

# arts & architecture

PRICE 50 CENTS

MAY 1964





---

KASPARIANS CONTRACT INSTALLATION / AIRPORT LOUNGE

---



*Horizon Room / Western Airlines Terminal / Los Angeles International Airport*

---

*interior design / Charles Luckman and Associates AIA / Los Angeles*

---

*furniture / KASPARIANS KM/24-1WB*

---



---

*please request catalogs on your letterhead from*  
KASPARIANS INC. / 7772 SANTA MONICA BOULEVARD / LOS ANGELES 46, CALIFORNIA

---



***In Next Month's issue of Arts & Architecture***

Form and Force by Ralph Knowles

House by Harry Seidler

An Architectural Sculpture by Michio Ihara

Please enter my subscription to

**arts & architecture**

NAME (PLEASE PRINT)

STREET ADDRESS

CITY STATE ZIP #

NAME OF YOUR FIRM

TYPE OF BUSINESS TITLE OR OCCUPATION

☐ 1 year —\$5.00

☐ 2 years—\$9.00

☐ 3 years—\$12.00

☐ check enclosed

☐ send bill

These rates apply to subscriptions to U.S.A. and Possessions only.  
Elsewhere: one year \$6.50, two years \$12.00, three years \$15.00.





**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT No. 43623, LOS ANGELES, CALIF.

**arts & architecture**

3305 WILSHIRE BOULEVARD  
LOS ANGELES, CALIFORNIA, 90005





Cover: Roof structure  
of Sports Arena, Genoa

EDITOR: David Travers

EDITORIAL ASSOCIATES

Amir Farr  
Dore Ashton  
Peter Yates  
Esther McCoy  
Susan Jonas  
Alfred Auerbach

LAYOUT

John Follis  
Frederick A. Usher, Jr.  
Ken Chapman

EDITORIAL ADVISORY BOARD

John Entenza  
William Wilson Wurster, F.A.I.A.  
Walter Gropius, F.A.I.A.  
Nathaniel A. Owings, F.A.I.A.  
Richard J. Neutra, F.A.I.A.  
Welton Becket, F.A.I.A.  
George Vernon Russell, F.A.I.A.  
Maynard Lyndon, F.A.I.A.  
Victor Gruen, A.I.A.  
Marcel Breuer, F.A.I.A.  
Paul Thiry, F.A.I.A.  
William L. Pereira, F.A.I.A.  
Harris Armstrong, F.A.I.A.  
Robert E. Alexander, F.A.I.A.  
John Rex, F.A.I.A.  
A. Quincy Jones, F.A.I.A.  
Whitney R. Smith, F.A.I.A.  
Gregory Ain, A.I.A.  
Pierre Koenig, A.I.A.  
Ira J. Bach, A.I.P.  
Harry Seidler, A.R.A.I.A.  
Konrad Wachsmann  
Paul Rudolph, A.I.A.  
Craig Ellwood  
Isamu Noguchi  
Finn Juhl  
George Nelson, F.A.I.A.  
Gyorgy Kepes  
Arthur Drexler  
Garrett Eckbo  
Edgar Kaufmann, Jr.  
Dorothy Liebes  
Harry Friedland  
Herbert Matter  
Edward Frank, A.I.D.  
Harold W. Grieve, A.I.D.

PRODUCTION MANAGER

F. Stuart

CIRCULATION MANAGER

Paula Jones

ADVERTISING REPRESENTATIVE

Arden E. Roney & Associates  
580 South San Vicente Boulevard  
Los Angeles, California 90048  
651-3930

149 California Street  
San Francisco, California 94111  
981-0848

830 North Wabash Avenue  
Chicago, Illinois 60611  
787-3717

317 Stephenson Building  
Detroit, Michigan 48202  
875-7978

200 Park Avenue, Room 345  
New York, New York 01017  
986-0625

208 Almeria Avenue  
Coral Gables, Florida 33134  
444-8326

751 Main Street  
Waltham, Massachusetts 02154  
889-3475

# arts & architecture

## CONTENTS FOR MAY 1964

### ARTICLE

A Statement by Louis I. Kahn	18
------------------------------	----

### ARCHITECTURE

House by Craig Ellwood Associates	14
Precast Concrete Auditorium by Flewelling & Moody, architects	16
Italian Building Materials by Esther McCoy	20
Motel by Tracy Price Associates, Peter Munselle, architect	26
Case Study Apartments No. 2 by Killingsworth-Brady and Associate, architects	28

### ARTS

Art	6
Books	8
Music	10
Decorative Designs in Redwood	31

### FEATURES

Notes in Passing	13
Merit Specified Products for Case Study Apartments No. 2	32
Et Cetera	36
Reader Service—Product Literature & Information	38

ARTS & ARCHITECTURE is published monthly by Arts & Architecture, Inc., 3305 Wilshire Boulevard, Los Angeles 5, California. Established 1911. Second class postage paid at Los Angeles, California. Price mailed to any address in the United States, \$5.00 a year; to foreign countries, \$6.50 a year; single copies 50 cents. Editorial material and subscriptions should be addressed to the Los Angeles office. Return postage should accompany unsolicited manuscripts. One month's notice is required for a change of address or for a new subscription. The complete contents of each issue of ARTS & ARCHITECTURE is available to subscribers in a Microfilm edition.



# ART

DORE ASHTON

When, during the past ten years, the modern writer has thrust a long catalogue of objects into his narrative, or when the film director has trained his camera interminably on one object after another, or when the young artist has ransacked the world for bits and pieces of solids, or when the painter has declared that he makes not a painting but an object, it is clear evidence of a significant campaign to re-orient the contemporary sensibility toward the so-called objective world.

But, unless we seek to founder in a morass of philosophical hair-splitting, it becomes very difficult to understand in what sense this new orientation admits of deep significance. An object in a common-sense definition is nothing other than something which is there, a solid which our senses encounter and which is identified almost automatically. An object is what we trip over in the dark. It is there to recall us to awareness. It is true that an object can be invested with tremendous meaning — the famous Proustian madeleine — but that is of course totally dependent on a subject. What then, speaking plainly, is the meaning of the end-less discussion of objects in the new esthetic?

It cannot be simply an attempt to awaken sensibilities to the endemic esthetic properties in solids, in those thing-like objects our senses encounter throughout the waking life. If this were so, then sculpture would be far more important than it is today. The fact is that there are fewer good sculptors than ever, and the few who survive growing indifference to their work are in the same lamentable position as the painters who insist on paintings instead of objects.

It seems to me that the growing obsession with objects is one of the most impoverishing esthetics ever to afflict modern art. It is another one of those isolating, fragmenting approaches that in the end can only achieve gross mannerism.

I remember reading an essay a few years ago by the French novelist Michel Butor in which he offers a long descriptive passage from one of the classic writers (perhaps it was Dostoyevsky). A young man enters a room. The room has yellow wall-paper. There is chintz on the furniture, some dried flowers. Cheap prints on the wall. And so on. This simple enumeration of the contents of the room, Butor pointed out, needed no poetic adjectives, for it occurred in a crucial point in the novel, and was poetic in the context. It is the *context* which illuminates the passage. If Butor lingered tediously in his own novels over the minute details of the physical structure within which human events come to pass, it is clear that he envisioned an esthetic of wholeness, of context which necessitates contrasts.

But the majority of object-makers reject contrasts as corrosive to their notion of the thing-in-itself. They do not point to objects with a poetic end in view. There is no wholeness at the end of their rainbow. Only more objects in an assembly line that has no end. The similarity between their work, which is three-dimensional, and the work of a sculptor is misleading, for fundamentally they have nothing in common. The true sculptor knows all about the solidness of objects, the thingness of certain experiences, the

strangeness of three-dimensional forms fixedly observed. But he knows more, and wishes to express more, which puts him in the category of the painter for whom paint is a means toward a vision of unity.

I think the French sculptor Jean Ipousteguy (b. 1920) put it very well in his remark that "objects, like machines, are right on top of numbers; anti-objects (works of art) issue from the *intervals* between numbers."

Ipousteguy also takes a strong position as a sculptor. He renounces the conveniences of novelty in favor of personal, organic growth as an artist — something which has little to do with external flashes of uniqueness. "As a sculptor," he says in his notes, "I am not here to 'invent' but to 'remember'. Artists (or creators as they are called) merely remind their contemporaries of what is in danger of being lost: an initial language already expressed a hundred times."

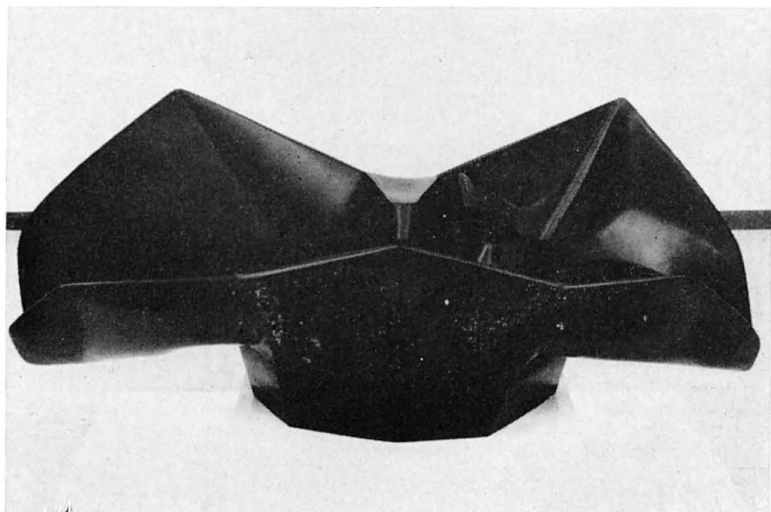
The forms that Ipousteguy draws from plaster or clay and renders in bronze are such reminders. They are not mere solid objects, but rather, an abstract evocation of all the dynamic shapes that could move him, that have moved him, and that have moved others before him. These forms he seeks to interpret in terms of context: They exist as reminders of human shapes, but more importantly as reminders of the vital actions and histories of humans, and of their existence within a universe.

Once you have such universal terms, it is impossible to think only in terms of a solid weight displacing so much space and lying in the path of our senses.

In his exhibition at the Albert Loeb Gallery, Ipousteguy demonstrated the range of his thought. He tackles problems of relationships from more than one viewpoint. For instance, there is "La Rêve Moisi" (The Mouldy Dream) which is a pure baroque compendium of specifically symbolic forms. Verging on surrealism, this sculpture calls to mind the mythic constants in the imagination. With its breasts, its suggestion of fingers, its corroded surfaces, its corruscating detail, it reminded me of the fertility sculptures in the Tivoli Gardens.

If the allegorical intention is spelled out emphatically in this piece, in others Ipousteguy works with non-specific associations, vaguely metaphorical. For instance, one of the most striking sculptures is his "Casque Fendu," a broken helmet by title, but far richer in evocation by form. This ovoid, full sculpture, rent in several of its curved walls, refers as well to rocks and planets as it does to the human head. Its four jagged-edged forms which lie free in the front window, are as much like parched clay on the desert as they are like the divisions of a face. In addition, the dense black lacquer patina which Ipousteguy habitually uses to emphasize the contrast between smooth and flowing curved walls and sharp fissures, gives the total form a kind of unity which must certainly be one of Ipousteguy's objectives.

Sometimes it is this smooth, rather thick lacquer which lessens the impact of the sculptural form. The roughness and abrupt breaks in continuity important in all his work are made to appear too elegant. When he cuts cleanly through clay and casts the resultant sharp forms, he makes a compelling statement by means of contrast. But the contrast is dulled by the thick, smooth surface.



Jean Ipousteguy

Left:

*"Le Crabe et l'Oiseau"*

62" long; 1958

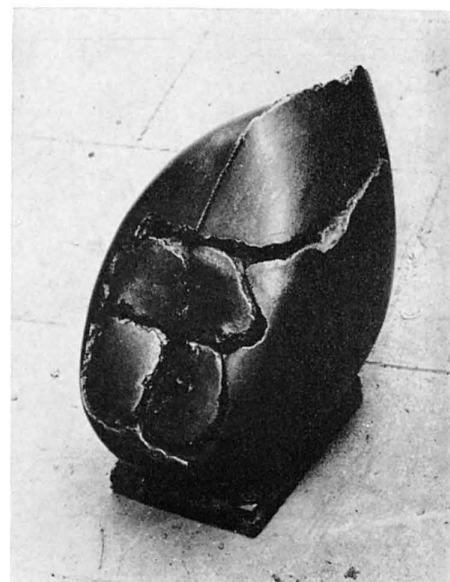
Photo by Thomas Feist

Right:

*"Helmeted Head"*

16 1/4" high, 21" long; 1959

Photo by Robert David



Courtesy Albert Loeb Gallery



I have always hesitated to discuss painting in terms of the regions in which it is done, but geography does play its part, particularly on the West Coast. The artists around San Francisco seem to have preserved the robust spirit of burlesque which once existed in the East. At an exhibition of the work of William Wiley — his second show in New York at Staempfli — I couldn't help being impressed by the breathless, I'll-try-anything-once spirit which Wiley allows to take the initiative in his works, particularly his paintings.

By this I mean that he doesn't seem the least bit worried about how a painting will come out in the end. The important thing is to render his capricious notions as directly as he can. This results in a certain ingratiating crudeness; a wantonness that is at once disturbing and intriguing. He is like a very young animal who is compelled to expend energy, even if it means blundering into stone walls or hurtling over precipices.

Wiley likes large formats, and often combines two large canvases in order to spin out his humorous views of certain hallowed subjects. He paints densely, and reminds me often of the older San Francisco painter Frank Lobdell in his uses of impasto. But unlike Lobdell, Wiley cannot quite handle his densities, and his surfaces do not have the structural soundness found in Lobdell's work. A huge yellow field, for instance, stays on the surface with Wiley, whereas in Lobdell's paintings, it seems to well up from yellow-essence below.

Still, why carp about technique? Wiley indicates in his racing forms a heavily populated imagination and a true sense of burlesque. His diptych "Columbus Rerouted" for instance contains a number of symbols that seem especially important to him: forked lightning (a corny parody I'm sure); testicles masquerading as plants; heart-shaped forms, and inserts of map-like drawings. In this painting, and in a number of very small encaustic paintings, Wiley begets an elaborate, cartographer's imagery that reminds me a little of the drawings in children's editions of Poe's "The Gold Bug." His whole viewpoint is drenched in the quick, loud laughter of a very young man playing games with his talent.

Even the small works with their parodies of solar and lunar dreams have something downright funny and boyish about them. If there is any doubt, look at the three-dimensional objects — sex symbols all over the place combined with the sober symbology of the alchemists.

What strikes me as regional is Wiley's willingness to dispense with the striking autographic image, or the "look," in order to be free to keep painting, as his imagination feeds his hand, without interruption. He is neither so bloody serious nor so intent on "style" as his Eastern counterpart. On the other hand, he still finds paint exciting, and does not limit his range by going over entirely to objects. From the exuberant address evident in the work, it is possible to predict that Wiley will continue to enjoy painting for its own sake, and will in time learn to use his medium to its best advantage.

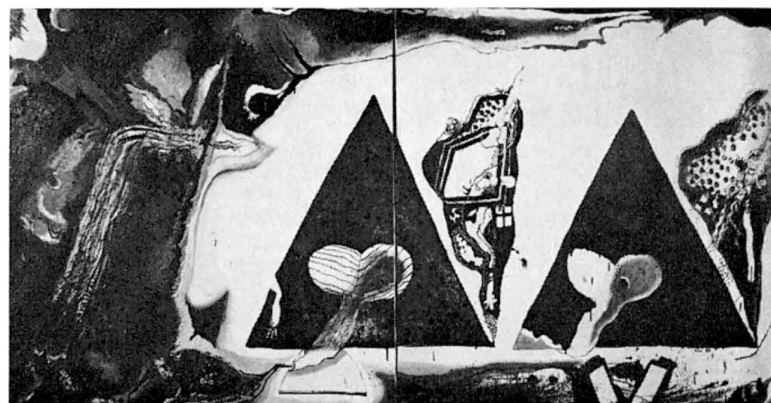
\* \* \*

From time to time I relay the sarcastic observations of Jean-Francois Revel, art-critic, novelist and arch gadfly on the French scene, since I find his consistent negativism generally amusing. This time he is attacking the reproduction and art book industry, lamenting the false air of general culture these commercial enterprises sponsor.

So you think the big exhibitions never were so well attended? Well, Revel says, you're living in cultural euphoria. Other epochs were less optimistic and there were even Montaigne and Baudelaire who were positively suspicious of their times. But we, we are enchanted with ours. Everyone wakes up in the morning delighted to be in 1964; to live in it is almost in itself a proof of talent. No doubt about it, he writes bitingly, we are the most intelligent, the most sensitive, the most informed men in history.

But wait: Diderot remarked in 1761 that he could scarcely see a certain picture because of the crowd. A critic in 1810 complained about the masses of herring sellers, valets and porters obstructing his view of the Salon. In 1824 on the first day of the Salon, a reporter wrote: "After nine o'clock an immense crowd waited . . . already two thousand people waited impatiently. At last the doors opened and the people spread through the galleries. This avid multitude threw itself with stamping feet into the pleasure of glancing in these vast rooms at some 2,300 works waiting for their inspection."

In 1836, Revel continues, the numbers visiting the salons were



William Wiley  
"Columbus Rerouted #3"  
72" x 141", 1963

Courtesy Staempfli Gallery  
Photo by John D. Schiff

given as 1,200,000 during two months. (He notes that in 1847 the total population of Paris was only slightly over a million, so that there must have been some regulars who attended repeatedly.)

We are not, then, the first to visit the museums in such throngs, nor are we the first to marvel at the drawing power of art. When I hear museum officials boasting of their tallied attendance rates in New York, I can't help wondering if indeed there has been the slightest cultural amelioration. And so, apparently, does M. Revel who continues his articles by jibing at art book publishers, postcard publishers, and the sales desks in the modern museums which dispense the falsely glowing phantoms of works of art, and think they are contributing to culture.

Art books, Revel accurately observes, are not books at all in the main, but collections of postcards and reproductions masquerading as books. "Art books are no longer made to be read but to be leafed through just as museums are no longer made to be seen but to be reproduced."

\* \* \*

As a rule I am not interested in techniques of displaying works of art, and often don't notice the clever arrangements so painstakingly worked out by galleries and museums. But during a quick visit in Chicago's Art Institute I paused to admire the way James Speyer, curator of 20th century art, had coped with a space that would normally annihilate the works of art it housed.

In the new wing for the permanent collection of modern art, the architect created a vast hall with ceilings so high it is a strain to look at them and walls so overbearing it is difficult to forget them.

The cold, barn-like vastness of this hall is so obviously geared to conventions rather than the intimate setting paintings demand that it requires considerable ingenuity to transform it. What Speyer has done is to create imaginary subdivisions of the space. For instance, he hangs the paintings at eye level, considerably lower than do most museums. This serves to cancel out the enormous

(Continued on page 35)

Art Institute of Chicago, Morton Wing Photo by Hube Henry, Hedrich-Blessing





# BOOKS

ROBERT JOSEPH

**WORLD ARCHITECTURE, An Illustrated History.** Introduction by H. R. Hitchcock (McGraw-Hill Pub. Company). This large, well-made volume contains a reasonably thorough survey of the entire field of world architecture, although omitting, except for one page of pictures, the architectures of pre-Columbian Central and South America. One may describe it as a popularized reference book for architects, the text supplemented by some fifty excellent color plates and more than a thousand pictures, drawings, and outline plans in black and white. One might criticize it for being routine: the articles by the several authors outline the principal developments and link them with consequential arguments, generally avoiding any commitment to unusual claims or theories. Some omissions seem glaring, particularly in the section about Modern Architecture, which contains no mention of Buckminster Fuller, Richard Neutra, or Bruce Goff, and only a brief word about R. M. Schindler. All sections are well, if closely written; at critical points one is pleased to discover informative paragraphs on such special subjects as the influence of A. W. N. Pugin and the work of William Butterfield. Planning such a reference book to provide space for enough pictures of adequate size and a usefully complete text cannot have been easy. The editor and the several writers are to be commended.

**THE JAPANESE INFLUENCE IN AMERICA** by Clay Lancaster, (Walton H. Rawls, \$17.50) is a handsomely mounted and extremely easy to read account of the trend of Japanese influence on American art and architecture, beginning with the earliest voyages of American sea captains to Nippon at the end of the eighteenth century, through Perry's visit, and through the architectural experience of the Japanese pavilion at the 1892 World's Fair. Architects from all parts of the country visited the Phoenix Villa, liked what they saw, and injected the Japanese-style ideas which had impressed them into their work. Among these architects was Frank

Lloyd Wright who adapted the Hoo-den to what he called "organic architecture." The imprint on fine arts was no less profound, and this the author documents with illustrations and text. An outstanding collection of architecture and art, superbly illustrated.

**IMAGES OF AMERICAN LIVING** by Alan Gowans (J. B. Lippincott Co., \$16.50) is a thorough and authoritative study of America's functional surroundings—from the log cabin to the cantilever building. Architecture and furniture express American history and social evolution; thus we are still searching and experimenting with ideas and forms to evolve a final statement of American art and architecture.

**EARLY BYZANTINE CHURCHES IN MACEDONIA AND SOUTHERN SERBIA** by R. F. Hodinott, (St. Martin's Press, \$49.00) is the most authoritative and complete history of the origins and development of eastern Christian art in print. Over 300 photographs and illustrations of some fifty churches built between the 4th and 7th centuries trace the history of that portion of the world through the art of these structures, some of which are still in use today. In evidence are the influences of early pagan cults—the worship of Isis, the religion of Zoroaster, and most particularly the cultural contributions of the Slavs. A treasury of early eastern Christian art, a learned dissertation on Christian beginnings in the turbulent pagan world of the eastern Mediterranean basin.

**AN INTRODUCTION TO A HISTORY OF WOODCUT** by Arthur M. Hind, (Dover Publications, Two Volumes; \$2.50 ea.) is an exhaustive study embellished with 484 illustrations. The art of woodcutting, states the author, began in China in the 6th or 7th century, reached Europe in the middle of the 15th century to become a part of the trade of printing. For the art collector and the connoisseur, these two volumes are indispensable. *A History of Engraving & Etching* by the same author (Dover, \$2.75) traces the history of this art from the 15th century to the work of Kathe Kollwitz (1914); a handy one-volume compendium and study of the development of the craft with 110 illustrations.

**TRAVELLER'S GUIDE TO EUROPE'S ART** by Jane and Theodore Newman, (Channel Press, \$2.95) is the art lover's *ne plus ultra* on galleries, haunts, shops and "places" to seek out Europe's and the Near East's art treasures.

## ESSAYS AND POLEMICS

Charles Lamb once observed that no one ever lays down a newspaper without a feeling of disappointment. In his essay "Detached Thoughts on Books and Reading" he referred to the fact that news stories were never complete, for the next day would bring a further report on most of the stories. Walter Lippman has added that the disappointment was compounded because editorially or otherwise newspapers had also lost the art of making a point based on the facts in the news. It has fallen to our essayists and polemicists to fill the gap by investigating, warning, nagging at our public conscience, as attested by a shelf of currently published anthologies.


**DOINGS AND UNDOINGS** by Norman Podhoretz, (Farrar, Straus & Co., \$4.95) is a collection of articles and essays by one of the wisest, most perceptive literary critics writing today. Literature, states Podhoretz, must make a statement about life in the time of the author, and this is the yardstick which the essayist uses in evaluating the work of modern writers. His first book, this collection of his pieces from *The Reporter*, *The New Yorker*, *Partisan Review* and others, presents estimates of the work of Faulkner, Nathaniel West and John O'Hara among others, and personal judgments on current issues. His reports on Hannah Arendt's book, *Eichmann in Jerusalem*, his inescapably honest statement about his Negro Problem, his essay on the content of TV are brilliant and urgently recommended for immediate reading and reflection. Podhoretz will stir your thinking, which is, after all, the essayist's principal function.

**REPORTING** by Lillian Ross, (Simon & Schuster, \$6.50), offers selections by that indefatigable reporter at her best. It has been said, and after a reading of these reports one can believe it, Miss Ross started and ended more Hollywood careers with her series in *The New Yorker* on the making of "The Red Badge of Courage" than the most important movie magnate. Lillian Ross not only has the unerring eye of the trained newshawk, but she has the unerring ear of the philosopher-sociologist, and her command of


**The Executive Collection**

Designed by John Follis and Elisha Dubin to meet the needs of the most important executive in any organization. Substantial in scale, luxurious in its use of materials, contemporary in its styling. Write for folder.

**Brown-Saltman Company**



15000 South Figueroa Street Gardena, California



words, used with such aplomb, make her one of the best reporters in the business. She is not only complete, but she is also cruel, although cruel is not quite the right word. The facts are cruel, and she reports them as they are. The accumulated articles are called "Picture," complete with nervous producer, breezy director, the coterie of what the industry calls "gophers," the indifferent and the indolent. An unforgettable panorama of what happens when a picture is being made. "Terrific" is a backstage account of what happens at a charity ball, and "Portrait of Hemingway" is an encounter with the novelist that depicts him as few have seen him. All the articles are gems of reporting.

**INTEGRATION VERSUS SEGREGATION** edited by Senator Hubert Humphrey, (Thos. Y. Crowell, \$4.95) is a statement of the question in a series of articles, court decisions, position papers on both sides of the issue. Here the Second American Revolution, as Sen. Humphrey refers to it, is revealed through the thinking of respected Southern Senators and Representatives in the Southern Manifesto, and in the text of the Supreme Court Decision of 1954. The Southern position, reflected in the Manifesto, emphasizes the legality of the traditional separate but equal decisions of another era, damning federal intrusion in local affairs. The essays on Integration cite the economic, political as well as diplomatic need for a decision to get on with the law.

**ABUNDANCE FOR WHAT?** by David Riesman, (Doubleday & Co., \$6.50) offers a series of brilliantly incisive essays on the American mind and mood today. Riesman's special field of interest is the effect of the Cold War upon the thinking (or unthinking) American: a retreat to inner surroundings and a rejection of serious thought; a pursuit by our youth of "safe" jobs which call for little responsibility or cerebration; an acceptance of socially, not to mention politically, acceptable ideas. But there is good, too, for Riesman believes that the Cold War has forced us to adopt some cosmopolitan ideas and recognize that the earth is round. A social scientist might question the mathematical accuracy of Riesman's estimates; but his sense of American Manners goes beyond statistical tables. The author reflects on the effect of the automobile, TV, mass standardization and on the Pabulum Society which uniformity has created and it is here that Riesman is most meaningful and incisive. His conclusions are sound, highly provocative and highly readable as well.

**A PIECE OF LETTUCE** by George P. Elliott, (Random House, \$4.95) covers some of the same ground as Riesman's sociological view of American moods and manners, except that Elliott is much less objective. Elliott is a novelist who has turned back to essay writing as a means of getting some things said that he feels strongly about. He feels strongly about the super-intelligentsia in a stimulating article, "Who is *We*?" — a little fun-poking at the set which writes for the intellectual snob magazines and can never read or deliver a simple declarative sentence without Freudian-Orwellian-Marxian-Aristotelean over-undertones. He refreshingly asks for simplicity. "Home Again" recalls his experiences as an instructor on the Berkeley campus and is an indictment of the unthinking or scared-to-think youth that is bitter and pointed. Elliott has a lot to say and he says all of it well.

**FOCUS AND DIVERSIONS** by Lancelot L. Whyte, (Geo. Braziller, \$5.00) is a series of autobiographical essays relating the experiences and reflections of the British scientist, lecturer, author and scientific consultant. The author calls his offerings "a chain of stories," and good human drama they are, including accounts of trench warfare in WW I, his visit to Germany in the late Twenties, his assignment to help refugees in Czechoslovakia in the hysterical months after Sudetenland and the Protectorate. His plan to incorporate part of the Czech defense force and its military equipment in the British Army fell on deaf Cabinet ears since it would have offered provocation to Hitler. Whyte was at the time a very active and vocal participant in the move to substitute Churchill for Chamberlain, knowing as early as Munich the change would have to be made. But Whyte's review of the past includes lighter moments: Dame Edith Sitwell advising Marilyn Monroe to read the works of Schopenhauer and Lancelot Whyte as part of her education. When he met her she told him she got her ideas on acting from Chekov. Fair enough, until he learned she meant Chekov the acting coach out in Hollywood. Finally, and with encouraging conviction, Whyte reveals himself as an optimist in an essay on man's future. To read *Focus and Diversions* is to spend an evening with one of the great minds of this century.

(Continued on page 34)



For  
Your  
Information

**Q:** In designing a structure in a canyon area where there is a certain amount of fire danger, I would like to provide protection without going to masonry construction. The owner prefers wood throughout for finish as well as frame. Suggestions, please?

**A:** Lumber and plywood pressure-impregnated with Pyresote (fire-retardant salts) should give you the required protection. Tests conducted by the Underwriters' Laboratories, Inc., and Forest Products Laboratory, substantiate the fact that this treatment appreciably retards flame spread; it reduces smoke density, fuel contributed, rate of penetration by fire and is self-extinguishing. These characteristics are added to the inherent insulating qualities of wood which also maintains its strength at high temperatures.

**Q:** Construction has started on a building where we are using a great deal of aluminum in window and door frames. On completion we will have the problem of clean up plus the worse problem of plaster burns. Is there a solution?

**A:** There is a simple solution. It is an easy-to-apply, sprayed-on protective coating that not only protects anodized and polished aluminum from plaster burns but keeps window mechanisms working freely, is easily wiped off when the job is completed, and will reduce clean-up time substantially.

**Q:** We have facing us a very important waterproofing problem in the sub-surface floors of a high-rise building. How can we be sure there will be no problems after the structure is completed?

**A:** This can be accomplished by specifying a guaranteed job. There is a manufacturer who offers a five-year maintenance guarantee on impermeable concrete and masonry and non-dusting concrete floor surface at a nominal charge for inspection during installation. The product is a liquid compound that is chemically active with and increases the hydration of Portland cement. When used it results in dense, hard, impermeable concrete and cement masonry of increased compressive and tensile strength, impervious to water, moisture, frosts, oils, sugar solutions, alkalis or sea water and resistant to many acids.

**Q:** I want to use natural crushed roofing rock in a tract that is now in the design stage. What colors and sizes are available?

**A:** The colors are green, brown, red, pink, gold, turquoise, lilac, black and white. Sizes include standard crush which contains all material passing through a 3/8" screen and remaining on an 8 mesh screen; medium crush which contains all material passing through a 1 1/8" screen and remaining on a 3/8" screen; the large crush of 1 1/2"-2" rock (shadow rock) available at no extra cost; and special sizes of 4" and 6" available at extra cost.

**Q:** I am designing a building in the beach area and will be using a large amount of sheet metal. I will appreciate information on an economical solution to the atmospheric problems that are sure to develop.

**A:** The light-weight, zinc-based alloy with titanium has a range of properties found in no other single alloy and offers an economical solution to your specific problems, plus many others. It produces a permanent, armor-like oxide on the surface, eliminating pitting and offering excellent resistance to corrosion. It has no measurable creep or stretch when weighed down for years with a load of 12,000 psi. There is no rusting or staining, the natural color is a soft, slate-gray that blends with other materials, and it can be color coated and textured successfully.

Building Center

7933 West Third Street

Los Angeles, California



# MUSIC

PETER YATES

## PLAYING PIANO IS EASY

Playing piano is easy. All you have to do is do it. Yet there's a perpetual urge among music-lovers to read about how it's done. The critical literature of the performing artist includes a quantity of fairytales as well as a hysteria of superlatives. Harold C. Schonberg's *The Great Pianists from Mozart to the Present* contains in quotation a generous helping of both. His own estimates are more accurate, though cautious.

He has been a published critic of music as long as I have, some 25 years; he is now Senior Music Critic of the *New York Times*. My pleasure in reading him ceased January 24 this year, when the *Times Western Edition* went out of business. A regular reader of that paper, I had learned to respect him. I obtained his permission to borrow a complete column of his writing about piano-duet-playing for my own forthcoming book, *An Amateur at the Keyboard*.<sup>\*</sup> Harold Schonberg keeps his mind up-to-date and has learned not to waste words arguing against the prevailing developments of the art. He conceals his preferences, seldom writes as if bored, scolds minimally — though lately he told off Leonard Bernstein for apologizing to his audience before playing a couple of pieces of contemporary music. (The apology took the shape of an explanation, but it took, also, more time than the two pieces.)

When John Cage, Christian Wolff and eight associated pianists undertook to perform a little piece by Erik Satie (*Vexations*: 180 notes, playing-time 80 seconds) according to the composer's instructions, requiring 840 repetitions, Mr. Schonberg saw to it that a *Times* critic was on duty at the scene throughout the entire 18 hours and 40 minutes. The performance was continuous, pianists changing seats and hands while the playing went on uninterrupted. It was a benefit performance, \$5 admission with a refund of 5¢ for each 20 minutes attendance plus a 20¢ bonus to anyone who stayed the course. (One person did.) Each critic wrote a separate report, the one on the 4 to 7 a.m. shift preferring anonymity to a by-line, be-

<sup>\*</sup>Pantheon Books: look for it about August this year.

cause he "entered and promptly fell asleep." His successor made up the loss by sitting in one 20-minute stint at the keyboard to replace a missing player. His report of the experience is the high point of the 2½-column review. "The hypnotic music provides a point of concentration . . . of a fragile, unresolved character . . . While actually playing, one's mind is similarly freed . . . The consciousness is deflected from the mechanics of playing to the inner state of balance, which, in response to the calming effect, is poised as if suspended . . . The experience is dreamlike, and one resists waking up." The total review belongs among those classics of critical reporting from which Harold Schonberg's book liberally borrows.

A genuine master of the piano usually recognizes in at least one of his rivals gifts of technique and expressiveness beyond his own. It's the second-rater who extols his own ability to the exclusion of all others. Mindless fools gifted with nothing but an elementary sense of showmanship, and in the case of the "Chopinzee", as James Huneker called him, Vladimir de Pachmann, an innocent or clownish humor, have been acclaimed as masters mainly because stories about them make good copy. Pachmann did represent—or parody—one extreme of pianistic interpretation, the little man at the keyboard who complacently believes nobody can play better than he. He improves the music; he lectures the audience. Fancied slights, the condition of the piano, the height of chair or stool, the lights, noise or late-comers distract him from his job.

A good Pachmann story never wears by telling. As Harold Schonberg tells it, "His struggles with the ups and downs of the piano stool were legendary. One of his tricks was to raise it, lower it, fiddle around with the controls until the audience was desperate. Then he would rush into the wings and come out with a large book, placing it on the seat. No good. Then he would rip out one page, put that page on the seat, and smile beatifically at the audience. Now he was comfortable."

I have seen an eminent young pianist, rudely and without innocence, make a fool of himself in similar fashion, believing that he could not play otherwise and that what he did was therefore for the good of music. A true virtuoso of the legend should be able to sit with closed eyes at a battered upright in a basement and pour forth great music. That, rather than finickiness, is the tradition of Franz Liszt.

Small children have been accepted as musical marvels. The real child prodigy is the one who proves that playing piano is easy. He matures so rapidly as a child, being unaware of difficulties, that the only difficulty he may become aware of is growing up. Josef Hofmann made his American debut at the age of ten, playing, before an audience which crowded the Metropolitan Opera House, the Beethoven C major Concerto with orchestra, and as solos Rameau, Chopin, Weber-Liszt, and a group of improvisations. Henry Krehbiel, an authoritative critic, exclaimed: "Ripeness, maturity, precision, pianistic genius . . ." After that debut Hofmann was exploited in so many concerts and recitals that the New York Society for the Prevention of Cruelty to Children intervened in the hope of limiting the child's performances to no more than four a week. At the end of his life, after a career which embraces all the superlatives, the failing Hofmann reverted to playing like a child prodigy. Everything, miraculously, was there, but nothing any more in it.

Better, like Leopold Godowsky, to be cut short in your stride; his right arm became paralyzed after a stroke while he was recording the Chopin Nocturnes. Thirty years ago I listened in a record store to Godowsky's playing of the last Nocturne, opus 72, from the incomplete set of 12 issued as an album; just lately, listening to a taped recording of that album, my remembered opinion was confirmed. Wesley Kuhnle recalled meeting Godowsky: "He put his little hand in my great fist." The little hand and the real mind which controlled it performed prodigies which were too often dismissed as exhibitionism. We talk too much about setting standards in art. No standards can deal with the playing of such a pianist. The listening public comes very slowly to distinguish between the internals and the externals of pianistic excellence. Playing piano is easy; what you make it do is everything.

As a matter of fact, if you play the piano too well, without condescending to showmanship — how can anyone, with showmanship, really play a Chopin Nocturne! — you may have a career, or you may lose it. Harold Schonberg tells that Godowsky never played in public so well as privately at home. Franz Liszt had one repertory of classics for musicians and insiders and another of display pieces for the public. He seems to have enjoyed equally playing either. Until quite recent years, the effort to perform music objectively as work of art, to conceive a composition whole and let it be (not

**MOST ARCHITECTS ARE CONCERNED ABOUT YOUR HEALTH AND COMFORT**



THAT'S WHY . . . along with other modern and advanced equipment, you'll find more and more Ogden Water Purifiers specified for new homes or apartments.

THE ARCHITECT . . . who specifies an Ogden Purifier is thinking of you and your family by providing spring fresh drinking water right from your faucet. No more chlorine, algae, rust, dirt or bad taste . . . and no bulky, bottled water dispensers. The Ogden Water Purifier is the latest addition to health and pleasure in your home.

There is an OGDEN WATER PURIFIER to fit your every need.

**OGDEN FILTER CO., INC.**  
4214 SANTA MONICA BLVD., LOS ANGELES, CALIFORNIA  
MANUFACTURERS OF PURIFICATION EQUIPMENT SINCE 1929

express emotionally) what it is, has invariably brought from the public and its critical spokesmen accusations of "coldness, severity, pedantry"; during recent years the critical attitude has flipped.

When Glenn Gould, recording the Beethoven C minor Concerto, performed with the controlled *rubato* freedom and occasional elaborate embellishment which is the "great tradition" of piano-playing, the critics accused him of doing exactly what he did. Liszt would have rhapsodized very much more freely. Busoni enjoyed playing the first movement of this concerto, orchestra and all, in Charles Alkan's arrangement for piano solo.

Another time Gould insisted on performing the Brahms First Concerto so slowly that Leonard Bernstein, who was beating time, came on the stage first to disclaim responsibility with another of his little speeches to the audience. No mindless playing is sillier than the mindless snobbishness which insists that a piece of music exists in perpetuity as an *ur-type*, a sort of audible Platonic ideal, that should remain inviolate. Beethoven was the first to violate and then reject his own metronomic markings. (Rudolf Kolisch insists that this is not important and has written a study to show that Beethoven's markings are still an excellent guide to correct tempi — which is true). I thought Gould was wrong, but in the first movement I was fascinated by the consequences. It was as though Brahms, in his several revisions of the concerto, had conceived some portions at a slower pace, and Gould revealed the evidence. Real light shone through the murk. Gould wouldn't stop when he may have been partly right; he continued the same slow pace through the other two movements, and fascination changed to flatness.

A musical conception is what it is, what the performer makes of it on each occasion of performance, and as much as each listener can put together of it in his own receptory, intellectual, emotive, imaginative apparatus, both while listening to it and afterwards in retrospect. The composition is at once the score, as corrected, edited, improved, comprehended or misunderstood at every point of its existence from the composer's original notation to the latest edition; it is also the score-reader's better or worse apprehension of the score, at first sight without ever having heard it, after trying it with the instrument, and as he returns to it after the experience of hearing many performances.

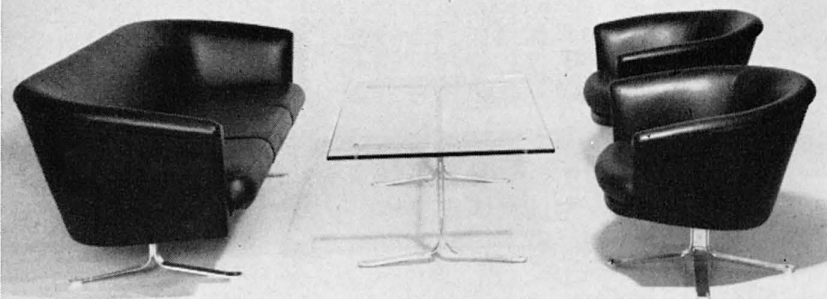
A musical composition is protean, has a public and a private life, like any well-known performer, and contradicts itself, as he does. If a composition were in reality, as Igor Stravinsky says he would like his music to be, exactly what the composer has made it in his notation and afterwards in his public performance most of us would eventually weary of listening to it. I have a recorded performance of Stravinsky's *Soldier's Tale* by members of the Northwest German Radio Orchestra under his direction and another made under his direction in Los Angeles. Each is impeccable, and each is different. The German players line up at each chord like disciplined soldiers to produce an exact sonority; the Los Angeles musicians play right through, independently, producing a variable sonority, as in the music of Charles Ives or jazz.

Every record contains an unalterable performance. There are those who learned their Beethoven and Schubert so thoroughly from listening to Schnabel's records that for them the Beethoven or the Schubert sonata is the Schnabel performance. Listening to a fine record the listener exults in its virtues, learns to expect them, tires of finding them always the same and wakens suddenly to the contrary virtues of a very different performance. If he doesn't, he will before long cease listening to music. Music has become a day-dream he remembers.

Nobody would think it likely that an audience could sit without discomfort through the performance of a Haydn sonata, when the pianist repeats each half of each of the three movements as the score indicates; but Sviatoslav Richter plays it that way and audiences like it. The habit has been to play the notes exactly — too exactly — and omit at least half the repeats. Even when reading for ourselves we omit the repeats, and that is silly, because we are not reading the whole composition as Haydn conceived it. When he wished otherwise, he omitted the repeat marks. Our scholarly habit has been to say that including the repeat marks was habitual, they are not to be taken seriously. Only our failure to do so is habitual.

Most of us can admire the exact performance of a Bach *partita* by Ralph Kirkpatrick, though we may quarrel with the style, but when he reproduces each section of each movement like a second print of the same photograph, some of us cannot endure it. He is reproducing the notes as written but violating the intention of the

AVAILABLE FOR DIRECT IMPORT  
Shipments Are Made From Our Scandinavian Factories Direct To Dealer



Sofa "Wasa"—Steel  
Polished Chrome

Coffee Table "Wasa"—Steel  
Polished Chrome

Swivel Chair "Wasa Roto"—Steel  
Polished Chrome

*scandinavian at its best*

from

**SND**



Desk Swivel Chair "Verona Roto"  
Polished Chrome Base with Adjustable Height and Tilting



Swivel Chair "Wasa Roto"—Wood  
available in Teak or Walnut  
Pedestal Table "Wasa"—Round

Write for Information  
Enclose \$2 for Catalog Only  
Enclose \$4 for Catalog and Swatches

**SND Exports**

SWEDEN NORWAY DENMARK  
Division of Scandiline Furniture, Inc.

2175 Signal Street, San Pedro, California 90731



Bench No. 2 "Te-Ve"—Two Chairs      Bench No. 1 "Te-Ve"—One Chair  
Available in Teak or Walnut



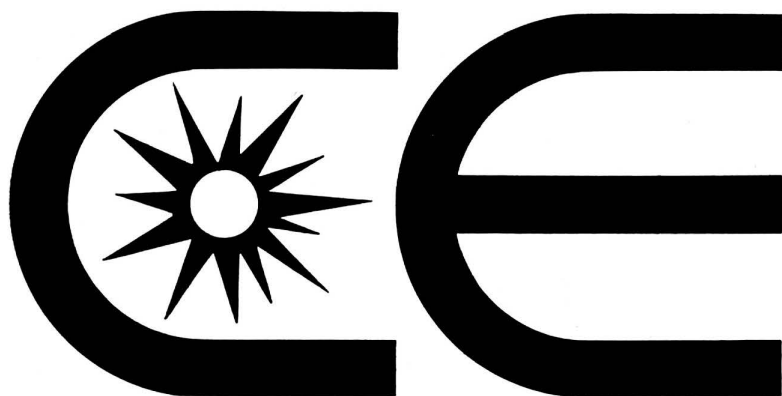
**WHAT'S IN A NAME?**

Identity? Yes, but much more.

We pledge that our new name will continue all our old qualities.

**SERVICE-INTEGRITY-RELIABILITY**

to the electrical industry.

**CONSOLIDATED ELECTRICAL DISTRIBUTORS**

**FORMERLY** Incandescent Supply Company / Phillips & Edwards Corporation, The Electric Corporation, Grey Electric Company, San Francisco Lighting Co.

**PRESENT AFFILIATES** Electrical Suppliers, Inc., Fresno and Merced, California, Kitchen Electric Supply Company, Reno, Nev., Electrical & Mechanical Supply Companies of El Paso (Tex.) and Roswell (N. Mex.), and The Stubbs Electric Company of Portland.

style, that each repetition should be in some way varied. Indeed, varied repetition with added embellishment was so much the custom that C. P. E. Bach, in his *Versuch* objected to doing so. I have been told on dependable authority that Kirkpatrick is well informed about every matter of dynamic expressiveness and altered rhythm in the best tradition of harpsichord playing, that he will demonstrate for hours the variety and force of these nuances. Listening to him play one would never know it. Wanda Landowska revealed in her last piano records of Mozart and Haydn some of the great knowledge of these matters which she had carefully concealed while recording what she called her "Last Will and Testament", J. S. Bach's *Well Tempered Clavier*.

A friend has sent me the published keyboard works by Johann Gottfried Muethel, J. S. Bach's last pupil; he sent me also an *Archive* record with a performance of Muethel's *Duetto* in three movements for two pianos. The music is as elaborately embellished as the history of the period indicates; the convention had already so far deteriorated that the composer left nothing for the performer to add, except skill and taste. The recorded performance is a collector's item, superbly performed on original Stein and Walther pianos, from a German collection, which have been restored in excellent condition. The piano tone lies between clavichord and piano, a clear, delicate outline, with more overtone and less heavy fundamental tone than a modern piano. Such an instrument is more beautiful than a Steinway, when one is playing classical music in small space. The monstrous ponderosity of our domestic instruments, their lack of timbre compensated by thump, prevents us from genuinely appreciating piano music written during the half-century before 1800.

Another *Archive* record, of no less value, include the performance of a concerto, by C. P. E. Bach, for harpsichord and piano with orchestra, using a modern reproduction of an 18th century piano, so that the plucked and percussive timbres are in balance.

We are only now beginning to appreciate, some few of us at least, the rococo sheen and delicate intricacy of this keyboard music, an art quite unlike the 19th century keyboard literature of which it is the source. The six books of Carl Philipp Emanuel's late keyboard compositions, the Sonatas, Rondos and Free Fantasies he composed at Hamburg until his death in 1788, were first republished in 1863 in a superb edition by that indefatigable editor Carl Krebs; the edition, now reissued, opens a new window on the formal garden of the late 18th century. Yet the leap in style is directly from these late sonatas and rondos to Beethoven, not by way of Haydn and Mozart. One can understand why Beethoven, as late as 1810, was asking his publisher to send him all the keyboard works by C. P. E. Bach. These were for him sources of idiom not less important than the sonatas by Muzio Clementi or, at this period, the counterpoints of J. S. Bach.

Playing piano is easy. One has only to look into or occasionally hear what a great pianist, as distinct from a great composer, will compose to display his digital dexterity — the latest example is probably Vladimir Horowitz's working-over of *The Stars and Stripes Forever*; most of the younger pianists these days are so busy competitively being pianists they have no time to think of being in the larger sense musicians, composers — to realize how widely the pianistic imagination differs from the imagination of one who is preeminently a composer. Pianist-composers like Ferruccio Busoni and Artur Schnabel — the type is now almost extinct — painfully and painstakingly divorced their reproductive and creative talents: their early compositions are of the period; the mature works are as individual in character as the compositions of the composer-pianist Bela Bartok and of equal authority, whatever one may feel about them as music. The careers and reputations of the Bachs, father and sons, and of Serge Rachmaninoff warn us that we may be wise to suspend indefinitely final judgments.

But if playing piano is easy, why cannot anybody do it? Indeed almost anybody can, given a normal pair of hands, some encouragement, and the patience and determination to keep at it. I am not speaking now of those extraordinary gifts of ear and physical coordination which distinguish some great musical talents. To play the piano well one need have only the temperament to believe that one can do it, uninhibited by the inward fear that blocks the mechanism. That is why the greatest pianists have so often been child prodigies; the mechanism has been freed before the blockage interferes.

Most of us live amid a confusion of blockages which we recognize as the warped container of our personality; the pattern projected may become work of art. A keyboard virtuoso may be no

(Continued on page 33)






## I run, jump, sing, shout, scribble, scuff, study...and grow

Who expects kids to be clean, dignified and quiet? Parents maybe. But school planners have to be practical. That's why so many schools (like the new Douglas A. Newcomb Elementary school in Long Beach, California) are built inside and out with Facebrick. It fits the function. Choir practice doesn't drown out geography class. Heel scrapes and pencil doodles don't mar walls. And earthen-toned Facebrick interiors are the next best thing to being outdoors.

A school built of Facebrick will be around a long time—saving maintenance money every year. And, years from now, when kids grow up, they will still be proud to say: that's where I went to school. Wouldn't you be proud to build a school like that?

For information on Facebrick for your applications, write:

**Pacific Clay Products** LOS ANGELES BRICK DIVISION  
1255 W. 4th St., Los Angeles, Calif. 90017 • HUrtle 2-3100 

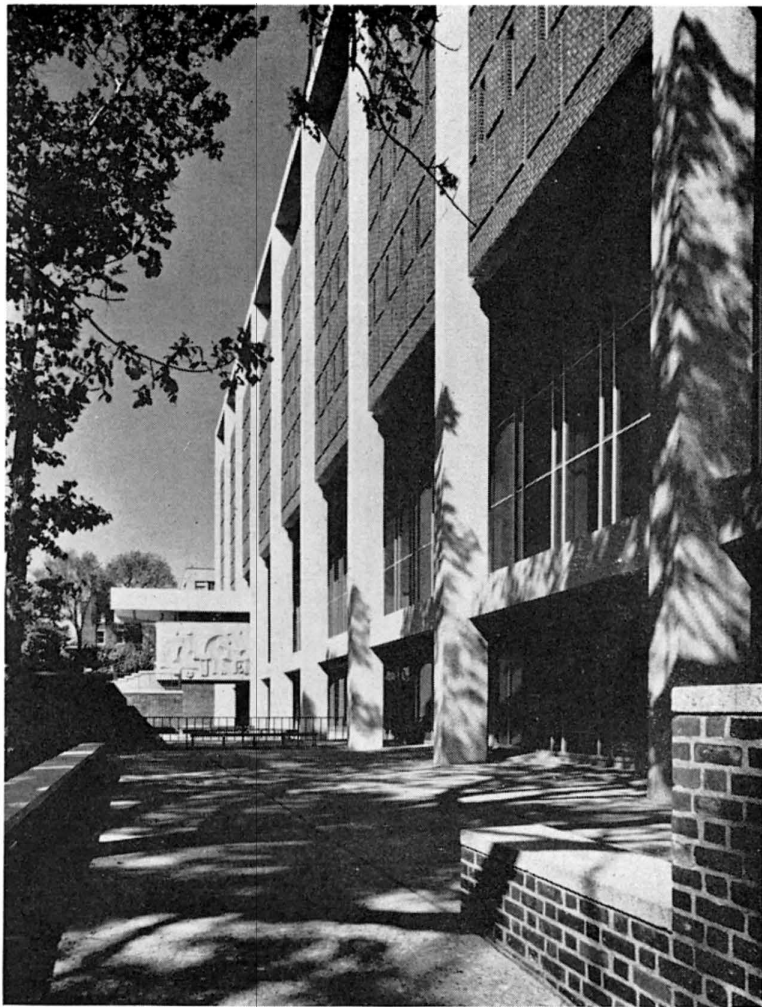
Facebrick: Dutch White Norman Ruffle



Architects: Hugh Gibbs & Donald Gibbs A.I.A.  
General Contractor: R.J. Daum Construction  
Mason Contractor: C.R. Crain & Sons, Inc.

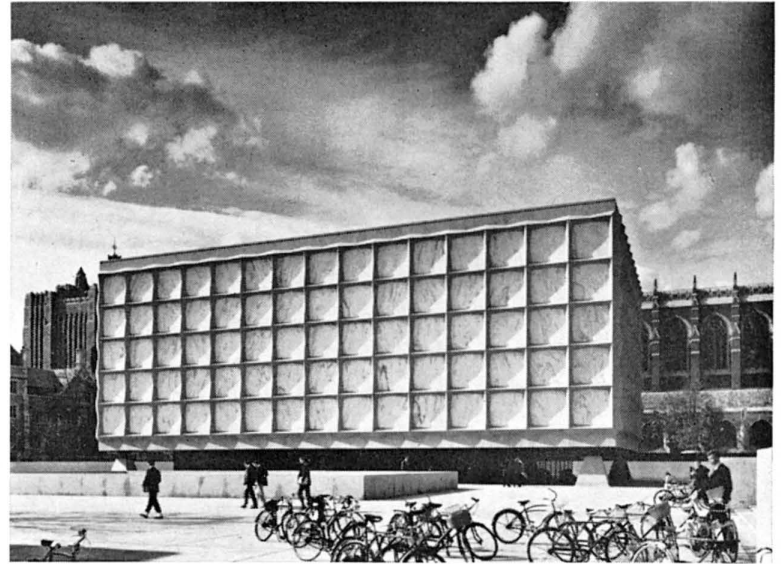






1.

## AIA LIBRARY AWARDS



2.

Results of the 1964 Library Buildings Award Program sponsored by the AIA, the American Library Association and the National Book Committee finds the jury rewarding those entries considered most clearly expressing their function. The jury was composed of architects Arthur Gould Odell, Jr., Ulysses Floyd Rible and David H. Condon and librarians Dr. Keyes D. Metcalf, Hoyt R. Galvin, Dr. Richard L. Darling and William H. Jesse.

A third First Honor Award winner was the Flora B. Tenzler Memorial Library, Tacoma, Wash., by architect Russell N. Garrison. There were 10 Award of Merit winners in addition to those shown here.



3.



4.

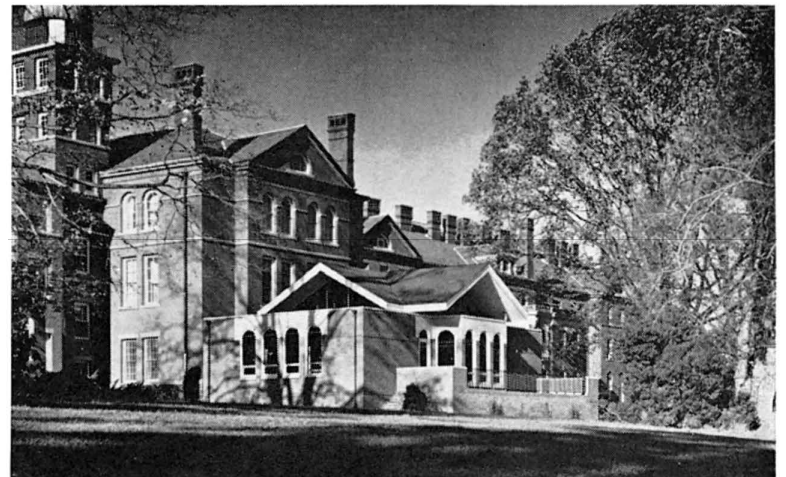
1. First Honor Award: Charles Patterson Van Pelt Library, University of Pennsylvania, Philadelphia. Harbeson, Hough, Livingston and Larson, architects, Philadelphia. Photo: Cortland V. D. Hubbard.

2. First Honor Award: Beinecke Rare Book & Manuscript Library, Yale University. Skidmore, Owings & Merrill, architects. Photo: Ezra Stoller Associates.

3. Award of Merit: Lafayette College Library, Easton, Pennsylvania. Vincent G. Kling, architect, Philadelphia. Photo: Lawrence S. Williams.

4. Award of Merit: Silas Bronson Library, Waterbury, Connecticut. Joseph Stein, architect, Waterbury. Photo: Ben Schnall.

5. Award of Merit: Westtown School Library, Pennsylvania. Cope & Lippincott, architects, Philadelphia. Photo: Edmund B. Gilchrist, Jr.



5.

As the recipient of a "liberal arts" education (definition: literary and philosophical cheese-parings of history that equip one to be crack-a-jack at charades and crossword puzzles and little else), we are always impressed by the complicated intellectual games open to those who are thoroughly and practically educated, who know something well. (That as a result of such training they are usually too busy to play such games is immaterial; they can if they are inclined.) The following short article by architect Terry Waters of Malibu, California, is an illustration. A virtuoso performance. Mr. Waters entitles it "Uniformity, Discontinuity and the Only Solution," and, adding his own subtitle, "a draft of an article from my drafty brain," we print it herewith:

There is an apparent paradox visible to any architect who takes a long or oblique view at the buildings that line our streets. This paradox is evident whether one is driving through a burgeoning business district with its many types of structures or through a residential area.

The paradox lies in the uniformity and discontinuity of the buildings. On the one hand, all of the buildings appear to be similar. There is a remarkable similarity in the interplay of surfaces, volumes, planes, materials and colors. The surface similarity can easily become interpreted as monotony and the architect frequently feels trapped by the lack of variations.

However, when the architect examines carefully the plans of any two separate structures, which at first glance appeared identical, he is conversely struck by their dissimilarities. For a simple example, look through any of the books of "house plans" which are for sale on most magazine racks. Most of the plans shown will appear to be practically the same. They will almost always contain a group of rectangular spaces, of about the same size, arranged in about the same manner. A careful inspection of these mazes will show that no two are exactly alike. A house plan book from thirty years ago will be full of floor plans resembling those in the recent publications. And yet, none of the plans are ever the same, not really!

Why, then, do they look the same? Conversely, why are they so different?

A clue to part of this paradox might become evident if we listen to an architect arguing against a change in his plan by a client. The architect will usually fall back on the defense that "this was the only solution".

Well, is there really only *one* solution?

When backed into a corner the architect will admit that there are probably a few other ways of doing it that would be passable but he still feels that his is the best!

How many *best solutions* are there?

For a clue to the number of best solutions we must go to an investigation of the numbers involved in a design and perhaps we can discover some other basic facts about design in the process.

There is a branch of mathematics called combinational analysis which deals with the number of different ways in which an act can be performed and states:

"The number of permutations of  $n$  different things, taken  $n$  at a time, is  $n!$ ." (" $n!$ " is read as " $n$  factorial.")

The formula for the above statement is:

$${}_nP_n = n \times (n-1) \times (n-2) \times \dots \times 3 \times 2 \times 1 = n!$$

For an example of the applications of the theory of permutations to architectural design let us use a simple residential project. The house is to have eight rooms or zones, each with different functions. Then, the number of possible ways in which these eight zones can be arranged in a square with each zone of equal area and all on the same plane is:

$${}_8P_8 = 8! = 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 40,320 \text{ squares containing squares.}$$

Now if we add a variation to the problem by allowing the rooms to be rectangles instead of squares we have:

$$9! = 8! \times 9 = 362,880 \text{ rectangles containing rectangles.}$$

If they can be on different levels:

$$10! = 9! \times 10 = 3,628,800 \text{ split levels.}$$

Suppose they can be angular in shape:

$$11! = 39,916,800 \text{ possible combinations.}$$

You like curves?

$$12! = 479,001,600 \text{ different structures.}$$

Different ceiling heights?

$$13! = 6,227,020,800 \text{ special concepts.}$$

Client doesn't have much to spend?

$$14! = 87,178,291,200 \text{ tract houses.}$$

The building codes are too restrictive?

$$15! = 1,307,674,368,000 \text{ ways to beat the code.}$$

What style do you like? Less is more?

$$16! = 20,922,789,888,000 \dots \text{ still seems like more.}$$

Organic is the only way:

$$17! = 355,687,428,096,000 \text{ Wright ways.}$$

How about a little delicate neo-gothic?

$$18! = 6,402,373,705,728,000 \text{ little world's fair pavilions.}$$

Thin shell roofs are kind of nice:

$$19! = 121,645,100,408,832,000 \text{ hyperbolic paraboloids.}$$

Don't forget the possibilities of prefabrication:

$$20! = 2,432,902,008,176,640,000 \text{ assemblages.}$$

What about all of the materials in Sweet's catalogs?

Now we are in real trouble.

Just for the sake of simplicity let's assume there are only 978 different kinds of building materials and we have:

$$998! =$$

Now we have to consider the clients:

$$\text{Husband: } 999! =$$

$$\text{The wife: } 1000! = \text{one thousand factorial.}$$

$$\text{One thousand factorial is so large a number}$$

(Continued on page 35)

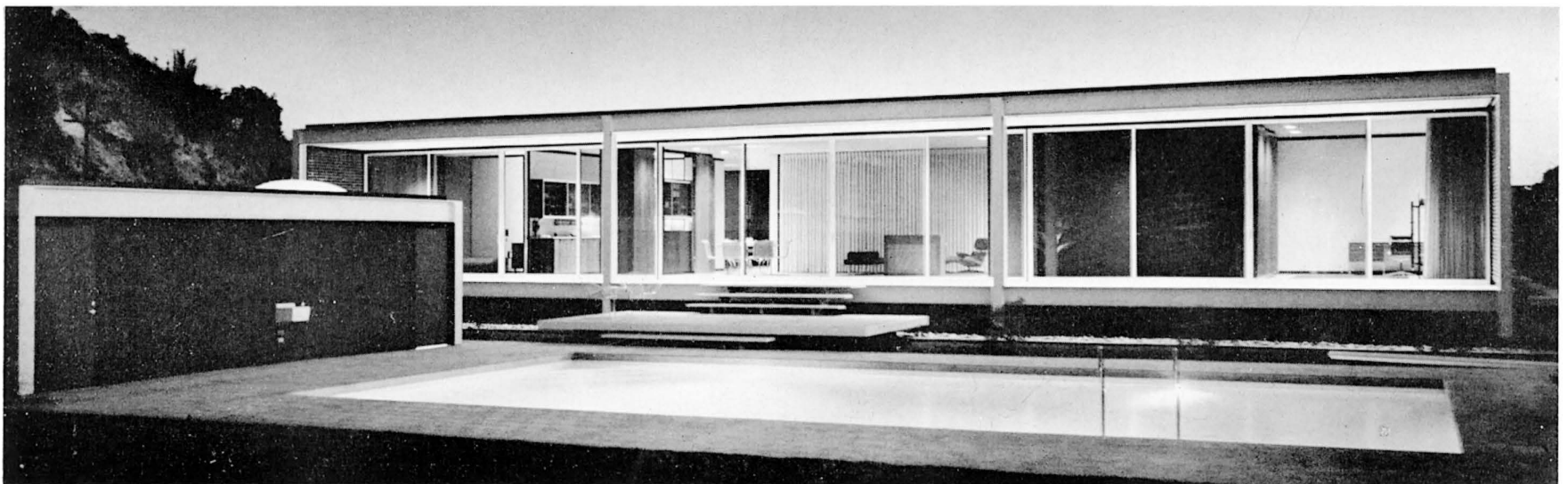


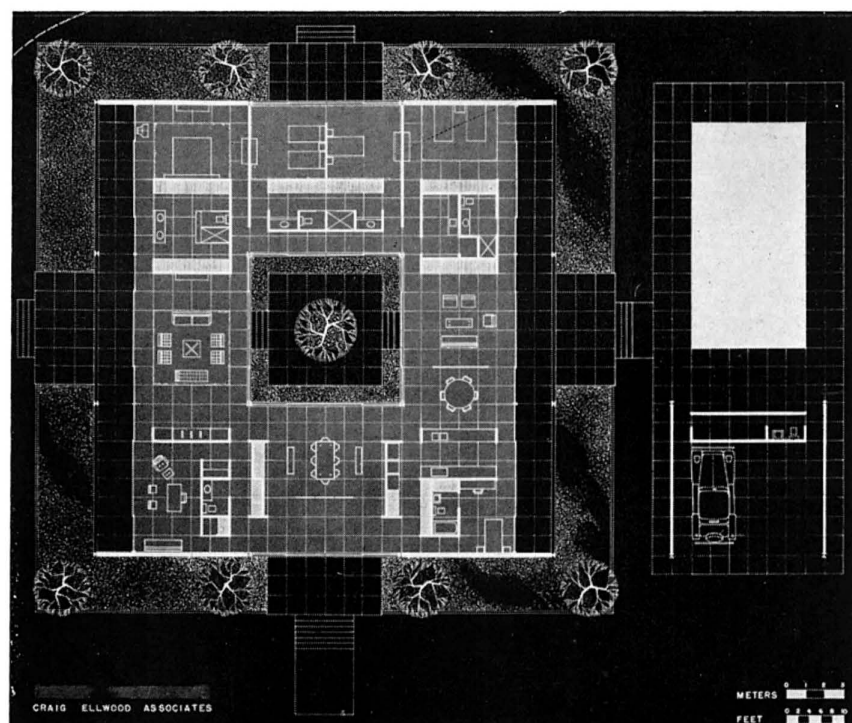
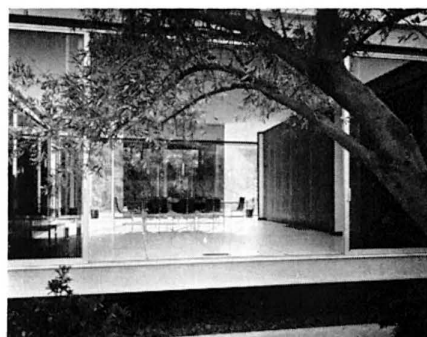


## HOUSE BY CRAIG ELLWOOD ASSOCIATES

The plan and vertical elements of this house for a family of five in Los Angeles (Mandeville Canyon), California, shows careful consideration of rhythm and symmetry in the organization of space. Because of the fact that only two interior partitions touch the exterior wall, the enclosed space reads as a unit and walls as freestanding planes or volumes.

The structure, elevated above grade to gain a better view down the canyon to the sea, has a water-worn charcoal rock podium surrounding it and flowing beneath and through the atrium. Exterior walls are charcoal colored ceramic-faced Norman brick; interior walls are walnut pan-

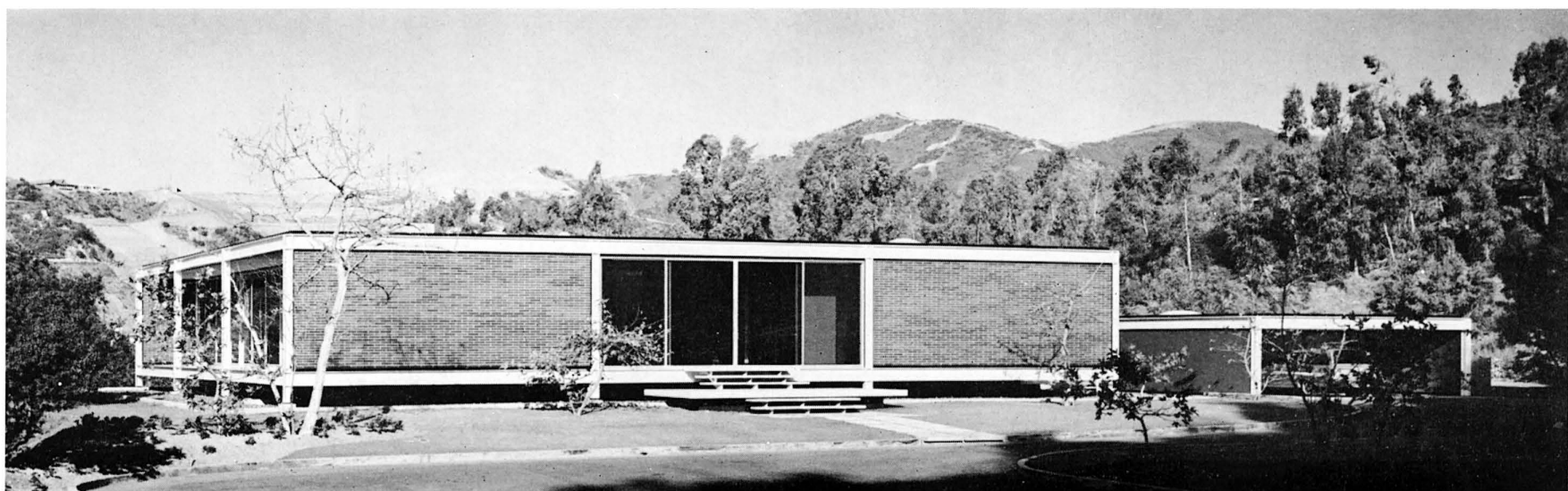




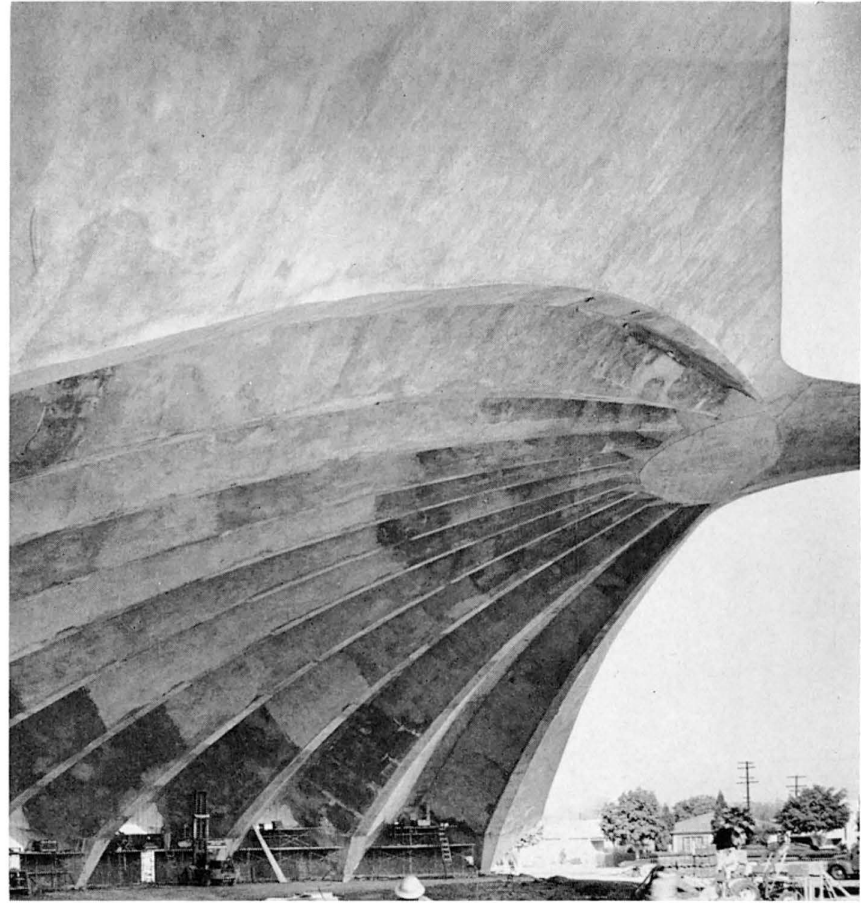
eling and white plaster. The fireplace unit is stainless steel.

Interiors are by the designers, including beds and all tables excepting the Mies van der Rohe coffee table in the living room. Color accents are furnished by fabrics and carpets. Flooring is white terrazzo.

Glass is grey plate with sliding screen units to the inside; half-inch grey plate is also used as a screen between entry and the formal dining room. The structure is of nine equal (26'8"-square) steel-framed bays with the center bay open to the 26'8"-square atrium; the grid module is 3'4" and ceiling height 10'0".







**PRECAST CONCRETE AUDITORIUM**

**BY FLEWELLING & MOODY, ARCHITECTS**



This school auditorium in Culver City, California, is shaped like a fan with the "handle" acting as a great thrust arm and the segments are folded plates brought to the ground in sweeping parabolic curves. The auditorium proper, seating 1319 persons, is an elliptical bowl designed to obtain acoustical values from the form of the structure rather than by means of extraneous materials or objects. The designers believe that sound waves "might be made to flow rather than bounce by means of a constantly changing surface, particularly if the sound source projects those waves more parallel to the surrounding surfaces than normal to them."

The nature of the building is a theater-in-the-round containing stage-craft facilities, rehearsal room and music room, all within the circular masonry structure which spans 250' from center to center of the abutments.

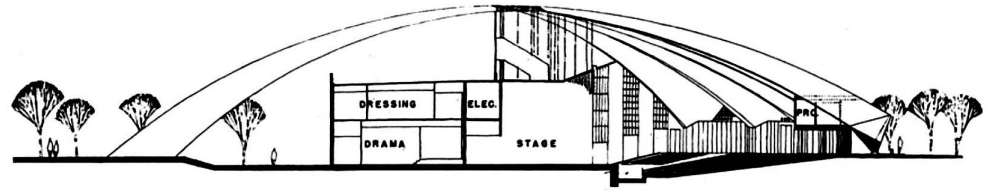
The folded dome was designed as a series of eleven segmental arched elements which converge at the crown junction with the supporting arched buttress. Maximum rise at the crown is 50'. Individual curved dome elements are 125' long, 32'6" wide at the base and 4'0" wide at the crown. Thickness of the concrete is 4" and depth of the fold varies from 10' at the base to 1.25' at the crown.

Design analysis assumed both two-hinged and three-hinged conditions, with hinges at the bases and either a hinge or full continuity at the crown. The buttress arm was shaped and proportioned to balance the dead load of the dome segments. The dome was designed for a full live load of 12 pounds per square foot, an unbalanced live load of 6 pounds per square foot on one-half of its area. It was also designed for seismic and wind loading.

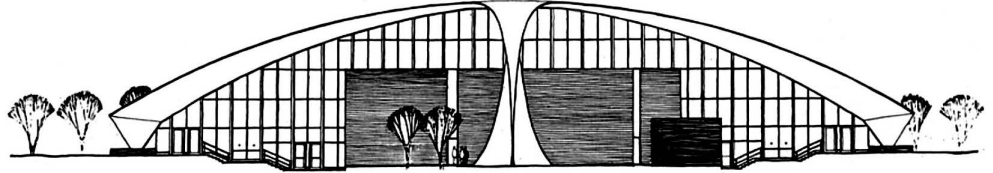
A manual arch analysis was made and confirmed by several digital computer analyses which also took into account the effects of temperature changes, shrinkage of concrete and possible foundation settlement. The horizontal thrusts of the dome elements and the buttress are carried by a system of radial underground prestressed concrete tie beams. Thrusts are about 150,000 pounds from each segment and about 1 million pounds from the buttress.

The eleven folded dome segments were precast on the ground. Curved V-shaped casting beds were constructed by cutting the earth and lining it with 2"-thick concrete waste slab. Two stacks were formed, one on either side of the structure. The segments are of 4"-thick lightweight aggregate concrete weighing 110 pounds per cubic foot and total about 50 tons each. The buttress arm was formed and poured in place with regular stone concrete. After the precast segments were moved into position by crane, ridge joints between segments and the crown connection were poured.

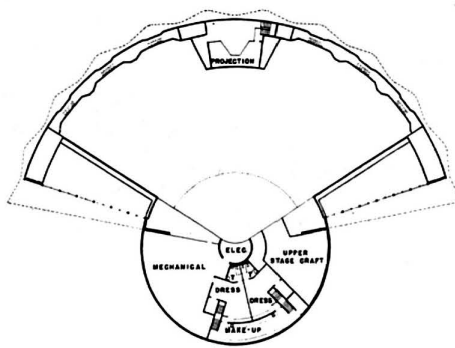
Upon removal of all shoring, the crown deflected downward only about  $\frac{1}{4}$ ", according to the architects.



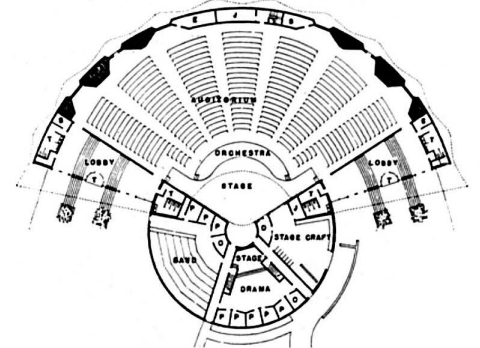
SECTION



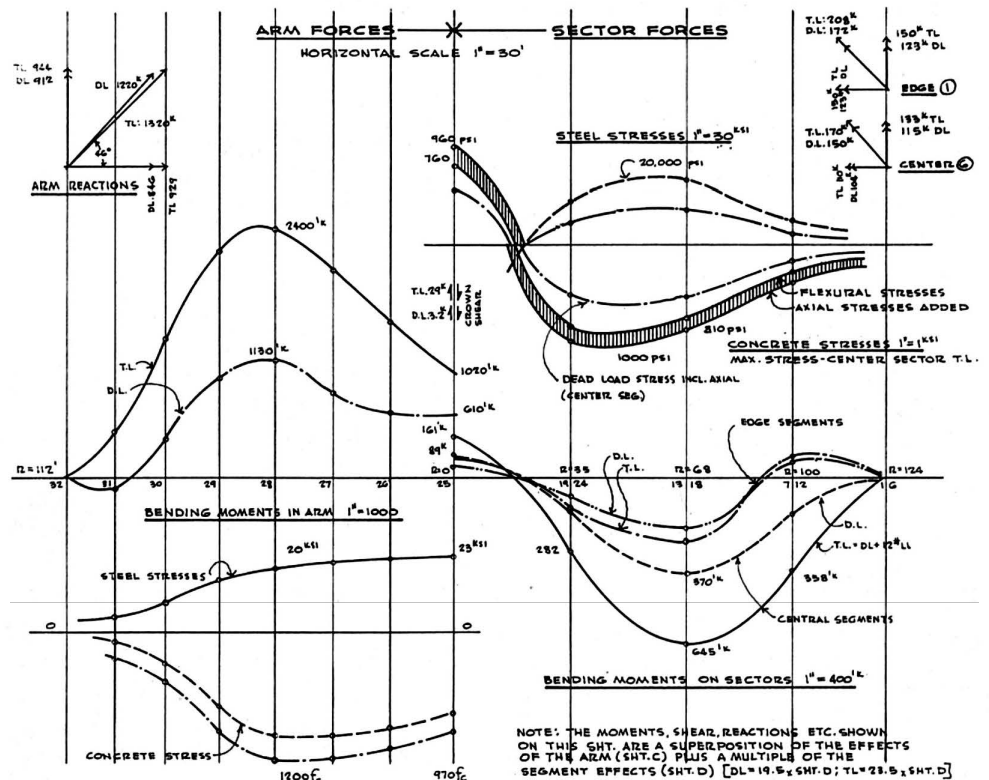
ELEVATION



UPPER LEVEL



MAIN LEVEL





## A STATEMENT BY LOUIS I. KAHN

Life to me is existence with a psyche; and death is existence without the psyche; but both are existence. I think of the psyche as being a kind of prevalence — not a single soul in each of us — but rather a prevalence from which each one of us always borrows a part. This applies to every living thing, be it a flower, be it a microbe, or be it a man or an animal. Every living thing. And I feel that this psyche is made of immeasurable aura, and that physical nature is made of that which lends itself to the measurement. I think that the psyche prevails over the entire universe. It demands an instrument of expression which it cannot hope to have in some other area of the universe. I am sure that this very psyche hammers at the door of the sun and says, "Give me an instrument here upon which I can express love, hate, nobility" — all the qualities which are, in my opinion, completely immeasurable.

The instrument is made by nature — physical nature, a harmony of systems in which the laws do not act in an isolated way, but act in a kind of interplay which we know as order. Man isolates the law and makes every good use of it. But it must not be assumed that the law, when gotten by the tail this way, is very happy except when it is in relation to other laws where its real life actually exists.

When I hear a scientist speak in categorical terms of what he has discovered, I feel that as he grows older, he will change his categorical term into something which is not quite so sure. He discovers that the law is in a degree unchangeable, whereas rule is changeable; you check it off and say, "one down, and so many to go." It isn't quite as simple as that in my mind. Now we are made out of what nature makes of the demand of the psyche for an instrument to play the wonderful song which will never actually be finished. We must take pot-luck from nature, because nature has no consciousness whatsoever. Nature is not conscious of the sunset; nature is not conscious that the sunset is beautiful. As a matter of fact, if a painter were to faithfully duplicate the sunset, the sunset would laugh at him and say, "I'll make a better one tomorrow." But if man paints a sunset as a reaction and his product says to the young man, "I'll have a good time tonight," and to the older man, "I haven't got long to live," then nature is very jealous, because it cannot do this. Nature is unconscious, but the psyche is conscious, demands life, and gives life. Nature makes the instruments which make life possible. It will not make the instrument unless the desire for life is there.

Wonder in us is — you might say — a record of the way we were made. It is a well, which is completely full of all the things you will ever

learn; because nature, in making things, records every step of its making. It is, one may call it, a seed. But it's understood much more if you realize that in wonder lies the source of all that we'll ever learn or feel. Knowledge which is derived from wonder is unhappy unless it relates itself to other knowledge. And this relation of knowledge to knowledge is what you might call, a sense of order; a sense of the position of this knowledge in relation to other things around. When we get a sense of order — not just knowledge or information — then we are very happy. We wink at wonder and say, "How am I doing, wonder?" Because wonder is activated by this knowledge and better still, by this sense of order. And wonder becomes more reachable, more full of that of which we were made.

From wonder we can also derive the position of that which is intangible; because you cannot measure love; you cannot measure hate; you cannot measure nobility; they're completely unmeasurable things. We may, though, come to points where we know the nature of man sufficiently to know there is a commonness in all of man, because man is man, all over. I don't believe that if you can think of a soul belonging to one man, it is different from another soul. I think all souls are alike, because they are first of all, unmeasurable; and secondly, they are gathered from all of earth. But what is different is the instrument. Nature, being an unconscious thing, cannot make the same instrument again, as we do in factories. Nature cannot, because the moment, at another moment in time, is a different thing entirely to nature. Nature is the interplay of these laws; any one time is not the same as any other. It's a kind of readjustment of equilibrium. When you come about, when you are born, you are not the same person as any other — you are a singularity, as an instrument, but not as a soul.

Nature is the instrument maker. Nothing can be made without nature. In fact, you might say that nature is the workshop of God. With a sense of order, and with the greatest moment in feeling — the feeling of religion in general, combined with the high moment in thought, which is philosophy — you get the area of realization; you realize something. This realization is very true somehow, but still you cannot describe it. This is a great moment for the scientist as well as the artist. The artist feels with expression; the scientist does not feel with expression. The scientist (through his realization) goes excitedly to find again the real definition or position of the law in order. And he works without his feelings at that moment, but through experience, and from realization, which is just full of feeling. At that moment he must be

completely objective. And men who speak objectively, speak truly as scientists — not necessarily as creative men but as scientists. Scientists who are interested in the law and finding the relationship of one law to another, find that the nature of man is already in a different kind of working than science. When a man works in biology, he is nervously concerned only with the laws, the physical laws of nature because his concern is so much with that which is undefinable; that which motivated the making of life altogether. And so, he must surrender the excitement of this for the moment in order to discover better means, tools, to evaluate if not measure the commonness of man biologically, psychologically and any other way. So you see, the scientist, I believe, is concerned with measures and with the nature of nature.

The artist is concerned with expression, but he starts with the same sense of realization as the scientist does. And here it might be well to say that the difference between a creative man and an artist is that a creative man is one who brings about the new image. He sees a new point of view. From this new point of view he sees different things. And through this point of view, which others are not in possession of, he sees and makes images which are different. The artist is one who senses from this image. He senses the meaning of a new point of view. I can draw a circle on the blackboard, to show what I mean about that. If I can be so arbitrary, I will say what I have drawn is the realm of architecture. Of course, it isn't. We know this is not the realm of architecture, but it has limits, we know that. We know that an architect is not a sculptor, and he's not a painter. Because a painter can paint people upside down. A painter can make people fly in the air, he can paint doorways smaller than people. A sculptor can convey the futility of war by making a piece of sculpture of a cannon with square wheels. But an architect must use round wheels, and he must make doors bigger than people. He is not the same man; his realm is different. I make this circle of what I call the realm of architecture. If we see architecture from this point of view today, the creative man sees it differently. From the same realm, the same architecture, the same eternal qualities which make architecture architecture. And he makes an image, and this image is seen by men today. This image reflects another point of view. Men immediately see that the realm of architecture has grown to be more rich; the walls, the limits are more understood. The creative man makes this image; the artist works towards the beauty of this point of view.

Now this brings us to what is realization.

Realization is really realization in form, not in design. Realization has no shape or dimension. It is simply a coming to a deep, revealing understanding in which the sense of order and the sense of dream, of religion, becomes the transference of I into thou. A man does not live a philosophy — he lives what he lives; but he gives philosophy as though it didn't belong to him, because he can't live the philosophy that he senses. From this sense of order and sense of dream come realization. Realization in form. Now form, in my opinion, has no shape or dimension; form is merely a realization of the difference between one thing and another — that which has its own characteristic. A circle is not a triangle, though tautologically it may be the same thing. It isn't the same thing in form. It has characteristics for rather inseparable parts. If you take one thing away, the form is destroyed. Each part must be accountable to the other. This is realization in form. When the scientist realizes this, he can work for years and years and years on this realization, making many designs, many experiments, many extensions of this realization.

Dr. Salk calls men who work towards extension in this light "biological engineers". But the biologist he visualizes he would like to have in his Institute is one who recognizes the immeasurable as well as the measurable. To think that men can really put down a statement saying, "We now know what hope is when we can measure it." I believe this is not so. I believe the unmeasurable will always remain unmeasurable. I believe also that if you continue to think this way, even the unmeasurable will become much closer to you, because you recognize that you'll never get it by the tail. You'll know it much more that way than you will by assuming that you'll ever know it.

In this same way, I believe that you'll never really measure nature, unless we extend for years and years our wonder source, the well, which tells the whole story of how we were made. Now design is the exercise or the putting into being of that which you realize is form. I will give a familiar example, because I can't think for the moment of another: if you think in terms of a spoon, you think in terms of a container and an arm. If you take the container away you have a dagger. If you take the arm away, you have a cup. Together they are a spoon. But spoon is not a spoon; spoon is form. A spoon is made out of silver, out of wood, or paper — when it becomes a spoon, that's design. The realization, spoon. Form. Spoon is not design. This can be extended to buildings as well as it can to everything we make. Take the example, for instance, of that which can come together and that which can

be separated. I had a problem for a carborundum factory. If you know what a carborundum factory is, it's a pretty terrible place to work because the dust is very bad. The whole architecture should be shaped to take care of a human working in such an atmosphere. Therefore, it's a completely hooded kind of architecture in which the dust is gathered before it ever reaches the room. That's what the building should look like, although I don't know of any carborundum factory that looks that way. If I were given the assignment, I would do it that way: if you consider, from the present standpoint of architectural thinking, the placement of a cafeteria in this plant, there are many architects who would assume that you merely have to assign it a certain corner of this temple for carborundum making. And this is definitely wrong, because a cafeteria does not contribute to carborundum and carborundum doesn't contribute to the cafeteria. It should be outside of this building; maybe a little Pompeian house, next to the modern factory would be more appropriate than to try and integrate both. Because form-wise they do not come together; they mean nothing to each other. The realization of this separation, and the realization which does come together, is unexplored in our architecture.

This brings me to law and rule, which is my present concern — not that my architecture changes radically, because at present it isn't changing at all. Law cannot be changed. Law is there. You may not understand it fully, but it's there. Always there. Rule always should be considered as on trial. Rule is just made from realizations of feeling and the law. And when more is known of the law at certain times, then the rule must automatically change. Think of the wonderful discoveries of science today, and think of how much our architecture is at a standstill. I believe our architecture looks like Renaissance buildings, simply in new materials. I do not think it looks like modern buildings to me. It's all because the rules have really not been changed.

When we think of our cities for a moment, we can review again the new knowledge we have, the new sense of order we have, in relation to water, to light, to air, to movement. Just think of law and rule in this sense. If I get in front of a truck — the truck is hard; I'm soft — I'm a dead duck. I disobeyed the law. The rule is the red light and the green light. When I am driving a car, I resent the red light, the rule. I like to drive right through it. But I think of my own child, and I obey the rule.

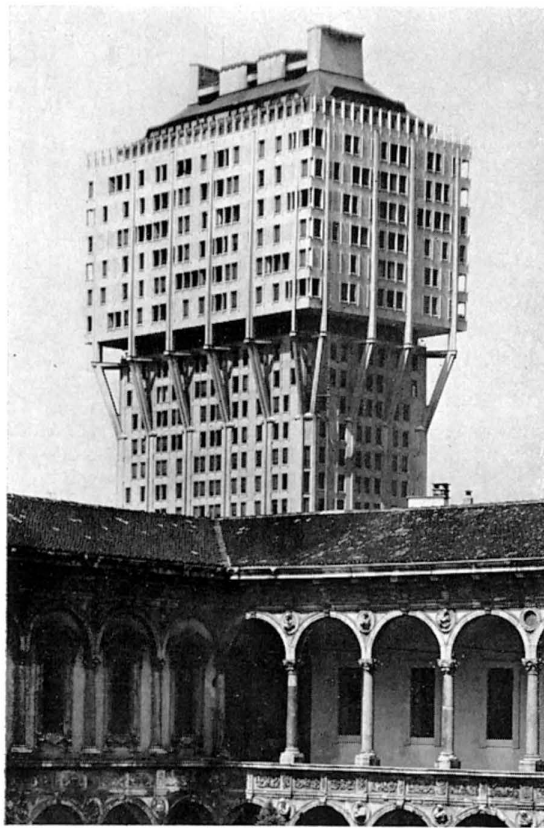
The law is relentless; it has no feeling; but the rule has. Think of cities that have reservoirs miles away from where the water is used. Why

do we have to use drinking water for air conditioning plants, and drinking water to feed fountains that don't need filtered water? And why must we clean streets with filtered water? Why can't we have an architecture of water that goes through the town easily, recognized in deference to the very precious water? The order of movement today is based on an extension of the horse and buggy. You feel as though the manure has just been swept away. There has been no thought given to the motor car whatsoever. The same streets serve the motor car as served the horse, which was a pedestrian. The hitching post is really the garage, but the garage is a piece of real estate which should be part of the design of the street, it should be the extension of the street. The garage, therefore, is really a roundup street, and must be made part of the design of the street. The streets must be completely redone in the center of town. Why must you rip up a street and put in a new line every time you have to repair or improve services for comfort and control of environment? We dig them up every time as though they were the Appian Way. Why isn't there a building in which a room is dedicated for piping only? The dead center of the city, where those mistakes are most unprofitable, should be completely redone. In the center of town the streets should become buildings. This should be interplayed with a sense of movement which does not tax local streets for non-local traffic. There should be a system of viaducts which encase an area which can reclaim the local streets for their own use, and it should be made so this viaduct has a ground floor of shops and usable area. A model which I did for the Graham Foundation recently, and which I presented to Mr. Entenza, showed the scheme. This is finding new rules out of realizations of law.

In the Salk project again, I am developing walls around buildings to take care of the glare. I do not think that venetian blinds and curtains and all kinds of window devices are architectural. They are department store stuff and don't belong to architecture. The architect must find an architecture out of the glare, out of the wind, from which these shapes and dimensions are derived. And these glare walls are based on a very simple principle, which I got out of observation when I was in Africa, where the glare is very startling. There the people worked with their backs against the sun, and they got the light off walls near where they worked. Their buildings are close together, and their windows look into walls. They modify the glare, by looking at something that is in light. These walls I'm developing for the Salk Center in San Diego are in recognition of this discovery of

(Continued on page 33)





Velasca Tower, Milan. Belgioioso, Peressutti and Rogers.



Palace of Sport, Rome. Nervi and Piacentini. Photo: O. Savio

Photos: Publifoto



Rinascente, department store, Rome. Franco Albini.

## ITALIAN BUILDING MATERIALS

by ESTHER McCOY

The materials discussed by Miss McCoy and other Italian building materials will be exhibited at Century City's Gateway West Building in West Los Angeles from June 12-24. Included will be marble, travertine, ceramic and marble tiles for walls, floors and decorative use, glass and ceramic mosaics, ceramic panels and concrete-framed glass. An exhibition of Italian Design in interior furnishings, murals, glassware, ceramics and fabrics will be held in conjunction with the 4th Centennial Michelangelo Exhibit June 8 through July 10 at the International Design Center, 8899 Beverly Blvd., Los Angeles.—Ed.

Italy's first two skyscrapers were completed shortly before the country celebrated its hundredth year of unification, the Velasca Tower, in the shadow of the Cathedral of Milan, and the Pirelli Tower near the Milan railway station. While the Pirelli Tower sits on its own great plaza in a district gradually being transformed into the new business center of the city, competing only with the present and not the historical city, the Velasca tower is on a small plot in the midst of buildings sanctified by time and often by art. Its design exemplifies the predicament of how to pay homage to the past in terms of the present. The problem of the Velasca Tower, as it rose above its neighbors to present a profile which might rival the stone snowflake-like spires of the cathedral, was a delicate one, not to be solved by a curtain wall building. Its sinuous structure summons up a memory of the Gothic cathedral.

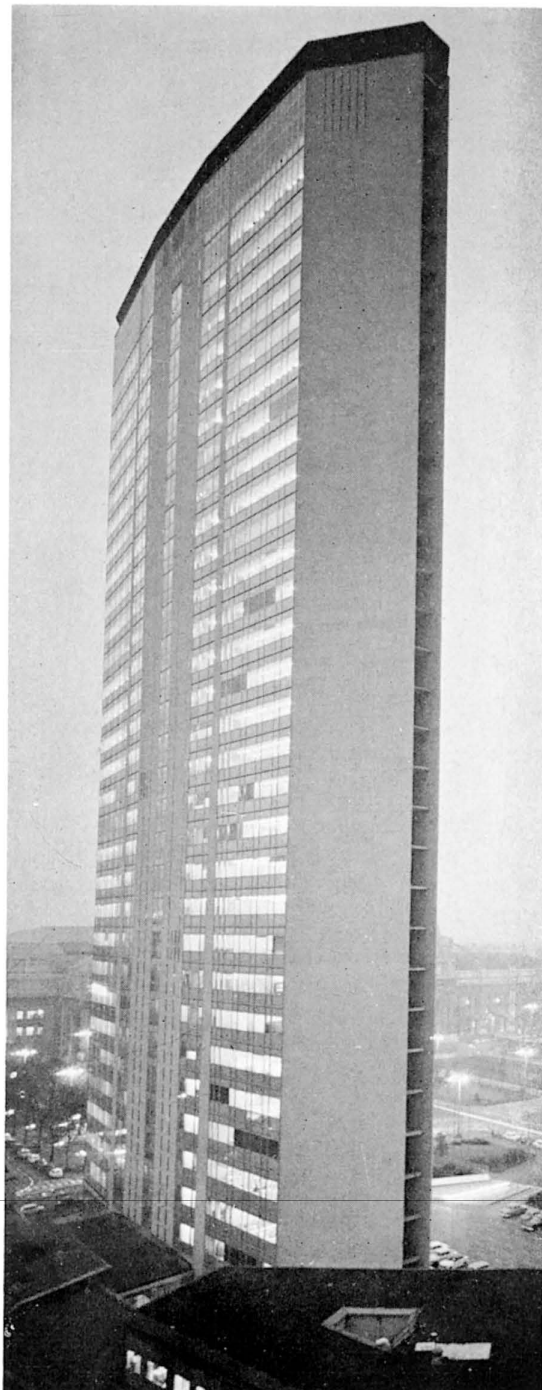
And, again, in Venice's decorative pierced travertine balcony rails are the laces of Venetian Gothic pressed upon a modern apartment house building. An especially gracious acceptance of place and history is the 1958 Rinascente department store in Rome, where the color, texture and cornice line are adjusted to neighboring buildings.

An expanding Italy walks on eggs around its architectural treasures, committed to the present, respectful of the past. Industries small and large are building additions, and by the time the construction is completed they are already cramped for space again. Genoa's steel plant (Italsider) is pushing out onto newly filled land in the harbor.

One industry that has taken an enormous leap is tile, both majolica and gres, both hand-made and machine-made. There is a renewed interest in it as a flooring, and since rain washes it clean it now is widely used as an interior facing in cities where grime collects, especially Milan and Genoa.

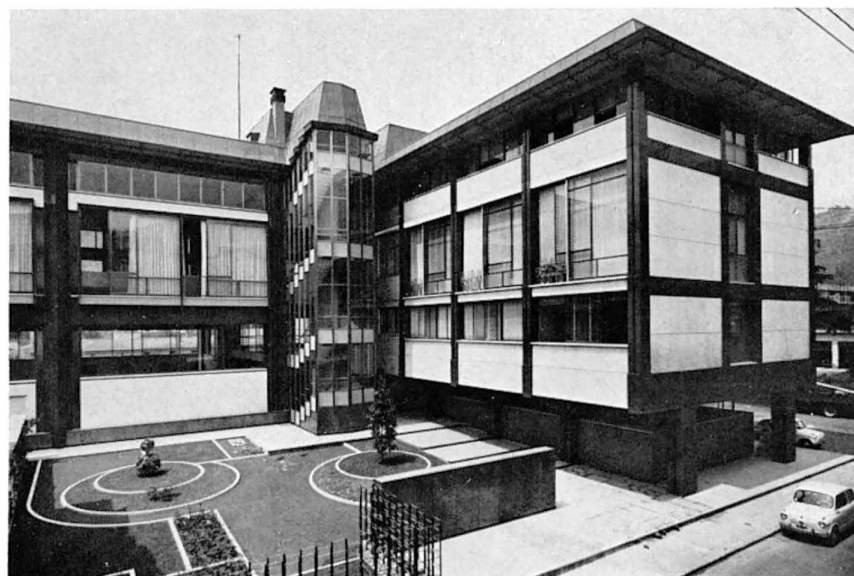
Gio Ponti clothed his Pirelli Tower with warm gray ceramic tile — millions of small, weather-resistant pieces — and Luigi Caccia Dominioni chose high glaze tiles in a blend of reds for the exterior walls of a condominium in the new multiple housing area around Milan's Piazza Carbonari.

At the Building Center in Genoa, where Italy's new products and architectural work are displayed, the seriousness and inventiveness of the Italian industrial products are everywhere evident, from plumbing fixtures, long overdue for new designs, to Edilresine's easily installed plastic frames for doors and windows.



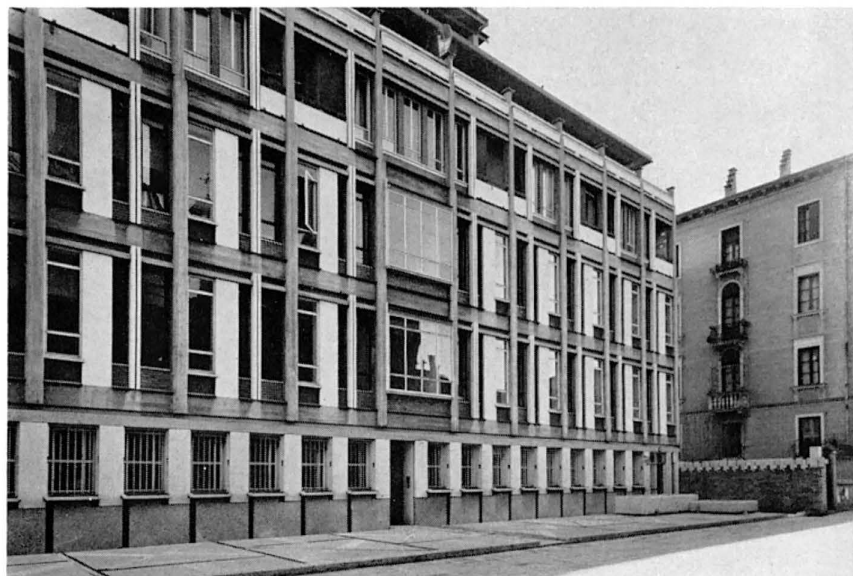
Pirelli Tower, Milan. G. Ponti, architect; P. L. Nervi, engineer.

Marble stairway, apartment house, Milan. Architects Ponti and Rosselli.



Marbles, Carrara region in the Chamber of Commerce building, Carrara. Architects Aymonino, Chiarini and De Rossi.

Photo: Cav. I. Bessi



Marbles from the Verona and Vicenza region for Palazzo INAIL, Venice. Architect Giuseppe Samona.

Photo: F. Venezia

## MARBLE

Italian marble shipped to the U. S. is thin slab used here to spell out elegance, and it is startling to see the great thickness of the slabs in new buildings under construction in Italy. We polish it until it is unmistakably marble. They can be cavalier with it in Italy where it is plentiful; the architects of the Brutal School in Italy even chip it, which gives it something of the appearance of concrete.

Travertine can sometimes also be understated. I noticed the red chips in the Travertino Romano quarry in Tivoli last winter and was told that this was the outer crust of the material, now in demand by some of the younger architects for its color and rough texture. This is disappointing to men in the travertine field who love the material with the larger pores filled and the whole polished smooth. I agree that it is beautiful so, but the red of the crust is the color of many old plastered walls in Rome. Rome is to me synonymous with that particular red and also with travertine.

As I talked to quarry men we were watching preparations for sawing into what was described as a new bank, but as it turned out it was not new, just a part of the quarry untouched since the days of the Roman Empire.

What strikes one about the marble and travertine quarries is how much material has come out of them and how generously they seem to offer centuries more of it. In Querceta there is an Henraux quarry of Carrara marble whose banks are cut away to leave standing a high Gothic arch. The material is so plentiful that one village of marble workers in the Apuan Alps has houses, church, altar, shops,

and its fountain in the square of marble. Even the streets are paved with marble.

The quarries of the Vicentini Marble Industry in Chiampo, near Vicenza, are rolling hills compared with the steep Apuan Alps where Carrara marble is quarried. One identifies the Vicenza and Verona marble zones with red, but there is an extraordinary range of color, from flesh tones of the veined *breccia rosata* and cloudy violet shadings of *fior di pesco carnico* to the deep red of *onice*. The Vicenza-Verona marbles belong to a later geological period than the Carrara, and their interesting markings are from organic residuals. From this zone come pale marbles from cream color to straw, and in these the evidence of prehistoric marine life is very clear.

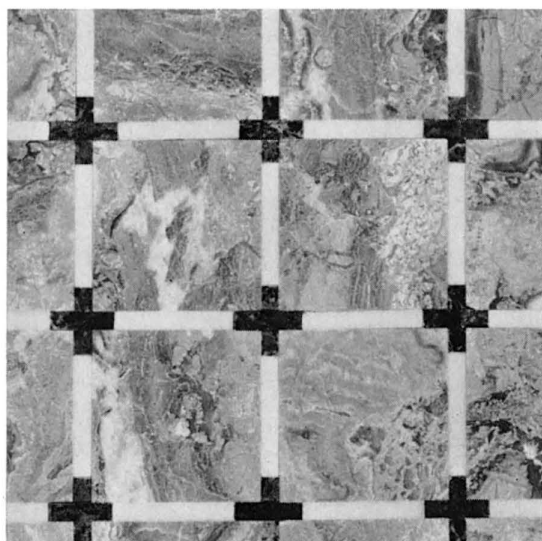
Only a small percentage of the Carrara marbles is white. There are the *arabescatos* with arabesques of gray or faun, many of them clouded; whites veined with grays, or gray with darker gray; and the *breccias* which are whites with fragments of yellows, grays, violets or reds.

Carrara is a port town, which means that marbles from various parts of Italy and from quarries all over the world are stockpiled. There are even the marbles whose quarries were long ago exhausted and are now so costly that they are sought mainly for repairing marble work in old buildings. The finest way to see and compare the marbles of the world is to walk through a Carrara stock yard, tilting stacked slabs so the sun shines on the polished face. One has the feeling of staring under the crust of the earth.

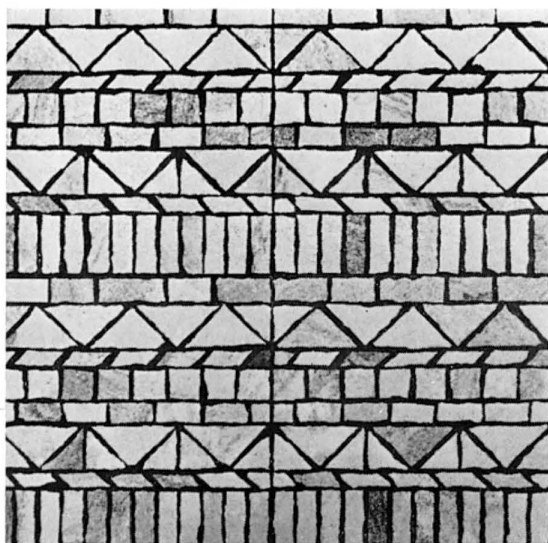
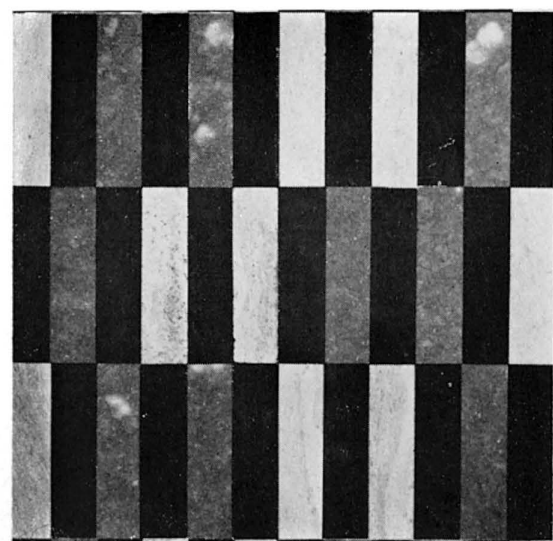
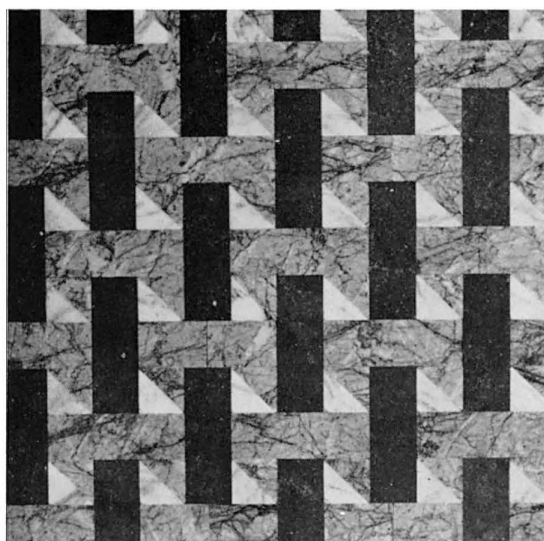


Fior do Pesco Carnico marble stairway, Savings Bank, Florence. Architect Giovanni Michelucci.





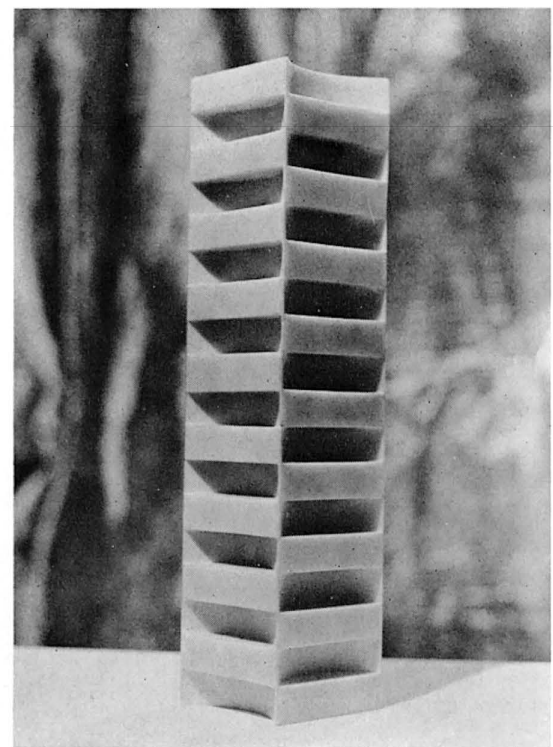
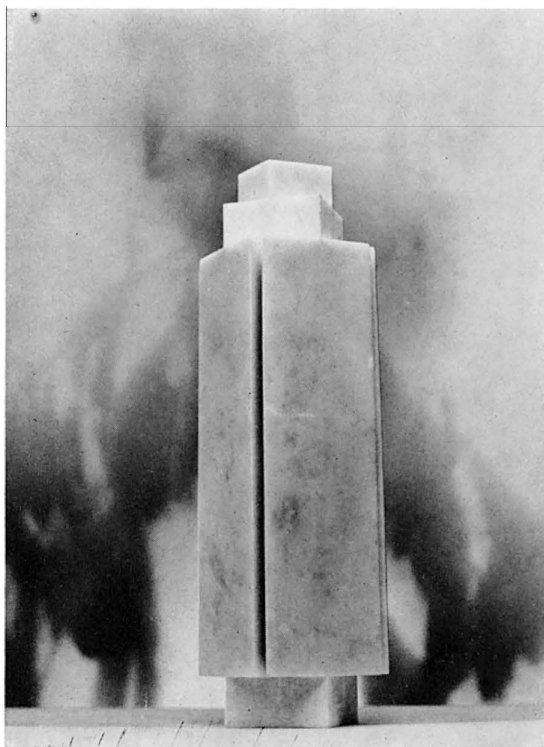
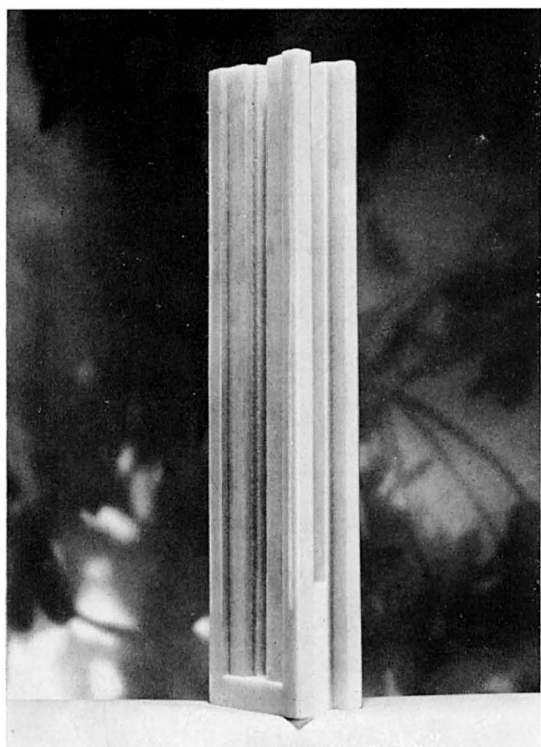
*Pavings designed by Ugo Blattler for Henraux of Querceta.*



*Ravenna-style marble paving, Bergamo.*

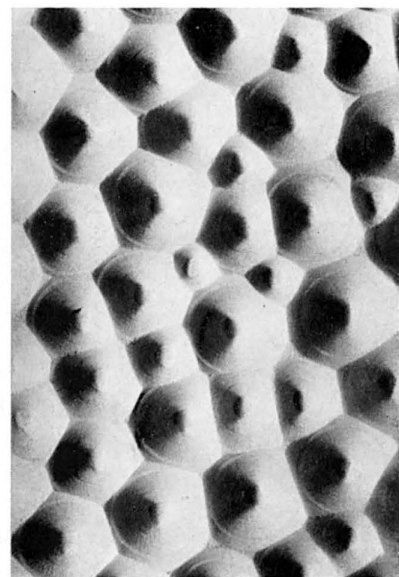
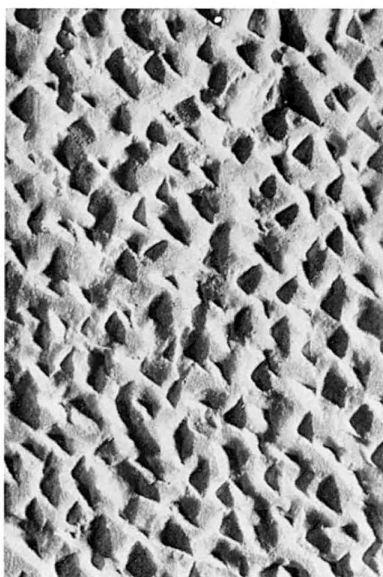
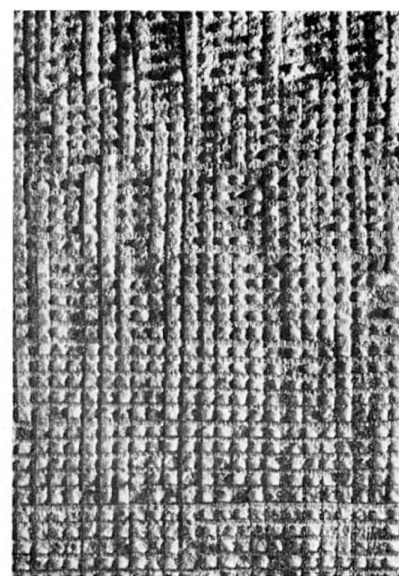
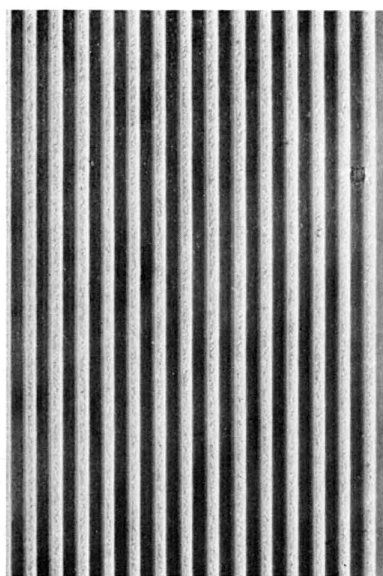


*Marble tile in Milan apartment. Architect Ettore Sottsass, Jr.*



## ITALIAN BUILDING MATERIALS

*Marble textures developed by Ugo Blattler for exterior facing. Experimental laboratory of Henraux Co.*



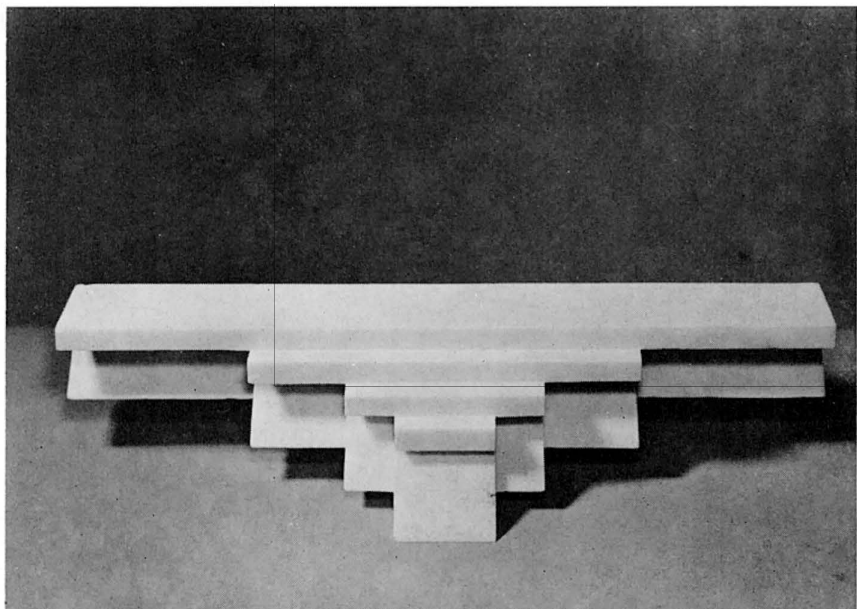
PHOTOS BY OSCAR SAVIO

## PLASTIC FORMS IN MARBLE

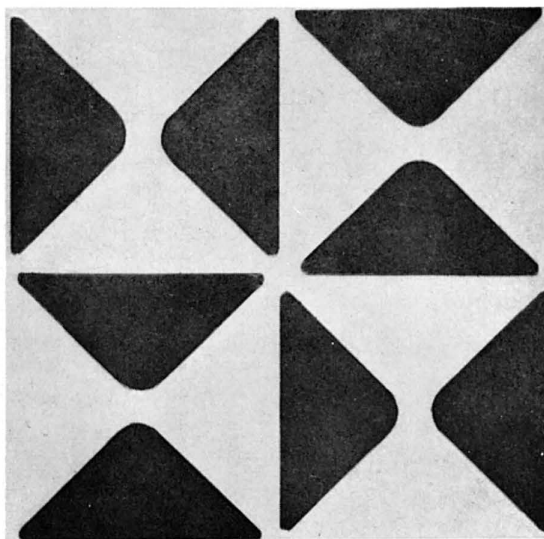
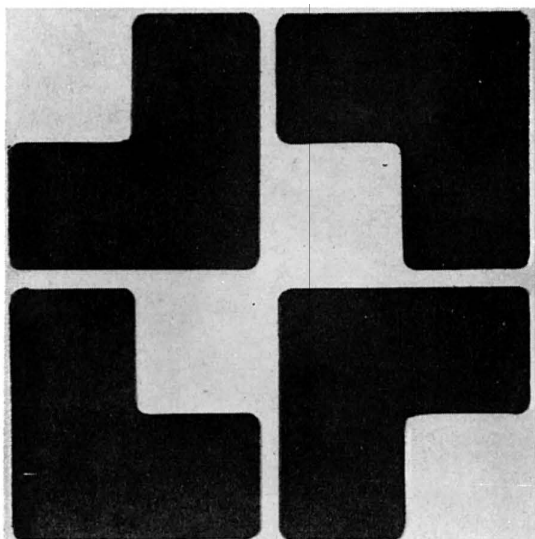
Ugo Blattler, a Swiss artist, has developed a series of plastic forms in the experimental laboratory of Henraux Company of Querceta in the Apuan Alps. The forms are carved from white statuary marble from their quarry at Monte Altissimo — Michelangelo's quarry.

Blattler uses new diamond-edged cutting devices to carve out lights and shadows in the marble and to release its character.

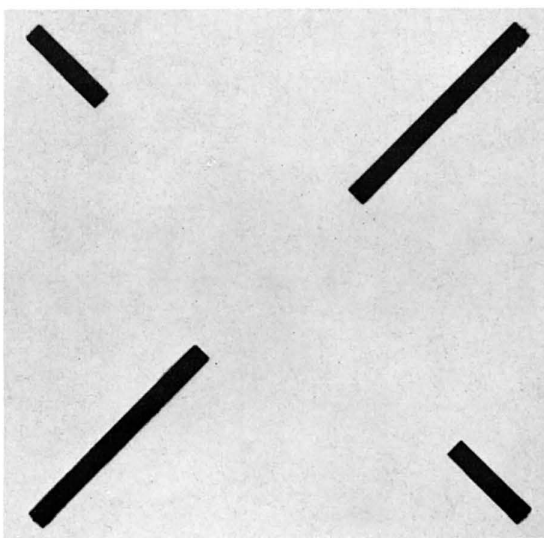
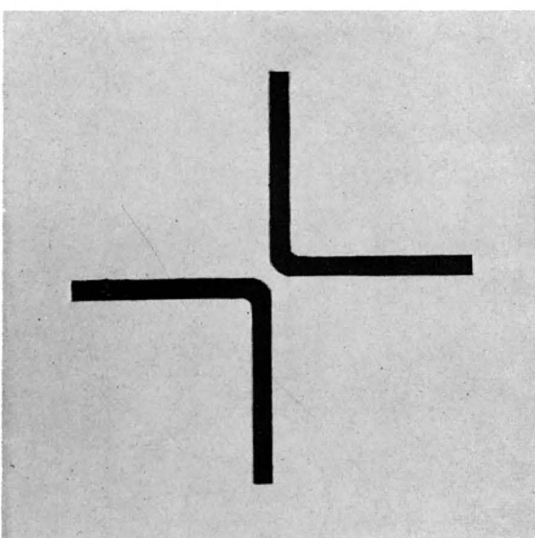
"The Carraran marble frees from the compact tones of its own surface a true descriptive luminosity," he says. "I wish architecture and sculpture to return in overwhelming force to this Italian stone. My respect for it goes back to my boyhood on the shores of the Four Cantons Lake. Along the railway lines I used to see the freight trains carrying the blocks northward. They gave me the feeling of a strange power of matter. Now in these plastic forms I have tried to pay homage to the statuary marble of Altissimo, and to Italian labor which employs the energies of three thousand of the finest marble workers of Europe, and perhaps the world. This material is not a substance to which it is necessary to give life or on which to stamp movement in terms of traditional sculpture and architecture. The life inherent in the Apuan marble is brought out by workmanship. This is what I have tried to do in the plastic forms."







*Tiles designed by Alberto Rosselli, architect.*



*Tiles designed by Gio Ponti. Designer's apartment.*

## ITALIAN BUILDING MATERIALS

### TILES

Majolica ware came to Italy at the end of the 14th century from Spain, which learned the art of tin and lead oxide glazes over clay from the Middle East. By the end of the 15th century when Caesare Borgia brought majolica tiles from Spain to Italy a spontaneous industry erupted in Faenza, the Bay of Naples, Orvieto, Siena, Genoa, Milan, Modena and Venice.

Tiles quickly made themselves at home in the warm Bay of Naples area where a cool floor was desirable. While tiles have had their ups and downs, the craftsmen of Naples, Salerno, Vietri, Amalfi and all along the coast, have never ceased to turn out tile for palace or cottage. In the best tradition of 18th century majolica are the tiles in the cloisters of

CEDIT, the Milan ceramic company with factories in Milan and Palermo, offers each year in collaboration with *Revista Dell' Arredamento* six awards for distinguished designs for new tiles: the Golden Tile, the Silver Tile and four Diplomas of Honor.

The chairman of the board of the competition is Mario Giacomo Tedeschi, and members include Tommaso Ferraris, Lucio Fontana, Enrico Peressutti and Marco Zanuso.

The tiles shown here were award winners in previous years.

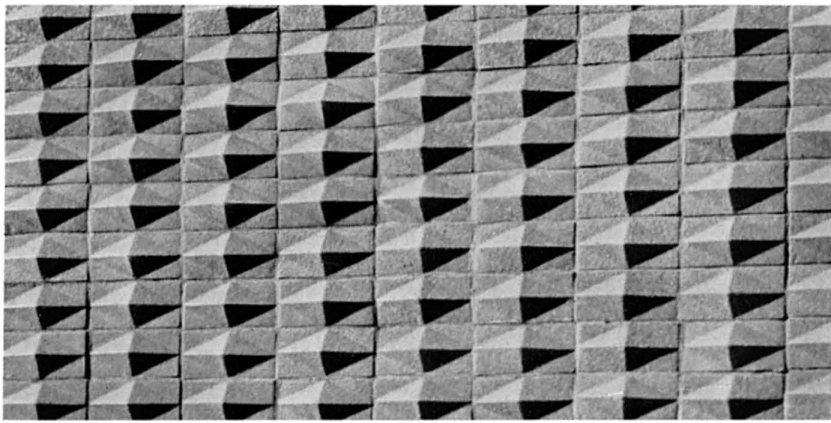
The competition is open to architects, designers and decorators of all countries. Information concerning the 1965 competition may be obtained by writing CEDIT, via de Amicis 44, Milan, Italy.

*From left:*

*Vergara, Golden Tile winner, shown in assemblage and detail. Designer, Sergio Gais.*

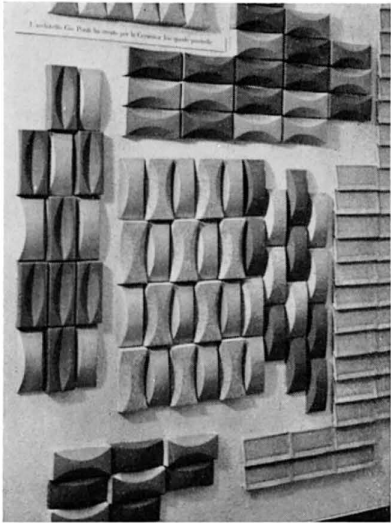
*The Venaria tile, designed by Luca Beltrami, received a Diploma of Honor.*

*The Valdieri, Golden Tile winner for 1961, designed by architects Sergio Mazza and G. Gramigna. An assemblage of 16 tiles and single tile.*

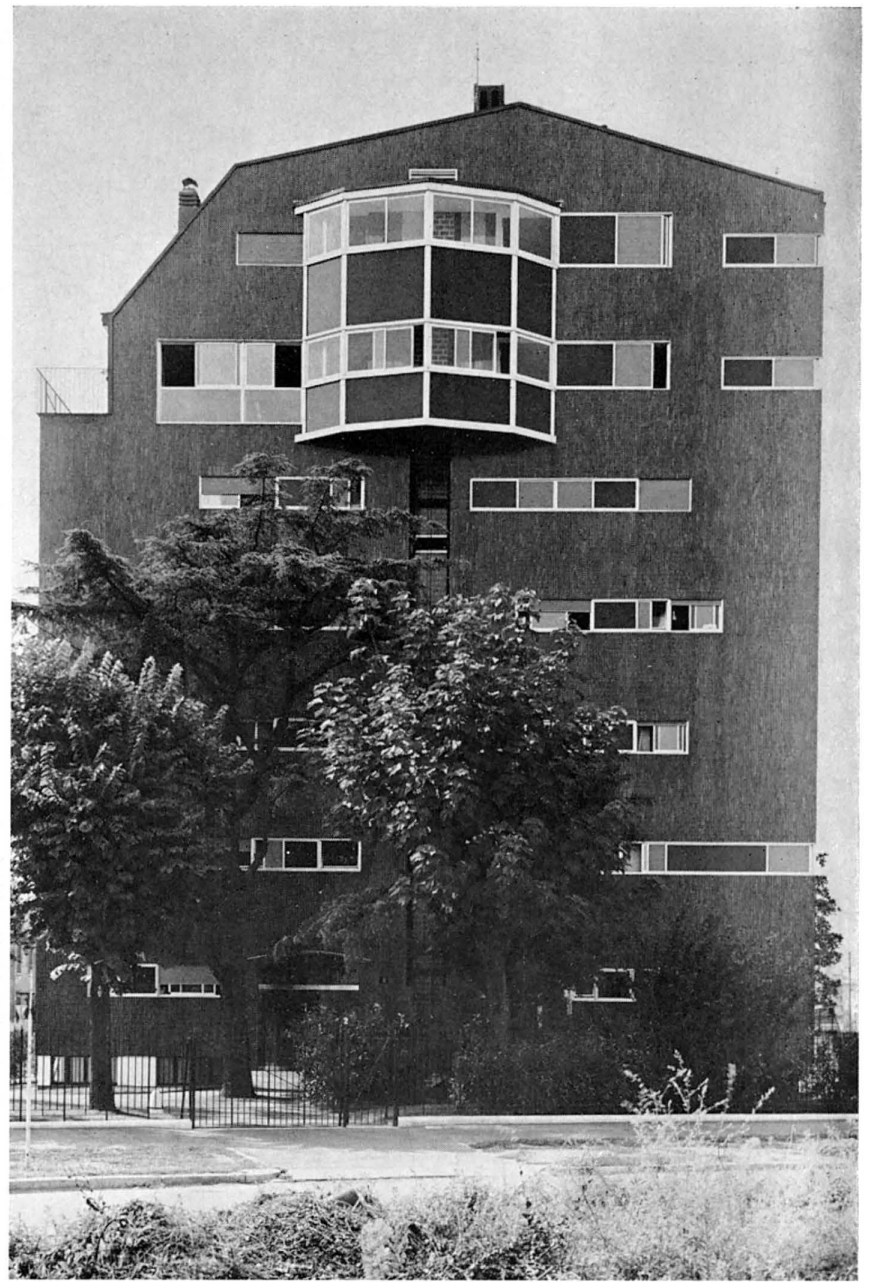
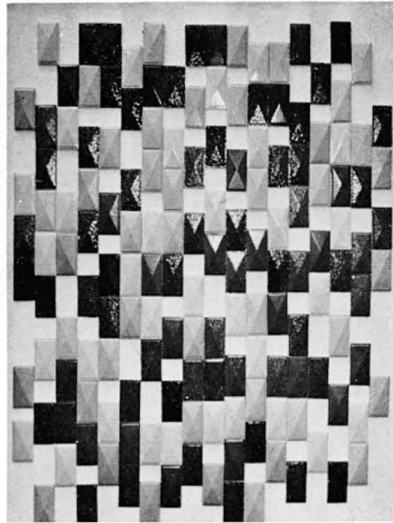


Tiles designed by Gio Ponti for a Ponti and Rosselli building in Milan.

Photo by Casali



Tiles for exterior and interior walls, glaze and matte finishes for the various sculptural effects.



Architect Luigi Caccia Dominioni uses a red glazed tile for exterior walls of a Milan apartment.

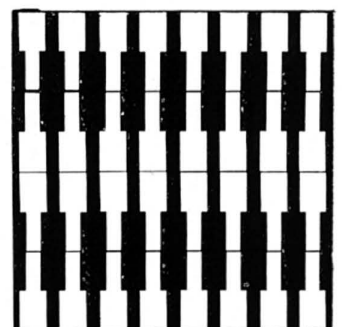
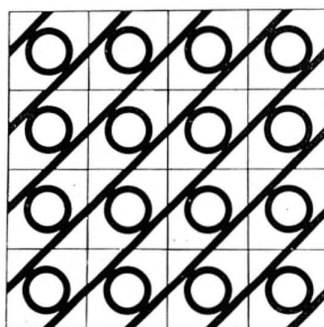
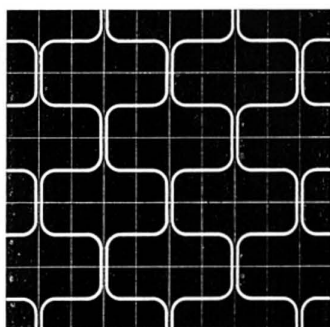
Santa Chiara, San Domenica and Santa Anna dei Lombardi.

Arabesques and plant forms are still the design source of the typical Bay of Naples tile, and the stylization of the Kufic arabic script, introduced into the decoration by Moorish craftsmen in Spain, is still present as a design element.

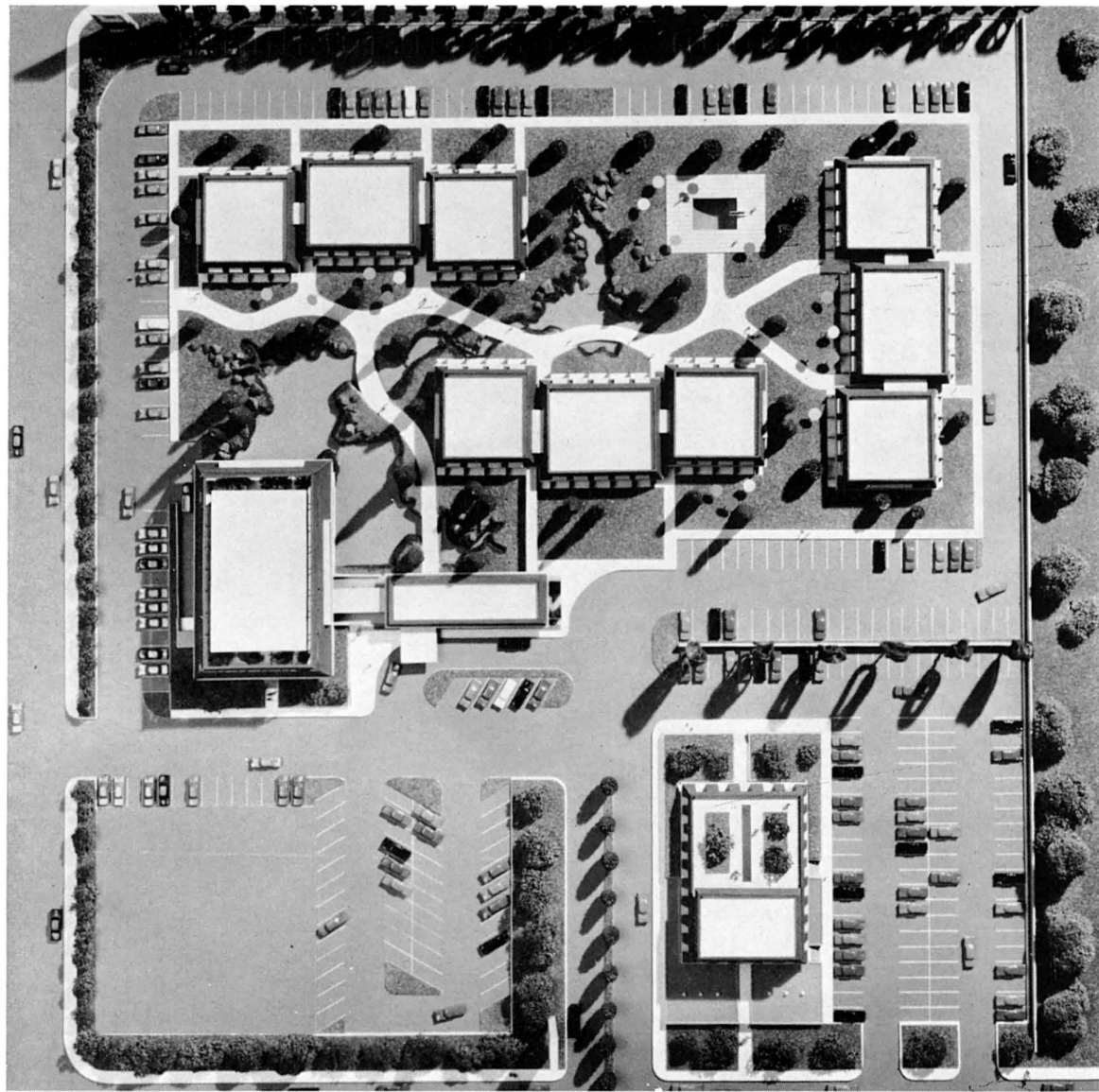
Around Naples and Salerno they are more apt to speak of the art of tilemaking and its history, while in the north they stress the certificates of proof that the tile is heat, frost, water, acid and oil resistant — facts verified by the eye in Genoa and Milan. They use more gres (sandstone) tile in the north than south; the south prefers the glazed majolica except for exterior facings for buildings.

Two sources of tile in the south are the D'Agostinos of Salerno and ICAN of Naples, both having machine-made and handmade tiles. In fact, there are two D'Agostino factories, one highly industrialized which turns out modern tiles, and one for traditional designs which is strictly a handcraft operation (and foot, for the clays are mixed with the feet to give them greater plasticity). Both of the D'Agostino factories have doubled their annual production for the last three years, indicating the demand for handmade tiles grows along with the machine-made product. Many architects have rediscovered the beauty of handcrafted tile; Le Corbusier is using one in a milky white (the shade of the tin and oxide glaze before colors are added) for all floors in a new hotel

(Continued on page 32)



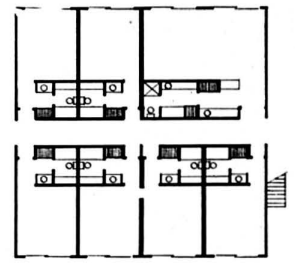
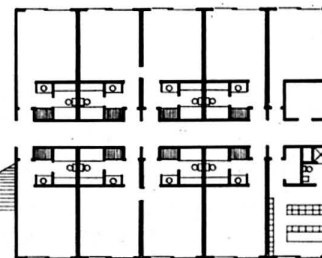
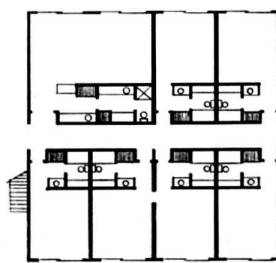




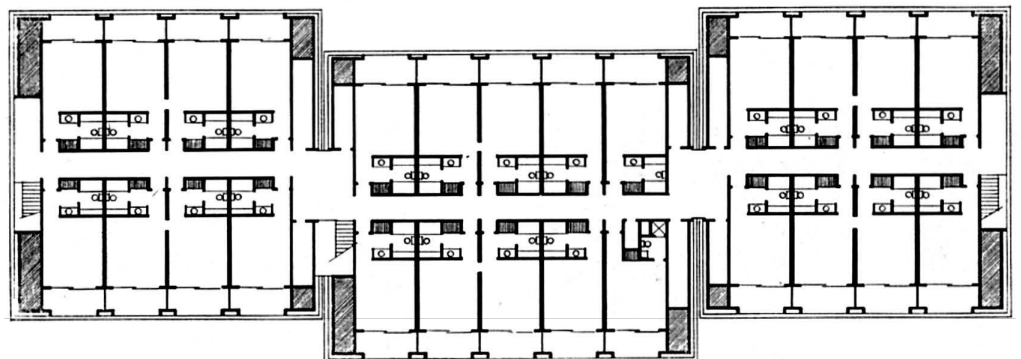
MOTEL BY TRACY PRICE ASSOCIATES, PETER MUNSELLE, ARCHITECT, A JOINT VENTURE

Overall design of this development in Upland, California, suggests a small village at the foot of nearby Mount Baldy. In addition to the 150-unit motel, the complex will include a terraced restaurant with coffee shop, beauty salon, barber shop and steam rooms and a separate two-story office building of 20,000 square feet.

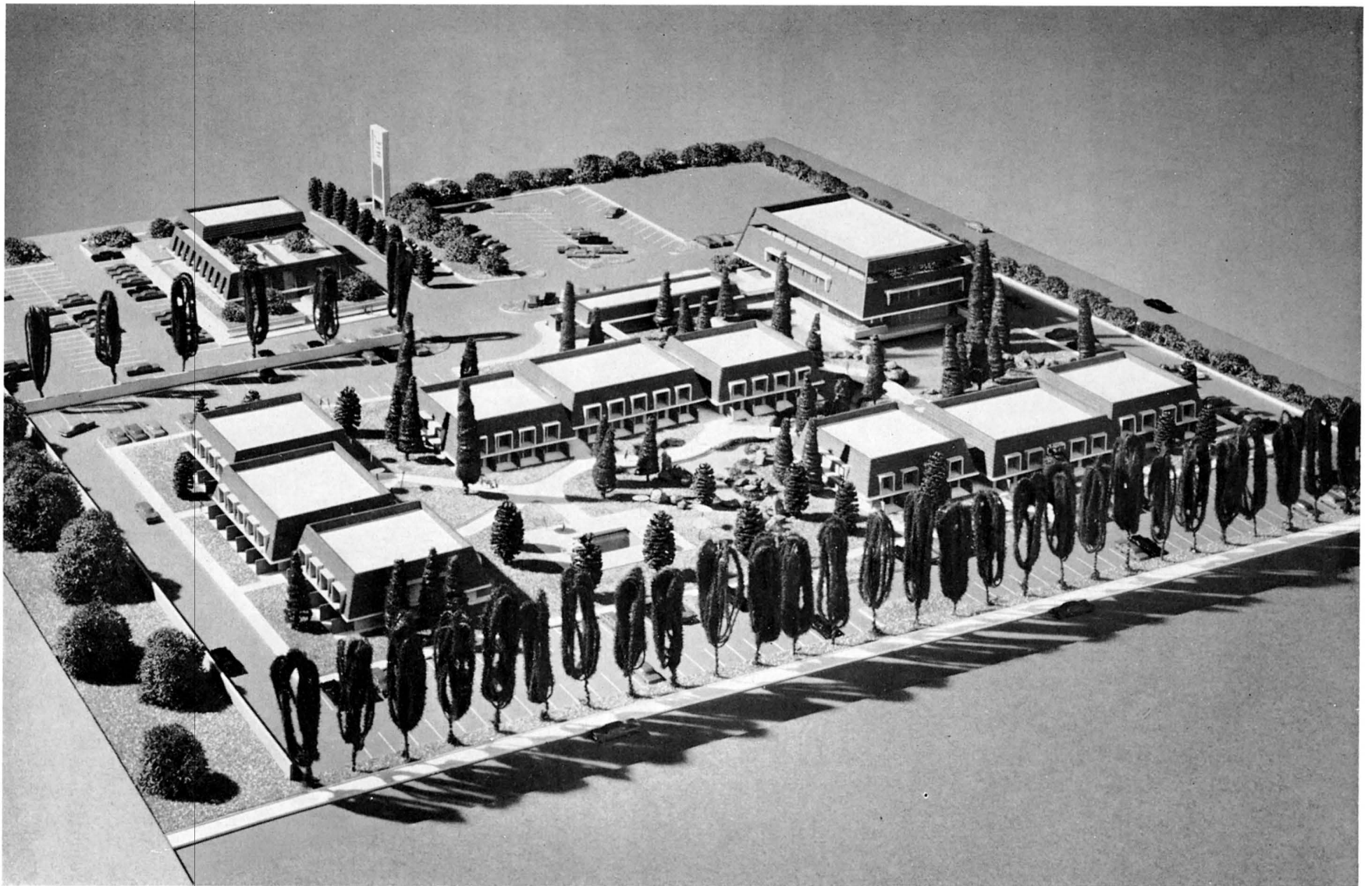
Service roads and planting buffer the development from the adjacent San Bernardino Freeway and motel units overlook a park-like landscape with small lagoon, fountains and waterfalls.



FIRST FLOOR PLAN

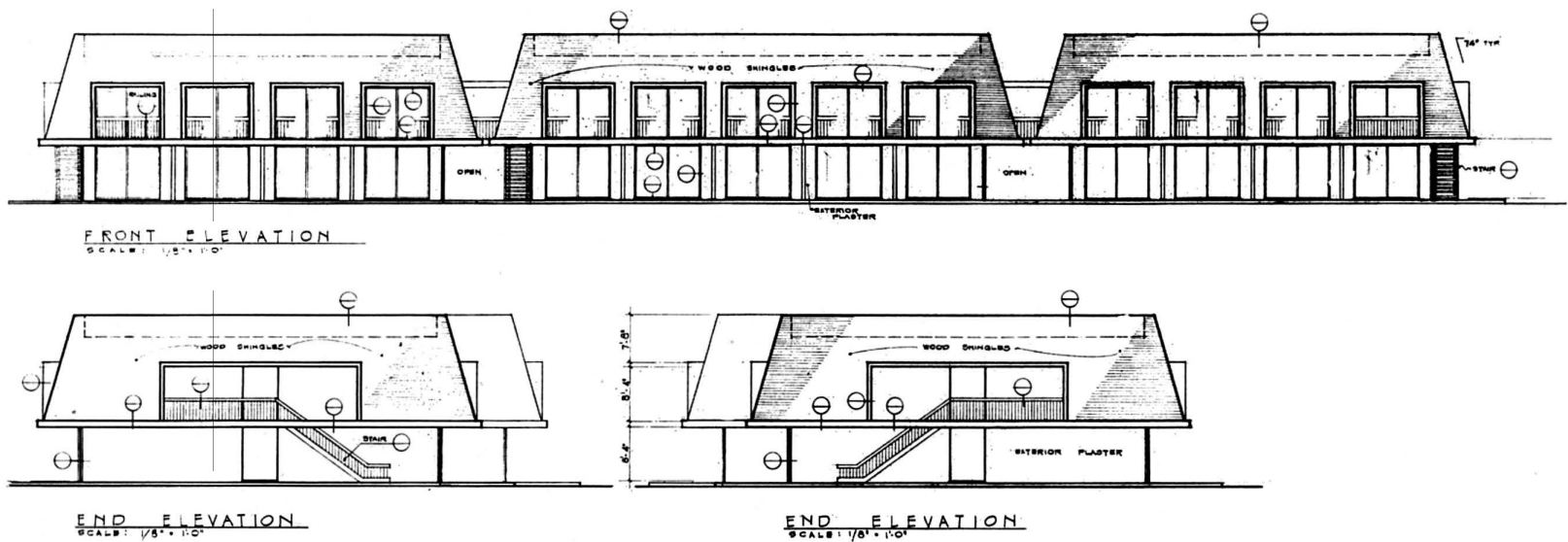


SECOND FLOOR PLAN

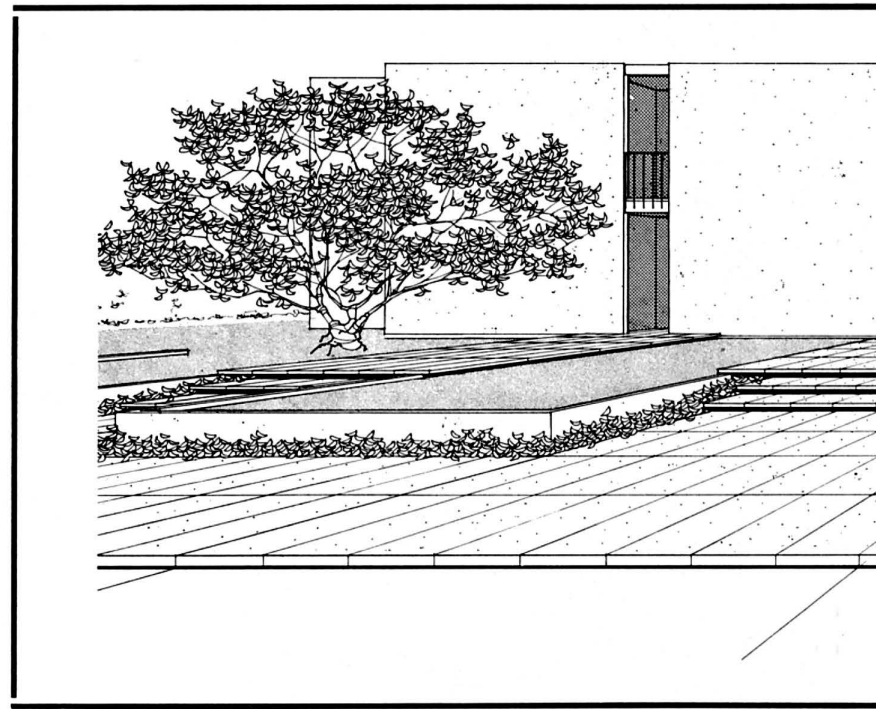


PHOTOS BY HERBERT BRUCE CROSS

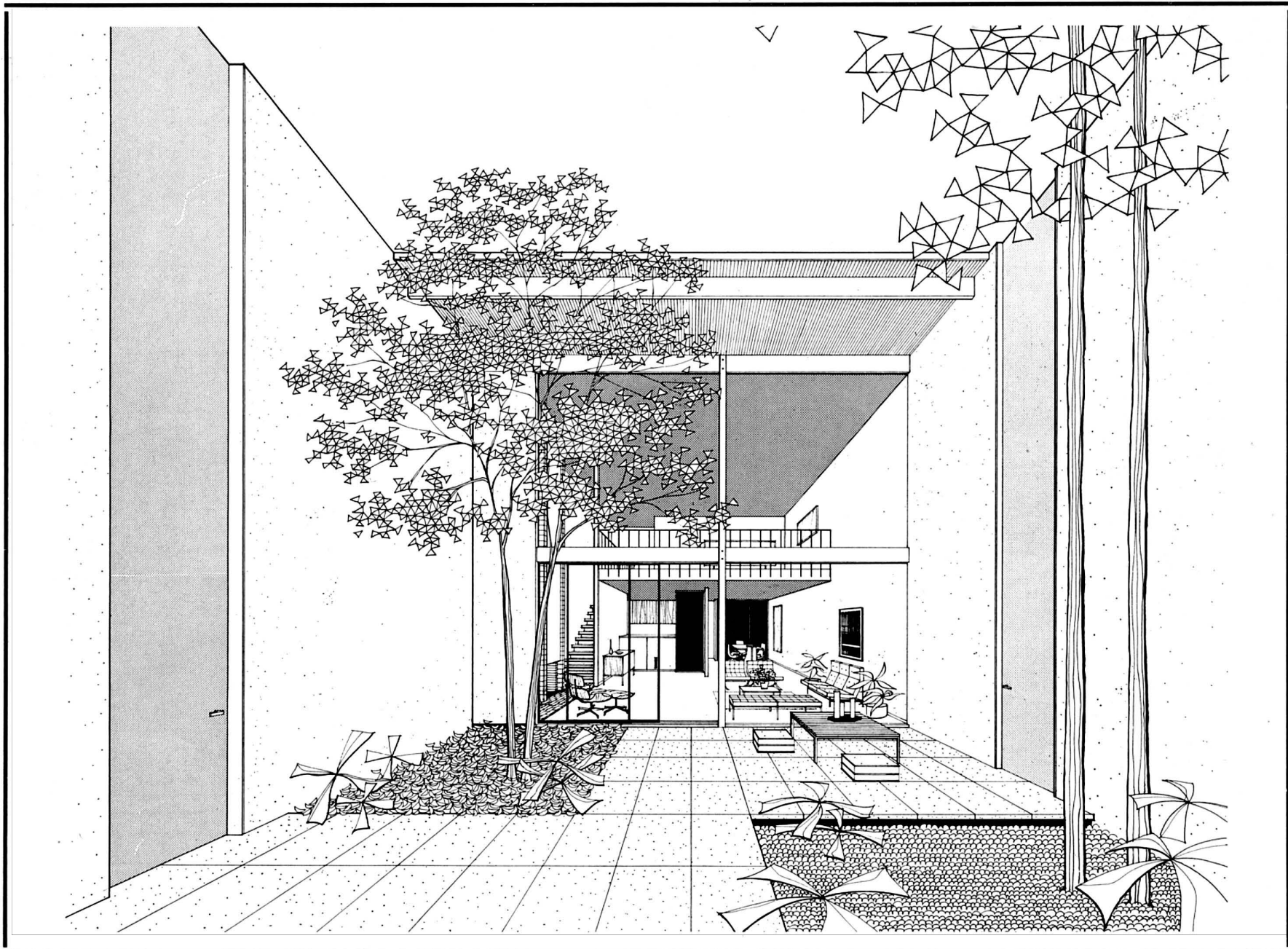
PROJECT ARCHITECT JACK KRAUSE

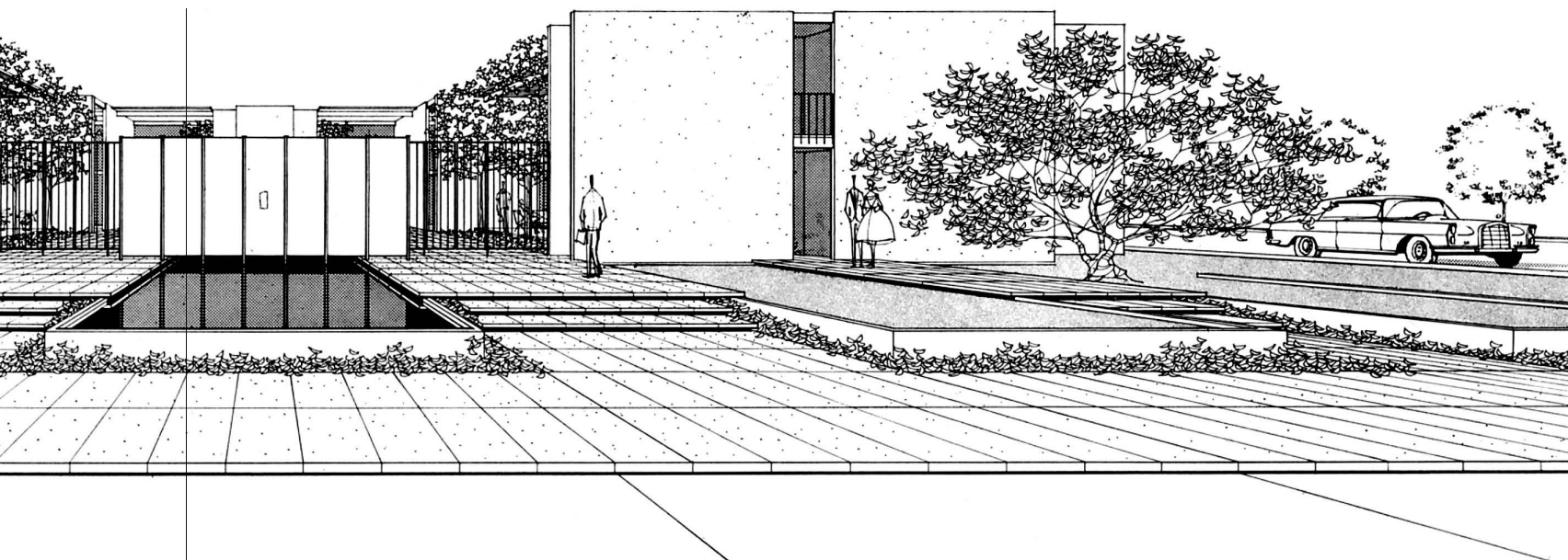






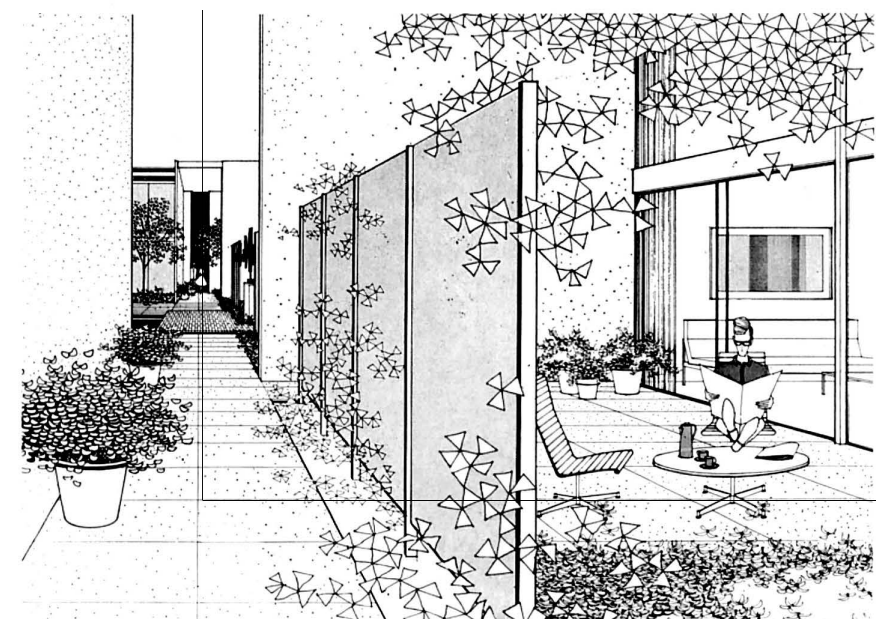
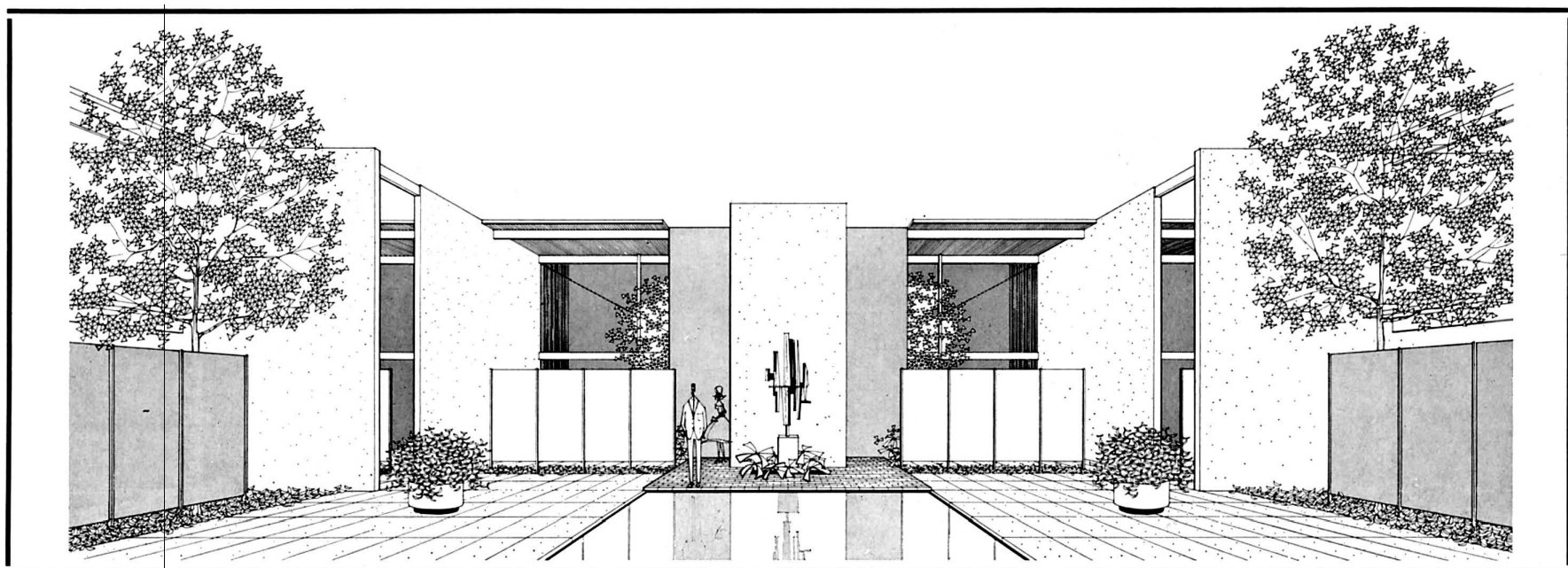
**CASE STUDY APARTMENTS NO. 2 BY KILLINGSWORTH-BRADY AND ASSOCIATE, ARCHITECTS**





FOR THE MAGAZINE, ARTS & ARCHITECTURE, IN ASSOCIATION WITH SHERMAN WHITMORE, OWNER-DEVELOPER

ARTHUR L. HOSKINSON, GENERAL CONTRACTOR



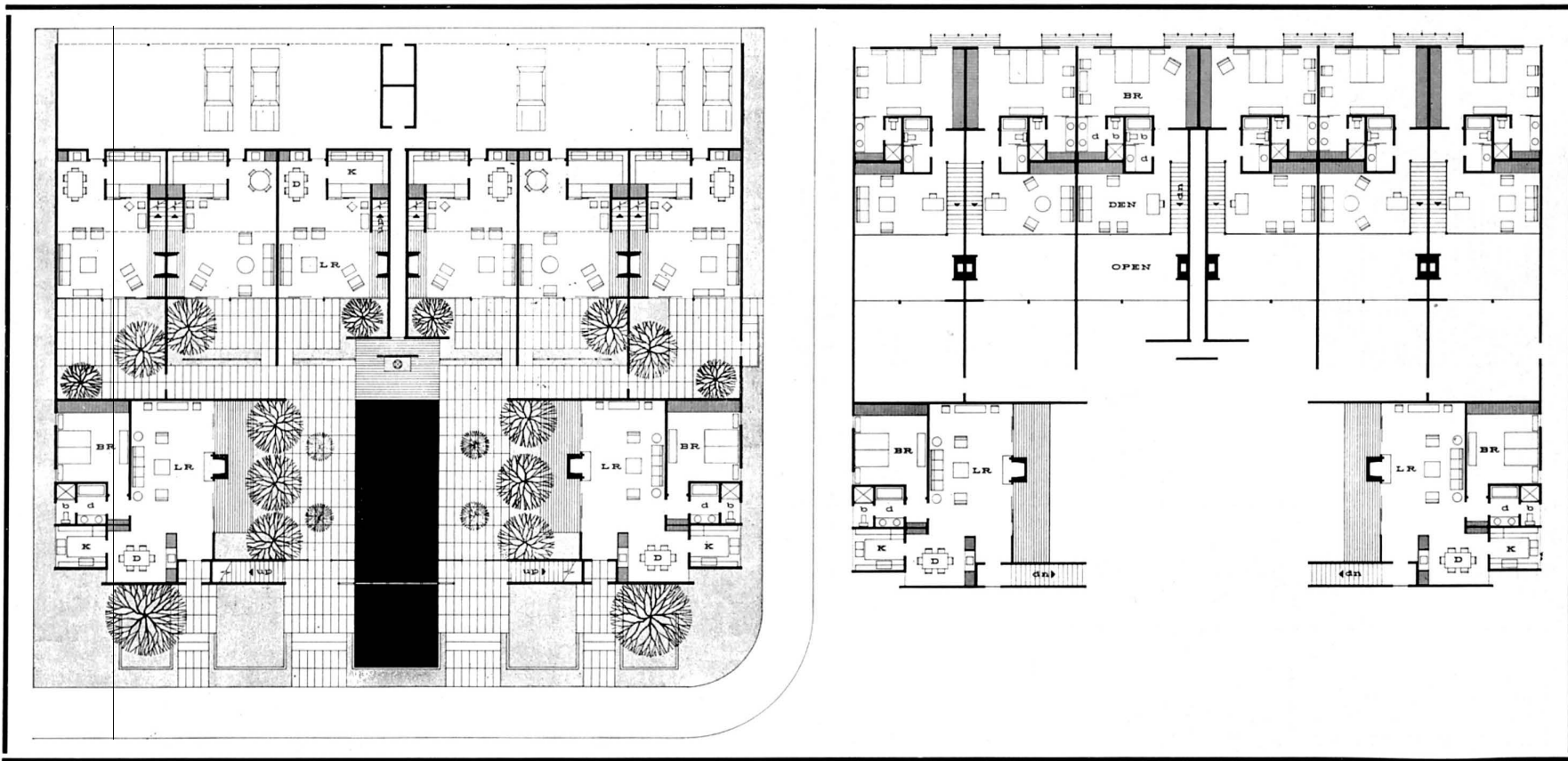
*Editor's note: While waiting impatiently for construction on Case Study Apartments No. 1 (formerly Case Study House No. 28, A&A November, 1963) to reach a sufficiently photogenic stage of construction to warrant publication, we here present our second excursion into multi-family residential architecture.*

The site of the project is a corner property 129'-0" x 142'-0" located on the upper mesa of Newport Beach, California. One street is the primary traffic artery for the general area, the other is a typical street of a better residential neighborhood. At the rear of the property is a 20'-0" alley which provides for service. There is a 20'-0" building setback on the primary street and the sideyard requirements are 4'-0". However, at the side street there is an easement for underground utilities, which requires a building setback of 10'-0".

Zoning restrictions would have allowed 12 units on this parcel of land. The owner preferred to develop only 10, thereby allowing larger units and added amenities. Four of the apartments are two-bedroom units. The other six are two-bedroom, two-story studio type. The general plan has been developed as a balanced composition around a courtyard with a 15'-0" x 30'-0" swimming pool fronting on the principal street. On each side of the courtyard two two-bedroom apartments are stacked. The

*(Continued on next page)*





rear of the courtyard is closed with the six studio apartments. The garages face the alley and the bedrooms of the studio apartments are above these.

The building is set upon a 20"-high podium. Access to the courtyard is by means of low rise 20"-wide steps through wrought iron gates combined with factrolite glass to shelter the courtyard from the street. Paving in the courtyard is of concrete aggregate, composed of pea-size natural gravel set in a tight pattern of redwood divider strips. The 15'-0" x 30'-0" pool is by Fiesta Pools and is developed as a garden pool of simple shape for reflections as well as swimming. On either side of the pool are factrolite glass screens sheltering private gardens for the two-bedroom units on the ground level. Behind the pool, and at the focal point of the courtyard, is set a 17'-0"-high plaster panel as a background for a large bronze sculpture which is to be mounted upon a high pre-cast concrete base.

The studio apartments contain 1,310 square feet with living room, dining area, kitchen, two baths, master bedroom, and a den-bedroom combination. The width of the unit is 20'-7", the depth is 50'-0" including the master bedroom which projects over the garage space. Entrance to each apartment is by private courtyard through a tall door to the two-story-high living room. Features of this room include the two-story glass wall to the garden, a tall fireplace and the den-bedroom at the second floor as a balcony. The dining area is at the rear of the living room and is a one-story space with a wet-bar set behind walnut doors. Cabinets in the kitchen are of walnut with white plastic laminated tops. The lighting is low key incandescent, and all appliances are electric, including the water heaters. A pantry and a large serving counter to the living room are also features of the kitchen.

The second floor consists of a master bedroom and two baths and the den-bedroom combination on the balcony with a commanding view through the two-story living room to the garden beyond. The master bedroom is 13'-0" x 17'-9" with a large quantity of storage space. The master bath has two separate marble counter tops with wash basins and an individual compartment for the toilet and shower.

The four two-bedroom apartments on either side of the courtyard are duplicate units with two above and two below. Each apartment contains 1,290 square feet with living room, dining room, kitchen, two bedrooms and two baths. A small entry separates the entrance from the 16'-0" x 21'-0" living room which faces upon its own private courtyard. At the end of the living room is a room 10'-0" x 12'-0" which may be used

(Continued on page 32)

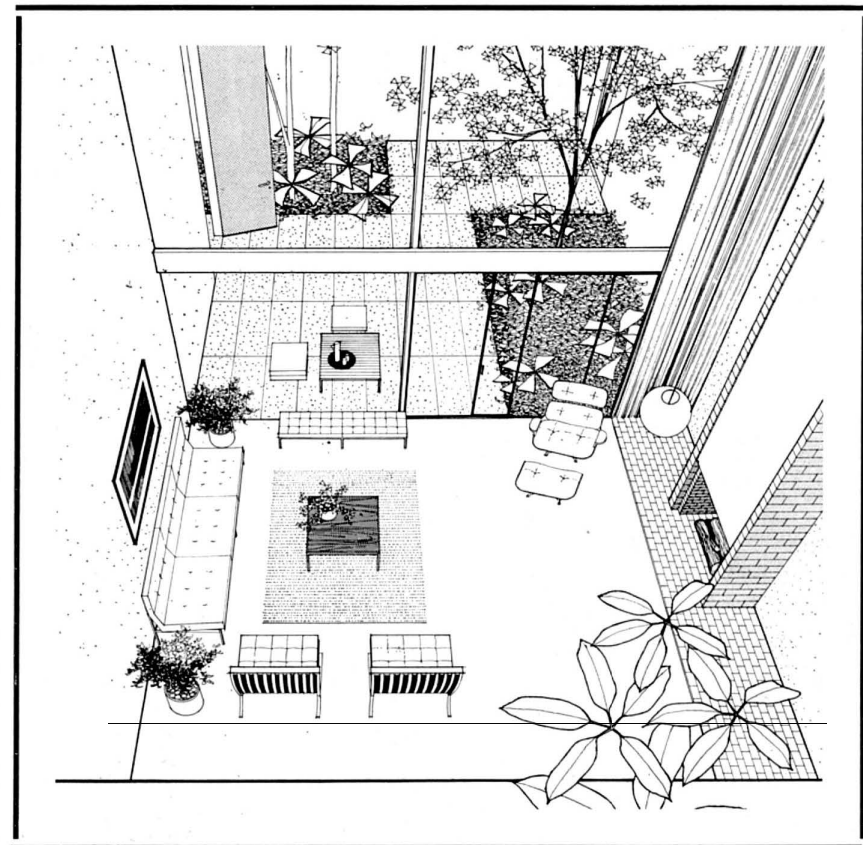
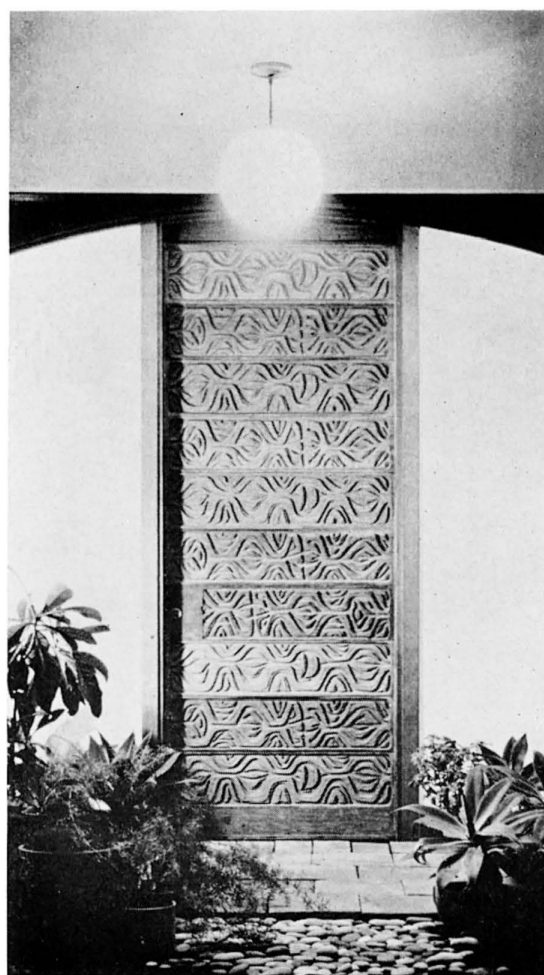




PHOTO BY DON E. WOLTER

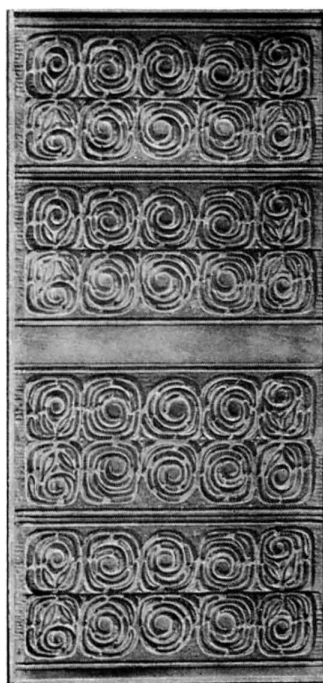
## DECORATIVE DESIGNS IN REDWOOD



These modular carved panels, designed by Evelyn Ackerman and architect Sherrill Broudy for Panelcarve of Santa Barbara, Calif., are hand-crafted by machine, utilizing a process that retains the best of the old while adapting it to the new. The designs are reproduced by a machine guided by the craftsman's hand, which is reflected in the small variations discernible in each panel.

The panels are carved in modular sizes from 1-1/16" kiln-dried, all heart redwood and have tongue-and-groove edge detail that permits easy assembly into a variety of design combinations, and a limit to their possible uses has yet to be reached. Most of the panels are 9" x 36" (ranging in price from \$9.50 to \$16 depending on intricacy of design) and have been assembled into doors, table tops, divider screens, paneled walls, desk components, planters, cabinets, headboards, and even used individually as wall hangings.

The wood is treated to give a dark brown color, the shade varying from panel to panel with the character of the wood, and may be installed unfinished and allowed to age and weather naturally. Although stocked in the dark unfinished redwood, the panels can be carved in walnut, pine, mahogany and other woods.



PHOTOS BY RANDLE



# PRODUCTS



merit specified

## FOR CASE STUDY APARTMENTS NO. 2

### Killingsworth, Brady & Associate, Architects

The following list of specifications represent those products considered by the architects on the basis of quality and utility as being most suitable to Case Study Apartments No. 2 and have thus earned the right to be "Merit Specified" within the meaning of the Case Study House Program. Additional products will be added to the list when specified by the architects.

#### STRUCTURAL

**Cement**—Portland Cement Association, 816 West Fifth Street, Los Angeles, California.  
Riverside Cement Company, 2404 Wilshire Blvd., Los Angeles.  
**Floor Fill**—Elastizell Concretes of California, 2524 North San Gabriel Street, South San Gabriel, California.  
**Steel Columns**—Bethlehem Steel Company, 6000 South Boyle Street, Vernon, California.  
**Glu-Lam Beams**—American Institute of Timber Construction, 1757 "K" Street, N.W., Washington, D. C.  
**Framing Lumber**—American Plywood Association, 1119 "A" Street, Tacoma 2, Wash.  
Hemphill-O'Neil Lumber Company, Inc., P.O. Box 667, Chehalis, Washington.  
West Coast Lumbermen's Association, 1410 S.W. Morrison Street, Portland 5, Oregon.  
**Roofing**—Owens-Corning Fiberglas Corp., 5933 Telegraph Road, Los Angeles 22.

#### WALLS

**Plaster Grounds**—Milcor Metal Lath and Accessories, Inland Steel Products Company, 4807 East 49th Street, Los Angeles 58.

#### DOORS AND WINDOWS

**Sliding Glass Doors**—Arcadia, Northrop Architectural Systems, 5022 Triggs Street, Los Angeles 22.  
**Slab and Wardrobe Doors**—General Veneer Manufacturing Company, 8652 Otis Street, South Gate, California.  
**Shower Doors**—American Shower Door Company, Inc., 936 North Cahuenga Boulevard, Los Angeles.  
**Jalousies**—Cal-State, 2473 Fletcher Drive, Los Angeles 39, California.  
**Plate Glass**—Pittsburgh Plate Glass Company, 1413 Cravens, Torrance, California.  
**Obscure Glass**—Mississippi Glass Company, Fullerton, California.  
**Skylights**—Skydome, American Cyanamid Company, 2300 South Eastern Avenue, Los Angeles.  
**Sliding Door Closers**—The Kelly Kloser Company, 20367 Gault Street, Canoga Park, California.  
**Door Hardware**—Schlage Lock Company, 3467 West 8th Street, Los Angeles 5.

#### FURNISHINGS

**Furniture**—Crossroads Manufacturing, Inc., 15250 East Whittier Boulevard, Whittier, California.  
Frank Bros., 2400 Long Beach Boulevard, Long Beach, California.  
Designed by George Kasparian for Kasparians, 7772 Santa Monica Boulevard, Los Angeles 46.  
Knoll Associates, Inc., 8936 Beverly Boulevard, Los Angeles.  
Herman Miller, Inc., 8806 Beverly Boulevard, Los Angeles.  
Scandiline Furniture, Inc., 2175 Signal Street, San Pedro, California.  
**Paintings**—Orlando Galleria, 17037 Ventura Boulevard, Encino, California.

#### FIREPLACES

**Masonry**—Los Angeles Brick & Clay Products Company, 2310 E. 7th St., Los Angeles.  
**Dampers**—Superior Fireplace Company, 4325 Artesia Avenue, Fullerton, California.

#### ELECTRICAL

**Kitchen Lighting**—Globe Illumination Company, 1515 West 178th Street, Gardena, California.  
**Electrical Supplies**—Consolidated Electrical Distributors, 1700 - 17th Street, San Francisco, California.  
**Low Voltage Lighting**—Coronado Manufacturing Company, 1247 East Hill Street, Long Beach, California.

#### FINISHES

**Quarry Tile**—The Mosaic Tile Company, 131 North Robertson Boulevard, Beverly Hills, California.  
**Ceramic Tile**—International Pipe & Ceramics Corporation, 2901 Los Feliz Avenue, Los Angeles.  
**Counter Tops**—Laminart, Fabicon Products, 6430 East Slauson Avenue, Los Angeles 22.

#### PLUMBING

**Kitchen, Bar and Bathroom Sinks**—Graning Company, 4100 North Arden Drive, El Monte, California.  
**Water Heater**—Day & Night Manufacturing Company, 855 South Anaheim-Puente Road, City of Industry, California.  
**Water Purifier**—Ogden Filter Company, Inc., 4214 Santa Monica Blvd., Los Angeles.

#### CABINETS

**Kitchen**—St. Charles Custom Kitchens, 8660 Sunset Boulevard, Los Angeles.

#### GARDEN

**Concrete Staining**—Kemiko, Rohloff & Company, 918 North Western Avenue, Los Angeles 29.  
**Pool and Pool Equipment**—Fiesta Pools, 9830 Atlantic Blvd., South Gate, California.

#### ITALY — ESTHER McCOY

(Continued from page 25)

near Olbia in Sardinia.

Not unexpectedly, the consumption of tiles of traditional design is greater in the south. The north makes good use of its contemporary artists and architects. The ubiquitous Gio Ponti, however, designed some tiles for D'Agostino and a large line for Joo Ceramics of Milan and Genova Ceramics of Genoa. His associate Alberto Rosselli has also tried his hand at tile design with good results. Many of the artists whose ceramics have been exhibited at the last two Triennales of Milan have now turned to tile design with the upswing in the production. Their understanding of the medium gives their work distinction. Examples have been brought to the United States by the Cappellin Ferruccio Company of Milan.

But the bulk of the tile production comes off the beltlines of Joo Ceramics, Genova Ceramics, Pozzi of Milan, and the firms belonging to the Association of Industries of Sassuolo, Veggia and Spezzano di Fiorano in the area of Modena. Their combined output of gres and majolica tiles is enough to pave the European Common Market.

Modena, twenty miles from Bologna, is the hub of a large tile operation. A city with a superb Romanesque cathedral and campanile, and a great cuisine which is complemented by the light red, slightly *spumante*, Lambrusco wine, it began producing tile in the 15th century. Within a short drive from the city are now over a hundred tile factories, all filling orders for Europe, Asia, the Near East and America. Ceramic tiles are cheaper here than asphalt or linoleum ones, and cities and towns clothe all their new buildings with it.

At their most romantic, tiles are wonderful embroideries molded with fire, and at their simplest they are oiled clay or sandstone fired to a brick red, brick-shaped or in Roman splits, beautiful in their serviceability. D'Agostino makes them not only in the basic shapes but in hourglass, diamond and lozenge shapes.

A tile that circles the globe is the glass mosaic from around Venice. The walls of most of the railway stations in northern Italy are of glass mosaics. The SARIM plant at Mira, which at night looks like a setting for a production of *Faust*, has a hundred or more bins of tiles, each of a different color. An excellent use of them close to home is in the First Christian Science Church in Santa Monica, designed by the architects Risley, Gould and Van Heuklyn. On a serpentine wall the glass mosaics shade from pale sand to dark brown with darker tones on the concave surfaces. The uneven undulation of the colors was achieved by the blending of light to dark on the sheets of mosaics, and gradually working up the scale to a concentration of the deeper tones. In lights and darks, gold tiles are interlaced for sparkle. There are fifteen colors in the full range from light to dark.

#### CASE STUDY APARTMENTS NO. 2 — KILLINGSWORTH-BRADY & ASSOCIATE

(Continued from page 30)

either as dining room or a small family room-dining room combination. On one wall is a wet-bar set in walnut cabinet work. The kitchen is spacious and has direct access to the private courtyard through a sliding glass door; the cabinets are of walnut with white plastic laminate tops. The two bedrooms are large, with ample storage areas, and the master bath, with a large expanse of mirrors, serves also as a dressing area at the entrance to the bedroom. The counter top is of marble and has dual bowls. The second bath is located with direct access from the other bedroom, which may be used as a study or a guest room.

The buildings are of wood frame and plaster. Heating is by means of electric wires in the ceilings of the units. First floor apartments are on a concrete slab floor. The second floor units have floors of Elastizell lightweight concrete set on wood floor joists.

Landscaping of the project will be extensive, with large olive

trees set at either side of the courtyard entrance of the building and at the side street corner to soften the corner. Plant material in the courtyard will be set in large pots to develop a formal character. Colors of the structure throughout will be muted earth tones with a dominance of white for interior wall surfaces.

Furnishings will be of a simple linear form to reflect the general architectural character of the project.

#### STATEMENT — LOUIS I. KAHN

(Continued from page 19)

the law of light, from which I have made a rule for myself in the design of the building.

Recently I was asked to design a town in Israel. Unfortunately I could not go to convey my ideas. But I thought of the desert being reshaped in mounds, which would contain reservoirs. And these mounds would be so placed against the winds that they would help in creating venturi which now are just flowing freely, not being controlled. And that a village be built around a venturi principle of air so that the air would be guided through small avenues and large receivers. The shape of the streets will follow the need which the buildings have there. This would not be applicable in Germany. Some of the buildings which are built in Israel today, follow the rules set down by German architects — good rules for Germany, but not good rules for Israel. This indigenous architecture is, I think, the great excitement of architecture.

In a dormitory I'm doing for Bryn Mawr College, I had a feeling that the dining room, living room, reception rooms and entrance were different, in every respect, from the sleeping quarters. And I kept the sleeping quarters apart from these rooms, believing that I was expressing that one was different from another. But I discovered my mistake. I realized that a person sleeping in a room felt well about his house if he knew the dining room was downstairs. The same way with the entrance to the building. The sense of hospitality, or reception, of getting together must be part of the fabric of the house itself. I changed, much to my delight, the whole conception, and I made these spaces part of the fabric of the other spaces. To me, this is realization in form.

Now if I had just looked at it as design, as I did before, I would have been led to something which may look well, but which had no power to convey one very wonderful thing about architecture. Because architecture really is a world within a world. When you build a piece of architecture, you build a kind of location for an activity of man which is, let's say, different from another activity of man, even though it may be in the same general realm of activity.

One of the most wonderful buildings in the world which conveys its ideas is the Pantheon. The Pantheon is really a world within a world. The client, Hadrian, and the architect, whom I don't know the name of, saw the demand of this pantheonic requirement of no religion, no set ritual, only inspired ritual. He saw the round building, and a very large building. I imagine that he probably thought the building should be at least 300 feet in diameter; he changed his mind because there were no craftsmen who would make such a building, and it was out of the stream of economy. Economy meaning here that there's no man around to do it. I don't mean money — I don't mean budget — I mean economy. And so the Pantheon is now a hundred and some feet in diameter. The dome, the first real dome made, was conceived with a window to the sky. Not because of ethereal reasons, but because it's the least distracting, the one that is most transcending. And there is a demand form saying nothing specific, no direction; that's what form says to you, feeling and philosophy. It says no direction to this . . . no oblong . . . a square not satisfying here . . . too far and away at the corners. The round building is something which is irrefutable as an expression of a world within a world.

Now architecture — if you think of it in terms of school — also

#### JOIN THE GRAPHIC CIRCLE

Build a valuable art collection of limited editions.

For the modest sum of \$3.00 a month (\$36.00 yearly membership) you will receive an original European numbered and signed black and white or colored graphic.

Each edition is limited to 100 only.

Graphics are shipped ppd. and duty free.

For further information:

**GRAPHIC CIRCLE** GORDON'S FIFTH AVENUE GALLERY  
68 Fifth Ave., New York 10011



probably began with a man under a tree who didn't know he was a teacher, talking to a few who didn't know they were pupils. They listened to this man, and thought it was wonderful that he existed, and that they would like to have their children and their children's children listen to such a man. Of course, that was in the nature of man impossible. School then became a room, and then an institution. Read a program today from the institutions called schools, and what do you get? You get a program that sounds like this: There should be a nine-foot fence around the school; there should be corridors, probably nine feet wide because statistically this is supposed to be enough. These, being corridors, are possibly the best place to have the air conditioning return system and lockers.

In this environment you go to your classrooms, which, by reason of the fact that all classrooms have 30 pupils in them, are all alike. You have perfect air conditioning, ventilation and light — this is always given. And the cafeteria can be in the basement, because actually you don't spend much time there. This is the kind of a program you get from the School Board.

Now I think the first act of the architect is to change this; to change the program for what is good for the institution, for the continuation of the institution of learning. Man has established that for which he feels an inner need to know, to relate knowledge to himself. And that school is as much a part of him as though it actually grew with him. That's really what an institution is. It's an extension of man and his needs. And this must be made greater and greater by the architect. He must refuse the program, he must change the client's program — which reads in the form of areas — into spaces. He must change corridors into galleries; he must change lobbies into places of entrance; he must change budgets into economy. Architectural space is a space within which you read how the space is made; within the space, the columns, the beams, and the stones are in the space itself. A great span must have nothing in it, but that which is captured by the span. And the decision of the structure of the span is also a decision in light. A column, next to a column is an expression of opening and light. A vault is a choice in character of light. You shouldn't open one room to the other to find out how the space is made. Within the space itself is the structure of that space. That makes architecture different from building, just building. All building is not architecture.


#### MUSIC

(Continued from page 12)

less blocked, except the single outlet through his fingers. "Archangel!" the once-famous dancer Maud Allen breathed aloud, when I spoke of her beloved friend Ferruccio Busoni. "Archangel — and Archdevil!" Richard Buhlig, who had known Busoni well, growled back at her across the table. They did not quarrel, each remembering a man outside the common knowledge.

Guy Maier told me of taking the young Vladimir Horowitz to





**Strength in any Length**

- For enduring strength and beauty for most any roof span, specify solid, KD Douglas Fir roof decking from Hemphill-O'Neill. Available in random or specified lengths to 24 feet.

**Hemphill - O'Neill**  
LUMBER CO., INC.  
POST OFFICE BOX 667 • CHEHALIS, WASH.

visit Schnabel. Horowitz was convinced that Schnabel did not approve his playing and would not wish to meet him. After the amenities, Schnabel invited Horowitz to sit at one of the two pianos, handed him the score of the Mozart two-piano sonata and himself sat at the other piano. I shall not attempt to reproduce Maier's superlatives describing what then happened; one can no more than try to imagine the interplay of two so distinct styles. Before starting the slow movement, Schnabel, across the two pianos, hissed: "Nicht schmalz." It was unjust; it was the perpetual conflict of two unreconciled traditions.

One can hear today on a record Gustav Mahler limpidly reading at the Welte-Mignon pianistic apparatus from the finale of his Fourth Symphony. When Busoni returned to Vienna to play the *Emperor Concerto* a second time with Mahler, he was summoned by a note to come to Mahler's office. There he was kept waiting, a half-hour, forty minutes. The door to the inner room burst open; Mahler almost ran across the waiting-room and out the other door, snapping over his shoulder as he passed by Busoni, "Nicht schnell!" Mahler felt that Busoni at the last performance had played too rapidly; he dared not tell him so face to face. Buhlig told me this; he had it from Busoni.

And the anecdotes of Buhlig and Schnabel, friends of fifty years. Schnabel was present at the first program of Buhlig's second Beethoven sonata cycle in Los Angeles. I shall never forget the little square man in frock coat and square top hat, a visible anachronism, marching away from us down the street with a strut like a miniature Brahms. Next day, by way of mutual friends, came Schnabel's verdict. "He lacks nothing," Schnabel said of Buhlig, "except sensuality." "Sensuality" Buhlig snorted, hysterical between laughter and fury, his most conspicuous characteristic thus obliterated. Later during the same series, Schnabel played the *Diabelli Variations* on a Wednesday evening. That morning a critic had written of Buhlig's

Monday evening recital: "It was the greatest piano-playing I have ever heard." (I endorse the statement). The next morning Buhlig drove his old friend and rival to the station. On the platform Schnabel said how happy he was to have heard Buhlig play once more. "And the critics gave you great praise." Then turning his head as he climbed up to the Pullman, "But that was only one person's opinion!"

Friends, furies, rivalries — but they bring tears to the eyes. The two pianists, the one all German, the other from Chicago, met as boys, pupils of Leschetizky in Vienna. Buhlig, slightly the elder, was the first to break away from the "Paderewski atmosphere"; the next year Schnabel followed him to Berlin. They became members of the Busoni circle, those who visited Busoni at his apartment in the afternoon, retiring with him into the back room with the pianos to discuss their technical problems; Busoni never gave lessons. With inexorable Germanic decision Leschetizky had assigned Buhlig, the dramatic performer, to study Beethoven sonatas and Schnabel, the lyricist, to study Schubert sonatas. For a few years the young Buhlig was the rising soloist, while Schnabel played chamber music. Later the wheel of fortune spun.

One tries to read through the anecdotes to discover the spirit of these extraordinary men and a few women, who lived and made music like princes of the blood. And though one suspects a deeper tragic stuff in them than shows through the cheerful weaving of tales in Harold Schonberg's *The Great Pianists*, the book offers aplenty for enjoyment, filled out with an abundance of technical and stylistic information.

#### BOOKS

(Continued from page 9)

**INVENTING THE FUTURE** (Alfred A. Knopf, \$4.95) by Dennis Gabor, physicist and Fellow of the Royal Society, also expresses an optimistic view of the future. It is his principal thesis that we not only can determine the rate of progress of our material future, but that for the preservation of civilization, we must. The two elements which can overwhelm us are an all-consuming technology and over-population. We can, if we have the will, resolve both problems by invention. As he says, Gabor eschews the pessimism of Anatole France or Bertrand Russell and believes that Man can still preserve himself and his planet.

**THE NAKED SOCIETY** by Vance Packard, (McKay, \$5.95) is a very serious and shocking report of the extent to which our privacy has been violated, the guarantees of State and Federal constitutions notwithstanding. Packard makes no claim to being what the pedagogues call "an exact scientist" working in an "exact science," but he does pile up the facts in an endless chain of evidence to prove a case: that we are constantly being investigated as individuals or as members of groups or organizations in ways which are illegal if not immoral. Packard is concerned with the erosion of some fundamental tenets which we used to respect. The Art of Investigation has gone to fantastic lengths: wire-tapping is but one facet of the constant effort to accumulate information. The Great Snoop literally begins at birth, follows us through school, college, our first jobs and on into adulthood. The dossier is purchasable and is used by countless pitchmen and sales organizations to inundate us with junkmail, phone calls, solicitations and invasions of our peace if not our privacy. But beyond this nuisance, there is the real danger that we are being dossierized to the point where it becomes dangerous to be different, independent. Big Brother is watching us.

**THE MEANING OF HISTORY** by Erich Kahler, (Geo. Braziller, \$5.00) is an assertion of man's freedom of choice and historic evolution to the growing freedom of men to make multiple choices. In this sense Kahler is an optimist in the tradition of most of the great historians. Kahler synthesizes the traditions and beliefs of East and West into a statement of belief in progress and salvation. In substance *The Meaning of History* is a reply to the nihilists of history from Nietzsche to the Existentialists.

**THE TALK IN VANDALIA** by Joseph P. Lyford, (McNally & Loftin, \$2.95) is a journalist's "survey in depth" of an average American town deep in the heart of America. Gathered with the assistance of the Center for the Study of Democratic Institutions, this is a report on the changing face and soul of rural America. What bothers smalltown America? The high cost of farming and civil defense. An excellent and important report.

## A is for Arts & Architecture

## B is for Binder

- handsome, durable black cover
- conveniently holds 12 issues
- individual mechanism secures copies
- opens flat for easy reference
- title stamped in gold foil

\$3.00 each

or

3 for \$8.50

**ORDER YOURS NOW**

make checks payable to Arts & Architecture

3305 Wilshire Blvd.

Los Angeles 5, Calif.

(add 4% sales tax in California)

## NOTES IN PASSING

(Continued from page 13)

that nobody has ever had enough time to determine its actual value but the mathematicians have an approximate method which uses Sterling's formula:

$$n! = \left(\frac{n}{e}\right)^n \sqrt{2\pi n}$$

From this we find that  $1000!$  is approximately equal to:

$$10^{2570}$$

This number is so large that it would take this whole page to write it all down, but how big is it, really? Well, how many times does your heart beat in a normal lifetime? 70 years  $\times$  365 days  $\times$  24 hours  $\times$  60 minutes  $\times$  60 seconds = 2,207,520,000 thumps. This is approximately =  $2.2 \times 10^9$  which is very small in comparison to the  $1000!$  number.

Since the number of heartbeats in a lifetime doesn't give us a "feel" for the number of possible combinations of eight-room houses lets look for another large number close at hand.

How many atoms are there in the universe?

There are about  $10^{24}$  atoms per cubic foot of the Earth.

Then the Earth contains:  $(8000 \times 5000)^3 \times 10^{24} = 6.4 \times 10^{46}$  atoms.

The sun contains:  $6.4 \times 10^{46} \times 10^6 = 6.4 \times 10^{52}$  atoms.

The Solar System: about  $10^{53}$  atoms.

The Milky Way Galaxy (ours): about  $10^{63}$  atoms (10 billion stars).

100 million galaxies: about  $10^{71}$  atoms.

So as to keep one-up on all of the super galaxies that will perhaps be discovered by new type equipment in the future:

Say 100 million super galaxies: Approximately a total of:  $10^{79}$  atoms in the universe!

This didn't accomplish much toward understanding just how big a number  $1000!$  is, except to state that  $1000!$  is a great deal more than all of the atoms in the universe.

Some of you are sure to be saying by now: "That's like the problem of the monkeys writing all of the books in the British Museum — most of the books are gibberish".

But these houses are being designed by architects and there is not so large a proportion of gibberish. Well, how much of the  $1000!$  number is gibberish?

Let us go way overboard and assume that only *one* of these houses in ten thousand will have the most happy combination of understanding rich clients and building departments and a good architect.

Then:  $\frac{10^{2570}}{10^4} = 10^{2566}$  which is about as big as before.

By now it should be clear that the reason that none of the houses or structures are ever exactly the same is that there are so many possible combinations of *best solutions!*

Why, then, do they look so similar?

The only logical explanation would seem to be that almost all of the architects are either deliberately or subconsciously restricting themselves to very narrow pathways insofar as the variations regarding Space, Volumes, Shapes and Styles are concerned.

There are certainly enough colors.

There are plenty of solutions.

We have enough materials.

It isn't logical that they should *remotely* resemble one another!

All numbers under 201 from: *Mathematical Tables from Handbook of Chemistry and Physics*.

All numbers over 201 supplied by Marc Goldwater, Combinatorial Analyst, who will supply bigger numbers on demand.

See also: *The World of Mathematics* by James R. Newman; Simon & Schuster, 1956 edition, 2469 pages.

## ART

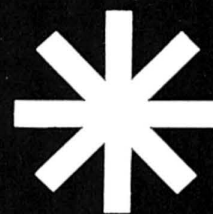
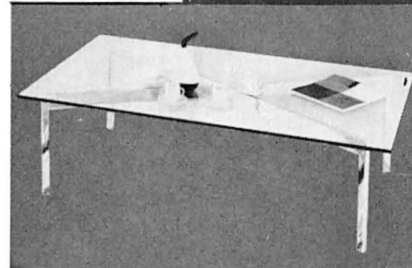
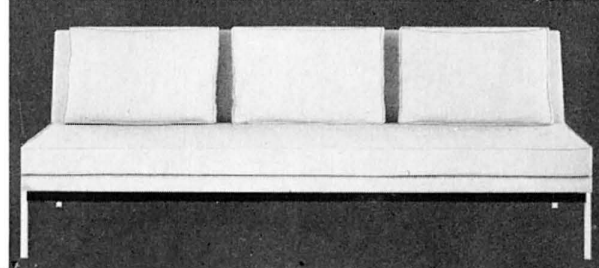
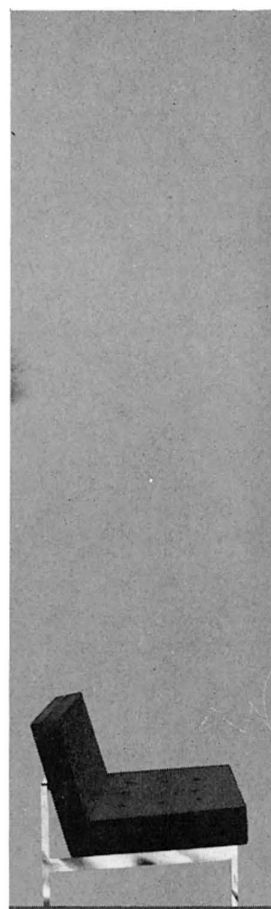
(Continued from page 7)

empty volumes hovering above. Then, he subdivides the central hall with a group of asymmetrical free-standing walls that are long enough and solid enough (not like those perfectly ridiculous metal dividers that now ruin many museums) to suggest that they are true enclosures, safely supporting their burden of paintings. At certain intervals, a panel from floor to ceiling suggests another level, and serves as effective foil for the exhibition of sculpture.

While even Speyer cannot provide the intimate spaces most of these paintings were painted in and intended for, he has so effectively combatted the hostility of the hall that it is possible to contemplate the paintings without feeling overwhelmed.

## SERIES 3000

FOR THE MOST DISCRIMINATING  
CONTEMPORARY CLIENT . . .  
ARCHITECTURAL SEATING IN A  
VARIETY OF LENGTHS . . .  
ATTACHED OR LOOSE  
BACK CUSHIONS WITH  
POLISHED OR BRUSHED  
CHROME  
BAR STOCK FRAMES . . .  
3000 TABLE IS AVAILABLE  
IN CUSTOM SIZES  
USING 7/16" GLASS TOPS.



CROSSROADS

MANUFACTURING INC  
15250 EAST WHITTIER BOULEVARD  
WHITTIER, CALIFORNIA

OXBOW 8 8034  
SPACE 471, LOS ANGELES FURNITURE MART



## et cetera

### PENDING

The 1964 Institute of Church Design, a program first held last year for the purpose of acquainting architects with present-day developments in theological disciplines, will be held on the campus of the Pittsburgh Theological Seminary June 1-20. Sponsored by the Seminary and the Carnegie Institute of Technology, the Institute will be in two sections this year June 1-12 and June 8-20. Twenty-five architects, each of whom has designed at least one church, will attend each session.

Meanwhile, it was noted by Rabbi Eugene J. Lipman of Washington's Temple Sinai, during a two-day seminar held by the AIA, that "The rabbi, minister or priest over the age of 50 has life tenure and has a tendency to build a monument — this has nothing to do with religion." The architect is faced with a dilemma, he continued. "If he gives the parish what they want, the building is a failure; if he gives them what they deserve, they get a phony; so the architect should give them what he believes they ought to get."

The First World Congress of Craftsmen, a program planned to discuss the problems of world craftsmanship and communications and to establish an international association of craftsmen, will be held June 8-19 on the campus of Columbia University in New York City. Dr. d'Arcy Hayman of UNESCO will give the keynote address at the congress which is sponsored by the American Craftsmen's Council.

Plastic design, cable-hung roofs, space frames, delta girders will be among the topics discussed at the 16th National Engineering Conference sponsored by the American Institute of Steel Construction May 14 and 15 at Omaha.

"Public Opinion and the Building of Cities" will be the subject of a seminar May 14 and 15 at the San Francisco Press Club. Speakers representing the press will be Grady Clay, editor of *Landscape Architecture* and real estate editor of the *Louisville Courier-Journal*; and George McCue, urban critic for the *St. Louis Post-Dispatch*. Seminar is sponsored by the San Jose State College Department of Journalism and Advertising and the CC, AIA.



### Saarinen

New 38-story home for CBS in New York (left) by Eero Saarinen & Associates carries vertical ductwork in the triangular perimeter concrete columns (to be faced with black granite). The building, with 20,000 square feet to a floor, will occupy only 43% of the site, the remainder to be open plaza below street level on all four sides.



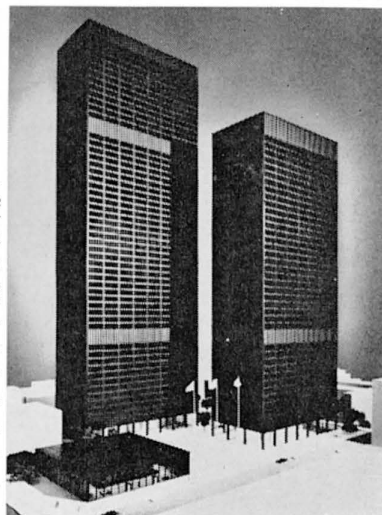
The 54 exterior columns are 491' high, 4'11" wide and 3'7½" deep. The subway cuts through the building foundation and heating, air-conditioning and other mechanical equipment will be contained on the second floor rather than the basement.



Above are "before" photo of devitalized downtown section of Fresno, Calif., and drawing of "after" as conceived by Victor Gruen Associates and landscape architects Eckbo, Dean, Austin & Williams. The main mall will be six blocks long and crossed at three locations by sub-malls.

### Mies in Basic Black

At right: model of the Toronto-Dominion Center consisting of a single-story Banking Hall, a 55-story Bank Building and a second 44-story office building rising from a four-acre plaza. Exteriors will be black steel, stainless steel sash and bronze-tinted glass. Architects of the \$125 million complex are John B. Parkin Associates and Bregman & Hamman of Toronto, Mies van der Rohe, consultant.



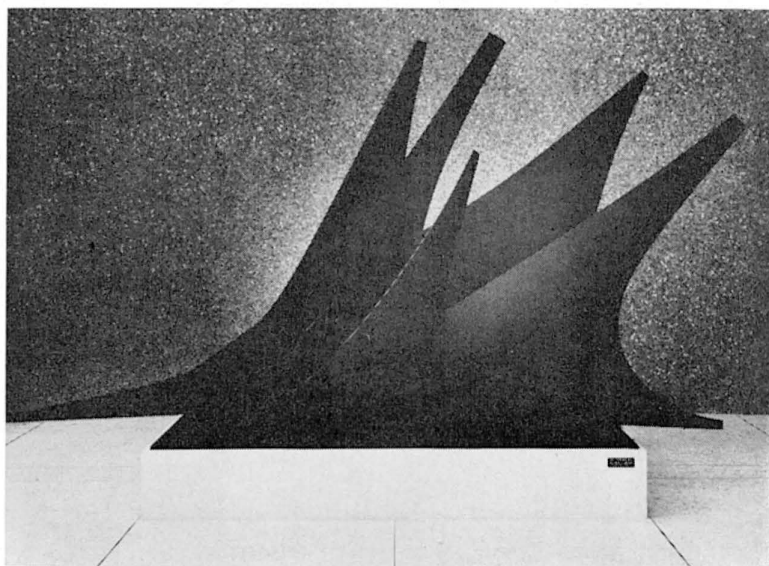
### New Madison Sq. Garden

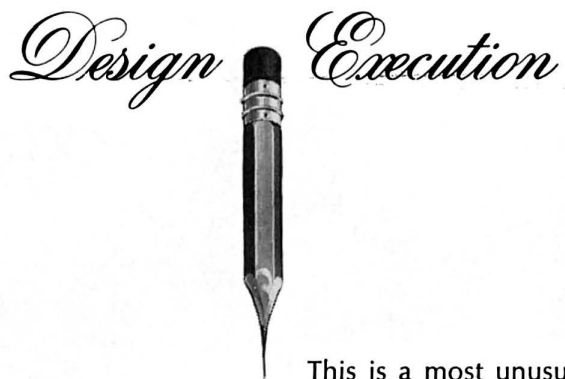
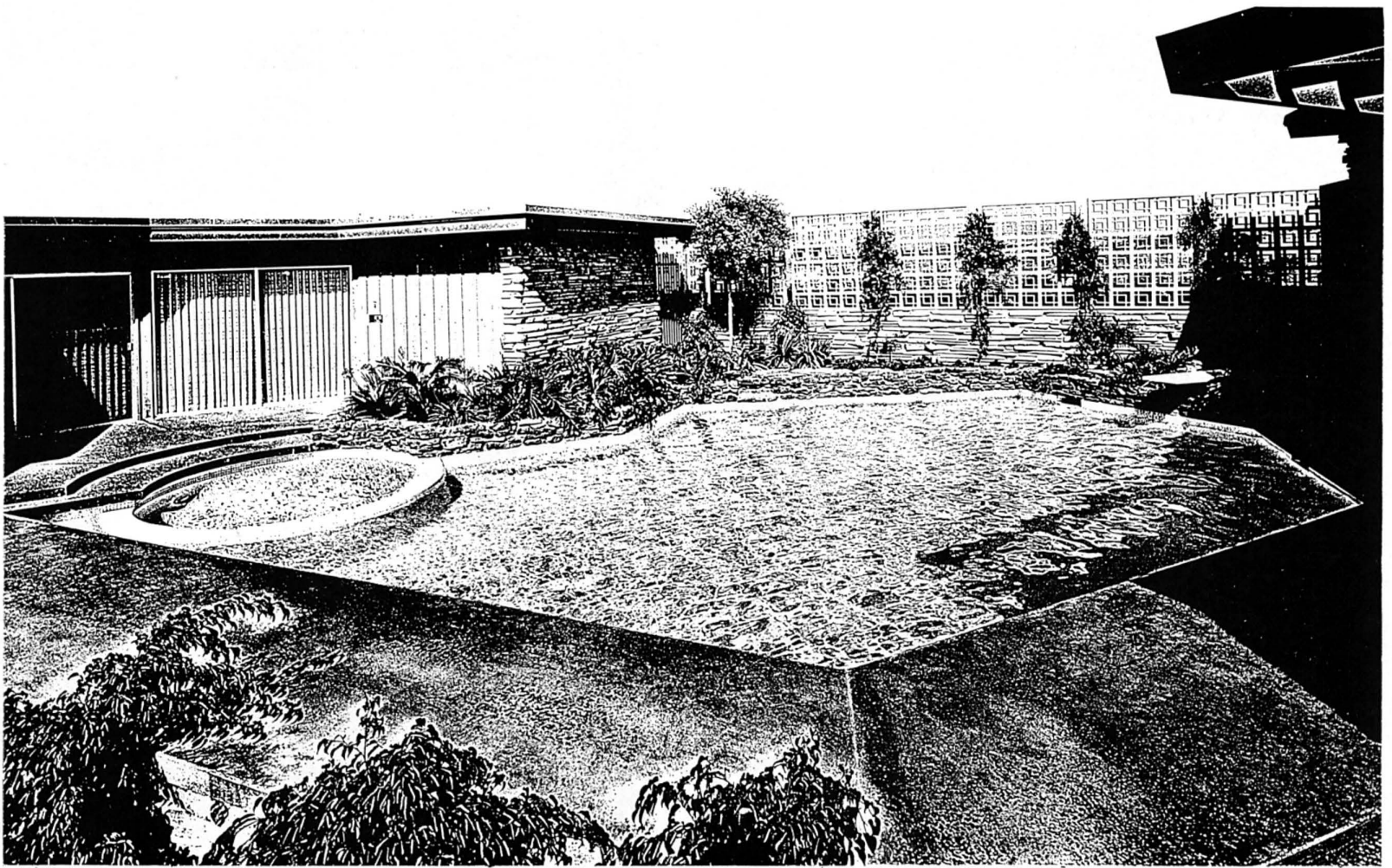


Standing in Penn Station's stead will be the new Madison Square Garden Sports and Entertainment Center (left) by Charles Luckman Associates. The circular sports complex will be 425' in diameter, with cable-hung roof allowing the 22,000-seat arena to be column-free. Four glass enclosed escalator towers project from the circular building and a pedestrian bridge connects it with the 29-story office tower. An "all-new Penn Station" will occupy the concourse levels.

### Sculpture of the Month

"The Fountain" by Alexander Calder Painted black steel, 1962, 69" x 9'8" x 72". Universal Building North, Washington, D.C.





This is a most unusual pencil, and it belongs to a most unusual company. Both should be working for you. Consider... Because faithful execution of your design is imperative, you are meticulous when choosing a builder. Rightly, you demand experience and proven capabilities. You demand knowledge of your professional requirements, and you demand consummate workmanship. That pencil belongs to Fiesta Pools, a company with such qualifications. Fiesta maintains a Commercial Division of swimming pool engineers who are assiduously attentive to every detail of your design. Equally important, Fiesta is the only pool builder which uses no sub-contractors in swimming pool construction—there is never shifting of responsibility. You are invited to write for Fiesta's technical bulletins and brochures — no one will call on you without your request. (Incidentally, the pencil is very sharp because it symbolizes Fiesta's pricing policy.)

## **Fiesta Pools**

EXECUTIVE OFFICES: 9830 ATLANTIC BLVD.  
SOUTH GATE, CALIFORNIA • LO 7-8825



# READER SERVICE — PRODUCT INFORMATION

Turn to page 41 for prepaid inquiry card.

(201) Visualite louvred windows, full frame and strip hardware, illustrating vertical and horizontal installations, with blades of wood, aluminum, and colored and clear glass. Stainless steel tension clips, an exclusive Visualite feature, insure louvre tightness in both the gear and cam operated windows. Available in standard and custom sizes. Other products include Spray Mask, to protect frames from stains and plaster burns, and Magix Metal-Lube, a silicon base lubricant. Acker and Acker.

(202) Industrial building products in aluminum, including sheeting, rib roofing, industrial siding, etc. Also have available information on hand rails wrought aluminum products, curtain walls, store fronts, windows and doors. Aluminum Company of America.

(203) Amtico Permalife vinyl flooring, solid vinyls that are available in 20 patterns and unlimited custom colors as well as in conductive tile, Amtico Carefree vinyl, a budget priced flooring with no paper back-

ing, in 5 modern patterns and a wide choice of decorator colors, Amtico vinyl and polymeric resins for above-grade, on-grade and below-grade installations, available in 12 colors, and Amtico rubber and plastex rubber flooring in marbleized patterns featuring 22 colors. American Bilt-Rite Rubber Co.

(205) American Maid shower doors and tub enclosures featuring decorative laminated glass and acrylite panels with gold, satin and polished frames. Also available in other

plastics and wire glass and in special anodized finishes. American Shower Door Company.

(206) Manufacturing a complete line of quality paint products and exhibiting the Color Key library, an original method of color selection. Divided into Color Key #1 and Color Key #2, the method separates the entire spectrum into only two palettes with the colors in each mechanically related for total harmony to facilitate the pre-selection at a glance of the entire range of colors for all decorating. Ameritone Paints by Vi-Cly Industries.

(207) Manufacturers of Anti-Hydro, Aridsil and Amurseal waterproofing, Amortop hardener and the new Demicon Curehard, the single application material to cure, chemically harden and dust proof concrete. A written guarantee is available on Anti-Hydro Products when application is supervised by a factory representative. Anti-Hydro Waterproofing Company.

(208) Supplier of Baxco CZC (Chromated Zinc Chloride) for pressure treatment of lumber to guard against termites and dry rot in foundations, sub-floor framing and sheathing, and of Baxco Pyresote for pressure treatment of all lumber to resist fire and flame spread termites, insects and dry rot. Both materials are approved under I.C.B.O. research recommendations and each piece of Pyresote pressure treated lumber bears an Underwriters' Laboratories, Inc. label. J. H. Baxter and Company.

(209) Architectural letters and plaques in bronze, brass, aluminum and nickel. Also, custom fabricators of all types of architectural metal work including stairs and handrails, store fronts and entrances, window walls, solar screens, flag pole holders, cast aluminum mail boxes and bank depositories, plus elevator entrances, doors and frames, elevator cars, and conveyors. A. J. Bayer Company.

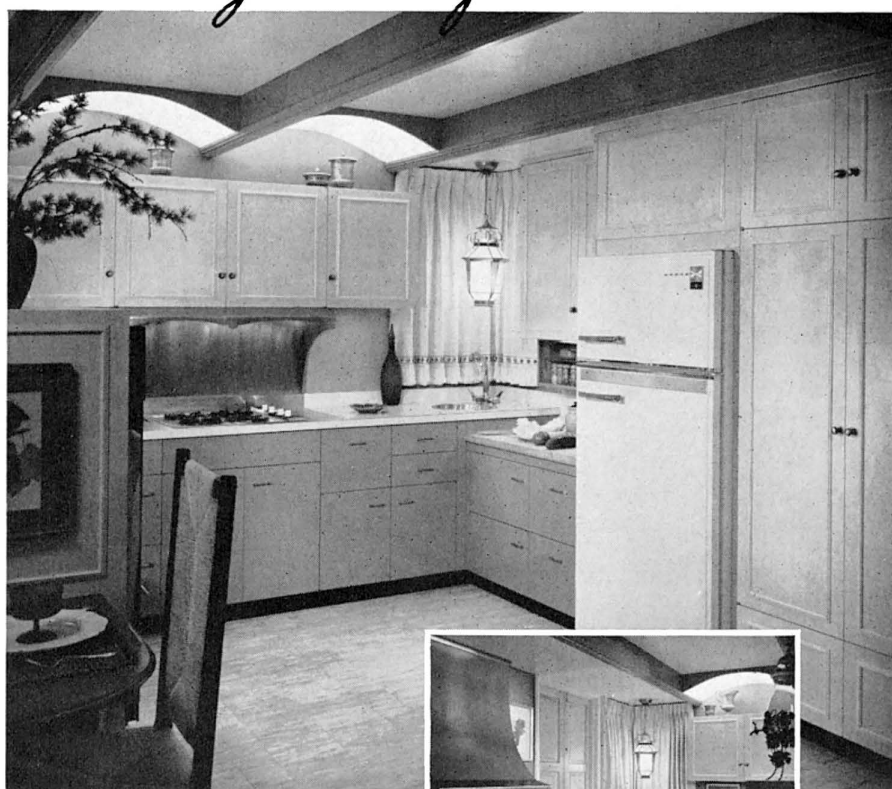
(212) Rubber and vinyl tile flooring in 51 marbleized and plain colors with rubber cove base to match. Also display rubber stair treads with matching tile and base. Special color matches are available at no extra charge on orders of 2000 square feet or more. Burke Rubber Company, Inc.

(213) Manufacturers of Cabots stains, oils, waxes and colloidal paints for preserving, protecting, and coloring all types of exterior and interior woodwork, as well as adhesive products, damp-proofing and clear waterproofing materials for brick and concrete. Samuel Cabot, Inc.

(214) Colored vinyl link mats and runners in weave widths of 1/2", 5/16" and 3/8", fashioned to specifications. Also manufacture tire fabric link mats and runners, and rubber and vinyl matting. Cactus Mat & Patch Manufacturing Company.

(215) Colored, decorative glass panels by Jim Weaver executed from the architect's own pictorial or abstract design, including motifs that carry from solid to transparent areas. Cal-Western Manufacturers.

*As individual as  
your signature*



SPECIAL NOTE TO  
ARCHITECTS:

Please see opposite page ..... ➡

CUSTOM KITCHENS by



*St. Charles*

LOS ANGELES: 8660 SUNSET BLVD. • OL. 5-7812

(216) Exclusive distributors of Monkey Pod hardwood plywood paneling and suppliers of all types of hard and soft plywood, masonite, and Formica decorative laminates. California Panel and Veneer Co.

(217) An association of member mills whose Redwood lumber is properly seasoned, graded and milled under close supervision and given the CRA Trademark of quality Redwood. Both finish and construction grade Redwood are available for siding, paneling, fascia, finish and millwork. California Redwood Association.

(218) Roof deck systems and insulation, Bermuda roofs, fireproofing, fiber forms, acoustical treatments, insulating materials and loose fills based on the light-weight, fireproof qualities of Zonolite. California Zonolite Company.

(219) Manufacturers of Blue Flame fireplace log lighter and the A.G.A. certified Blue Flame gas valve, available either separately or in a combination pack. Canterbury Enterprises.

(220) An extensive line of decorative panels for sliding, folding or fixed partitions. Unlimited designs are available including carved wood grille patterns, the palisade panel for use as an opaque room divider, and panels with inserts of perforated metals, fabrics and translucent plastics. All feature the exclusive overhead hardware and bottom guide and quality hardwood frames. Carlton Products.

(221) Dex-O-Tex latex base troweled-on flooring and roof deck coverings which include special decorative terrazzos, static conductive floors, industrial flooring and acid proofing, underlayments, adhesives and marine products. Crossfield Products Corporation.

(222) A complete line of washroom dispensers for commercial and industrial buildings including chrome roll dispensers, recessed towel dispensers and waste receptacles in satin buffed stainless steel and prime coated steel and towel and tissue dispensers in chrome, white, stainless steel, copper plate, and Kromotex finish in green, bronze and gray. Crown Zellerbach Corp.

(223) Structural clay products including Steeltid brick, Imperial brick with cellular openings to create static air space for insulation and less weight, and Bel Air flats for walkways, decorative veneer, wall capping patios, pool decks and window ledges. Davidson Brick Company.

(224) Ply-Sawn, the Douglas fir siding for a new dimension in exterior siding, and random plank Philippine mahogany plywood paneling from Mindanao and Luzon, either unfinished or pre-finished, for use as an interior wall finish. Davidson Western Plywood Co.

(225) Maintains a continuing policy of programs and informational services for the architects, including the Gold Medallion Seal for residential construction and the exclusive Merit Award for commercial and industrial buildings that conform to required standards of excellence in electrical installation. Information on these is available from the department's residential or commercial utility consultants. Department of Water and Power.

(226) Styrofoam, a feather-light board of expanded polystyrene for

concrete forms, floor, wall and roof insulation, insulating plaster base and pipe and vessel covering. Also manufacture Saraloy 200 and ply-film waterproof membranes Saraloy 400 elastic flashing Scorbord insulating board, Roofmate FR roof insulation and the Miller dry wall system. The Dow Chemical Company.

(227) Plastifutre, a resilient floor covering of vegetal felt backed by jute burlap canvas, coated with plastic, for use indoors and out, over wood, concrete and tile, where a carpeting effect is impractical but desired. Available in four patterns and a variety of colors, and suitable also as a covering for interior walls. European Chemical Corporation of America.

(228) Execute scale models of all types of buildings and site developments stressing details in design and materials. Glenn Evans Miniatures.

(229) Manufacturers of intercommunication and sound systems for schools, hospitals, medical buildings, commercial structures and residences, with consultation service for layouts available for any type application. Executone Systems of Southern California.

(230) Laminart, a high pressure decorative laminated plastic, manufactured in Los Angeles. The new line, with samples available at the display, includes solid colors, wood grains, decorator, and special pat-

terns. Fabricon Products, Division of Eagle Picher Company.

(231) Natural, cellular, lightweight lava stone for garden display and masonry veneer in a color range from light grey to charcoal, as well as sierra tan, and available in varied sizes, shapes and custom cutting. Featherrock, Inc.

(232) Manufacturers of roofing materials including built-up roofing, Rex-Kote, Acrylic Coat, aluminum reflective and asphalt emulsion coatings, and Uni-Thik asphalt shingles. Also make concrete forms and Monoform water-proofing membrane, acoustical tile, insulating materials including board, batt, roll and Canec roof insulation, Ceil Dek structural building board and

CUSTOM KITCHENS by



Mr. Architect . . .

## IF YOU'RE DESIGNING YOUR OWN KITCHENS YOU'RE WORKING TOO HARD!

Let *Custom Kitchens by St. Charles* — exclusively specializing in quality kitchens — prepare your detailed floor plan on your vellum or ours with elevations and working drawings for job use. Ink perspective on hard board for you to present to your client for both new or remodel jobs.

St. Charles features by far the widest range of sizes, styles, colors and services. Your choice of real woods: walnut, oak, cherry, fruitwood, nutmeg, antique white on white birch. Styling: provincial, traditional, classic, contemporary, high-style

modern. Also baked enamel in 18 decorator colors, smooth or textured steel. Visit our display rooms. Let us show you how our Architect's program can cut your work, enhance your service to your client, and let you make more money.

## ST. CHARLES KITCHENS SELECTED

For

## CASE STUDY APARTMENTS #2

Merit Specified by Arts & Architecture

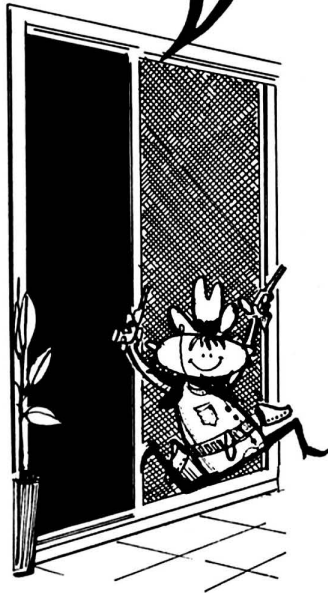
CUSTOM KITCHENS by



LOS ANGELES: 8660 SUNSET BLVD. • OL. 5-7812



## Automatic Sliding Door Closer



### Make all your SLIDING SCREEN DOORS

open easily and freely at the touch of your finger . . . and then

### CLOSE AUTOMATICALLY

When you specify the Kelly Klozer with all sliding screen doors, you insure for your client a sliding screen door installation as close to perfection as possible.

Kelly Klozer Company services and adjusts the screen so that it fits perfectly, replaces all standard rollers with high-quality sealed ball bearing rollers so that the screen will roll with a baby's touch.

Kelly Klozers are manufactured in various models to accommodate all makes of sliding doors, and the proper model is installed so that the door will close as smoothly and gently as a summer breeze.

Specified by leading architects for motels, hotels, hospitals, commercial installations and fine residences.

Also available for sliding glass doors.

Factory installation available in Southern California.

**KELLY KLOZER**

P. O. Box 25  
Reseda, California  
Phone 347-8258

Manufacturers of pneumatic door closers for sliding doors.  
Established 1956

Tred-Top and Flint-Mastic bituminous flooring. The Flintkote Company.

(233) A high pressure plastic laminate in solid colors decorator designs and wood grains with up-to-date samples available at the display. A Formica exclusive is the custom design service of sealing murals, designs and art treatments to Formica. The newest development is the brushed finish laminate surfacing for kitchen cabinetry. Also available are Formica flush faced doors. Formica Corporation.

(234) An extensive line of overhead doors including wood, both paneled and carved, and the new Filuma door of Fiberglass and aluminum for garages, and a variety of doors for commercial and industrial use. Featured in the display is a working model of the new telescoping movable center post for unimpaired clearance in multiple door installations with the safety factor of non-closing unless the post is in place. Also manufacture hardware for all types of sectional and rigid doors, operators, weatherstripping, pass doors and rosettes. Frantz Manufacturing Company.

(235) An extensive line of concrete block, both structural and veneer, including Flagcrete, Lacestone, Slumpstone, Terracrete and Viking Stone, as well as sculptured and flat concrete screen block. General Concrete Products, Inc.

(236) Textolite, the high pressure decorative laminate in both conventional and textured surfaces with samples available in the solid colors, decorator designs and wood grains. The latest development is the Candy Stripe pattern for commercial installations featuring a 2-inch stripe running the width of the sheet. General Electric Laminated Products.

(237) Koroseal, a vinyl wall covering of precision calendered vinyl sheet welded to flame-retardant fabrics. In a wide variety of high styled and functional patterns, it is registered and approved for flame-retardance by the California State Fire Marshall. B. F. Goodrich Co.

(238) Illustrations of a complete line of acoustical tile, including wood fiber, mineral and fire rated, and samples of special sizes and colors which the firm features. Also has available suspension systems, integrated lighting, luminous panels, mouldings and other accessories for acoustical work. O. P. Grani, Inc.

(241) Marvel interior finish in color or as a base for paint, exterior stucco in a wide choice of weather-resistant colors, Marblecrete finish in color and imbedded with exposed pebbles or marble chips, acoustical-type textured plaster for use where acoustical properties are not required, Hi-Sorb acoustical plaster in many colors, and a swimming pool finish resistant to acids and algae. Highland Stucco and Lime Products Co.

(242) A complete line of jamb type garage door hardware and accessories for all doors and weights, both residential and commercial, also, structural devices such as joist hangers, anchors, connectors, "T" and "L" straps, concrete form ties and related items. Distribute the Hollywood Wonder Action Disappearing Stair. Holmes Hardware and Sales Company.

(243) Manufacturers of Hoertiron steel folding gates for all types of commercial installations. Also available, when appearance is the predominant factor, folding gates of cold rolled steel, aluminum or bronze constructed of cold formed end and track sections to receive ball bearing rollers, machined bearings and brass washer construction, built-in cylinder locks for standard or master-keyed cylinders and flush wall cabinet to receive gates. Hoertig Iron Works.

(244) Manufacturers of putty and caulking compounds for all glazing and caulking problems, including Hunco architectural caulking compound for use where a permanent elastic expansion joint is required and Hunco commercial caulking compound used as a sealant for cracks, joints and around door and window frames. H. R. Hunt Putty Manufacturing Company.

(246) Hydro-T-Metal, a homogeneous, non-ferrous alloy of zinc, copper and titanium which offers the longevity benefits of copper at much reduced cost. The material is used for sheet metal work and plaster accessories as no painting is necessary initially or for maintenance. Hydrometals, Inc.

(247) A masonry veneer of fabricated stone with the realistic appearance of quarried stone. Made of concrete, crushed rock and sand, it is available in a variety of natural colors and comes in sheets approximately 3' x 4' in size and one inch thick. It can be used as an exterior or interior finish. Loma Stone Sales Company, Inc.

(248) A variety of colors and textures in facebrick including Norman, Roman, Colonial Amsterdam, Economy Norman, Hillcrest Splits and Alberhill Pavers. Also manufacture Kord Modular and over-size common brick, fire brick and flue lining. Los Angeles Brick & Clay Products Company.

(249) Vetrum venetian glass mosaics, Lake Como Italian pre-cast marble mosaic tile with recessed or smooth surfaced matrix, Cremona and Appiani Italian quarry tile, Latco vitreous porcelain ceramic glazed or unglazed tile, and decorative tile from Spain and Holland, for use on exterior and interior walls and floors. All are available in a myriad of colors and patterns. Los Angeles Tile Jobbers, Inc.

(250) Dual Window Wall, a system consisting of a metal louvre exterior with glass louvre interior, both movable. Also manufacture aluminum louvre windows, frame or strip hardware, Roller King aluminum rolling windows and doors, and Aqua King shower and tub enclosures. Louvre King, Inc.

(251) Cam operated, stainless steel, louvre window strip hardware and overhead suspended aluminum rolling window with Fiberglass screen. Also manufacture an aluminum nail-on surround for louvre windows with steel or aluminum hardware and a bottom rolling aluminum sliding glass doors. Louvre Leader, Inc.

(252) The Series 300 aluminum sliding window for commercial use and the Capri Cavalier aluminum sliding door with outside slide design. Also available is the residential line including the Rollmaster,

## Design — from cities to teakettles

## NOTES ON THE SYNTHESIS OF FORM

*Christopher  
Alexander*

Presents an entirely new theory of the process of design, first discussing the process by which a form is adapted to its context and the problems created for the designer by our "self-conscious" society. The author's proposed method allows the designer to solve these problems and bring his full creative imagination into play. 40 linecuts. \$6.75

Ask your bookseller

**HARVARD**  
UNIVERSITY PRESS  
Cambridge, Mass. 02138

an aluminum sliding window with both sections removable, and the Capri Cadet aluminum sliding glass door. Lujon Corporation.

(253) Marlite plastic finished wall panels for residential, commercial and industrial use, featuring wood grain reproductions, decorator patterns and pastel colors available in sheets and planks and developed by Raymond Loewy Associates. Also exhibit Korelock, a hollow core paneling which requires only a backing of studs or solid nailing or furring strips. Marsh Wall Products, Inc.

(254) Manufacturers of roof scuttles of heavy steel construction with spring levers and lock and padlock hasp, and steel ceiling hatches. Both products are available in special materials and sizes. Metal-Tite Products.

(255) Ornamental garden art in cast stone, including statuary and bowls for fountains and a variety of designs and shapes in garden benches and planters. Available in natural or white as well as custom work in colors to match almost any decorative scheme, for indoor and outdoor use. Monterey Garden Art.

(256) A complete custom kitchen, designed by Jeannette Coppes, N.S.I.D. Included is the contemporary Paul McCobb line suited to open plan kitchens, also used for built-in storage throughout the house and assembly for office furniture, and versatile 600 Series adaptable to any period from Cape Cod to oriental modern. Cabinets are of northern maple finished in natural grains of maple, autumn-tone, fruitwood, driftwood and walnut, and in 16 decorator colors, with choice of hardware. Mutschler of California, Inc.



# arts & architecture **READER SERVICE**

## For Manufacturers' Product Literature and Information

1. Circle number on coupon corresponding to the number preceding the listing.
2. Print name and address and occupation.
3. Remove and mail prepaid, addressed card.

(1) A complete package of information literature on new Armstrong Ventilating Acoustical Ceiling systems has been compiled for architects and engineers by the Building Products Division of the Armstrong Cork Company. Fully illustrated brochure gives complete details on basic operation of the new ceiling system, shows how it reduces air conditioning costs through elimination of air diffusers and a large amount of supply duct work; case histories of actual installations; available at no extra cost. Armstrong Cork Company.

(2) An attractive, 32-page booklet describing a number of steel-framed homes is available from Bethlehem Steel Company. Write for Booklet 1802. Color and black and white photographs describe outstanding steel-framed houses in many areas in the United States. Floor plans, construction information, and costs are described. Examples of mountain cabins, apartments, and steep hillside site solutions are shown. Bethlehem Steel Company.

(3) New informative brochure available from Cervitor Kitchens, gives all important specifications, details and features of their space-saving kitchen units; under-counter, built-in, free-standing units manufactured in limitless sizes, with or without range, oven, sink; carefully crafted in walnut, laminate, etc.; ideal for offices, homes, apartments, patios. Cervitor Kitchens Incorporated.

(5) Handsome illustrated folder describes and gives complete details on the Container Corporation of America Color Harmony Manual based on the Oswald system, and designed to improve the planning and use of color by artists, designers, manufacturers and consumers. Folder includes sample color chip. Container Corporation of America.

(6) Interior Design: Crossroads have all the components necessary for the elegant contemporary interior. Available are the finest designed products of contemporary styling in: furniture, carpets draperies, upholstery, wall coverings, lights, accessories, oil paintings, china, crystal and flatware. Booklet available. Crossroads Mfg., Inc.

(7) Stained Glass Windows: 1" to 2" thick chipped colored glass embedded in cement reinforced with steel bars. A new conception

of glass colored in the mass displays decomposing and refracting lights. Design from the pure abstract to figurative modern in the tradition of 12th century stained glass. Roger Darricarrere.

(8) Plywood For Today's Construction, a new catalog with basic information about fir plywood properties, grades, types and uses has been published by Douglas Fir Plywood Association. The 20-page booklet, indexed for A.I.A. filing systems, also contains information about special products and about plywood floor, wall and roof construction systems. A special new section discusses plywood component construction. Single copies of the booklet S62 are free. American Plywood Association.

(9) Two new pamphlets on folded plate roofs and stressed skin panels are available from the Douglas Fir Plywood Association. Each brochure contains structural details, illustrations and descriptive text; valuable addition to any collection of data on components; updates previously available information; other booklets in the components series describe box beams, curved panels, trusses and pallets. Available free to architects, fabricators, and builders. American Plywood Association.

(10) Furniture: A complete line of imported upholstered furniture and related tables, warehoused in Burlingame and New York for immediate delivery; handcrafted quality furniture moderately

priced; ideally suited for residential or commercial use. Dux Inc.

(11) Contemporary Fixtures: Catalog, data good line contemporary fixtures, including complete selection recessed surface mounted lense, down lights incorporating Corning wide angle Pyrex lenses, recessed, semi-recessed surface-mounted units utilizing reflector lamps; modern chandeliers for widely diffused, even illumination; Luxo Lamp suited to any lighting task. Selected units merit specified for CSHouse 1950. Harry Gitlin.

(12) A new, 12-page executive furniture catalog has just been completed by Hiebert, Inc., manufacturers of a complete line of executive office furniture. New catalog contains detailed illustrations of the line, including executive desks, secretarial desks, side storage units, corner tables, conference table, executive chairs, and side chairs. The center spread features a full-color photograph showing the various Hiebert furniture pieces. Copies of the catalog may be obtained free of charge. Hiebert, Inc.

(13) The 36-page Hotpoint Profit Builders catalog for architects and builders contains specifics on Hotpoint's full line of products, including built-in ovens, dishwashers, disposers, heating devices, refrigerators, ranges, air conditioners, laundry equipment. Also included are diagrams of twelve model Hotpoint kitchens with complete specifications for each. Hotpoint.

(14) Interpace has published a 6-page brochure on the new Contours CV, a lightweight ceramic architectural facing for exterior and interior use. The brochure features photographs of 12 standard designs in a wide pattern variety ranging from those achieving medallion effect to ones which vary the play of light. The brochure also details dimensions for individual custom designs which can be designed up to 11 1/4" x 11 1/4". International Pipe and Ceramics Corp.

(15) Catalogs and brochures available on Multalum and X-Alum series of contemporary furniture designed by George Kasparian. Experienced contract dept. working with leading architectural and interior design firms. Kasparians, Inc.

(16) Complete line of furniture designed by Florence Knoll, Harry Bertoia, Eero Saarinen, Richard Shultz, Mies van der Rohe and Lew Butler as well as a wide range of upholstery and drapery fabrics of infinite variety with color, weave and design utilizing both natural and man-made materials. Available to the architect is the Knoll planning unit to function as a design consultant. Knoll Associates, Inc.

(17) Lietz Porcelains announces the addition of two new shapes to their line of porcelain cabinet pulls bringing the line, designed for the use of architects and interior designers, to a total of eight designs. All pulls available in four colors delivered from stock: white, black, cerulean and amber. On custom order pulls can be produced in ten additional colored glazes. Lit-

(Continued on next page)

Card  
good  
until  
8-31-64  
Allow  
2 months  
for  
processing  
and  
delivery.

### Circle Number for Desired Product Literature and Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip # \_\_\_\_\_

Occupation \_\_\_\_\_



erature, free upon request, contains samples on full color line. Sample board with the eight shapes in the four stock colors can be had for \$5.00 f.o.b. Mogadore, Ohio. Lietzke Procelains.

(18) Lighting: A completely new 12-page, 3-color brochure of popular items in their line of recessed and wall mounted residential lighting fixtures is now available from Marco. The literature includes typical installation photos as well as complete specifications on all items. Marvin Electric Manufacturing Company.

(20) Contemporary Clocks and Accessories. Attractive folder Chronopak contemporary clocks, crisp, simple, unusual models; net lights and bubble lamps; George Nelson, designer. Brochure available. One of the finest sources of information, worth study and file space.—Howard Miller Clock Co.

(21) Lanterns, a major innovation in lighting designed by George Nelson and manufactured by the Howard Miller Clock Company, are shown in a two-color, four-page brochure. The illustrations show all 21 styles in four models—ceiling, wall, table and floor—and include the large fluorescent wall or ceiling unit designed primarily for contract installation. Each is accompanied by dimensions and price. Distributed by Richards Morgenthau, Inc. Howard Miller Clock Company.

(22) Selections from the diversified decorative accessory collections designed by George Nelson for the Howard Miller Clock Company are presented in a new illustrated, four-page brochure, available to architects and interior designers without charge, upon request. The brochure covers clocks (both built-in and surface mounted); bubble lighting fixtures; net lights; planters; room dividers; and the versatile space divider, Ribbonwal. All information necessary for specifying is provided. Howard Miller Clock Company.

(23) Write for complete new catalog on Wee-Mac accent, recessed and surfaced 12-volt lighting fixtures that are adjustable, blended and hidden light with choice of finishes. Also Allura-Lite complete 12-volt garden lighting system that yields a soft glow rather than usual harsh light, fea-

turing simplicity of installation and flexibility. Montrose Lighting. (24) "The pleasure of planning your home with Mosaic Tile," a new 24-page brochure, depicts unusual uses of tile and presents a variety of home planning ideas; large selection of handsome color photographs. Tiled steps, hallways, tiled fireplaces, kitchens, bathrooms, patios and swimming pools show the versatility and wide color choices as well as low maintenance costs and lifetime advantages of ceramic tile. Mosaic Tile Company.

(25) Completely new full-color 28-page catalog of Mosaic ceramic tile manufactured in California and distributed throughout the area west of the Rockies. First presentation booklet form of tile in the Harmonitone color families; includes decorated glazed wall tile, new Staccato palette in one inch square tile, and Byzantile. Catalog available upon request. The Mosaic Tile Company.

(30) Lighting Fixtures: Complete range of contemporary designs for residential and commercial application. Write for new 20-page catalog—Chandeline—a different concept in lighting. Prescolite Manufacturing Corporation.

(32) Manufacturers of contemporary furniture, featuring the Continental and "Plan" Seating Units, designs by William Paul Taylor and Simon Steiner. Selected Designs, Inc.

(33) Appliances: Thermador presents two new brochures. The 14.2 cubic foot Refrigerator-Freezer is featured in one brochure. All sections of the interior are explained in full; choice of colors and detailed specifications are given. The second brochure colorfully illustrates Thermador's Bilt-In Electric Ranges. The special features of the Bilt-In Electric Ovens, such as the Air-Cooled door, 2-speed rotisserie, scientifically designed aluminum Broiler tray, are shown. The Thermador "Masterpiece" Bilt-In Electric Cooking Tops are detailed. Thermador Electric Manufacturing Co.

(34) Full color illustrated brochure describes new Thermador Bilt-In Dishwasher: stainless steel is used for actual tank and inside door liner of washing compartment eliminating chipping,

staining, rusting, odor problems, specially developed insulating, sound-deadening material makes operation nearly noiseless; new exclusive "washing arm", food residue separator, drying system, completely automatic, service-free controls; style and color co-ordinated with other Thermador Bilt-In kitchen equipment; brochure gives detailed specifications. Thermador.

(37) Filon Corporation offers a 4-page brochure on FiLite, the translucent Fiberglass ceiling panels, which insure even, shadow-free light diffusion for the home, business and industry. Also available is the newly revised and expanded AIA file containing complete product data and technical specifications for Filon products. Filon Corp.

(38) Key to Elevator Planning. A 12-page brochure is available containing hatchway and penthouse layout information and standards for hydraulic and electric passenger and freight elevators. The National Association of Elevator Contractors.

(39) New "Color Edge" line features tough specially compounded cellulosic plastic T-mouldings, designed for exceptional durability, easy application and decorative appearance at low cost. Also new flexible vinyl moldings, track for sliding doors and a complete selection of wallboard trim. A six-page color brochure is available upon request. Plastiglide Manufacturing Corporation.

(40) Wood/Line, Globe's newest fixture series, accents the texture and patina of real walnut with the cool (all over glow) diffusion of milk white plastic to provide the handcrafted look in lighting. Globe Illumination Company.

(41) A free 28-page catalog by Steelcraft explores the great flexibility that can be achieved with America's finest line of standard metal doors and frames. Included are a variety of door styles in many finishes and a list of the accessories they can be prepared to accommodate. Special attention is given to Steelcraft's extensive line of Underwriter Labeled fire doors with matching frames, transoms and removable mullions. Another section features "custom" frame designs that can be achieved with Steelcraft standard frame components. Steelcraft Manufacturing Co.

(42) Scandiline Furniture offers a 36-page catalog "Scandinavian at its Best". Many new items in the residential line are pictured as are those in the new office furniture division. The design-awarded, hand-printed Swedish lampshades for ceiling and wall hanging lamps are detailed. Price lists available. Scandiline Furniture, Inc.

(43) Scandiline Pega Wall System is the ultimate answer for any storage or service requirement. Unlimited combinations can be designed. The system is available either wall hung or free standing with 12 alternate leg heights. This patented construction, designed by Ib Juul Christiansen, is imported from Norway by Scandiline Furniture, Inc.

(44) Executive Desks: New collection by Brown-Saltman features designs by John Follis and Elisha Dubin. Manufactured in Southern California; complete local inventory available for immediate delivery. Brochure shows executive desks, conference desks, executive storage units, etc. Brown-Saltman Company.

(45) Aluminum Railings: Post bases and cinchrail aluminum railings are illustrated in 12-page booklet. Installation drawings included. Michel & Pfeffer Iron Works, Inc.

(46) Orlando Galleria has continuous exhibits of fine paintings and sculpture. Free schedule of exhibitions available. Orlando Galleria, 17037 Ventura Boulevard, Encino, California.

(47) Ogden water purifier converts tap water to pure, spring-like drinking water by a scientifically developed, disposable cartridge. The small, compact, stainless steel unit is easily installed either above or below the sink. Portable and industrial units available. Ogden Filter Company, Inc.

(48) Complete information concerning the new automatic door closer for screen, glass and wardrobe doors by Kelly Klozer. \$18.95 installed, can be used on your present sliding screen door and features mechanism adjustable to door weight and an automatic safety stop when interrupted. The Kelly Klozer Company.

(49) Lighting brochure, offered by Consolidated Electrical Distributors (formerly Incandescent Supply Company / Phillips & Edwards Corp.) describes its electrical services, supplies and apparatus for commercial, industrial, residential, outdoor and decorative lighting, electrical appliances and housewares. Consolidated Electrical Distributors.

(50) Mastery of Life, a free booklet explaining the Science of Living taught by the Rosicrucians; a way of life of personal attainment and self-assurance by developing the creative forces within the individual. Rosicrucian Order.

(51) Brochure-catalog containing complete price information and illustrations of the new modular carved wood panels by Panelcarve. "Handcrafted by machine" the panels may be assembled into a variety of design combinations for doors, table tops, room dividers, paneled walls, desk components, planters, cabinets, etc. Panelcarve.



**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT No. 43623, LOS ANGELES, CALIF.

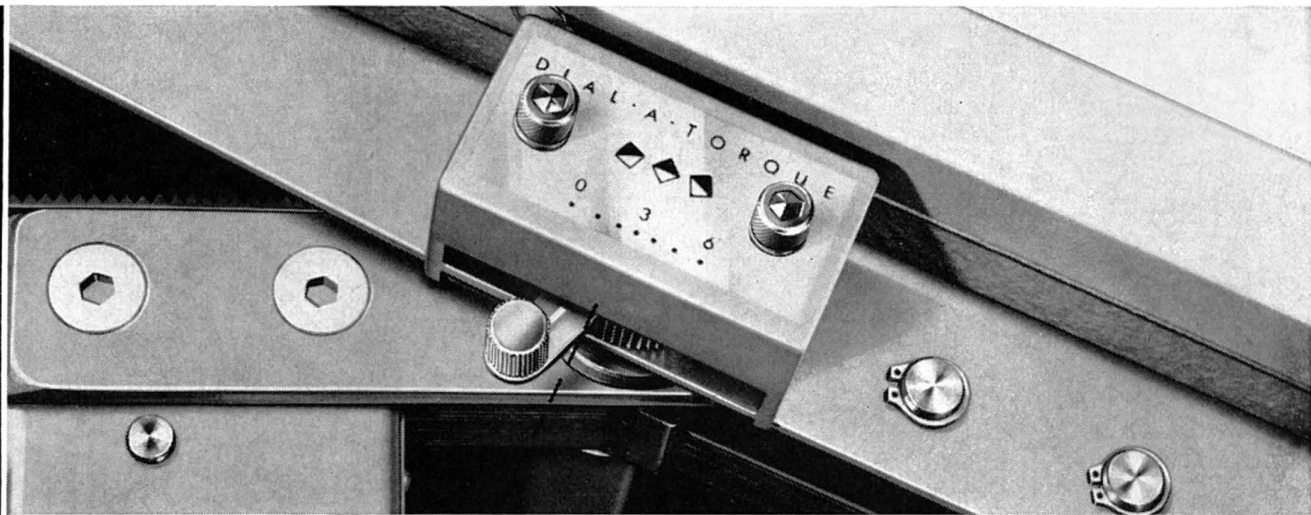
**arts & architecture**

3305 WILSHIRE BOULEVARD

LOS ANGELES, CALIFORNIA, 90005

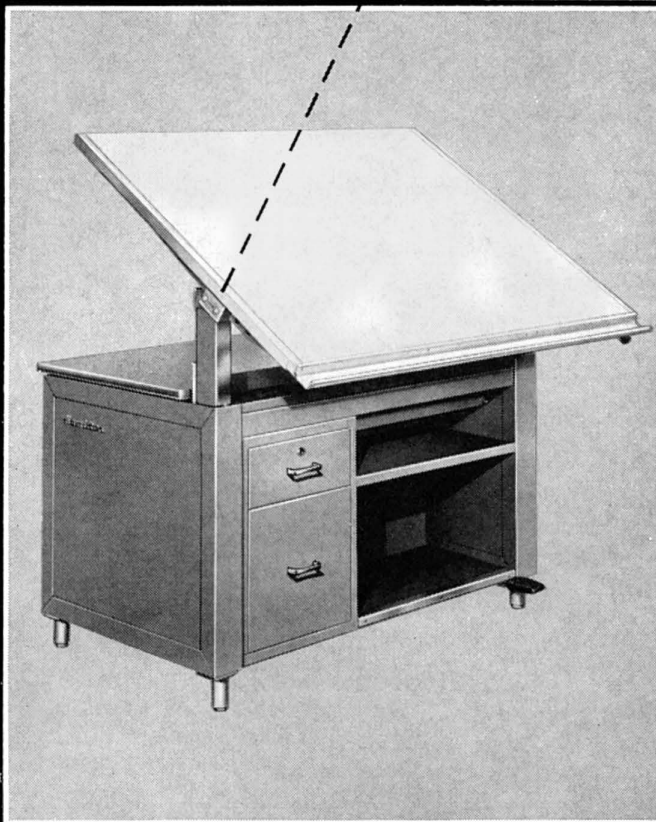






# THIS IS DIAL-A-TORQUE\*

It adds an important benefit to the most advanced drafting table made,



the new  
***Hamilton***  
TORSION AUTO-SHIFT  
from **DIETERICH-POST**

DIAL-A-TORQUE is Hamilton's newest step forward in complete drafting table control. Truly fits the table to the draftsman by letting him "dial" the amount of torsion that offsets weight of his board equipment. DIAL-A-TORQUE ends need for constant "firming up" and repeated adjustments. Gives him fully counterbalanced board angling at finger's touch. Adds up to increased drafting room productivity.

But this new space-saver of a table has still more new advantages to offer. We call your attention to just a few:

- New increased 14" vertical board travel • New increased storage capacity • New improved reference-drawer facilities • New desk-height or stand-up drafting convenience • New drawing board surface

\*patent applied for



## DIETERICH-POST COMPANY

San Francisco: 599 Second Street, EX. 2-3150 • Oakland: 1539 Webster, HI. 4-2913 • Portland: 1101 Equitable Bldg., CA. 8-5277 • Los Angeles: 616 Monterey Pass Rd., Monterey Park, Calif., CU. 3-7161 and AT. 9-5021 • Seattle: 314 Lloyd Bldg., MA. 2-2558 and MA. 2-4898

We invite you to  
evaluate the new  
**HAMILTON**  
Torsion Auto-Shift  
drafting table with  
**DIAL-A-TORQUE**



MR JULIUS SHULMAN  
EP  
7875 WOODROW WILSON DR  
LOS ANGELES 46, CALIFORNIA



**These are clocks** designed by George Nelson for Howard Miller. For complete information, write Howard Miller Clock Co., Zeeland, Michigan... National Distributor: Richards Morgenthau, 225 Fifth Ave., New York; Merchandise Mart, Chicago, Illinois; Fehlbaum, Berne, Switzerland; Pelotas, Sao Paulo, Brazil; Excello, Mexico City, Mexico; Weston, Bogota, Colombia.