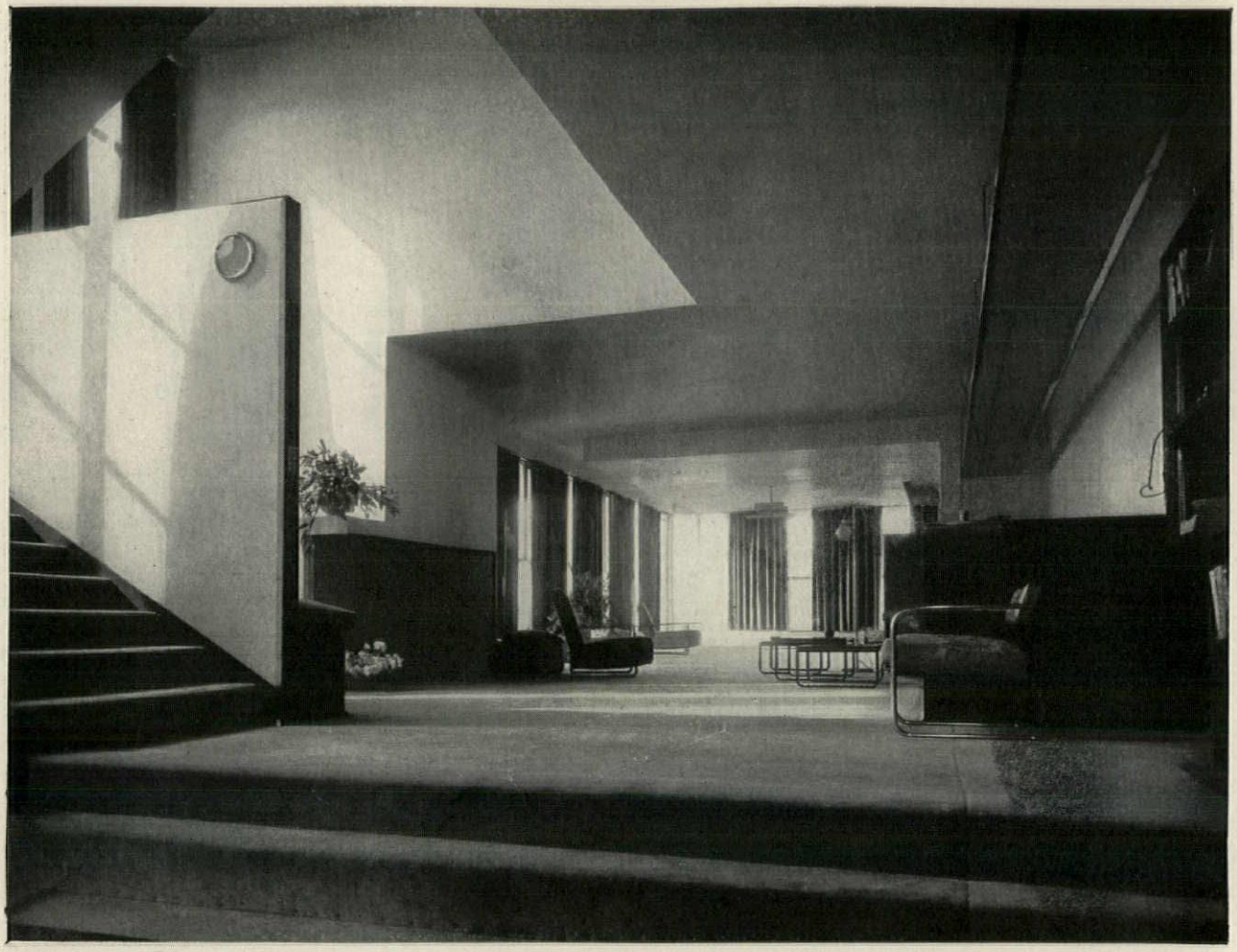
* *Giedion, "Eisen, Eisenbeton in Frankreich"*



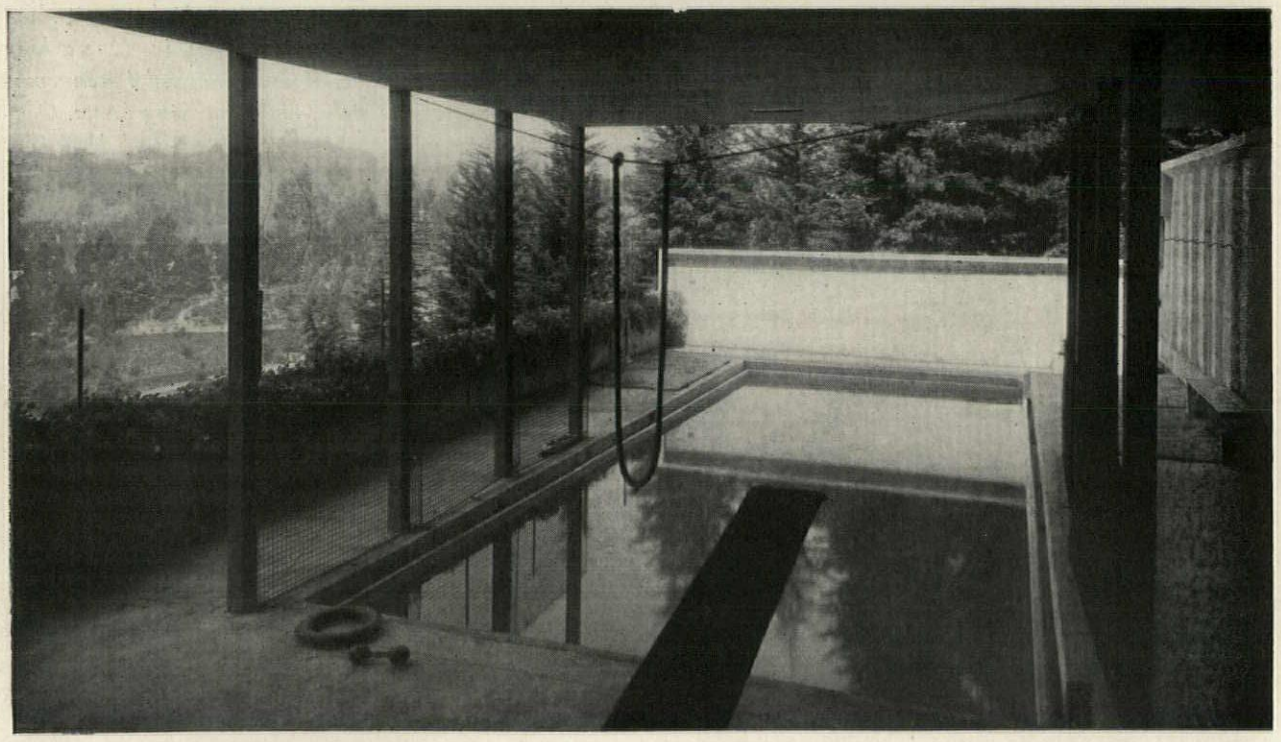
Demonstration Healthhouse for Dr. P. M. Lovell, 1927-28, Los Angeles. Steel frame with standardized spacing of supports and lengths of girders to fit standard triple steel casements, which form an integral part of the skeleton. All floor projections suspended from roof level. Floor construction: prefabricated, electrically-welded light weight bar-joists, which permit short cut diagonal runs of electrical and plumbing pipes. Erection of steel-skeleton in 40 working hours. Outside walls of expanded metal reinforced, 36 mm. shot concrete, applied by air compression gun over a backform of 8 mm. felt-covered, gypsum slabs, in 32 working hours. Concrete materials were mechanically mixed and shot through a sixty-meter length of hose. The entire job was carried out to within 3 mm. exactness of execution—a remarkable performance

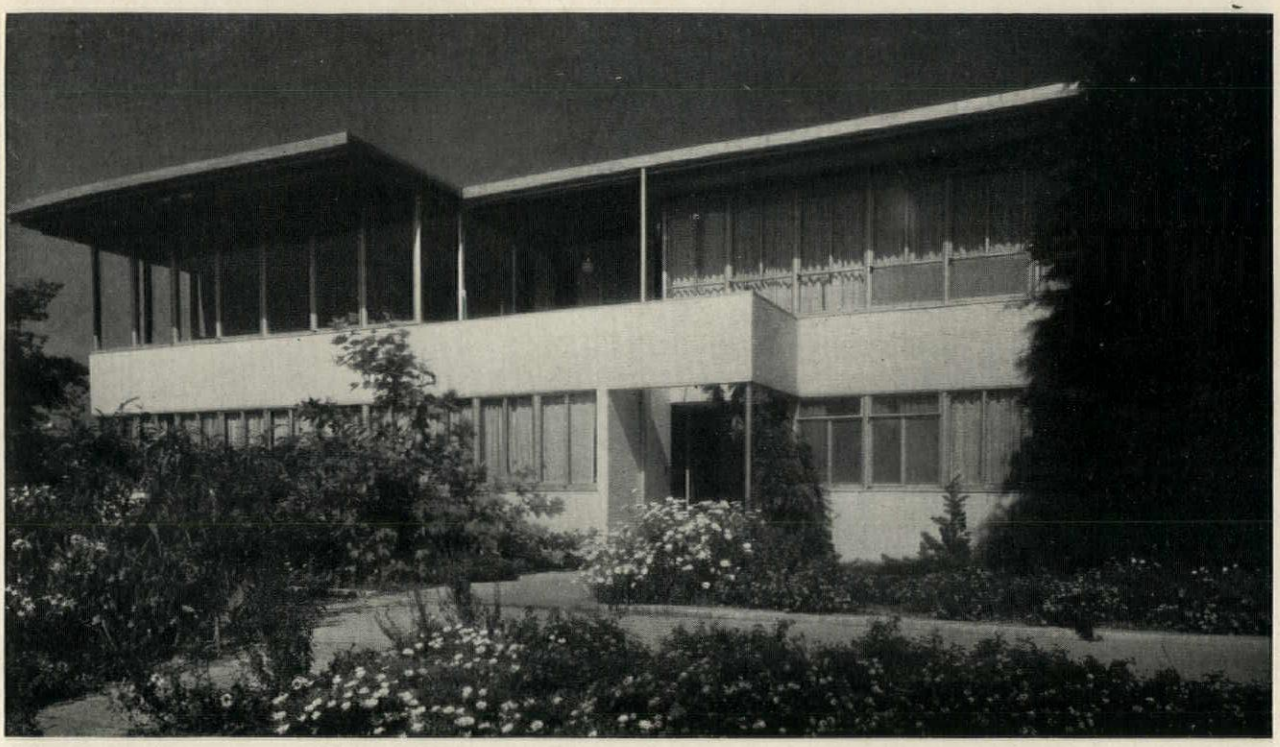






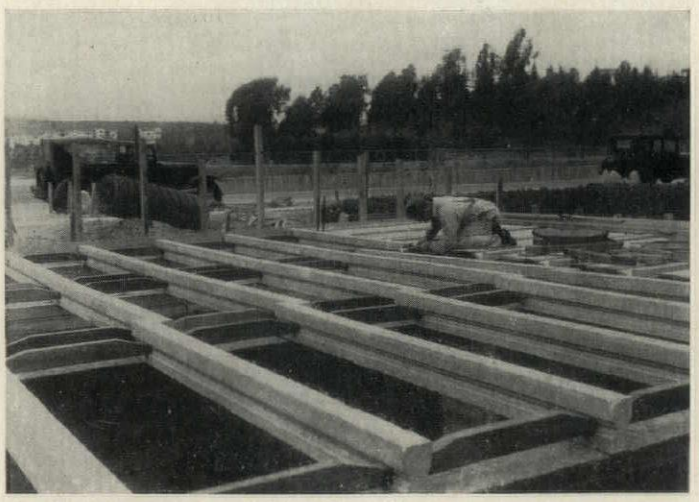
In the so-called "Healthhouse," done in 1928, Neutra provided social quarters opening out into Griffith Park, overlooking the city of Los Angeles and the distant ocean. Color scheme: white, silver gray, steel blue flat mohair curtains, black lacquered woodwork. The slender steel post supports permitted the use of the subfloor porch for a swimming pool with open physical exercise room. A bench with loose cushions surrounds this room and a fireplace gives it coziness and warmth when the evenings are cool. Adjacent is a dressing room with toilet and shower.



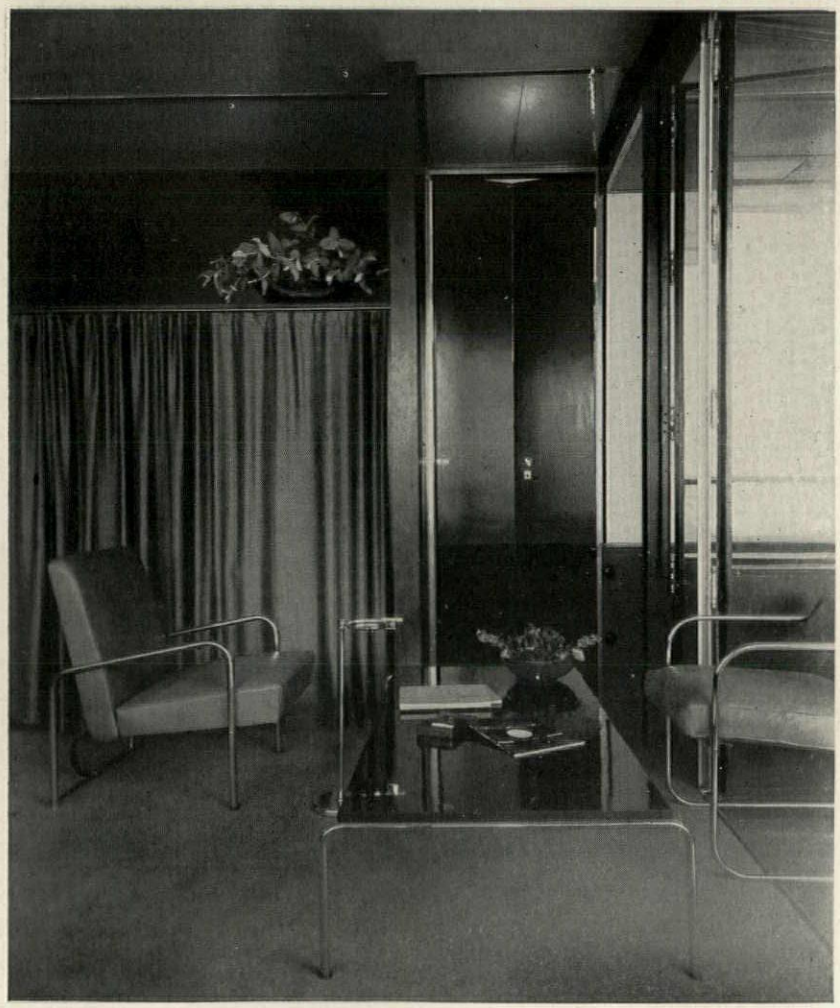


For his V. D. L. Research House, overlooking Silver Lake, Los Angeles, Neutra provided a colorful setting with sulfur-yellow Gazenias, orange Lantanas, and white-yellow Chester daisies contrasting with an evergreen frame of Monterery Cypress, Juniperus Sabina, and Juniperus Tripartita. Deciduous California Sycamores and a Wisteria growing to the entrance pergola and upstairs porch give indication of the changing season. The building itself is of light oyster-shell color with posts, window-frames, and eaves-facing of aluminum.

This house, which was done in 1932, has a precast, vibrated concrete joist floor, to which is bolted an earthquake-proof, standardized wood chassis to fit marketable steel sash in milled grooves and rebates. Continuous trusswork in spaces between rows of windows, hollow walls of fireproof Thermax slabs, bright metal-foil insulation felt, pressed wood fiber slabs on inside. Exterior application of prefabricated Red Top insulation board coated with an asphaltum emulsion and Hydrocell Gypsum powder, further coated with Cemelith cement silica glaze. Part application of baked enamel steel sheets, of Canec composition boards, of rebated paper-covered Sheetrock slabs, of Firtex fiber boards. Cork and pressed wood as flooring material. Asphaltic composition roofing with granulated oxidized-iron top sheet of 3250 grams per square meter. Walking deck of steam-pressed cement tile, integrally colored to match fire-enameled sheet steel.

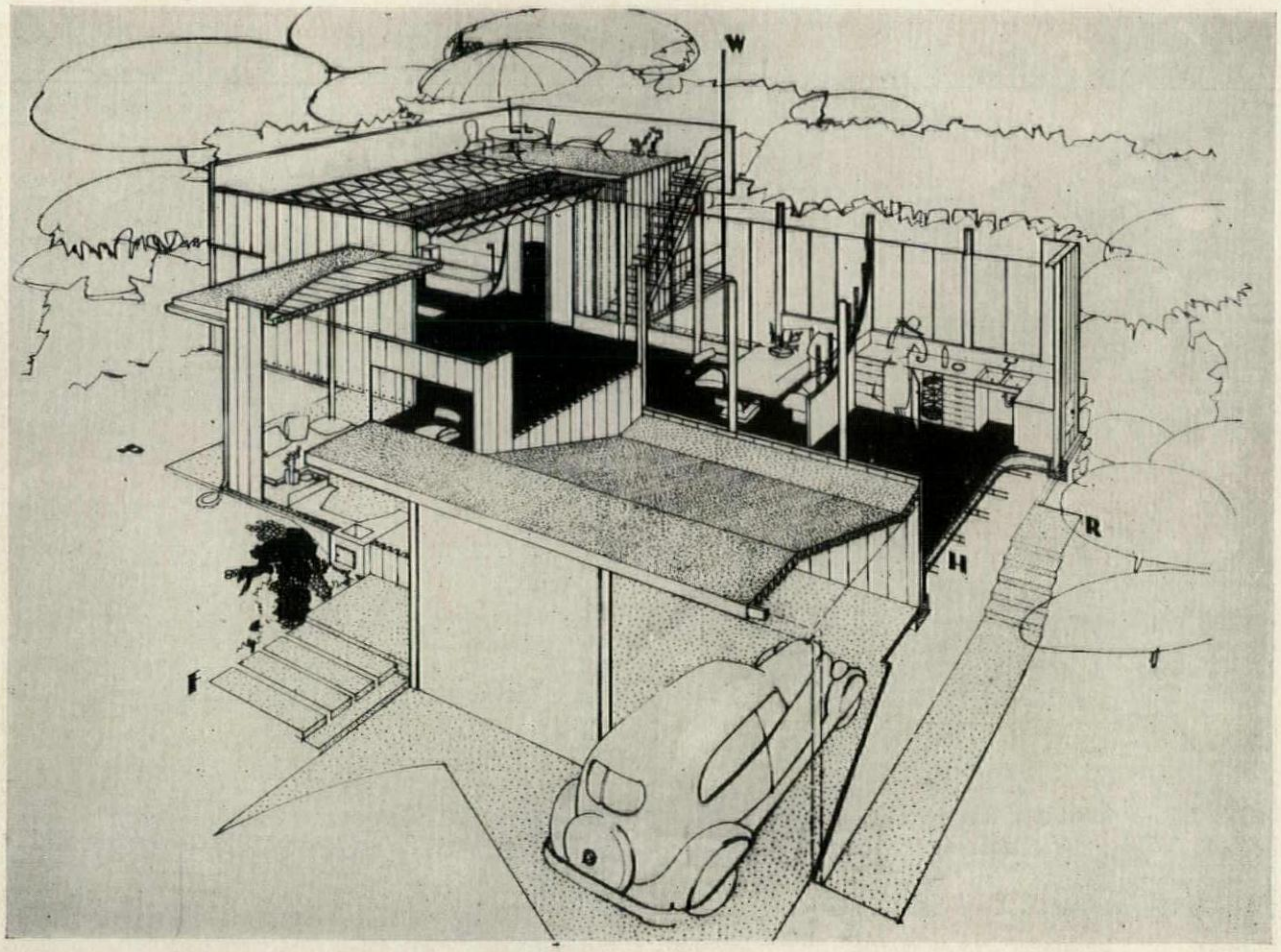


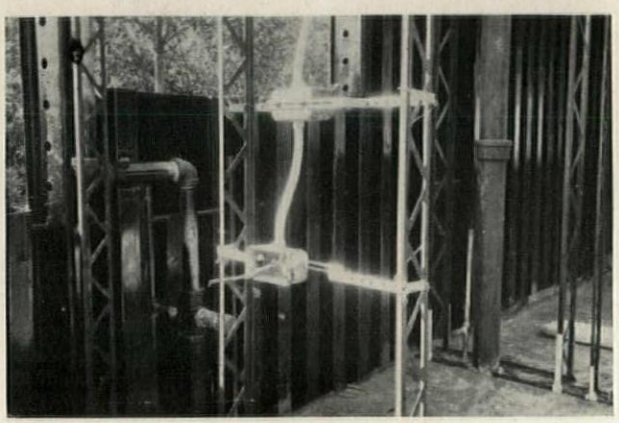
In Neutra's V.D.L. Research House, overlooking Silver Lake, the main window front of the living room faces the western sky and through the best plate glass are viewed evening clouds and sunsets. In order to take full advantage of this view and prolong its effectiveness over the whole twenty-four hours of the day and night, it was found desirable to arrange for lighting the room from outside the glass to eliminate reflections from interior lights. A five-foot overhang, bearing an awning box at its eave, shades the glass area but permits ample influx of diffused daylight. This overhang carries a concealed light trough with a prism glass soffit and 1500 watts in daylight bulbs which afford night illumination for the interior of the living quarters and the lake view porch, eliminating light reflections on the inside glass surface. When interior indirect lights are switched off, the reflections of the exterior lights on the outside of the glass function like an optical screen against the street, thus gaining in privacy



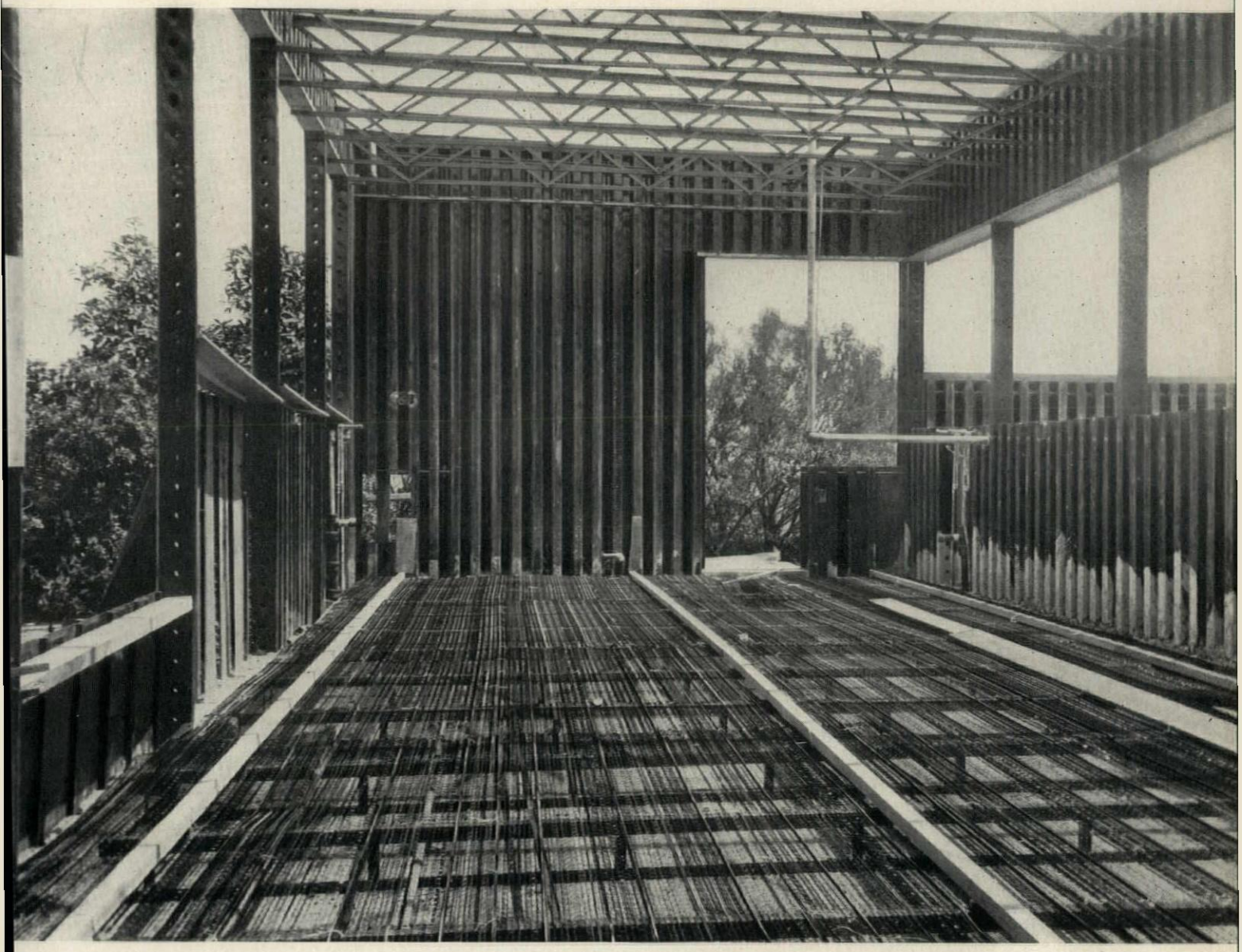
In the illustration below notice the collapsible partitions of plate glass and bakelite which make it easy to rearrange living quarters

V. D. L. Research House overlooking Silver Lake, Los Angeles. Entry and stairway. Diffused ceiling illumination, Neon house numerals, pressed-wood faced partitions, cork steps, aluminum nosing, terrazzo floor

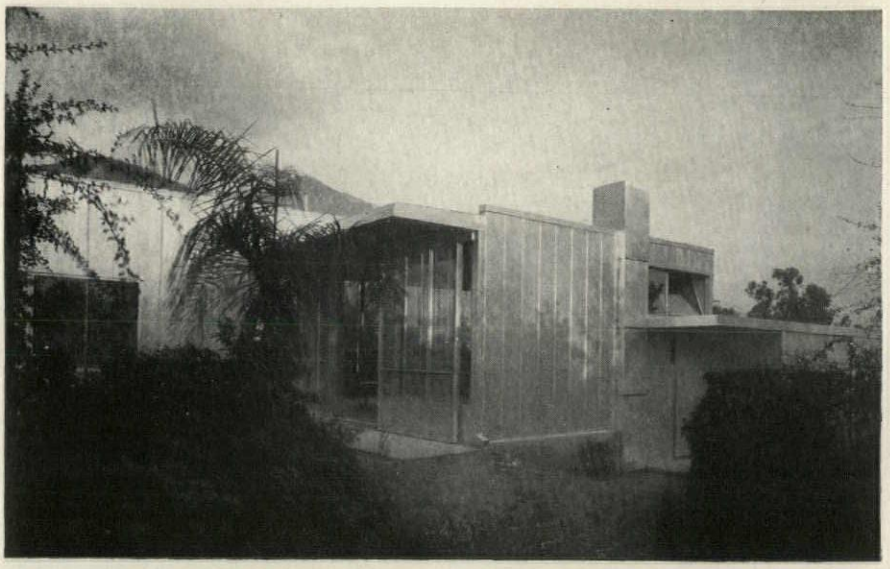




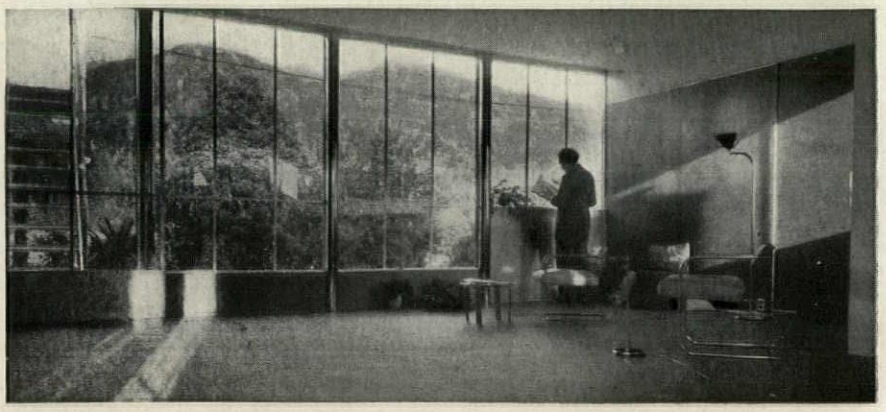
Diagrammatic perspective of Neutra's house for William Beard at Altadena, California. It is a four-room house, constructed in one story in earthquake-proof, fireproof steel. (F) is the front entrance leading to a large living room with view-windows and sliding metal-glass doors opening to the rear garden and west patio (P). (R) is the rear entrance to service porch and kitchen with breakfast nook. A stairway leads up to a roof terrace prepared for a future second-story addition of two bedrooms and bath. The two photographs at the left show the welding of the Robertson-Palmer system cellular steel sections and the installation of utility lines in the steel chassis.



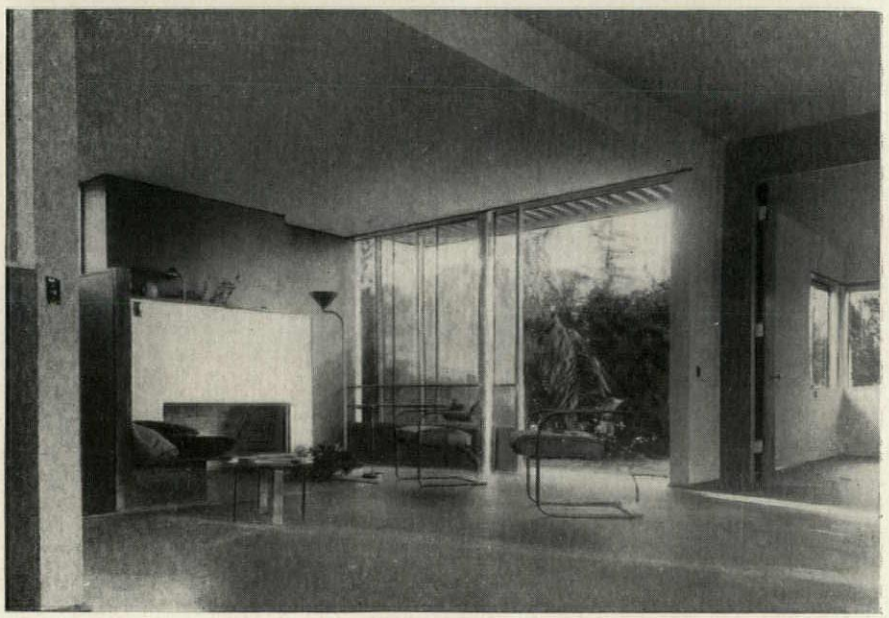
Construction photograph of the William Beard house at Altadena, California. The hollow, steel, wall elements (of the Robertson-Palmer system) are cantilevered from a grooved footing and interlock with one another by means of male and female joints. Each element has an air intake at the bottom so that sun radiation starts air convection and cools the walls automatically. The hollow steel constructed floor, with a diatom cement slab under felt and battleship linoleum, forms a plenum chamber topped by a low temperature radiating panel. Hot air supplied from a gas-burning furnace circulates, electrically boosted, from sub-floor into hollow walls from which the heat then radiates



The house of William Beard at Altadena, Cal., as seen from the southwestern side

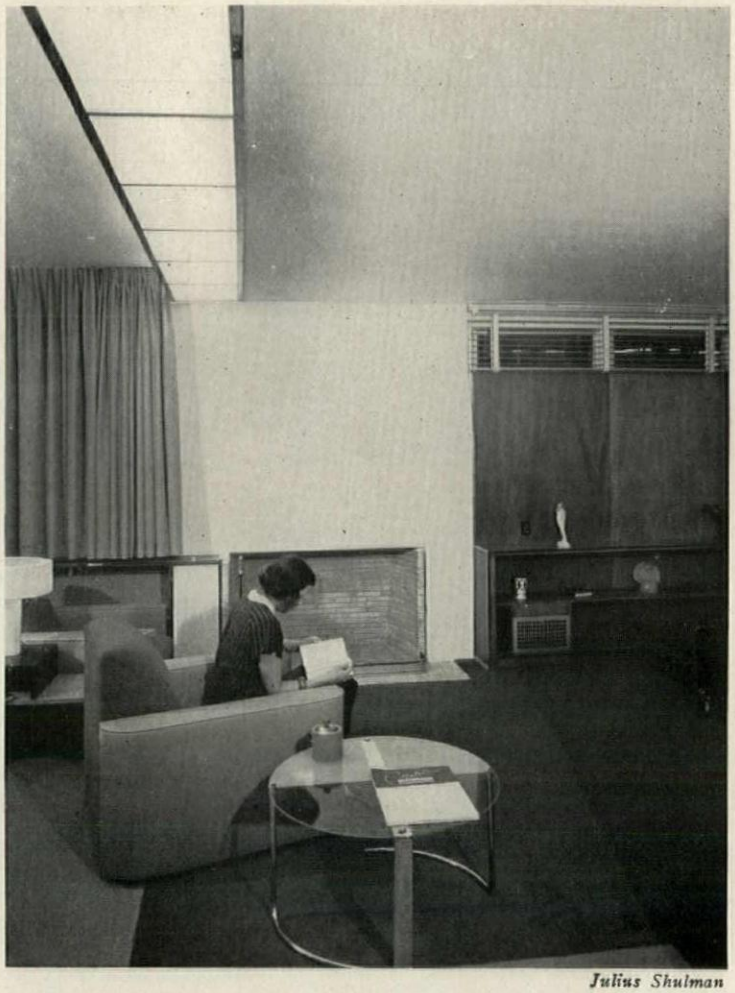


The mountain-view windows in the Beard house, which was awarded first prize in a nation-wide residence competition, held a few years ago



Sliding doors open to the western patio. At the left may be seen the aluminum fireplace—an unusual feature

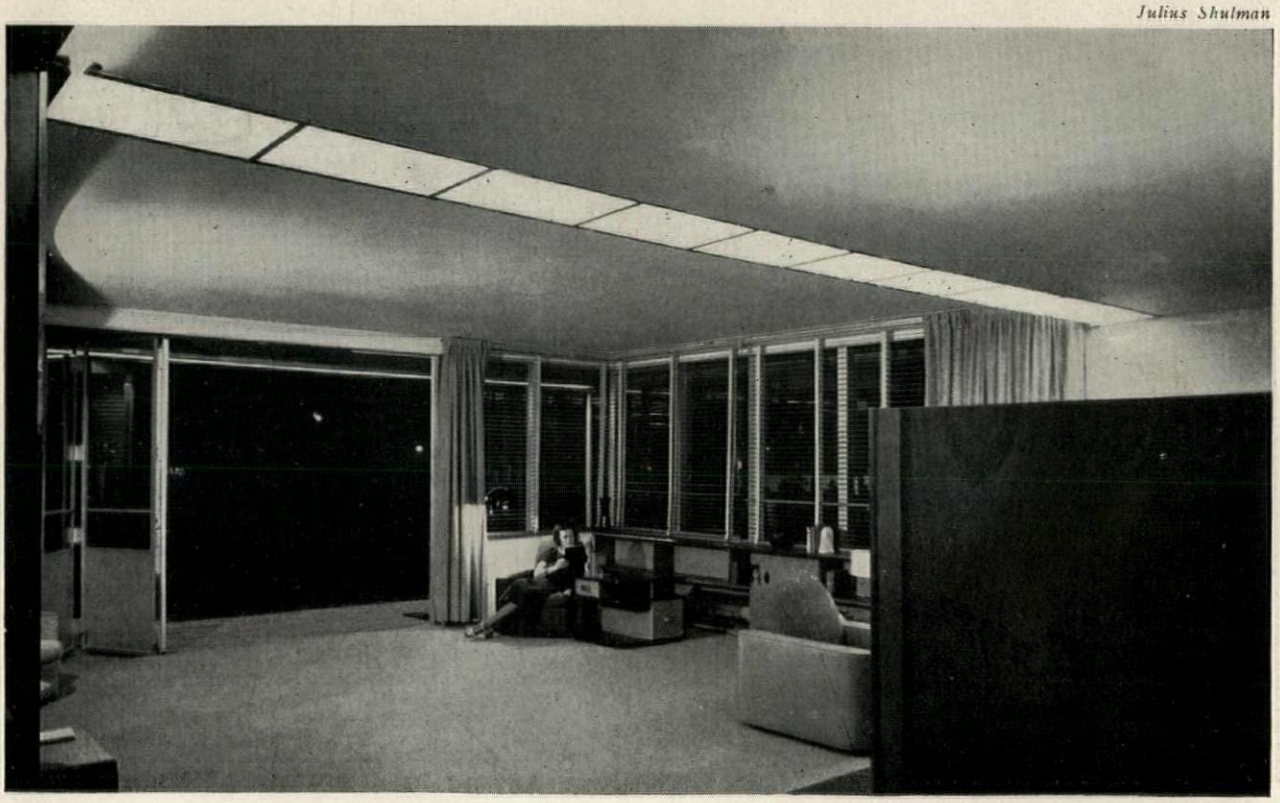
"Super-Plywood" Model House, Los Angeles. Weather-proof, non-shrinking, non-warping "Super-Plywood," with Aluminum Kalomeined joint-cover moulds, is a material combination lending itself to building prefabrication. Standard steel sash are fitted into the milled chassis. Chemically stabilized, granulated iron, top sheet with heat-reflecting, aluminum coating forms the roof. The super-ceiling space is aerated through the continuous copper screening of roof overhang. Walls and roof are calorifically enriched by Thermax composition slabs. Shown as seen from front, from rear, and at night from the patio with the glass partition opened

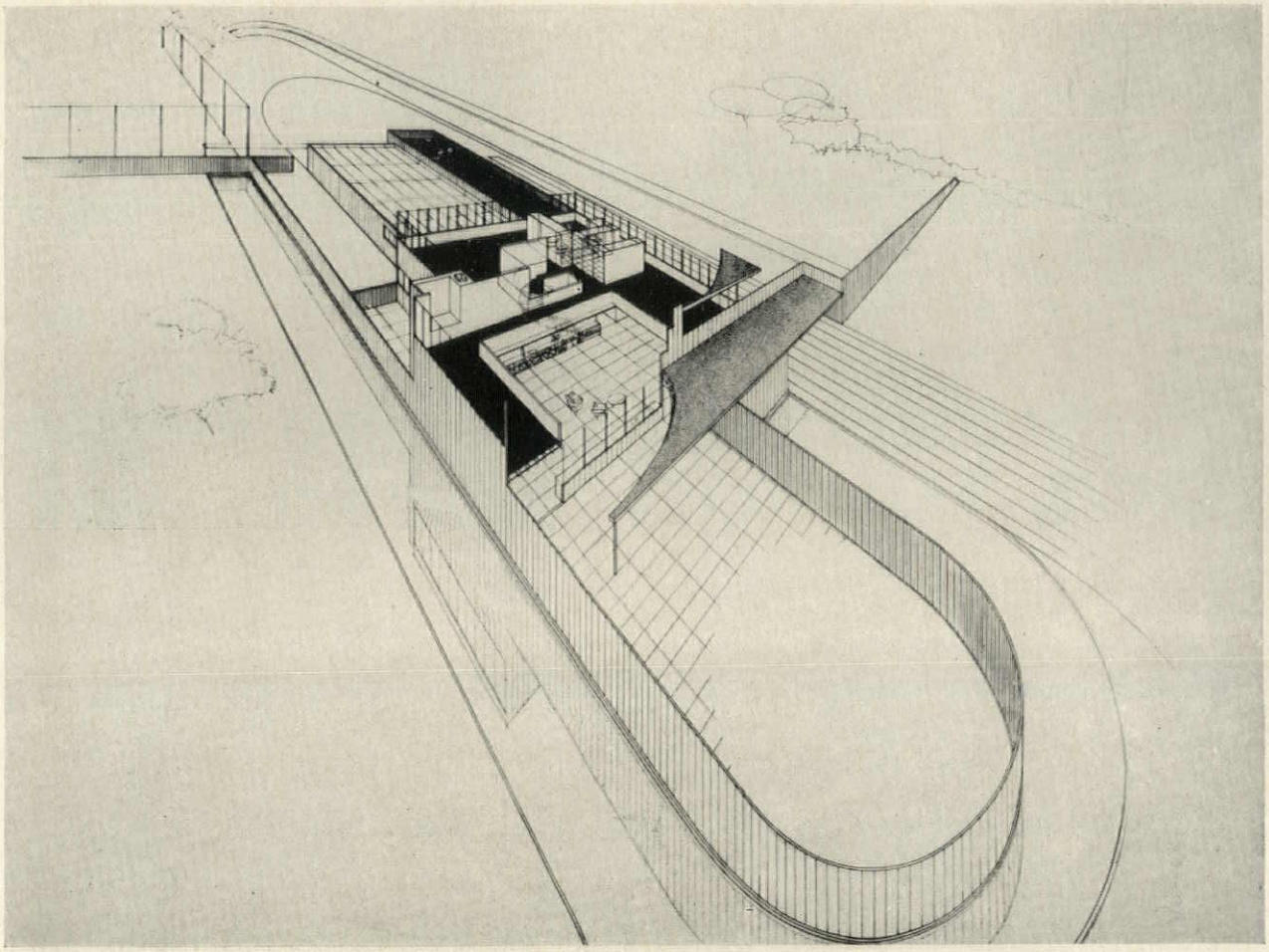


Julius Shulman

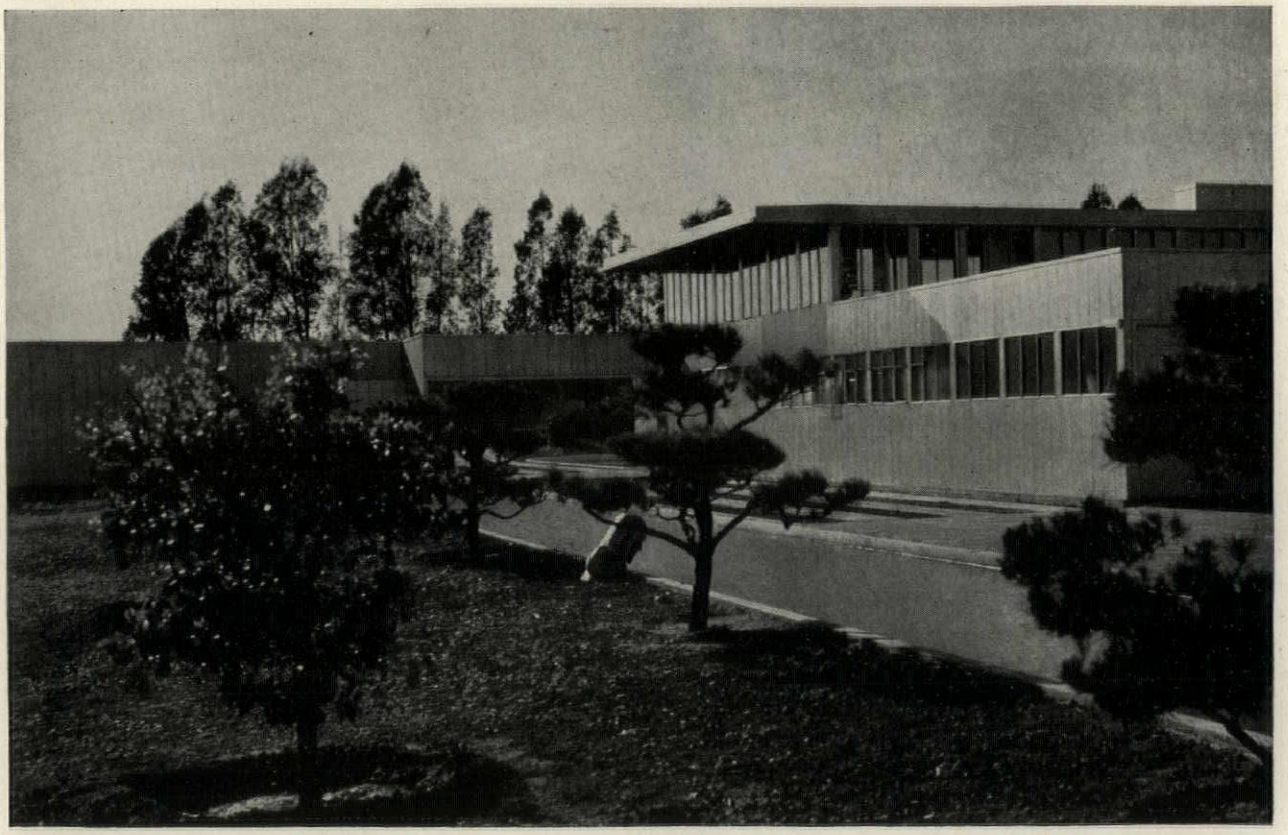
In Mr. Neutra's Super-Plywood Model House, Los Angeles, illumination is partly indirect, partly diffused through opal flash glass. Below is a night view from the living room through folding glass partitions into the garden patio

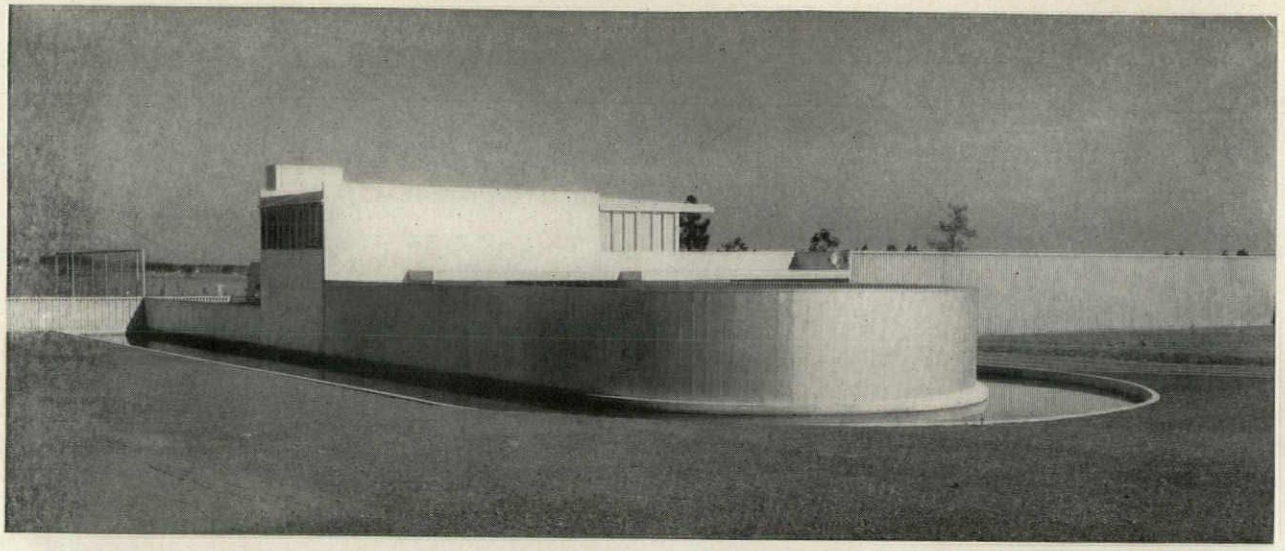
Julius Shulman



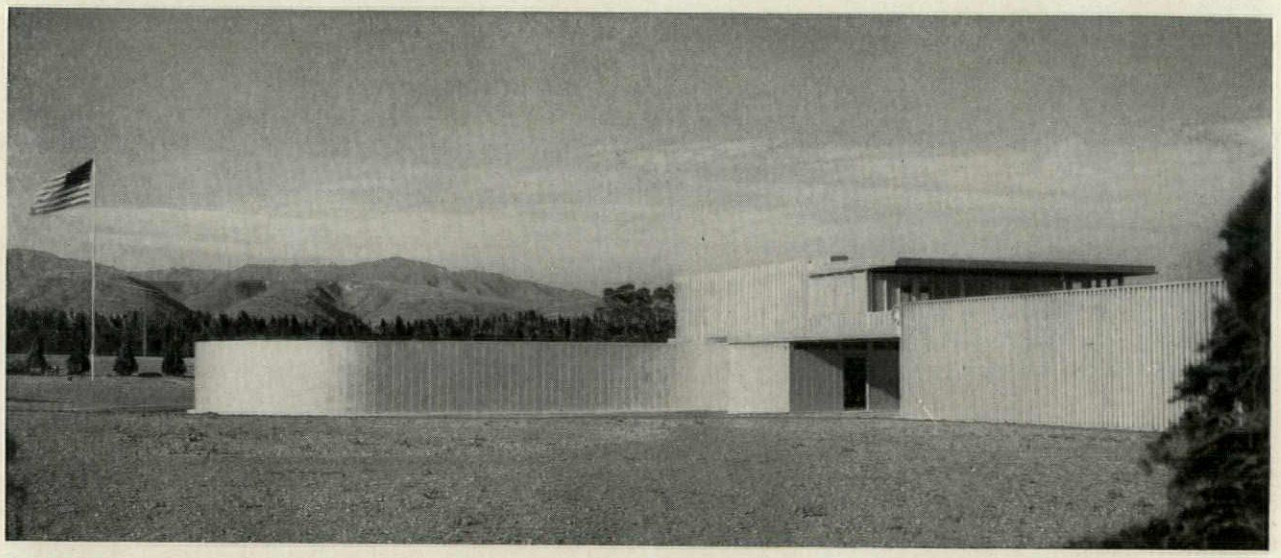


All Steel Residence for Josef von Sternberg, San Fernando Valley, California. Airview with partly removed roof. The layout offers the required possibilities for outdoor and indoor exhibition of the owner's modern art collection. Waterpools surrounding the building and on the roof give refreshing coolness to this unique estate

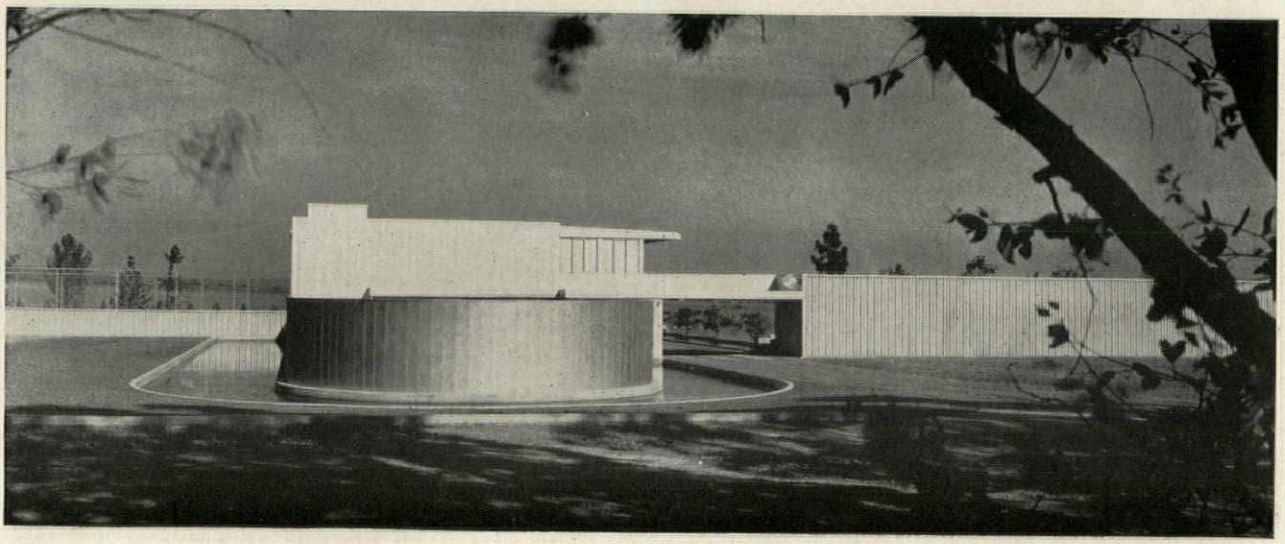


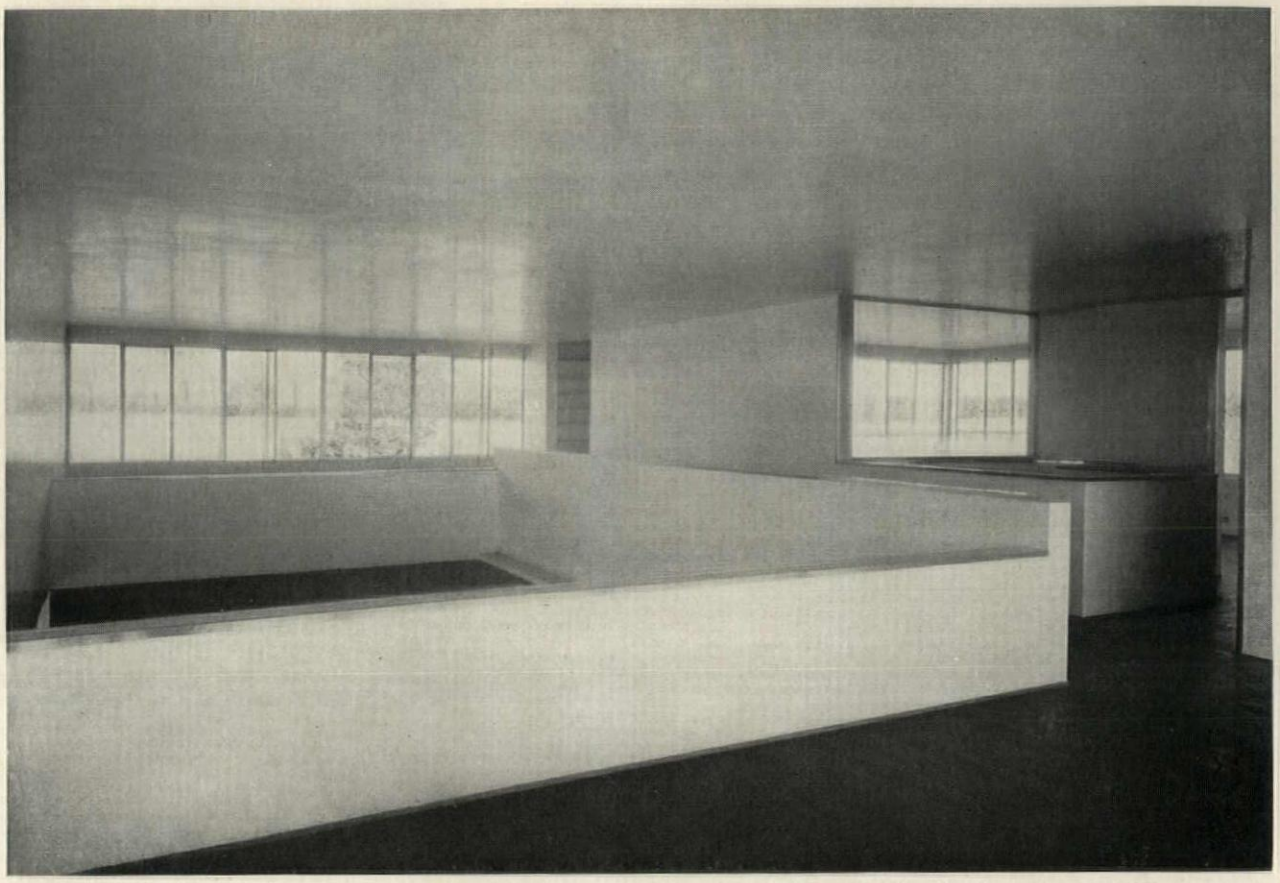


All Steel Residence for Josef von Sternberg in the San Fernando Valley, as seen from northwest

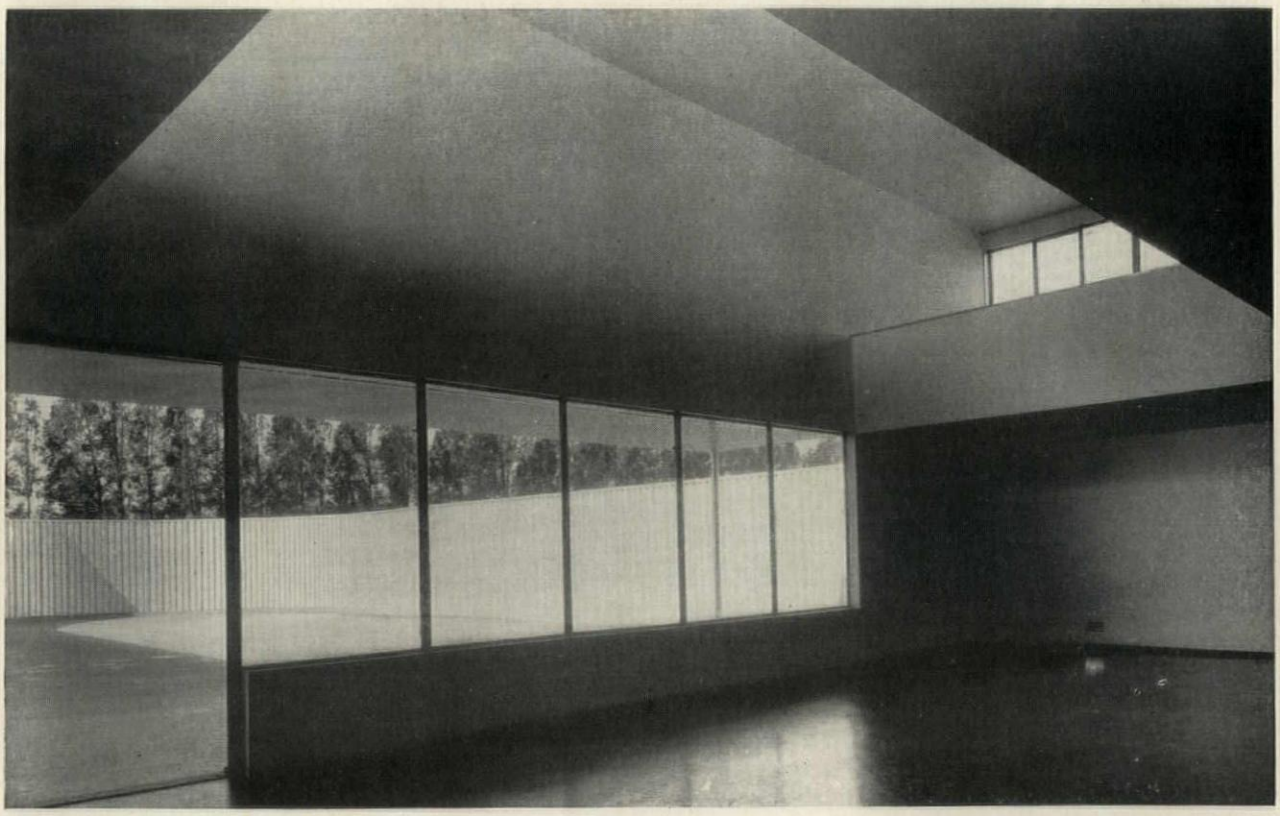


Two other views of the same house as seen when looking towards the San Fernando mountains, and as viewed from the west

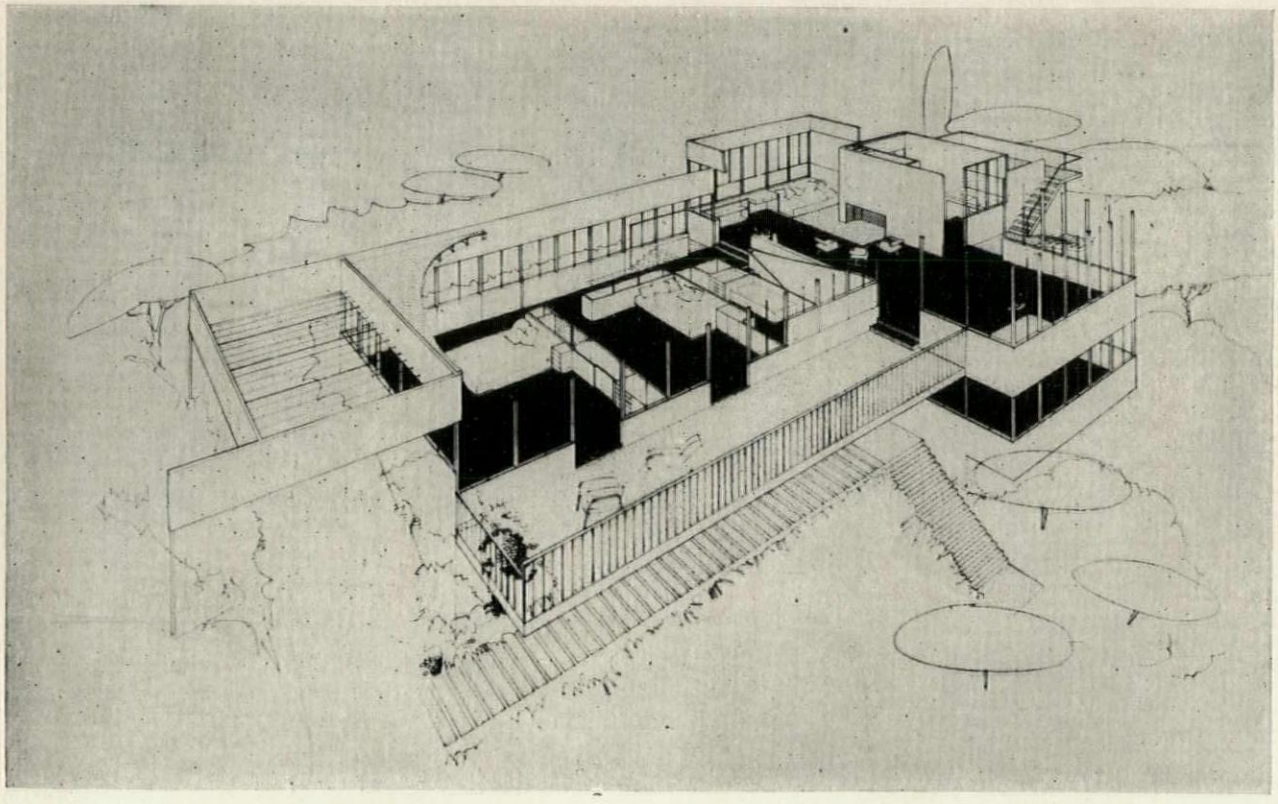


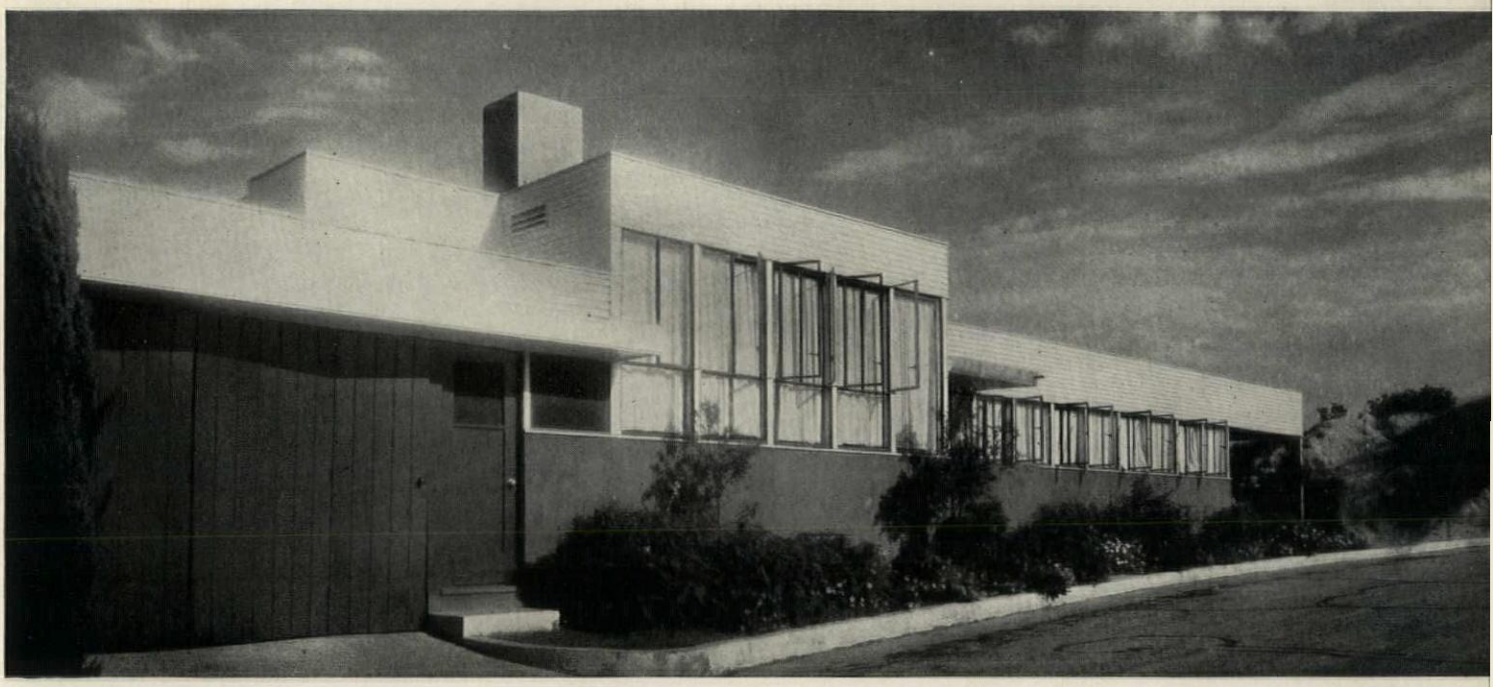


Interior views of the All Steel house of Josef von Sternberg in the San Fernando Valley, California. The downstairs living-room-gallery is connected with upstairs by a large light-well. A Belgian Black marble terrazzo floor extends through and unifies outdoor and indoor quarters for living

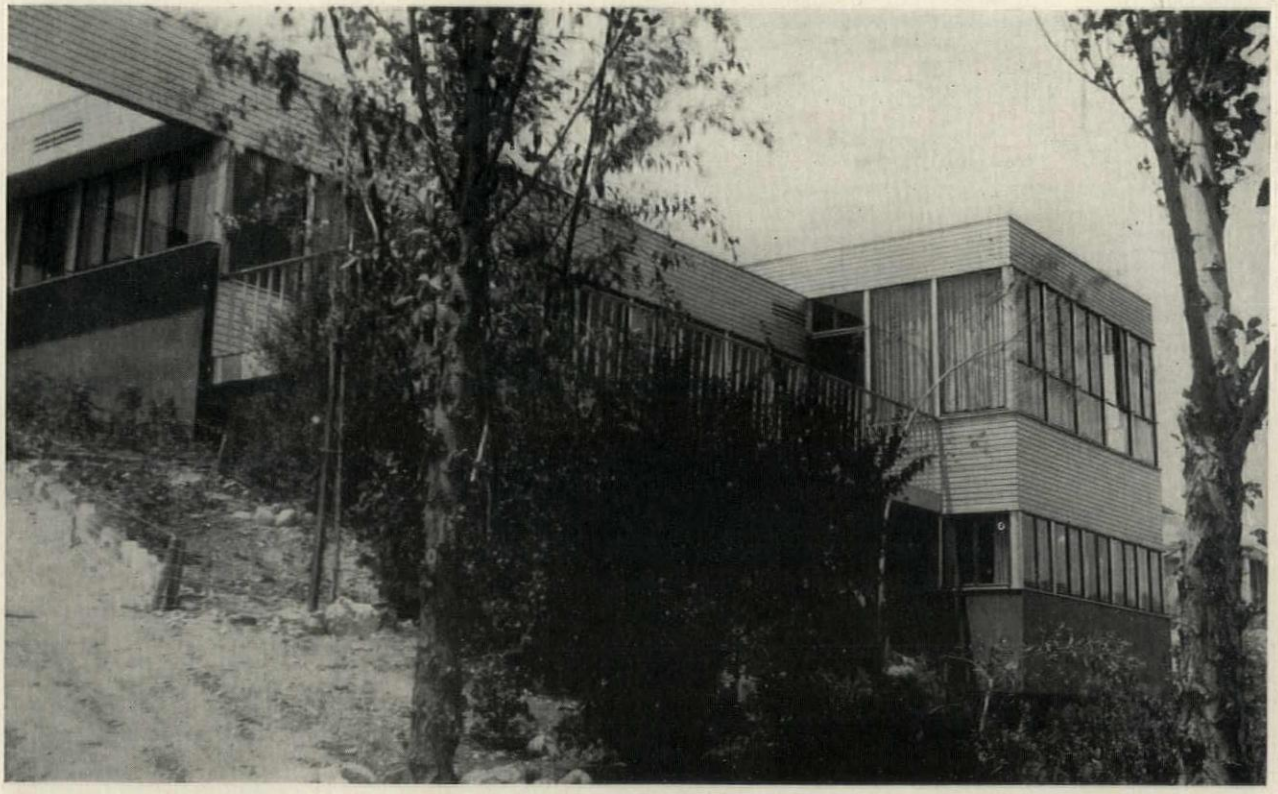


The low cost house Mr. Neutra did for Mrs. E. Mosk at Hollywoodland, California, was awarded first prize in a national competition. It is a five-room house on a hillside with living room, kitchen, two bedrooms, and bathroom on the upper floor, and a private apartment with separate garden entrance on the lower floor. The drawing shows the roof removed, exposing the interior

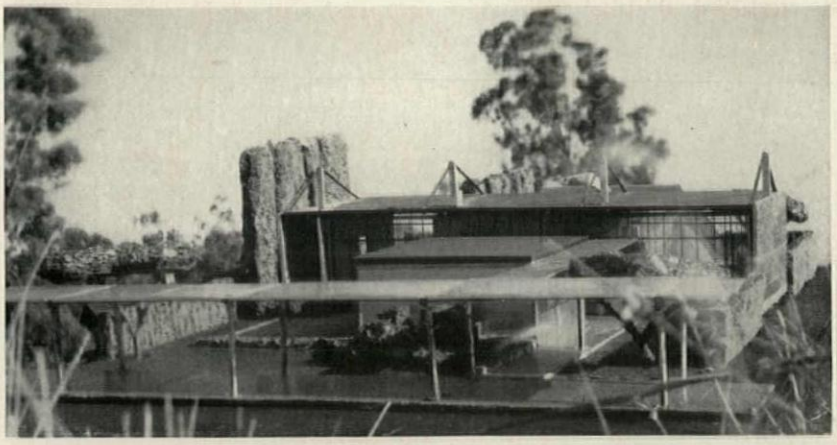


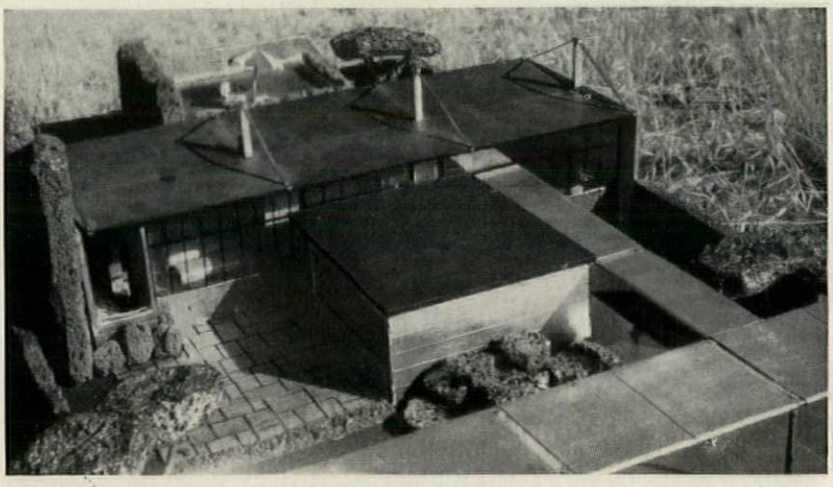


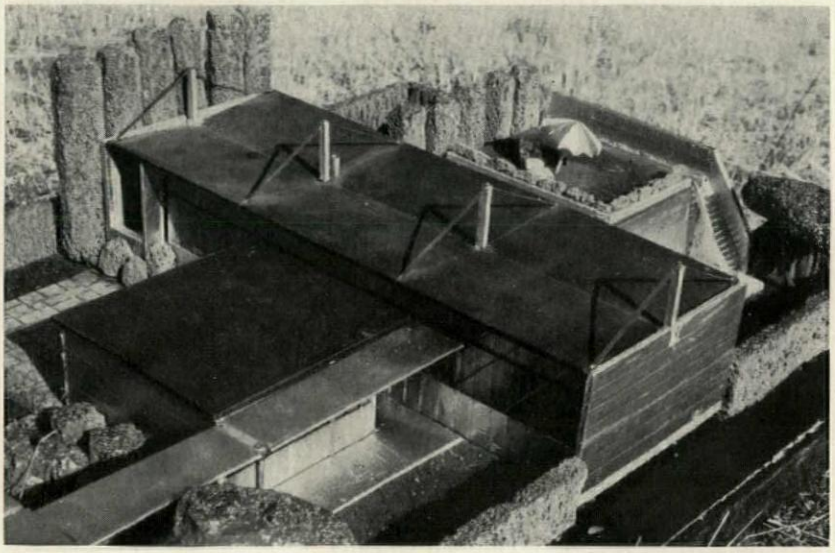
Two other views of the Mosk house show how it fits its setting. It was built with a standardized wood chassis designed to fit double steel sash. The exterior walls were made of steam-pressed composition slabs formed of wood shavings and cement penetrating molecular interstices. Aluminum flake spray coat on all exterior redwood. Interior of highly compressed and densely surfaced wood and Canec fiber slabs



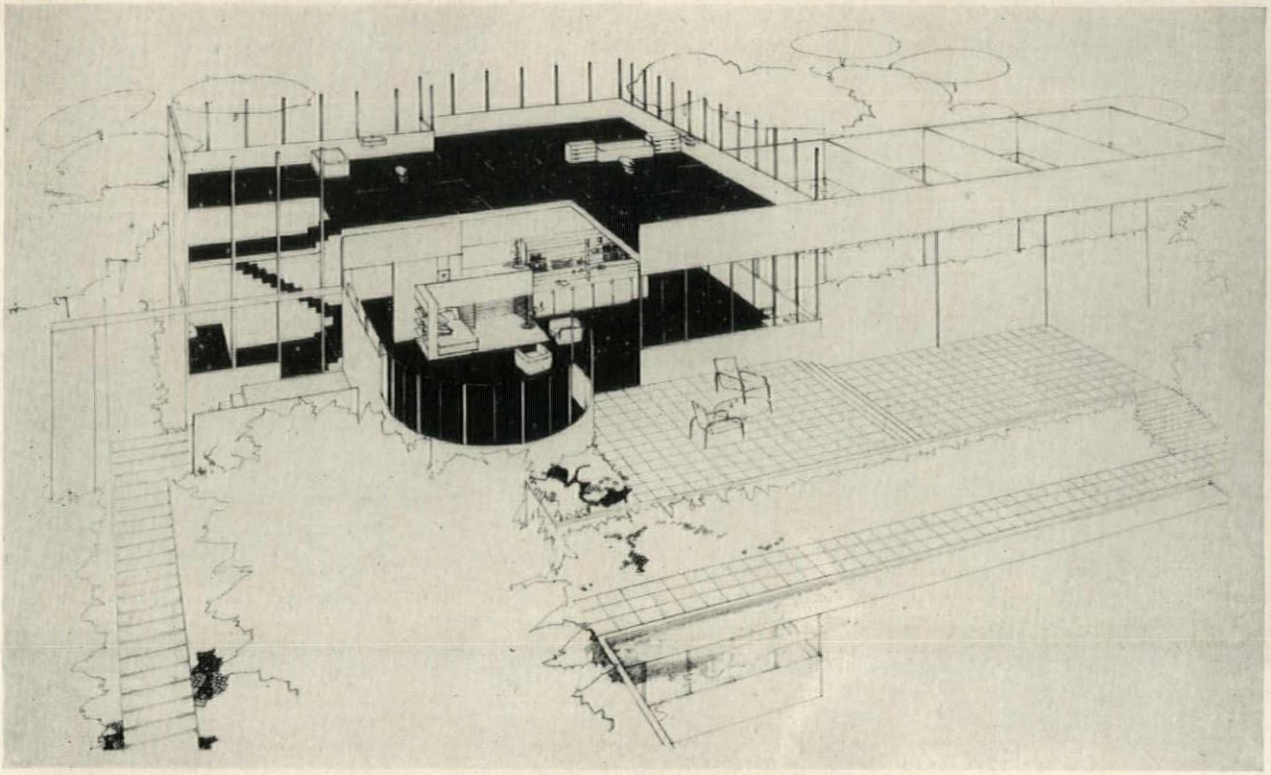
Three views of a model of Neutra's "One-plus-two Diatom dwelling" which he developed from 1927-32 with Peter Pfisterer as collaborator. The project is for a prefabricated, non-combustible, vermin-proof, light-weight steel frame, Diatom composition dwelling, to be sold or leased completely furnished with service agreement in three elemental units: (1) Core house for incipient family group, with social room, parents' quarters, infant's room, bathing and dressing compartment, and kitchen with electrically warmed dumb-waiter — Illumination of interiors from exterior overhang light source; (2) Children's house for increased family group; and (3) Garage unit which may be for one or two cars



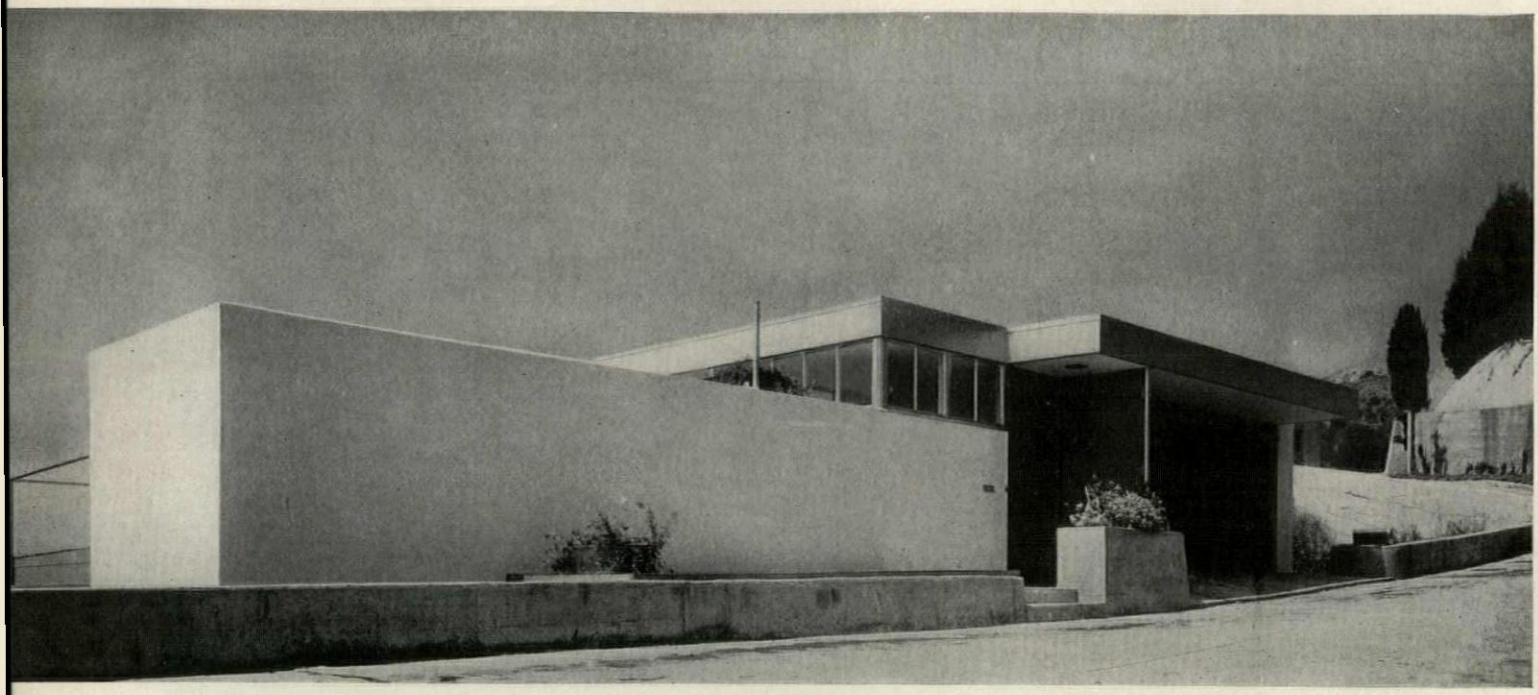


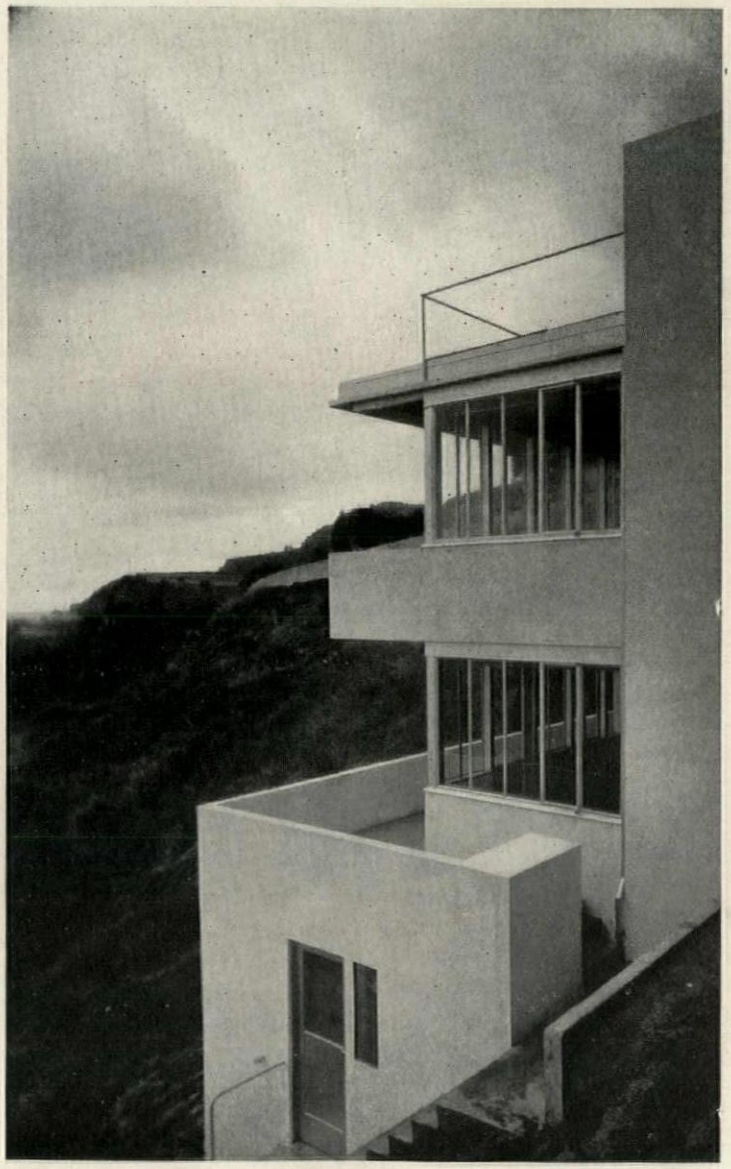


For more than fifteen years, Neutra has worked on the devising of practical approaches to prefabrication as a technical and as a consumers' problem. Many of his executed structures and projects (see "Ringplan School" on page 435) are educational demonstrations of the possibilities of shop fabrication

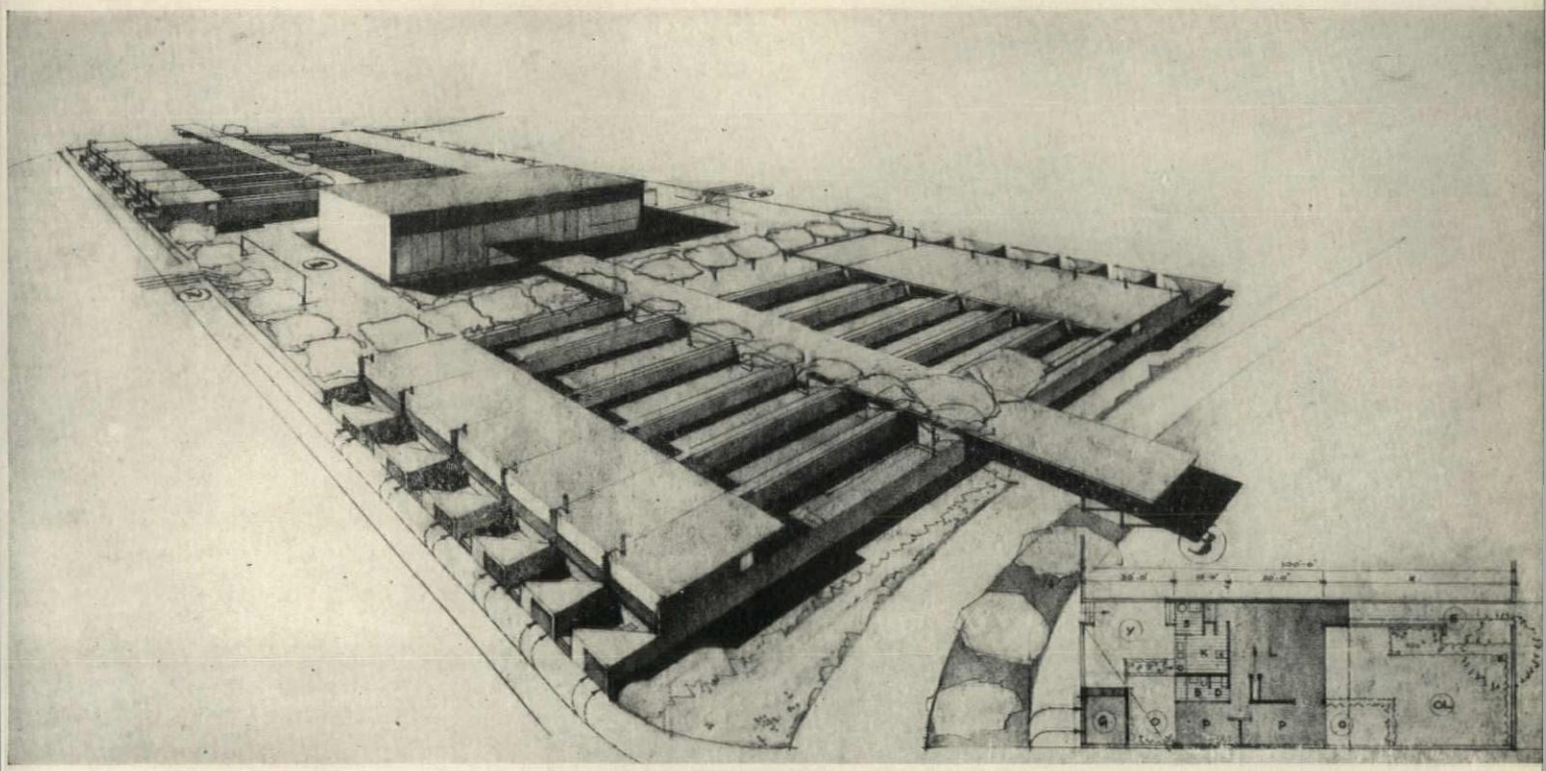


The residence of Anna Sten and Eugene Franke in Santa Monica, California, won for Neutra a first prize in a nation-wide competition. The drawing shows it with the roof and part of the second floor removed so that its inner workings may be seen. The living room has a cozy sitting corner, as desired by the owner, and a semi-circular bay with large view windows overlooking a swimming pool and the Pacific Ocean. The photo shows a detail of the stair hall with its indirect illumination

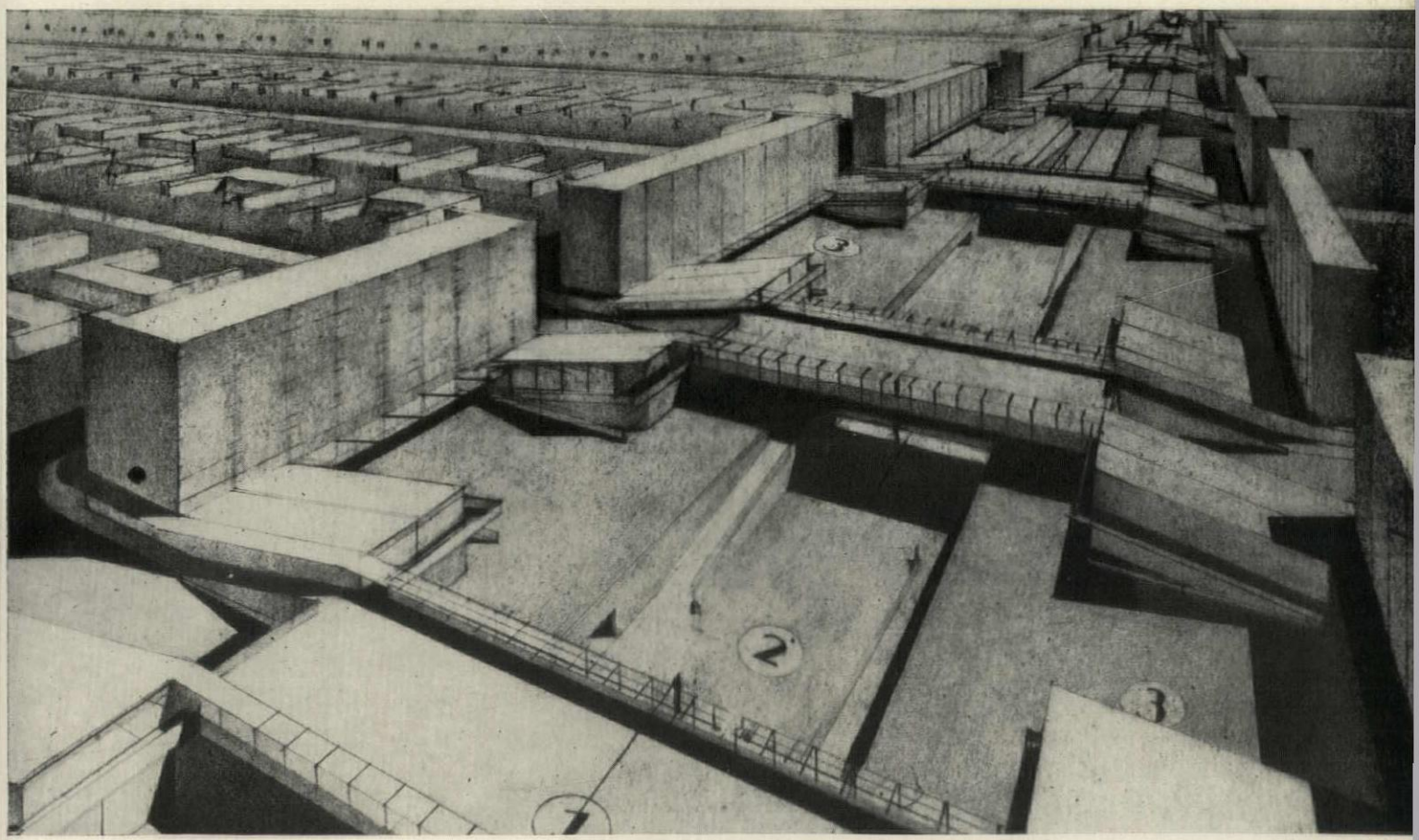


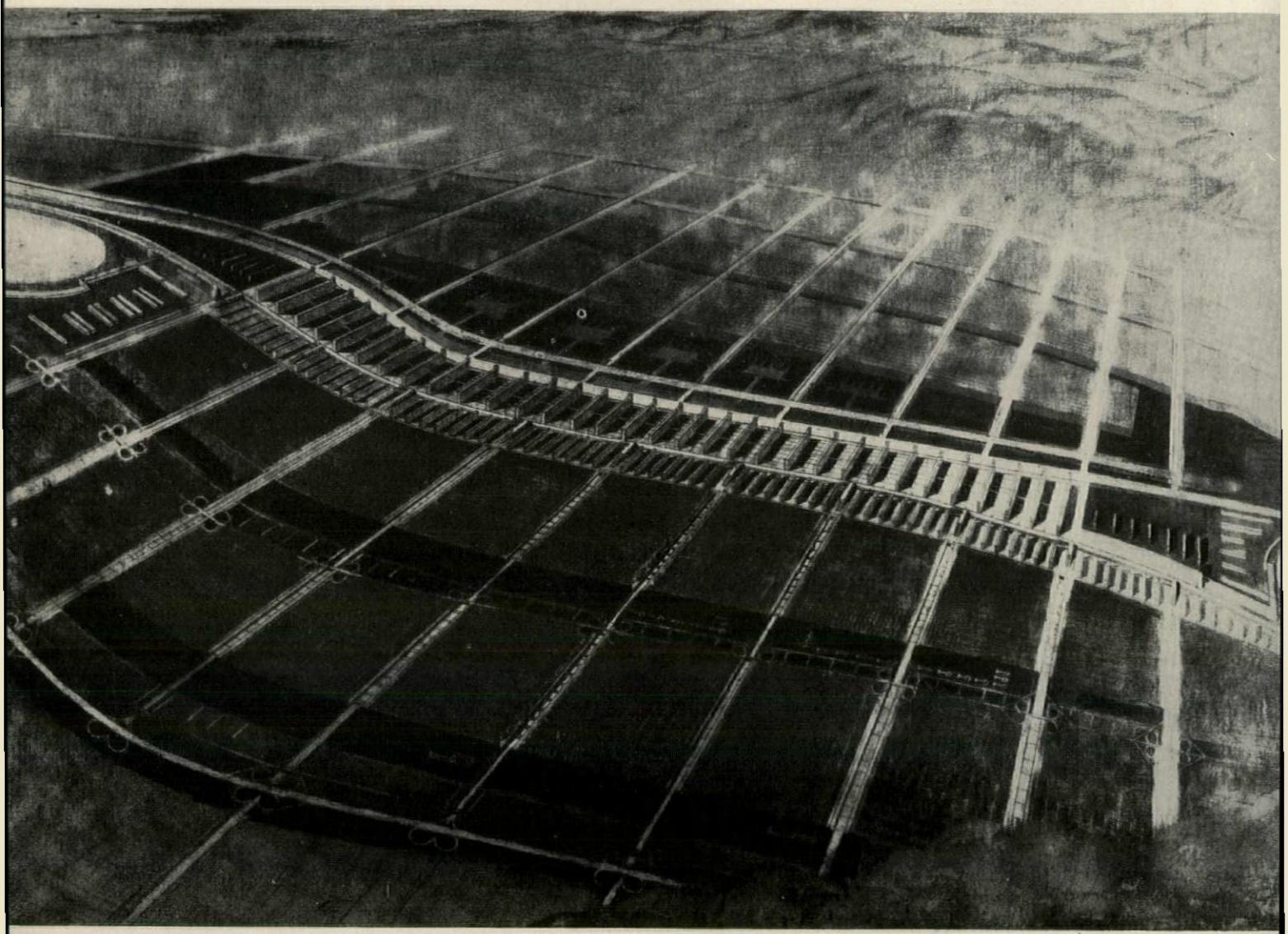


The All-electric house done by Neutra with his collaborator, Gregory Ain, for Mr. and Mrs. Josef Kun in Hollywood is situated on a steep hillside with an expanse of view windows toward valley and ocean. The upper level gives upon the street, from which it is well shielded



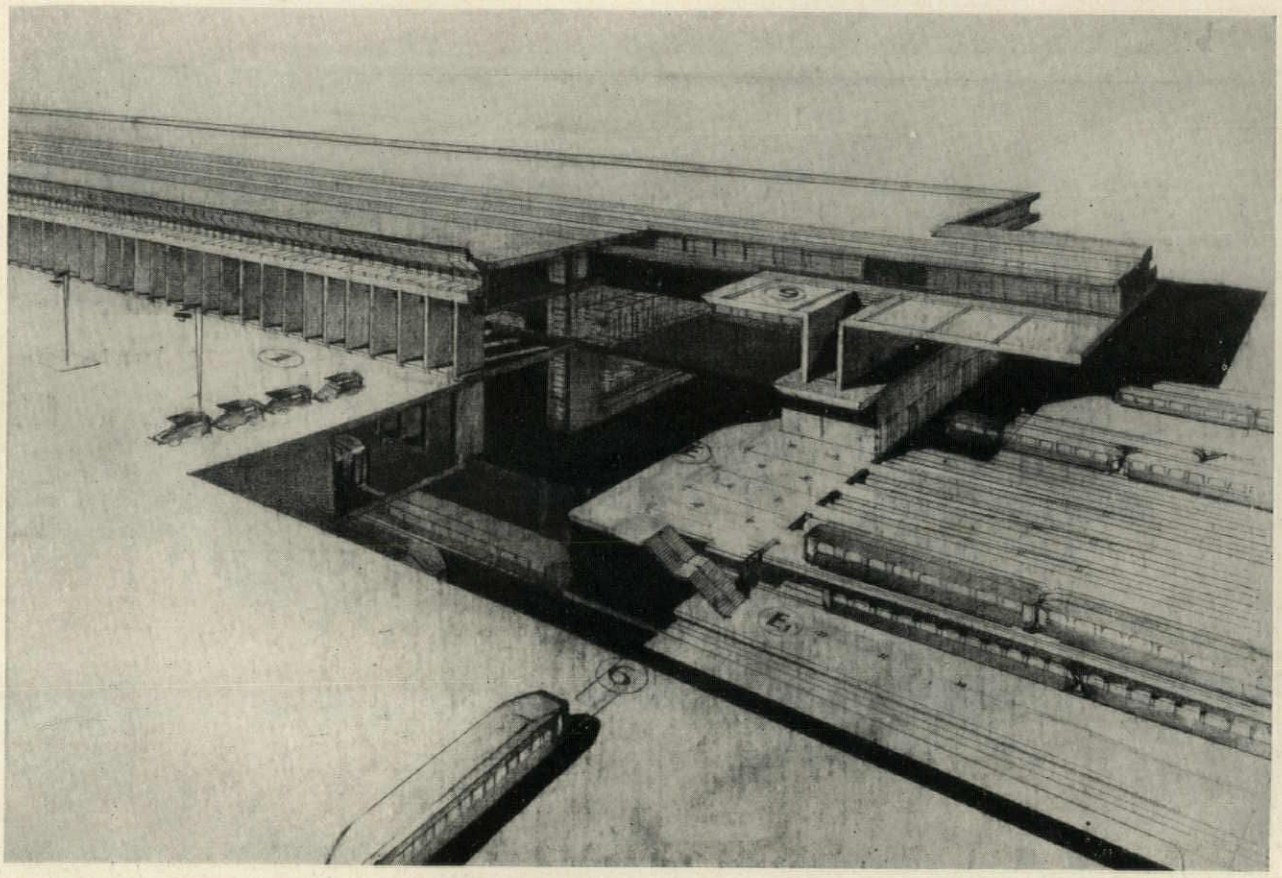
Two drawings from "Rush City Reformed." Above is a dwelling block (1927) with communal playground, recreation hall, and strict separation of rolling traffic and pedestrian approach. Below is a radial avenue with sunken speedway and local traffic lanes, level-free crossings, and parking areas (1928).



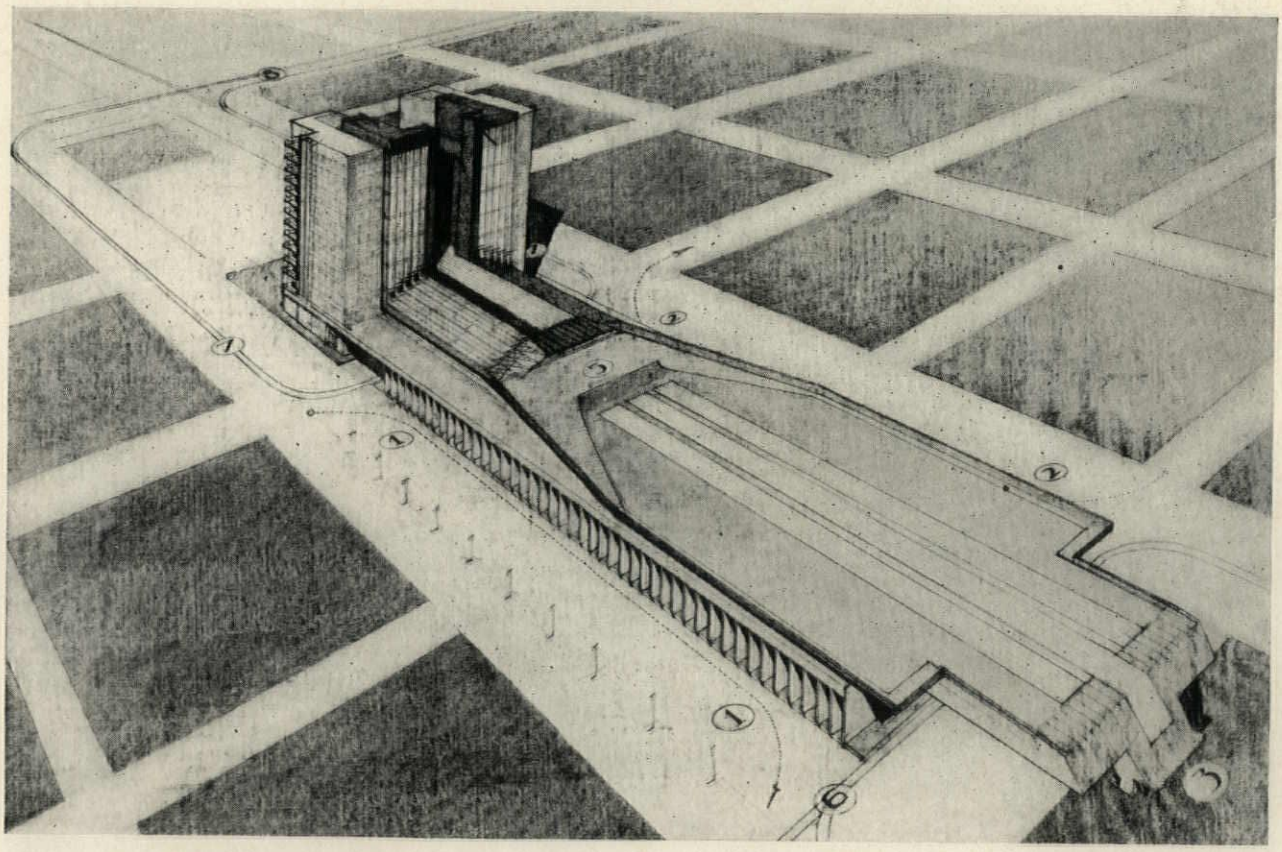


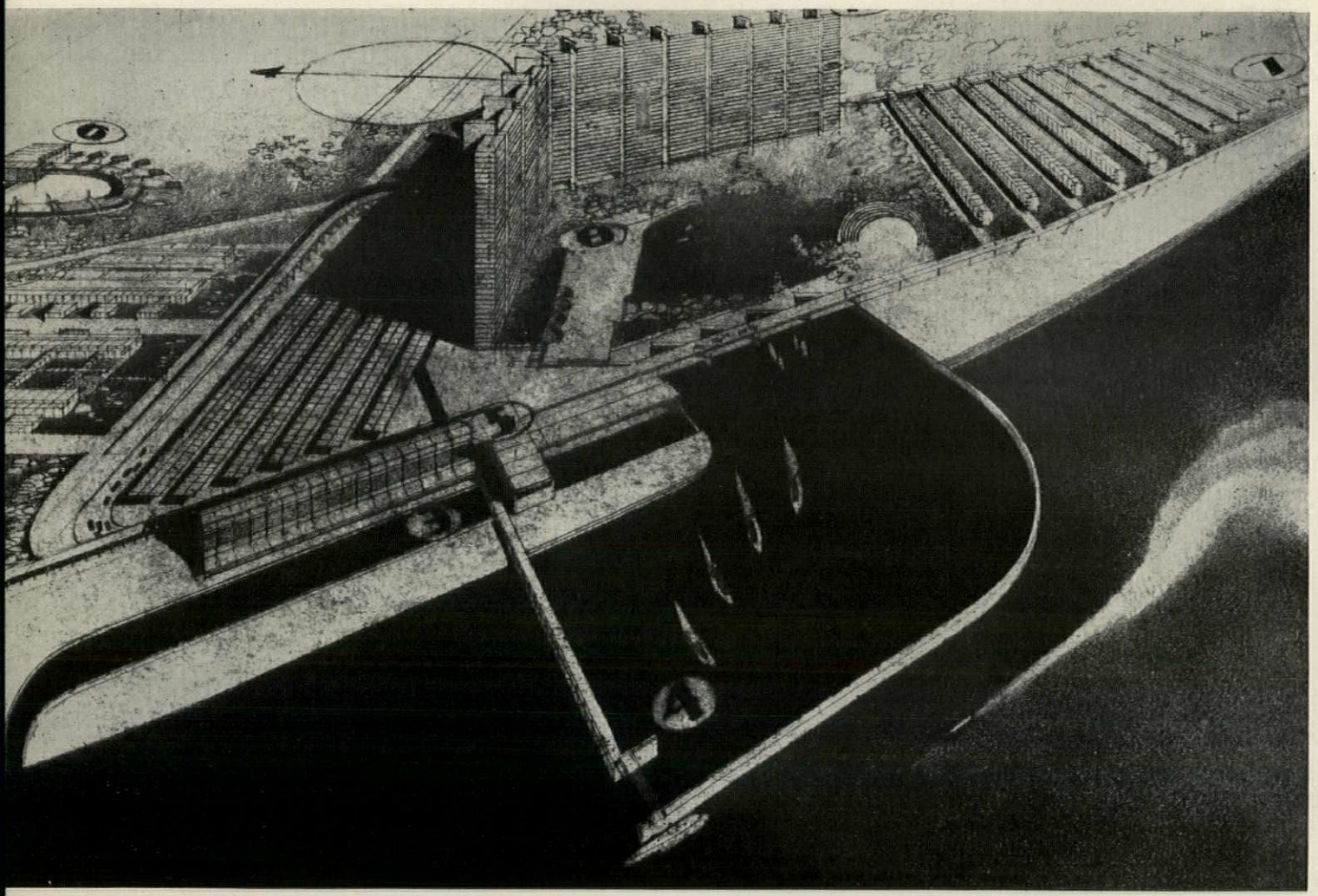
From "Rush City Reformed." First published in: "How America Builds," 1927. General view showing the axial development for regional *production, administration, distribution, connecting the two main transfers for long distance air and track traffic. The speed traffic system, eliminating level crossings in this region of 1,000,000 population, makes the maximum commuting distance 35 motor minutes. Each dwelling sector inserted into this major traffic network, which connects it with the activities of the regional core line, has a mixed population of 22,040, settled in dwellings, differentiated as to the age of the family groups, and is endowed with an adjoining zone for the activities of* local *administration, distribution, and production and with a green belt with institutions for education and recreation.*

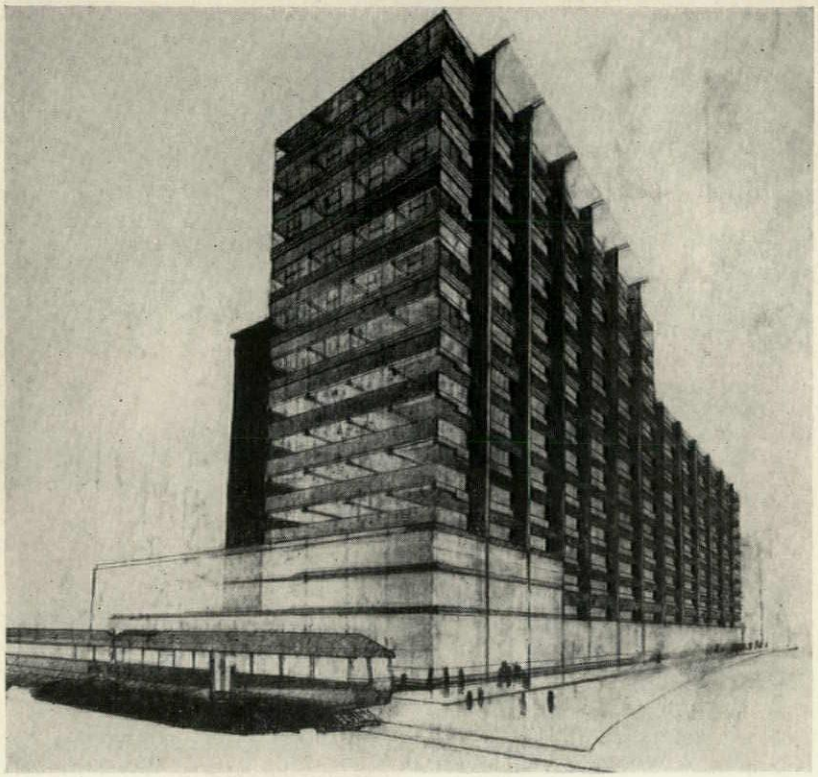
"Rush City Reformed" is not a plan for an ideal city but a volume of compiled research and of many part studies on traffic—rail and transfer—diversified housing, industrial, commercial, recreational, educational aspects of advanced regional planning



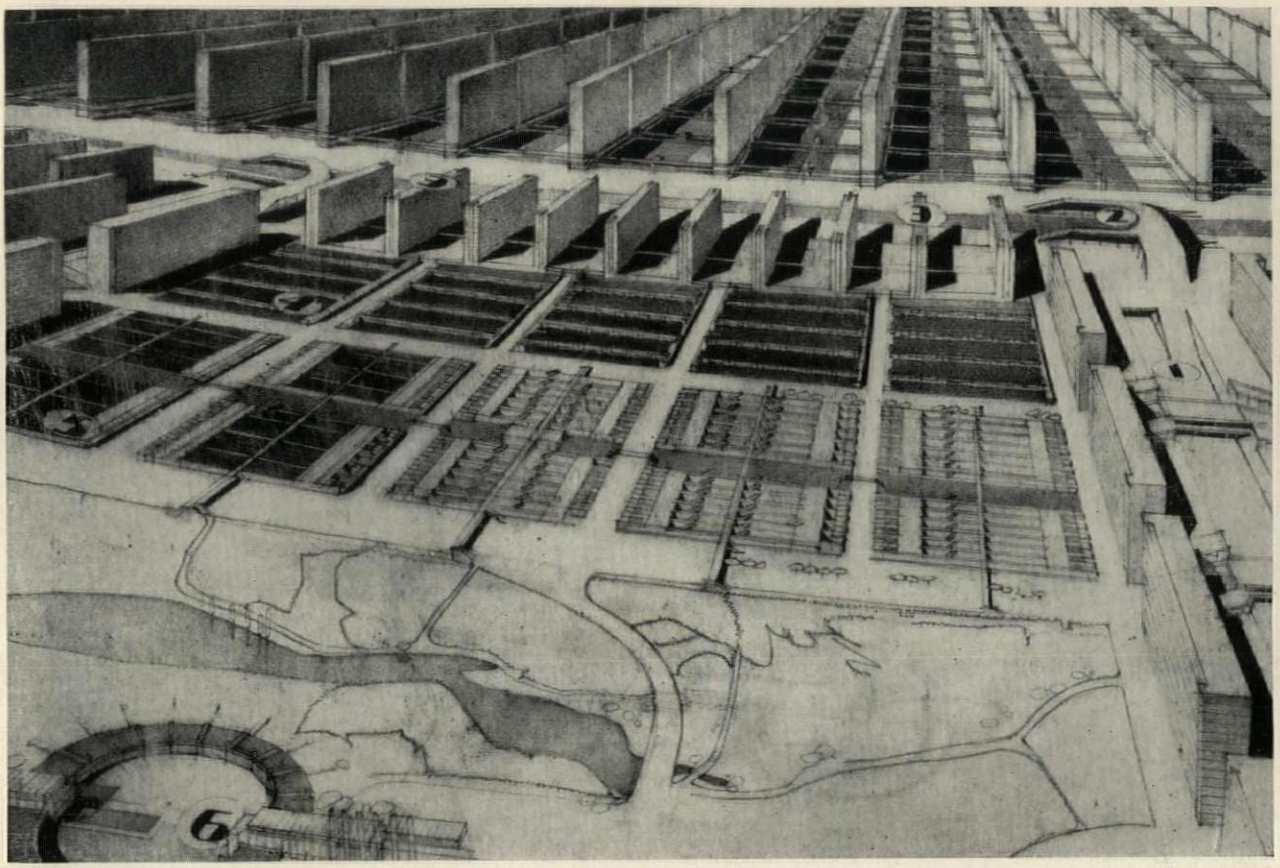
From Rush City Reformed, 1923. Above, a perspective section of the Terminal, showing long-distance and suburban levels, the latter in intimate relation to city traffic. Below, an airview of the Terminal, showing approach of surface vehicular traffic and airplane landing platform



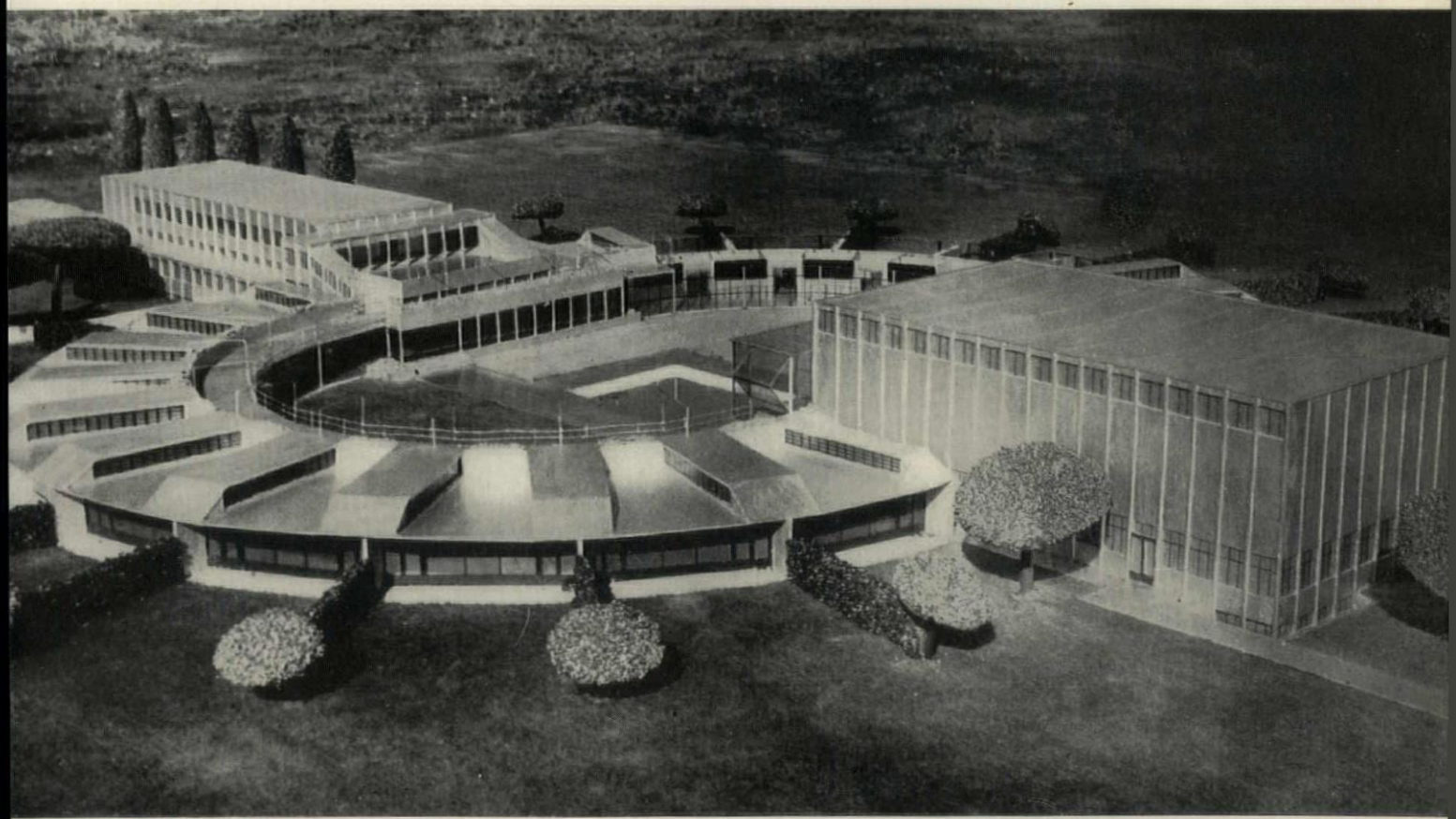


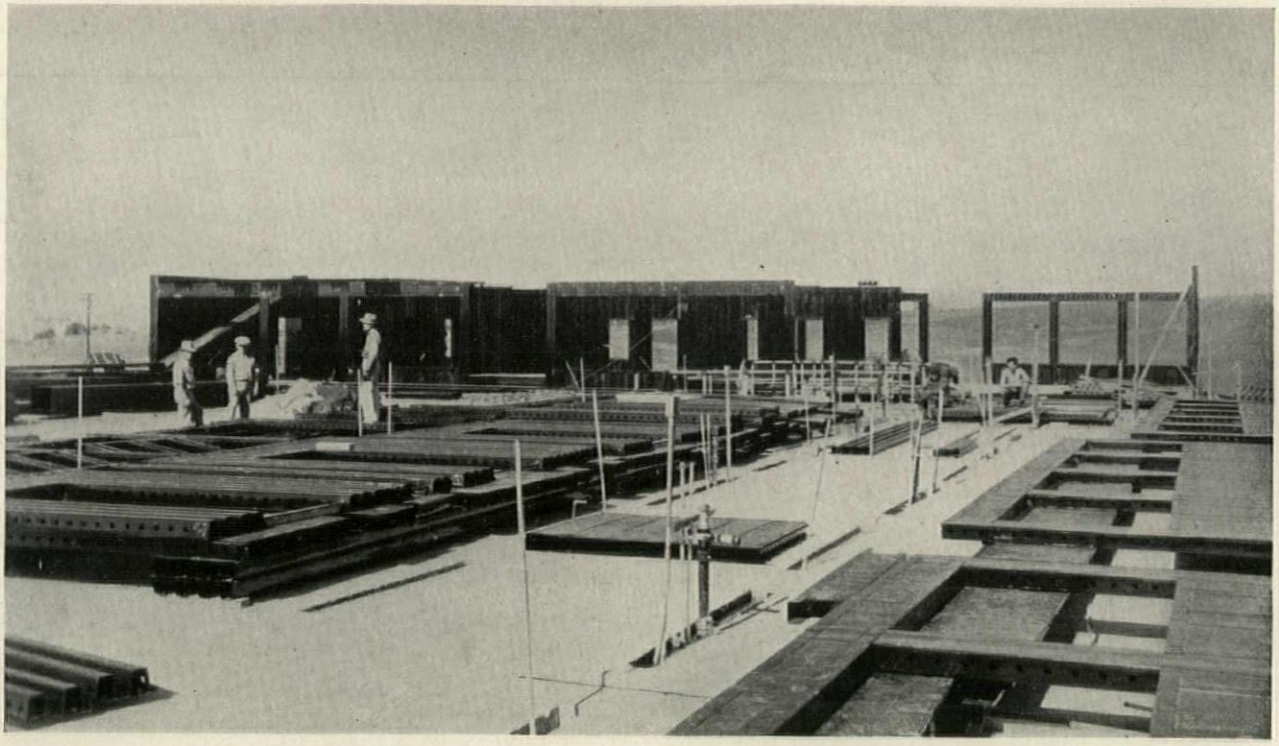


Above, a study for a Municipal Beach development with bathing establishment, yacht harbor, recreation grounds, and diversified vacation housing. Below, a corner store building, designed in 1923 with laterally stiff reinforced concrete construction, cantilevered floors, and glass curtain walls on principal front

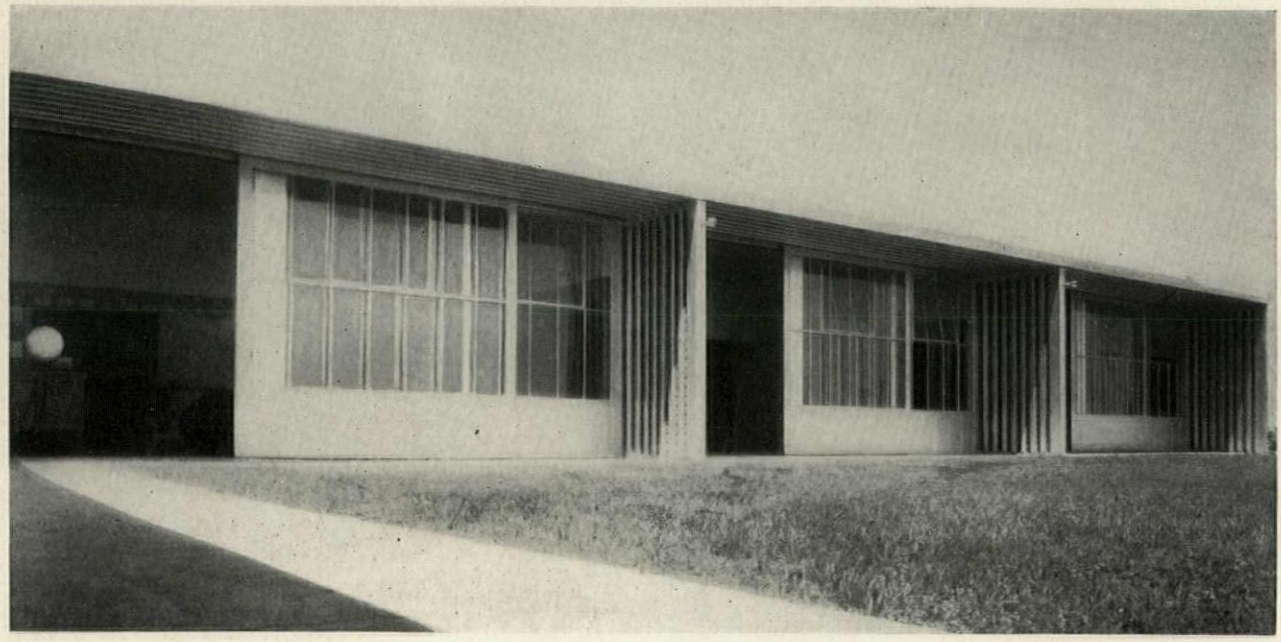


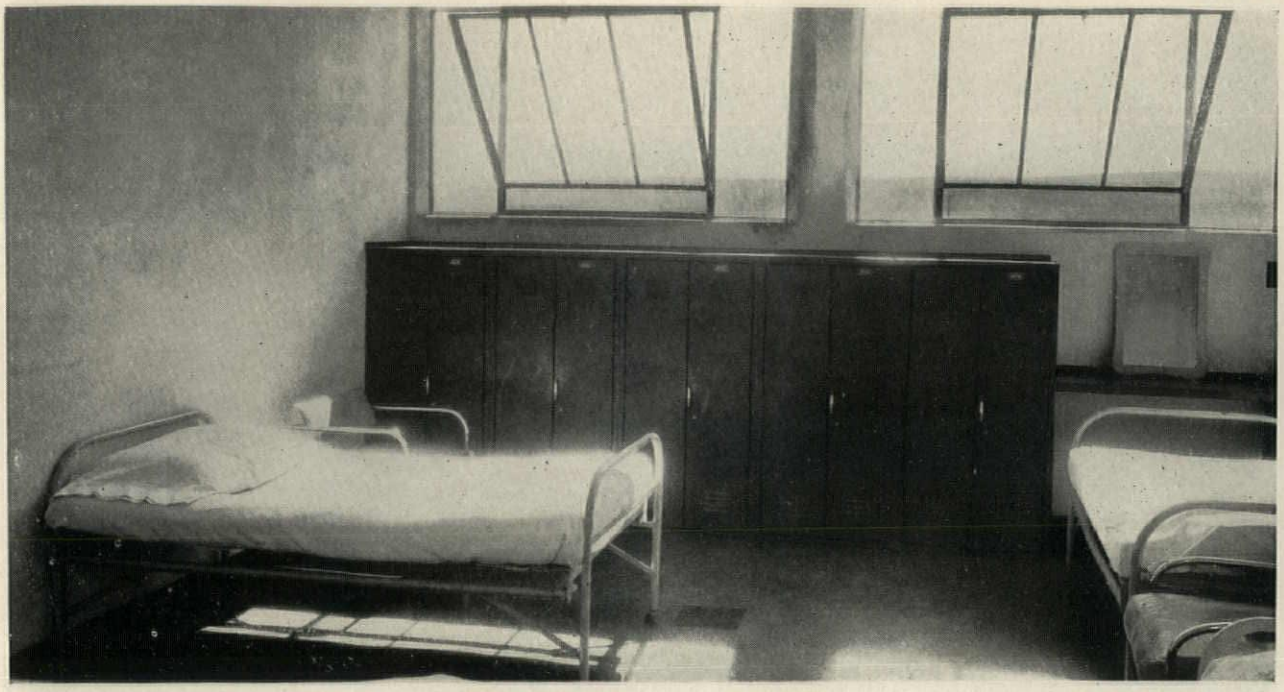
From Rush City Reformed. Partial view showing greenbelt, housing, transient dwellings, and business zones. Below is the famous Ringplan School for activity training, designed for prefabricated light steel construction (1928)

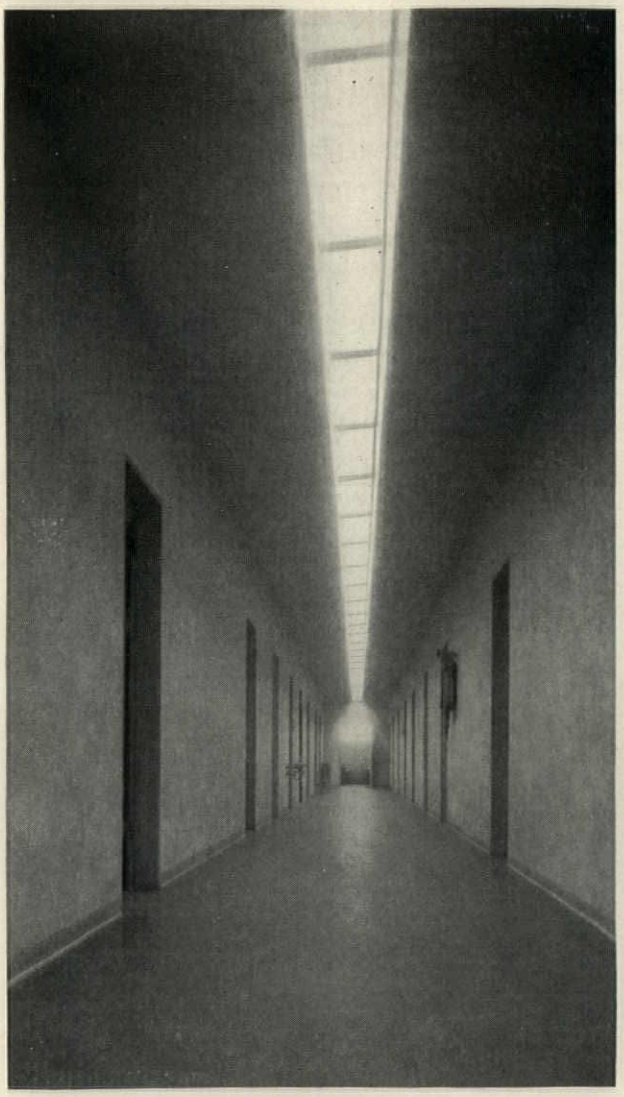




In the California Military Academy at Baldwin Hills, California, Neutra employed the Robertson-Palmer system of cellular steel construction. Above is a view of assembled classroom walls ready for erection and below a finished classroom wing in which large sliding glass doors connect instructional area with patio

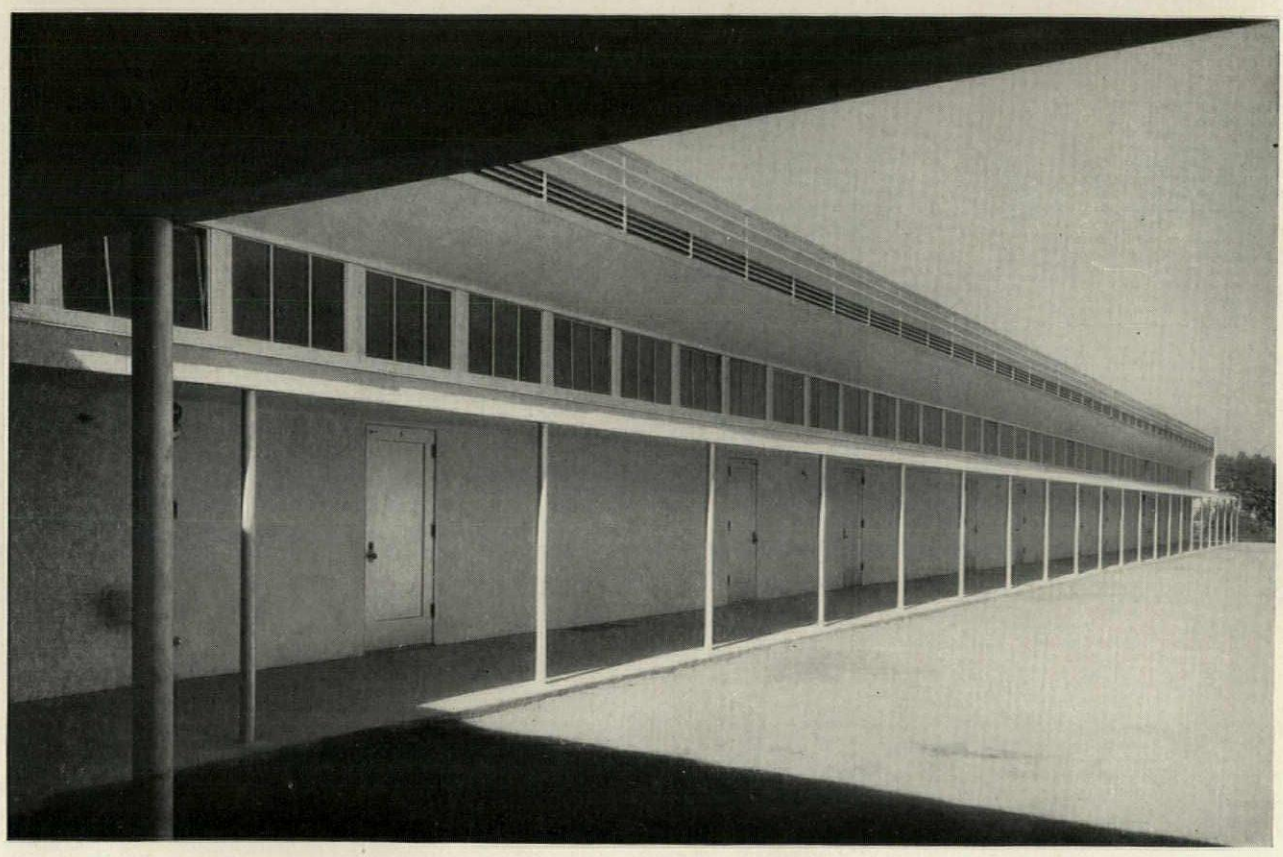




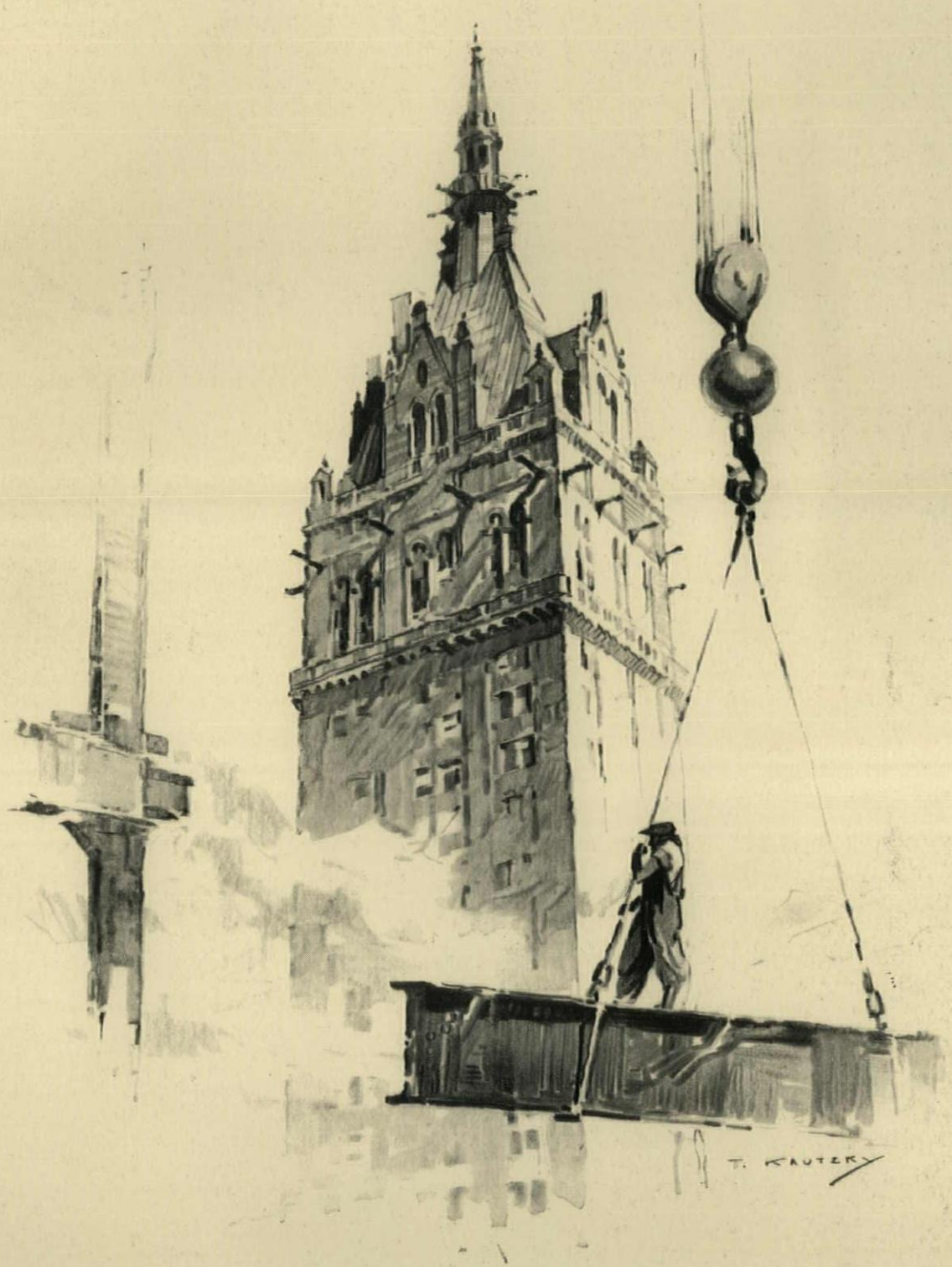


Dormitory room, Dormitory corridor, and Entrance; California Military Academy. The walls and roofs are constructed of cellular steel, including the interior bearing walls along the corridor. This system permitted the continuous corridor skylight so strikingly shown in the photograph below at the left

Experimental Public School for the Los Angeles Board of Education. Schoolroom units with attached outdoor schoolrooms and manual study material compartments for active "unit of experience" training. Fixed seating, one-sided illumination abandoned! *Corridors, stairways, their disciplinary problems, and their high costs eliminated!*



Woodcock



One of a series of pencil sketches by Theodore Kautzky recording some of the jewel-like tower tops, executed and admired in Manhattan during the boom twenties but which are now so much a part of its skyline that they are taken for granted. This example is the Sherry-Netherland Hotel by Schultze and Weaver, Architects

SCHOOL TRAINING FOR ARCHITECTURE

SOME PERTINENT THOUGHTS ON EDUCATION

BY CHARLES W. KILLAM

EDITOR'S NOTE:—*The following address was delivered by Charles W. Killam, Professor of Architecture, Emeritus, at Harvard University, before the Association of Collegiate Schools of Architecture, gathered in Boston at the Convention of the American Institute of Architects on May 30th of this year. Professor Killam has always been noted for his soundness of thinking and forthrightness of expression. This talk, seven pages of it, is so crammed with common sense that we recommend it for reading by every serious practitioner. Our pages are open for discussion of the matters he deals with, if you are minded to make a rejoinder.*

I AM speaking for myself, not for the Department of Architecture at Harvard.

I am speaking of the training for architecture, not for city planning, landscape architecture, sculpture, painting or design for products of industry. The architect may, in practice, cooperate with these other designers but his first duty is to be a competent architect and our first duty is to start that training by doing the part which the schools can do best.

Three questions occur at once. What kind of architects? What kind of architecture? What part of the training should the schools do?

What kind of architects? Not social reformers. Not mere critics. Not specialists in domestic work or low-cost housing. Not extreme modernists who can give their clients only bare boxes or glass hothouses. Not dilettantes whose income from other sources allows them to practice without profit. Not all-round geniuses who attempt not only to design the building itself but who offer to tell the people what they ought to like and also claim the ability to rearrange the regional and city plan, do the landscape work, and design the interior decorations and furnishings down to the chairs and dishes.

Architectural schools are not responsible for the entire artistic output of the country. Still less is it our duty to show industry how to make more beautiful motor cars or perfume bottles, at any rate not until we can make more beautiful buildings.

If architects were more competent to do their particular job they would be doing a larger share of the building work of the country than they are doing today. It is not our first job to reform the universe; it is our first job to be competent architects. It is not a satisfactory answer to say that most of the building work of the country cannot afford to pay for our services. We must be competent enough to meet and conquer that difficulty too.

There is much talk, particularly by non-practitioners, about the need of broad social study on the part of architects, but nobody tells us in plain words what they would require in the courses in biology, sociology, and economics, and what they would leave out to make room for them. The practitioner finds himself busy enough in performing the jobs in hand. He is likely to take from others the results of their lifetime studies in these and many other sciences. We ought not to fritter away our time getting a smattering of many subjects, a dangerous little knowledge.

I am not, of course, minimizing the need for the practicing architect to keep himself informed as to social and political trends. His training and experience fit him to cooperate effectively in many activities, and such cooperation will be welcomed by the community if he has first established his professional competence. He should, however, avoid the habit of some college presidents and professors who, unasked, advise the world on all controversial subjects.

It is not the primary function of the schools in general to develop super-designers; it is our function to train men so that our profession can do a much larger share of the building work of the country and do it well, and that will require many architects of many different capacities. And they must earn a living.

The schools in general must help to train

the kind of men who can perform competently the first duty of an architect; that is, to work out a good plan for a building, to build it economically, using materials and methods which will make it as durable as its particular use requires. And the architect alone must be relied upon to make it beautiful.

What kind of architecture?

The study of architecture is altogether different from the study of painting, sculpture, or music. If an architectural student is simply to make pictures like a painter he can be as original and modern as some of the psychopathic cases who fill the Museum of Modern Art with their ephemeral "isms." But an architect's work is more serious, more lasting, and vastly more complicated. He has to consider innumerable factors and work through many cooperating people. He has no business to present a design until he knows what its structural scheme is, what the materials are, how they are put together, their resistance to fire and the elements, their durability and their cost. If he disregards these factors he is doing paper architecture. He can design functionally if he will stop copying photographs and will use the structural systems and materials which are common in this country and with which his studies have given him some familiarity. If he uses established systems and materials he will waste less time guessing how to put together strange new materials in strange new ways and have some time left to make his building beautiful.

Our function is to train architects, not painters, sculptors or commercial designers for machine made products. The architect's work is so difficult that he has no time to waste in learning the qualities of materials by working with his own hands with any of them. He deals with some thirty sub-trades and with thousands of different materials. Any technique that he might learn in any two or three of them would soon be out of date in these rapidly moving days. A man intelligent enough to be an architect can find out enough about the possibilities of materials by watching skilled workmen instead of amateurish fumbling with his own hands. Nor is it necessary for an architect to work with his own hands in different materials in order to learn how to design buildings. The best way to learn to design in architecture is to design buildings themselves, and there are surely enough opportunities for practice in design in the building and all of its parts.

It is the duty of the architect to start from the function and use the structural scheme, materials and æsthetic design best fitted to that function. It is not his duty to start with a preconceived structural scheme or material or façade and then work backward with a resulting building which may be quite ill-fitted to its function. It is not his duty to work out a design which will use the latest structural scheme or alloy or plastic or gadget. It is not his duty to support the advertisers who support the architectural magazines. It is not his duty to provide a market for the material producer, nor is it his duty to design buildings to be scrapped in a few years to provide a market for some more new materials. *Our duty is to design a building to fulfill its function and to use any material or method, old or new, which is best fitted.* If we try to introduce all of the new stunts in every building we do we shall spend so much time in working out details that our commission will not pay for our trouble. One stunt at a time in each building is enough. And one trouble at a time is enough to risk for trying new materials and methods.

What kind of architecture should we teach in our schools? Some of you will say that I, a teacher of construction, ought not to discuss design at all, much less ought I to discuss what kind of design can be most usefully taught in the schools. But the teaching of design cannot be isolated from the teaching of the other courses and therefore the question as to what kind of architecture is to be taught in the schools is of fundamental importance. Some may hold that it is immaterial what type of architecture is used in teaching design. This may be true in schools which still teach design as two-dimensional, meticulously rendered decorative patterns, entirely distinct from human needs, structural schemes, materials, locality, costs, and other factors which the practicing architect has to consider. But if school designs are to approximate reality they must take some or all of these elements into account. If they are to be taken into account it is not desirable to use the extremely modern type of architecture because the student is unfamiliar with the structural schemes, construction details and costs of these designs which are still exceptional and experimental in this country. The student is on much safer ground if he works in stone, brick, concrete, steel, and wood, put together in the ways which are current in the United States and which he has been taught in his construction courses. It is a common habit of most students and of some practitioners to copy a design produced in Germany, Sweden, Holland, or England without having any idea whether the

altogether different conditions in Maine, Florida, California, and Minnesota make its use economical or otherwise advisable for us. The student is not even sure that it was a reasonable design in the country of its birth. There may be incompetent architects in Europe. In this country, in normal times, we are not as poor as post-war Europe and we do not need to copy their starved architecture. On the other hand, our labor and material costs are quite different from theirs and our climate varies so greatly in different parts of this large country that we must build to fit our varying conditions, not to fit in to some alleged "international style," an obviously unreasonable ambition in any case.

If we are to build to meet our conditions, instead of copying current modern work abroad, the student in the school should certainly start with our own well established structural systems, materials, and methods. As far as styles are concerned, the student should follow precedents which have proved their fitness in the past, modifying them as necessary to meet the needs of the present. The old buildings must have had some good about them. They do not need to be scrapped entirely because our needs have not changed entirely. Examples of the recent buildings which lie all about him give the student a realization of what his own somewhat similar designs will look like if built. There are not enough modern designs built in this country to give him object lessons and some would lead him astray.

A good many of the enthusiastic writers on the new architecture are obviously more experienced with the typewriter than with the slide-rule. Many of the structural stunts which they ignorantly praise are neither straightforward, economical, fireproof nor weatherproof. In particular, their discussion of reinforced concrete makes it clear that they have never watched a concrete building under construction. We have correlated design and construction so long at Harvard that I have had a long experience in helping students to put together and hold up something which, in many cases, ought not to be held up anyway. They copy a photograph of a feature which may or may not have been reasonable where it was used. They apply it to conditions which, in some cases, are quite different. Then they ask me how to hold it up. They will not design something which is simple structurally, something which their construction courses and their visits to buildings have made real to them. In some consulting work on real jobs I have realized how much more the architect has to pay the engineer for time spent in working out schemes for holding up queer features. Their structural stunts are so expensive and take so much time to work out that they have no time or money left for ornament, therefore they decry ornament and profess to admire "clean" designs.

Students spend all of their time doing modern designs, disregarding the fact that they have got to earn their living by designing buildings for owners who, in most cases, do not want modern designs. We know this by observing what is being *built* in the United States, not what is being *talked about*. A good many of the people who talk about modern architecture live in apartments anyway and will never build a house. Architects in general cannot make a living doing the shop fronts, filling stations, movie theatres, cocktail rooms, night clubs and the very few residences which now provide most of the chances for the extreme modernists in this country. Students are getting very little training to fit them for usefulness in the kinds of offices which have been doing any amount of work in recent years. They are getting no practice in the design and placement of ornament, their only experiments in this direction being signs with the capital letters left out, or window grilles, than which there can be no more useless feature. Human beings have always demanded some ornament, on their own persons, on their clothing, on their weapons and boats, and on their buildings. They will not be satisfied with bare boxes ornamented, if at all, only with signs or with stripes and flutes, vertical and horizontal, and soon, I suppose, to be oblique and then wiggly. One need not go to the other extreme and continue to rely too much on columns and cornices, although some people still like two-foot stone columns better than four-inch steam-pipe columns supporting overhanging stucco prisms. We need buildings with pertinent sculpture and murals more than we need buildings with copied Corinthian columns and cornices or buildings with copied steam-pipe columns and corner windows.

Engineers have used the cantilever, in steel or in concrete, for many years whenever the conditions demanded it. A few years ago some architects found out about it and the discovery went to their heads. It found that space vacant in some cases and they became cantilever addicts. If a designer knows something about engineering or if he will consult an engineer he can find out whether a cantilever is reason-

able and economical in any given case. Sometimes it is but not always. Sometimes cantilever planning increases the number of columns in the interior of a building with no worthwhile increase in lighting efficiency. Columns set a few feet inside the exterior walls are in general more in the way than columns set in the wall itself.

Speaking of engineers, they, rather than architects, were the inventors of functional and modern design. They did it years ago, as bare and ugly as you can do now. The so-called slow-burning or mill-construction building developed in New England seventy-five years ago was entirely functional with its piers reduced to the minimum allowed by the particular material and with wide windows carried up close to the ceiling. Architects did not invent the strip windows. Engineers did that too. They built mills with all the glass they needed and used corrugated iron for the rest of the wall. Architects, as well as engineers, have for years built simple, straightforward, functional, industrial buildings, often better looking than the non-industrial buildings of the same time. But architects, not engineers, must give us beauty. If we stop giving that we lose much of our reason for being.

It is sometimes urged that the schools should lead in research and show the practitioners how to progress. But research in the complicated art of designing, specifying, and supervising building construction is altogether different from research in some other professions and sciences. It is not the part of the schools to lead the profession in modern design. Students in art schools, as well as painters and sculptors in active practice, are free to try anything they want to with paint, canvas, clay, and stone. They can try any stunt and may find some purchaser. They do not have to correlate the work of many men working with many materials. Students in a school of architecture should not be expected to create new types of architectural design or new types of structural design or new uses of materials, any more than engineering students should be expected to develop new types of bridges or tunnels, law students to establish new legal principles, or medical students to invent new techniques in surgery. In fact, the architectural student is far less fitted to blaze new trails than students in these other professions because progress in building is possible only when based on the work of a great number of cooperating agencies, each with its different background of experience and its different responsibilities. For more than a quarter of a century I have advised students in regard to structural systems, materials, details, and methods in their theses and, in recent years, in some of the problems before they come to the thesis. The kind of design they are now doing would require the cooperation of an experienced architect in actual practice, an experienced engineer in active practice, a general contractor, several sub-contractors, material men, and a testing laboratory. The helpful cooperation of all of these men can be obtained by a practicing architect with a real job. This cooperation cannot be obtained by a student with an unreal project. An experienced architect, even with all of this expert and responsible cooperation, often finds that the new materials and methods give unsatisfactory service. A student's judgment, guided only by his instructors, cannot possibly produce any real progress, nor can the instructors in a school of architecture lead in architectural progress unless they are relieved of most of their teaching load and provided with laboratories and ample funds. Even then they could accomplish little because they could not possibly have the facilities and contacts available to such organizations as the Bureau of Standards, the Forest Products Laboratory, the Portland Cement Association, the DuPonts, Johns-Manville, and many others. I have, for many years, taken architectural and engineering magazines and have collected reports from United States Government departments and university experiment stations, and I have some understanding of the amount of money, brains, and energy being spent on the problem of new building materials and methods. The student's time will be best spent in learning tried and proven methods applied to the kind of design now in use in the great bulk of actual work being done by the reasonably progressive members of the profession who still love beauty. When an architect has had some years of actual experience he will be far better fitted than any student or professor to lead in progressive design.

What part of the training should the schools do? We can get little help from practitioners in deciding this question. In general they think the schools are still teaching the same things in the same way as they did when they were in school. Every discussion finds the practitioners blaming the schools and every symposium shows that the practitioners are themselves hopelessly divided as to what should be taught and how. Some of them tell us we should emphasize design, meaning design in its narrowest sense. Others say that we should give

a broad background of economic and social sciences. Others say that we should emphasize the business and practical aspects of the profession. There is no consensus of opinion.

How large a field should we attempt to cover? I repeat; architectural schools are not responsible for the entire artistic output of the country. Nor is it our duty to show industry how to make more beautiful motor cars or perfume bottles. We should not claim too much. School training for architects must recognize the general educational system existing in this country. We cannot assume that elementary and secondary school curricula will be modified so as to help us to discover and develop artistic ability. Other arts and industries besides our own believe that elementary and secondary school training should be modified to fit children for their particular activities which they believe to be more important than artistic activities. We must, therefore, take students of all degrees of artistic training and talent, some of whom may have just decided upon an architectural career. Nor should we be disturbed if we are not able to make designers of all of those who enter the schools. Architectural practice has room for a great diversity of talents of which design in its narrow sense is only one. Even if the student does not go forth into architecture at all his training will fit him for usefulness in the many related fields.

Some practitioners and some professors issue solemn statements telling how architecture should be taught when they ought to know that hard facts make it impossible to teach in these theoretically perfect ways. They make too little distinction between methods which must be used in different courses. They ignore the fact that large classes cannot be handled in the same way as small classes. They inveigh against factual teaching without regard to the kind of course involved. They urge that instruction in all kinds of subjects be given in the laboratory, over the drawing table, in the sunny courtyard, or around the fireplace with pipe and bowl. They advise individual instruction to fit the personality of each student, disregarding the fact that some students have personalities which should be violently changed. For instance, some college graduates have arrived in my courses believing it quite immaterial whether they put down the product of ten times one hundred as having two, four, or six zeros. I strangle their individuality and make them all compromise on three zeros.

We cannot afford one professor to each student. We cannot afford the time to tell individual students over the drafting table about concrete, plumbing, the design of beams, or the analysis of trusses. Many facts and theories must be explained to a whole class at once. The discussion with pipe and bowl would suit some professors and some students because they like to talk, but if they would spend the time sweating out their own solutions over the drawing board they would have less need for talk.

Some critics would eliminate written examinations. They are the best check on a student's daily work and they give him practice in telling what he knows in an orderly, exact and concise manner. He will later, in practice, have to express himself by telephone, telegraph, oral or written statements, specifications and contracts, and he will often be pushed for time just as he is in an examination.

I should like to discuss engineering instruction as fitted to the needs of the architectural student, not the engineering student. It should be taught in the architectural school itself and by men who have had experience in architectural offices, men who can get out a set of plans. We are attempting to cover so many subjects that the time allowed for construction is too restricted to give architectural students any engineering training except that relating to the simpler building problems. The theory that architectural and engineering students should take the same fundamental courses, and that these courses should be given by engineers with no architectural office experience, is wrong because the fundamentals for architects are not the same as for engineers. Architectural students are not, in general, interested in mathematics or engineering. Some of them will, in practice, do simple engineering design, but most of them will correlate the work of the engineer along with the work of many others with whom they must cooperate. The student has no business wasting his precious time in studying calculus in order to deduce formulas which he should take for granted and get on with his practical applications of non-calculus theory to building work. He should not waste a whole semester on statics. Nor another semester on the resistance of materials. Nor should he spend time in a testing laboratory. He is to be an architect, not an engineer. He should spend as much time as possible in the design of simple structures, deducing only such formulas as can be deduced without the use of higher mathematics. Any attempt to modify engineering courses so as to fit the needs of both architectural and engi-

neering students will produce a mongrel result unsuited for either. What the architectural student needs is enough theory to allow him to do a large number of practical design computations so that he will lose his fear of figures and will be willing and able to use them not only in structural design but in other parts of his work. If he spends too much time on mathematical deductions of formulas in mechanics, using higher mathematics instead of arithmetic on the slide rule, he will always be afraid of figures. He must prepare for the examinations of the architectural registration boards and these boards do not ask for deduction of formulas or discussion of theory. They ask for the design of beams, girders, columns, and trusses and for parts of foundations, floors, and roofs.

The student should not only do a large number of problems in his formal courses but he should do more. He should apply what he has learned in his formal courses to computations for the structural design of buildings which he has done in his design courses. It is of more importance for him to design a beam than it is to deduce a deflection formula. It is still more important, in his future practice, that he should know when and how to use different structural elements, even if he never again does the computations. Structural elements should become a part of his vocabulary, even more so than corner windows, glass bricks, or columns, either Corinthian or steam-pipe.

Construction courses for architectural students have other reasons for being besides their value in teaching simple structural design and an understanding of the use of the different structural elements in buildings. An advantage of the architect's training is the different faculties which it calls into play. Imagination in design, powers of close observation in free-hand, ability to gather information from a wide range of reading in other courses. In construction the approach is analytical and mathematical. The student must analyze the problem and apply the proper mathematical method to its solution. But he needs imagination in structural design just as he does in the rest of his design work. Before he can design a reinforced concrete member he must not only visualize the form in three dimensions but also the play of hidden stresses in different parts of the member. This demands imagination and the power to thus use his imagination is akin to the power which he must develop in order to visualize his plan, interiors, elevations, structural system, and colors when he is doing what are usually called the architectural plans.

A by-product of the study of construction is by no means unimportant; the habit of orderly, accurate, and clear presentation, a habit not always acquired in college. The practitioner who would restrict engineering instruction in the schools can have little understanding of the slovenly mental habits and slovenly presentation of their work too common with college men. These faults have to be corrected and the professor of engineering has a large part in that correction. The practitioner must analyze his problem in an orderly way, wasting no time in the process, and then must present his conclusions in an orderly, clear and convincing way, whether orally, or by the written word, or by sketches or finished working drawings. The construction courses help the student to acquire these good habits.

This discussion of engineering instruction would be incomplete without consideration of the influence of the examinations for the registration of architects. The student must be prepared for these because registration laws are now in effect in most of the states. This necessity is an adequate answer to the practitioners who argue that the architectural student does not need engineering instruction because he will always hire an engineer. He cannot hire an engineer to take the registration examinations for him. The average practitioner believes that the student should spend only a small amount of time on engineering studies. The registration boards evidently disagree with the average practitioner. The study of design is so emphasized in the schools and so much time is given to it that the students have insufficient time or energy for enough engineering study to fit them for the unreasonably difficult registration examinations given in some of the states. The average practitioner does not seem to agree with the registration boards as to what an architect should know. The boards seem to be too much dominated by engineering members or advisers who are ill-informed as to the relative importance of the different parts of an architect's duties. Examinations in engineering should be given by an architect. They might be tried out on the members of the board themselves.

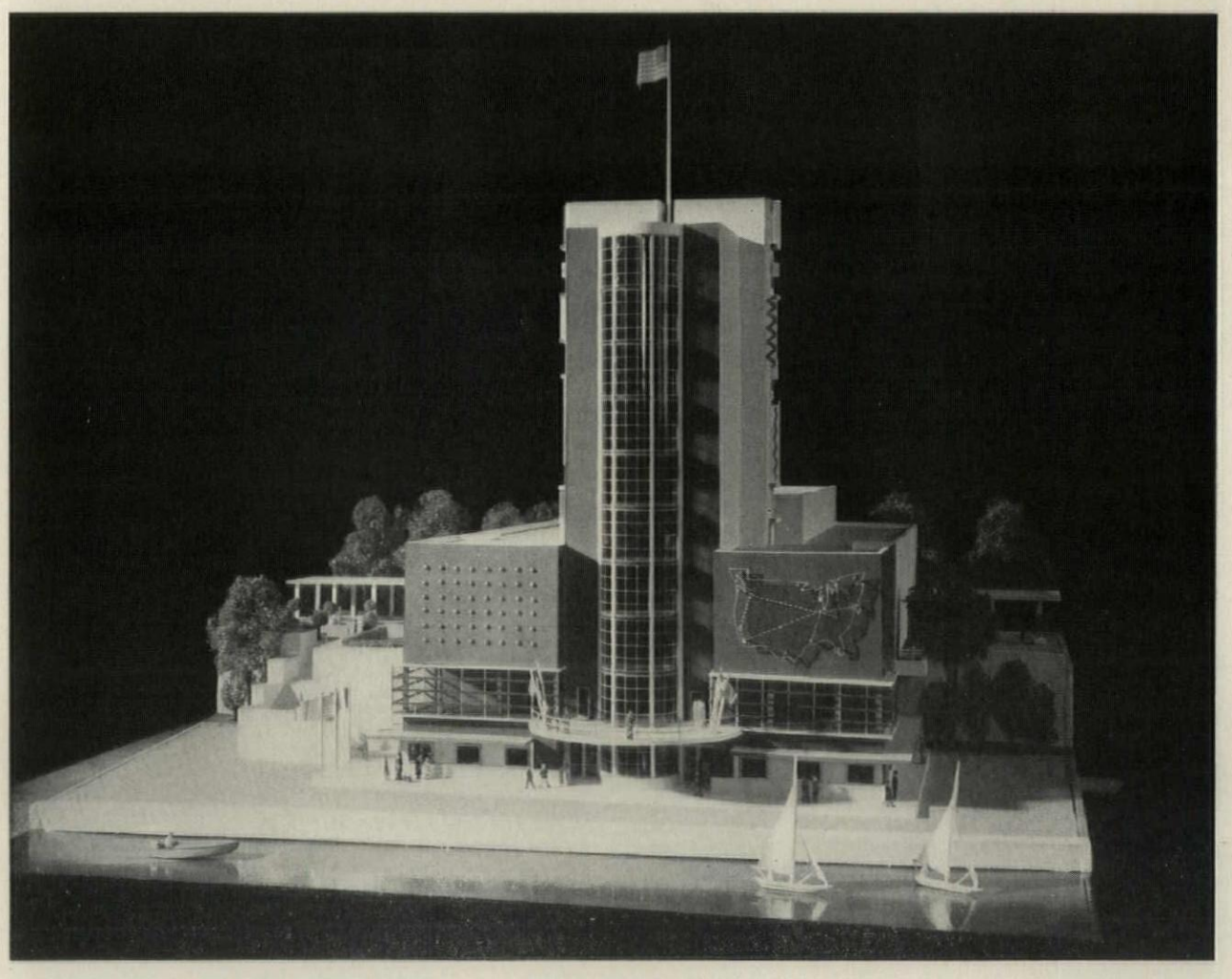
We try at Harvard to correlate design and construction so closely that the student will know how his design should be affected by structure, materials, methods, equipment, and details, as well as by the use for which the building is to be erected. It is in large part this correlating ability which makes the successful

architect and the registration examinations should aim to discover architectural ability rather than engineering ability.

Nothing that I have said should be understood as in opposition to progress, to reasonable and evolutionary modernity, but why do we need to change everything at once? Most modernists admit that the work of other modernists is now bad but they tell us that they will improve in time. But why should we suffer an interim of unsymmetric conglomerations of naked geometric prisms? Why not carry on some of the beauty of the past, pruning unnecessary applied columns, cornices and buttresses, but not so much as to go nudist?

My point is that no worthwhile and permanent progress can come from students or professors, nor can it come from practitioners who advertise themselves by doing something blatantly different. It must come from architects in practice, men who have had the background of a good training and the responsibility of actual building under the complicated conditions of our day and country. Some of the men, even of this description, will, of course, do things which are simply different without being reasonable, functional, economical, or beautiful. But most of the men of this background and experience will create, adapt, modify, and improve as rapidly as is necessary and desirable in a profession like ours which is responsible for the expenditure of vast sums of money and whose works form so large a part of the physical environment of our lives.

It is our duty to make that environment convenient, safe, healthful, and economical. But our profession, more than any other, must also make it beautiful.



Model of the United States Pavilion designed for the International Exposition in Paris by Paul Lester Wiener in collaboration with Charles H. Higgins and Julian Clarence Levi, New York architects associated on this project

Edward Steichen

ROCKEFELLER CENTER

(Rockefeller Center Awarded Gold Medal • Architectural League Show • 1937)

HAVING simplified the rhythm of the LINES of his original sketch by the use of tracings, the winner proceeds to a separate study of the VALUE pattern made by the lights and darks of his rendering. Here also he can make use of the tracing paper to try out several arrangements before a final selection for the finished rendering is made.

The value of an architectural presentation as a work of art depends, more than on any other single factor, on the beautiful distribution and pattern formed by the VALUES. In other words, value your values. The light and dark spots of a drawing carry or read at a greater distance than any other element or contrast. By that I mean that value contrasts are far more powerful and moving than color contrast or the thin contrast of line alone. The navy found this out in the visibility tests for their signal flags. Mass and Value are the two abstract qualities that give power and strength and impressiveness to an architectural project.

What Architect does not love the beautiful black and white sparkle of his "poché-d" plan?

For the utmost simplicity and strength, nothing can beat just two values—jet black and pure white for sparkle and a glittering brilliance, or gray and white or gray and black for a more quiet, sober, tranquil quality. Taking into consideration the total area of the picture, it is most important that one value only should dominate and that the others should take a lesser place; that is, occupy less actual space.

Most of the great artists since earliest times including Giotto, Pierro della Franchesca, and the more contemporary de Chevannes and Picasso, rarely employed more than three values to gain their handsome effects. The complications of nature are reduced to three—light, dark, and halftone. There may be some slight variation in the darks, some gradation in the halftones, and slightly higher and lower tones in the lights but the three big divisions always remain clear and distinct, well organized, separate units. One can clearly see this by analysis of the illustrations which accompany this article.

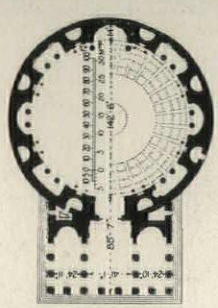
Some artists arrange their pictures into what, at first glance, seems to be but two values, mostly white with less black and only a small quantity of halftone to bind or cement the two together.

I have rarely seen an Architect use values in such a way as to dramatize his work to its full possibilities.

The dominant use of any one value will induce a mood which may be serious, tranquil, or light-hearted and gay. For example, a rendering in which the dark values predominate will have a serious mien—that bank president look, black suit, grey vest, white collar and cuffs effect. On the other hand, a drawing in which most of the space is devoted to white paper with snappy blacks and a few greys to tie them together, is, in total effect, gay, light, smart, amusing, and brilliant. Where the halftone value dominates most of the area—with, we will say, a dark house and few light accents—the effect is one of tranquillity, strength, poise and livableness. Architects should try to dramatize their work by the proper selection of the major value.

THE MAJOR VALUE OF THIS PAGE BEING DARK, THE GENERAL EFFECT IS UNUSUAL AND PRODUCES A SERIOUS MOOD

I like to think of each separate value group as a constellation composed of a large sun and many smaller stars, whose sizes diminish as they get further away from the controlling mass. Each value group should break into interesting shapes that distribute themselves into all parts of the picture — relating, echoing, and



POCHÉ-D PLAN BY
ALBERT CLAY, ARCHITECT

look best toward the center. 4. The halftone on the water is lighter than the sky, and the halftone on the trees is darker than the sky value, thus achieving an unusual effect simply by shifting the various value arrangements

N. Y. Public Library

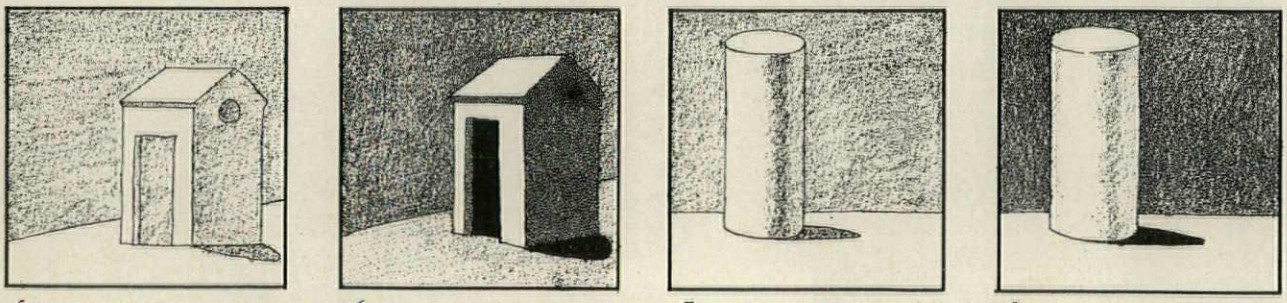
"The Pianist" by Matisse is a Handsome Arrangement of Light, Dark, and Halftone Values Together with the Sparkle of an Area Composed of a Pattern of Spots of all Three Values. There are Also Simple Areas Against the Complex Pattern and Large Masses with Smaller Echoes Which Add Much to the Composition

binding the entire space together. As we all know, no two spots of the same value should be alike in shape or size and one among them should be the largest. In this way, the effect will be compact and not scattered or spotty. This theory of spotting is presented here in the following diagrams.

It goes without saying that in order to relate a dark and a light mass one should break lights into the dark mass and work some of the dark into the light areas. Halftone broken into both light and dark masses will also relate and bind them.

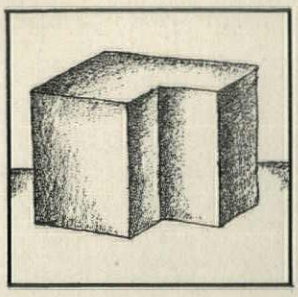
Many painters and perhaps some architects make the mistake of using a value for rendering some detail in an object which is the same as that he uses for the background, thus giving the effect of a transparency or a hole. These little diagrams will show exactly what I mean.

Also, there are times when, working in color, we forget the value contrast completely; for example, in the above diagrams, if the sky is red and the door blue, but both of the same value, then the artist often makes the mistake of thinking that because there is



5 6 7 8

5. Bad. *When painted in various colors this picture may read well, but when photographed the weakness of the value is seen. 6. Correct* Values *distinguish a drawing and give it strength. No amount of fine colors will hide a poor value arrangement.* Values *are more forceful than* Colors. *7. Column as seen in nature. 8. Column artfully treated, both light and shadows kept lighter than the background which has been made darker than in nature*



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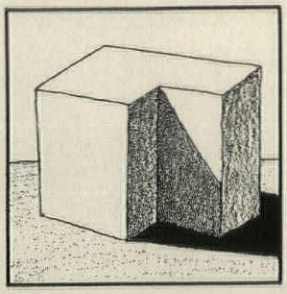

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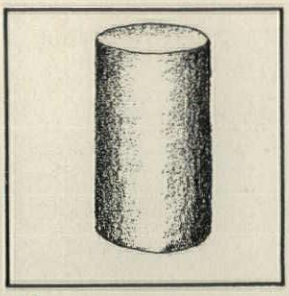

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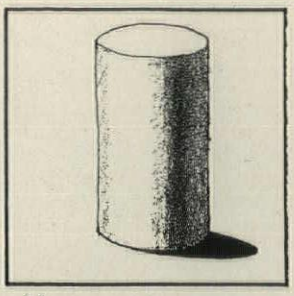
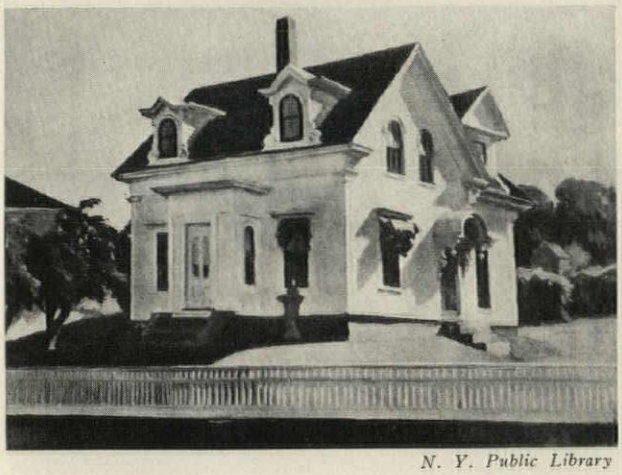


12

9. A shape drawn by intensifying the FORM *with application of* VALUES. *10. A shape drawn by representing the form with* LIGHT *and* SHADE. *11. The roundness of this column is symbolized with* VALUES *darkened as they recede backwards. 12. The form of this column is expressed with* LIGHT *and* SHADE. *It is a more natural, although a less decorative, treatment of* FORM *than illustration 11. Architects might profitably experiment with values*



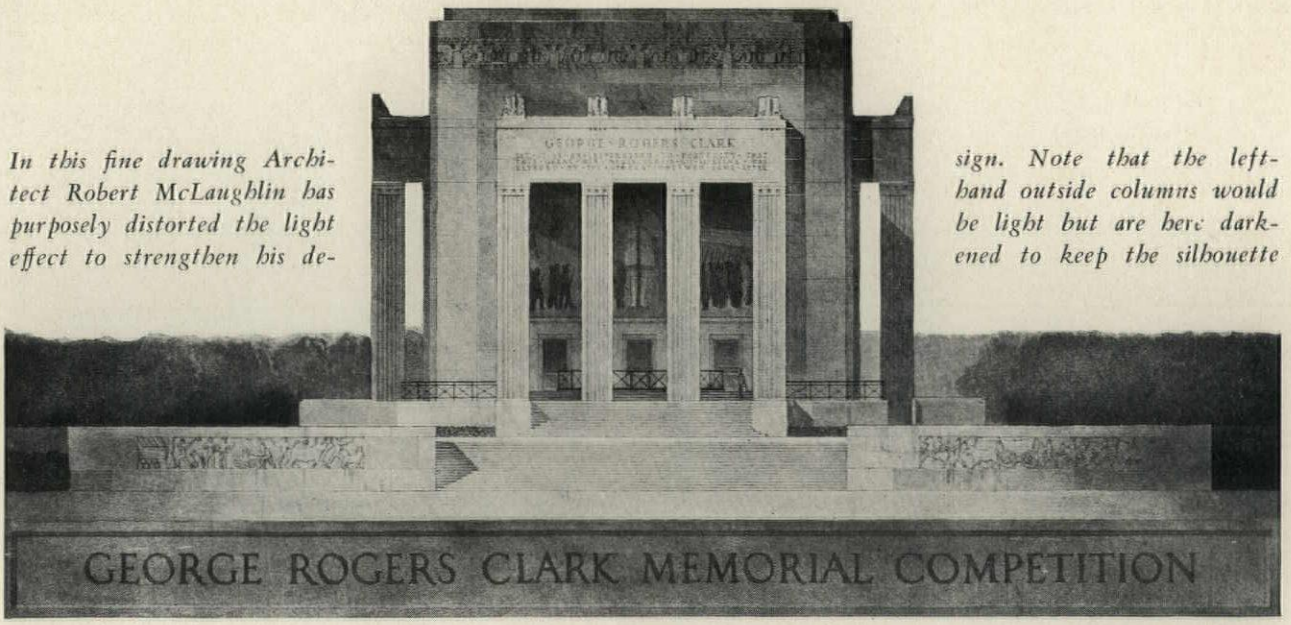
N. Y. Public Library

"Hodgkins House" by Edward Hopper is a beautiful example of how a painter would render a house. Notice the simplification, strength, and design of the VALUES. *The massing of the dark foliage and shadows against the architecture gives a rich effect. The composition of* VALUES *is equally important whether it be painting, architect's drawing, photograph, or architecture itself*

Gottscho

An interior by Smyth, Urquhart, and Marckwald, Inc., which strikingly illustrates the effective use of VALUES *in interior architecture. So many people make the great mistake of thinking in terms of colors when planning interiors and forget that here, too,* VALUES *dominate. A handsome arrangement of* VALUES *makes the room, as well as the sketch, unforgetable and distinguished*

In this fine drawing Architect Robert McLaughlin has purposely distorted the light effect to strengthen his design. Note that the left-hand outside columns would be light but are here darkened to keep the silhouette

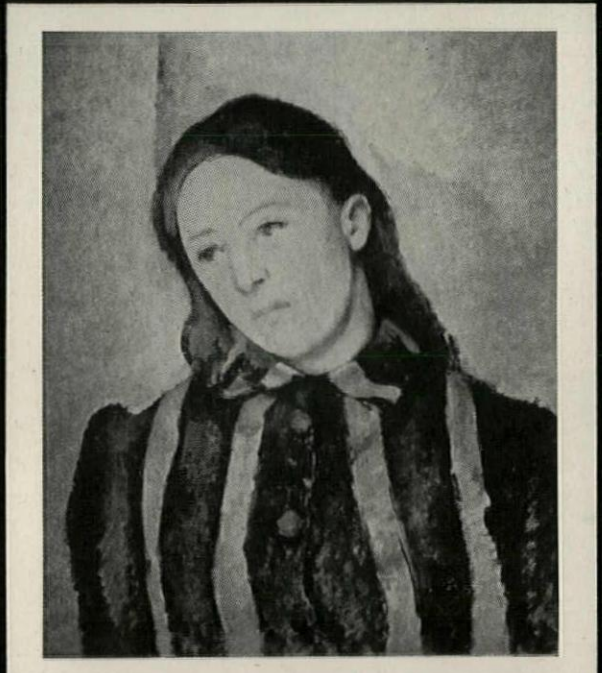


University Prints, Boston

The "Woman Carrying a Casket," a late Minoan III painting, is a monumental arrangement of LIGHT, DARK, *and* HALFTONE. *It exemplifies the interest that may be worked into an illustration when complicated patterns are set off by plain areas. The rhythm of* LINE *in the hair as contrasted with the dark mass of the body also achieves a pictorial effect worthy of attention*

This portrait by Lurçat is a distinguished design of VALUES *and* LINE. *Its simplification gives it* STYLE, *and the interest is in the pattern rather than in the pictorial representation. The flowing lines add distinction*

N. Y. Public Library



This "Portrait of Madame Cezanne" by Paul Cezanne is a beautiful example of the simplification of light and dark areas. The multitude of VALUES *in nature are here reduced to almost two, light and dark. Note the brilliant result*

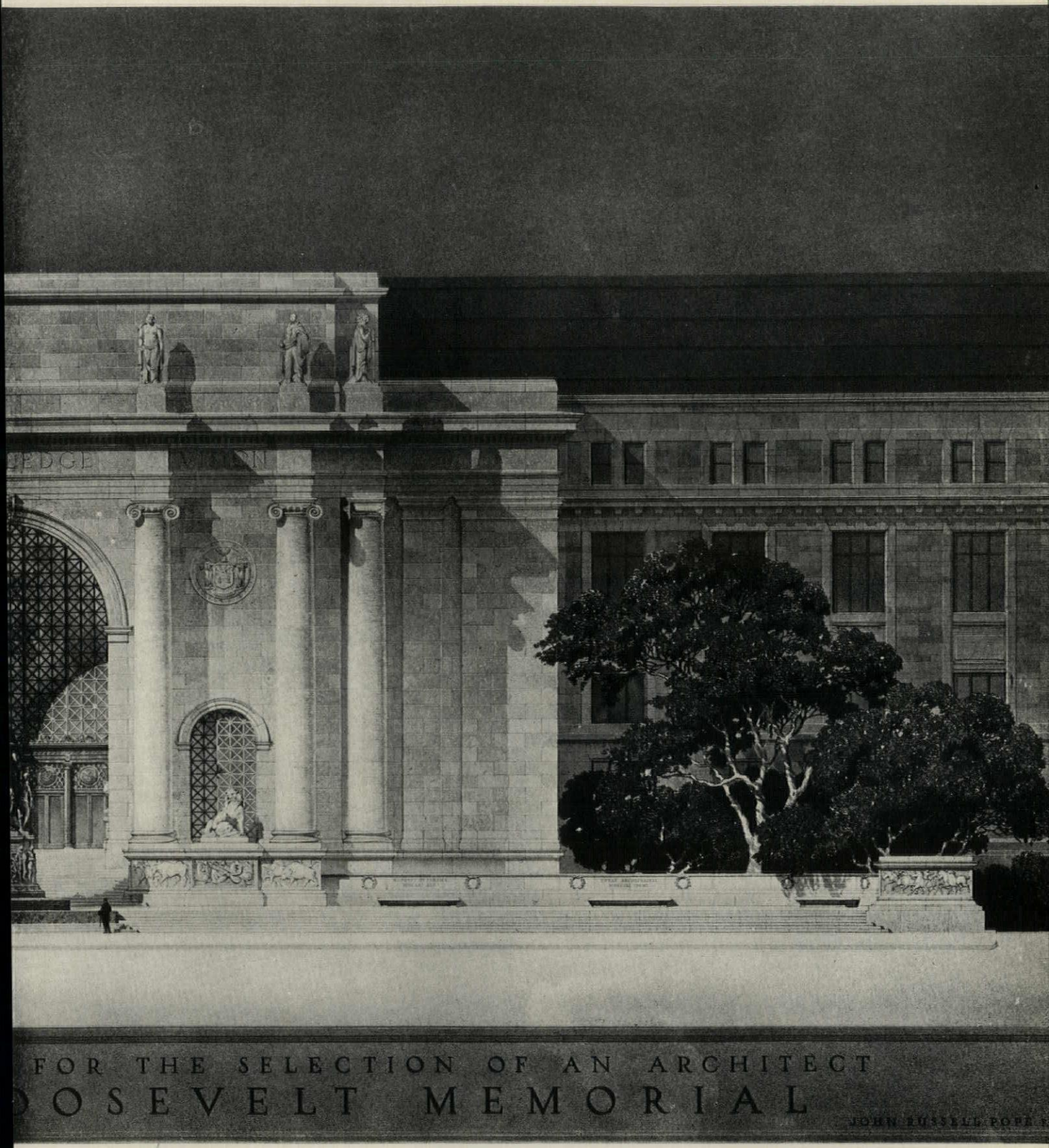
University Prints, Boston

"The Baptism of Christ" by Piero della Francesca, 1420-1492, of the Umbrian School, who was one of the finest mural painters of all time. He shows us here a masterful arrangement and simplification of VALUES. *Notice how he has changed nature: the leaves are darkened and have no halftone; the shadows of the figure of Christ and the trunk of the tree are all kept light; and there is a sparkle of lights in the distant landscape. This painting is mostly a composition of darks with some light and very little halftone. In fact, it almost might be said that this work is a composition in two values*

a difference in the color the similarity of value will not be noticed. This is an extremely bad custom because when viewed at a distance or when the picture is photographed for publication, the color will be lacking and the transparent effect is seen at once. Mistakes of this kind can always be avoided if a separate tracing and study of the value pattern is carefully made before the application of color on-to the final drawing. This value guide will be found most helpful. Many of the greatest of the old Italian masters used to paint their pictures first in monochrome composed of a color called "terre verdi," a kind of greenish black pigment, in which they painted in their design completely before painting or glazing over with color. A method of this sort can be used in water color, first paint the picture in warm

THE DESIGN WINNING THE COMPETITION

NEW YORK STATE R



OTTO EGGERS *won the 1937* BIRCH BURDETTE LONG MEMORIAL PRIZE *for an architectural rendering at the recent New York Architectural League Show. This drawing by him (which is not the one that won the Prize) of the Roosevelt Memorial shows to great advantage Mr. Eggers' knowledge of* VALUES *and his ability to draw in such a way that the jury is usually "sold." These trees are especially good studies in* VALUE *design*

"The City," a Mural Panel by the Author Showing the Simplification of Architectural Forms to Create a Color Pattern

greys and then wash in the local color of the various objects. The result is strong but naturally lacks some of the brilliance and purity of the direct method.

The strength and enduring qualities of the old masters is largely due to this careful study of the values. It is the nice balance of the sizes and weight, or value, of the various spots in a picture that makes the deepest impression upon us. This is what we see at first glance and what we so often judge by when pressed for time in viewing an exhibit. The beautiful pattern of values is one of those major abstractions that make us like a project in spite of the fact that the furnace may be on the roof. Like the base in an orchestra, the values give the power and distinction to a drawing or painting and make it stand out in a crowd like nothing else will.

I need not say that a strong black and white contrast, set side by side, makes an accent. I urge you to place your greatest contrasting values where you wish to concentrate the attention of your client. I have seen any number of architectural drawings where the greatest value contrast was placed in two loving figures in the foreground, or else in a handsome tree to one side, or in the carefully worked out foliage in some corner. Perhaps this is propaganda for out-of-door living. I understand many a competition has been won by an old oak tree that completely hides the house.

A QUESTION OF SIMPLICITY

BY RALPH WALKER, F. A. I. A.

MANY times during the history of Europe the art and the underlying thought of the Occident have been influenced greatly by the Orient. It might be but little open to question were it said that with each major meeting of the East and West another form of art developed in Europe.

The stream of inspiration seems to have been more constant in the East while that of the West has undergone more cyclical changes.

One of the more recent influences has been the great force exerted by the Japanese house on the modern architectural mind. This has been as true of the work of Frank Lloyd Wright as it is of that of Mies Van der Rohe and most of their followers.

It is somewhat amusing to find that the machine minded modern seeking for a simple form chooses that which is so obviously made by hand and moreover made with a seeming simplicity of character which only comes from a complexity of manners.

It is so often true that when an architecture seems simple the manners of its tenants are apt to be elaborate. So, in truth, the Japanese house is the background for a drama of customs and ways rich in form and in tradition. The background is one definitely related to habits of hospitality and to family religion. They are more complete and, at the same time, with a more enduring meaning than are the myths and ways built up about the British Crown.

Materials which in the Japanese house also seem simple are generally chosen with well considered thought so as to avoid monotony, for the Japanese appreciate that the mind and the spirit are related and that monotony is an enemy to both. In the Japanese house there is no lack of sensitiveness; there is no mere riding of an intellectual dogma nor the avoidance of design leading to fundamental human emotions. The use of each form and material is considered with the judgment of creation.

What the Japanese mean when they say simplicity is not what the modern European means. There is no paucity of shapes, no glaring crudity in proportion. They have deeply the feeling for "the spare grace of Line." They choose their surroundings with a subtle and delicate taste and these surroundings, while refined and subdued, are again related to the glorious complexity of the pattern of nature in the closely intimate gardens which are so definitely a part of the Japanese house.

No Japanese could ever say, for example, that the problem of a house was to so place it as to get more land for a garden. To him the problem always would be to place it so as to get the best house related to the best garden.

There is a wide distinction between these two quantities.

Centuries ago, in Egypt, men painfully made bowls of alabaster so simple and so perfect that the forms endure nor can they be bettered in shape or in manufacture, and the same forms are found in Japanese tea bowls, in American Indian pots and baskets, and in Europe throughout both classical and medieval times in the utensils in general use.

Lately the same forms have been used in chromium and aluminum under mass production without much change in intellectual or emotional appeal. Each time, however, that enduring type of form has a subtle complexity of curve either in profile or in surface which tends to give it more than a passing interest.

The modern finds it difficult to associate the human mind with anything except a billboard conception of simplicity. For example, if a house has a view then the view must be ever present and dominantly so. There are no chances of retirement into intimacy.

The modern is very definitely either a simple exhibitionist in that he willingly exposes his private life to the public gaze or, on the contrary, he has a viewpoint of negation and shuts the world out with a wall which permits light but no view.

And whether the view is present or shut out, his conception of simple and intimate

nature is a thorny cactus placed so engagingly to give a graceful note to stark simplicity.

Certainly we need simplicity. But certainly we need to understand that simplicity is not an abstraction but part of moving life.

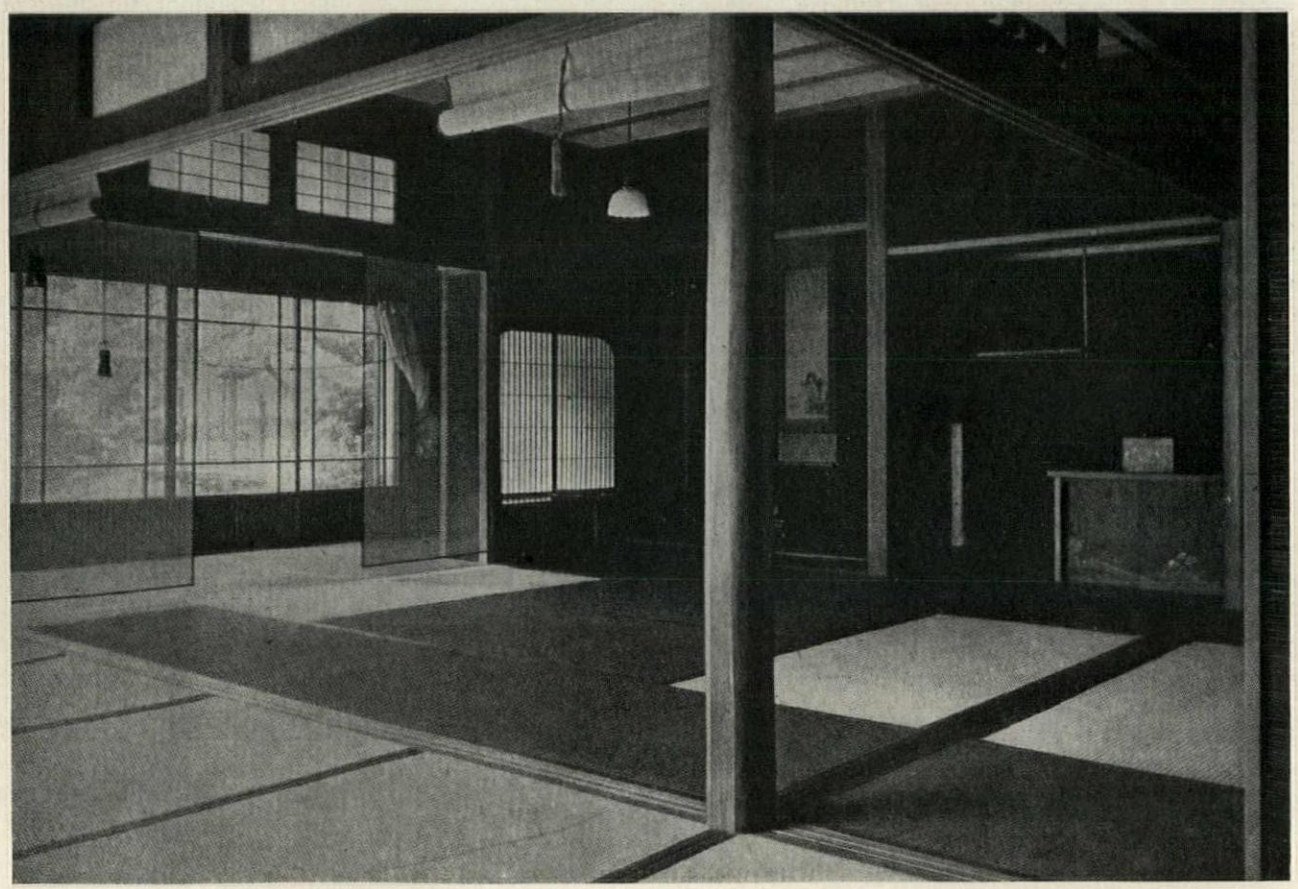
Simplicity has always been assumed to be the one great gift to man which the great Greeks bestowed upon us and always, of course, the Parthenon seems a common ground on which the modern and electric meet. It has become a center for modern sophistry. Any one may use it to point any argument. Yet it is quite true should you strip the Parthenon of all its sculpture and ornament it still would remain one of the most ornamental and decorative buildings in existence. Strangely enough, the Greeks were much more decorative artists than they were architects. The real and supposed refinements are those belonging to a people who delighted in complexity rather than simplicity.

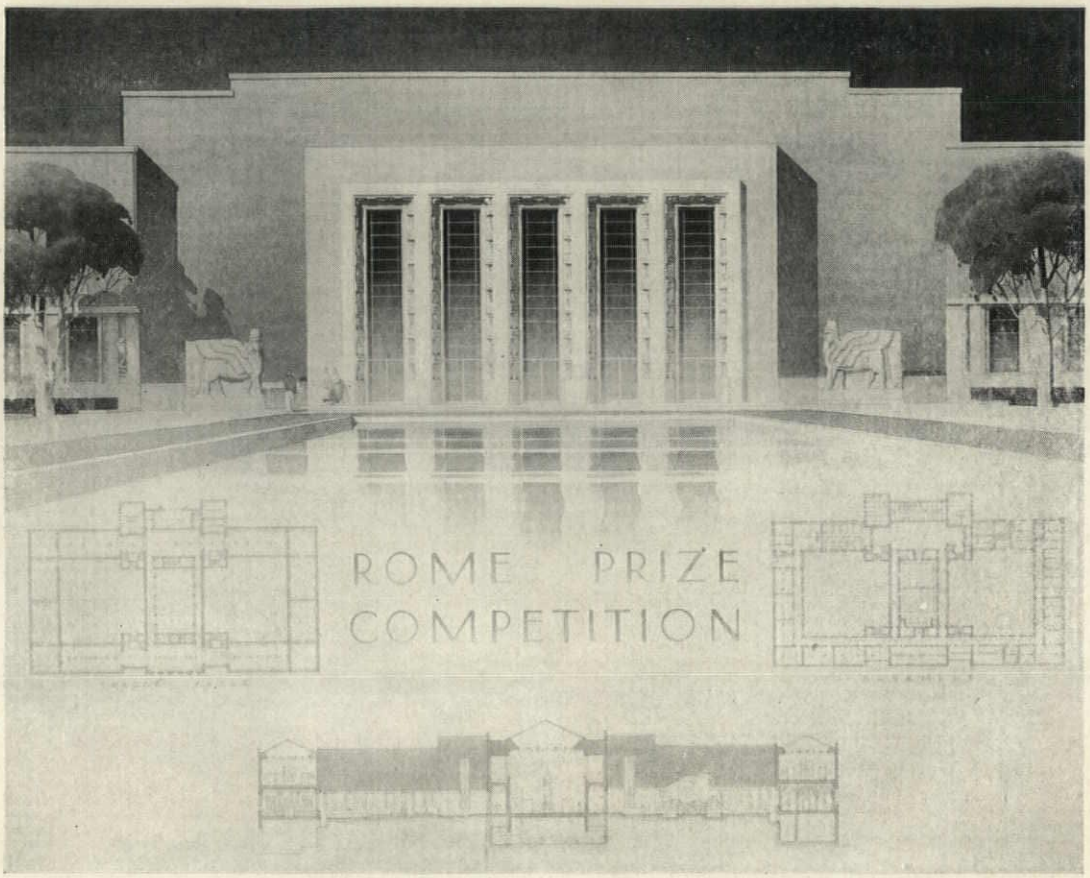
The well known refinements were of a nature to add personality to a generally known and used form. The Greek doric may have been an abstraction but the Parthenon itself achieved individuality.

The Japanese house may be planned on a certain number of mats and a definite sense of related customs but their true knowledge of simplicity enables them to avoid an arid result.

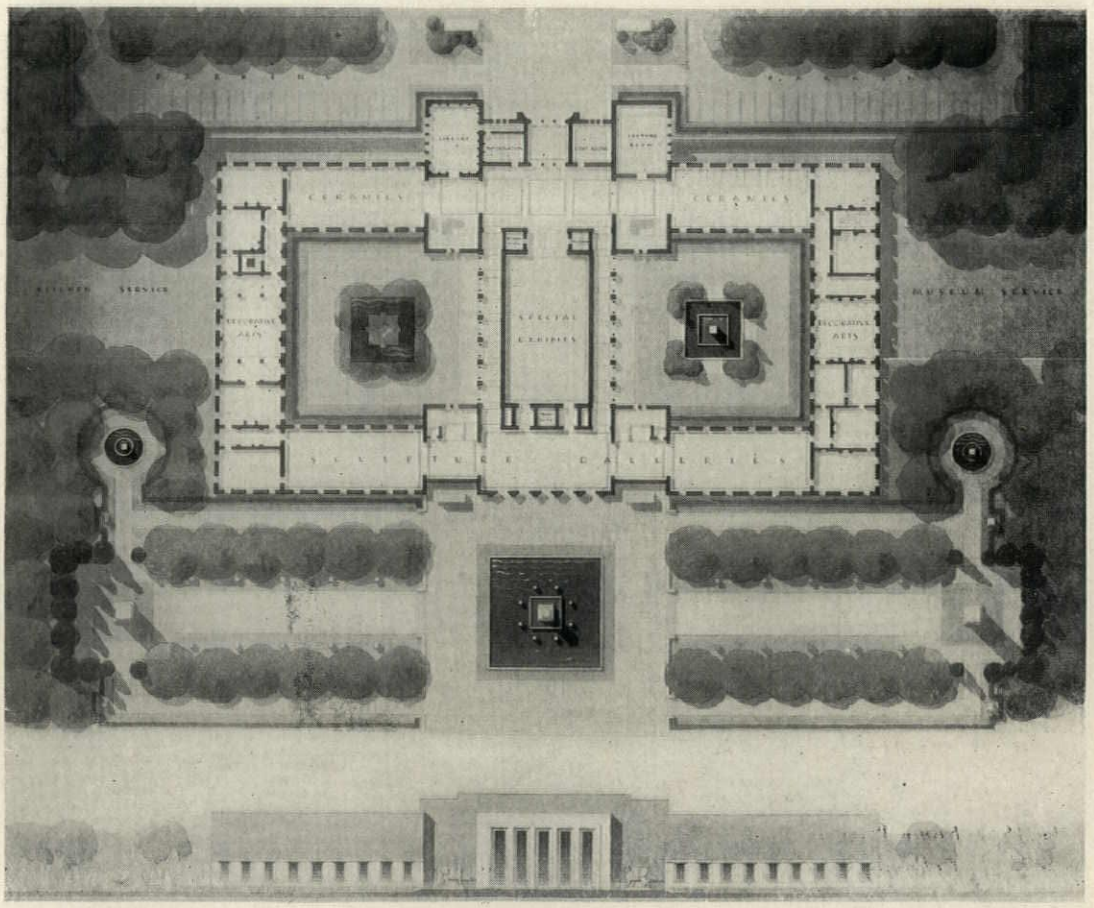
It might be said that simplicity may only be arrived at through a thorough knowledge of complexity. For simplicity without a basis of complex form or manners achieves nothing but monotony.

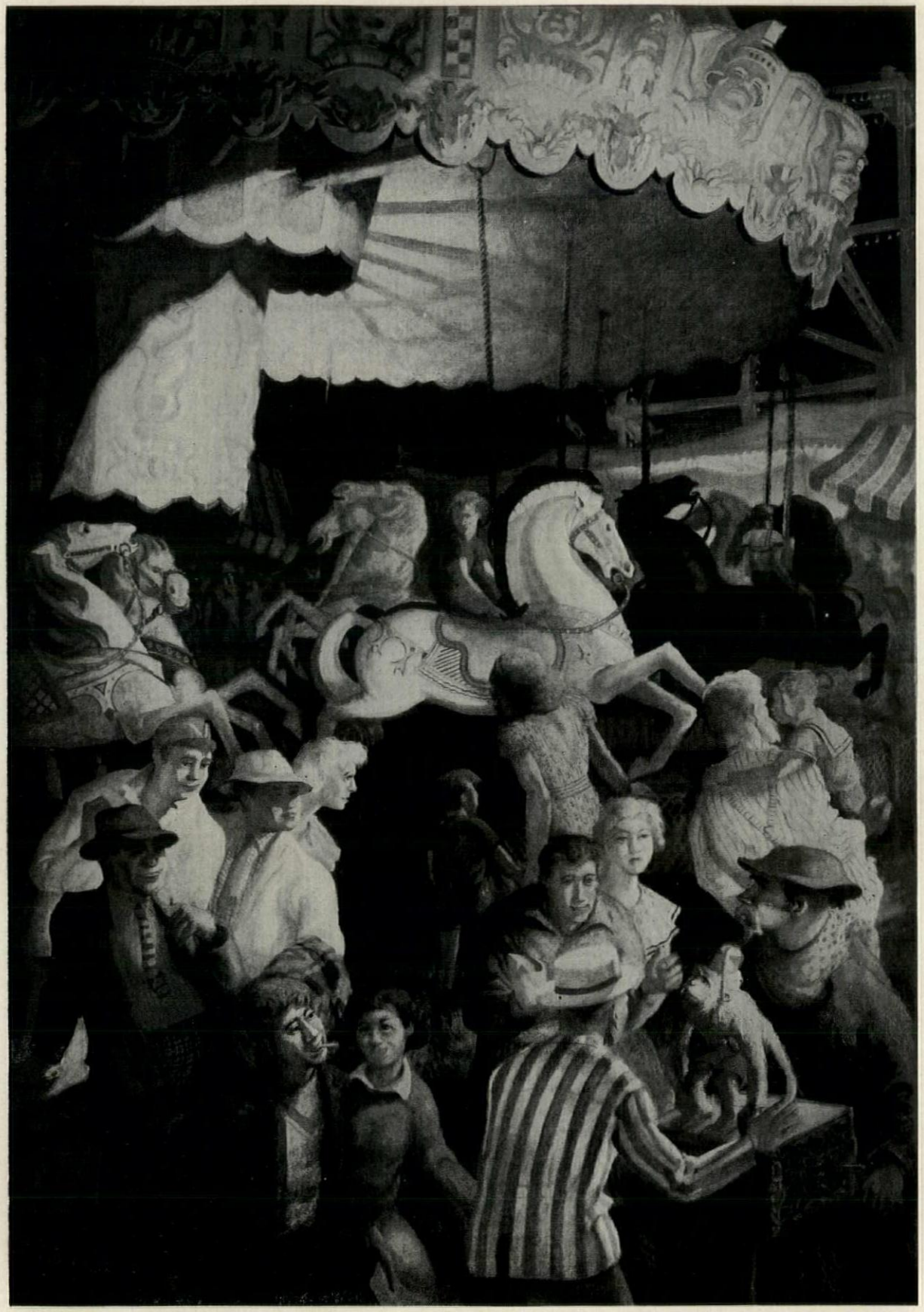
A room in the house of Mr. K. Nezu of Aoyama, Tokyo, reprinted from "The Lesson of Japanese Architecture" by Jiro Harada, which was recently published in the U. S. by the Studio Publications, Inc. This interior was chosen by Mr. Walker as being an especially good accompaniment to his "A Question of Simplicity"



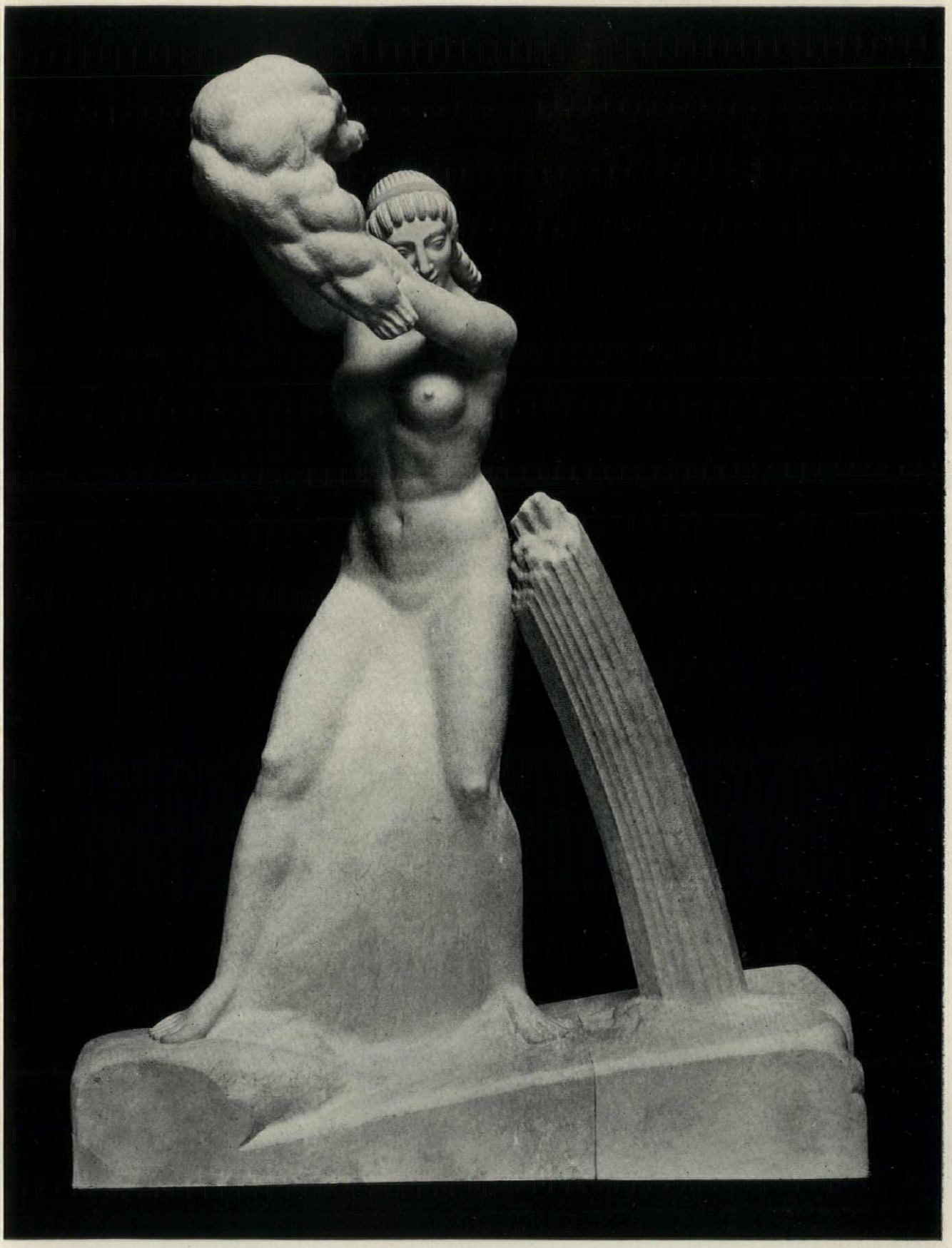


Elevation, section, and plan for a "Museum of Art" which won for its designer, Richard Gardner Hartshorne, Jr., of Melrose, Massachusetts, the 1937 Katherine Edwards Gordon Fellowship in Architecture which carries two years of resident study at the American Academy in Rome

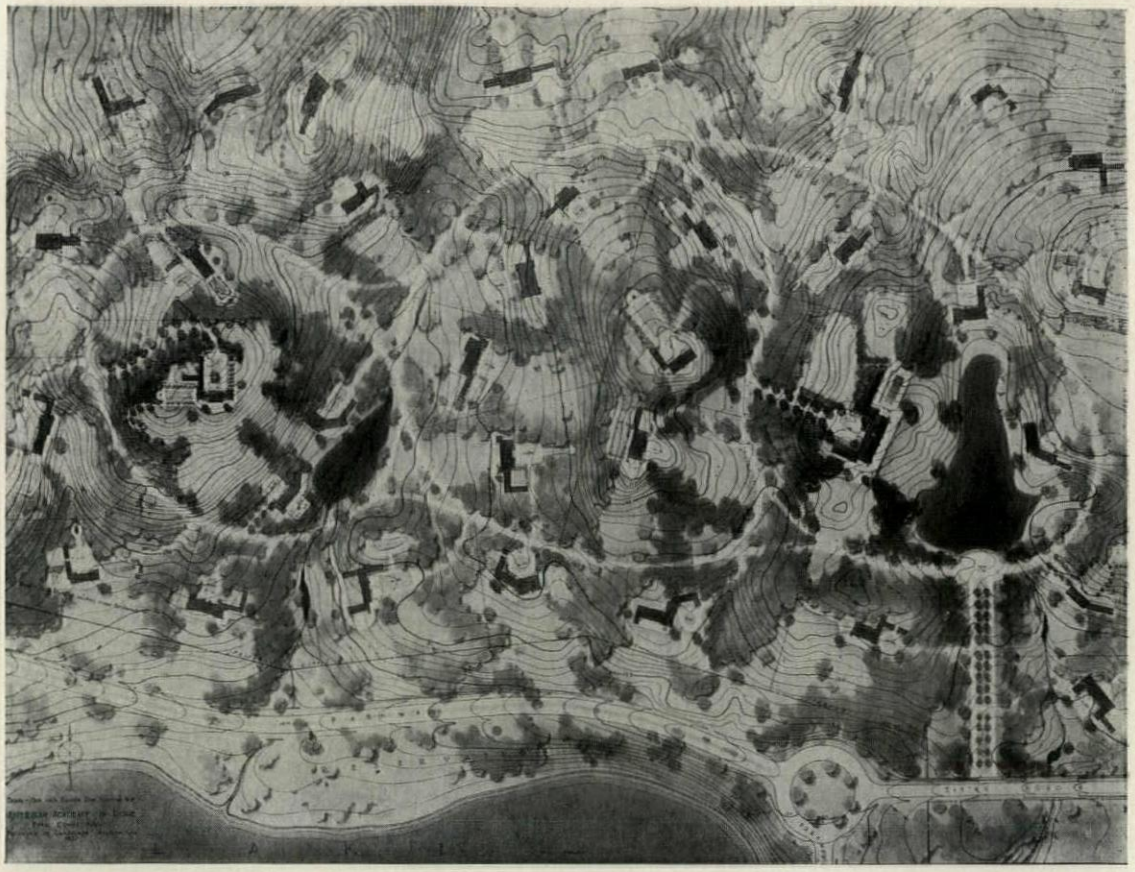




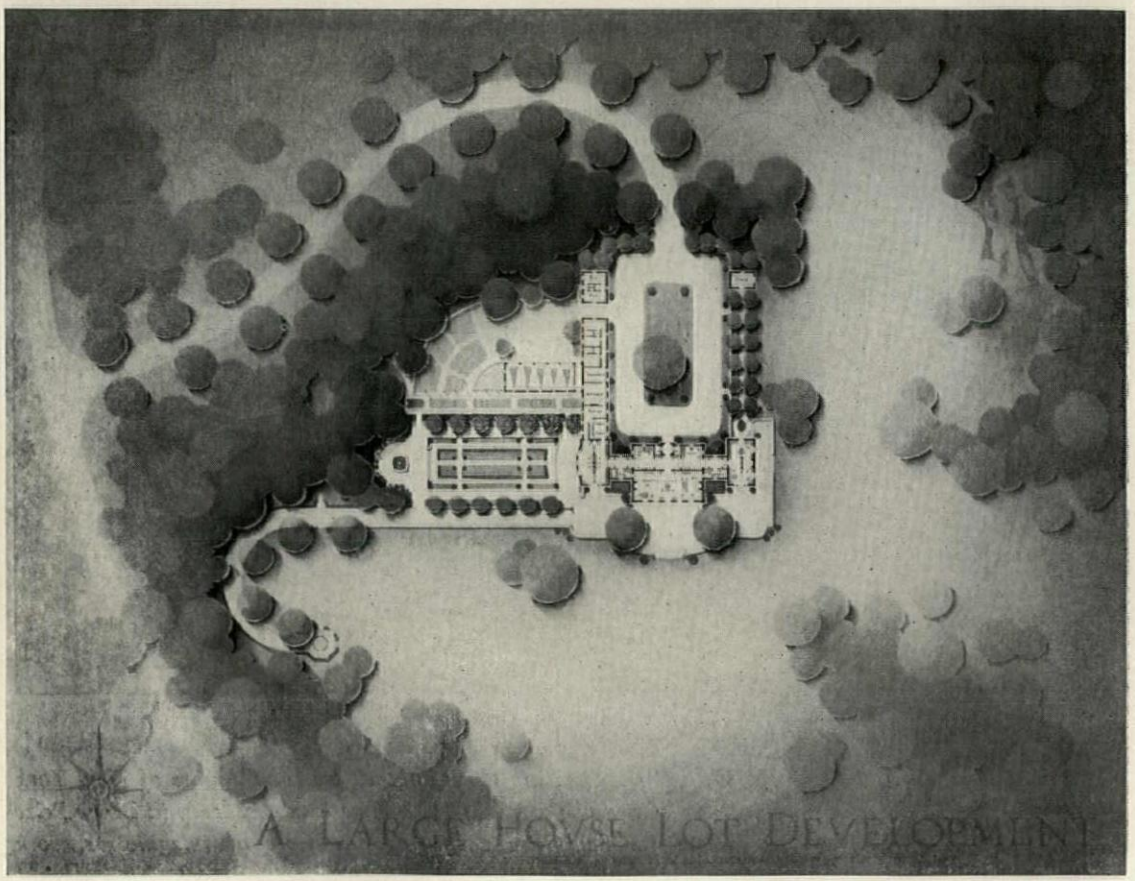
The 1937 Rome Prize in Painting went to Clifford Edgar Jones of Kokomo, Indiana, whose bright and colorful "Carnival" has fine values even in black and white

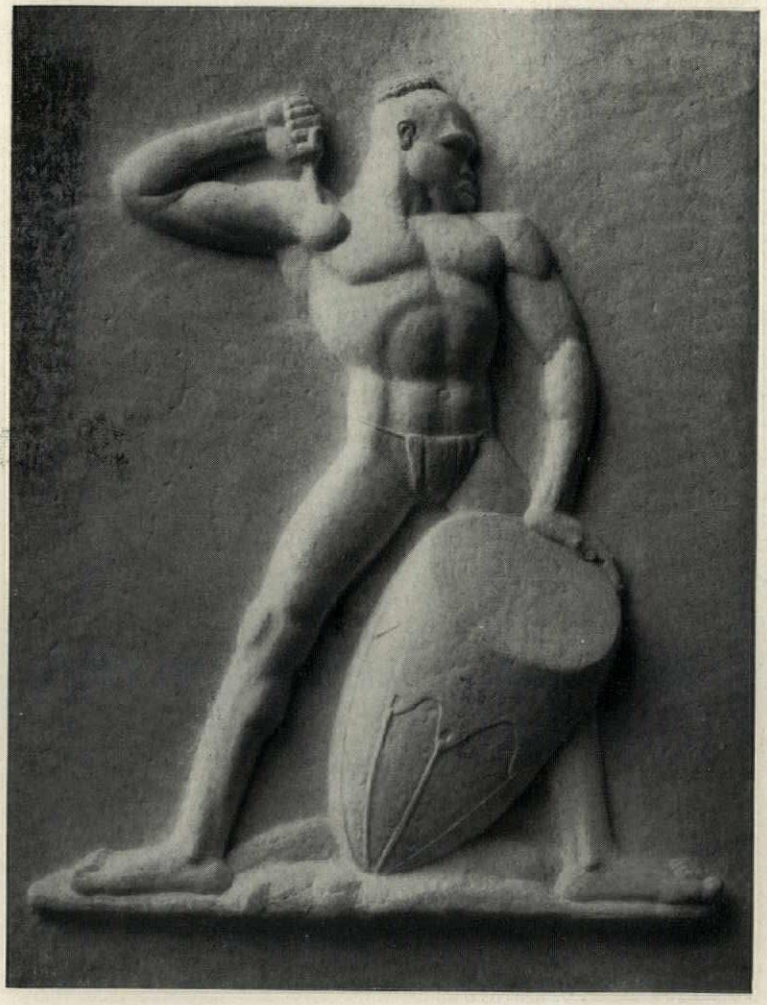


"Iris Creating the Rainbow" by John Amore of New York City who won the 1937 American Academy in Rome Prize for Sculpture with this fine piece of imaginative work

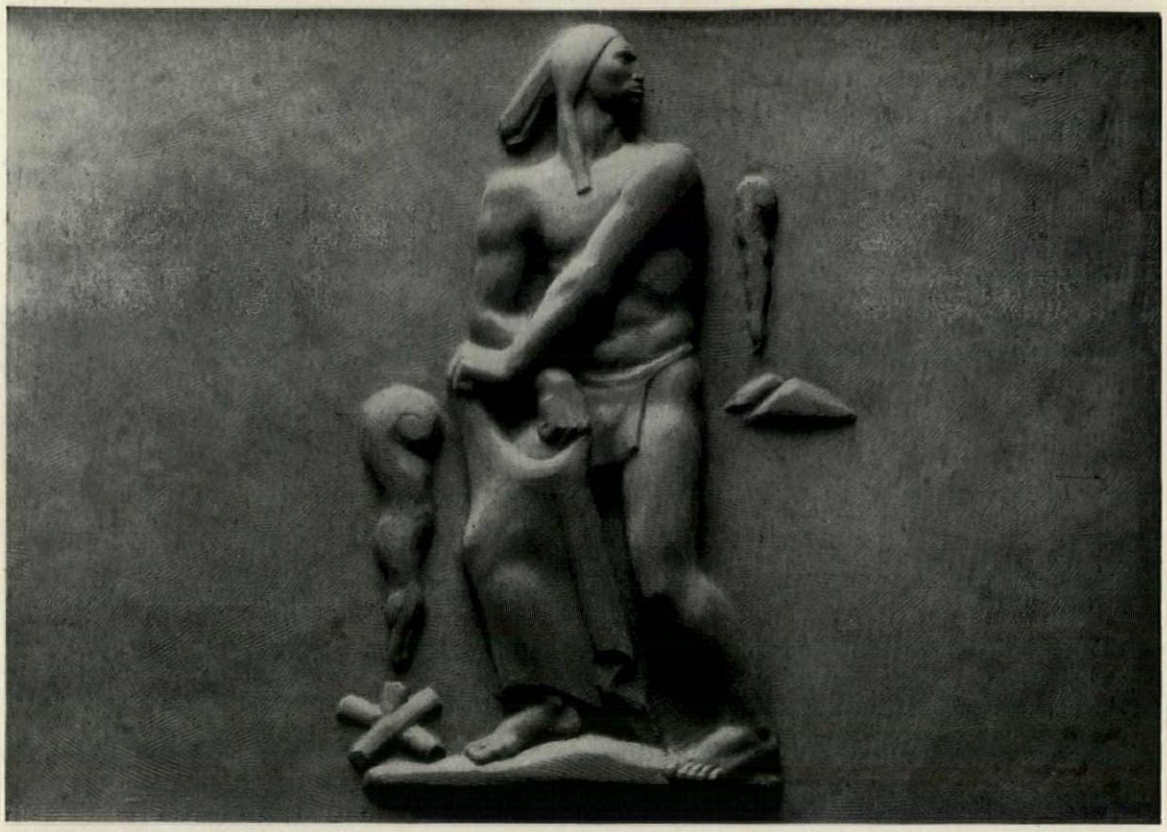


John Finley Kirkpatrick of Cincinnati, Ohio, received the 1937 American Academy in Rome Award in Landscape Architecture for his solution to the Competition Problem calling for the development of a large tract of land as a fine residential district. His renderings of the development as a whole, and in part, are presented here. A close inspection of them reveals imagination and good planning

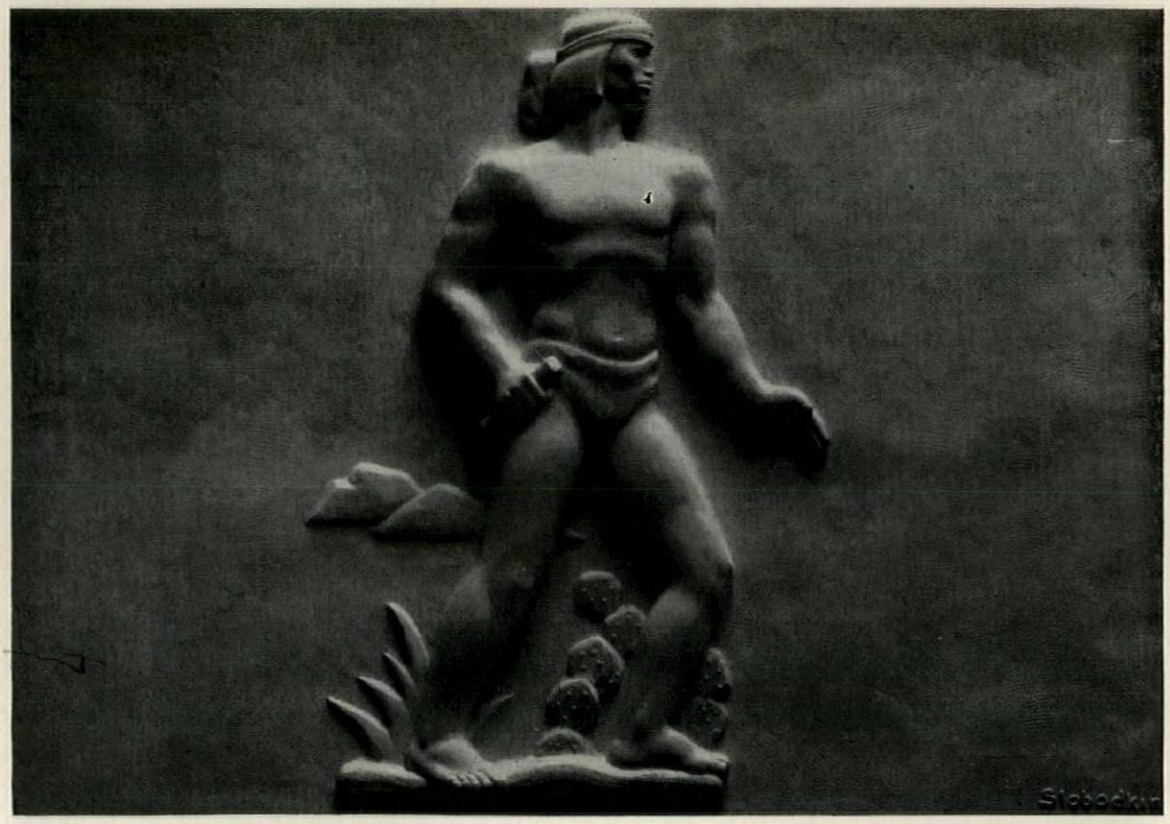




Two sculptural panels, "Communication by Flight," above, and "Communication by Sound," below, executed by Edmond Amateis for the new building which houses the Madison Square Branch of the New York Post Office. The building itself was designed by Lorimer Rich, Architect. The panels were designed for execution in cast iron with the figures gilded against a black background for contrast

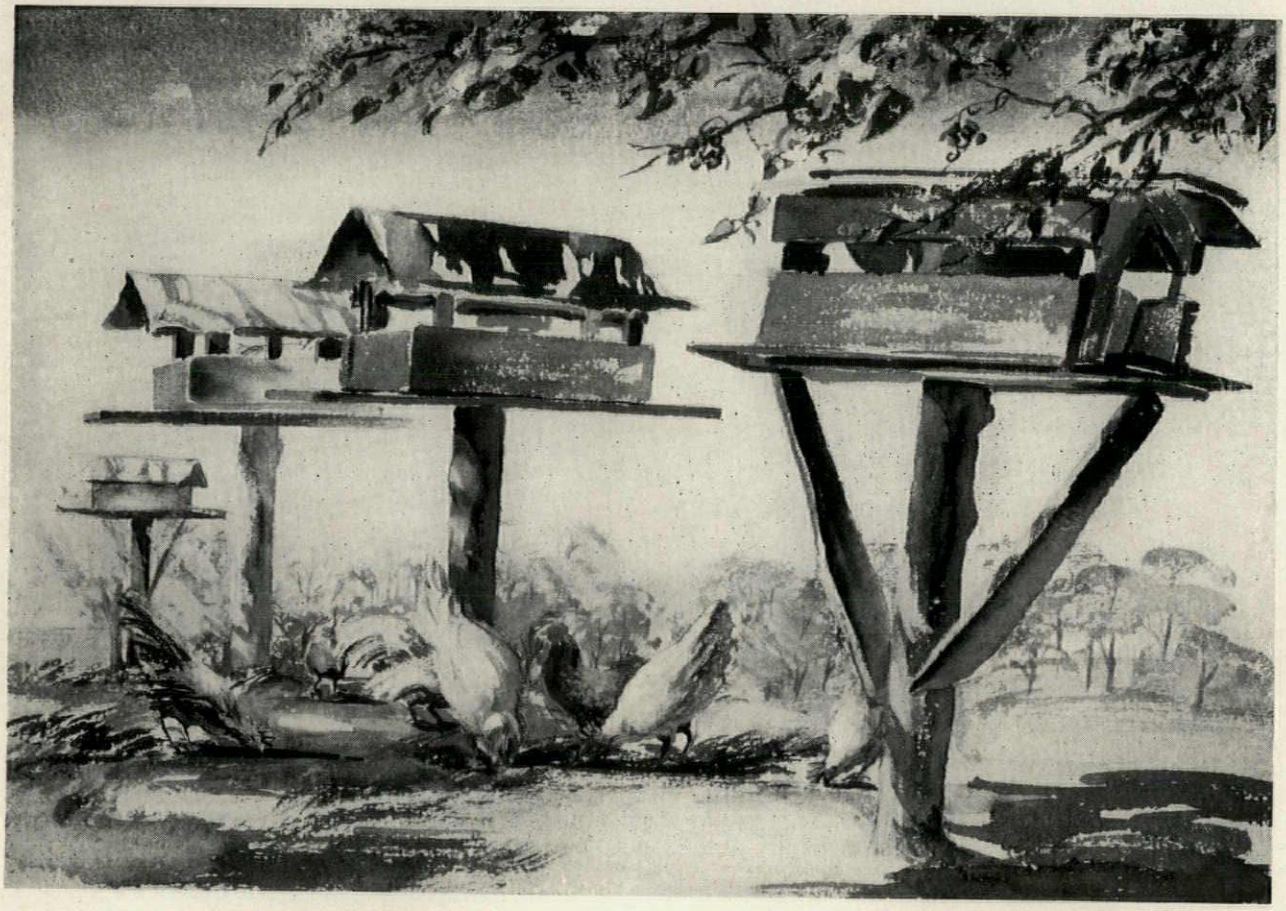


Decorative sculptural panels by Louis Slobodkin for the new Madison Square Branch of the New York Post Office. The one above is "Communication by Sight," the other "Communication by Motion." Like those on the preceding page, the finished panels were cast in iron and had gold figures on black



Rear view of a Victorian cottage in Laurens, South Carolina, as sketched in water color by Willa Gray Martin. The high elevation of this house above grade is unusual in the south, according to Miss Martin, but in this case the expense of a brick foundation was eliminated by the use of stone pillars. Chicken nests, partly hidden by lattice-work, utilize the space thus provided

Two more Carolina water colors by Willa Gray Martin, reduced to black-and-white but still effective in value arrangement. Above, a negro cabin on washday, with its rock and clay chimney, shingled roof and T-shaped plan, characteristic of up-state regions. Below, elevated hen housing, arranged to keep nests safe from prowling possums



GUPTILL'S CORNER

Well Sir, and Well Marm, and Well Miss, and Well, Well Everybody, here I am dropped right in your midst again! And am I glad to be back!

And thank you, thank you, thank you, for all your letters and cards and things! I didn't know how many friends the Corner had until its career was interrupted by the advent of our new magazine, ART INSTRUCTION.

I hope you'll forgive me if right now I say my little say about this youngster which is my new pet, and get it off my chest. First, I am more than delighted to find that so many of you Cornerers are already on our subscription books with others joining daily. And I honestly believe if you are interested in bettering your knowledge of the use of the pencil, brush, and pen, you will be glad in the long run you signed up. I sincerely hope so. We have arranged with many real leaders to write on just the sort of things I believe you like, and Ernest Watson and I will add our bit in every issue.

To brag some more, the splendid acceptance of the initial issues has amazed us, hopeful though we were. Many dealers haven't been able to keep stock on hand—one of them sold 50 copies in a single day. If this keeps on, the thing is bound to prove a grand success. And we're doing our darndest to make it just that. And you are too. So thanks again for your part! And don't forget we want your suggestions from month to month as the project develops.

I wonder how many of you are familiar with the famous "walking bug" problem which this diagram illustrates. It's quite a brain-teaser.

The bug is inside a box at "A," 5 inches in and 1 inch up from the bottom. He wants to get to "B," 5 inches in and 1 inch down from the top (still inside, of course).

What is the shortest route for the bug to take? And how far will he have to travel? Remember he (or she) is a *walking* bug and cannot fly. And the answer *isn't* 30 inches! Try it out. The first person to solve it is entitled to the keys to the city. We'll print the answer next month.

HAVE YOU SEEN THIS ONE?

From time to time I have received interesting suggestions from Cornerers on unique methods of drawing and painting. J. H. Stewart, of Cincinnati, sent in the following stunt which some of you may like to try. He says, "If you've heard this one you can stop me. You need a number of plain white dinner plates, or saucers will do, and a few camel hair brushes. You will also require a candle. Smoke the inside of a plate with the lighted candle to a thick dense black, and render the subject with the camel hair brushes. If results are satisfactory, the plates may be 'fixed.' If not, they may be washed clean. There are a number of tricks in technique that one stumbles upon after a few trials. In fact, if no one is watching, the work may be touched up with a lithographic pencil. However, it is more interesting to see what you can produce with the brushes alone." Ain't that sumpin?

A PLATE PAINTER PAINTING PLATES

July is the month when outdoor sketching enthusiasts show unusual activity. Among architectural folk the pencil seems the most popular tool, or at least runs a close second to water color. If you make a pencil sketch which becomes involved as to technique or otherwise proves disappointing, don't forget that by brushing a little turpentine, benzine, or some similar solvent over it you can soften and distribute the graphite, changing the effect for the better. Or you can use this combination of pencil and solvent deliberately. See Sketch 1.

And don't overlook the advantages, for quick sketching purposes, of large square sticks of graphite, three inches or so long and a quarter of an inch or more in width. Especially do these prove convenient where time is at a premium or large areas are to be toned. They are capable of great side strokes, while their end strokes, which are quite large, permit easier treatment of detail. Where fine work is needed a pencil is normally used in conjunction with a stick. Sketch 2 shows a quick effect using such a combination.

A technique which seems to be growing in popularity, especially among comic artists and illustrators, is exemplified at 3. In this, line work in crayon, pencil or pen, is supplemented by tone work obtained by the use of powdered graphite or some sort of powdered crayon. The line defines the form: the powdered medium, rubbed in with finger or stump (and ultimately sprayed with fixatif) gives a rather unusual tonal quality. The graphite from your sandpaper pad, especially if you have been sharpening soft pencils, does very well for this. Highlights are often erased: "kneaded rubber" is good for such erasure, the draftsman's shield proving helpful in controlling the process.

Sketch 3 was outlined in pen before the powdered graphite was applied.

Sketch 4 was done quite completely in pencil and then toned here and there by rubbing with the stump.

Most architects have at one time or another experimented with the so-called "water-color pencils." Similar soluble materials are now being put out in the form of crayons. Drawings may be done directly with these, their large size suiting them particularly to outdoor sketching and other rapid work; more often water is applied to the crayon work.

Speaking of outdoor work (regardless of medium used), remember, especially if trying your hand at it for the first time, that it is far easier to sketch things at some distance than nearby. For things at a distance appear to be relatively simple. If you attempt things nearby, it may prove necessary to shift the eye repeatedly from one area to another. As you draw each of these areas it may look correct in itself, but the whole may reveal distortion, the various areas not combining properly. The effect is in a sense comparable to what we would obtain in a photograph if it were possible to focus the camera in several different directions from instant to instant while making a single exposure. The larger the subject matter, the greater the difficulty in this respect. So if you wish to save yourself trouble, stand back!

Four sketches by Arthur L. Guptill demonstrating four pencil techniques. A more detailed description of this work will be found on the preceding page