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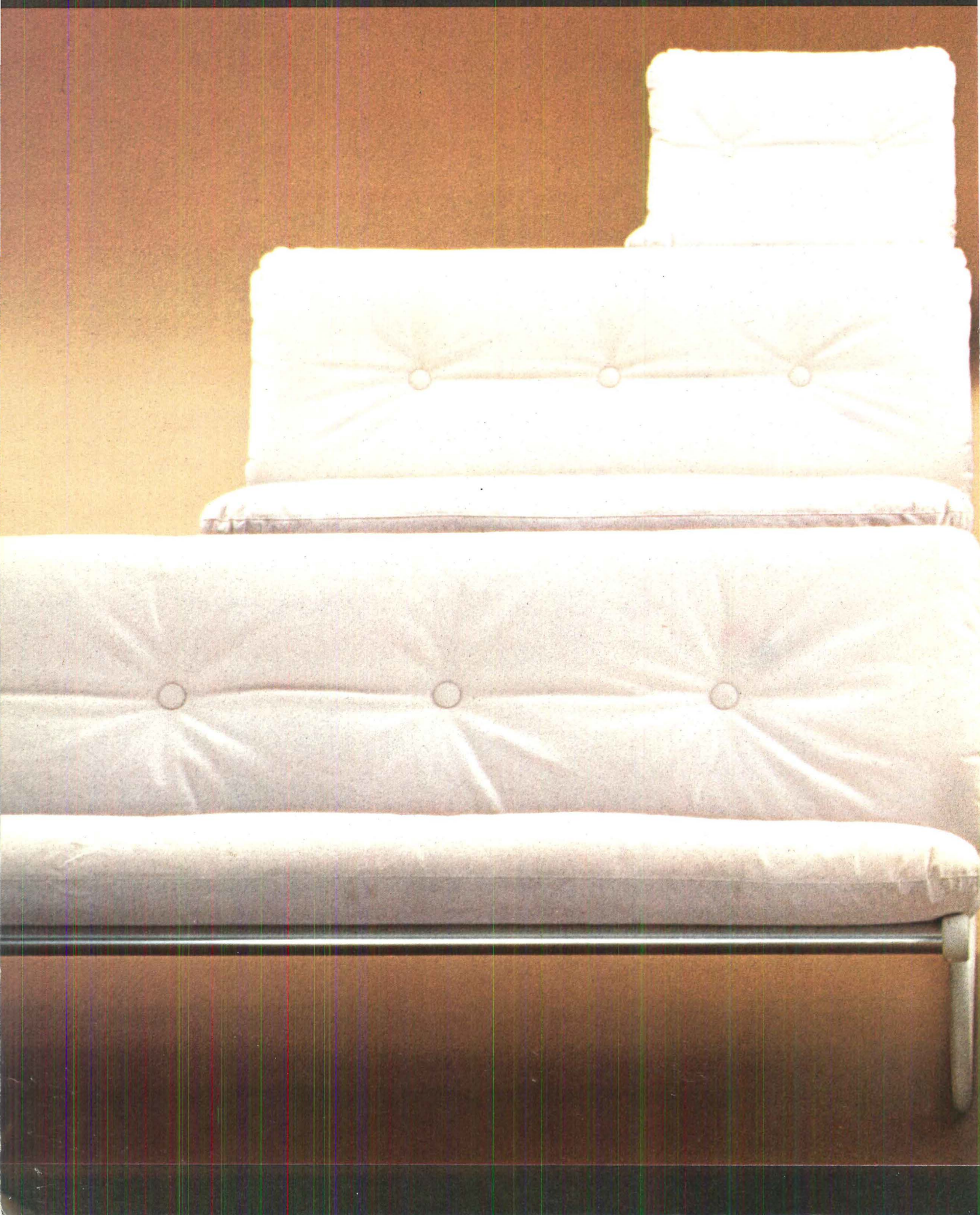


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The International Magazine of Architecture May 1973

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8	<b>Letters</b>
13	<b>Books</b>
17	<b>News +</b> Reports and reviews from around the world.
24	<b>A French architect in Lebanon</b> André Wogenscky, with Maurice Hindié, designs a hilltop campus for the Lebanese Ministry of Defense. By John Hadidian.
32	<b>Whigs of Whig Hall</b> Charles Gwathmey and Robert Siegel are producing buildings that are both striking and thoughtful.
44	<b>Playing it cool on Wilshire Boulevard</b> Craig Ellwood has designed a clean, straight-forward bank and office building for Beverly Hills, California.
50	<b>Yemeni windows</b> A living tradition of ornamental windows going back to the Queen of Sheba. By Brent C. Brolin.
56	<b>The Swedish "Servicehus"</b> These "family hotels" allow a lifestyle in tune with today's social realities by providing community services that allow women with children to work.
60	<b>A painless experience</b> Italian architect Giotto Stoppino has designed offices for a Milanese dentist that most resemble an elegant apartment. By Suzanne Slesin.
64	<b>Japan's Big Five</b> Five Japanese construction companies, each doing over \$1 billion of contracts yearly, are designing and building some of Japan's—and the world's—most interesting buildings.
72	<b>A very significant chair</b> Variously called the Butterfly, Safari, Sling, Wing, African, Campaign, and Italian Officer's chair, among other names, the Hardoy chair has to be the most famous modern chair in the world today.
90	<b>Product Literature</b>
92	<b>Advertising Index</b>

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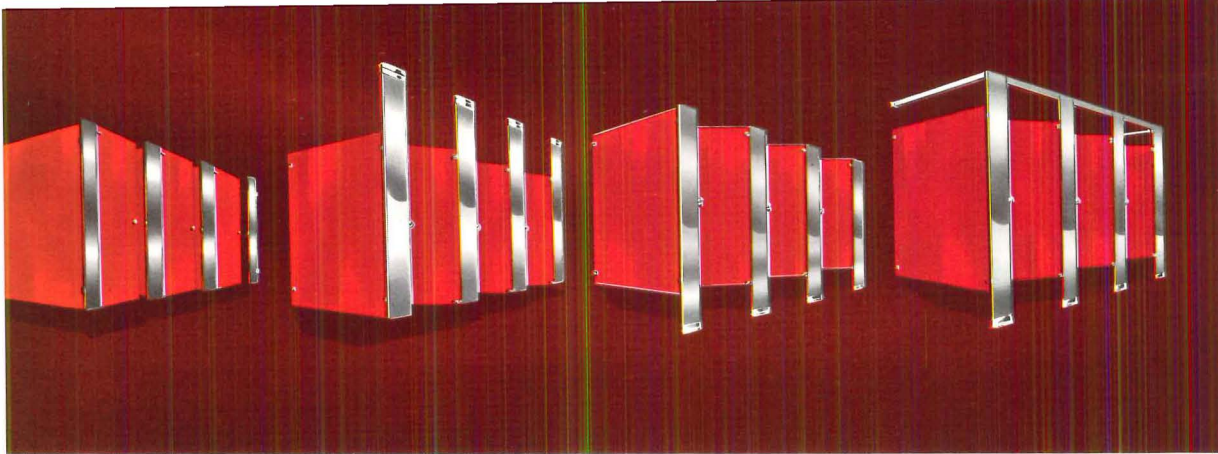
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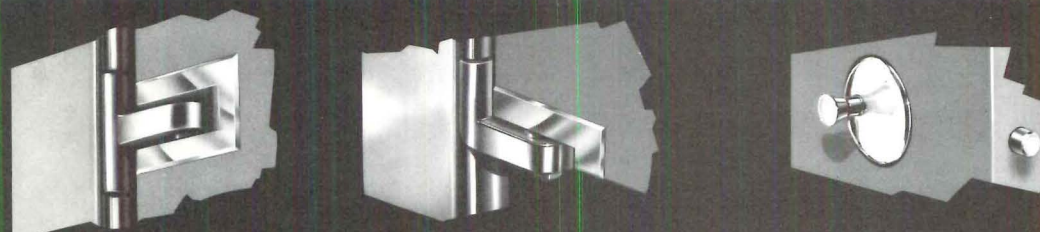




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# Letters

Finally, the first issue of Architecture PLUS did arrive. We were waiting for it with great curiosity, and were fully satisfied. Congratulations!

I wish Architecture PLUS 100 years of success. After that, I hope that we will produce, all together, an international magazine, merging all our magazines. But... we still have some time in front of us.

BRUNO ZEVI  
Editor, "L'architettura," Rome, Italy

I was delighted with Volume I, Number I of Architecture PLUS. Its coverage is as comprehensive as EROS (Earth Resources Observations System, of course), and my only concern is that with such a start how can you keep up the torrid pace that you have set.

A careful search of the index revealed no credit for the cover design. If it was not designed by Charlotte Winter it is certainly Winteresque and that means top quality.

HAROLD SPITZNAGEL  
Architect, Sioux Falls, S.D.

PLUS ONLY JUST RECEIVED  
MAGNIFICENT A THOUSAND  
CONGRATULATIONS . . .  
GREETINGS

DE CRONIN HASTINGS  
London, England

*Hugh deCronin Hastings is, of course, the long-time Editorial Director of the London-based Architectural Review—a magazine of such extraordinary and sustained quality that no message could possibly mean more to us than his.*—ED.

I think you have done a magnificent job with the first issue of Architecture PLUS, and in it have already set a very difficult pace for yourself. In all respects, it is a *tour de force*.

WILLIAM CARPENTER  
Vice President, PPG Industries  
Foundation, Pittsburgh

Congratulations on Architecture PLUS. I thought your first issue was first-rate.

However, let me take the strongest exception to the content and tone of your article "No More Money for Housing." Starting with the headline, this article is highly misleading. As Secretary Romney's announcement of the "temporary hold" on approval of subsidized projects and the President's subsequent budget message made

clear, it is intended that there will in fact be 383,000 federally subsidized housing starts between January 1, 1973 and June 30, 1974. As Secretary Romney's statement further explained, these starts will come not only from projects approved prior to announcement of the "temporary hold," but also from subsequent project approvals designed "to meet statutory or other specific program commitments." The priorities for these further project approvals are currently being developed. A start rate of 250,000 units a year represents an ultimate federal subsidy somewhere in the order of \$10 billion, depending on the program mix, which is scarcely "No More Money for Housing." It is, indeed, a start rate some 30 percent higher than in the final year of the Johnson Administration, which was then a record.

I should also point out that a White House letter to Senator Sparkman on January 15, 1973 made it clear that, "This temporary hold is not intended to spell termination of the program.... The objective is to have better programs; not to abandon the federal responsibility in housing." Surely no one would contend that there have not been very serious problems with our present housing subsidy programs. I would hope that Architecture PLUS could play a prominent role in the days ahead in bringing the best thinking in the architectural profession to bear on the subject of devising the best possible federal housing programs.

S. WILLIAM GREEN  
Regional Administrator, HUD  
New York City

*It is true that there is a considerable backlog of previously approved housing projects that will enjoy federal subsidy—and one reason (in this area) is that Mr. Green has worked so hard to activate and promote such projects. It is also true that any federal program would benefit from review—though some programs, under the enormously increased Pentagon budget, for example, seem to be traditionally exempted.*

*The trouble is, I think, that the kind of "halt" ordered by HUD, however temporary, interrupts the long and immensely complex process under which these projects are finally realized—a process that takes a tremendous amount of (often volunteer) citizen effort, an awful lot of money, and much expert planning. Many projects, after years of preparation, were stopped just on the brink of construction; others had already caused whole neighborhoods to be razed; still others had generated hopes that are now dashed. And while approvals are now denied, prices go*

*up, professional teams (and the investors in limited-dividend projects) scatter, and projects once feasible are often killed. To start up again is costly and time-consuming. The pipeline isn't dry yet, but is drying up rapidly. The present state of subsidized housing is one of complete confusion, and little seed money (or seed "effort") is likely to be forthcoming to start new ones.*—ED.

Let me offer my congratulations on your inaugural issue of Architecture PLUS. It was nice to see 'old friends' like Jane Jacobs and H. H. Richardson afforded some space. But generally your straightforward humanistic approach is very refreshing.

WILLIAM MORGAN  
Princeton University, Princeton

Congratulations to Architecture PLUS. It fills a real need with intelligence and style and ought to be required reading for anyone involved in urban affairs. I look forward to its long and lively future.

CARTER BURDEN  
Councilman, New York City

I was enormously impressed by the freshness of the whole thing. (What a contrast to *World*!) Congratulations! All success.

EDMUND N. BACON  
Architect, Philadelphia

Congratulations on your excellent magazine. Having recently completed a significant planning effort on a major multi-use complex in downtown Atlanta with I. M. Pei & Partners I was particularly impressed with your perceptive analysis of that firm's *modus operandi*. Top talent, a recurring sensitivity for the necessity to humanize a development in such a way as to encourage man's spirit to soar, and an unyielding standard of overall excellence melds into the firm a team approach to problems which is both pragmatic and creative.

I look forward with anticipation to your future issues.

LLOYD T. WHITAKER  
President, Downtown Development  
Division, Cousins Properties Inc.  
Atlanta

We at Urban Design Associates are delighted with PLUS. I really enjoyed the Pei and Boston City Hall articles. (What a contrast they are to the piece on Stirling's Florey: all deezine; and no people. No wonder the only student mentioned in the article kicked the exposed structural column in his room and said: "I'd like to get rid of this.") But at last, in the Pei and the Boston article, architectural journalism acknowledges that people design buildings, and people use them too. Soon, perhaps, architects will realize that the people in both cases are

the same! The Boston article's humanness is a triumph; so are the snapshots. It is very exciting to us to see approaches to architecture and architectural criticism emerging which celebrate people.

DAVID LEWIS  
Architect, Pittsburgh

Congratulations on your excellent first issue. Architecture PLUS serves an important need because many of the articles go beyond the specifics of architecture and get into the larger realm of the city, community and total environment in which the architect and planner must play a leading role. To have the benefit of worldwide coverage makes the magazine that much more appealing.

I. JACK GURAL  
Director, Planning Division  
Public Buildings Service  
General Services Administration  
Washington, D.C.

Congratulations on a superb first issue! I might add that a superb first issue is somewhat of a rarity for it usually takes a while for a new publication to crystalize what might be termed "its image" or "its stance." In your instance it is clear you perceive quite clearly and quite precisely where you are going, despite the modest blandishments of the opening editorial remarks.

I am especially pleased with the "Plus" in your magazine's name. A periodical which embraces not only architecture but also many of the related design disciplines fills a very positive need. Keep it up!

ALFRED AUERBACH  
Designer, New York City

Just read PLUS #2. You're still #1.

JAMES STEWART POLSHEK  
Architect, New York City

I have just read your March issue of Architecture PLUS and I think it is, without a doubt, the best architectural magazine I have ever seen.

It is beautifully organized, elegantly illustrated, and so sensitively printed that it does my heart good.

Of course you have a very good subject. The graphics and pictures are a credit to Pei's office but the way it was put together seems to me to be worthy of a special commendation from this end of the world.

VINCENT G. KLING  
Architect, Philadelphia

*Errata: In the March issue of Architecture PLUS the site plans for the Choate School and the Cornell Art Centers were inadvertently reversed. Our apologies. Our apologies, too, to the firm of S.J. Kessler & Sons, Architects & Engineers, for the omission of their name in the Kips Bay Plaza credits.*



# Book Review

**In the Nature of Materials; The Buildings of Frank Lloyd Wright, 1887-1941** by Henry-Russell Hitchcock. Duell, Sloan & Pearce, New York, 1942; reprinted with a new foreword and bibliography by the author, Da Capo Press, New York, 1973; 143 pp., 413 fig., \$18.50.

Reviewed by David G. De Long

Henry-Russell Hitchcock's *In the Nature of Materials* is at last available again in this Da Capo reprint. This book continues to be essential for any complete understanding of Frank Lloyd Wright as well as modern architecture in America. Its beginnings were in the major show of Frank Lloyd Wright's work held at New York's Museum of Modern Art in the fall and winter of 1940. The museum had previously not neglected Wright. He was represented in their 1932 International Exhibition of Modern Architecture and in a small exhibition (in 1938) of the Edgar J. Kaufmann house; he was further given a prominent position in their 1940 *Guide to Modern Architecture, Northeast States*. But the 1940 show was the Museum's first major exhibition devoted entirely to Wright. He justly felt it important to his career, and had himself assisted with its installation. Reviewing the show's opening for the *New York Times* (November 13, 1940, p. 20), however, Edward Alden Jewell said: "The exposition of Mr. Wright's architectural ideas, theories, projects and accomplishments is not nearly as graphic or clear as one might wish. The data is there, but it seems not to be presented and correlated with enough simplicity, enough explicitness. Rather surprisingly, too, no catalog has been prepared for the Wright Exhibition."

In actuality a catalog was prepared, but it was not issued. Frank Lloyd Wright mentions a catalog in a letter to Henry-Russell Hitchcock dated November 23, 1940. (Special thanks is due the Avery Memorial Library at Columbia University, and particularly to its director, Adolf K. Placzek, for permission to inspect this document.) His remarks there reflect the tenor of Jewell's criticism and reveal an anxiety that the work displayed be understood and appreciated. Wright was obviously concerned about public reaction to this show. Wanting a more objective explanation of his work and less critical interpretation, he seems to have objected to the catalog which was to be issued. In the letter he asks Hitchcock to consider the undertaking, to be based partly on the show and partly on further research by Hitchcock in cooperation with Wright and members of his staff. Wright affects no humility and compares the magnitude of his show to that of the Leonardo da Vinci exhibit in Italy. The end result of Wright's request was *In the Nature of Materials*, though its preparation took considerably longer than the two or three weeks that Wright suggested. The work was issued

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as part of a trilogy on Wright's design and philosophy, the other volumes being *Frank Lloyd Wright on Architecture: Selected Writings, 1894-1940* (edited by Frederick Gutheim, New York, 1941) and a new edition of *An Autobiography* (New York, 1943). All three publications appeared in a format which Wright had himself designed.

Wright could probably not have selected a more able person than Henry-Russell Hitchcock to explain his work and place it within its proper context. Well before 1940 Hitchcock had written two seminal works of modern architectural history, *Modern Architecture, Romanticism and Reintegration* (New York, 1929) and, with Philip Johnson, *The International Style: Architecture Since 1922* (New York, 1932). Among his many other writings were the introductory text for a French publication, *Frank Lloyd Wright* (Paris, 1928), and major portions of the catalog for the 1932 International Exhibition of Modern Architecture at the Museum of Modern Art. In the last Hitchcock stated "there is already no question that Wright is one of the greatest architects of all time." Wright could not have failed to notice such a statement and also seems to have liked Hitchcock's contributions to the catalog withheld from the 1940 show. Under the conditions imposed by Wright for the writing of *In the Nature of Materials*, with every word subject to approval of the Master himself, it must have been no easy task. In this light the clarity and objectivity of the text become all the more remarkable.

The appearance of *In the Nature of Materials* marked the first time that a comprehensive publication of Wright's work was generally available in this country. The major publications preceding it were the two Wasmuth editions of 1910 and 1911 issued in Berlin and the Wendingen compilation of 1925 published in Santpoort, Holland. Their objectives, however, were different, and their range was of course limited by their earlier dates. Beginning with Robert C. Spencer, Jr.'s article in the *Boston Architectural Review* ("The Work of Frank Lloyd Wright," vol. 7, May, 1900, pp. 61-72), Wright's work had not infrequently appeared in American magazines. Several of his own writings had also been published in book form including most notably *The Disappearing City* and an earlier edition of *An Autobiography*, both published in 1932.

The reviews which greeted *In the Nature of Materials* were generally enthusiastic. Typical was Walter Curt Behrendt's comment in *The Yale Review* (vol. 32, September, 1942-June, 1943, pp. 178-180, p. 180): "The book is highly recommended as an important contribution to the knowledge of American culture: from it we might learn, if we did not already know, that in our midst there is living a great genius, one of the greatest of all history." But for an understanding of the book's objectives and its relation to the show at the Museum of Modern

Art, the best discussion is that in *The Art Bulletin* by Hitchcock himself ("Frank Lloyd Wright at the Museum of Modern Art," vol. 23, March, 1941, pp. 73-76).

For those not already familiar with the book, the text is organized into six chronological periods which reflect major phases of Wright's career. Part One (1887-1892) discusses Wright's early work in the offices of J. L. Silsbee and Louis Sullivan against the background of Chicago architecture at that time, while Part Two (1889-1900) explores the first phase of Wright's independent work, beginning while he was still in Sullivan's employ. Part Three (1901-1910) treats the first mature phase of Wright's work, including such famous examples as the Larkin Company Administration Building (1904) and Unity Church (1906). As the Wasmuth publications informed Europe of this mature phase, Wright's work took a different turn, described in Part Four (1911-1920). During a period of slackened building activity which followed, covered in Part Five (1921-1930), several projects give evidence of the coming resurgence of Wright's career chronicled in Part Six (1931-1941). Outstanding in this sixth phase are, of course, the Edgar J. Kaufmann House (1936) and the S. C. Johnson Administration Building (begun in 1936 but not completed until 1939). Following the text is a chronological list of executed work and projects from 1887 to 1941 and a generous selection of photographs arranged chronologically with brief explanatory notes.

New to this Da Capo reprint are an additional foreword by Hitchcock and a section from the third edition of his *Architecture: Nineteenth and Twentieth Centuries* summarizing the major aspects of Wright's career after 1941. In addition selected bibliographies from 1942 to 1968 and from 1969 to 1972 have been added (the latter prepared by William G. Foulks of the Avery Library). These welcome additions have been inserted so as to leave the page numbers of the text and the figure numbers of the illustrations unchanged from the original edition. Minor changes have been made in the title pages and also in the color and layout of the cover. The reprint otherwise remains identical to the original down to the apparent typographical error on page 54 ("heated" for "treated") and the reference on page 97 to figure 414 (the figures end with 413). In the second foreword it is noted that many of the illustrations have been newly made from the original photographs and plans which were prepared for the first edition. This makes possible a higher standard of reproduction than often occurs in reprints, though a more pronounced contrast in the illustrations of the original produces a generally sharper image. This is, however, a minor point when the moderate cost of this reprint is compared to other such lavishly illustrated books appearing today.

*In the Nature of Materials* remains a book of singular importance. Certainly no work on the subject has appeared which could surpass it in the attainment of its objectives. The chronologi-



cal list of executed work and projects remains the basic and most reliable source for the dating of Wright's work of this period. The text, moreover, seems to contain the seeds of many subsequent studies of Wright, and its precision and directness are refreshing after the heavy doses of theory which recent books on architecture have offered. A continuation of this same high standard of scholarship in covering Wright's work from 1941 through the last projects would be most desirable. One hopes the study mentioned in the new foreword (which would seem to refer to *The Architecture of Frank Lloyd Wright: A Complete Catalog*, by William Allin Storrer, M.I.T. Press, 1973), will fulfill this wish.

*In the Nature of Materials* is also a reminder, if one need be given, of Wright's greatness as an architect. That he showed a significant concern for the improvement of all levels of the urban environment is made abundantly clear by the lengthy series of projects for urban housing of many types and for the development of major public amenities. These projects are surely among his major achievements. Particularly remarkable is the 1940 scheme for Crystal Heights in Washington, D.C. Describing this Hitchcock says (p. 101): "The man who sees the city as disappearing offers here not only a model of how the urban ideal might be maintained in the mid-twentieth century, and a model much more realizable than the projects of the twenties for rebuilding European metropolitan cities, but a masterpiece of urban architecture, beside which Rockefeller Center itself and the accidentally isolated skyscrapers of Wilshire Boulevard appear as timid, half-hearted compromises." Its development from earlier projects is revealed in the text and illustrations: in terms of form and scale it stems from the Grouped Apartment Towers (1930), the St. Mark's Towers (1929), and the National Life Insurance design (1924); in terms of scale alone, from San Marcos-in-the-Desert (1927), the Edward H. Doheny Ranch (1921), and ultimately from the Wolf Lake Amusement Park (1895). All remained unbuilt. As a culmination of this development, Crystal Heights demonstrates an unsurpassed grasp of urban scale, a certain confidence also apparent in the Madison Civic Center project of 1939 (reworked by Wright in the mid-1950's) and later in the first design for Point Park, a civic center for Pittsburgh (1947). In these projects are indications of a city as one structure, a structure with that Wrightian sense of variety and scale which denies the selfless anonymity of the city dweller. Such achievements seem increasingly unique.

**Jack & Jill.** By Jack and Jill Killjoy. 159 pp. Published by Some-such Press, New York. \$5.95.

Reviewed by Peter Blake

I am about to attempt the impossible, and that is to review a book without mentioning its name or the names of the authors. Why? Because it is

a book of such puerile vulgarity that I wish to do nothing to promote its sales; yet it seems significant enough, in its repulsive way, to suggest that we may all be in for so massive an invasion of our most intimate privacies as to make the Gestapo's snoopers look like a bunch of katzenjammer kids.

My task, in reviewing this book, is made doubly impossible since the Editor of this magazine unlike the Editors of such racy volumes as the Oxford English Dictionary, refuses to acknowledge the existence of certain four-letter words that describe activities fairly common among mammals.

So I must start by explaining that my code word for the name of the book is "Jack & Jill;" my code name for the authors is "Jack & Jill Killjoy;" and my code word for that Oxford Dictionary term is "cosmo"—you know, as in "I cosmo, you cosmo, he-she-it cosmoes," etc. etc.

Ok. Now that we have explained the ground rules, let's get started.

The most traumatic event in New York architectural circles, these past few months, has been the publication of an innocent-looking little volume entitled "Jack & Jill." Jack Killjoy, one of the book's two co-authors, is a middle-aged Professor of Architecture at a New York think-tank; and Jill, his wife, is an architect until recently associated with one of the best architectural firms in Manhattan. The book is subtitled something like "born free;" I have known Jack & Jill for half a dozen years or so; and the book tells us how their marriage became really super because Jack and Jill decided, some time ago, to cosmo around, left, right, front, back and center, with any available partners, to enrich their sexual experiences. The book almost precisely identifies these extra-marital partners, details their cosmic talents, and evaluates their performances. In my rapidly shrinking circle of friends, many of these partners are clearly recognizable; indeed, the people and situations described are so graphic that loud sighs of relief were audible at every recent, architect-oriented cocktail party in New York City when it was revealed that Jack and Jill had, in fact, mercifully spared some of the rest of us.

I don't know what it is about architects—or, rather, frustrated architects—in this century that makes them act up so: Adolf Hitler, Lavrenti Beria, Albert Speer—and now Jack and Jill! Or, perhaps, it is all fairly obvious: those architects who can, do; those who can't (and are therefore frustrated), cosmo—or write about it. Many trite things have been said and written about the sexual symbolism revealed by certain buildings—skyscrapers, grottoes, domes, and what have you. No need to add to the list. So, perhaps, it is not surprising that *frustrated*—i.e., non-building—architects, turn to other forms of expression.

God knows, I am not about to start knocking sex; it is very neat, especially if you don't weaken. But does it have to be a spectator sport? Indeed, should it be?

There is something stupefying—well, "snig-

gering" is the word, I guess—in Jack and Jill's accounts of their hitchhikes through cosmoland. The mechanical devices; the endless combinations, permutations, and other variations; the tacky accessories—all these are supposed to enlighten (whom, exactly? Eskimos?) or shock—and they do shock, but in a way far different from that presumably anticipated by this dynamic duo.

For the truly shocking aspect of this exercise in exhibitionism is not that Jack and Jill expose themselves—cosmo! it's a free country!—but that the third, fourth, fifth-to-twenty-ninth parties are mercilessly identified, by first name, occupation, and place of employment (though not always by their last names—which ranks with the kind of lipservice paid to civil liberties by the late J. Edgar Hoover when he only *leaked* wiretap transcripts to his favorite columnists . . .); and the most intimate feelings of those other parties are described in the terminology of the butcher shop or the taxidermist trade.

Indeed, these faceless (though not nameless) partners are described as you would describe slabs of meat; and their sexual responses—not inconceivably, though (I am certain) very fleetingly motivated by some four-letter sensation like L-O-V-E—are described with all the sensitivity of an inscription on the walls of a pissoir.

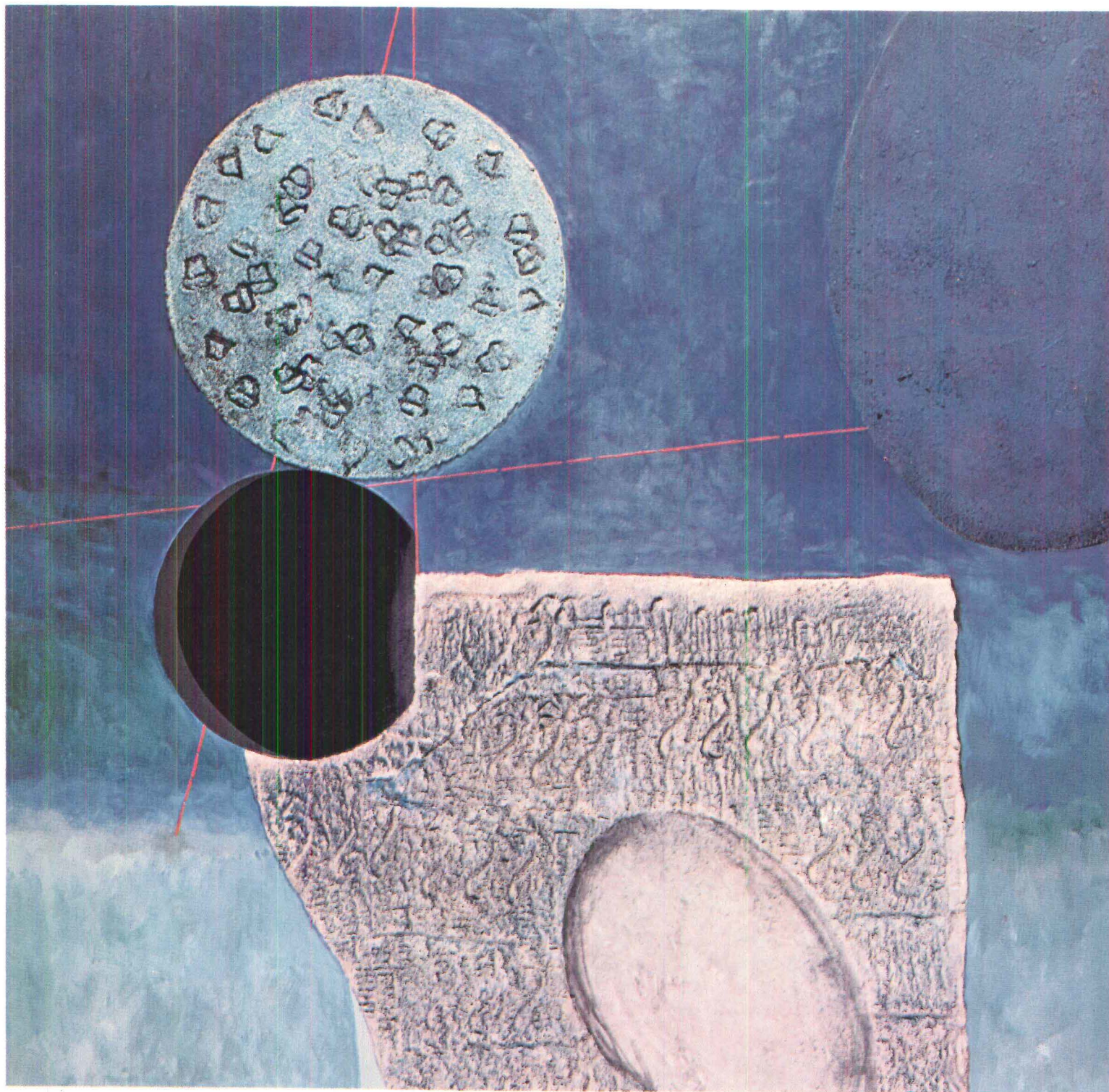
Sure, sure—most of these hapless victims probably consented—you can either con or cajole or coerce anybody to consent to just about anything, if you have the mind of a Beria, and the power of wielding ostracism in the grubby little world in which you live; but these pathetic slabs of meat who, presumably, agreed to have themselves described as "cosmoing like a bobcat," are cherished by their fellow-men and fellow-women who (how silly can one really begin to sound?) treasure humanity. Even if they, themselves, consented under some sort of duress to this public meatballing, the rest of us need not consent so as to retain our memberships, in good standing, among the Grubbies. There is no significant difference, really, between bombing the living daylight out of a human being in Vietnam, and destroying a human being by making mincemeat out of him or her on the public presses.

I really would not know how to define the special talents required to produce good architecture. Sexual awareness is obviously one—including the awareness of what sexual motivations may underlie one's own work. I do know that those special talents involve some fairly deep commitment to humanity, and to all animal and plant life, in fact. My only regret for having reviewed this sordid little book is that, despite the subterfuge, this review will help boost its sales. But, then, Jack and Jill will need the bread to pay their shrinks—and we may all breathe easier as a result. As for myself, to paraphrase Hilaire Belloc, "I have wisely grown/ confirmed in my instinctive guess/ that architecture breeds distress."



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**P**robably the most interesting article in the first issue of this magazine was Ellen Perry Berkeley's "More than you may want to know about the Boston City Hall." I was rather reluctant to run the article in full, since I have always labored under the impression that all my fellow-architects were illiterate. Obviously, I was mistaken; no article that has appeared in this magazine to date has been read so avidly. A gentleman in San Diego, California, told me the other day that he only stopped reading that piece when his right foot fell asleep. I was delighted to hear that his uppermost extremity was not affected.

This month, we are running something entitled "More than you may want to know" about the Hardoy Chair. It is at least as long an article as Ellen Berkeley's, and I wrote much of it some years ago, in collaboration with Jane Thompson, who is, among many other things, the wife of the Architect Benjamin Thompson. Jane and I used to work together at New York's Museum of Modern Art, and now work together on the Board of Directors of the International Design Conference in Aspen, which meets on that particular summit every year in the third week of June. The article is based on the sort of absolutely stupefying research that demented historians enjoy—and that serves no imaginable purpose other than to (hopefully) amuse their readers.

If you enjoy this latest entry in our "More than you may want to know" series, we will see what we can do to make you even happier in the months and years to come.

—PETER BLAKE.



Louis I. Kahn



George Nelson



Lawrence Halprin



Niels Diffrient

## Man is the measure

A recent design seminar sponsored by the American Iron and Steel Institute in Cincinnati featured four noted architects, planners, and designers—Louis I. Kahn, Lawrence Halprin, George Nelson and Niels Diffrient—discussing "imaginative concepts for improving the quality of life in our major cities."

Kahn described "the room as the beginning of architecture," and streets of cities as "community rooms."

Halprin, who calls himself "a city man rapturously in love with nature," talked about the vitality of the city, declaring "you cannot

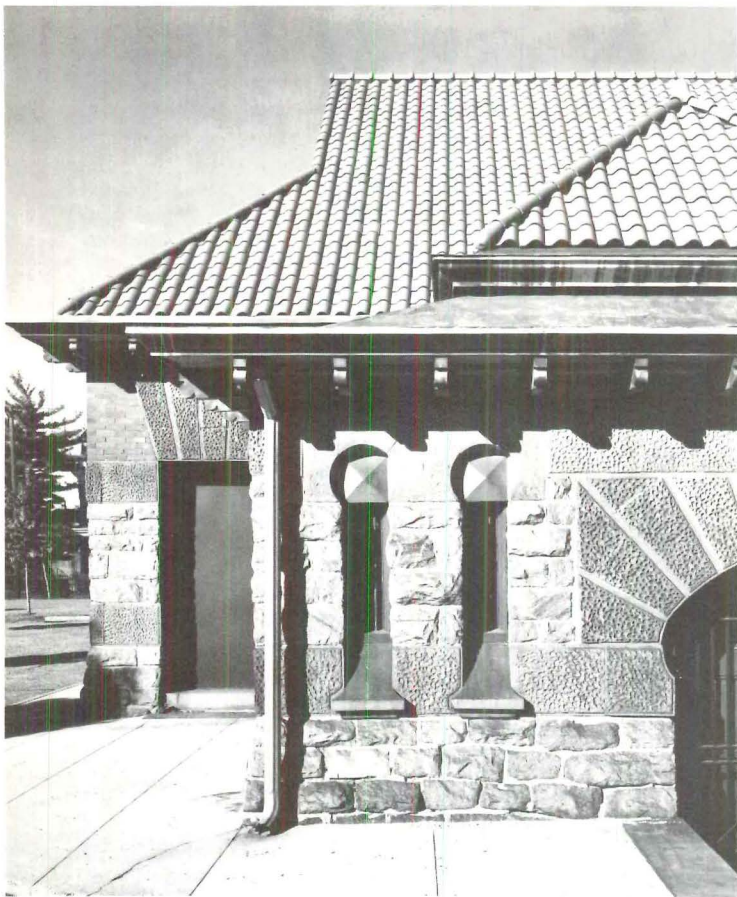
name an important culture that did not or does not get its major impetus from cities."

Nelson said, "Design has a technological base and esthetic qualities, but it also has a social meaning... Nobody builds cathedrals or rockets without some belief in whatever these objects stand for."

Diffrient suggested the formation of "interdisciplinary teams" that embrace the physical and social sciences to create better designs. All four of the speakers illustrated their commentaries with various examples of their own work in design.

*Many of the news reports and comments are from our regular field editors: John Donat (London), Gilles de Bure (Paris), Detlef Schreiber (Munich), Vanna Becciani (Milan), Charles Correa (Bombay), Neil Clerehan (Melbourne), Yasuo Uesaka (Tokyo), and Leonardo Aizenberg (Buenos Aires). Plus correspondents are identified by their initials; other contributors by their full names. The remainder is contributed by our New York staff.*





Chapel, Mount Sinai Cemetery, Philadelphia

### Furness in Philadelphia

All of Frank Furness' buildings didn't vanish in the Furness razing spree that reached its height in the 1950's. But, since then, despite the development of international interest in the man's architecture, there has been no exhibition devoted to his work, nor has there appeared a book on it. That has been set to rights now in the mounting by the Philadelphia Museum of Art of its current (until May 27) major exhibition on "The Architecture of Frank Furness" and its simultaneous publication of a 200-page monograph, with an essay by historian James F. O'Gorman. The included checklist covers 366 buildings of which, we are informed, some 200 are surprisingly still extant. Clearly Furness is more than half alive and well in Philadelphia.



### The city as a self-contained entity

The Minnesota Experimental City was conceived in 1966 as a new town plan that is "ambitious without being impractical," a completely self-contained entity that will serve as a "living laboratory for the most advanced ideas in urban planning, and technology."

The project originated with a scientist, Athelstan Spilhaus, who first proposed the city in the comic strip, "Our New Age," which he writes for Sunday newspapers. Under the guidance of Spilhaus, former dean of the University of

Minnesota's Institute of Technology, the full resources of that university were placed at the disposal of the project, and a three-year study of the new city was begun.

The study phase was funded by federal and private money. In 1971 the State of Minnesota formed the MXC Authority, whose main function was to select a site.

A 73,000-acre site was found by the MXC Authority after an extensive search, and the proposal is now before the Minnesota Legislature for a vote. The site is 120 miles

north of Minneapolis in Aitkin and Cass Counties and—miraculously for a piece of land of 400 square miles—has only 970 people living on it; 360 of them live in one village on the edge of the site.

These people seem enthusiastic about the idea of the new city; they have formed a Committee to Encourage the Development of the Minnesota Experimental City. Some local opposition, however, is coming from hunters who shoot deer and muskrat there.

The site has rolling hills, low mountains with ski areas, a few lakes (the largest is 900 acres) quite a bit of marshland, and a lot of third-growth pine and birch.

Dubin-Mindell-Bloome Associates with offices in Rome, Johannesburg, Hartford and New York, are the consulting engineers responsible for the energy and waste management programs, and for recommendations for future design and planning. They emphasize the integration of energy and utility systems with transportation and building structures.

Several energy sources will be used. One area of the city will harness wind power, one solar energy, while another will use heat

energy from the gas produced in the treatment of sewage. There will be complete recycling of liquid waste. Controls may be set on what can be brought into the city such as unrecyclable packaging.

At one point several years ago, Buckminster Fuller, who was one of the people who encouraged the experiment, planned for the whole city to be covered over with a dome. Present plans call for smaller domes to cover and protect parts of the city.

With its pollution-free, total energy systems, many jobs will be created in research-oriented industries alone.

### Ars Gratia Artis

On the Strip in Las Vegas, what is being touted as the "largest luxury hotel ever constructed" (2,084 rooms plus, of course, casino) has just been topped out. Called the MGM Grand and owned by a subsidiary of Metro-Goldwyn-Mayer, the hotel will offer suites named for Dr. Zhivago, Lara, Rhett Butler, and Scarlett. No, the architect is not Gary Cooper, but Martin Stern, Jr., of Los Angeles.

### For everyone a garden

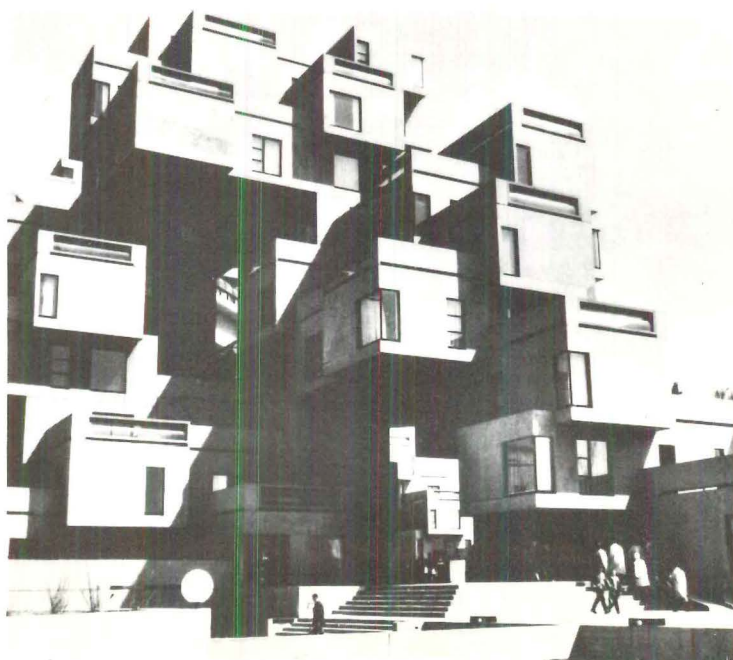
The first major exhibition on the work of Moshe Safdie opened on April 27 at the San Francisco Museum of Art, and will close June 17.

The show, called "Moshe Safdie: For Everyone a Garden," has on display Safdie's writings, drawings, and projects; 12 architectural models of his major works; a walk-in theater after a "module" designed in a San Francisco State College Student Union project and housing 16 slide projectors; and

nine monitors showing video-tapes of Safdie's current projects.

The format for the show was designed by the firm of O'Malley & Associates, Inc., architects of Baltimore, in cooperation with Mr. Safdie and the staff of the Baltimore Museum of Art, who organized the show. A "History Wall" illustrates the socio-economic, political and cultural disposition of our times. The show will be on view during the May convention of the AIA, in San Francisco.

Habitat, built for Expo 67, Montreal





## The ghamela fits the head

Street furniture and other urban objects are the current focus of attention at the Indian Institute of Technology in Bombay. Professors Adarkar and Nadkarni, who are responsible for setting up the Industrial Design Center in the Institute, have had students and staff involved in projects redesigning the ordinary and most-used everyday tools and utensils of India, with great success. Samples:

- The lunch box for carrying food from home to working place is a commonly used product in a city like Bombay. There are regular organizations which undertake the work of collecting these boxes during the morning from the houses of the workers and delivering them to their working places. As many as 200,000 people get lunch box delivery service in Bombay alone.

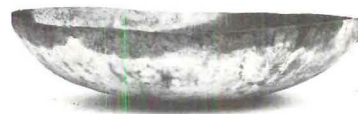
The redesign of the lunch box was tackled by a student at the Center. In the existing unit the outside box is made of galvanized iron sheet, and the inside is made of aluminum, which normally gets corroded in the course of time. The food gets cold in these boxes. The identical round containers do not provide enough flexibility to send different types of food, and the food often gets mixed up.

A study was made to determine what a standard facility for a typical Indian food *should* look like. The sizes and shapes of the containers were arrived at accordingly. A separate flat container was incorporated into the design to keep items like chapathi and papad (both bread) dry. The outer cover and inside containers are of injection-moulded polypropylene with thermocole in between for heat insulation. This will keep the food hot for four hours. And, most importantly, the average worker can afford to buy such a container.

- The ghamela, a pan-shaped container carried on the head by both men and women, is widely used for carrying materials like cement, mortar, concrete or bricks. The redesign of the ghamela was marked as a student project. The ghamela is often passed from hand to hand in a long line of persons in assembly-line fashion. The product is roughly handled; many times it is thrown from considerable heights.

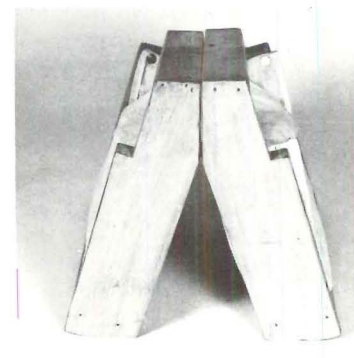
The redesigned unit is of steel, and is stackable. The elliptical shape makes hand-to-hand passing more efficient. The bottom neatly fits the head, and it costs no more than the existing ghamela.

- The shoe shine boy is as common a sight in India as he is elsewhere. Young boys with a polishing stand and canvas bag go around polishing shoes, charging one to three cents, to add to the family income. The design proved to be



a challenging problem because of the strict economic constraints. Existing units cost as little as three rupees, or less than half an American dollar. The boys form great sentimental attachment to the boxes, but were very much interested in having a new design to attract more business.

The solution consists of two identical wooden frames hinged at the center. A catch at the bottom holds the two frames secure while the stand is being carried. Each wooden frame has a canvas bag in the middle for storing brushes and polishes. The unit attains a stable posture when the two frames are tilted around the hinge, and this works as a stand for holding the shoe in place. Inexpensive fir is used for



the frames—the whole thing weighs one kilo and costs eight rupees (about one U.S. dollar).

- The mail box design was a staff project requested by the government. Collection schedules are easy to read. A plastic bag inside protects the letters in the monsoon season, and the postman can lift out the bag without stooping. The box is made of steel sheet. The boxes are now being installed in Delhi and Calcutta.

Personally I am not sure that new images are always better than the ones they are replacing—rather like one of those slimming ads where the girl actually looks better (i.e., more human) when she is plumper. But it is perhaps a subtle way to progress.—C. C.

## Fun and games on Alcatraz

Alcatraz Island, notorious and dreaded former federal prison in San Francisco Bay, has been turned over to the National Park Service, and they can't figure out what to do with it.

The barren and dismal island, referred to (without affection) by inmates as "the Rock," has been abandoned for years, except for a year-and-a-half takeover by Indians. The feds gave the Indians a hard time, and the Indians became discouraged and left in 1970. The Park Service would like to create some kind of tourist attraction there, and is asking for suggestions.

## Synagogue architecture

A museum devoted to the history of Jewish art and architecture from the third century A.D. to the present opened in April at Yeshiva University in New York City. On permanent display will be ten scale models of historic synagogues created especially for the museum. Most of the models have been cut away to show intricate interiors.

Synagogue architecture has always been strongly influenced by the culture of the surrounding community. The wooden synagogue at Zabludow, for example, reflects Polish folk art of the early 17th century.

Though there are few regulations governing the location and internal layout of a synagogue, there are definite differences between the oriental, Sephardic (Iberian) and Ashkenazi (Central and East European) styles.

The mosaic floor in the nave of the sixth-century A.D. Beth Alpha synagogue clearly shows the ark, the zodiac, a scene of the sacrifice of Isaac, and the names of the artists who made the mosaic.

The exhibit area of the museum was designed by Charles Forberg Associates, architects.

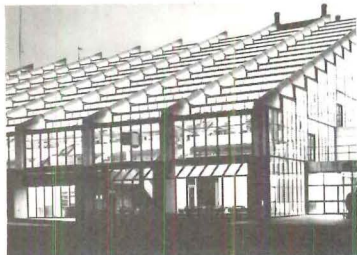
Wooden Synagogue, Zabludow



Beth Alpha Synagogue, Jerusalem







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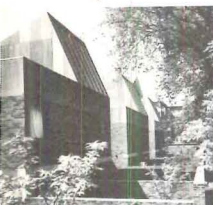
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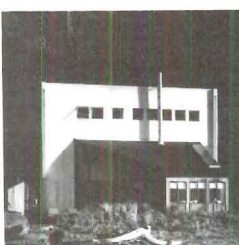
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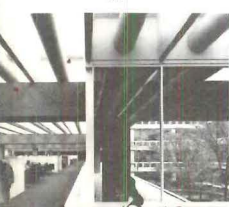
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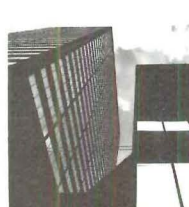
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## AIA top honors

The American Institute of Architects presented its 1973 honor awards for architectural excellence at the San Francisco Convention, May 7-10. The winners were:

- 1 George Gund Hall, Harvard Graduate School of Design, Cambridge, Mass.; John Andrews/Anderson/Baldwin of Toronto, Canada, architects.
- 2 St. Francis de Sales Church, Muskegon, Mich.; Marcel Breuer and Herbert Beckhard, New York City, archts.
- 3 Woolner Residence, Chilmark, Mass.; Edward A. Cuetara, West Tisbury, Mass., architect.
- 4 Julian T. McPhee College Union, California Polytechnic State University, San Luis Obispo, Calif.; Esherick Homsey Dodge & Davis, San Francisco, architects.
- 5 Faculty Housing, Radcliffe College, Cambridge, Mass.; Ronald Gourley/Carleton R. Richmond Jr., of Cambridge, Mass., architects.
- 6 Public Housing for the Elderly, Wayne, Mich.; William Kessler & Associates, Inc., Grosse Pointe, Mich., architects.
- 7 St. Procopius Abbey, Lisle, Ill.; Loeb Schlossman Bennett & Dart, Chicago, architects.
- 8 Vacation/weekend residence, San Mateo County, Calif.; McCue Boone Tomsick, San Francisco, architects.
- 9 Beach house, Santa Cruz, Calif.; MLTW/Moore Turnbull, San Francisco, architects.
- 10 Fountain Square Plaza, Cincinnati, Ohio; RTKL Assocs. Inc., Baltimore, Md., architects.
- 11 American Can Company, Greenwich, Conn.; Skidmore, Owings & Merrill, New York City, architects.
- 12 Time & Life Building, Chicago; Harry Weese & Assocs., Chicago, architects.

## AIA to Congress: Bury It

Plans to add new office space to Washington's National Capitol area are unfortunately not dead, but they may be buried anyway. In a continuing effort to avert the destruction of the most prominent effect of the country's most prominent building—the West Front's breathtaking cascade of columns directly below the mammoth dome—the American Institute of Architects has suggested to Congress an alternate scheme of leaving the existing building intact and putting new work space underground (a sound suggestion that the AIA might have considered in expanding its own headquarters). The AIA has also wisely advised a comprehensive planning study of the Capitol Hill area as a prerequisite to any construction.

Despite engineering research on the feasibility of restoring the West Front (rather than expanding beyond it) done for Congress in 1970 by the New York firm of Praeger-Kavanaugh-Waterbury; despite repeated pleas from the AIA and the National Trust for Historic Preser-

vation; and despite an *estimated construction cost of \$368 a sq. ft.*, Vice President Agnew and the six other members of the Commission for Extension of the U.S. Capitol have now announced their intention to proceed with the extension.

In the wake of the administration's wholesale dismantling of domestic housing programs, this is an inexplicably expensive as well as an irretrievably destructive plan. The AIA's suggested alternative is far superior.

## Thou shalt not steal thunder

Rainmaking, which has already proved feasible in experiments, may be the military ammunition of the coming decade—one country could steal another's rainfall.

Canadian Maurice S. Strong, head of the UN environmental program, warned of the possibility of "environmental aggression" at a recent news conference in New York. "I predict that in 10 or 15 years environmental aggression will be a major source of conflict," he said, and talked about the international disputes already caused by waterway pollution.

## This is the way the world ends...

The First and, if God is indeed as Merciful and Almighty as he is cracked up to be, the *last* Federal Design Assembly, took place on April 2 and 3, in Washington, D.C.; and there were few survivors.

It all began with an Opening Session held in what will henceforth be referred to as the Cecil B. de Mille Memorial Mausoleum, located in a building that also houses the U.S. Department of Labor—a mausoleum (or, more correctly, a columnar hall) of a degree of banality so stupefying as to boggle the assembled minds. President Nixon, who was to have opened the Assembly in person (but was having deserved fun with President Thieu in the California White House instead), conveyed his greetings on tape, which was dutifully and expertly played to the architects, designers and dispirited government officials gathered in the mausoleum. "It is time that we cast aside the theory that excellence of design is a luxury," President Nixon's tape-recorded voice announced, sounding as if it were emerging from some nearby catacomb. "The ideals that shaped our Government are among the noblest in human thought." There were some eminent Canadians present, but neither they nor our Black or Indian conferees flinched. "It is imperative that these ideals be faithfully reflected in the physi-

## Prize totems

Last December, the city fathers of Marne la Vallée, a new town just east of Paris, sponsored a design competition for the painting of two water towers.

Among the contest entries were designs by many well-known illustrators and graphic designers; Folon, Castelli, Le Foll, Goude and the Haus Rucker Company, to name a few.

The winner was the French illustrator Maurice Garnier, who produced these two very charming water towers. They are the sun and the moon, and they stand smiling on the townspeople.—G. de B.

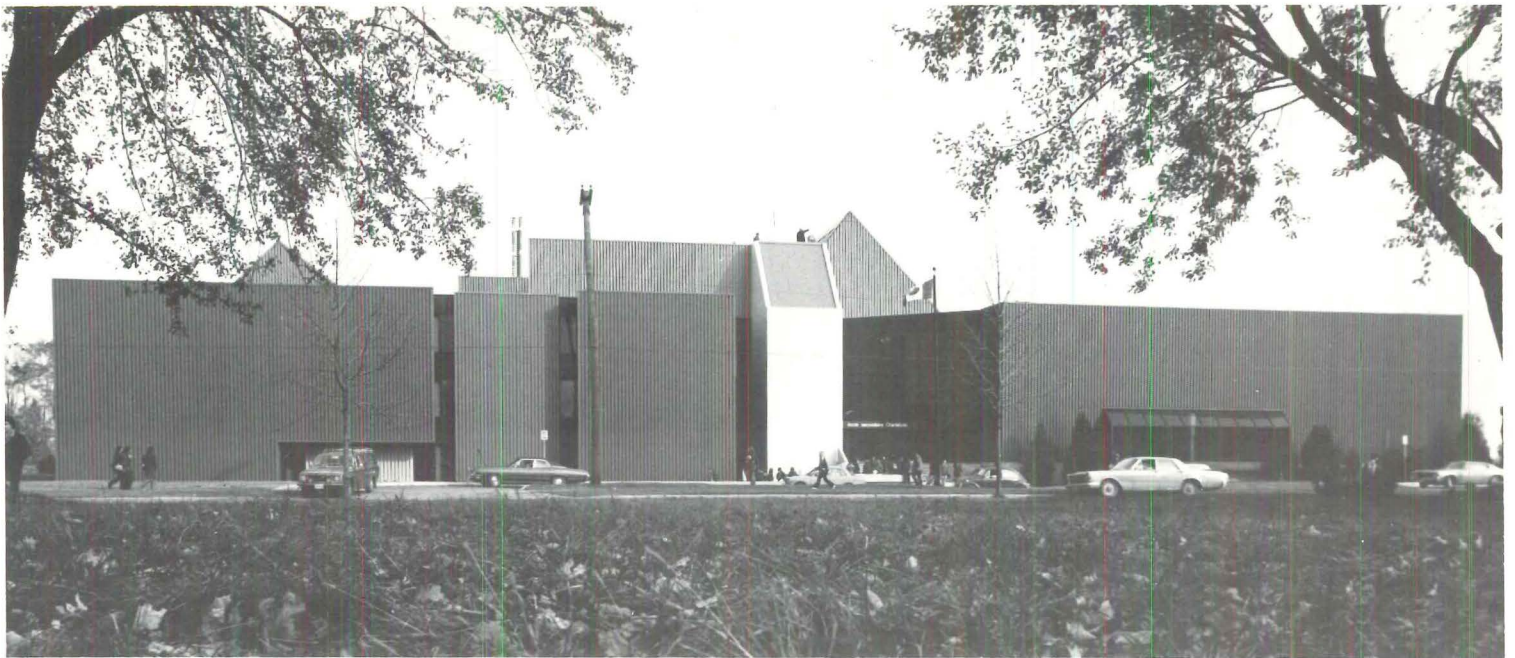


cal creations of our Government, so that future generations may be proud and inspired by those who have come before." After that it was all uphill.

There was, for example, on that first evening, a speech by Mobil Oil Chairman Rawleigh Warner, Jr., who described himself as Architect/Designer Eliot Noyes' "assistant" in Mobil's efforts to clean up its gas stations, typography, and image. Good enough. There was a showing of Charles Eames' film-sketched "Powers of Ten"—a well-known though still enthralling effort that baffled our friend, J. Carter Brown, who was billed as Chairman, First Federal Assembly Task Force, and Chairman, Commission of Fine Arts, and Director, National Gallery of Art. Carter Brown said that all the signs in the National Gallery entrance rotunda had been in six different typefaces when he got appointed three-and-a-half years ago, and he fixed *that*. And then there was a film by the co-designers of this bash, Ivan Chermayeff and Richard Saul Wurman, entitled "What Do You Mean By Design?", which charmed all and sundry, and especially those present who had not, as yet, attained intellectual and/or physical puberty—and that included most of the attending heads of governmental agencies.

The moral of that First Assembly  
*continued on page 85*





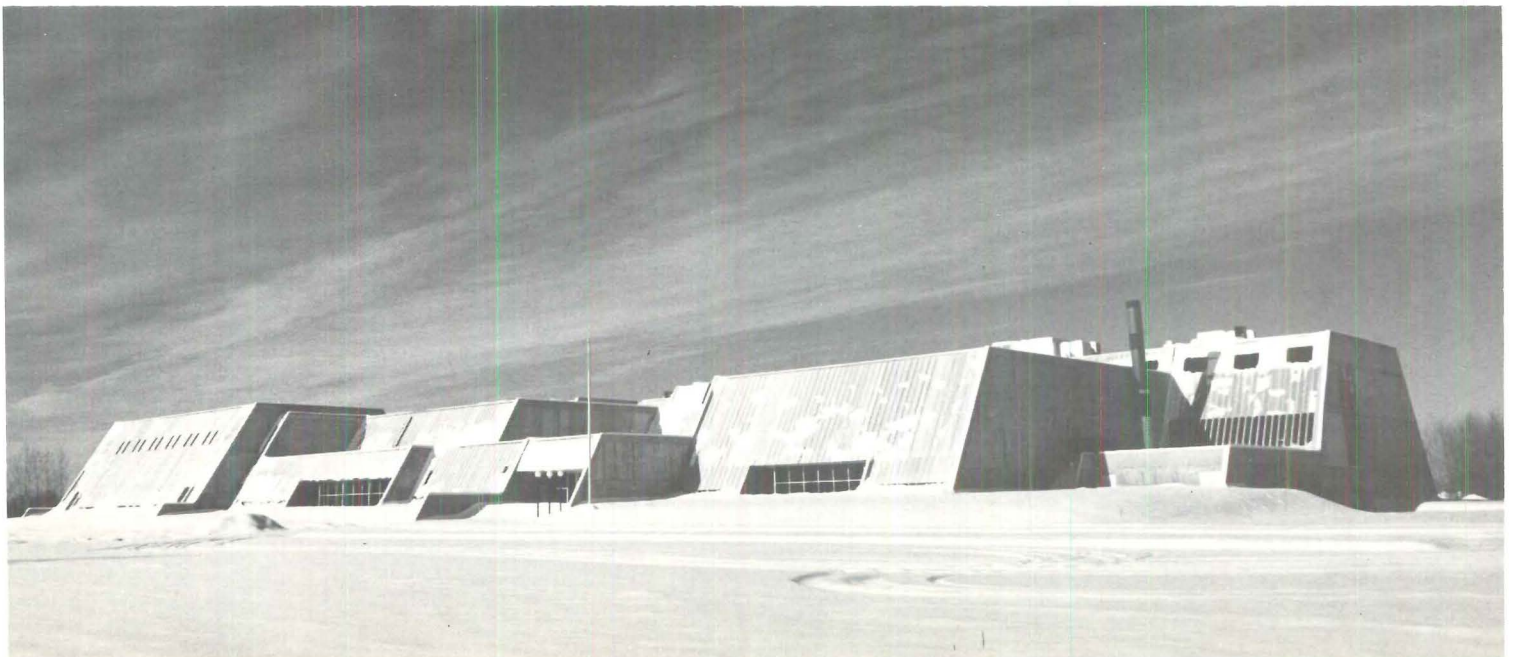
## Ontario, Canada

The basic concept of the Charlebois High School in Ottawa (above and right) is two large blocks; one, a three-story academic block of flat-slab concrete construction, and the other, a one-story block 30 feet high, containing a partial basement, a gymnasium and a space the architects call a cafetorium (cafeteria plus auditorium). The second block is framed in steel because of the long, clear spans required. The architects chose light, dry materials which could be erected quickly, and which allowed cantilevering of floor slabs.



The Garneau High School in Orléans (below) has a sloping metal clad exterior wall system. Contrasting concrete masonry walls and carpeted floors are the basic interior elements. All teaching spaces are arranged along a multi-level mall with steps for sitting.

Both schools were designed by the firm of Schoeler Heaton Harvor Menendez of Ottawa.







# i line

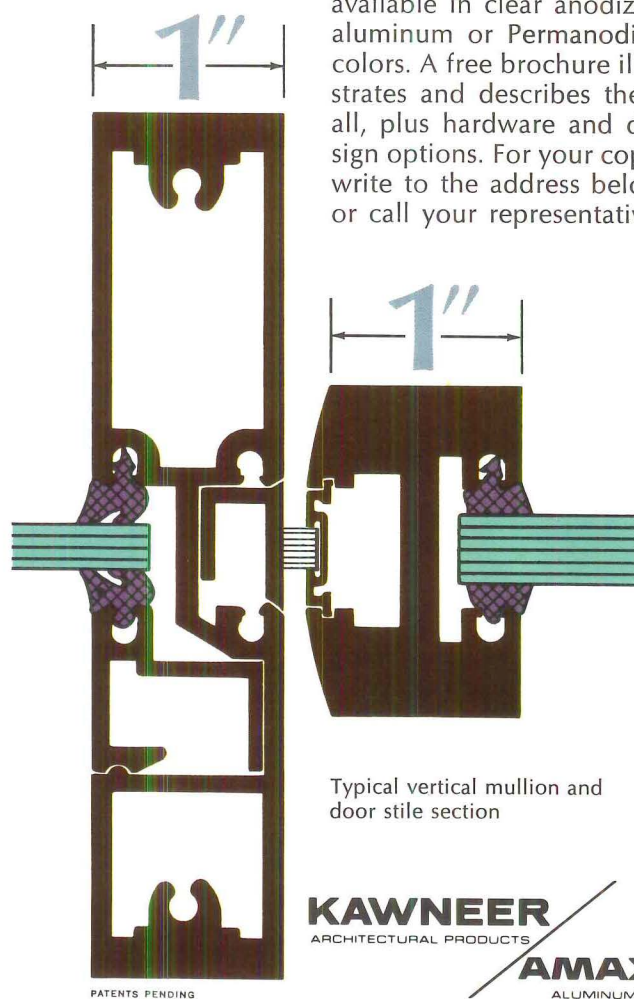
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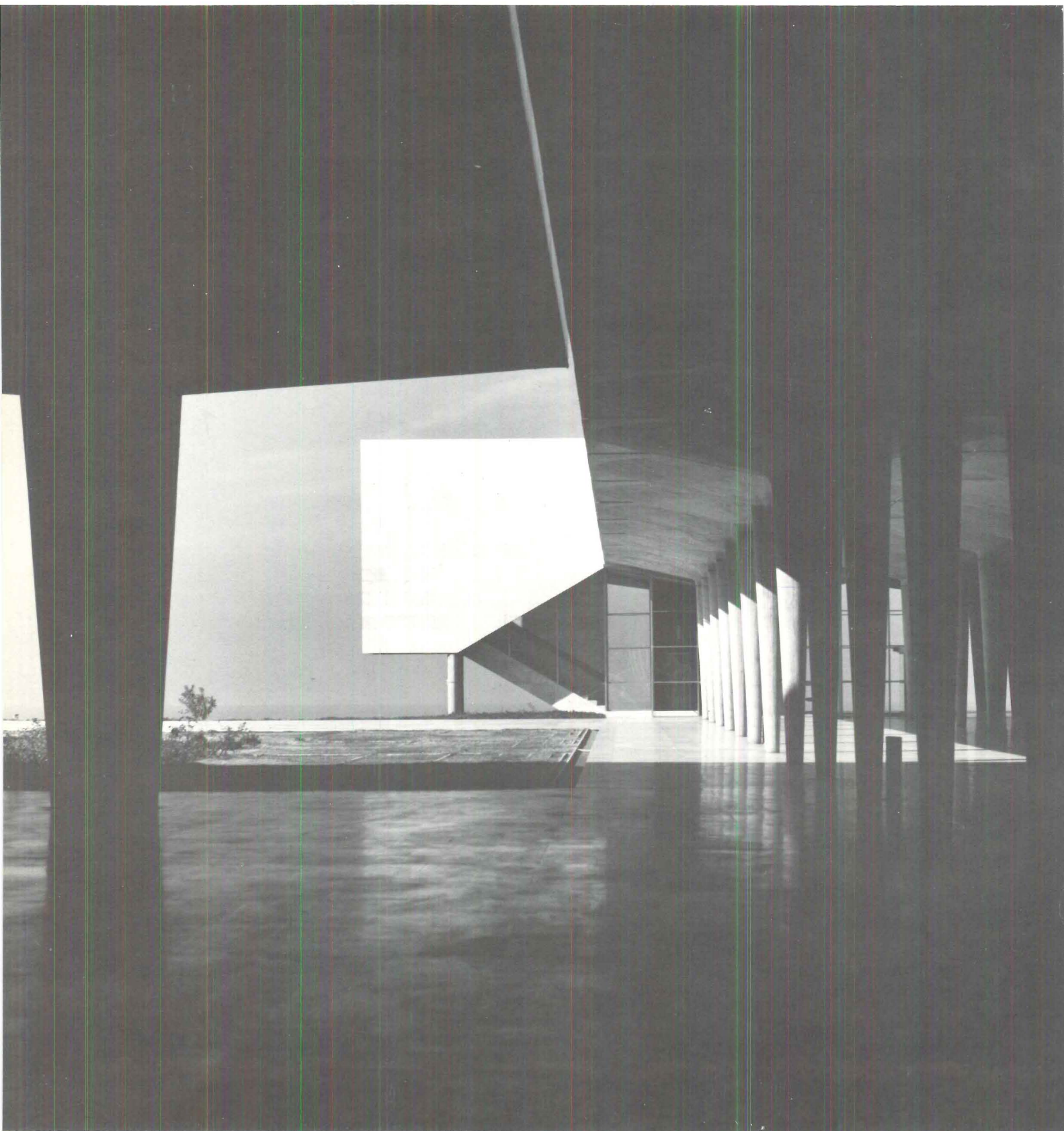




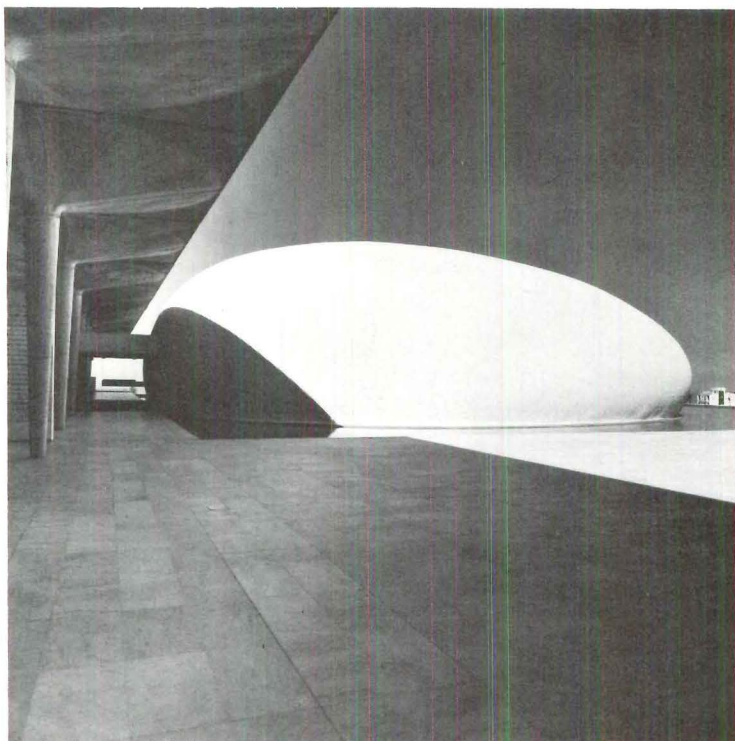
# A French Architect in Lebanon

André Wogenscky, with Maurice Hindié,  
designs a hilltop campus  
for the Lebanese Ministry of Defense.

By John Hadidian







Lebanon is one of the smallest republics on the Mediterranean. Its population is thought to be two and a half million, but nobody is quite sure: officially our population is equally divided between Moslems and Christians, but a formal census, often called for by the Moslems (who suspect they are in the majority), is resisted by the Christians. Thus the myth of equal representation persists and, together with the many other myths that make up the credo of the population, contributes to keeping Lebanon the most tolerant and easy-going place in the Middle East.

With shortages in educational facilities and only a nascent social security system that still leaves much to be desired, it is not surprising that the Lebanese view with something less than enthusiasm the modernizing of their army. A nation of confirmed civilians, either by conviction or default, we have never allowed our army to have the glamorous position it occupies in so many other countries. On the contrary, our volunteer force of fifteen thousand men was, until a few years ago, mainly concerned with internal policing functions aimed at keeping a volatile country together, a thankless task often requiring more political delicacy than military tactics. This it managed with fairly outdated equipment and while operating out of the old French Mandate headquarters, a conglomeration of nondescript buildings in downtown Beirut. Recently, however, in the face of continuing tension in the Middle East, it has become obvious that the Lebanese army, even though remaining small in size, will have to operate on a more efficient basis.

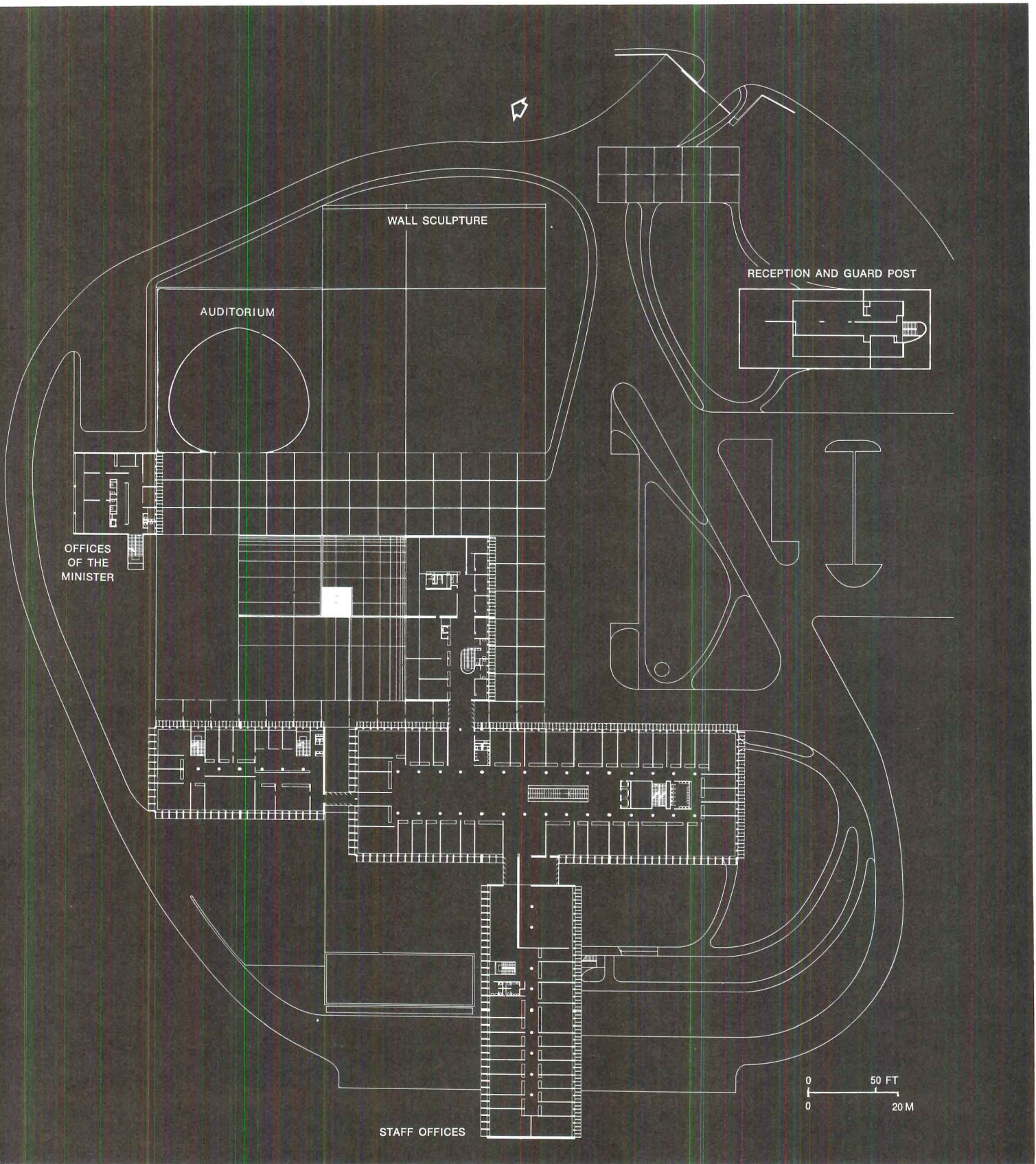
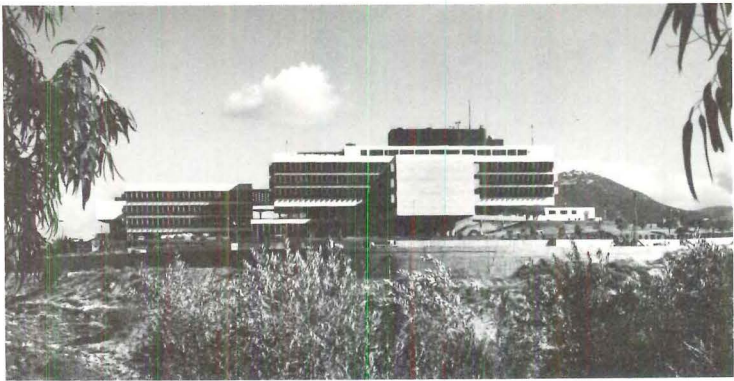
The removal of the headquarters of the Ministry of Defense to its new location in the suburb of Jamhour, on the winding Beirut-Damascus mountain highway, already represents a new rational approach in the choice of site. The ministry's dealings are between the government and the army, having, unlike other ministries, very little to do with the public. Thus it was logical that such a ministry should be outside the capital and yet accessible from the major routes.

The site is one of those spectacularly beautiful but exposed pieces of land that should draw out the best in any good architect. Located on a spur of one of the many ridges that drop from Mount Lebanon down to the sea, it dominates a view that encompasses the whole coastline, as well as the city of Beirut that lies sprawled at its feet. A short drive separates it from the main highway with its agglomeration of roadside businesses which it is a pleasure to leave behind. The landscape is covered with Mediterranean umbrella pines, and the immediate neighborhood consists of villas of the wealthy. Such a site will either enhance a good building most generously or cruelly expose a mediocrity.

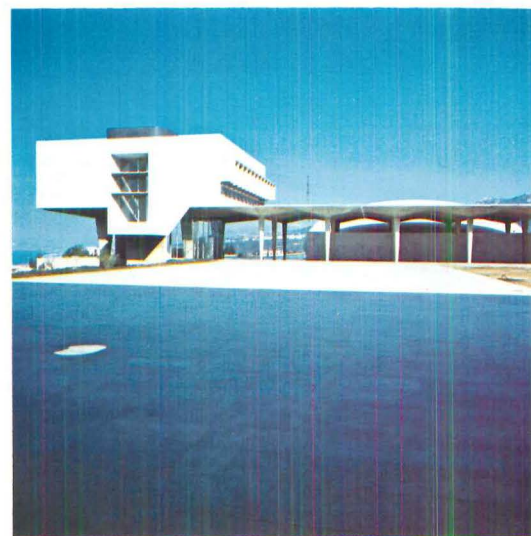
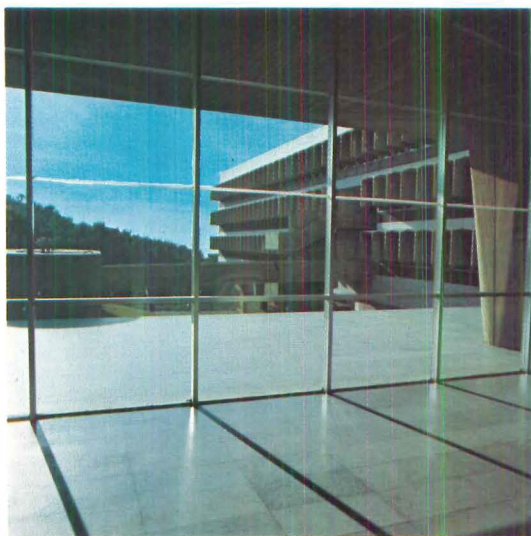
The architect chosen for the new buildings was André Wogenscky of Paris. By Lebanese law, Wogenscky needed a locally registered associate in order to be able to build here, and it was through this associate, Maurice Hindié, that I became familiar with their collaboration. My natural reaction to the site was to ask Hindié if it were appropriate to build a defense ministry in such an exposed location. After all, in military terms, the building is a perfect sitting target recognizable at a great distance. He pointed out that most countries now have their defense administration housed in very public and highly visible places, quite sepa-

*John Hadidian practices architecture in Lebanon, and teaches at the American University in Beirut.*









rate from the more militarily sensitive and protected functions. This, then, is a ministry involved with daily routines of desk work, and it should be thought of quite like any other ministry. Its four main blocks are rows of offices connected by long central corridors, and neither by their layout nor their organization are they significantly different from those of other government ministries.

If the building form handles the functions of a ministry in a simple and straightforward manner, on the symbolic and associative level, it raises many points worth discussing.

André Wogensky is known for his many years of association with Le Corbusier, and, although he is a skilled architect in his own right, it would be less than honest to say that one does not approach his work with images of the work of the Master as an ever-present standard of comparison. The four blocks of the ministry—not including the offices of the Defense Minister which are as detached from the main buildings as his political appointment is detached from the main ministry—are partly raised on pilotis and partly touch the ground, according to the slope of the land. Wogensky at least has made sure that the first floor connects all four blocks. To do this, and also for reasons of view, site accommodation, and distribution of functions, the blocks face the four points of the compass in a partly court-encircling, partly radiating pinwheel pattern that fits in very pleasantly with the landscape. Not only is the complex, seen at a distance, in the great tradition of the Mediterranean area's "white architecture," but on closer view that impression is further substantiated by the discovery of the courtyard and the rows of pilotis that create covered galleries. One is made to recall a courtyard in a traditional Middle Eastern mountain palace, or a Turkish seraglio or mosque, with three sides bounded by quiet arcades and the fourth pushed to the edge of the hill to catch the view. Such impressions also grow on one in a more subtle sense, suggested by the buildings' being raised above the ground, in that their separation from the landscape and their juxtaposition of precise geometric forms to the rolling hillside are also in the Mediterranean tradition of contrasting the prismatic to the natural. The organic does not exist on the Mediterranean in the sense of free forms weaving in and out of the rocks; rather, as in its historic cities, there is the building up of smaller cubes of dwellings into bigger ones, and these into a morphological whole which culminates, at the apex of the town, in the palace or the temple.

Whiteness is achieved by a judicious admixture of white Carrara marble (imported in large quantities to the Middle East, where kitchen counters are made of it) to the light colored and carefully formed concrete. In such niceties, as well as in his restrained detailing and considerate planning, Wogensky clearly has departed from the rough individualism of Le Corbusier, although I notice that Wogensky too is not averse to having an occasional small office sprout a column in the center of its floor, in the purist conviction that no wall should ever hide a column.

A major commitment in the project is to the strongly emphasized *brises-soleil* on all sides of every block. Unlike many sun-breakers, this design (although creating a very deep shadow, necessary in a land of strong sunshine) is kept well above eye-level so that there is no obstruction of the view. For those who would object that a sun-breaker is justified on sunlit faces of a building but certainly not on the north face, it should be pointed out that







Left, the central part of the concrete wall sculpture by Marta Pan. Below, the glass-enclosed marble lobby. The monumental stair is supported on a steel beam suspended from the slab above.





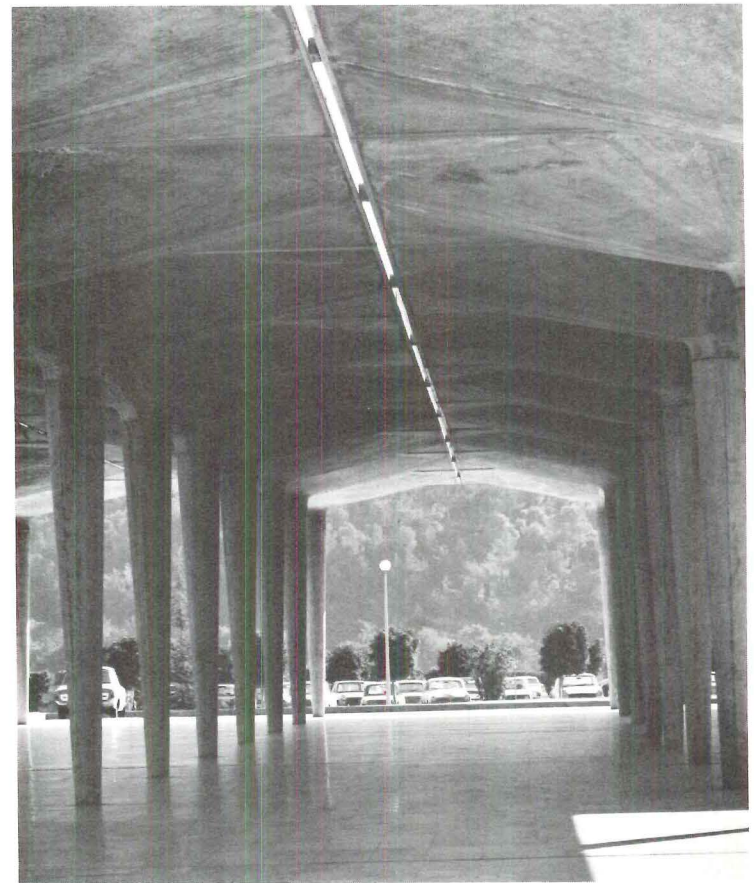
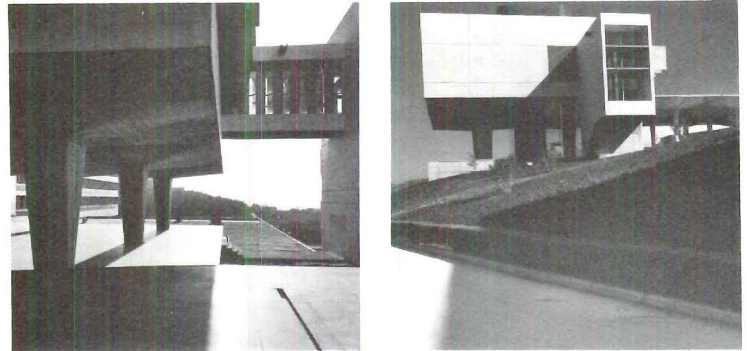
here the late afternoon sun and the daytime glare reflected off the sea make screens desirable on all sides.

The sun-breakers themselves, like the roofs over the walks, are made of precast sections shaped with a gesture towards local vernacular: there is the slightest suggestion of a repeating arch form, although this has been stylized to the extent that the arch is split at its apex and made so shallow as to be hardly perceptible at a distance. Such introduction of vernacular elements in a building that otherwise is not designed in a local idiom often leads to dangerous ground, where the total unity of a concept may easily be compromised; but here one does not feel any inconsistency of treatment. On the contrary, the usual Corbusian *brises-soleil* have been done to death in so many parts of the world that one welcomes a new approach to this very real problem.

I have only two reservations about the Ministry of Defense: first, the offices of the Minister himself, occurring at the end of a long covered walk and much smaller in scale than the main buildings, are an important focus and the stopping point of a long horizontal movement. As such, they might have been treated with a great deal more attention to their detailing and to the massing of their components. The design seems superficial here, and one would have welcomed a much more sculptural handling at this sensitive and highly visible point.

A second criticism concerns the auditorium building, evidently the subject of much care on the part of Wogenscky. He has tried to create a form totally in contrast to the rectilinear basis of the whole design by introducing a flattened ovoid in a shallow pool of water, meant to stand out as a major expressionistic statement with the administrative blocks as a foil behind it. There is nothing wrong with this idea, but, on purely formal grounds, the great white egg could have been given more study. It is a hard thing to select good egg shapes from bad, but once such a simple form has been chosen, all efforts must be made to refine it to the utmost, for by virtue of its very simplicity it is open to subtle interpretation and to highly subjective criticism. Thus Le Corbusier, in discussing the curvilinear versus the rectilinear, said, "Contours go beyond the scope of the practical man, the daring man, the ingenious man; they call for the plastic artist." Furthermore, by resting this egg shape in a reflecting pool, an impression is created (again, on the symbolic level) which seems at odds with the intended use of these buildings. For there are strong associations of luxury connected with reflecting pools, and an image of sybaritic splendor is not one that is appropriate for the staff headquarters of a small army working hard at modernization.

If the Ministry of Defense represents one aspect of the affairs of a small emerging country, the career of an architect like Maurice Hindié is indicative of another interesting aspect. Until World War II there were no architects trained in Lebanon. Either they received their training abroad, usually in France, or they were engineers and contractors who supplied "architecture" free of charge as part of their professional services. The first school of architecture was the Lebanese Academy of Fine Arts, a private establishment based on French models. There are now no less than five different schools of architecture in Beirut. Considering the size of the country, this can only be explained by the fact that Beirut serves as the center of higher education for many other countries of the Middle East as well as for Lebanon. Graduating



from the Academy of Fine Arts in 1952, Hindié was in the first generation of home-grown architects. Like many others, he then went to Europe for experience in the professional offices there. At that time he met André Wogenscky, and they have been friends ever since.

They have worked together not only on the Ministry of Defense, but also on current plans for the Lebanese University and for St. Charles Center, a tall commercial structure nearing completion in Beirut. These three diverse collaborations between two architects of very different backgrounds reveal something of the present situation in Lebanon—a country, in many ways typical of similar countries elsewhere, that is trying to find its own way with the help of the best resources it can command.

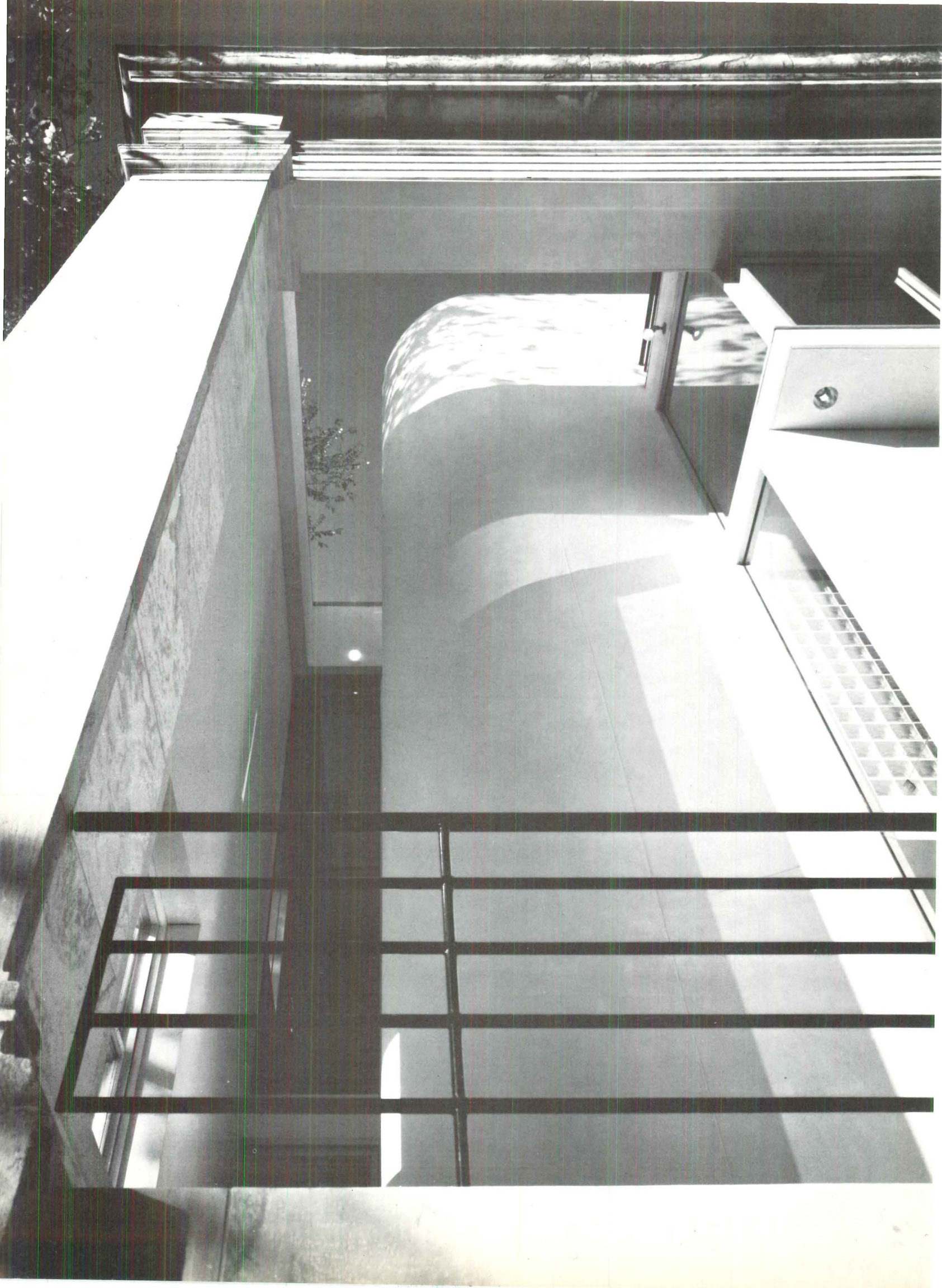
Photographs: Pierre Joly and Véra Cardot.



*"... there are strong associations of luxury connected with reflecting pools, and an image of sybaritic splendor is not one that is appropriate for the staff headquarters of a small army..."*



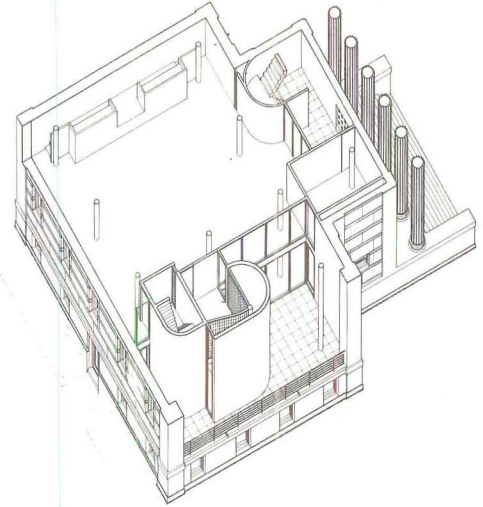






# Whigs of Whig Hall

Architects Charles Gwathmey and Robert Siegel



Whig Hall is one of a pair of neoclassic marble "temples" on the Princeton University campus. When its wood interior was gutted by fire, Charles Gwathmey, a young architect who had been teaching at Princeton, and his partner Robert Siegel, formerly a project architect in Edward Barnes' office, were given the job of restoring the building. The result is certainly "Whig" (in the traditional political sense of being anti-Establishment). But it is not just an impudent frolic. Gwathmey and Siegel are serious, and Whig Hall demonstrates some thinking worth our attention.

Whig Hall's building program was to accommodate a Princeton debating club as well as classroom space. It called for 10,000 sq. ft. of area in a building that had previously held only 7,000. Despite this requirement, the architects' remodeling stays within Whig's original shell. Indeed, the architects feel their remodeling is more respectful of that shell than had been its original contents, a feeling given some credence by a glimpse at the present "restoration" work in Clio Hall, Whig's twin.

One way of responding to the discipline imposed by Whig Hall's shell would have been to place the major rooms—a lecture hall, a lounge, and the James Madison Room for special meetings—on axis with the entrance portico. Gwathmey and Siegel have chosen to abandon symmetry, however; although the building is still entered in the center of its front and back elevations, the new interior is fiercely asymmetric. And the architects have taken further liberties: as a functional necessity, the building now has four floors rather than its original three; as a structural necessity, the new work has its own column system independent of the old walls around it; and, as a design choice, one entire side wall is removed, exposing the new work to a major circulation path of the campus. On a football weekend last fall, while the building was nearing completion, Siegel overheard an alumnus comforting his wife, "Yes, dear, it looks funny now, but when they put the wall back it won't show." The wall is not to be put back, of course, and it *does* show.

Not only is Whig Hall's interior exposed to the campus, but also the form of Whig Hall's shell is now discernible, for the first time, from inside. The marble end pilasters, the base and cornice remain, the minimum

elements that could define the volume. And it is the great opening between these elements that allows that volume to be sensed from every major interior room. The main floor extends, partly as an open terrace, to all four corners, and the spaces above are given a variety of views through the open area to the edges of the original box.

Such clarity, the architects say, is the goal of all their work, and the free shapes and curves are only counterpoints which emphasize more basic simplicities. In Whig Hall (to look closely at some of these shapes), two curved forms disport themselves at opposite corners of the plan. One, near the entrance, is clearly useful—the inside of the curve is a natural shape for a stair landing; the outside a natural shape leading lecture hall crowds to the exit; the leftover wedge between curve and outside wall a convenient place for air-conditioning ducts.

The second curved form is apparently more willful. Here—in the main floor office and the upper floor green room suspended in its volume—the architects seem to declare themselves free of any obligation to limit their building to an embodiment of its function, careless of economy-through-simplicity, disdainful of the straightforward. Yet, the architects rightly protest, it is by making such subordinate elements free in form that the strength of the enclosing box is made more apparent. Other recent work of the firm also reflects such a commitment to order. Within and against this order, a few lyrical shapes occur, but never dominate.

Charles Gwathmey and Robert Siegel work now completely as a partnership, from preliminaries through supervision. Some of Gwathmey's earliest work, however, was done in a partnership with architect Richard Henderson, now teaching at New York's Cooper Union, and some intermediate work in a three-man firm called Gwathmey, Henderson, and Siegel. Represented by two works from those earlier days, Gwathmey has been given a place in the recent publication *Five Architects* (with criticism by Kenneth Frampton and introduction by Colin Rowe, published by Wittenborn and Co., New York, \$17.50 in paper covers). The other four of the five are Peter Eisenman, Michael Graves, John Hejduk, and, perhaps best known of the group, Richard Meier. Arthur Drexler of the Museum of Modern Art suggests in his preface to

the book that these five "may, with only a little exaggeration, be said to constitute a New York school."

PLUS: "Do you think there is a New York school?"

Gwathmey: "No."

PLUS: Did you agree with Colin Rowe's analysis of your work?

Gwathmey: "I didn't understand it."

PLUS: "What is your reaction to the book?"

Gwathmey: "Disinterest."

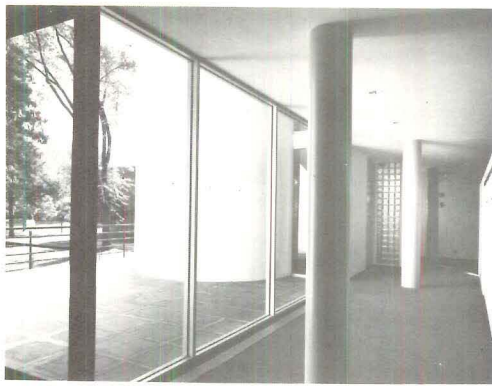
A healthy reaction. Nevertheless, it is worth noting that, "school" or not, these five architects have at least in common a penchant for uncommonly beautiful, perhaps *gratuitously* beautiful, drawings. There have been a few times in the past, of course, when unbuilt visions have affected the course of architecture—the powerful fantasies of Piranesi, for example, or the Cité Industrielle of Tony Garnier. Even some people in completely different fields—Piet Mondrian, John F. Kennedy, Henry Ford—have indirectly influenced our buildings, but no-one calls them architects. Architecture is a serious profession, and what it is serious about is HOW TO BUILD. Concentration on uncommissioned, unbuilt, sometimes even unbuildable projects, like other forms of masturbation, is harmless enough if practiced in private, but it is not architecture.

Three of the "five architects," Gwathmey, Graves, and Meier, also share a distinctive vocabulary of forms taken straight from the *oeuvre complète* of Le Corbusier (from his early, painterly work more than from his later, more robust work). Colin Rowe suggests that, if not for the war, the buildings in the book might well have been built in the 1940s, and that they show, in any case, that the delights of cubism and its spatial playfulness were not exhausted in the '30s. They also reveal a frustration, at least for some, of the hope that a strictly systematic approach can automatically produce good building. The machine-age dream of achieving beauty as a by-product of the pursuit of utility is a collapsed dream, and Gwathmey and Siegel's neo-Corbusier manner is by no means the worst way to react to that collapse. These young architects seem to be liberated from the old Anglo-Saxon ethic which suggests that anything not useful must be wicked. Their love of machine art is (as Le Corbusier's prob-

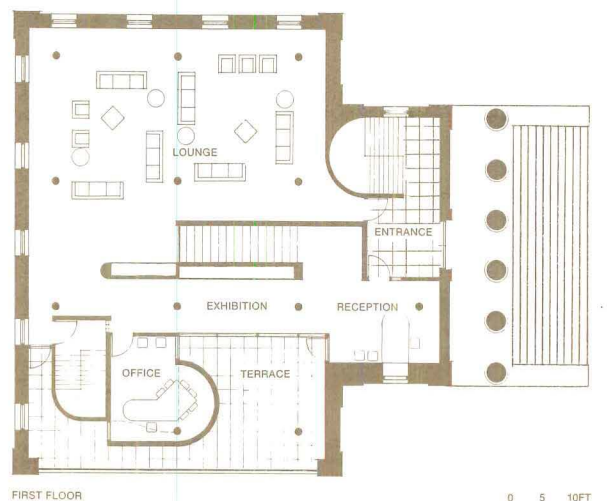
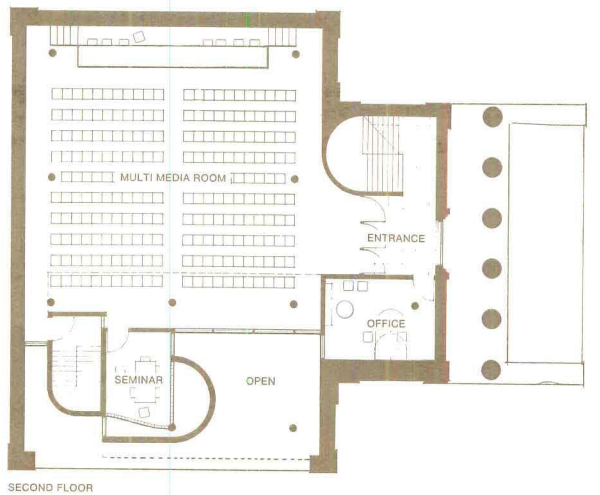
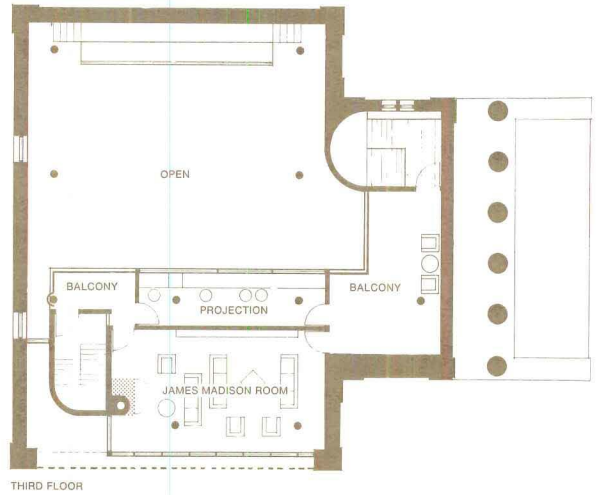
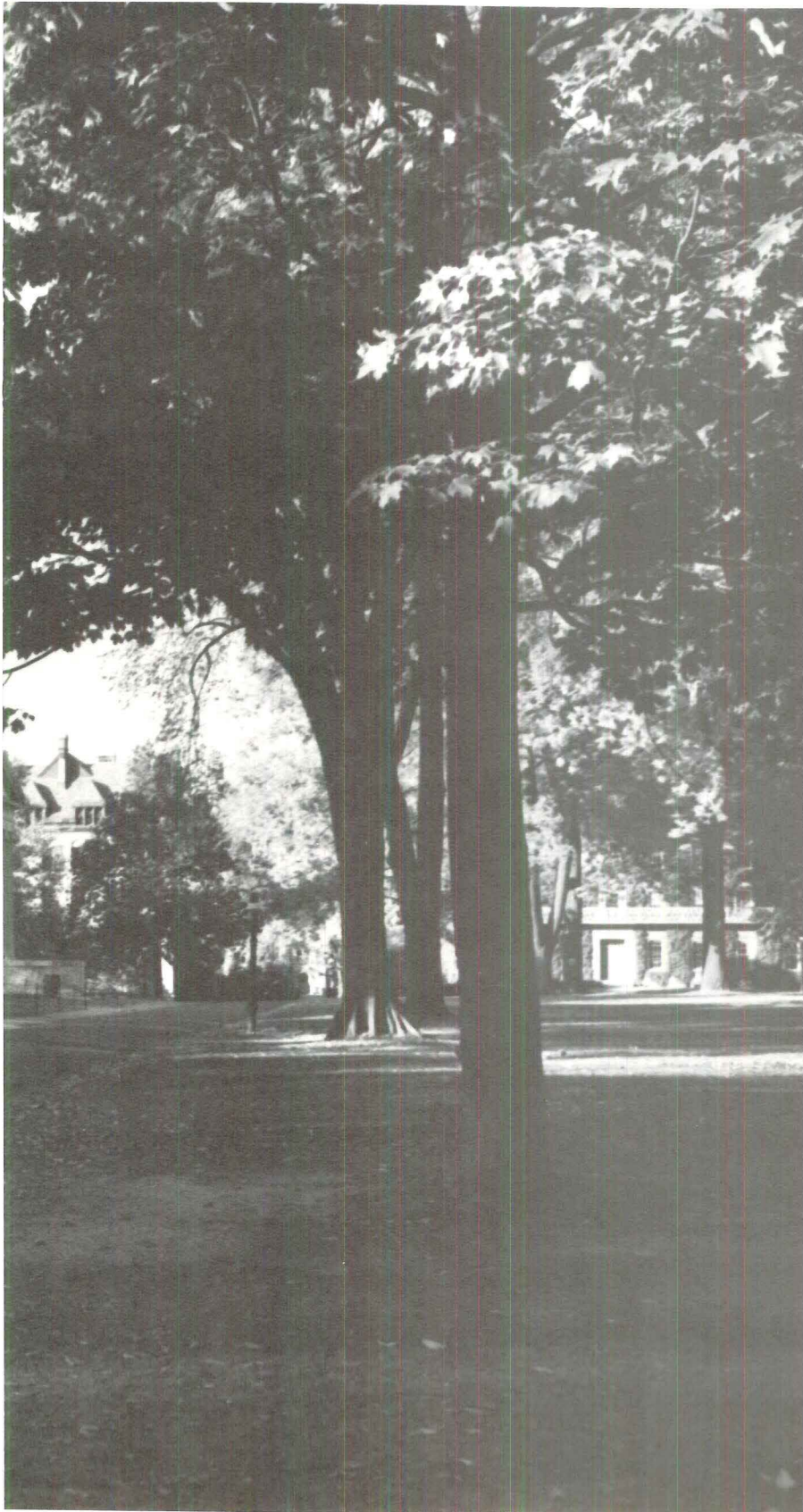








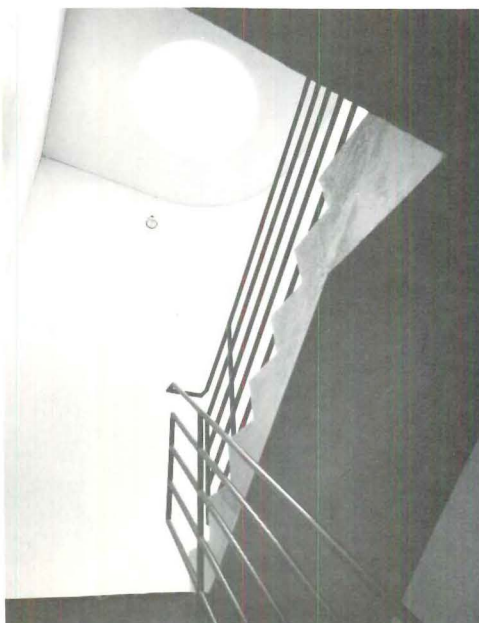
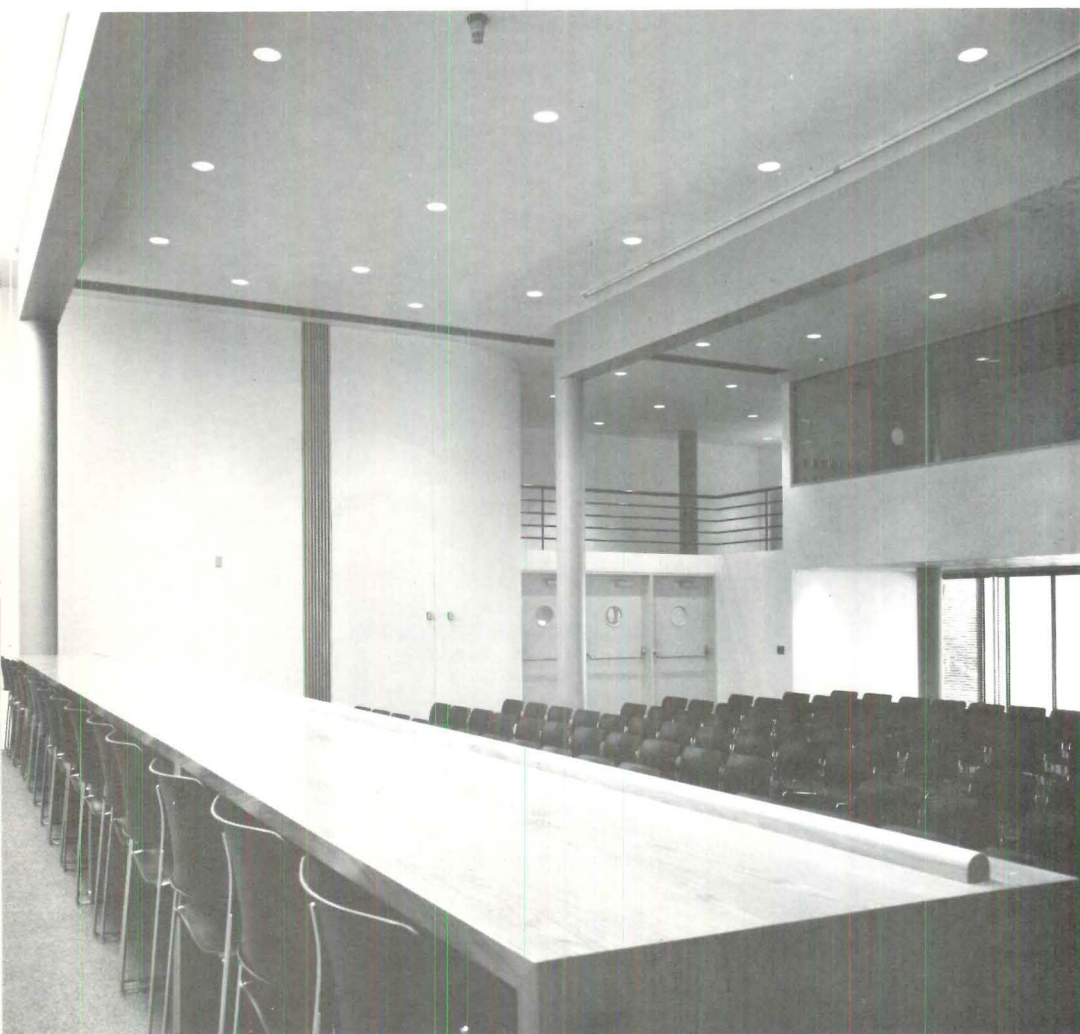
Left, a view through the newly opened wall to the main floor terrace and the campus beyond.  
Below left, Whig Hall and Clio Hall, once identical twins.  
Below, plans of the upper three floors. A partial basement, not shown, houses work space for the Whig staff.



0 5 10 FT



Top, Whig Hall's double-height lecture room. A skylight at left washes with light the wall behind the speakers' platform. Where columns have been eliminated for this large space, they have been replaced by dropped beams at the ceiling. Below, the James Madison Room on the top floor, and a skylighted stair well.



ably was) a poetic one, and is not confused in their minds with practicality.

Not that there is anything frivolous in the work of Gwathmey and Siegel. On the contrary, to put Whig Hall in the best possible light, we have only to compare it with some of the overdecorated pastries of the '50s and '60s (there are some prize examples nearby on the Princeton campus). If parts of Whig Hall make us think of a young man affecting the look of Le Corbusier, these slightly older buildings are Mies van der Rohe all dressed up in the most embarrassing drag.

The obvious danger in consciously emulating anyone is that work may then be based on stylistic preconceptions rather than on fresh thought. The firm's 1970 houses for the Steel family in Bridgehampton, Long Island, seemed, indeed, to have fallen victim to that danger and to be overwhelmed by mannerisms. But Gwathmey's early house and studio for his parents at Amagansett had gone significantly beyond a strict machine esthetic by being built in wood, lightly stained and then left to weather naturally. And Whig Hall and other recent work of the Gwathmey Siegel firm, shown on the following pages, escape the danger of being slaves to style by being, whenever appropriate, general rather than specific; by limiting the quotations from Le Corbusier to special areas which are highlights against a quieter, more regular fabric; and, above all, by being not just *avant-garde* in appearance but also carefully thoughtful about logical building processes. Charles Gwathmey and Robert Siegel, in a world full of dilettantes, are proving themselves to be architects. —STANLEY ABERCROMBIE

#### Facts and Figures

Whig Hall, Princeton University, Princeton, N.J. Architects: Gwathmey Siegel. Job captain: Timothy Wood. (Architect for the original 1893 shell: A. Page Brown.) Engineers: Geiger-Berger (structural), Langer-Polise (mechanical and electrical). Contractor: Lewis C. Bowers, Inc. Building area: 10,000 sq. ft. Photographs: Bill Maris. Building suppliers listed on page 92.



## Service buildings

Top, an exterior view showing skylights spanning between brick retaining walls and the buildings' main structure. Center, site plan of the complex. Below, a typical interior view.

On a wooded and steeply sloping site, these three utilitarian buildings are used as giant retaining walls to enclose a level open area for the maneuvering and parking of service vehicles. The buildings are a repair garage, a warehouse-shop facility, and a boiler plant and storage stall building, serving the State University College at Purchase, N.Y.

All buildings are based on a system of construction with three main elements: first, brick exterior walls; second, a light steel frame carrying open web steel joists and metal roof decking; third, spanning between the masonry and the steel, continuous strips of skylights. It is this last element which expresses the duality of the first two and which gives visual variety to this group of buildings. The skylights also provide air and sunlight to work areas below without interrupting valuable wall space. The sloped planes of the skylights are manipulated to join the different ceiling heights required by the program.

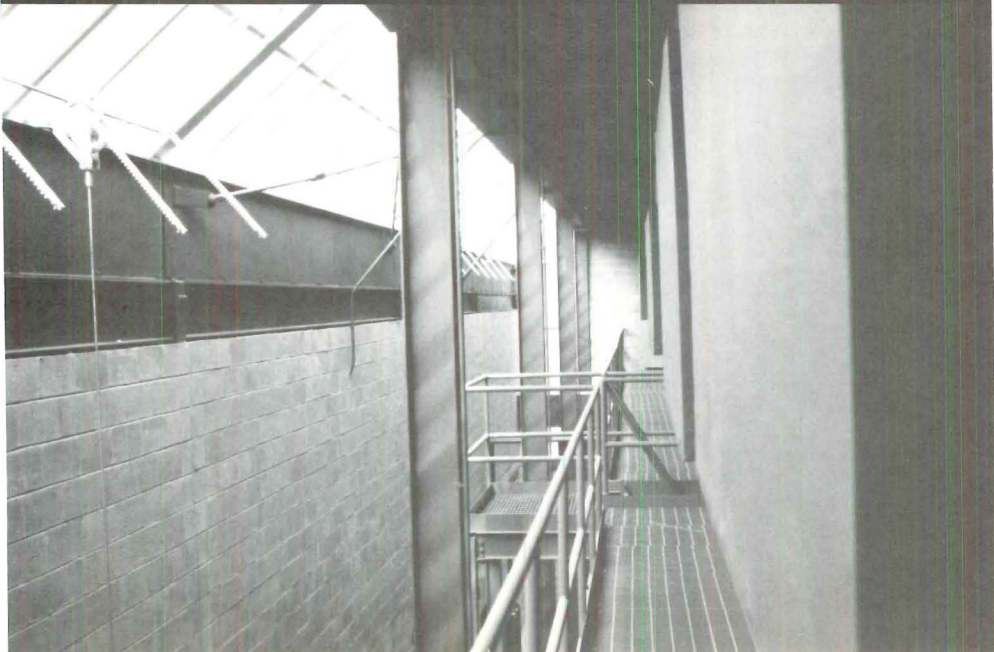
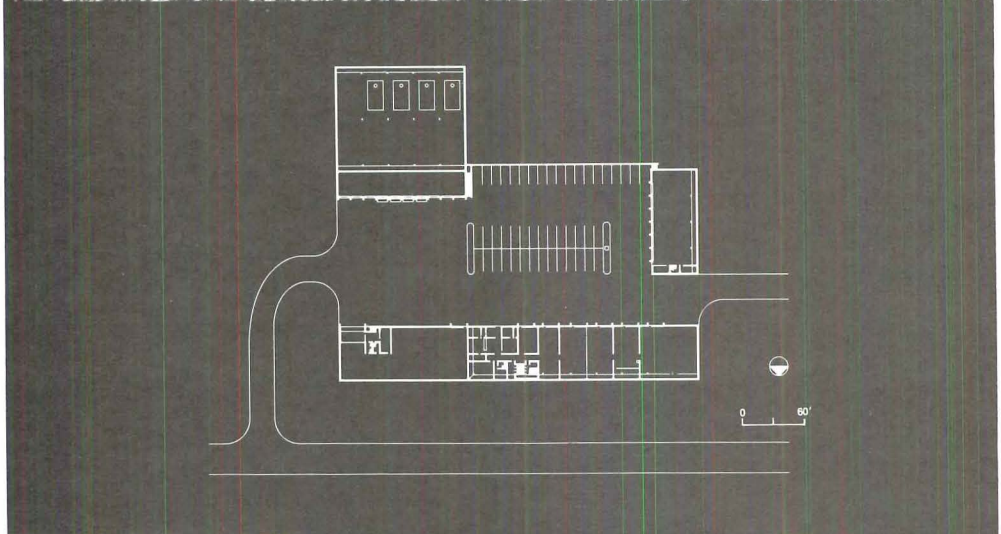
Mechanical equipment and lighting fixtures are exposed and carried through the open webs of the joists. Cost per sq. ft. in 1970 was \$17.

### Facts and Figures

Boiler Plant and Service Group, State University College at Purchase, N.Y. Architects: Gwathmey, Henderson & Siegel. Associate in charge: Durwood Herron. Engineers: Geiger-Berger (structural), Segner and Dalton (mechanical). Landscape architect: Peter G. Rolland. Contractor: Michael Harmonay Corp. Building area: 40,125 sq. ft.

Photographs: Bill Maris.

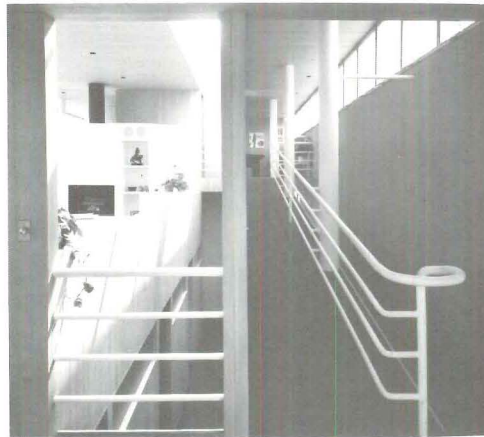
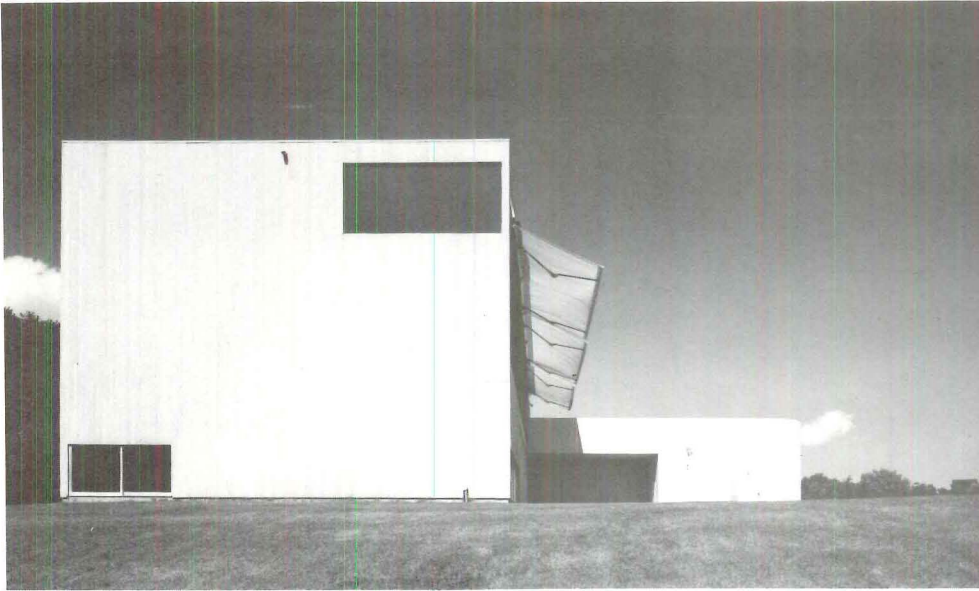
Building suppliers listed on page 92.





Top, an end elevation. Awnings shade glass overlooking the ocean.  
Center, an interior view with the ramp at the right. Here and in other buildings by Gwathmey Siegel, pipe rails are the subject of felicitous detailing.  
Below, the entrance front.

## Private housing



The once-serene stretch of Long Island ocean-front towns known as the Hamptons is fast becoming a ghetto of expensive second houses for wealthy New Yorkers. To be outstanding among so much architect-designed (and architect-overdesigned) work, a house must be good indeed. The Cogan house by the Gwathmey Siegel firm is one of the good ones.

Faced with cedar, stained almost white but still obviously cedar, it is a house with two main faces: an entrance front, and a garden front with a dynamite view of lawn, swimming pool, pond, dunes, and the Atlantic. The house sits rather high for such an open site in order to fully enjoy this view. The two end elevations are treated clearly as ends.

Three major levels in the house are connected by a ramp. The form of the ramp is partly visible on the entrance front, and it enlivens the interior with a rare sense of movement. The basic structure of the house is a system of columns standing free of the exterior walls. In these respects, the house brings to mind something of Le Corbusier's Villa Savoye, and in its basic street front-garden front form, it may remind us of Le Corbusier's Villa Stein. But the Cogan house is no copy; it is a fine house by architects who have profited from the study of masterworks of nearly fifty years ago.

### Facts and Figures

Cogan house, East Hampton, N.Y. Architects: Gwathmey Siegel. Contractor: John Caramagna. Building area: 5600 sq. ft.

Photographs: Ezra Stoller.

Building suppliers listed on page 92.



## Public housing

Two views of the site model. In the lower photograph, the community center is at upper left. Semicircular projection at ends of the rows of housing contain laundry facilities.

This residential community for 560 families near Rochester, N.Y., is being developed by the New York State Urban Development Corporation and its local subsidiary, UDC Greater Rochester, Inc. Townhouses and garden apartments line both sides of four *culs-de-sac*. Each unit is entered directly from one of these roads and has its own covered parking area. Pedestrian circulation through green areas (and to the 6000 sq. ft. community center at a corner of the site) is parallel to the four roads but completely separated from them by the apartments. Separation of cars and people is a planning principle at least as old as Clarence Stein's Radburn plan of 1929, but it is a principle often neglected in practice. The two very different characters of the road frontage and the garden frontage have also been considered in the plans of individual units.

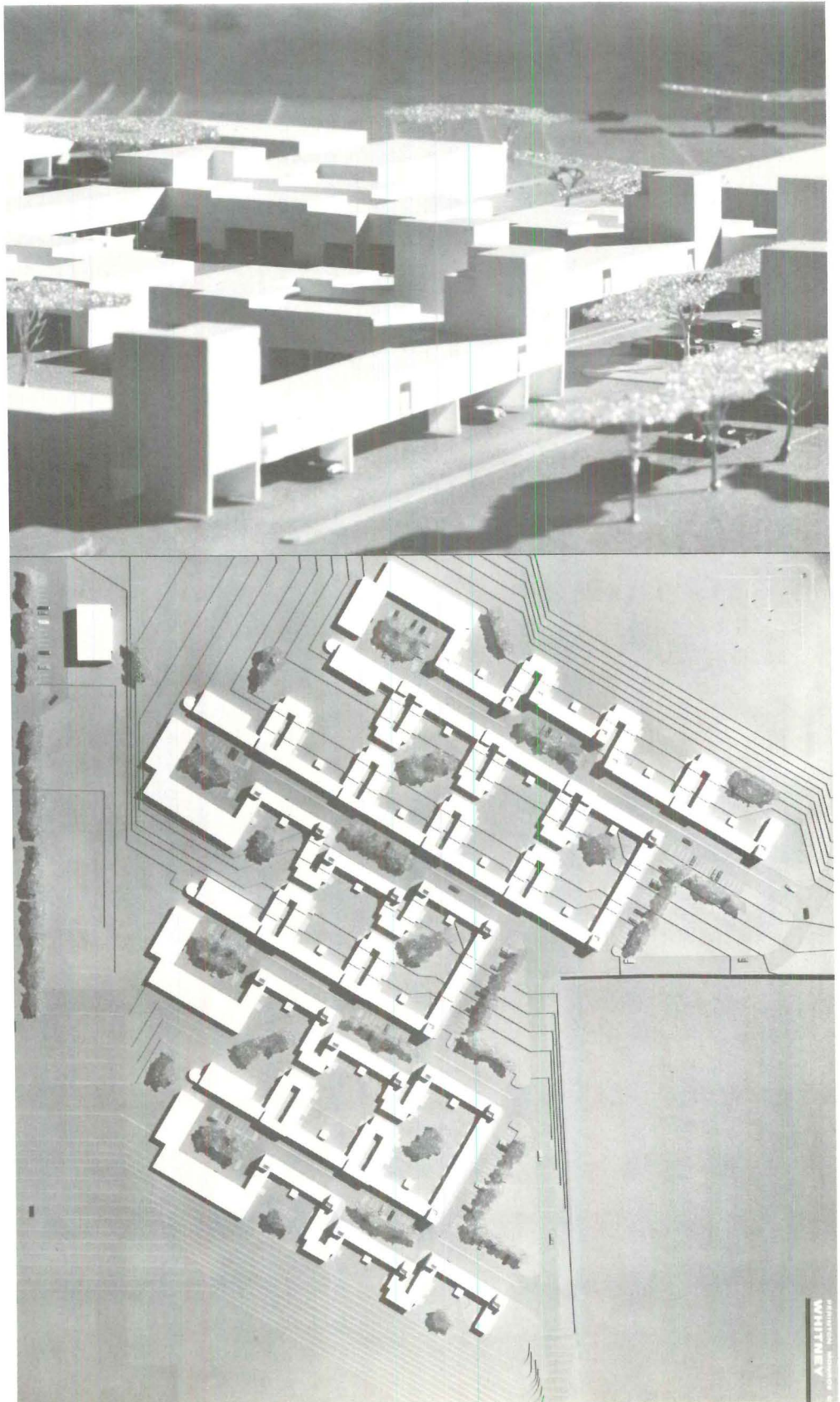
Because of its sloping site, this strictly ordered plan promises to produce results that are actually quite varied, the rows of housing units being frequently stepped to meet the changing contours. After studying both costs and appearances of many possible materials, the architects decided to face these stepping facades with panels of white stucco.

Half the units will be subsidized under Article 236 of federal housing law, and the other half, financed by the UDC, will be rented at prevailing market rates. 120 units are reserved for the elderly.

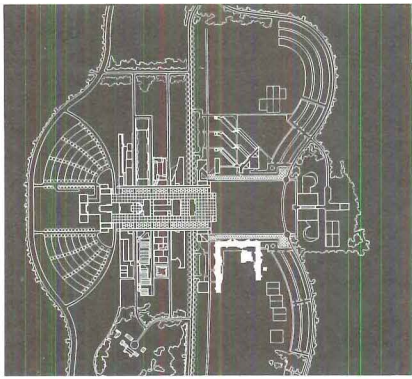
Construction is underway, and occupancy expected early in 1975. Average unit construction cost, including site work, is \$14,500.

### Facts and Figures

Landmark Village, Perinton, N.Y. Architects: Gwathmey Siegel. Job captains: Marvin Mitchell and John Choi. Engineers: Geiger-Berger (structural), Langer-Polise (mechanical and electrical). Landscape architect: Peter G. Rolland. Contractor: Jewel Builders. Building area: 439,200 sq. ft. Building suppliers listed on page 92.





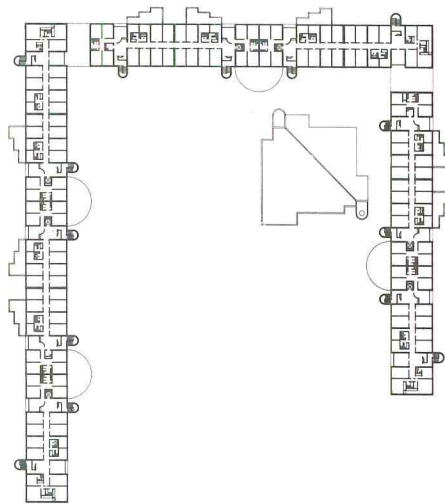
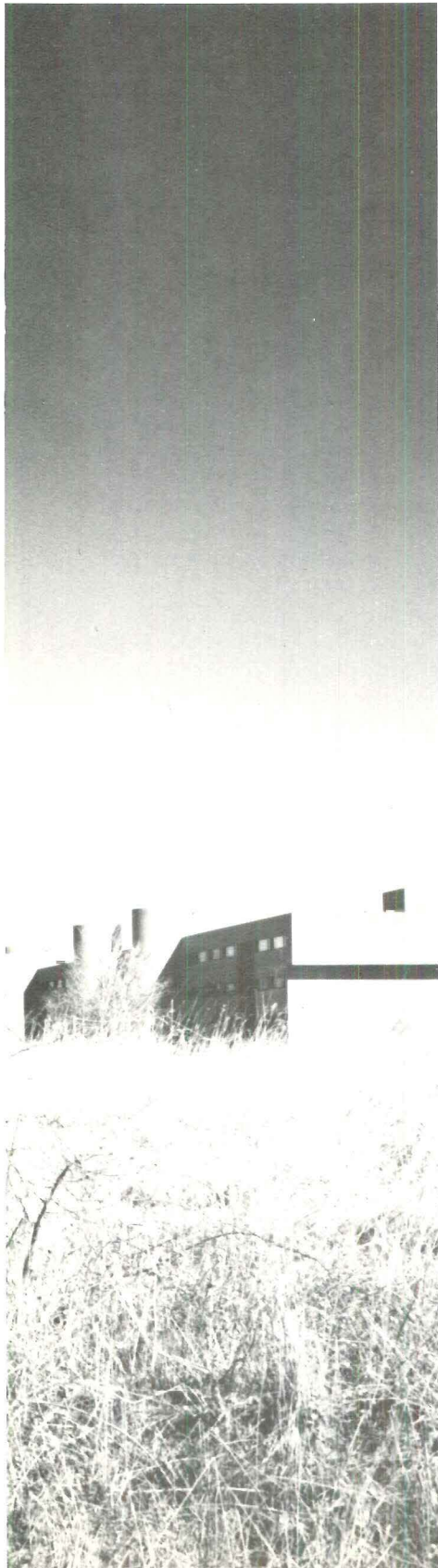


## College dormitory

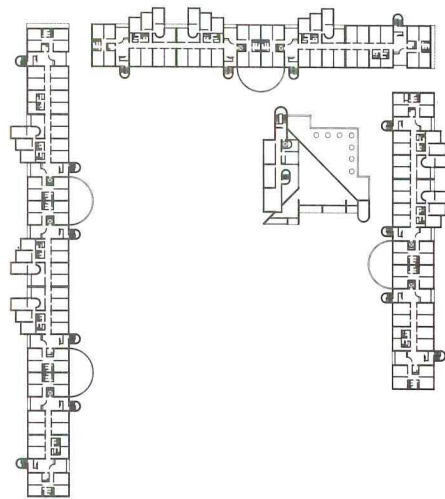




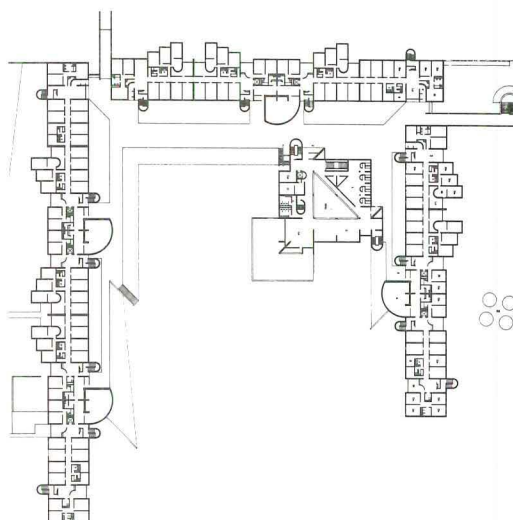
At far left, a site plan of the campus, the dormitory shown in white at lower right. Below left, a view from the meadow into the partly enclosed courtyard. Below, plans of three upper floors. The lowest level, not shown, contains laundry and service rooms and provides underground access to the dining hall.



THIRD LEVEL



SECOND LEVEL



FIRST LEVEL

The 800-student dormitory for the Purchase campus of the State University College of New York is now partly occupied and will be completed before next fall. In response to the formal discipline of the campus' master plan, by Edward L. Barnes, the dormitory presents a strict linear facade to a central mall. The building's other side, however, facing away from the mall, is more open and informal, enjoying views into the meadow beyond and partially enclosing a major outdoor space.

Within this space, connected to the dormitory only below grade, sits a spectacularly sculptured object housing dining spaces of many different characters, a lounge and a library. It is expected to be a center of student activity open at all hours; in any case, it will be *architecturally* active at all times.

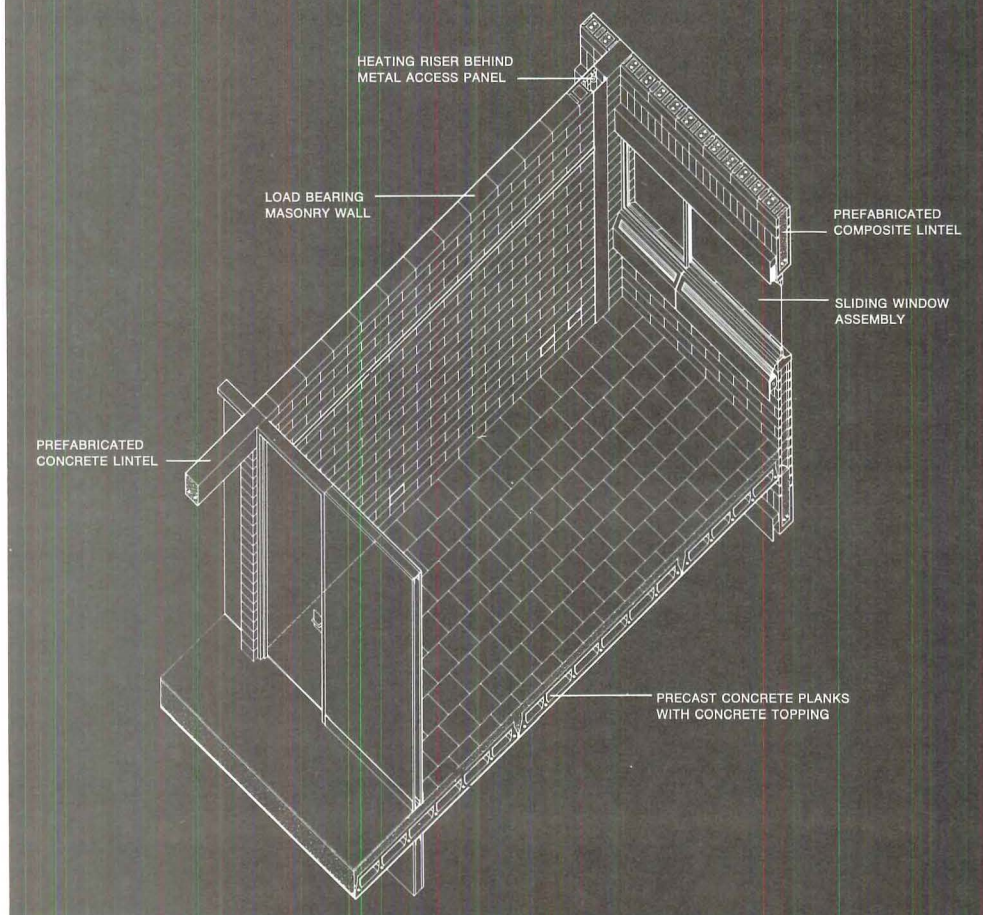
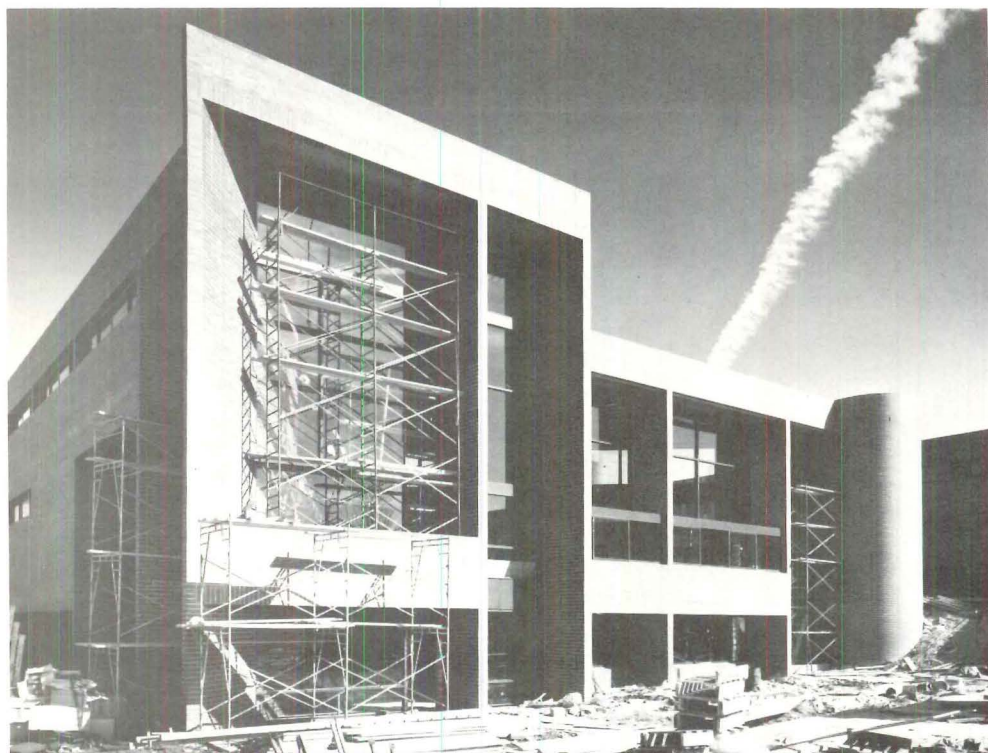
The long dormitory ranges against which this object is displayed, although very regular by comparison, are not without variety. A basic plan unit, repeated 40 times with minor variations, provides space for 20 students in several room types: corridor singles and doubles, and suites for 4, 6, and 8. Each unit also includes a lounge area.

At ground level, the building is further varied by projecting half-circles which contain spaces for academic use (convertible in the future to student lounge areas). These rooms are very beautiful, their solid curving walls lighted by large circular skylights, and, like the more dramatic dining hall building, they provide welcome relief to the necessary cellular repetition of bedrooms.

Unlike the brick veneer used on other buildings of the campus (Siegel thinks of it as "brick used as paint"), the brick of the dormitory is structural. An oversized modular unit, it provides finished surfaces inside and out, and its cavities are used for electrical and telephone conduits. The same clay units turned on end, and with their cavities filled with concrete and reinforcing rods, form prefabricated lintels spanning 24 feet (two room widths). This lintel shows on the exterior as a soldier course at each floor, giving the brick walls a textural interest lacking in other buildings on the campus. One minor inconsistency in the general structural use of masonry units occurs at the cantilevered ends of the top floor (the cantilevers provide slightly enlarged quarters for faculty members). Here the struc-



Top, the dining hall under construction. Below, a diagrammatic section through a typical room. Masonry units form a bearing wall between rooms, and the same units, turned on end, face a precast lintel over the windows. Right, the curve of a lecture hall meets a round-ended stair tower.



ture does seem to be "painted" with brick.

Floor decks are 24-foot precast concrete planks with a poured concrete topping. In-fill walls, between the bearing walls, are gypsum board on metal studs. Stairs are standardized precast units spanning from floor to landing. Throughout the building, Gwathmey and Siegel's concern was to use products which, by a high level of factory development, could reduce labor in the field.

The building follows a conception of dormitory planning—rooms strung along double-loaded corridors, with gang toilets down the hall—which was then required for such construction, but which is now considered outmoded by the architects, the client (the Dormitory Authority of New York State), and, it seems, the students. The dormitory nevertheless provides a variety of room types rare in such a building, and the planning, from concept to details, displays a thoughtfulness rare in any building.

There is indication here that as the Gwathmey Siegel firm is receiving commissions of increasing scale and responsibility, the clarity of its work is growing as well. These Whigs are worth watching.

#### Facts and Figures

Dormitory and Dining Hall, State University College at Purchase, N.Y. Architects: Gwathmey, Henderson & Siegel. Associate in charge: Andrew Pettit. Engineers: Geiger-Berger (structural), William Kaplan with Langer-Polise (mechanical and electrical). Landscape architect: Peter G. Rolland. Kitchen consultant: Harry Skolodz. Contractor: Jos. L. Muscarelle, Inc. Building area: 235,940 sq. ft. Photographs: Bill Maris.

Building suppliers listed on page 92.











# Playing it cool on Wilshire Boulevard

Craig Ellwood has designed a clean, straight-forward office building for Beverly Hills, California

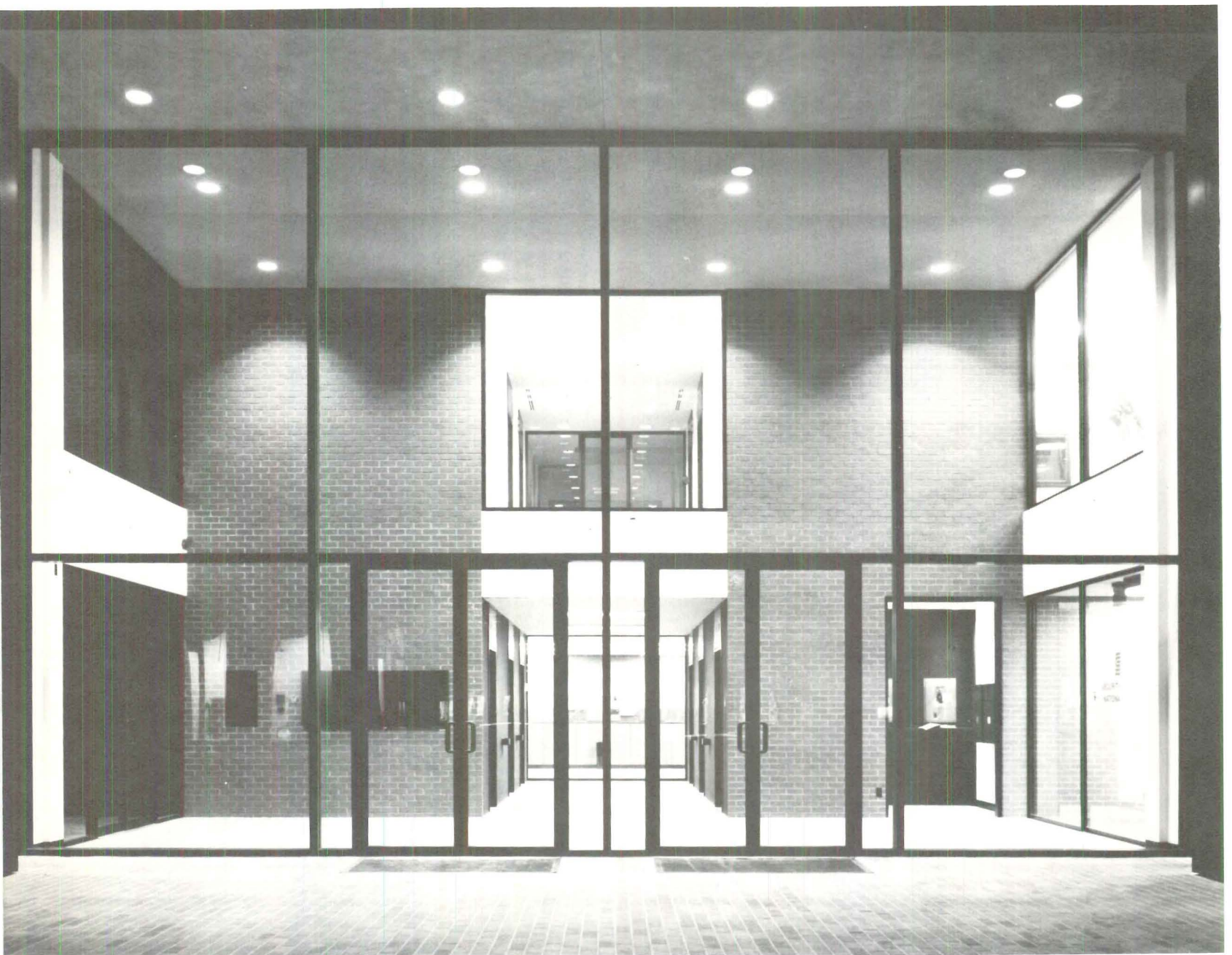
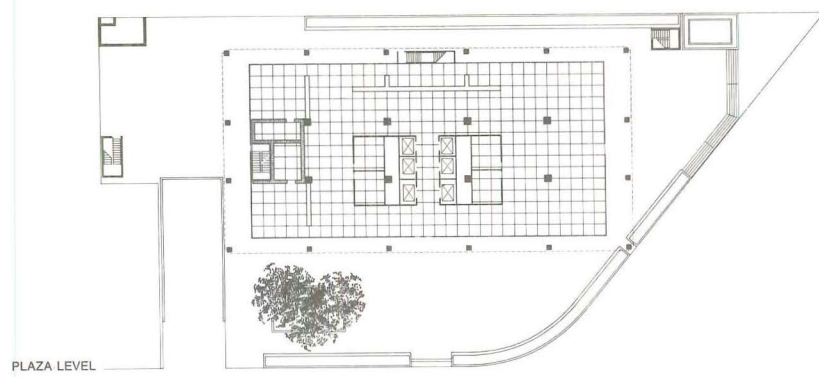
Craig Ellwood, who designed the ten-story Security National Place building in Beverly Hills (opposite), feels that the architects of most of the other highrise structures in that Los Angeles community have been far too adventuresome in their esthetic endeavors for the good of the community. Ridiculing a procession of ten-story "masterpieces"—Beverly Hills has a mandatory height limit of ten stories and 160 feet above the sidewalk—that play all sorts of visual tricks on the passerby, he has chosen to maintain the rigorous Miesian form and surface treatment that brought his work to national prominence twenty-five years ago.

The architect's principal goal was to produce a low-cost, high efficiency commercial building. It is a success on both counts. According to Ellwood, the cost of the basic building was \$18.00 per sq. ft. in 1972. That includes all mechanical equipment. As for efficiency, when a single tenant occupies a floor, the rentable area is 92 per cent of the 15,736 sq. ft. gross area.

The reinforced concrete structure is clad in a bronze-colored, anodized aluminum, double-glazed curtain wall. The ground floor and mezzanine are occupied by a bank and (soon) by a restaurant. The same dark-brown paving brick used for the bank floor is continued outdoors onto the plaza—the biggest, says Ellwood, of any building in Beverly Hills and located at a "triangle corner," Wilshire Blvd. and Bedford Drive. Outdoor furniture designed by the architect and appropriate sculpture are being installed at present. The plaza and building were built over a four-story subterranean garage which holds more than 400 cars.





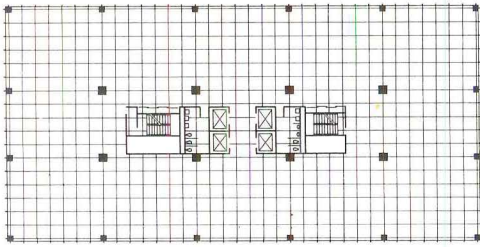




The ground floor building entrance (opposite) and bank (below) have the same floor surface as the plaza—dark-brown paving brick—to emphasize the continuity of indoor and outdoor space.







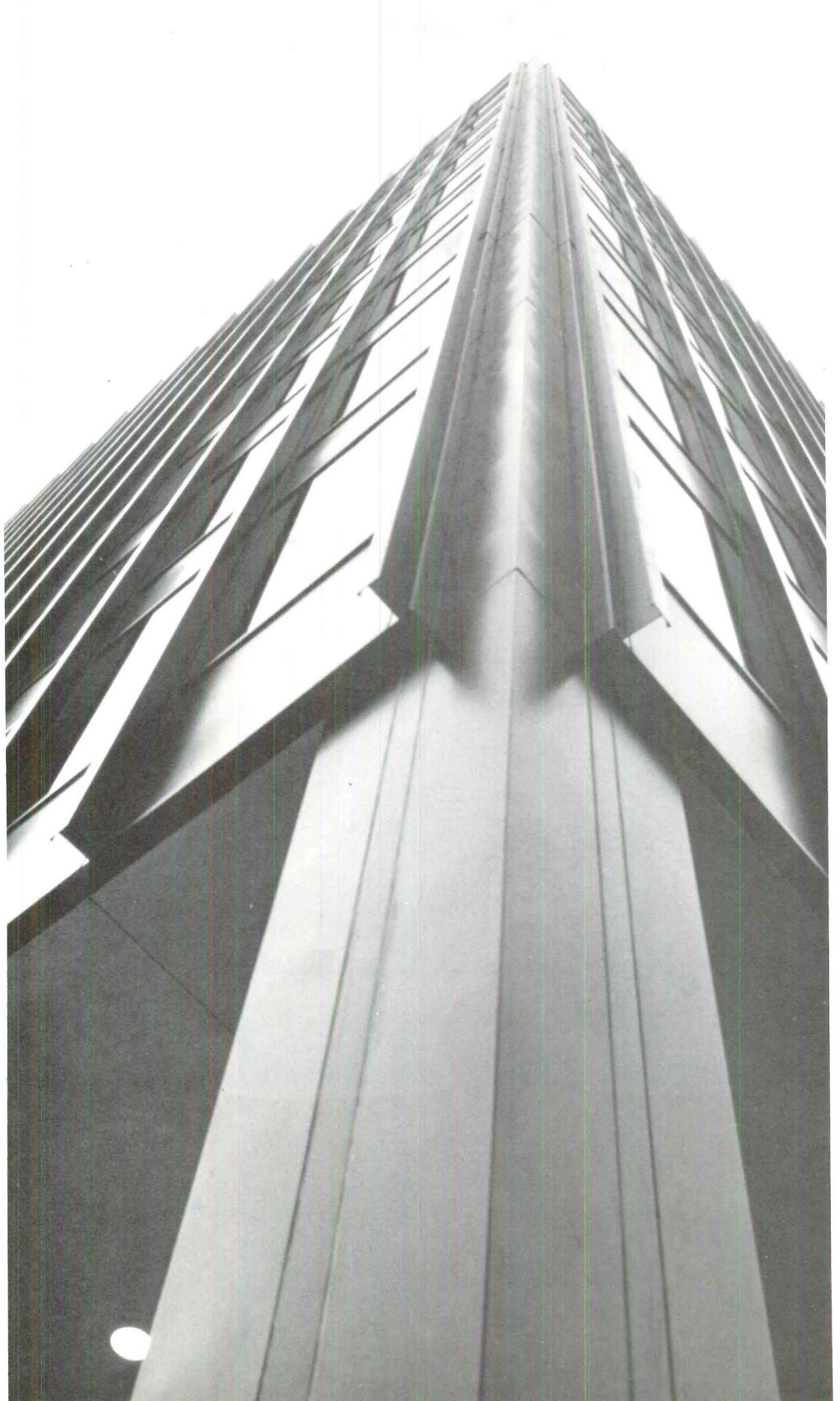
TYPICAL FLOOR PLAN

The typical floor of the Security National Place building (right) has a service core refined for maximum efficiency. Working closely with the developer, the Maguire Partnership, the architects tried several schemes before settling on the one built. According to BOMA (Building Owners and Managers Association) "Standard Method of Floor Measurement for Office Buildings," the ratio of rentable area to gross area when a single tenant occupies the floor is 92 per cent. The washrooms, in that case, are considered rentable area. In the case of multiple tenants on a floor, washrooms are included with elevators, fire stairs and chases as non-rentable space. The typical SNP floor is then 88 per cent rentable. In either case, it is considered an extremely efficient investment.

The curtain wall does not have the usual ventilating and airconditioning equipment at the sill to take up floor space. Instead, because of the smaller temperature ranges and minimal humidity problems of Southern California, the cooled air is introduced into the work spaces through the ceiling as near the core as practicable. The warmer air moves up the glass to a plenum (section, right) behind the insulated spandrel which returns it to the main mechanical floor atop the building. The curtain wall itself cost \$5.33 per sq. ft.

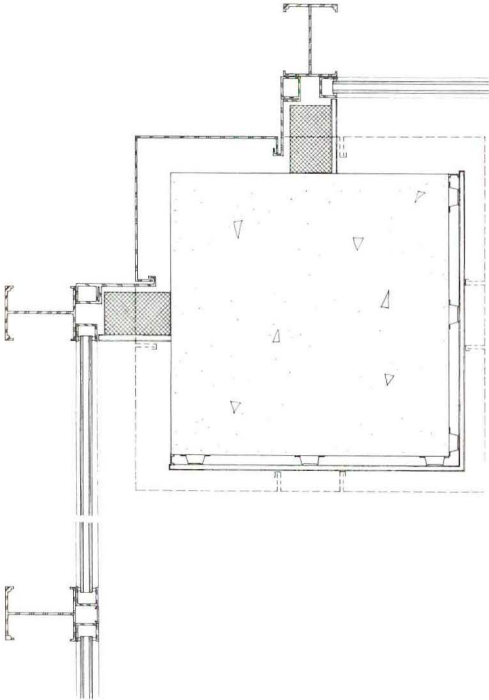
#### Facts and Figures

Security National Place, Beverly Hills, California. Client and developer: The Maguire Partnership. Architects: Craig Ellwood Associates. Associate for design: James Tyler. Associate for administration: Robert Bacon. Job captain: Donald Snow. Engineers: Walter E. Riley (structural); Carl M. Hadra (mechanical and electrical). Landscape architect and interior designer: Craig Ellwood Associates. Consultant: Ted Wu (graphics). General contractor: H. C. Beck Construction Co. Photographs: Glen Allison, pages 44, 46, 47. Elyse Lewin, pages 45, 48, 49. Building Suppliers listed on page 92

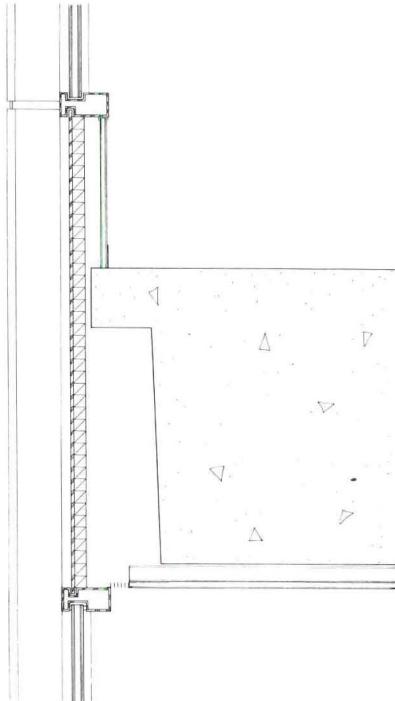




The carefully-detailed curtain wall on the upper floors (left) has bronze-tinted glass to reduce the heat load while the ground floor windows (right), with a generous portico to protect them from the sun, have clear glazing.



HORIZONTAL SECTION AT CORNER



VERTICAL WALL SECTION









# Yemeni windows

A living tradition

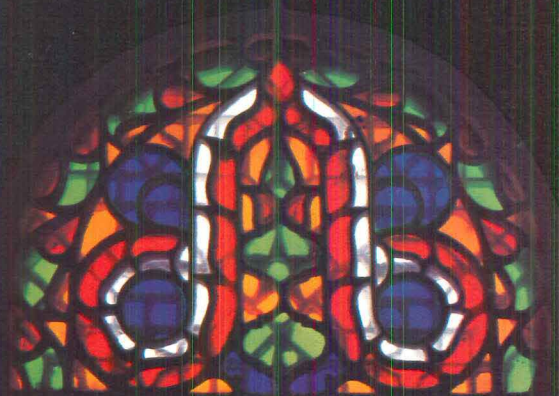
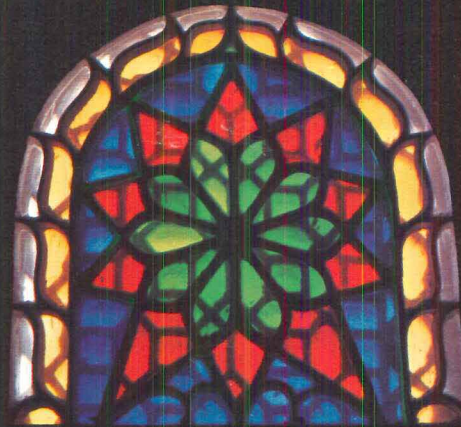
By Brent C. Brolin

Yemen is located on the southwestern tip of the Arabian Peninsula across the Red Sea from Ethiopia. It is divided topographically into the Tehama, a plain along the Red Sea, and the Jibal, a mountainous region to the east. Sana'a, the capital of North Yemen, is located on an arid plateau east of the Jibal at an altitude of 7250 feet.

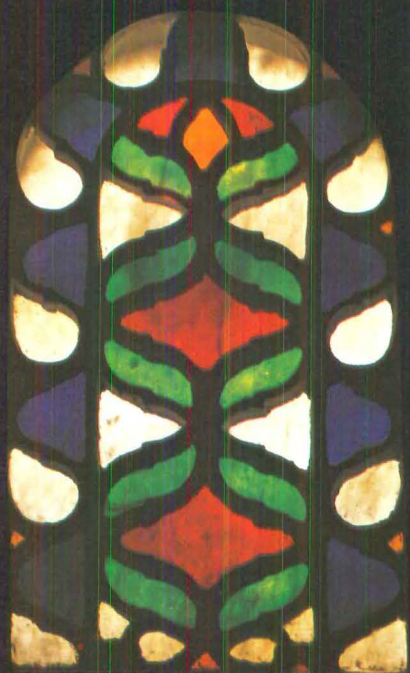
The city looks much the same now as it must have looked hundreds of years ago. The tightly packed houses vary from three to seven stories in height; the lower stories are of stone and the upper stories of fired brick. They are heavily ornamented with free-form plaster carving, brick bas relief and stained glass windows. The architecture of Sana'a is part of a living tradition. The buildings are continually being repaired and added to and new buildings are still built in the traditional way by masons and carvers whose skills have been passed on through time.

The tradition of ornamental windows is said to go back to the reign of the Queen of Sheba, 1000 B.C. (Sheba is the Biblical name for the region now known as Yemen.) As with European stained glass, the small panes are held in place by tracery; however the tracery is not lead, and windows are not found in religious build-

*Brent C. Brolin is an architect presently writing a book on the sources of the social and esthetic biases of modern architecture.*







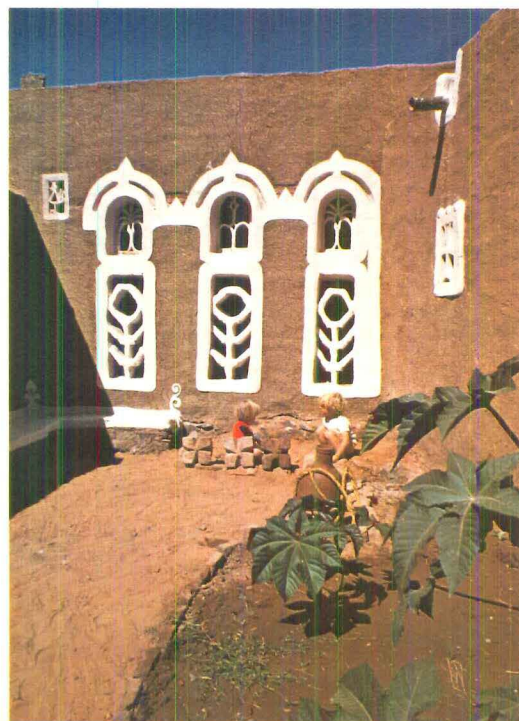
Lunette (left) seen from inside.  
 Stained glass in plaster screen with  
 alabaster sheet on the exterior.  
 Front elevation of a house (right)  
 designed by a U.N. planner.  
 Courtyard of the same house (below).  
 The decorative window frames are  
 made by spreading gypsum plaster  
 over the mud and carving it away  
 where it is not wanted. The flat  
 roof is built with log beams, covered  
 with brush and plastered above  
 and below with mud.

ings. In Yemen, the glass is held by  
 delicate plaster screens and the  
 windows grace private homes.

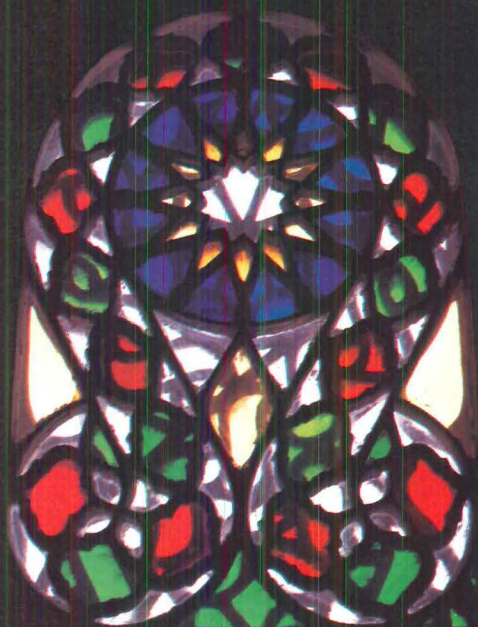
The standard window arrange-  
 ment consists of opening casements  
 with clear glass below and a mud-  
 covered log lintel above supporting  
 a stained glass lunette. Normally  
 the screens are carved before they  
 are put in place, but unusually  
 the windows, more than four feet  
 wide, may be carved *in situ*. A  
 1½" to 2" layer of gypsum plaster  
 is spread on a board and the board  
 is tilted up when the plaster begins  
 to set. The carver quickly sketches  
 his design on the plaster and begins  
 to carve; if possible the entire  
 screen is completed before the  
 plaster fully hardens. Given the  
 need for speed, the regularity of  
 the screens is remarkable. Once  
 the plaster has set the fine work  
 of inserting the glass is begun.

Traditionally there are two  
 carved screens to each window;  
 the interior screen holds stained  
 glass and the exterior clear glass  
 or, more often, no glass at all. In  
 some cases a slab of alabaster is  
 used instead of the exterior screen,  
 giving the colors a rich warm tone.  
 In poorer houses the alabaster is  
 often used alone. The patterns of  
 the interior and exterior screens  
 are graphically unrelated and the  
 complexity of these superimposi-  
 tions is often difficult for Western-  
 ers to appreciate.



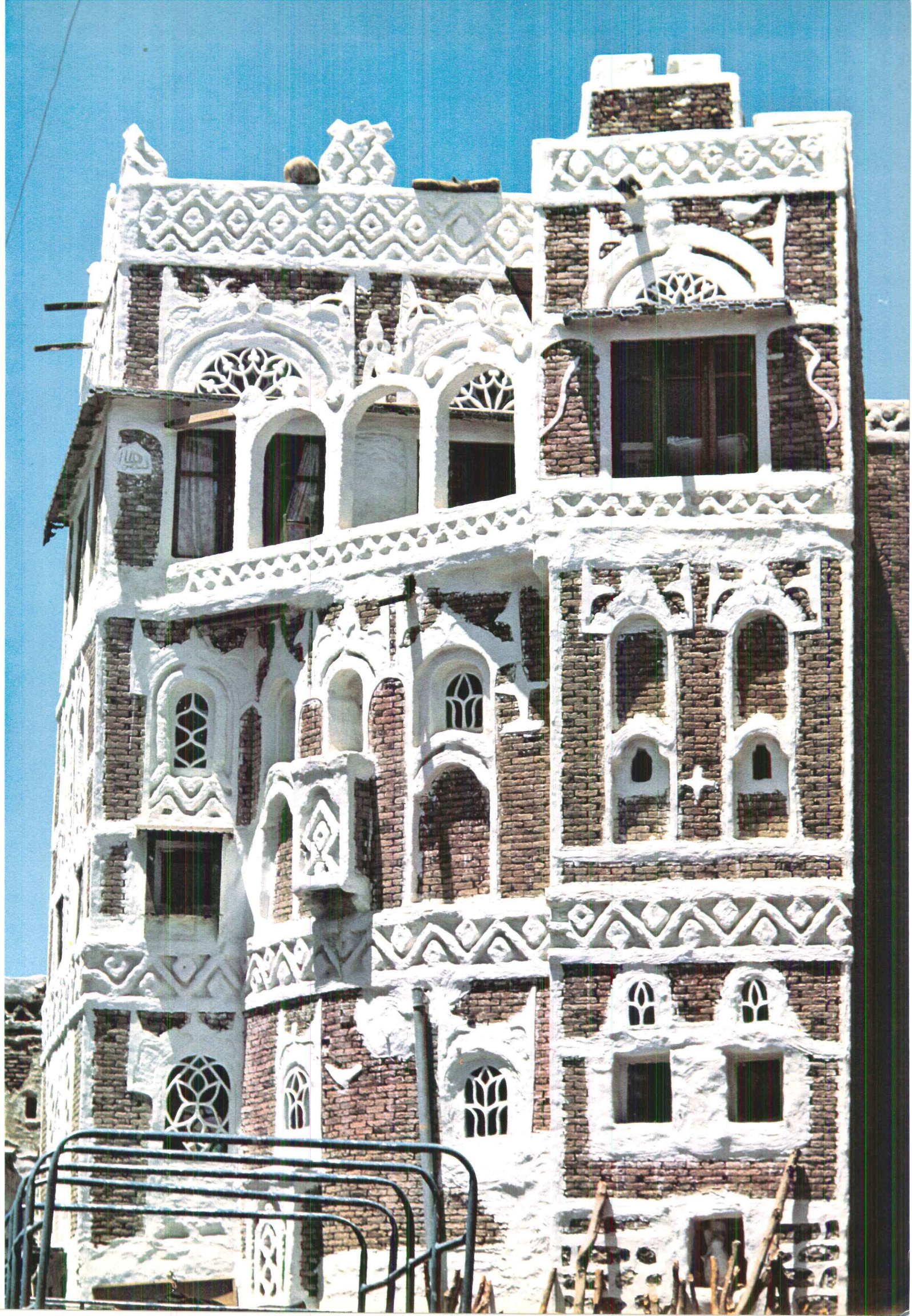






The interior and exterior screens are not "designed" or graphically related in any way that is readily understood by Westerners trained to admire the simplicity of modern architecture. There are few inhibitions about combining different types of windows and decoration in one facade (right). The geometric patterns are brick bas relief. These houses are extremely well-adapted to the climate; the interior temperature changes little on days when the exterior temperature varies thirty degrees.







# The Swedish "servicehus"

It suggests an alternative life-style more in tune with today's social realities

By Ellen Perry Berkeley

I discovered Swedish "service houses" in the *New York Sunday News*, a newspaper not usually considered a champion of promising social experiments.

Since I was planning a visit to Scandinavia, I hoped to see these unusual environments for myself, and to learn why fewer than ten exist in all of Sweden (although the first one dates back to the early 1930's). On my travels in Sweden, I visited a moderate-sized service house 17 years old, and a larger one only a year old. I attended a debate on the subject with the chairman of the Association for Service Houses in Uppsala, and met with a member of the

Service Committee in the government's Ministry for Labor and Housing.

What is a service house ("servicehus," in Swedish)? Quite simply, it is multi-family housing with a variety of services either available for purchase or included in the rent. Among the services: meals from a central kitchen; day care for children between the ages of six months and seven years; activities and day rooms for older people; hobby rooms for clubs and individuals; day and night laundries; maternity and well-baby clinics; and help in arranging for baby-sitting, house-cleaning, plant-watering (during vacation) and er-

rand-running (for the sick).

The name "service house" covers a lot of ground. I heard it applied to eight housing units and to 1,200. To complicate the matter, a service house is also known as a "family hotel" and a "collective house" (although this last makes it sound "like communism and group sex," I was told.

The first service house was started 40 years ago, at the instigation of the internationally known sociologists Alva and Gunnar Myrdal. The building was designed by Sven Markelius, also internationally known, and still stands—at John Ericsonsgatan 6—in Stockholm. But it no longer functions as a service house; the restaurant and laundry went commercial to serve a population larger than the building's 120 families, and the kindergarten closed when the early children grew up (the housing shortage kept these families from moving). Some say that this service house was always too small to survive.

No fewer than five "collective houses" in the Stockholm area were built between 1938 and 1956 by a large private builder, Olle Engkvist. Only the first was financed privately; the other four were financed partly with state loans.

The rationale for the service house was stated clearly by the Olle Engkvist company in its explanation of a project begun in 1940: "It is becoming more and more usual nowadays for women to acquire a training which will enable them to compete successfully on the working market. Many of them choose a profession that gives them a good income and a standing of social importance, and which so captures their interest that they continue to work after marriage, and even after the children have arrived. . . . The housewife will always have to shoulder great responsibility. But the services given by a collective house will ensure that she does not break down under the burden, and that the comfort and happiness of her home is not jeopardized."

The tone would be different today, emphasizing the *joint* responsibility of the couple for its home and children; Sweden has perhaps moved farther than any other nation in this respect, and has set forth government policy designed to loosen up the roles of the sexes and to equalize the burdens of parenthood. The times are also different today—60% of Swedish women work (it is 44% in the U.S.). And a gov-



3







ernment survey indicates that 20% of the women with children under 16 would prefer to work if they had good child care.

In the "family hotel" at Hässelby, built in 1956 by Olle Engkvist, 95% of the women work. The project is an eighth of a mile from the subway stop at Hässelby-Gård, one stop past the 1950's new town of Vällingby. At Örmängsgatan 43-71, four towers and 13 low buildings run the length of the quiet block; a single corridor unites all 328 units (1 and 2).

All the residents over the age of 10 must purchase 21 dinners a month at 9 kroner per meal.\* There is no choice in food, but residents may choose where to eat it, picking up dinner in a basket and taking it to their apartments, or eating in the pleasant dining room (3), or going to a smaller area "if their children are noisy." The restaurant employs 15 people to cook and serve, and to make dinner for another service house and lunch for the day nursery.

The "day home" has 54 children in it—90% from the service house, 10% from nearby homes. Four "departments" divide the children into age groups; each department has its own small "flat" of tiny, homey rooms (4). The children feel at home (and *are* at home, a boon in winter-time) and can stay with the experienced and affectionate staff from 7 a.m. to 6:30 p.m., Monday through Friday. Fees are set by the local authorities since the day home has public money. If the parents earn 5,000 kr./month, for instance, the charge for one child is 20 kr./day, and for two children 26 kr. If the parent is a student, the charge per child is 1 kr./day.

Residents have other services handy within the building. A nurse makes evening visits. A small gym opens in the evening;

\*1 Kroner equals \$ .20 U.S. dollars.

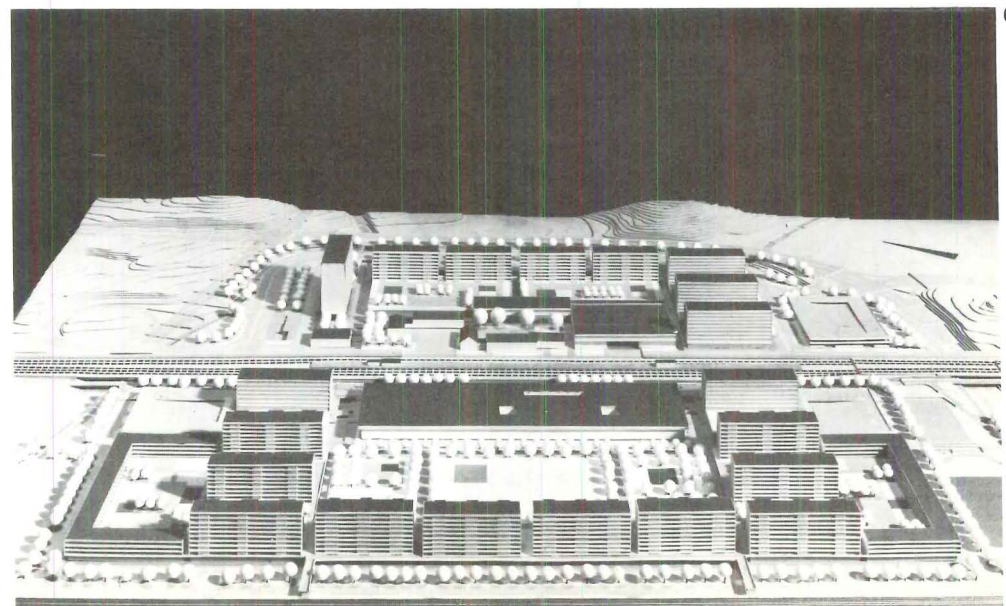
the school next door rents it during the day. Also on the premises: a garage (with gas pumps), a florist, a hairdresser, a dentist, a self-service shop, a laundry, hobby and club rooms, and a chapel.

Residents are mostly teachers, engineers, etc. Rents are not high; a two-bedroom flat is 647 kr./month (to which must be added 187 kr. for each adult for food, and half this sum—not obligatory—for each child). I was told by a disinterested party that the average rent for a new two-bedroom flat in suburban Stockholm, with no services, is 700-800 kr.

I walked to the subway through the

snowy schoolyard. Looking back to the four low towers along the skyline, I was impressed again by the pleasantness of the place. A strong-minded builder had combined with a capable architect, Carl-Axel Acking, to create a community with a special purpose and a special flavor. The scale seemed right, and for the 328 families who lived here the life seemed right. I was glad to see this option available.

The service house at Sollentuna, completed last year, is quite different. It is different in size, with 1,246 units, and in scale, with a wall of 19-story slabs against the horizon (5), and a plan for commercial





and office development—on the other side of the railroad track—to mirror this massing (6). It is different in ownership, with construction and operation the responsibility of a company owned by the town; this company has built one-third of all housing in Sollentuna. It is different in the services offered: residents do not have to eat in the restaurant; the shops and professional offices are more numerous; a small supermarket stays open evenings and Sundays (rare in Sweden); the reception desk has three hostesses arranging for baby-sitters, maid service and personal errands. The facilities include a pub, a school with eight

classrooms, a day room for the elderly, six day nurseries, and many small hobby rooms in the basement for rent to individuals (7 and 8). Like Hässelby, this service house has apartment sizes from efficiencies to four bedrooms; it also has apartments for the disabled. Like Hässelby, too, it is half an hour from central Stockholm. A two-bedroom apartment costs 726 kr./month.

"I don't know if the town *now* thinks this was a good idea," jokes Åke Arell, one of the architects of the project, designed by the large firm Vattenbyggnadsbyrå, or VBB. (Arell worked with the architect of the service house at Hässelby, and later

lived there.) He was referring to criticisms of this service house. It attracts "undesirables"—people who come in out of the cold and stay to drink or commit minor crimes. It is dense and noisy, with 1,000 residents under the age of 15. It is self-sufficient and isolated—"you can live your entire life here and never go outside."

But many residents find their lives vastly improved, with time suddenly released for companionship or new interests. Big as it is, the project is not big enough for all who want to move in.

The only group pressing for more service houses in Sweden is the Association for Service Houses in Uppsala, which carries on its information program only in Uppsala. A service house of a sort will soon be built here—a cultural/commercial center with 200 dwellings connected to it and another 8,000 dwellings nearby. "It's a start," says Jan Nyblom, head of the association; "500 people will have good services, and the rest only ordinary services. But it wouldn't be built at all without pressure from us."

The hope of this group is "to make the authorities understand quality instead of quantity in dwellings." The idea is not to rely only on oneself but on the community, says Jan Nyblom. Connecting people with each other for services should give everyone more time to be together and be themselves.

Nyblom himself wants to build a service house for his own family and seven others (9). The eight would hire two employees: one to cook and clean, one to look after the children. "No one would be forced to communicate; they could take food directly to their own flats, and could cook there too." Nyblom's problem is not to find interested families—he has more than enough already—but to get the required loans and permits, and to work out the legal questions of ownership.

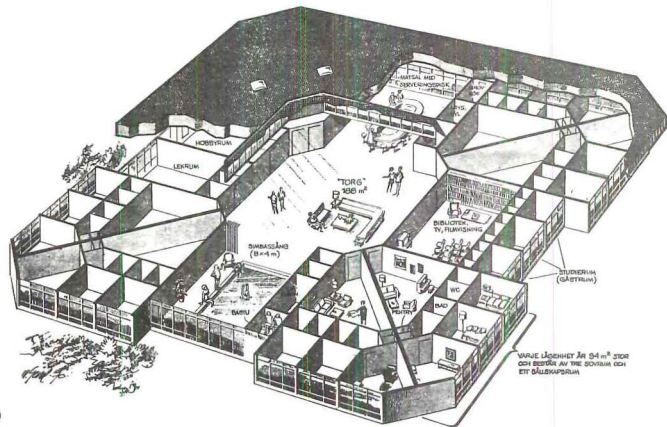
Sweden has other service houses—one in Lund and one in Göteborg. With the new one in Sollentuna and the activity in Uppsala, however, I wondered whether the movement was growing.

"When there are more jobs again, people will scream for more service houses," says Nyblom. He also cites the many unrented flats in the cities; maybe this will prompt better housing, more services.

But the private builder of the service house at Hässelby sounds a different note: "Probably a few or no further such houses







9

will be built, owing to the increased building costs and increased costs for managing this kind of housing." The costs of running a small restaurant are especially high, and it is "time-consuming" to convince residents they must use it.

One advocate convinced that the tide will turn is a Finnish woman, member of the Helsinki town council and columnist for the oldest Swedish-language paper there. Jutta Zilliacus frequently recites the benefits of life in a service house—women saving 50 hours a week, older people having companionship and help. It may be a "terrible grey monster," she writes (about Sollentuna, no doubt), but it works and people like it. Can her articles bring service houses to Finland? "No, the Finns are too individualistic," says her editor. In Denmark there are already a few service houses—the nonprofit Danish Public Utility Housing Association, Dansk Almennyttigt Boligselskab, runs six of them in the Copenhagen area; Vaerebro Park in Gladsaxe (1968) is the most recently built. Here social services have "full-scale public grants"; rent is state-subsidized; construction was financed by the state (80%), municipality (15%) and residents (5%).

I spoke with Tomas Lindencrona, an architect with the Swedish National Board of Urban Planning. In 1967, he was appointed an assistant secretary of the Service Committee in the Ministry of Labor and Housing, a committee charged with looking at service facilities in housing. He believes that the service house at Sollentuna, although the newest and largest in Sweden, is probably the last. Not that these services are on the way out; he would prefer to see services in smaller packages and spread out in lower buildings.

Clearly the community must provide all these services, Lindencrona states, but he deplors the fact that local authorities plan in a vacuum; more effective and less expensive services will come only by "integrating" facilities—by sharing space through cooperative planning.

The first such "integrated service facility" in Sweden, built in 1971 by a community-owned company, is in the new neighborhood of Brickebacken outside Örebro (10). Two other facilities are being planned for other towns in Sweden. It requires coordination at every level, says Lindencrona—Parliament readily approved the prin-

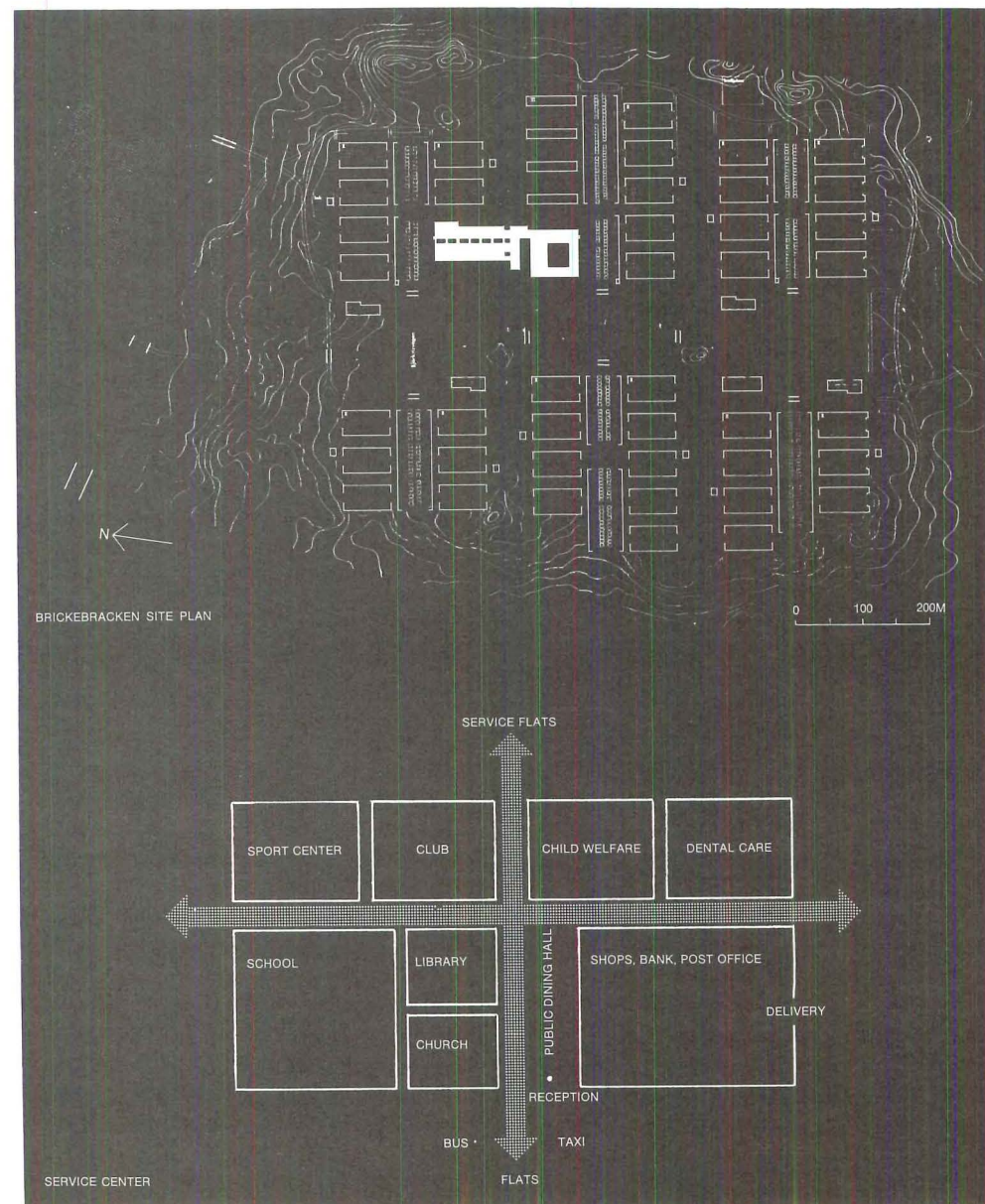
ciple, but bureaucrats at the lower levels need convincing. (A competition for such a center in Finland was won recently by two Swedish architects, but Lindencrona doubts if it will be built; "administratively they can't do it.") It also requires answers to many new questions: if a window is broken, for instance, whose window is it?

If true, does it matter that the service house is a fossil of the past, and the "integrated service facility" is the animal in evolution? No. What *does* matter is that residents have access to these services—commercial, housekeeping, medical, social, recreational—whether in high rise or low

rise buildings, built under private or public auspices.

These services do not yet appear as measurements of housing quality. *Housing in the Nordic Countries*, published in Copenhagen in 1967, lists amenities in terms of bathrooms, hot water, central heating and electricity. Until housing standards everywhere include more of the basic necessities of modern living, housing will be years behind the times socially, even while it may be up-to-date technologically. This disparity is an indictment of our age. Sweden, at least, is taking the indictment seriously.

Photographs: Roy Berkeley

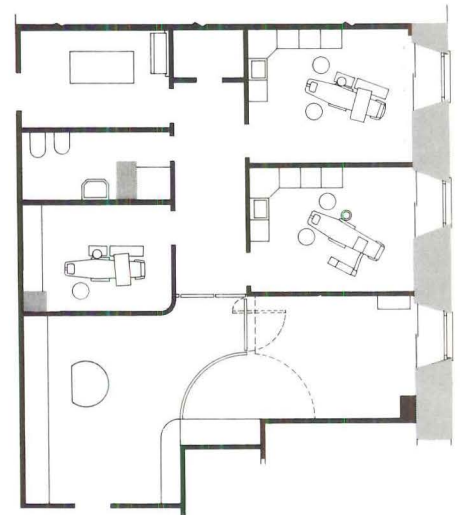


10



# A painless experience

By Suzanne Slesin





Waiting rooms and reception areas rarely exploit the fact that people who are waiting have nothing else to do but look at their surroundings—and feel apprehensive. Often, these surroundings are in fact boring, depressing, overly cluttered, and, in the case of doctors' offices hardly reassuring. These were some of the observations made by the Italian architect Giotto Stoppino when he was asked to design the offices of Dr. Aldo Borsetti, a Milanese dentist.

"Apart from taking down a couple of walls, there was very little construction to be done in the space," explains Stoppino. "I combined the reception and waiting areas into one large space and decided to build elements within the space that could efficiently articulate its different functions." Stoppino also decided to make this area very different in mood from the rest of the offices and to give patients a place to sit and relax. "I tried to make the room inviting and elegant and to have people relate it to a well designed and appointed apartment rather than to a dentist's waiting room."

The architect's material selections carry out this idea. Beige carpeting is used throughout, matching beige walls and contrasting with the stark blue and chrome of the other furnishings. A freestanding partition of dark blue lacquered wood repeats the circular shape of the desk and both divides the space and acts as a directive to lead people in and around to the waiting area. One side of the partition is seen as two connecting curves while the other holds shelves that keep magazines, ashtrays and other objects neatly out of sight yet accessible to waiting patients.

Double doors separate the reception/waiting room from the examination/operating rooms. Passing through the doors, one enters an all white space, with the beige carpeting continuing to the threshold of the examination rooms. Again, materials are carefully chosen. Walls are wood paneling painted white to allow the grain to show through, window shades are hung linen, furniture is kept to an absolute minimum and the clean, stark look is comforting instead of frightening.

*Suzanne Slesin is a free-lance writer on design. Her work has appeared in major U.S. and European publications.  
Photographs: Carla De Benedetti*

Residential materials make the waiting room of this dentist's office in Milan a relaxing place. Beige carpet and walls contrast with the curved freestanding partition of dark blue lacquered wood (below). It repeats the shape of the desk (left).

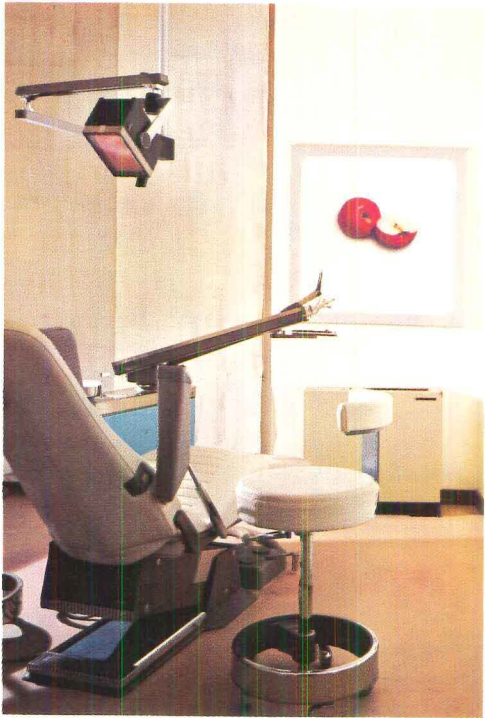




Vivid paintings and prints of apples by Italian artist Viviani have been used throughout the suite by architect Stoppino. "An apple a day keeps the doctor away" is the message. "At the opening reception, we placed real apples on every surface," adds Stoppino. Thankfully, that did not keep the patients away.









# Japan's Big Five

It is fascinating to think of significant buildings being created by huge anonymous corporations. Yet that is precisely what is happening in Japan.

Many of the structures there were designed, not by a single creative ego, but by one of five huge construction companies, each employing between 5,000 and 10,000 people and doing over \$1 billion of contracts annually. Of 295,000 contractors in Japan, these five do 12 per cent of the work and all five are among the ten largest contractors in the world.

The companies are Kajima Corp., Taisei Corp., Ohbayashi-Gumi, Ltd., Shimizu Construction Co., and Takenaka Komuten. All except Taisei are family run; all but Takenaka do civil engineering as well as building construction.

The companies are run like the modern, efficient conglomerates they are. They use computers extensively; they operate sophisticated research and development facilities; and they are internationally recognized for their accurate cost controls and accelerated project scheduling. Each has the ability to perform as a master builder, handling all aspects of the most complex projects.

To people outside of Japan, however, the companies are curiously paternalistic caretakers of their employees. This is a continuing tradition in Japan. When a company hires a man, it agrees to provide for his family. It provides them with housing, salary and social amenities of every kind; social status is synonymous with the company's. In return for sacrificing individuality, the Japanese worker receives the most comprehensive kind of security, are very proud of and loyal to their situation.

Each company employs an average of 500 architects. Despite anonymity, they may enjoy great latitude in design. One young architect says he works for Kajima instead of a well-known architectural firm in Japan because there he "could be free to be different—since they are primarily a construction company, they indulge in no preconceived notions of design." Generally, teams of architects and engineers work together on design.

Already these five companies are doing a great deal of work outside of Japan, including the U.S., Europe, Africa and the Middle East. Maybe they will start an international trend.

MARGUERITE VILLECCO & YASUO UESAKA



Kajima Corp. may be the most modern and streamlined of the Big Five. But it is also strong in design, which falls under the current direction of Shoichi Kajima, descendant of the firm's founder and a graduate of Harvard's School of Design.

The company was formed in 1839 to build houses for the daimyo (lords), but by 1858, it had entered the commercial construction business by building the Jardine Matheson Building, an English trading house, in Yokohama. After 1880, Kajima built many of Japan's railroads.

Management by the founding family has been continuous. One of its sons-in-law, Morinosuke Kajima, took over the company's leadership in 1938 and built up the employee roll from 300 to 1,000 (today it is almost 8,500). He also hired university graduates and almost drained one commercial school of its entire faculty; he improved labor skills, raised pay scales, reformed accounting methods and updated management procedures. A close relationship with the (U.S.) Morrison-Knudsen Co. showed Morinosuke many new techniques. (A son-in-law taking his wife's name is not unusual in Japan if her father has no sons capable of carrying on the name and family business, or has no sons at all.)

Morinosuke continues to be an important man in construction, but after he had reformed the Kajima Corp., he left it to return to the diplomatic world, his first love. His wife took over and she is today Vice Chairman. (Shoichi Kajima is their son.) The husbands of their three daughters are the president, vice president, and the managing director.

Today Kajima is known particularly for its work on earthquake-resistant and high-rise structures. Its Muto Institute of Structural Mechanics, established in 1969, has pioneered research into these subjects and Kajima's 47-story Keio Plaza Hotel (see p. 67) is the tallest building in Japan. The company is also heavily involved in housing, real estate and environmental systems. Besides buildings, construction includes 80 dams in Japan and abroad, plus bridges, docks and sea berths.

A truly international corporation, Kajima has offices in Singapore, Taiwan, Korea, the Congo, Los Angeles and New York. The New York office is exclusively a design firm.



The Shimizu Construction Co. built the first Western-style hotel in Japan and the first brick building. Established in 1804, the company's early work included shrines, temples and later many banks for the Mitsui family and other commercial structures. Last year its construction volume was well over \$1 billion.

Shimizu looks at itself as a business to "produce capital assets in the form of real property" for its clients. Almost 40 per cent of its work is in building office structures, industrial facilities and housing projects. Eight per cent of its total work is some form of building construction and the rest is in civil engineering projects, ranging from roads and dams to harbors and sewer construction. As of last fall, the company had work in progress at 1,600 sites.

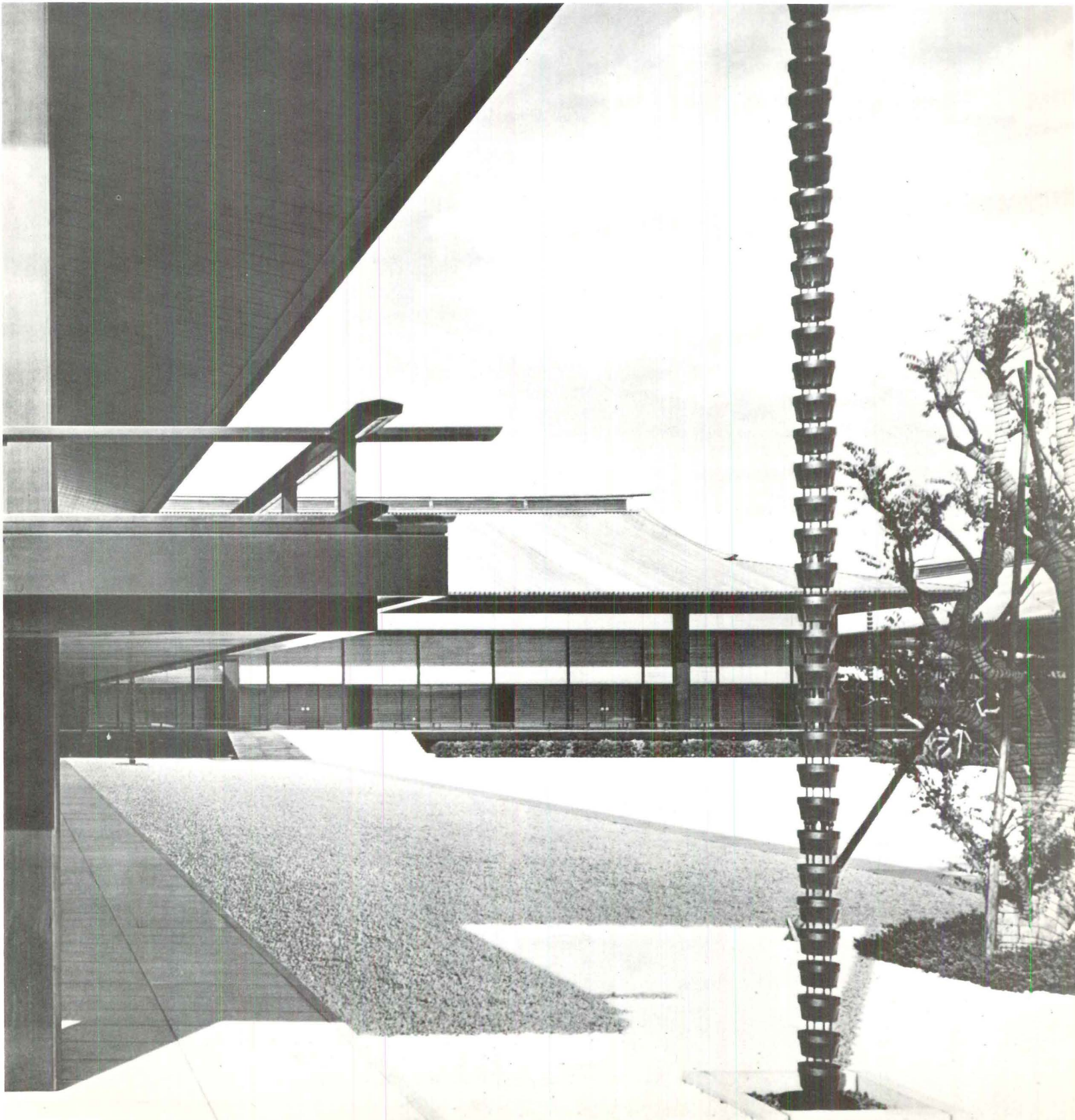
Shimizu, like the other Big Five, is a conglomerate operation designed to handle every phase of a construction project. It has over 50 operating departments, including those in real estate, urban redevelopment, market research, nuclear power, environment, industrialized housing, ocean development and maintenance services. There are eight branch offices in Japan, plus temporary project offices in New York, San Francisco, Sydney (Australia) and Düsseldorf. Overseas jobs are generally factory or civil engineering construction jobs.

The company has a large design department, which handles architectural, structural, utility, interior and landscape problems. About 40 per cent of Shimizu's construction volume is designed by its own staff.

Besides the departments within the company proper, there are several subsidiary operations. These include a wood workshop, eleven mechanical and equipment workshops and six industrialized housing plants.



All of the Big Five worked as contractors on the new Imperial Palace (below) which was completed in 1968 on the site of the old palace. Junzo Yoshimura was the architect for the original design, which was executed and supervised by the Imperial Palace Construction Division. While not designed by the five contractors, the building is notable for having brought all of them together on one project.







Takenaka Komuten is unique in that it has no civil engineering department and puts greatest emphasis on design quality. Its management is oriented toward producing good architecture and its main concern is "Total Design." This is the company's name for its policy that its designers choose everything inside and outside the building to conform and harmonize throughout. Sixty per cent of the firm's work is designed in-house (more than any of the other Big Five) and Takenaka will occasionally single out an individual designer for recognition.

The oldest of the five firms, Takenaka Komuten was founded in Nagoya in 1610 as the official builder for the feudal government. There it built many temples, shrines and lords' residences. As early as 1894, when most Japanese construction was still of wood, Takenaka started building with ferro concrete, steel frames, brick and stone. In 1923 the company moved its headquarters to Osaka and in 1959 it established its Building and Research Institute.

The design department was completely reorganized in 1961 (during the Olympics' construction period) and thereafter, in 1963, won a competition to design the National Theater. The department's entry was submitted by a 13-member team headed by architect Hiroyuki Iwamoto.

The company helps to create its own construction market through its Office for Project Development, which serves as an entrepreneur in housing developments and engages in urban redevelopment. Takenaka's well-designed, prefabricated housing units and plans are particularly well known.

In true Japanese tradition, Takenaka is concerned in improving its employees' lives. But it is the only one of the Big Five to provide vocational training for its field staff and laborers by maintaining two schools.



Taisei Construction Co. has never been a family operation and that makes it special among the Big Five. It was founded in 1873 as part of a small conglomerate and until last year was known as Okura Doboku, K.K. Taisei became a public corporation in 1949, and employees bought many shares.

Today Taisei is a conglomerate in itself. It employs 7,500 persons, of whom 6,200 are construction, civil or mechanical engineers. In 1971, its construction volume was over \$1 billion. Many subsidiary operations allow Taisei to act as master builder.

The company's so-called Green Heights projects are typical. These are bedroom communities ("new towns" in Japan) with shopping, educational, and recreational facilities and Taisei has built over 20 in Tokyo, Osaka, Nagoya and Yokohama. The latest has 2,000 units and is outside Tokyo. On such projects, the Taisei Housing Department does a feasibility study before or after Taisei Real Estate acquires land. Taisei Road Co. does basic site and road work, and the Taisei Prefab Construction Co., or the Nippon Prefab Construction Co. (also a subsidiary) puts up the buildings. The Taisei Setsubi Co. does the mechanical, electrical and plumbing work; the Yuraku Real Estate Co. (still another division) sells the condominium units and arranges financing; the Taisei Transportation Co. moves in the residents; and the Taisei Service Co. manages the project.

Taisei is known for its work in research and development, particularly in civil engineering. In 1958, it established the Taisei Technical Research Institute, which does \$700,000 worth of consulting work each year for the Taisei Construction Co. It pioneered such new processes as a tilt-up prefabricated concrete panel system for 4- or 5-story apartments; numerous inventions such as special moisture gauges, a laser transit compass (for measuring in tunnels), high tension wrenches, a new seabed blasting method that eliminates diving and even a low-noise, low-vibration dynamite.

The company, which computerized its operations in 1961, has worked all over the world since 1959, including Indonesia, Peru, Hong Kong, Iraq, Kuwait, Germany, Bali, India and other countries. It has an agreement to work with the (U.S.) Rust Engineering Co. (of Litton Industries) on industrial and air pollution controls.



Ohbayashi-Gumi, Ltd. is the youngest of the five companies. Founded in 1892 by Kogoro Ohbayashi, it is still family dominated and run by Yoshiro Ohbayashi, a grandson. The company grew along with the mechanization of the silk industry, the era of railroad and dam construction, and growing demands for office space. It now performs over \$750 million of building construction annually and over \$250 million of civil work. It employs 10,000 persons; over 5,000 are architects and engineers.

Headquartered in Tokyo, Ohbayashi-Gumi has offices in ten Japanese cities and has often worked overseas, especially in pre-war Korea and China. After a post-war setback, it is again working abroad, mostly in Southeast Asia, and now has plans for offices in Los Angeles and New York.

The company's Research Institute, which is staffed by over 200 scientists and engineers, does both basic and practical research. Special work has been done on underground concrete construction, earthquake-related structural problems and high-rise buildings. A new cross-structure system for highrise is being tested in the company's new 32-story headquarters tower in Osaka.

The company maintains a moderately conservative image and its business relationships often rely on personal relationships (a phenomenon common to all the Big Five). A client, including the royal family, generally remains loyal and, since contracts are privately negotiated, the estimated cost of construction is met. Half of the firm's work is in non-competitive contracts; forty per cent is designed in-house.

Besides construction, Ohbayashi engages in a variety of fields through its subsidiaries. These include companies that make furniture, design interiors, construct roads, make precast concrete panels, maintain projects, develop housing and hold real estate.

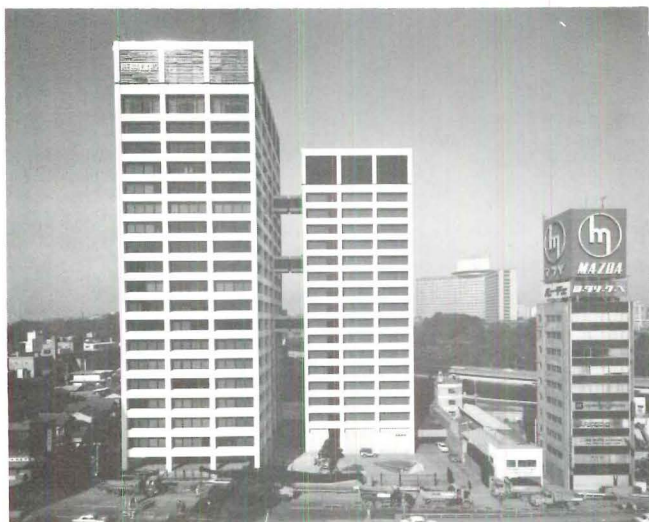
The management of the company is thoroughly modern, yet the company maintains the suffix "Gumi," which literally means gang. This same feeling for origin is reflected by the company's president, who has actively protected small contractors by maintaining that the larger firms should do only jobs that require their resources.



## A gallery of Big Five buildings



Kajima Corporation



Kajima's headquarters building in Tokyo (top left) will be used as a design prototype for the company. Kajima also designed and constructed the new Datsun headquarters in Los Angeles, after testing that the reflective glass facade would not distract freeway drivers nearby. The Keio Plaza Hotel (right) was designed by the owner, but was engineered by Kajima's Muto research institute. At 47 stories it is the tallest building in Japan.







Shimizu Construction Co.



The company crests of the Big Five are familiar sights to most Japanese and are used to decorate and identify all their projects under construction. Shown (left) is the Dai'ichi Mutual Life Insurance Co.'s new Tokyo office under construction and Shimizu, which designed and constructed the building, has displayed its crest prominently on the construction curtain. Below is the Nissan Mutual Life Insurance Co. headquarters, also designed and built by Shimizu. The precast spandrel and mullion elements are detailed at lower left.

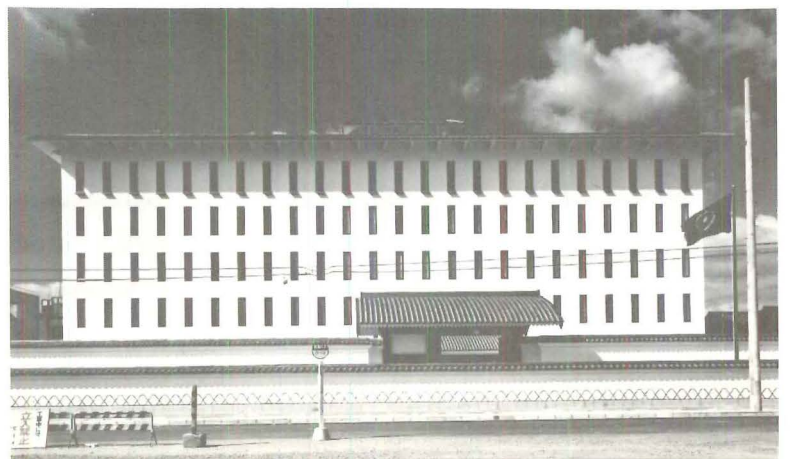
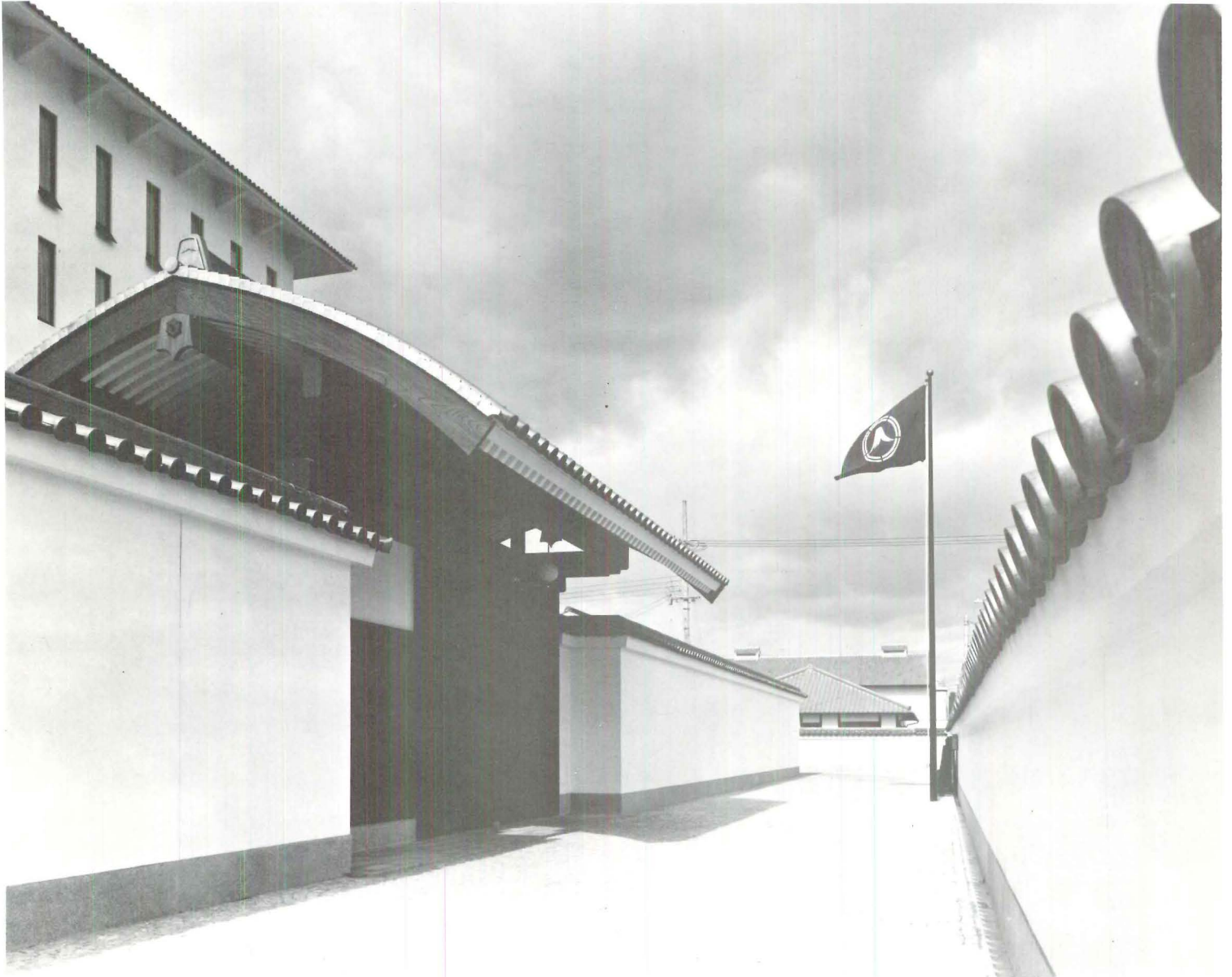




Takenaka both designed and built the Konishi Sake Brewery, in Osaka. An excellent combination of the traditional style and modern technology, it is made of white stucco and grey tile and appears severe to the point of elegance.



Takenaka Komuten

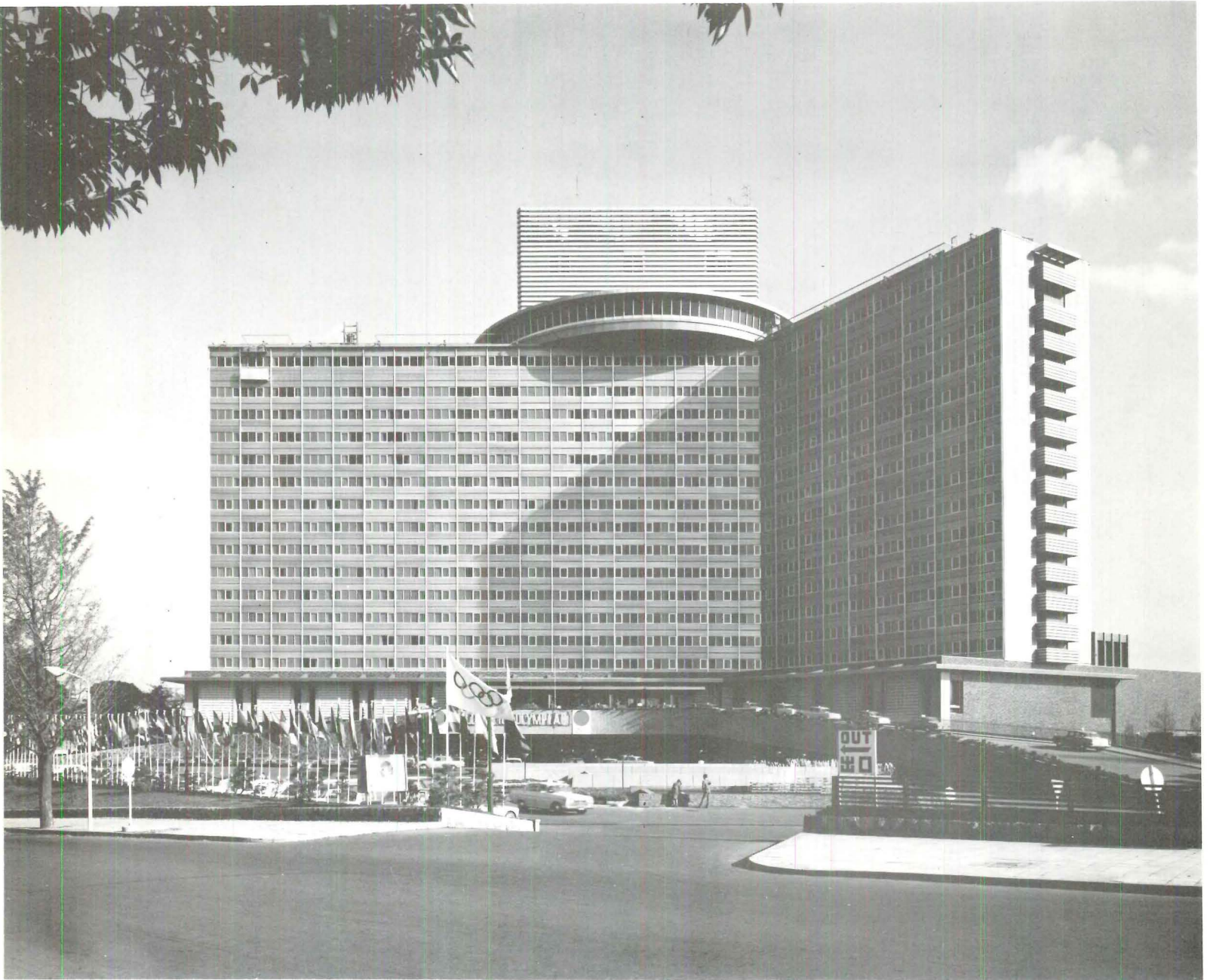




The new Hotel New Ohtani, in Tokyo, was designed and constructed by Taisei. A highly successful venture, the hotel is a familiar sight to many who travel in Japan.



Taisei Corporation





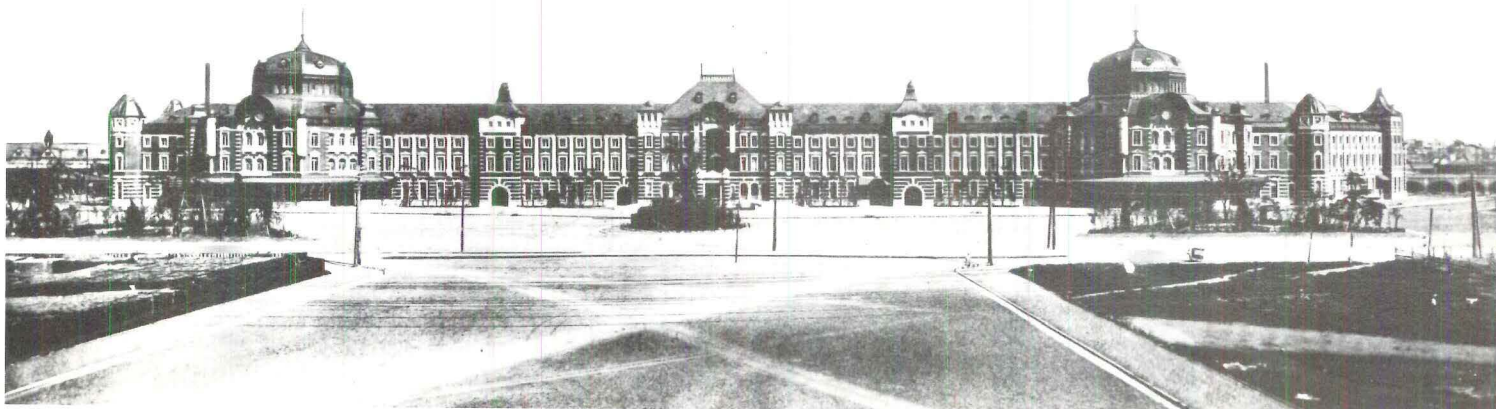


Ohbayashi-Gumi, Ltd.

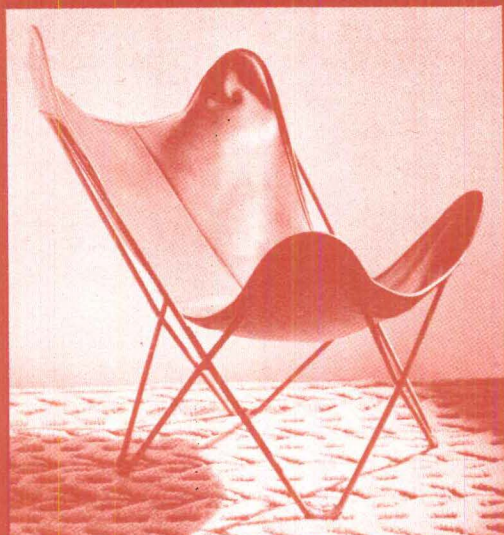
Ohbayashi's internationalism is evidenced by two design/construct projects: the Sarinah department store (left) in Djakarta, and the new tower for the Princess Kaiulani Hotel in Hawaii (right). The company also designed and constructed the original Tokyo Railroad Station (bottom) and in keeping with its tradition of loyal clients, it also designed and built the new station, which includes extensive underground work (not pictured).



Photographs: P. 67 (upper left) Kawasumi; (lower left) Wayne Thom. P. 68 (right and lower left) Studio Murai. P. 69 Toshio Tahira. P. 71 (right) Natori-Kobo.









# More than you may want to know about A very significant chair



By Peter Blake and Jane Thompson

The curiously twisted wrought iron and leather contraption shown on the left is, of course, the most famous modern chair in the world today. It has been variously called Butterfly, Safari, Sling, Wing, African Campaign, African Safari, North African Campaign or Italian Officer's Chair. Among the cognoscenti of the design world, it is known as the Hardoy Chair (named thus for one of its three designers, the Argentine Architect Jorge Ferrari-Hardoy). Its construction is disarmingly simple: it is formed of a seemingly continuous iron rod, approximately 1/2-in. in diameter, bent and twisted to resemble four giant hairpins locked in mortal combat. A sling of canvas or leather, cut roughly in the shape of a four-leaf-clover, is dropped over this construction to form a hammock-like seat. The whole thing weighs about 16 pounds and it could be bought, about ten years ago, for as little as \$5.95, retail.

It is almost impossible to discover how many people in the United States—let alone the rest of the world—have bought one or more of these chairs. Some estimates run as high as 5 million sold since 1950 in the U.S. alone. One reason for this difficulty in reaching an authoritative figure lies in the fact that Hardoy Chairs have been bootlegged by housewives in Los Angeles backyards, by adventurous undergraduates at Harvard, by blacksmiths in Rhode Island just as often as they have been produced legitimately—or, at least, openly—by some of the leading makers of modern furniture.

The clandestine production of Hardoys and some of the more brazen piracy of the basic design has been the subject of bitterly contested lawsuits and the cause of several murderous price wars. At present, none of the original manufacturers continues in the business of making Hardoys, and neither Senor Ferrari-Hardoy nor his two associates are receiving royalties on more than a tiny fraction of the Hardoy Chairs sold in the United States. The design has become public property, much like the pup tent and the yo-yo, and anybody with a small welding torch and a sewing machine can turn out half a dozen Hardoys a day. Just about everybody so equipped seems to be doing just that.

But questions of design piracy or patent-infringement are not the only interesting issues connected with this chair. Only 20 years ago, the Hardoy Chair was the badge of the most advanced spearheads of the avant-garde. Yet today a version of the chair occupies a place of honor (and respectability) in the Sears Ro-

beck catalog (solid colors or plaid). Its picture has appeared in almost every illustrated magazine in America, supporting dogs, cats, fashion models, babies, monkeys, nudes, "whodunit" corpses and boys in Hoppalong Cassidy suits. It has become a standard prop in movies, TV shows and advertisements for everything from nylons to beer. In short, it has ceased altogether to be *avant* and has become as homespun as the rocking chair on an Ohio front porch by Norman Rockwell.

In November of 1950, in the United States District Court for the District of Massachusetts, the Burtman Ornamental Iron Works of Roxbury was being sued for bootlegging the Hardoy Chair by its then exclusive (or *almost* exclusive) American manufacturer, the late Hans Knoll. Prior to the actual hearing of the Knoll complaint before Judge Wyzanski (who appears to have taken a rather dim view of this kind of furniture) attorneys for the plaintiff and the defendant met briefly. In the course of this meeting, the defendant's attorney suggested that the Hardoy Chair was an old design, that it had, in fact, been something of a household item with the Ancient Romans, and that he had in his possession a drawing, made around 1900 by "someone called Gentili," which showed that the chair was well known at that time. In other words, Ferrari-Hardoy & Co., rather than Burtman Ornamental Iron, had done the bootlegging.

Counsel for the defendant was not entirely accurate in his claim: it is quite true that the principle of *folding stools* (two X's with a sling between them) has long been familiar to just about everyone—from the Bronze Age men of Northern Europe to the earliest residents of Korea, who held X-chairs in such high esteem that they restricted their use to the most important of VIPs. It is further true that the Hardoy Chair was derived from a 19th-century patent that could be folded much like a telescoping umbrella, into a compact little package of wood and canvas, 3 in. by 4 in. thick and about 36 in. long, and that the Hardoy Chair was very definitely a folding chair until Senor Ferrari-Hardoy got mixed up in it. But the fact is that the chair's 19th-century ancestor was but a very remote kin of any Roman, Bronze Age or Korean X-chairs, and no real case can be made for any direct deviation from these early sources.

As it is, the history of the present Hardoy Chair is extraordinary and fantastically complex. When Jorge Ferrari-Hardoy, the Argentine architect, was asked by a friend, in 1947, to explain the origins of his chair, he readily admitted that it "was an improvement over previous designs. Therefore it cannot be called original." He added: "We simply designed it

to furnish our studio. It never entered our minds that the chair would reach such popularity." This was written long before its later American boom. He also insisted that "the designers of this chair are three persons: Antonio Bonet, Juan Kurchan and myself. Hence we decided to call it the B.K.F. chair." (The F, of course, stands for the Ferrari in Ferrari-Hardoy. It is a part of the monumental confusion that surrounds the history of this chair that Senor F.-H.'s friends in the U.S. amputated the more important half of his name and omitted reference to his talented associates altogether. One Argentine architect has suggested that the major contribution to the design was actually made by Antonio Bonet, a Spaniard from Barcelona whom Kurchan and F.-H. met in Paris in the '30s.)

In any event, it is clear that Senor Hardoy and his friends considered themselves to be little more than selectors and re-designers of a form or invention that was almost as commonplace as the safety pin, though perhaps not quite so successful. They had seen the wooden, folding, pre-Hardoy Hardoys widely used in Italy (where a manufacturer named SLICA, in Recco, near Genoa, makes them to this day). In all likelihood Hardoy & Co. may have heard someone mention—as someone invariably does when the origins of the Hardoy Chair are discussed in design circles—that Mussolini (or, at least, the late Field Marshal Graziani) sat in a pre-Hardoy Hardoy while defeating the Emperor of Ethiopia (or, maybe, a tribal chief in Tripolitania?). And while these fascinating tidbits may not have impressed Hardoy & Co. quite as much as they were to impress the readers of *Women's Pages* ten years later, they did make it crystal clear that *somebody* undoubtedly would recognize and know what to do with a Hardoy if he were to meet one. In other words, Burtman Ornamental Iron had a pretty good case in claiming that the chair was not the latest thing, but B.O.I. simply did not have their facts straight.

Neither, for that matter, did anyone else. While the attorneys for Knoll and Burtman Ornamental Iron were fighting it out in Boston in 1950, the New York architect and furniture designer, George Nelson, stated in an article about the chair that "the wooden version, which folded, was used by Italian officers in North Africa before Hardoy found it. Where *they* got it we don't know."

Our story was written several years later. The Case of the Missing Ancestor is now solved, and this is the dossier. Looking back over the years it took to assemble the facts, we feel that it was the Knoll-Burtman affair, more than anything else, which first suggested that we might embark upon this quest. Had we known how many ghosts of Italian Field Marshals we would

*Jane Thompson is the former editor of Industrial Design, and a critic and author based in Cambridge, Mass. Peter Blake is the editor of Architecture PLUS. An earlier, short, version of this article, without illustrations, appeared in Harper's Magazine 15 years ago.*



Wooden versions of the design include the Folding Camp Chair illustrated in the 1905 "American and Canadian Sportsmen's Encyclopedia" by Francis H. Buzzacott; the "Tripolina" currently manufactured by SLICA, of Recco, Italy; and the Gold Medal chair as illustrated in the company's 1915 "Camper's Manual."

encounter over the years, how many circus clowns and African Colonies we would correspond with or how many Western trappers we would have to pursue, the chances are that we would have let Senor Hardoy and his friends sit in peace.

When we started out we knew even less than Mr. Nelson. All we did have, in fact, was one Hardoy Chair. At parties, whenever conversation began to lag, someone invariably started to talk about it—and about those Italian officers, some African colonies, the British Army or the (then) Belgian Congo. In short, we were not getting anywhere at all.

But not for long. On October 27, 1953, the 95th anniversary of Theodore Roosevelt's birth, New York's Natural History Museum displayed a number of Roosevelt memorabilia—including a photograph taken in 1903 in Colorado showing him and John Burroughs standing in some sort of camp. Behind them, clear as could be, were three folding, pre-Hardoy Hardoys (striped canvas). Two were unoccupied, the third supported a rather disreputable looking trapper who was in the process of lacing up his leggings.

Next, on March 28, 1954, the New York Times Sunday Magazine published an article on circus clowns by Bill Ballantine, who was then a major attraction with Ringling Brothers, Barnum & Bailey at the old Madison Square Garden. Illustrations of the article (drawn by Mr. Ballantine) included a picture of a sad clown relaxing in a wooden, folding, pre-Hardoy Hardoy—his feet propped up on a big, old-fashioned foot-locker.

A few weeks later a small, torn booklet published in 1905 turned up in a pile of "10¢ Specials" outside a second-hand book dealer's place near Manhattan's Cooper Union. The volume was entitled *The Complete American and Canadian Sportsmen's Encyclopedia of Valuable Information* and its author was one Francis H. Buzzacott of Chicago. Buzzacott was a member of numerous expeditions, including the British South African Expedition of 1878-79, the Voyage to the Arctic of 1881-84, and the Wellman Polar Expedition of 1906. No slouch on his feet, in other words, though clearly quite a slouch sitting down: his little book contained no less than six drawings of the pre-Hardoy Hardoy (a rather more dashing stripe than Teddy Roosevelt's—something along the lines of an Old School Tie). He mentioned the chair as a piece of standard equipment for hunters, trappers and fishermen, but added that since it weighed about seven pounds, anybody who lugged it around with him instead of making his own, improvised furniture of sticks and branches should never have left the comforts of home in the first place.

Then, in the spring of 1954, a gentleman returning from a holiday in France, reported



that he had walked into a housewares store in Le Havre only to find that the place stocks (and has always stocked) a close cousin to the pre-Hardoy Hardoy for sale as a beach chair to vacationists planning to relax at Deauville. This particular chair, like Teddy Roosevelt's, was of wood and folded; it had a somewhat lower back than the Colorado version so that the sitter looked even more hopelessly entrapped than he or she would in the conventional Hardoy. Finally, the canvas sling, being French, had big and bold stripes in very bright colors.

Finally, in June, 1954, a new showroom was opened by the Olivetti business machine people on Fifth Avenue. Its seating equipment: a dozen, very dashing, folding, wood-and-leather, pre-Hardoy Hardoys. We questioned Dino Olivetti, then the head of the American branch of the company, on the origins of the chair. "Of course you know," he said, "it's the *Tripolino*, standard equipment with the Italian Air Force in the North African Campaign." "Which North African Campaign, for God's sake?" we asked, our patience wearing thin. "Well, it's really an English invention," Olivetti confided, smiling mysteriously. "Issued to all the Colonials."

Well, we really did not know much more than we had known when we started, but things seemed to be looking up. Clues were piling up. The trouble was that neither one of us happened to be going to Buenos Aires, or to North Africa, or to Deauville. The circus was down in Sarasota, and Buzzacott and Teddy Roosevelt were dead. Yet we felt that the answer might be just around the corner. It was. To be specific, we found our first really productive clue to the strange history of the Hardoy Chair on the eighth floor at Abercrombie & Fitch's, on the corner of 45th Street and Madison Avenue, in New York.

People who slink through the Furniture Departments of big U.S. stores, searching for the manufacturer's label on this table or that sofa, are not especially popular with the management: almost anybody who knows an architect or a decorator can get a piece of furniture at a considerable discount if he can discover the manufacturer's name—and this, of course, is not news to the store's salesmen.

When a tip was received late in the summer of 1954 that two pre-Hardoy Hardoys had been sighted amongst the outdoor furniture at Abercrombie's, we made an immediate trip to the site and found the objects of our search without difficulty. They were rather angular, consisting of 12 straight pieces of wood ingeniously joined, hinged and braced, and covered with a rectangular khaki canvas sling. One chair was smaller than the other, but both followed the "tangled hairpin" principle of the modern Hardoy in every major respect. Both chairs, of course,



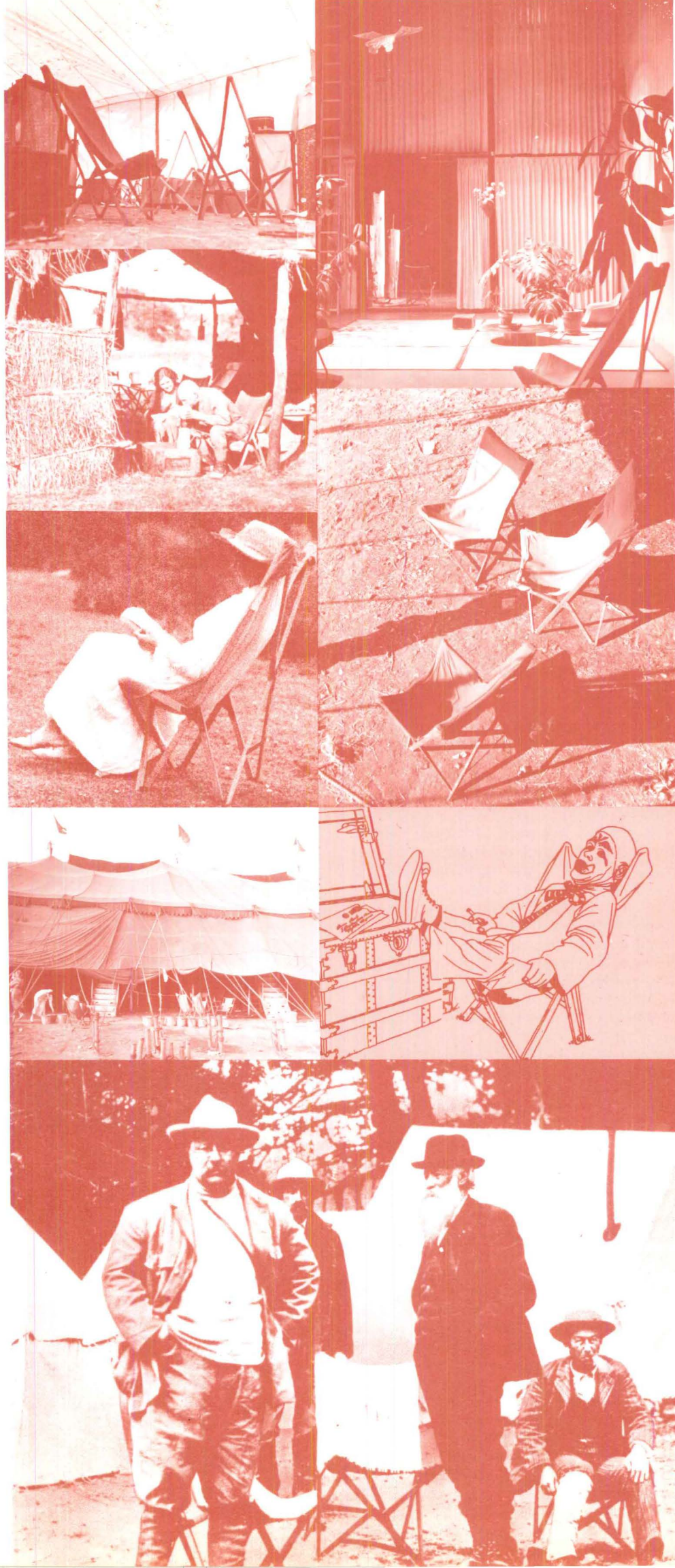
Other wooden versions shown in these illustrations include an assembly of circus chairs; a view of the living room in Charles Eames' own house, showing one of the latter-day circus chairs in use; assorted photos taken in the Lewis and Clark National Forest, Montana, at the turn of the century; a very proper lady (at about the same time) resting in an early Gold Medal Chair; and, at bottom, a 1903 photograph of Theodore Roosevelt and John Burroughs, camping out in Colorado. The drawing by circus clown Bill Ballantine appeared in the N.Y. Times in March, 1954.

folded. Both bore a small metal shield with the words "Gold Medal, Racine, Wis."

An inquiry addressed to the manufacturer produced an immediate reply from a Mr. L. V. Anderson: "It is our understanding that the first chair of this type was patented in Great Britain in 1877," said he. "The chair was placed in production by the Gold Medal Folding Furniture Company about 1895. When furnished with natural wood frame and khaki colored canvas covers, it is widely used by campers, sportsmen, hunters and for use in cottages and lodges. Originally the chair received much publicity because of its extensive use by game hunters and explorers. It was further popularized when pictured in use by such outstanding celebrities as Thomas Edison, Firestone and Henry Ford. We do not know," Anderson added, parenthetically and thoughtfully, "how the chair became a standard piece of equipment with the Italian Army officers during the Ethiopian War..."

To support his story, Mr. Anderson enclosed a page from the 1915 edition of Gold Medal's "Camper's Manual." The description of the chair is quite specific, and a detailed drawing (Old School Tie striped canvas) is very close to the modern, wrought iron Hardoy—except, of course, for the fact that the 1915 Gold Medal job is of 12 straight pieces of wood (rather than a bent iron rod), that it is hinged at all corners and at all X-crossings (rather than welded into a continuous hairpin tangle), and that its sling is rectangular (rather than four-leaf-clover shaped). The descriptive text states, among other things, that the chair "is strong enough to support the weight of the heaviest man or woman, being guaranteed to easily sustain a weight of 200 pounds." Teddy Roosevelt, who weighed something well over 200 pounds in 1903, may have served as an unwitting test pilot. The blurb continues: "It is comfortable for all, adjusting itself perfectly to the body and affording a better rest than any other folding chair made." The price was \$1.66 each. The weight, 6½ lbs. Another, slightly larger model, selling for \$2.08 and weighing 7 lbs., was also listed. The design of the Gold Medal chair changed very little—if at all—over the past 60 years: the only new features listed in the 1954 Gold Medal catalog are a version with a plaid, woven plastic seat in place of the original canvas—and, of course, a price about six times that of 1915. Alas, Gold Medal no longer makes it.

The Patent Office in Chancery Lane, London W.C.2., confirmed Mr. Anderson's recollection. In exchange for the sum of 3s. 6d., the Patent Office sent along a set of photostats of the original documents. These showed that a patent was indeed taken out on the 22nd of March, 1877, by one Joseph Beverley Fenby, a Civil Engineer, of Yardley, Worcestershire, for the





invention of "Improvements in Camp or Folding Stools, Chairs, Tables, and Beds." The patent drawings show a chair virtually identical with the Gold Medal type of today, though somewhat simpler in construction since it consists of only ten pieces of wood instead of Gold Medal's 12. The patent was granted on September 15th of the same year.

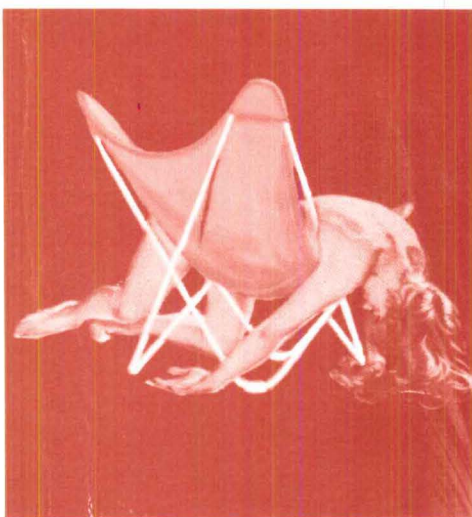
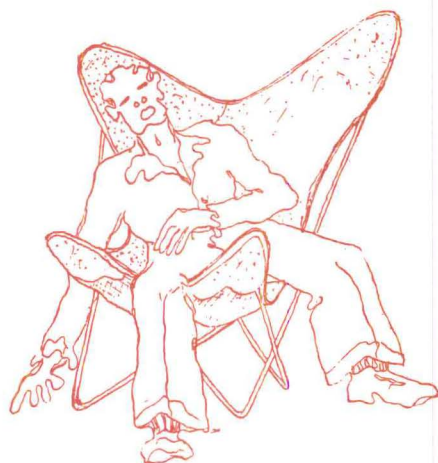
As if to anticipate the aura of confusion that was to surround his chair for the next 75 years, Fenby launched his invention with several hundred words of relentless doubletalk. His basic invention, it seems, was not the present Gold Medal chair at all—although it, too, was covered by his patent in footnotes and drawings—but, rather, a contraption remarkably similar to the beach chair recently discovered by our friend at Le Havre. For Fenby's prototype consisted of only eight straight pieces of wood, all identical in length, all crossed at the center to form four X's, all joined to each other at the ends to form a continuous frame. The canvas sling was square. Here is how he described his invention: "The folding parts of the stool consist of four pairs of bars, the bars of each pair crossing each other at the middle of their lengths, and being connected together where they cross by a pin or centre on which they turn. The tops and bottoms of the bars of each pair are connected respectively with the tops and bottoms of the bars of the adjacent pairs, so that the whole of the bars are combined together, the bars of each pair by the joint at their crossings, and the several pairs with each other at their tops and bottoms..."

As for the sling: "By means of a flexible top or webbing placed upon the summit of the folding frame the seat or camp stool is completed, the said flexible top or webbing being furnished with angle caps in which the summits of the jointed bars engage."

And as an afterthought, Fenby mentioned the chair that was to cause all the trouble later on: "For a camp chair, four of the bars are made of an additional length so as to serve as a support for the back of the sitter."

For a man who was to revolutionize the sitting habits of millions of people three generations later, Joseph Beverley Fenby made a remarkably small splash in his own day. In fact, the 1877 patent is just about the only remaining record of his achievements. He died in 1903, in King's Norton, not far from where he was born.

Whether Joseph Beverley Fenby had his chair manufactured in England right away is not clear. There is no evidence today of any production of the chair between 1877 and 1895, when Gold Medal, in Wisconsin, began to make it. Evidently Fenby sold the rights to his invention to different people in different countries: according to Gold Medal, he transferred the American rights to a Mr. Jason Marvin Bowen,



of New York; the French and Italian rights seem to have been sold to manufacturers in their respective countries at about the same time.

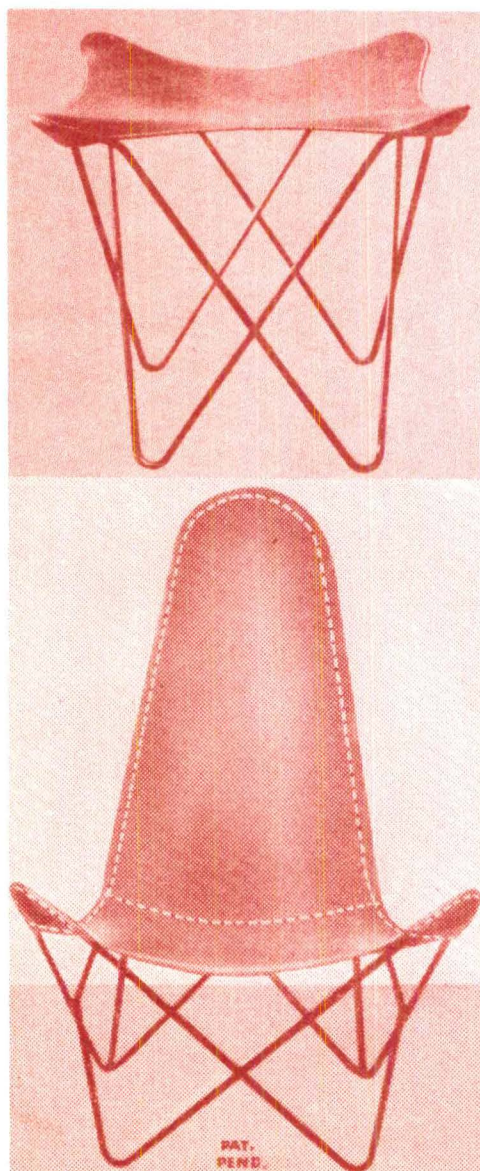
Once the Fenby Chair got into large-scale production in America, it became an immediate success. During the St. Louis World's Fair, in 1904, a "Complete Tented City" was erected at a cost of \$60,000. Fenby Chairs were used in many of the tents, and surviving pictures of the large "Hospital Pavillion Tent", in particular, show striped Fenby Chairs in great profusion.

Shortly thereafter, the Fenby Chair invaded the circus as well (where it is still enormously popular with clowns, and where it is still referred to as the "circus chair"). Mr. Pat Valdo, the Ringling Brothers' personnel director, who was with the circus for more than fifty years, recalled that the first time he saw the Fenby Chair was in 1909. Oddly enough, that particular job was home-made by a member of an Italian acrobatic troupe—a fact which, together with information supplied by the present Italian manufacturer of the Fenby Chair, seems to confirm the belief that Fenby sold the rights to Italy as well as to the United States. Until the Italian acrobat turned up with his version, circus performers had been forbidden to carry chairs of any sort because they took up too much room. According to Bill Ballantine, the Ringling Brothers clown, the only dressing room seating arrangement available to performers up to that time was a kind of board attached to the side of their foot lockers. "The circus has a bit more space for carrying things now," Ballantine wrote, "and performers like the newer style chairs of aluminum because they are more comfortable and more elegant. However, the old circus chair is still widely used."

Although Gold Medal had cornered a large American market for Fenby Chairs by the turn of the century, several versions kept on arriving from abroad. In addition to the Italian acrobat's contribution, at least four Fenby Chairs are known to have arrived in this country in the summer of 1912, from England. The critic and historian, John McAndrew, recalled them vividly. "I was quite literally brought up on those chairs," he wrote in the fall of 1954. "My family had four of them at our camp in Maine. They were known as 'officer's chairs' and I have some memory that my father had seen them in England, and that they had been brought there by some English friends who had been stationed in one of the British African colonies. I remember all this because the chairs were so unfamiliar and so striking to people who visited us that we were often asked about them. The cloth cover on the chairs was pink and white awning stripes—and very showy." McAndrew was not to see anything quite like those chairs again until 1940. In that year, a blurred picture of something remarkably similar to his childhood chairs was printed in *Retailing Daily*. McAndrew recog-



The leather-sling Hardoy Chair, in the Industrial Design Collection of New York's Museum of Modern Art, is shown on the opposite page, together with an early cartoon from a French publication, and a drawing from the cover of "Strangle Hold," a mystery novel by Mary McMullen. On this page, below: a leather-sling stool spawned by the Hardoy Chair, and sold in the U.S. in the 1950's; and a so-called "Swami Chair," of roughly the same period. At right, an advertisement showing a "Juvenile Model" of the Hardoy Chair, which sold for \$8.95 in the 1950's; and the cover of a contemporary issue of Ellery Queen's "Mystery Magazine."



nized the picture at once. He was then Curator of the Department of Architecture at the Museum of Modern Art, and in an excellent position to do something about the little blurred picture he saw in the trade paper. What he did had some far-reaching results.

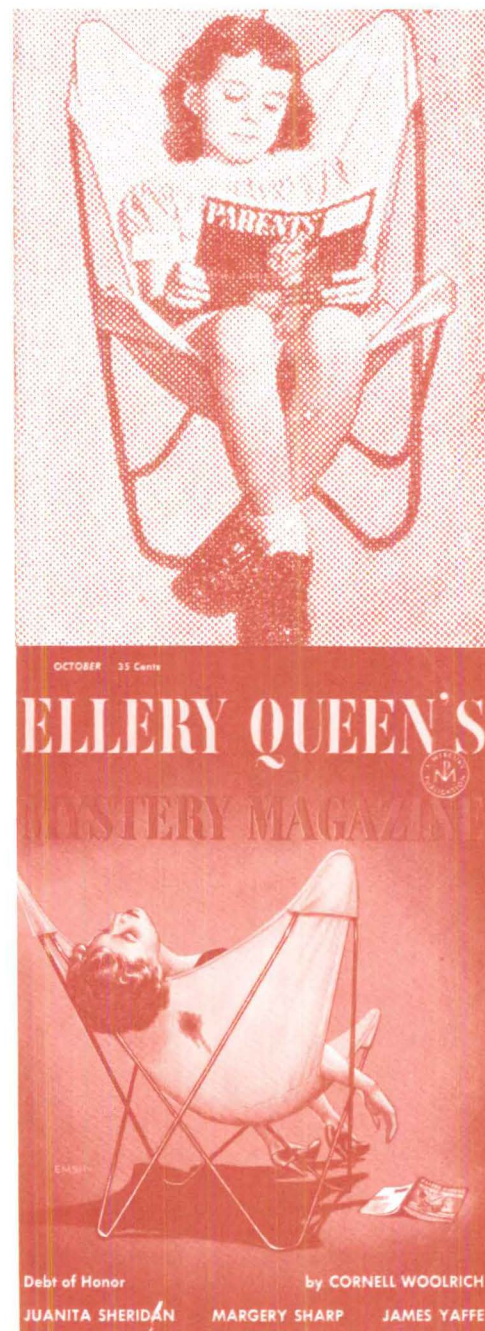
The picture that appeared in *Retailing Daily* on March 6th, 1940, was described as a "newly invented Argentine easy-chair with detachable seat-back . . . for siesta sitting." The caption under the picture also stated that the chair had been "copy-righted by Grupo Austral, Buenos Aires," a *nom de plume* for Bonet, Kurchan and Ferrari-Hardoy. They had just won an Argentine furniture competition with the design, and it had attracted considerable attention in Buenos Aires. Their chair was identical in every major respect with the Butterfly Chairs currently mass-produced throughout the United States. Its sling was made of leather.

There is little question that the three designers had seen the original Fenby Chairs in Europe. All three had studied with Le Corbusier in Paris, in 1937, and Hardoy himself had traveled extensively in Italy and France, where Fenby Chairs existed in profusion. The architect Bernard Rudofsky remembers the Fenby Chair well: it was very popular in Italy in the 1920's, and it was generally made with a leather sling on a folding, wooden frame. "It seems to me that I heard it was being manufactured in Libya and had always been standard equipment in the French-African Colonies," he has volunteered. That just about made it unanimous.

In 1940, when the small picture appeared in *Retailing Daily*, the manufacture of modern furniture in the United States was still in its infancy. Among the few men daring enough to make or sell modern pieces was Clifford Pascoe, who carried on a small New York enterprise under the name of *Artek-Pascoe*. His handsome showroom, on East 48th Street, was one of the few strongholds of the design avant-garde in New York at the time, and every one of its members who could afford it, bought Mr. Pascoe's imported Finnish furniture of bent birch.

Since the Museum of Modern Art was the strongest outpost the avant-garde had managed to establish in Manhattan, it is not surprising that John McAndrew should have got in touch with Pascoe immediately after seeing the picture of the Hardoy Chair in *Retailing Daily*. At the same time, Edgar Kaufmann Jr., who was then in charge of industrial design at the Museum, and who had also seen the picture in *Retailing Daily*, wrote to Hardoy asking "how much?" Upon learning that he could import one for \$25, Kaufmann ordered the first two Hardoy Chairs ever to enter the United States.

Hardoy was greatly interested, after winning the furniture competition, in having the chair





The cartoon, at right, appeared in the N.Y. Times Sunday Magazine of December 5th, 1954. The illustrations on page 80 show Fenby's original drawings for his patent granted on September 15th, 1877. Attached to the drawing are two additional items uncovered by the authors' relentless research: a cheesecake calendar printed in 1954, and a clipping of the brief story that appeared in Retailing Daily in 1940.

produced in the U.S. and in Europe, and succeeded almost immediately in interesting Raoul Guys, the Paris decorator, to manufacture Hardoy Chairs in France. Guys continued to make them for many years, exactly to Hardoy's specifications.

In the United States several manufacturers were considered, including Pascoe and Hans Knoll. Pascoe's offer won out at first: the arrangement was to have Pascoe make the wrought iron frames in America and to import only the leather slings from Argentina, where leather is cheap. The arrangement held good until the time of Pearl Harbor when the metal shortage forced Pascoe to stop production. He considered the venture a failure: he had managed to sell fewer than 1,500 chairs all told, most of them to young artists and architects around New York and Boston. It is unlikely that any of these pioneers knew, when they bought the chairs, that they were joining a rather non-select fraternity that included circus clowns, animal trainers, campers and African colonials. Much of the charm of the Hardoy Chair must have seemed to them to be its exclusiveness. For about \$75 (leather sling), the purchasers felt, they were buying a product that admirably combined the qualities of a rare modern *objet d'art* (in the manner of the daring, free-form abstractionists) with the possibilities of unusually abandoned sitting. Moreover, this remarkable contraption identified its owner—or so the owner thought—as a charter member of a very small elite, far ahead of its time. There was a lot of pioneering to be done in furniture design: Pascoe himself, in introducing the Hardoy Chair in his 1940 catalog, waxed indignant about the past "excesses of Victorian design," which he felt were still with us. He did not know, of course, how right—or how close to home—he was. Nor did his 1,500 bright-eyed customers know that their newest favorite had been designed originally by a loyal subject of the great Queen.

By the time World War II was over, the Hardoy Chair had become well known far beyond the confines of New York and Boston. Clifford Pascoe's early and short-lived version had hauled down in publicity what it had failed to attract in cash sales: an Associated Press picture of the chair was reproduced in more than 500 American newspapers alone. Moreover, the chair had received the surest accolade of all—it had become the butt of numerous jokes and cartoons. As Freud had pointed out in discussing jokes about psychoanalysts a couple of generations or so earlier, this was the one sure sign of popular acceptance.

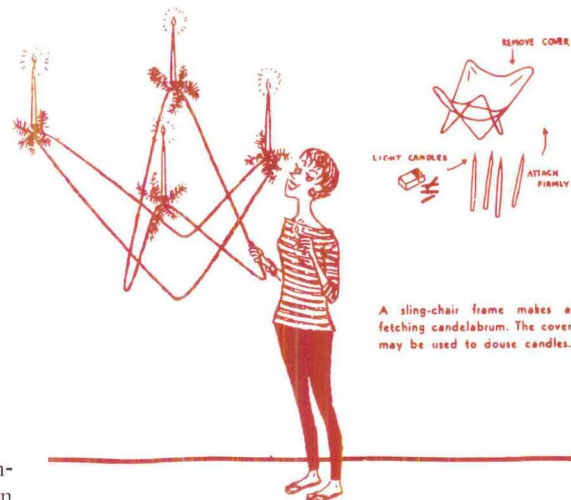
Such popularity was soon to tempt some of the more adventurous admirers of the Hardoy Chair. At the Harvard Graduate School of Design, a number of young architectural students decided that they would like to have a couple

of Hardoys made for themselves and their immediate friends. They approached the Burtman Ornamental Iron Works at Roxbury, Mass., and had a few chairs made there at a cost of only \$11 per chair. At the same time, in New York, Hans Knoll, the modern furniture manufacturer, was taking up where Pascoe had left off at the time of Pearl Harbor, and under a royalty agreement with Senor Hardoy began to manufacture the chairs commercially. His investment, both in equipment and in publicity, was soon quite considerable, and as a result his retail price for the chair (with a canvas sling—an innovation first thought up by Pascoe in 1941) was in the neighborhood of \$35. After Knoll had thoroughly popularized his "official" Hardoy, people all over the United States caught on to what the Harvard students had discovered in their own, limited ways: i.e. that the chair could be made a lot more cheaply, especially if your overhead was small, your publicity costs nil, your wrought iron frame thinner, and your royalty payments zero.

Before long Knoll discovered that Burtman Ornamental Iron had gone into fairly large-scale production, without the knowledge of the Harvard architectural students who felt that there should not be any commercial exploitation of the design without the designer's consent. Another Harvard student—this one a poet—had fewer scruples: he gave up poetry, moved down to Greenwich Village, and started to manufacture his own Hardoys for sale in a shop on the lower West Side. A similar and prosperous little clandestine operation seemed to be flourishing in the vicinity of Providence, R.I. Knoll's lawyers thought that Knoll should sue *somebody*—if only to scare his competitors (who had driven the retail price down to around \$21.50) out of business.

There is very little effective design protection under the law in the United States. Design Patents mean very little. Copyrights mean less. Because Senor Hardoy's English was somewhat broken, Knoll had gained the impression from the designer's letters that Hardoy had, in fact, obtained some sort of mechanical patent on the chair in Argentina. Such a patent, if indeed granted, might have conceivably helped Knoll in his lawsuit. Unfortunately there was no such patent: all that Senor Hardoy *did* have was something resembling a Buenos Aires copyright, and this would not carry very much weight in an American court of law.

Knoll's lawyers believed that the laws of the State of Massachusetts offered the most favorable conditions for a test case, and they proceeded to sue Burtman Ornamental Iron. The case was of considerable interest to all American designers, and a favorable decision for the plaintiff might have been of enormous help to many whose original designs have been pirated for years by unscrupulous manufacturers (and







Associated Press

RUSSIA'S VLASOV  
Portliness won't mix with butterflies.

by other designers). Unhappily, the decision went against Knoll. There was some suggestion, on the part of the judge, to the effect that imitators could be restrained from copying any little trade marks that Knoll might wish to print on the canvas slings of his chairs, an idea which Knoll found repugnant. He decided that this sort of thing might affect his image with the avant-garde, and went out of the business of making Hardoys. The time was 1950, and Hardoys were quoted at around \$19.95, retail.

The news of the court decision traveled like wildfire, and within a matter of weeks welding torches were flashing from Maine to California. The Hardoy Rush was on. In Greenwich Village the ex-poet started to mass-produce Hardoys at a phenomenal rate, cutting his labor costs down to 6¢ per chair. Across the East River, in Astoria, a Brooklyn entrepreneur bought a new factory and started making Hardoys too. 3,000 miles away, in Los Angeles, everybody with a welding torch was making them: by the end of 1954, the Hardoy-production in that city alone amounted to a conservatively estimated 3,000 chairs a week.

It did not take long for certain class-distinctions to develop among these manufacturers: the best among them—two or three had actually made some sort of royalty-deal with the all-but-forgotten Senor Hardoy—made a chair with a frame of  $\frac{5}{8}$  in. diameter wrought iron. The majority made a chair with a  $\frac{1}{2}$  in. rod. And some cut-rate operators in the business tried to get away with a  $\frac{3}{8}$  in. diameter rod—certainly not strong enough to support any latter-day Teddy Roosevelts.

As Hardoys moved into mass-production, the price dropped rapidly. Within a few weeks after the disappearance of the Knoll-Hardoy, the retail price of the canvas sling model leveled off at about \$14.50. It did not stay there for very long. Soon it had dipped again to around \$11, then down to about \$8.75, until, finally, it was possible to buy the chair, on and off, for as little as \$5.95 (with a  $\frac{3}{8}$  in. diameter rod). That seems to be about rock bottom, for the low price has stayed above that level for several years. By comparison, the traditional American ladder-back wooden chair, for decades a staple in furniture shops in the South, sold for \$10 or \$15, at about the same time, and you could not really curl up in it.

It is difficult to fix the exact date on which the Hardoy Chair became an acknowledged piece of standard equipment on the American scene. It happened sometime between 1948, when the high-fashion magazines began to show their models photographed reclining in a Hardoy, and Christmas of 1954, when the New York Times' Sunday Magazine published some humorous hints on do-it-yourself Christmas decorations, and included a method of turning your

"Sling Chair" into a fetching candelabrum. It was implied that every reader of the New York Times owned at least one Sling Chair. By the end of 1954, also, several middle-to-low-brow barometers registered the Hardoy regularly: a yellow-sling, black-frame Hardoy appeared on the cover of Ellery Queen's Mystery Magazine, stained with the blood of a limp brunette who had been done in with a pistol. Mystery fans picking that particular copy off the news stands may have noticed that there was a strikingly similar display on the wrapper of another whodunit. That one was entitled *Strangle Hold*. The girl, in this case, was a redhead. She was nude, the chair had a white frame and a green sling, and the cause of death was asphyxiation with a tie.

But much more impressive, perhaps, than any of these signs of popular acceptance of the chair itself is a development so pronounced in the annals of American homefurnishings as to merit the label "style." Without the slightest doubt, the Hardoy chair introduced a new style into American decoration, a style as clearly identifiable as Mission or Art Deco or Art Nouveau: its trademark is the tangled hairpin, generally used as a leg to support some heavier object. Perhaps the first man to recognize the advent of this new style was the furniture designer Edward Wormley who, in 1949, warned the National Home Fashions League in New York that a "Mosquito Leg" school of design was on the march. The "anopheles school of thought," he called it. And he was absolutely right: before very long there was, of course, a baby Hardoy, 10-in. high (for modern tots). There were anopheles stools, anopheles lamps, anopheles ashtrays, candlesticks, wastepaper baskets, tables, chests, bowls for fruit, and anopheles on drapes.

Moreover, the bent hairpin fashion has produced a whole flock of new chairs that compete directly with their own sire: there are Sloop Chairs and Bucket Chairs and Sunflower Chairs and Bathtub Chairs and chairs consisting of needle-sharp, cone-shaped baskets perched on hairpins. (They come with cone-shaped pillows that slip into the end of the basket—presumably a half-hearted concession on the part of the designer when he discovered that few of his friends were cone-shaped in the appropriate places.)

And then, one day, along came a man who figured out a way of making the Hardoy Chair fold like a telescoping umbrella . . .

As the Hardoy Style began to sweep the world, the avant-garde which had been responsible for its success found itself in an unfamiliar dilemma: as the late Frank Lloyd Wright once pointed out, there is nothing quite as unsettling for a professional radical than to discover that he has become fashionable. The avant-gardists,

brooding in their white-walled living rooms, decided that the Hardoy Chair must go.

At first it went into the nursery, to be demolished by the tots. When that failed, it was kicked out into the garden, where the weather might slowly take its toll. Rumors were circulated to the effect that the popularizers had made changes in the exact curvature of the original hairpin frame and in the exact shape of the sling. Serious doubts were expressed that Hardoy ever would have made his slings from more than two pieces of leather, or that he would have used rubber sleeves to cover the four tips of the frame where it touches the ground. A whisper-campaign of defamation spread through design circles. The word was "thumbs down on Hardoy."

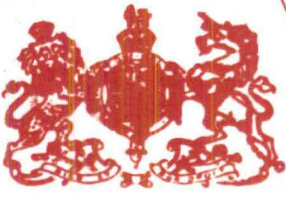
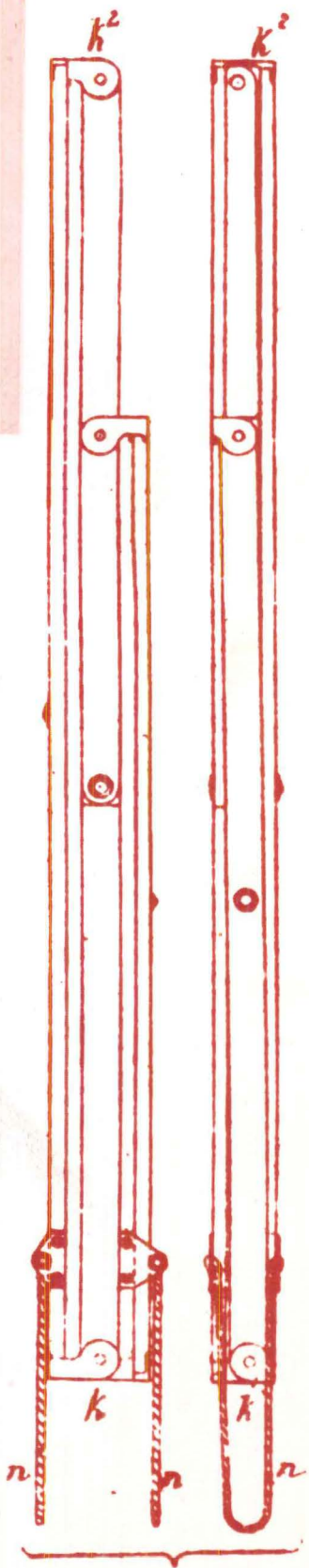
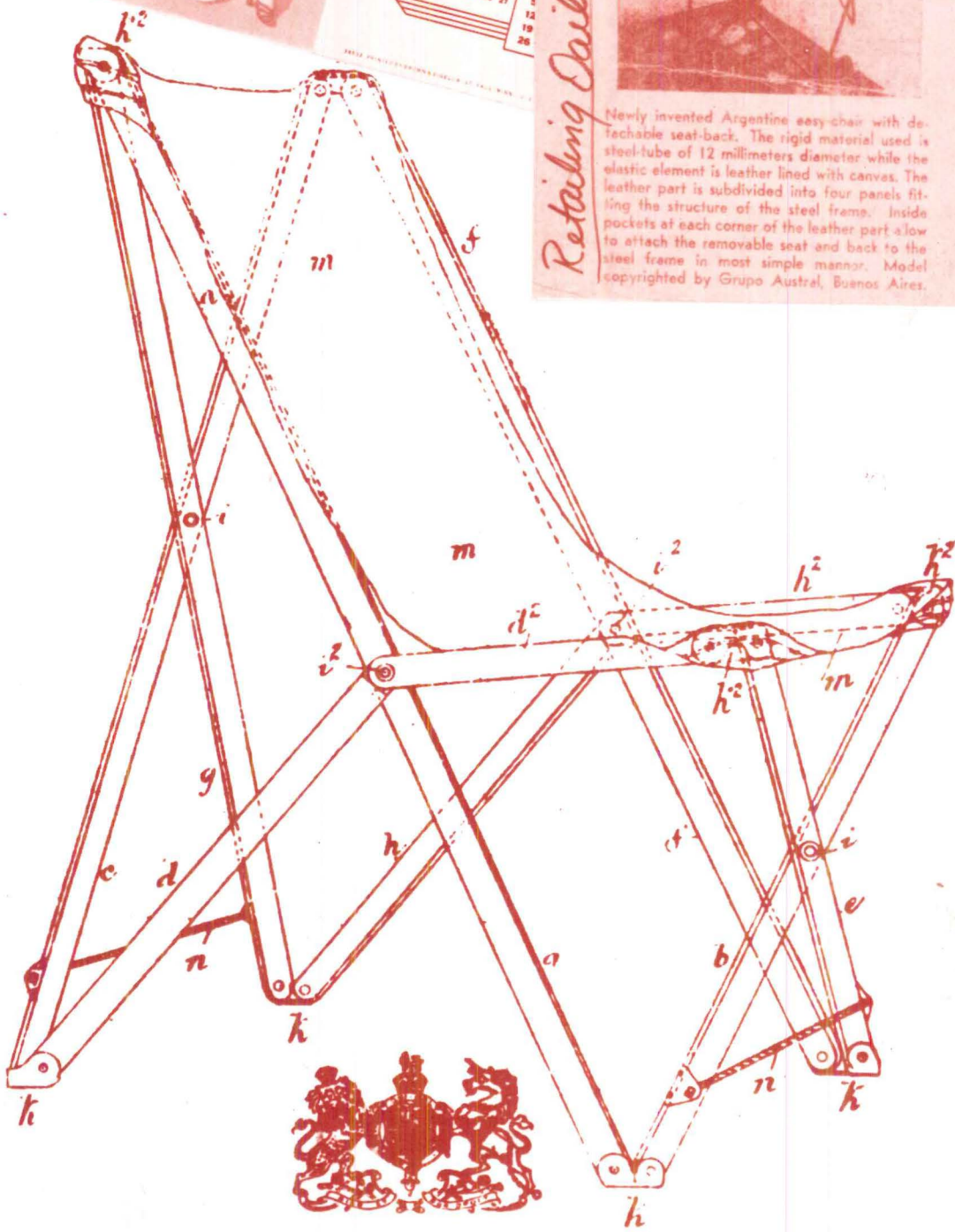
Thumbs down or not, avant gardists still had to sit down somewhere, if only to brood. They got their answer from a leading member of their own set: Charles Eames, the perennial youth from Venice, California, who had made some highly original contributions to the art of sitting himself.

Mr. Eames is what Russell Lynes once called a "Tastemaker," and his next moves have been watched by thousands of designers and hangers-on from coast to coast. He justified their faith in this crisis as he had many times before: as the Hardoy Style invaded the American market, as it swept triumphant through Sears Roebuck warehouses, as it made the pages of *Life* and the counters of Woolworth, word was received from the West Coast that Mr. Eames had found a way out: a new kind of chair had appeared in his famous house, a curious chair of many pieces of wood, hinged together so that it could fold, covered with a khaki canvas sling. A really wonderful chair, an indigenous product. Mr. Eames—so the story went—says that the circus clowns have used it for years. It seems that it has been manufactured somewhere in Wisconsin ever since the turn of the century. Rather like the Hardoy Chair, as a matter of fact, but in its *un*-designed, primitive straightforwardness a much more beautiful object, of course. Really a work of unconscious Machine Art. Historians report that the chair originated in the British—no, the French Colonies. Anyway, it was standard equipment with Italian Air Force officers in the North African campaign. Or was it during the Ethiopian War?





FIG. 6.



A.D. 1877, 22nd MARCH. N<sup>o</sup> 1138.

Folding Stools, Chairs, &c.

LETTERS PATENT to Joseph Beverley Fenby, of Yardley, in the County of Worcester, Civil Engineer, for the Invention of "IMPROVEMENTS IN CAMP OR FOLDING STOOLS, CHAIRS, TABLES, AND BEDS."

Sealed the 15th September 1877, and dated the 22nd March 1877.



“What some of you do  
with some of our products  
is amazing”



“absolutely amazing.”

Dick Raab, Vice President, Eastern Products Corp.



# CEILING

You've created dramatic, subdued, concealed, exposed, extravagant, modest acoustical ceilings everywhere . . . with our grid suspension systems.

You've taken our Tab-Lock acoustical grid suspension systems and used them as the backbones of every kind of ceiling design imaginable.

And why not? Eastern's Tab-Lock systems give you *total design freedom*. Styling to complement any design, and the strength to support it.

Simple to install, surprisingly economical, with the tensile strength and rigidity of steel, it's no wonder so many of you have turned to Tab-Lock for support.

Here, see what we mean:

**Tab-Lock:** Old reliable, stylishly supports functionally beautiful ceilings like those in Medco Jewelers, Oklahoma City, Oklahoma. Architect: Private Plans. Contractor: The Denman Company.

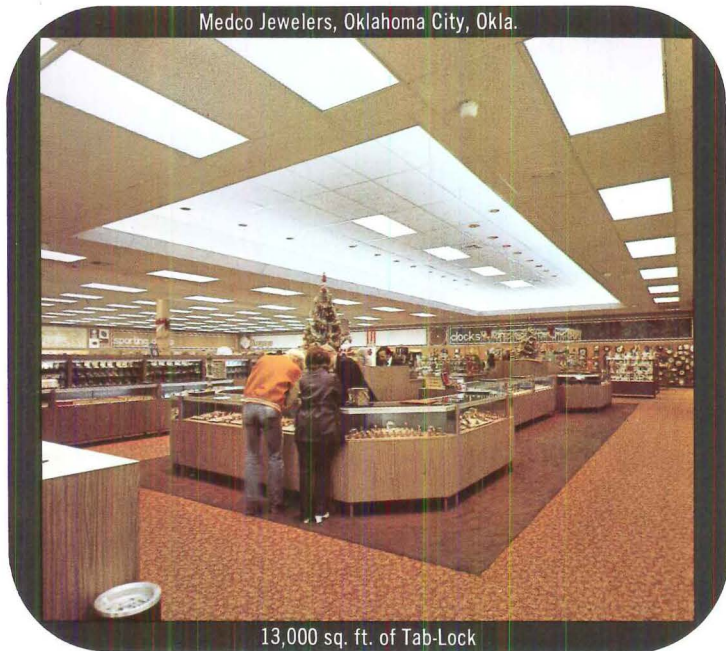
**Tab-Lock 281:** A true grid . . . in a concealed system . . . working behind the scenes in this exceptionally attractive ceiling at First National Bank

Building, Boston, Massachusetts. Architect: Campbell, Aldrich & Nulty. Contractor: K&H Contractors.

**Gemini+Plus:** A dramatic advance in suspension systems combines exposed runners with concealed elements to create a visually striking appearance in the soon to be completed S.W. Ohio Bell Telephone Company headquarters, Columbus, Ohio. Architect: Brubaker/Brandt, Inc., in association with Lorenz, Williams, Williams, Lively and Likens. Acoustical Contractor: Myron Cornish Co. General Contractor: Turner Construction Co.

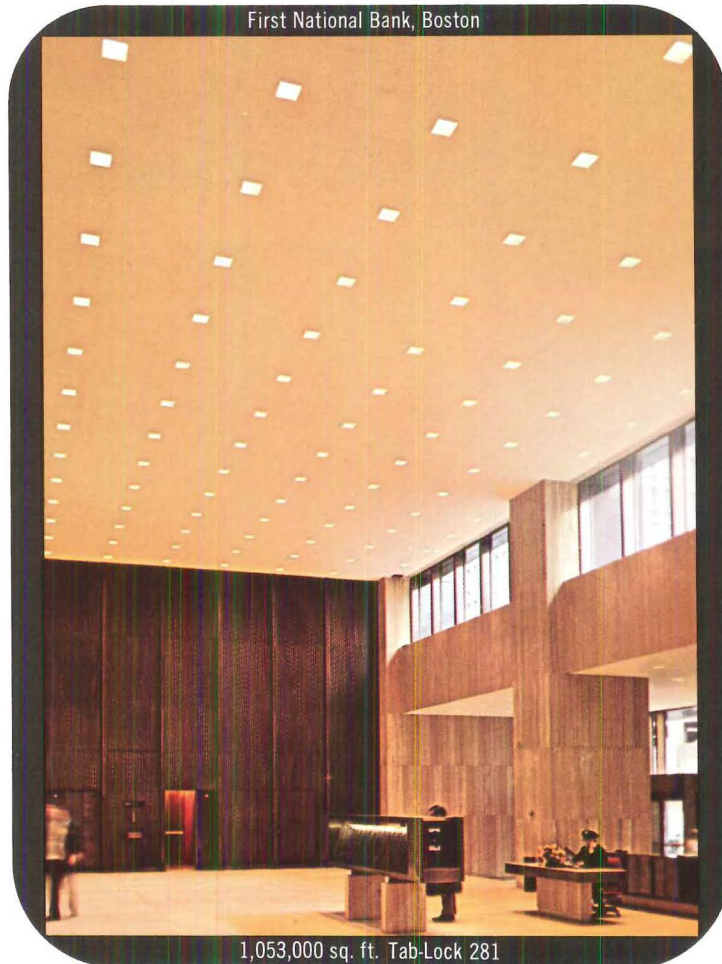
**Tab-Lock FIRESAFE:** The one to choose for fire resistive ceiling assemblies—attractive as they are functional such as this one in the K-Cinema, Sioux Falls, South Dakota. Architect: Mel C. Glatz & Associates. Contractor: Dakota Acoustical Tile Co.

Medco Jewelers, Oklahoma City, Okla.



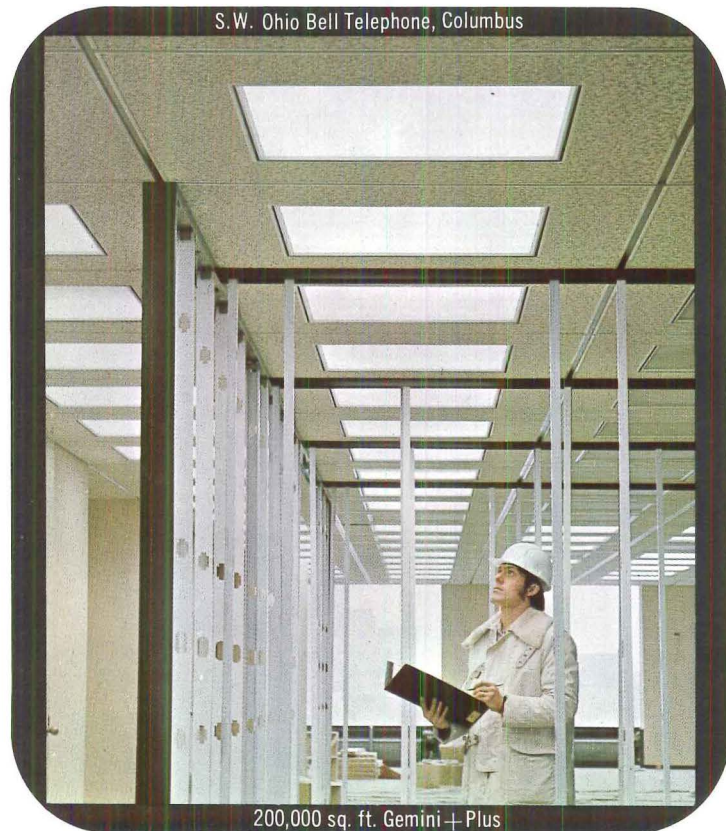
13,000 sq. ft. of Tab-Lock

First National Bank, Boston



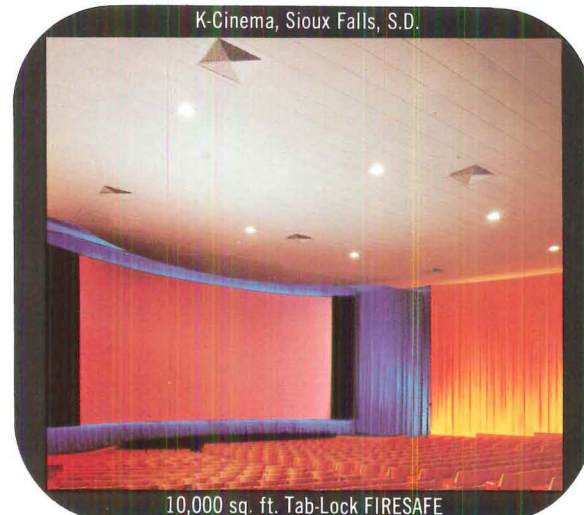
1,053,000 sq. ft. Tab-Lock 281

S.W. Ohio Bell Telephone, Columbus



200,000 sq. ft. Gemini+Plus

K-Cinema, Sioux Falls, S.D.



10,000 sq. ft. Tab-Lock FIRESAFE



was obviously this: the quaint notion that "Good Design Is Good For You" hasn't stirred anybody since, approximately, 1940 A.D.; the equally quaint notion that "Good Design Costs No More" has not been believed by anybody since that date, either; and Mr. Nixon's marvelously old-fashioned delusion that "good design can save money, time and maintenance" is merely another case of one of those rather quaint U.S. hang-ups that have always made Americans feel guilty about beauty as being, somehow, sinful. Unless something or somebody saves "money, time, and maintenance"—like, for example, a sturdy Hausfrau—it or she just *shouldn't* be beautiful.

Well, though the National Endowment for the Arts, and the National Council on the Arts, and the First Federal Design Assembly, and the First Federal Design Assembly Task Force, and the Federal Council on the Arts and Humanities, and their various sub-assemblies and sub-commissions—though these really extraordinary bureaucracies are, obviously, full of absolutely first-rate intentions and absolutely first-rate people, they are slightly out of touch. For example, not since the advent of Pop Art (approximately a dozen years ago) has anyone in his right mind thought that there was any such thing as inherently "good" design. And not since the early post-World War II days, when subjects like "Corporate Identity" thrilled international design conferees to their marrows, has anyone in his right mind thought that these were subjects particularly worth discussing outside the confines of a sales promotion meeting.

The Nixon Administration, like other administrations before it, is not entirely uninterested in the tricks of sales promotion. But should designers of high quality lend themselves to such tricks?

On the next morning, the action—if that is the word we are groping for—moved to an air-conditioned moratorium (if that is the other word) inside one of the worst buildings of the twentieth century: the home of the U.S. Department of State. There, supported by slightly enfeebled audio-visual sys-

tems, the Grand Old Men of the Grand Old Design Conferences of 1950 A.D. made their solid points, while bureaucrats and other kind hearts became comatose. Yet the presentations weren't half bad: Eliot Noyes' IBM and Mobil stuff was neat, and so was Saul Bass' stuff for Bell and, particularly, Lou Dorfman's graphic imagery for CBS. Herman Miller genius, Bob Propst, was sober, and Henry Dreyfuss heir, Niels Diffrient, was perhaps unintentionally hilarious—he showed slides of how to wire up a guy or a girl, electro-cardiogram-wise, so as to measure his or her responses to various environmental torture mechanisms. (The most bizarre of these appeared to be a combination acupuncture-of-the-eyeball, and printed-circuit band-aids applied to various erogenous zones on the human anatomy.) Paul Friedberg, the brilliant anti-landscape landscaper, was brilliant. But, by that time, most if not all had been lost.

In considering this rather trivial matter—this proposed coupling of the angels with the politicians—one feels that while the sponsors' intentions were lovely, they (the sponsors) may have been slightly soft in the head. The most interesting architects and designers in the world today—the farthest out, by far—are people like the members of Japan's Metabolist group, or Britain's Archigrammers; and to them the idea that "Good Design Is Good For You" must be about as daffy as some notion to the effect that "National Happiness Is Tricia Nixon's Wedding At The White House." In both cases, hucksters can be employed to make the absurdity seem plausible—almost, but not quite.

Perhaps the real problem is this: *The Arts are really the natural enemies of Government*, and should be. Not vindictive enemies by any means; just natural ones. And to attempt to enlist the Arts in bureaucracy won't work, and shouldn't. It is much more healthy to have those tensions between the world of dreams, and the world of pragmatism.

And, so, dear First Federal Design Assembly, and all those Task Forces that you command—we bid

you farewell; not in anger, but in compassion. "The artist," somebody once said, more or less, "must be a messenger of discontent." We are grateful for the kindness you showed the artists and the architects at that Super Assembly, and we will, some day, invite you to one of *our* parties. But you, the Assemblies and Task Forces and Federal Councils, you don't really understand too much at all.—P. B.



## What's new at NEOCON

The fifth annual contract furnishings convention will be held at the Merchandise Mart in Chicago on June 20-22.

One feature of NEOCON 5 will be the "New at NEOCON" product introduction program—many pieces of furniture will be shown for the first time anywhere.

Some of the speakers at this year's convention will be former Secretary of the Interior Stewart Udall, now chairman of "Overview," environmental consultants; Paul Dixon, author of "Think Tanks"; and Wm. Marshall, Jr., president-elect of the American Institute of Architects.

Architect/psychologist Sam Sloan will cover the topic, "People, Space and Psychology."

Seminars are scheduled on a variety of subjects, among them, the consumer revolt in the health care field and the role designers have in coping with this problem.

## Typography awards

Annegret Beier, the designer who photographed and wrote the story on the mosaic-encrusted house in Chartres that was published in the first issue of PLUS, this spring won three awards in the U.S. Type Directors Show. (She is the head of the Lubalin-Delpire studio in Paris.) One of the awards is for a pristine letterhead designed for the Editor of PLUS. The other awards were for her menus of two restaurants, La Paillote and Les

Cockiers, both located in the Meridian Hotel in Dakar, Senegal. She has also designed a letterhead for PLUS Field Editor Gilles de Bure in Paris which is even more illegible than the one she created for our Editor.

## Design prizes from Germany

The Braun Award is international and carries with it a prize of 25,000 DM. The award goes to young designers and technicians (students or designers who have practiced not more than two years).

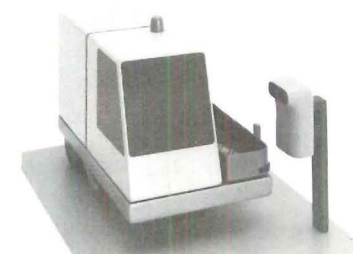
It is given by Braun AG of Frankfurt/Main, the manufacturing concern well known for excellence of product design. However, the production of the winning entries by Braun is not binding.

The three winners for 1972:

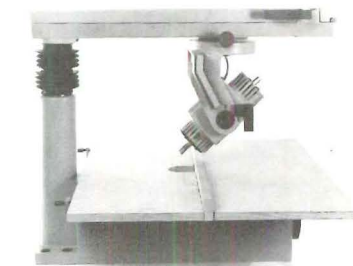
- a design team composed of Lothar Brendgens, Ludwig Littmann, Wolfgang Rebentisch, Peter Schneider, all of Germany; their entry was an automatic system for emptying litter bins.
- Nicholas G. Marchant, Great Britain, for his woodworking machine.
- Mordechai Rotenberg, Israel, for a hospital bed.

Seven further entries received honorable mentions and 1,500 DM each.—D. S.

A neater litter picker upper



Machine for woodworking



Hospital bed par excellence



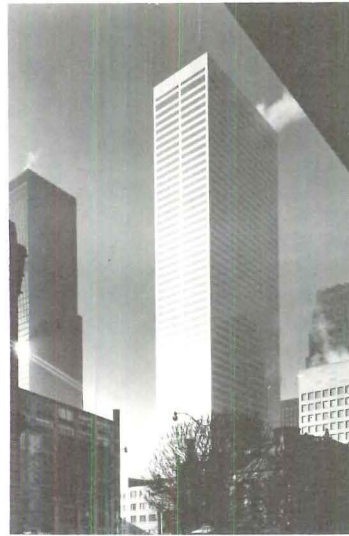




Jumbo hangar for the 747



Hillier house with central atrium



Commerce Court, Toronto



McCormick Place-On-The-Lake, Chicago

## Best steel

The Design in Steel Award Program, sponsored by the American Iron and Steel Institute, has announced the winners for 1972-73. In the field of architecture and design, awards were given in four categories, with many other structures receiving citations. The four awards were given to:

- I. M. Pei & Partners, for Commerce Court in Toronto, headquarters for the Canadian Imperial Bank of Commerce—the Highrise Architecture award (March issue, pp. 38-41).
- C. F. Murphy Associates, for

McCormick Place-On-The-Lake in Chicago—the Lowrise Construction Design award.

- Conklin & Rossant, architects, and Lev Zetlin Associates, engineers, for Superbay Maintenance Facilities, airplane hangars at San Francisco and Los Angeles—the Lowrise Construction Engineering award.

- J. Robert Hillier, architect, for his own home in Princeton, N. J.—the Housing Design award.

The 1972 Design in Steel winners were chosen from more than 1,000 entries in 14 categories.

## Build, said the judge

A federal judge has ordered the City of Hamtramck, Michigan, to build 530 units of low and moderate income housing, and said of local zoning laws restricting such dwellings, "These ordinances shall be deemed inapplicable."

Up to now, most decisions on urban renewal have been injunctions that halt future clearance.

The reason given for the court action was to make up for past discrimination against the city's 4,000 Black residents who were forced out of the city by "urban renewal."

The order to build, issued by Judge Damon Keith, will enable the displaced population to move back; they are to be given first priority to the new housing.

The judge also held that existing

homes offered for sale must be registered with a city agency, and stated that a public official would accompany minority residents when they wanted to look over a house.

Michael J. Barnhart, an attorney acting on behalf of the displaced residents, considered the ruling on the sales of existing housing more important than the ruling to build since it "creates a comprehensive and enforceable program for open occupancy to remedy the discrimination found to exist in the private housing market." He further said that the current HUD guidelines make urban renewal difficult to complete, and he estimated that there would not be any moderate cost housing construction at all in Hamtramck for some time.

## Mr. Blandings builds his dream headquarters

After trying to build for over a decade, the American Institute of Architects has finally moved into its new Washington, D.C. headquarters, seven floors of glass and precast concrete curving around the back of its old headquarters, the 1800 Octagon House. It has emerged from the experience with its image a bit tarnished.

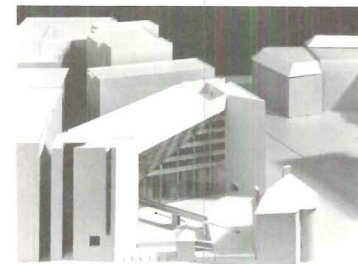
The first spot of tarnish was the embarrassment of holding a profession-wide competition to find the best possible design for the building, only to be told by Washington, D.C.'s Fine Arts Commission that the design, after some revision, was not good enough to be approved for construction.

Spot two involved the AIA's purchase of the handsome old Lemon Building next door. A straightforward Victorian job of carefully detailed, molded red brick, it might have become, as the Octagon has, a working example of the Institute's avowed concern for preservation. Instead, it was demolished to provide more room for the new building.

Spot three: despite criticism from the Fine Arts Commission, Mitchell/Giurgola's first, 1964...



... and their second, 1965...



... and their third, 1968



Final version by TAC



from Secretary of the Interior Stewart Udall and others that earlier versions of the building overwhelmed the scale of the Octagon, the built version provides not only three floors of office space for the AIA staff but also four additional floors for rental. In short, the AIA sacrificed planning principles in order to become the landlord of a speculative office building.

Spot four, by no means the AIA's own fault, is that the building design, as it progressed from one enforced revision to another, suffered an inevitable dilution of inspiration. Mitchell/Giurgola, whose very spirited first design won the competition, understandably resigned the commission after producing three different schemes, the original winning scheme rejected by the AIA itself because of an expansion of the program, and two later designs rejected by the Fine Arts Commission. Mitchell/Giurgola's replacement, The Architects Collaborative, has produced what one would expect from such a fine firm in such an impossible situation—a building that is competent, respectable, and quite ordinary enough to escape strong reactions of any kind. Its single relief from bland anonymity is a board room projecting rather menacingly toward the Octagon's unsuspecting rear.

Thus the new headquarters has risen from a battlefield littered with impressive casualties: Fine Arts Commissioners not very perceptive in the Fine Arts; Landmarks Preservationists; and distinguished competition winners. But the most notable casualty, perhaps, is the organization that represents the architectural profession in the U.S. Its credibility has not been very much enhanced.

## German design contest

The Bonn Government has announced an architecture competition for the Federal Diet and Federal Council ministries and central facilities. Participation in the competition, which is open to all architects living in West Germany and West Berlin, requires taking into consideration the results of a previously decided urban design competition.

Further, in the text of conditions it is stated, "The buildings will represent a contribution to the self-identification of the Federal Republic of Germany and express the basic principles of a democratic state and society. This concerns above all the relation between citizen and state. In a democratic society, the public authorities have



to serve the citizen and not the citizen the state. This means that any monumental aspect has to be avoided."

The first prize is 100,000 DM, and many additional prizes will be awarded totaling over 400,000 DM.—D. S.

*Other governments (e.g. that of the U.S., which awards many building commissions haphazardly) please note!—ED.*

## FDR goes on Welfare

Louis I. Kahn has been commissioned to design a memorial to FDR for Welfare Island, a slim strip of land in the East River bordering Manhattan, and the island is to be renamed for the late president. The New York State Urban Development Corporation, engaged in a massive building effort on the island, has agreed to provide two-and-a-half acres of the island's

southern tip for the project. The memorial has been commissioned by a private group called the Four Freedoms Foundation.

We hope Kahn's design will fare better than Marcel Breuer and Herbert Beckhard's 1966 design for a Roosevelt Memorial in Washington, D.C. Although accepted by the Roosevelt family and generally admired by architecture critics, it ran afoul of the District's powerful Fine Arts Commission, and its construction unfortunately now seems a dead issue.

Another hazard Kahn must beware is the spray from "the tallest jet of water in the world," the Delacorte fountain presently spouting (intermittently) at Welfare Island's southern tip. If, however, Kahn's plans, like Breuer's and Beckhard's, are shelved and replaced by an architecture-free rose garden, the problem then becomes: will the water of the East River support plant life?

## The Abbey of Sénanque

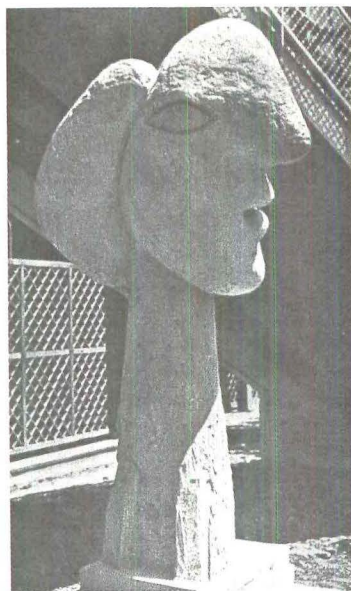
France is a very rich country in terms of natural resources such as castles, and like other rich countries, has tended to squander her wealth. Monasteries and churches, some dating back to the time when Caesar and his soldiers were building rest homes for weary and footsore Roman warriors, were often left abandoned.

A few years ago, this rule was reversed, and now the administration is taking good care of these treasures of its patrimony.

The National Treasure of Historical Monuments and Sites has determined that some of these ancient structures might be refurbished and put to very good use. By the prestige of their architecture and their original function, these structures already bestow an undeniable cultural influence, and they are being used, each in its own way, to respond to regional and national needs. An old abbey is now

being used with great success for art exhibits, happenings, concerts and conferences. The Abbey of Sénanque is one of six ancient religious structures which have recently been revived. This imposing complex sits in a tiny valley in the town of Gordes, 40 kilometers from Avignon. When Sénanque was built in 1148 by the monks of Mozan, the valley was reachable only by a muleteer's footpath. Except for the Vaudoise invasion in 1544 which ravaged the buildings, the abbey passed the centuries serenely. At the time of the Revolution, it was sold by the National Treasure to a gentleman from Provence. In 1854 his family gave the abbey to a religious community, which decamped in 1902.

Great care has gone into the restoration, with particular attention to the roofs. Unusable 19th century parasite additions to the complex were removed.—G. de B.



At Spanish Pavilion, Paris, 1937

## Obit

There is no painter, sculptor, or graphic artist practicing anywhere in the world today whose perceptions were not quickened by those of Pablo Picasso. Indeed, there is and was no visual artist functioning over the past 60 or 70 years who does or did not owe much of his inspiration to Picasso.

Picasso's impact on the development of modern architecture was less direct, but quite as significant. His 1908 painting, *Les Femmes d'Alger*, was, according to Alfred Barr, "the first cubist picture;" and it, in turn, decisively shaped the work of such Purist artists as Ozenfant and Jeanneret, later and better known as Le Corbusier; and the work of the Constructivists and the members of De Stijl and of the Bauhaus. And that just about takes care of 75 percent of the Modern Movement in architecture and design. No other artist in this century had so profound an impact on the development of modern architecture.

Picasso's collaborative efforts with architects were uneven in quality. Except, perhaps, for his famous *Guernica* mural (and his less famous sculpture) at José Luis Sert's Spanish Pavilion at the 1937 Paris World's Fair, Picasso's efforts in relation to significant modern buildings tended to look like afterthoughts, and often were: The Picasso mural in Breuer's UNESCO Headquarters, and the Picasso outdoor sculptures in Chicago and New York, are not among his best.

It would have been surprising if they had been. When he died, Picasso had completed an estimated 12,000 works of art, and contributed to the creation of thousands more. In so doing, he had completely changed the face of his time.

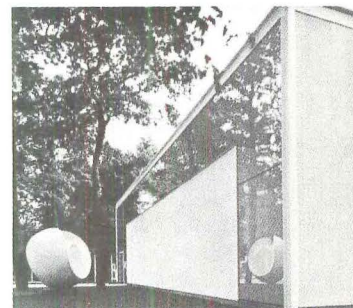
• December 2, 1972, one week after the death of Hans Scharoun

(Feb. issue) Wassili Luckhardt, another pioneer of German architecture, died.

Wassili, his brother Hans, and Scharoun belonged to a group of young architects called "glass chain," which after World War I tried to overcome the darkness of the war by producing what they called a new "Architecture of Light."

Luckhardt's designs, utopic and fantastic as they were (a design for a festival hall in glass was called "an die Freude," or "To Joy") were supposed to be shells for men longing for a more delightful way of living.

During the 20's his designs became more realistic. In collaboration with his brother, Hans, he built several flats and commercial build-



Berlin Pavilion, Hanover, 1951

ings in Berlin. During the Nazi regime, however, he was condemned to silence.

After World War II, Luckhardt created a few remarkable designs: the Free University, the America Memorial Library, a concert hall for the Music Academy, and others. Until the death of his brother in 1954, however, nothing was built, except the flats in Berlin, his own house and the Institute for the Physiology of Plants at the Free University.

His most famous building, which has become part of the history of architecture, is the Berlin Pavilion at the building exhibition "Constructa" 1951 held in Hanover.

With the death of Luckhardt, we lost not only one of the last avant-gardists of the "Neues Bauen" movement, but also one of the last "architects" in the universal sense of the word—an architect who followed his own way without compromises.—D. S.

Photographs: Page 18 (top left) Cervin Robinson. Page 19 (bottom right) Yeshiva University. Page 20, 1. Stephen Rosenthal 2. Hedrich-Blessing 3. Michael Zide 4. Wayne Thom 5. Phokion Karas 6, 7 and 12. Balthazar Korab 8. Jeremiah O. Bragstad 9. Morley Baer 10. Ron Thomas 11. Ezra Stoller; (right) URPHOT. Page 86, Scheme I and II, Rollin R. La France; Scheme III, Wm. Watkins; (bottom) Lautman.





#### Footnote

And Goldilocks was caught sitting in Papa Bear's chair. Twelve years of tender, loving care and more than a little bit of pruning have produced this roomy, leafy armchair in a garden in Northumberland, England. It must be comfortable: Goldilocks looks as if she has no intention of ever getting up.

Photograph: Tim Street, Porter



# Efficient building idea: Recent report tells how to solve the acoustical problems of open offices.



Good news for architects who like the design freedom of open offices—but don't like the acoustics.

Tests by an independent acoustical testing agency show you can get excellent open office acoustics by using these three things (with the help of an acoustical consultant):

1) An acoustically non-reflective ceiling—so the sound won't bounce off to other areas.

2) Sound-controlling screens—

to stop the sound from going directly from one work area to another. (Either directly or by reflection.)

3) A masking sound system—technically designed to fill the sound voids without increasing the overall ambient noise level. This makes it possible to hold personal conversations in a normal voice—without being overheard.

Of all the ceilings tested for Owens-Corning Fiberglas—

including expensive coffered and baffled systems—the best was Owens-Corning's Nubby II Fiberglas\* Ceiling Board in a standard grid suspension system.

If you'd like the whole story, send for our free design guide, "Achieving Acoustical Privacy in the Open Office."

Write to Mr. P. H. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

\*T.M. Reg. O.-C.F.

**Owens-Corning is Fiberglas**

OWENS/CORNING  
**FIBERGLAS**  
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# Product Literature

## BUILDING SYSTEMS

Three new systems brochures for selecting and specifying building materials have been released by Sonneborn Building Products Division of Contech, Inc.  
Reader Service Number 200.

## CARPETING

The Jute Carpet Backing Council has announced the 15th printing of their architectural guide specification for glue-down installation of double jute-backed carpets.  
Reader Service Number 201.

Construction and performance specifications, and installation recommendations are provided in pamphlet on Milstar® carpet developed by Deering Milliken, Inc.  
Reader Service Number 202.

Brunswick Corporation offers an information kit including technical data for the architect on Brunslon® static-control yarn.  
Reader Service Number 203.

## CEILING SYSTEMS

Installation data for the Gold Bond Panelectric ceiling system, comprising a radiant heating system as an integral part of a gypsum drywall ceiling, is given by Gold Bond Building Products Division of National Gypsum Company.  
Reader Service Number 204.

Eastern Products Corporation announces that up-dated literature on its lines of suspension ceiling systems and demountable wall systems is available.  
Reader Service Number 205.

## CERAMIC TILE

Udono, Ltd. of Japan offers details on their natural tile and pebble stone.  
Reader Service Number 206.

Literature providing photographs of their colorful tiles is available from the Italian company Ceramica Dalia.  
Reader Service Number 207.

From Milan, Italy Cedit Ceramiche D'Italia offers brochure covering their complete line of ceramic tile.  
Reader Service Number 208.

Group Artec has introduced the Terrestre Collection of ceramic tile for floor and wall surfaces that are rugged, durable, and virtually maintenance-free.  
Reader Service Number 209.

Elon, Inc. announces availability of color catalog including specification

data for handmade Mexican tile.  
Reader Service Number 210.

## DECORATIVE GLASS, MIRRORS

Pittsburgh Corning Corporation 15-page booklet contains selection and application information on decorative glass block.  
Reader Service Number 211.

Seraphic Pty. Ltd. of Australia provides information on their Cameo Clad, a custom made material for use in hotels, office buildings, schools or clubs.  
Reader Service Number 212.

Unusual design possibilities created by Plexiglas™ mirror are illustrated in six-page pamphlet released by Rohm and Haas Company.  
Reader Service Number 213.

## DOORS

Roller-shutter garage doors featuring silent, greaseless action are detailed in literature being offered by Byrne & Davidson Pty. Ltd. of Australia.  
Reader Service Number 214.

## FLOORING

The 1973 edition of Azrock's catalog of resilient flooring products, containing information on sizes, gauges, uses, installation, and light reflectance values, is now available.  
Reader Service Number 215.

## FURNITURE

Jens Risom Design, Inc. has issued catalog on their new Élan-Group Eleven executive furniture featuring a distinctive joining system which makes each piece more than just a desk, cabinet or table.  
Reader Service Number 216.

## HARDWARE

A data sheet outlining porcelain, crystal, timber, pottery and stoneware door furniture is now offered by the Australian manufacturing firm Gainsborough Hardware Industries.  
Reader Service Number 217.

Konan Industries, Inc. of Japan has available literature on their line of door locks and builder's fasteners.  
Reader Service Number 218.

Door hinges, knockers, handles and locks are featured in brochure from the Japanese-based Maruki Hardware Co., Ltd.  
Reader Service Number 219.

Soss Manufacturing Company provides installation and specification information for their invisible hinges.  
Reader Service Number 220.

## INSULATION

A brochure outlining shipping information and specification data on Johns-Manville fiber glass building insulation can now be obtained.  
Reader Service Number 221.

## KITCHEN, LAUNDRY, WASHROOM EQUIPMENT

General Electric Co. provides a colorful, 24-page idea stimulator containing illustrated kitchen and laundry concepts for large and small areas.  
Reader Service Number 222.

American Dispenser Co. has issued a new, fully illustrated 36-page catalog covering over 300 soap dispensers and other washroom accessories.  
Reader Service Number 223.

A toilet compartment catalog for 1973, including additions to their laminated plastic product line, has been released by Bobrick Washroom Equipment, Inc.  
Reader Service Number 224.

## LIGHTING

Wide-Lite Corporation has announced a new indoor luminaire for HID lamps offering a computer-designed reflector and optional high-strength film lens.  
Reader Service Number 225.

## PANELING

Application and specification data for flexible fire panel is given in a 10-page brochure recently issued by BASF.  
Reader Service Number 226.

## PLUMBING FIXTURES

The Moen catalog of plumbing accessories, containing detailed drawings, is now available.  
Reader Service Number 227.

Eljer Plumbing Division, Wallace-Murray Corporation, has available a specifying guide for architects covering their line of hospital/institutional plumbing fixtures and fittings.  
Reader Service Number 228.

## PLYWOOD

A new, full-color brochure introducing Finnish plywood is offered by The Finnish Plywood Development Association—USA.  
Reader Service Number 229.

Alstergren Pty. Ltd. of Australia provides pamphlet on prefinished plywood panels and particle board.  
Reader Service Number 230.

## RECREATIONAL EQUIPMENT

Recreational and fitness center gym systems especially designed for apart-

ment houses, health spas, and executive office buildings are illustrated and described in pamphlet prepared by Universal Fitness Consultants.  
Reader Service Number 231.

## ROOFING

Automated Building Components, Inc. provides information on Decramastic® roof tile which lends built-in durability to buildings of all kinds.  
Reader Service Number 232.

Specification information for Terne-Coated Stainless Steel, developed for a broad range of applications including roofing and weathersealing, is given by Follansbee Steel Corp.  
Reader Service Number 233.

## SEALANTS

The entire family of General Electric silicone rubber sealants is described in four-page pamphlet recently released.  
Reader Service Number 234.

## SECURITY SYSTEMS

Hager Hinge Company has published "Building Security into Building Plans." The booklet lists facts about major components and optional security equipment.  
Reader Service Number 235.

## SIGNAGE

Jas. H. Matthews & Co. has prepared a color catalog on their identification systems, featuring custom designed packages using unified signage, pictorial systems and color-keying.  
Reader Service Number 236.

## STAINS

Darworth Incorporated introduces Cuprinol® stain and wood preservative as well as other maintenance and decorative products in assortment of literature now offered.  
Reader Service Number 237.

## STRUCTURAL PRODUCTS

A C/O/A brochure detailing the C/O structural system comprised of truss, header channel and load clip is now available.  
Reader Service Number 238.

## WALL COVERINGS

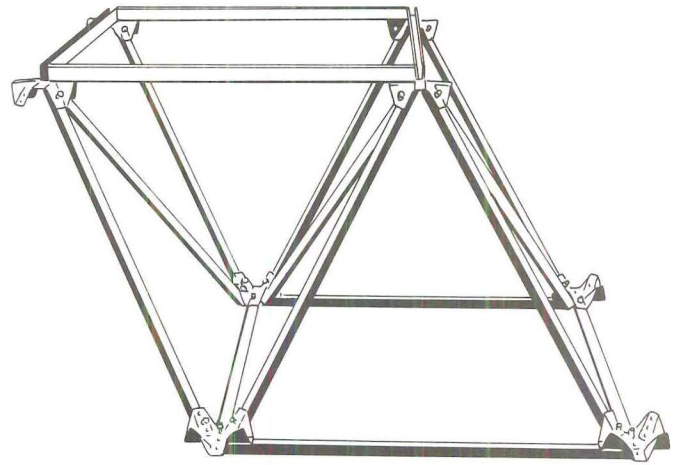
James Seeman Studios, Inc. displays their supergraphic murals screen-printed on vinyl in color booklet recently released.  
Reader Service Number 239.

## WINDOWS

Louver windows with glass and metal blades are featured in brochure furnished by Pillar Naco Pty. Ltd. of Australia.  
Reader Service Number 240.



# SPACE-FRAME IDEAS at WORK



*...in residential complexes*



*...in office buildings*



*...in cultural centers*



*...in plants*



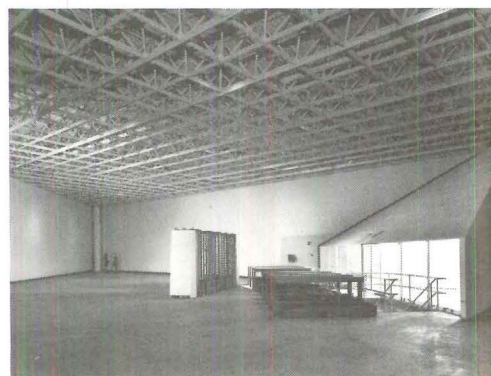
*...in schools*



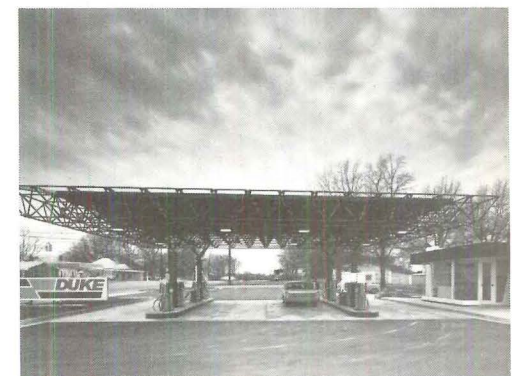
*...in canopy structures*



*...in lighting grids*



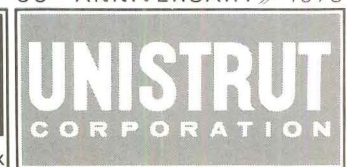
*...in museums*



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## Advertising Index

<b>ERCO Leuchten KG</b> Wirtschafts-und Werbeagentur B. Keysseltz	BC
<b>Eastern Products Corporation</b> Stackig, Sanderson & White, Inc.	81-84
<b>Electric Energy Association</b> Charles E. Root, Inc.	9-12
<b>Kawneer Architectural Products</b> Garrison, Jasper, Rose & Company	22-23
<b>Knoll International</b> William C. McDade, Inc.	2-3
<b>Libby-Owens-Ford Company</b> Campbell-Ewald Company	4
<b>Owens-Corning Fiberglas Corporation</b> Ogilvy & Mather, Inc.	89
<b>Sanymetal Products Company, Inc.</b> Beldon/Frentz/Lehman, Inc.	6-7
<b>Staempfli Gallery</b> Ridgefield Advertising, Inc.	16
<b>Thonet Industries, Inc.</b> APCL&K, Inc.	15
<b>Turner Ltd</b> Jamian Advertising & Publicity, Inc.	IBC
<b>Uniroyal, Inc.</b> Campbell Mithun, Inc.	IFC-1
<b>Unistrut Corporation</b> Denham & Company	91

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*F.P.E. Unit Air Conditioners:* General Electric. *Kitchen, Laundry Equip:* Hot-point, Peerless-Mayer.

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