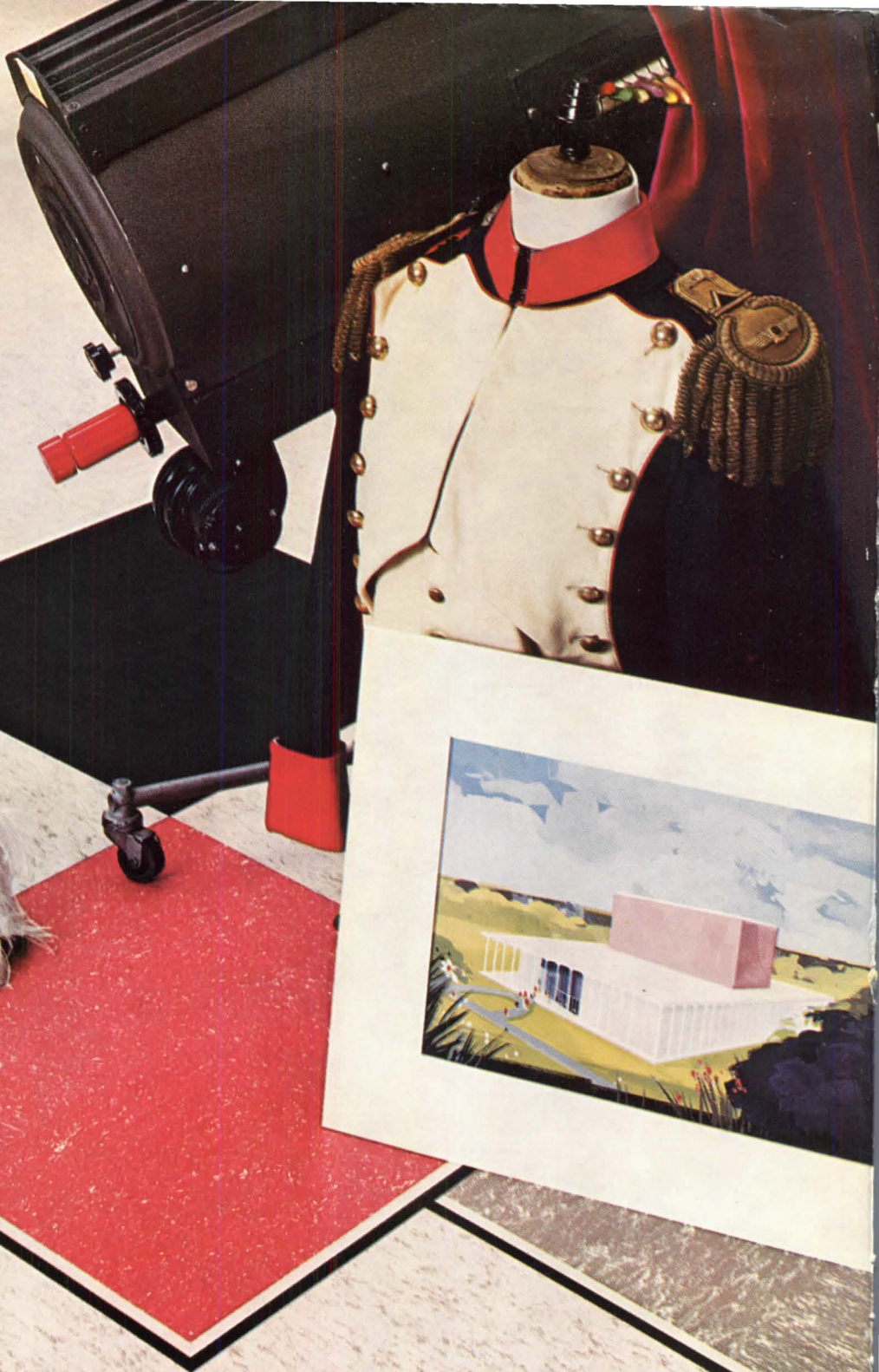




Installation: University of Oklahoma Drama
Building, Norman, Oklahoma.

Architects: Stanfield, Imel and Walton,
Tulsa, Oklahoma.

Floor shown: V-428 Creme Italia and V-429
Franciscan, with accent panel in V-300
Black and V-337R Cardinal.

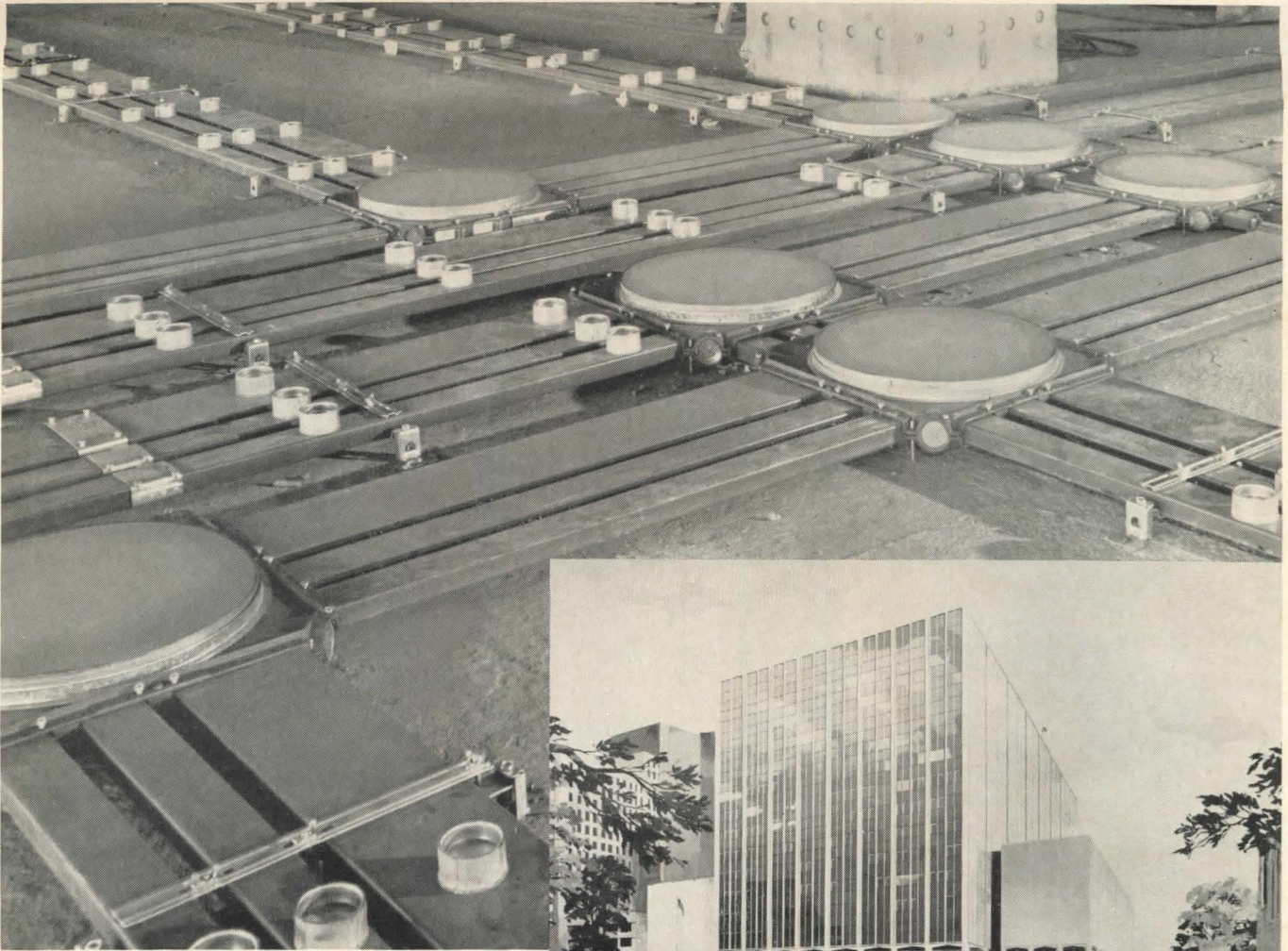


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Progressive Architecture® May 1966

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COVER

Revealing a skillful blending of building with natural setting, condominium at Sea Ranch sits at edge of cove opening onto the Pacific (page 120). Photo: Fred Lyons.

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115 EDITORIAL

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Chatham Towers: Imagination And Innovation

Dear Editor: I enjoyed reading the article on the Chatham Towers housing project [FEBRUARY 1966 P/A].

The Chatham Towers project is a highly significant achievement, in that it proves that middle-income families can find comfort, space, privacy, and neighborliness without having to move out to the suburbs. Efforts to establish more of this type of urban housing must be vigorously pursued. If middle-income families cannot be induced to remain in the cities, urban social harmony and balance will suffer, because there will no longer be a middle layer between the more extreme points on the socio-economic spectrum. Furthermore, ever-increasing amounts of public money will continue to be used on subsidizing the cost of transportation from suburb to city. And it must also be remembered that the more successful the effort to persuade people to stay in the cities, the easier it will be to preserve natural beauty and spaciousness in the non-urban areas.

In short, it is vital that urban housing offer to middle-income families that which they now seek in the suburbs. To those who want to own their own homes, the cities must offer cooperative arrangements; for those seeking a detached, quiet environment, cities must provide completely private, soundproofed habitations; for families with children, the cities must provide safe and spacious play areas; and to people who long for a patch of green to cultivate or to contemplate, the cities must offer that as well.

The challenge to the architect of today is a formidable one: to design for total living by middle-income families in the crowded, busy, difficult environment of our nation's great urban centers. The response to this challenge will take many forms. Imagination and innovation, such as went into the creation of Chatham Towers, will be the primary requirements.

SENATOR ROBERT F. KENNEDY
New York, N. Y.

Dear Editor: We are complimented by the attention your splendid article in the February issue directs to Chatham

Towers. We have been pleased with this latest AMIH development, both for its excellent architectural design and for the quality of housing it provides for the tenant-cooperator who lives in it. We are therefore pleased when the merits of this development are recognized by acknowledged experts in the field.

I would like to call your attention to certain factors that were important in achieving these results and were not made fully clear in your article. I write of them because they are important if housing of this standard is to be more than an isolated instance. So far, the housing built by our organization has been of exceptional quality, architecturally. This includes our most recent development, dedicated February 20, 1966, and located in the Virgin Islands—Bluebeard Hill Apartments, designed by Kramer, Kramer & Gordon.

The Association for Middle Income Housing is a consumer-oriented organization. Its policies and standards for the projects it develops emphasizes consumer consideration. AMIH, formed within the consumer cooperative movement, places the long-term needs of the families it serves and the community benefits of good architectural design near the top of its list of requirements when commissioning an architect to undertake one of its jobs. The same architect working with clients having other objectives can and does turn out uninspired housing jobs.

Your article seems to suggest that in this case Kelly & Gruzen benefited from having a client who was tractable and could be educated to good architecture. On the contrary, they had a client whose purposes permitted them to insist on good architecture. This does not detract from the glory that should be given to this fine firm of architects. They had the capacity to produce this job when given an opportunity to do so. The client, however, never attempted to dictate the solution to the requirements it presented to the architects and had the good sense to rely on their professional judgement when the proffered solution met with criticism.

There was also good cooperation between the client and the architect, even in the handling of details. For example, one member of the design team, Richard

Kaplan, joined me in a review of housing in Scandinavia and the decision to use the windows designed in Sweden grew out of this trip. My conclusion is perhaps prejudiced, but it amounts to a conviction: Namely, that housing development organizations that are consumer-oriented, not-for-profit associations can provide a yardstick for housing in the renewal areas of the central city.

Your final question of whether it is proper to have such luxury with such extensive public assistance does not embarrass us. If we do not face the fact soon that such tax abatement is just an adjustment of an inequitable and depressing tax system and that the write-down with city and Federal funds is necessary to correct municipal and Federal tax systems that have encouraged slums and discouraged improvements, we will offer little to the families who will and can choose to leave the central city.

S. F. BODEN,
President, Association for Middle Income Housing
New York, N. Y.

Dear Editor: In connection with your article on Chatham Towers:

If, as our President says, four out of five Americans will be urbanized by the year 2000; if it takes 10 years or more to effect any large-scale plan; then urban renewal must be considered not a patching up of our central cities but a broader consideration.

When Herbert Gans objects to urban renewal as being a method for eliminating slums rather than a rehousing of slum dwellers, he is right; but face it, to "renew" a city means, among other things, to recreate a population mix of all income groups. The middle class stupidly ran away from the city; shall we therefore stupidly make the city a gigantic low-income housing project? Shall we not, instead, say the region is the city and open up suburban areas for the slum dweller so that central city and its surroundings have proportionate shares of the different elements forming our population? How, otherwise, is ethnic integration possible?

When Martin Anderson complains that urban renewal destroyed more dwelling units than were built, he also is right, but is there a better solution than Federal intervention? I say sadly, as a Jef-

Continued on page 10

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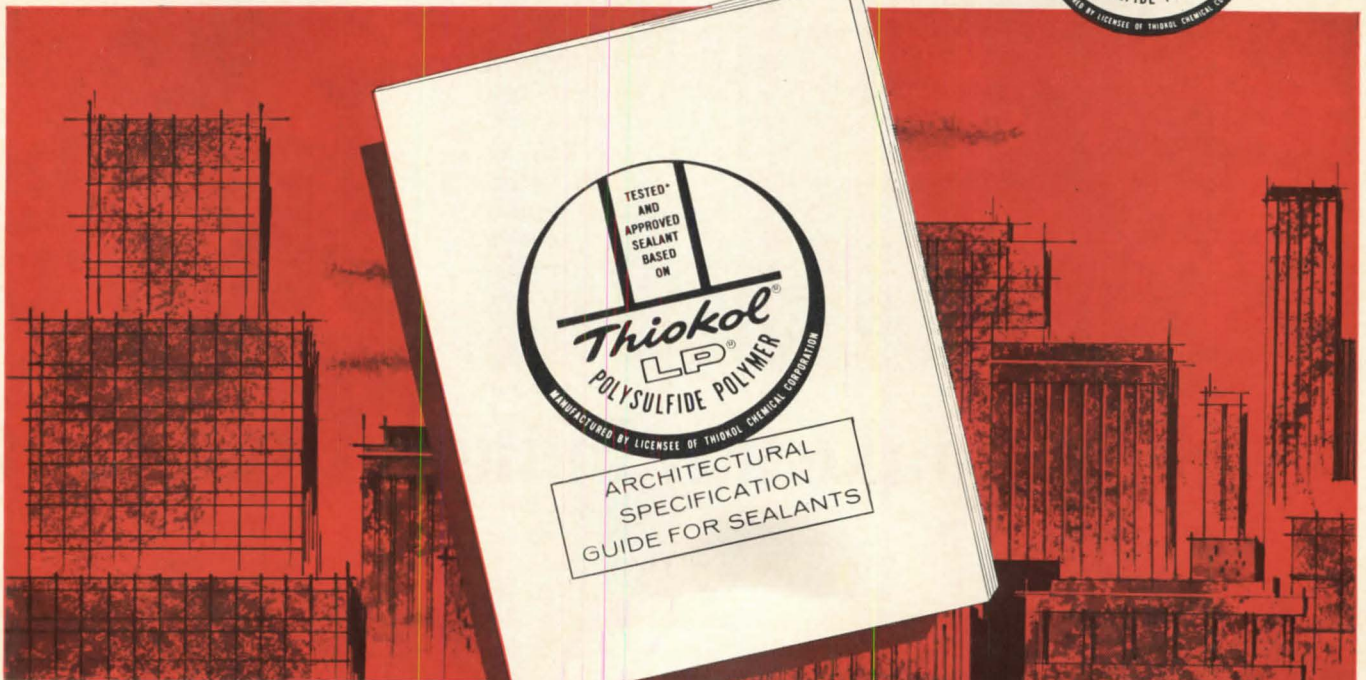
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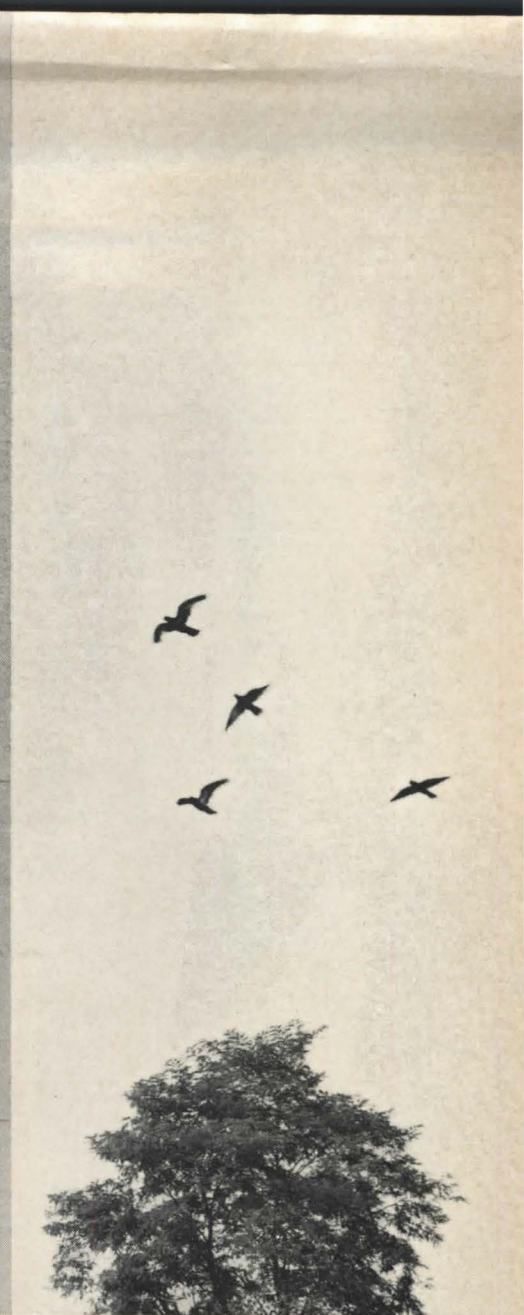
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Continued from page 6

fersonian Democrat (!), that the intervention is necessary, for laissez-faire capitalism and states' rights don't work.

To provide housing today in the central city, subsidy is required for all but the upper few. Such top-notch projects as Chatham Towers need subsidies—if these rob the poor, then let us not eliminate the subsidies needed for such projects but rather increase subsidies given to housing for the less privileged.

Even an architect knows that an

economy such as ours only operates if total spending matches total productive capacity. With a gross national product of over \$700 billion, we can afford anything but slums and what they represent.

PERCIVAL GOODMAN
Professor, School of Architecture
Columbia University
New York, N. Y.

P/A's Tiger: A Pièce de Resistance

Dear Editor: Congratulations! Forrest Wilson's AIA/AMA article is the *pièce de resistance* of the FEBRUARY 1966 P/A.

Being the daughter of an architect as

well as the wife of an architect, I have been reading P/A for more years than I care to remember. The advent of Forrest Wilson to your staff has proven to be a notable addition.

We eagerly await future issues to see what Zonk Wilson has done.

You certainly have a tiger by the tail; I hope you can hang onto him.

SARAH MARTIN
New York, N. Y.

Dear Editor: It was a pleasure to read the article in the February issue that exploited the comparison between architect and doctor. Writing of this nature presents fine food for thought.

I salute P/A for quality features like this.

ROBERT E. LEEKS, JR.
Basking Ridge, New Jersey

Dear Editor: In our world of disapproval by silence, "don't knock" and "don't stick your neck out," that kick in the behind by Forrest Wilson was good for our anodized souls.

Salty sketches as well.

BONNELL IRVINE, A.I.A.
Manager, Facilities Planning
Olivetti Underwood Corp.
New York, N. Y.

Arousing the Wit

Dear Editor: Here are two bits of reaction to the MARCH 1966 P/A:

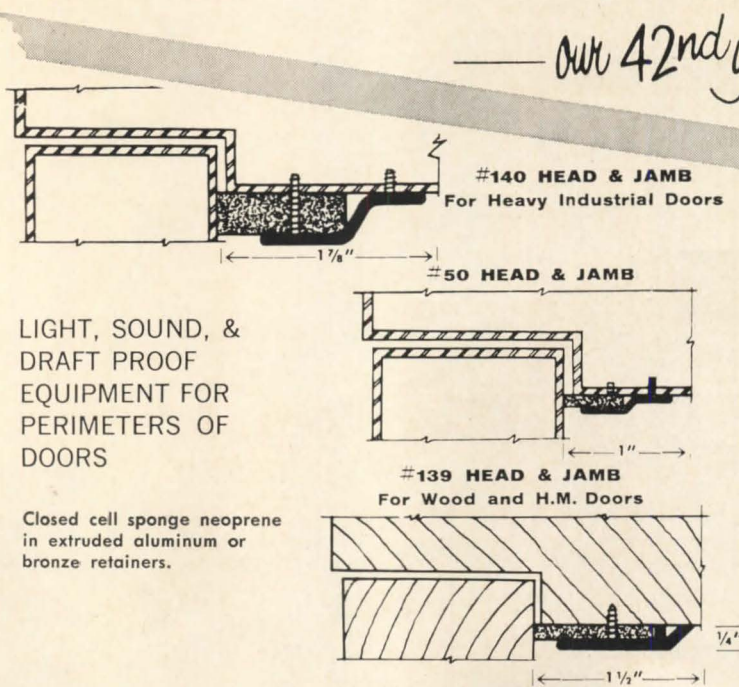
Re: "Down for Decoration, Upping the Nature of Materials." Some natural scientists maintain that the human animal is in physical decline; certainly the Romans had a point leaving us the motto "*mens sana in corpore sano*." I doubt that they could have foreseen contemporary designs. They may have made Cunningham and Andersen Nero's prime ministers, or exiled them to Tomis on Pontus Euxinus.

Re: "Airline Designs for Passengers." Congratulations to Alexander Girard again; also, to P/A for publishing the thrill in color. I hope "Pagliaccism" is not the case in Girard's exteriorization. Nevertheless, he makes us jealous of his color sense and arouses our wit while we enjoy his *joie-de-vivre*.

THEODORE HOOD,
A D E
635 Madison Ave.,
New York, N. Y.

Disoriented Editors

Dear Editor: I am glad to read in your Editorial [FEBRUARY 1966 P/A] that you think "the English experts at *l'Architecture d'Aujourd'hui* should either wake up or give up." I think the same. If we can trust these experts, in the same issue (September-November 1965) architectural credits are given to Albert C. Ledner, architect for a building located 7th Avenue, 12th and 13th Street, New York, and described as "siège de l'Union Maritime Nationale à New Orleans."



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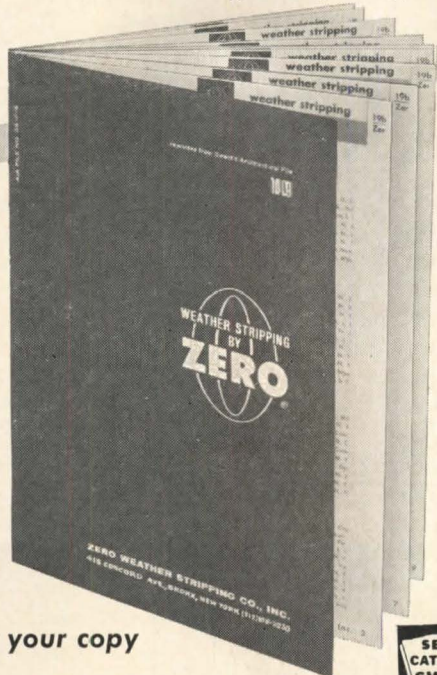


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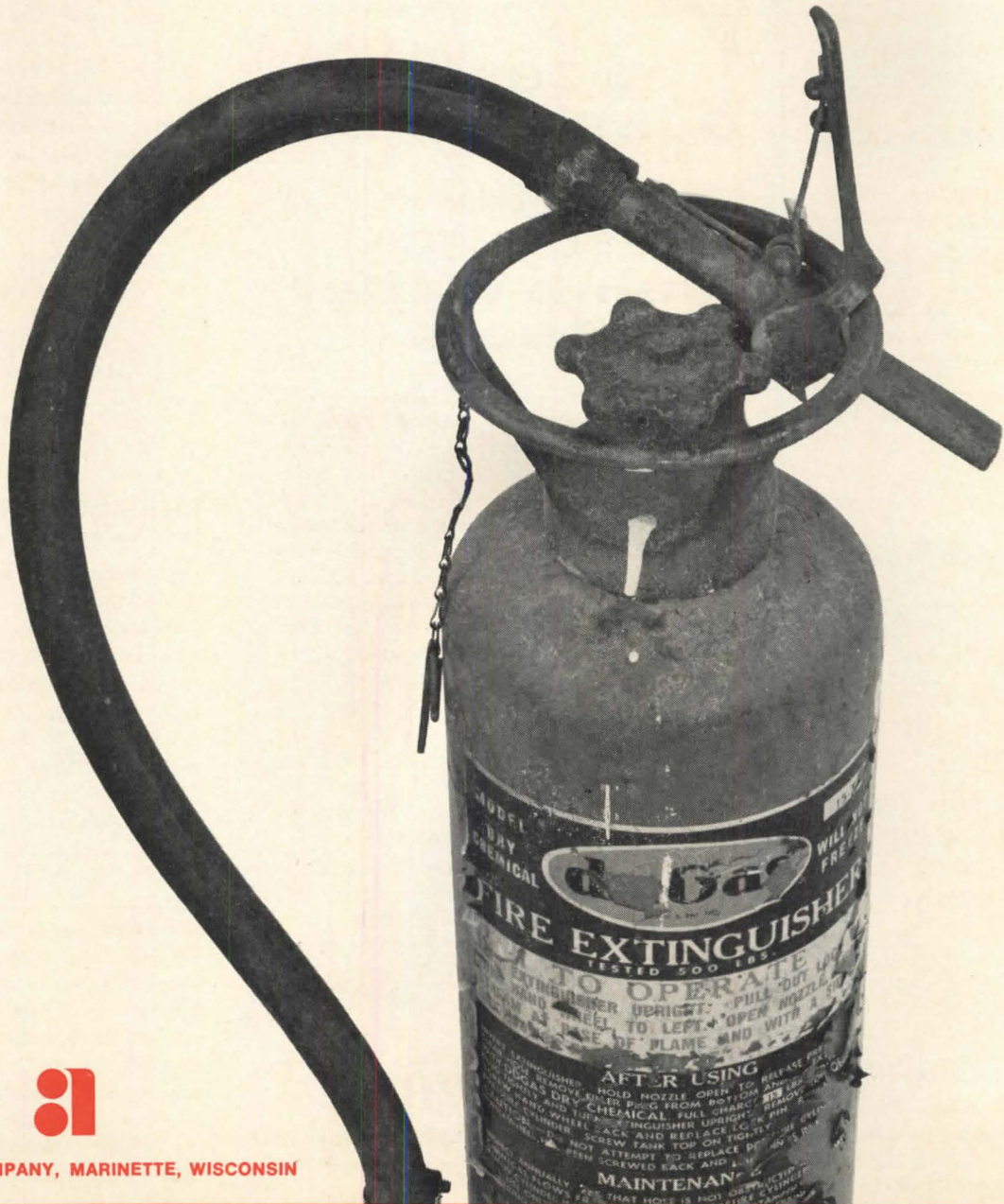
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I hope this letter will still reach you in New York and not in New Orleans.

PHILIPPE HEILBRONN
Paris, France

A Seeker After the Beautiful

Dear Editor: The architectural magazines, for many years now, have neglected their professional role, having selected material for publication on the basis of novelty rather than quality. This is particularly unfortunate during this aimless era, since they are the guide to students, faculty, and impressionable architects.

Instead of judging work by the standards of Vignola ("firmness, commodity, and delight") or Le Corbusier ("serenity, joyfulness, and efficiency"), they publish works of architects who are capable but misguided or cynical, whose work is accidental, haphazard, and unresolved, who dream of the day when mechanical elements will take the place of sculpture, who reject architecture as a fine art, a thing of good taste or of beauty.

Viollet le-Duc said: "Architecture cannot be Barbarous for the simple reason that it is Art. It is Barbarous only in

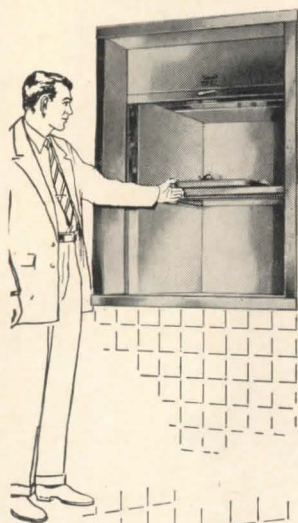
ceasing to be Art when it degrades itself by belying and violating its own principles; when it slavishly follows the caprices of Fashion; when it becomes the plaything of people without fixed ideas or convictions."

The work published is not that of architects but *anti*-architects. At best, these reflect the worst aspects of a troubled age. But architecture should reflect man's aspirations, not his despair. Architects should create Beauty, not Ugliness.

GEORGE NEMENY
New York, N. Y.

[Apparently Picasso once said that taste can be the enemy of creativeness.—Ed.]

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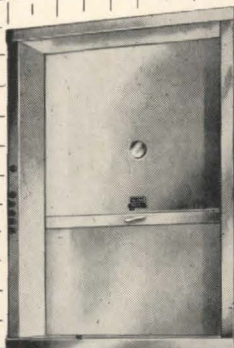
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On Readers' Service Card, circle No. 409

Bolstered Pride

Dear Editor: Re your article on the Beth David Synagogue [MARCH 1966 P/A]: You might be interested to know that it required little learning and even less humor to discover the symbolism in the 10 skylights. Obviously, they represent the Ten Commandments, with the large central skylight symbolizing the Torah itself, radiating the light of the knowledge and understanding through which a nobler and finer society can be built. (How was that?)


Thank you once again for your warm good humor; for bolstering the pride of my people in this very unique building, and for giving Werner Seligmann the credit and the attention he so richly deserves.

RABBI J. BERNARD MERZEL
Beth David Synagogue
Binghamton, New York

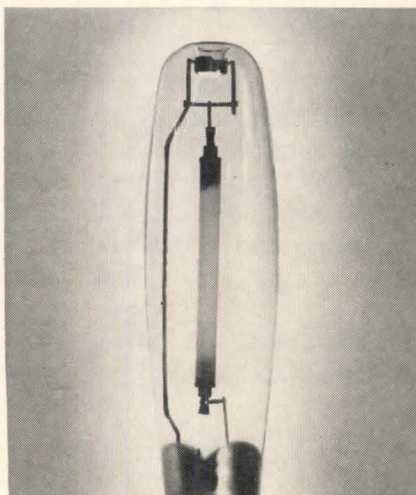
Belated Comment on the Design Awards

Dear Editor: A belated statement of appreciation for your service to the profession in conducting your Design Awards Program every year. Its contribution to contemporary sociology, and perhaps also to psychology, in "holding a mirror up to nature" should not be minimized, either for its formative significance today or for its microcosmic value to future researchers. As for architecture, I seem to sense a more ambivalent ambience.

In fact, there may be a hidden purpose working, in that I failed to communicate my sentiments earlier. From the first, I had been most struck by your boldface quote of a jury observation, "Strangely enough, the two fundamentals of Christian civilization in the past—the church and the house—are both apparently in a state of absolute decay." As for the residential aspect, at least a miniaturized answer suggests itself on the spot: the composition of your jury.



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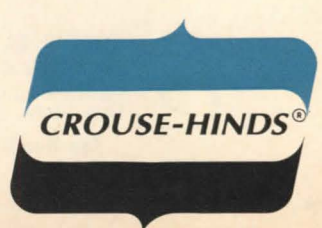
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Continued from page 14

pavilions at a fair, office buildings, or even glorified garages. And alas, too many architects designing churches are not believers. Too many, even if they are believers, though well-schooled in their profession, know little about the separate long traditions of the religions they intend to serve. Too many expect to find their source of inspiration in their own generalized concept of what a worship place should be.

I agree the problem is not easy, but all the more reason to see it as it is. I am sure the current trend to do away with the worship place in favor of more room for social services is a good one, and that when the pendulum again swings, people will also see how important it is to have one place in which the spirit can be nourished for such enormous social tasks. The architect has a most important role in providing this setting for worship, but if he is not an educated human being, he may lose this place. He may also, because of his buildings, be one of the deciding factors for or against religion in our day.

MRS. WILBUR KLONER
Sea Cliff, N. Y.

The New Wurster Hall: Some Sharp Opinions

Dear Editor: Congratulations on the OBSERVER article on the new Wurster Hall [p. 163, JANUARY 1966 P/A]. My first reaction to the building was: Bauhaus-Bauhaus, woof-woof-woof! However, I would like to compliment P/A for its editorial courage in producing a sound piece of honest analytical criticism.

EARL P. CARLIN
New Haven, Conn.

Dear Editor: Wurster Hall is not an easy building to criticize. It would be easier to denounce most of the buildings in the Awards Issue on the grounds of "formalism," particularly the First Award winner. This building seemed to be almost wholly preoccupied with "form."

But the design of Esherick, DeMars & Olsen's building springs from more serious thinking; it does not try to be pretty. This is a solid virtue in these days, when the architectural decorator rides high. Yet I don't really like the building or think it good architecture and keep asking myself why.

I visited it by accident the very day of the biggest FSM demonstration a year or so ago. The lovely fraternity house by Greene & Greene, just off-campus, had drawn me to Berkeley and, walking to meet an old university friend for

Continued on page 26



The Cathedral of Notre Dame is the most famous religious edifice in Paris. It measures 139 x 52 yards. Built with very slender internal supports, it exemplifies the grandeur of a balance between vertical and horizontal lines. Central spire was added during 19th Century restoration.

Could the brothers Parret have improved their "symphony in stone" with Castell?

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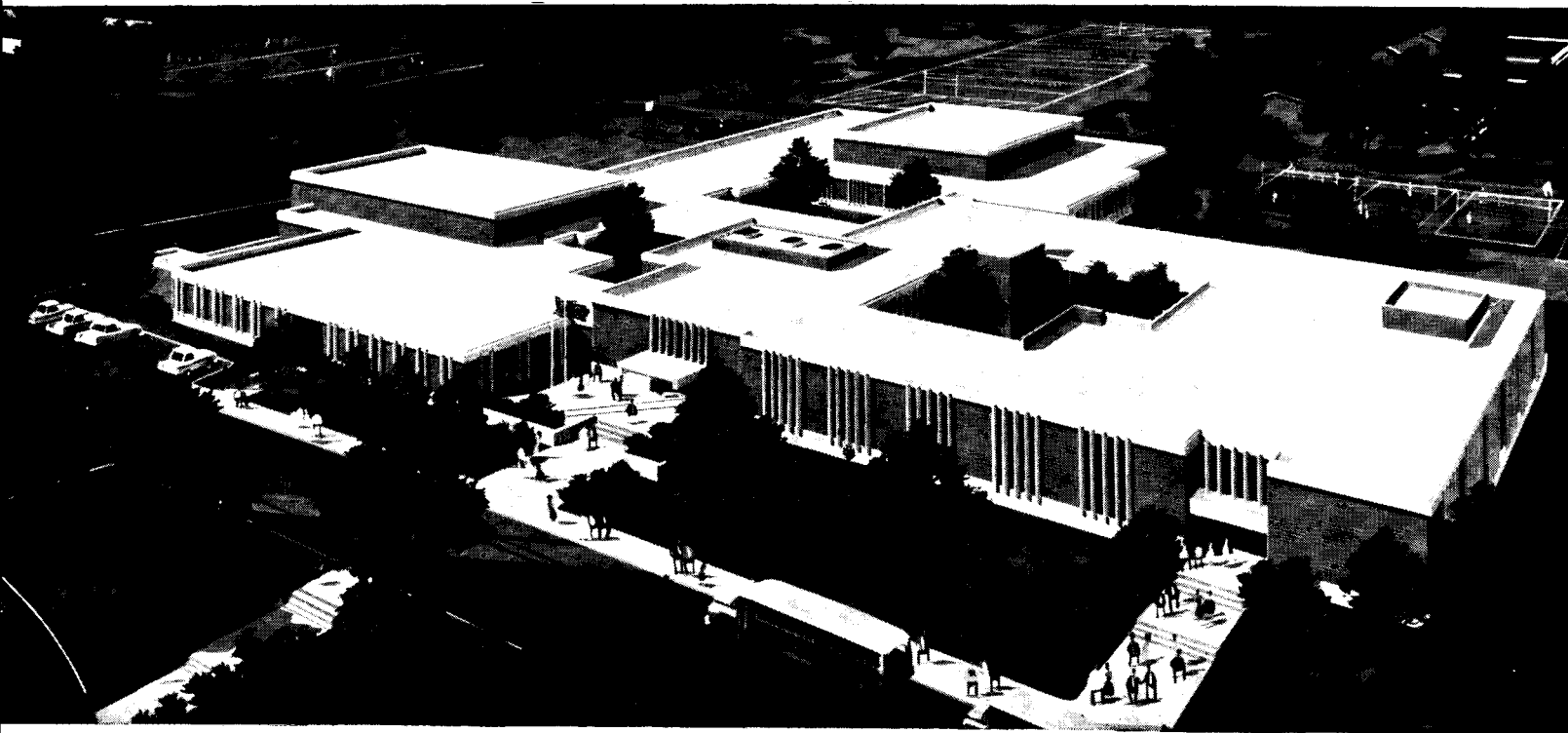


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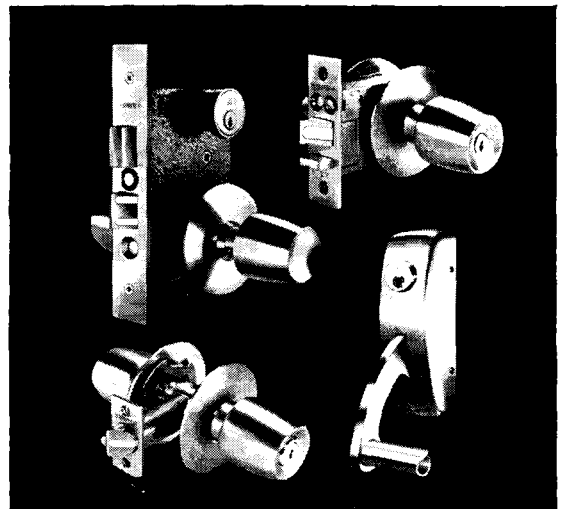


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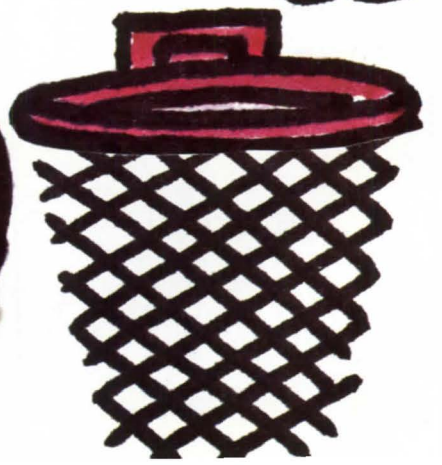
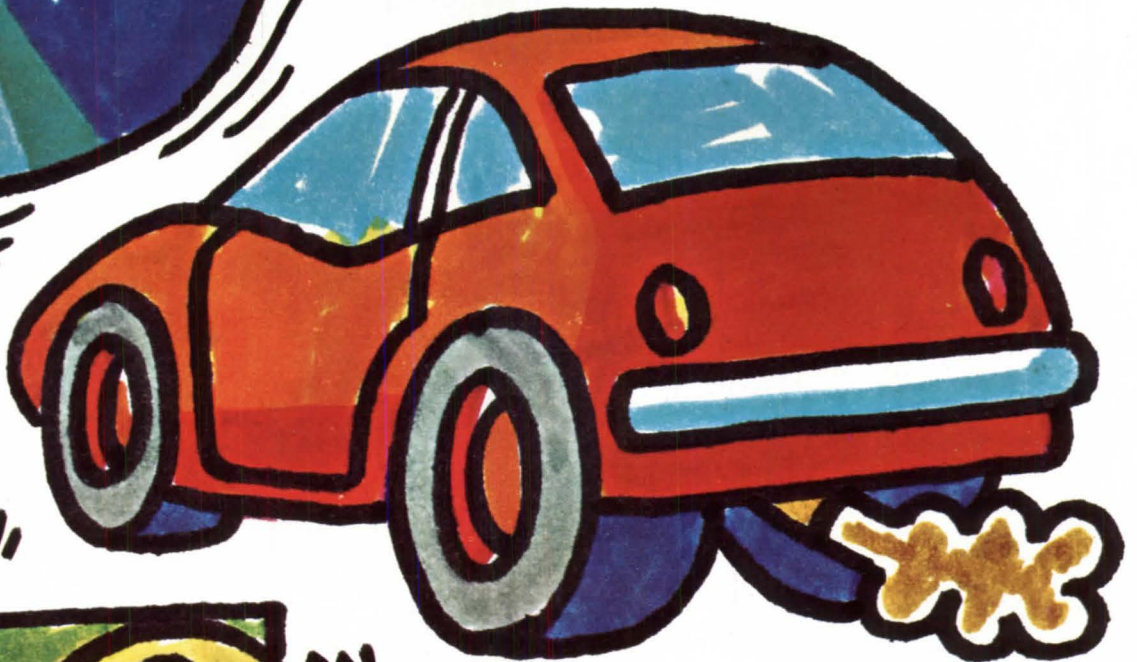
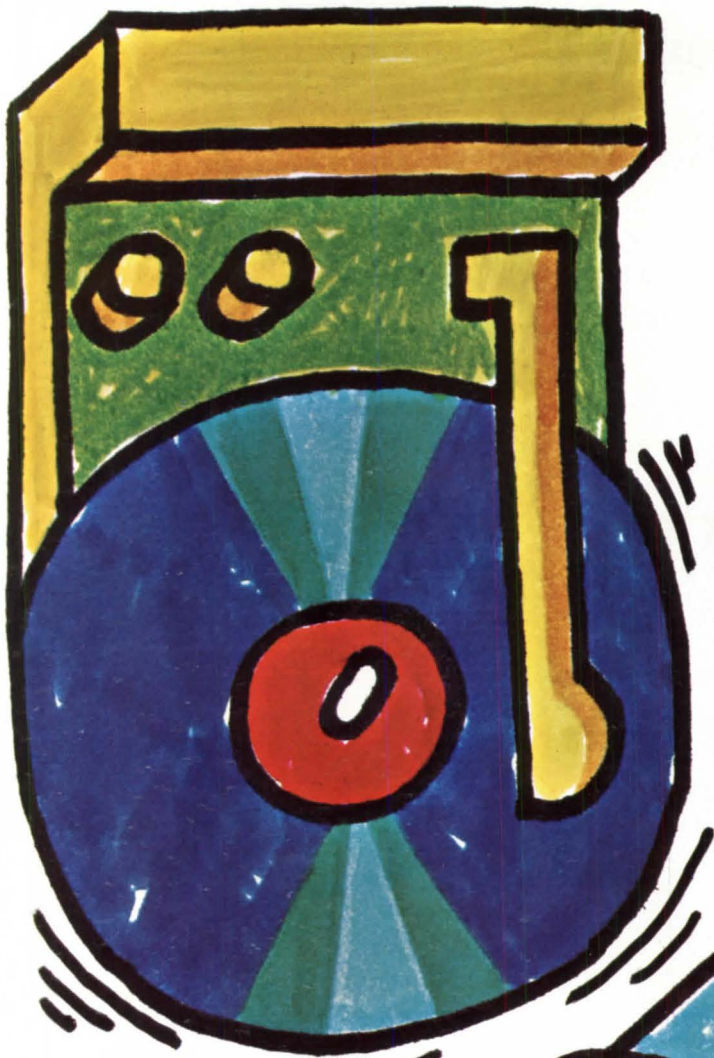
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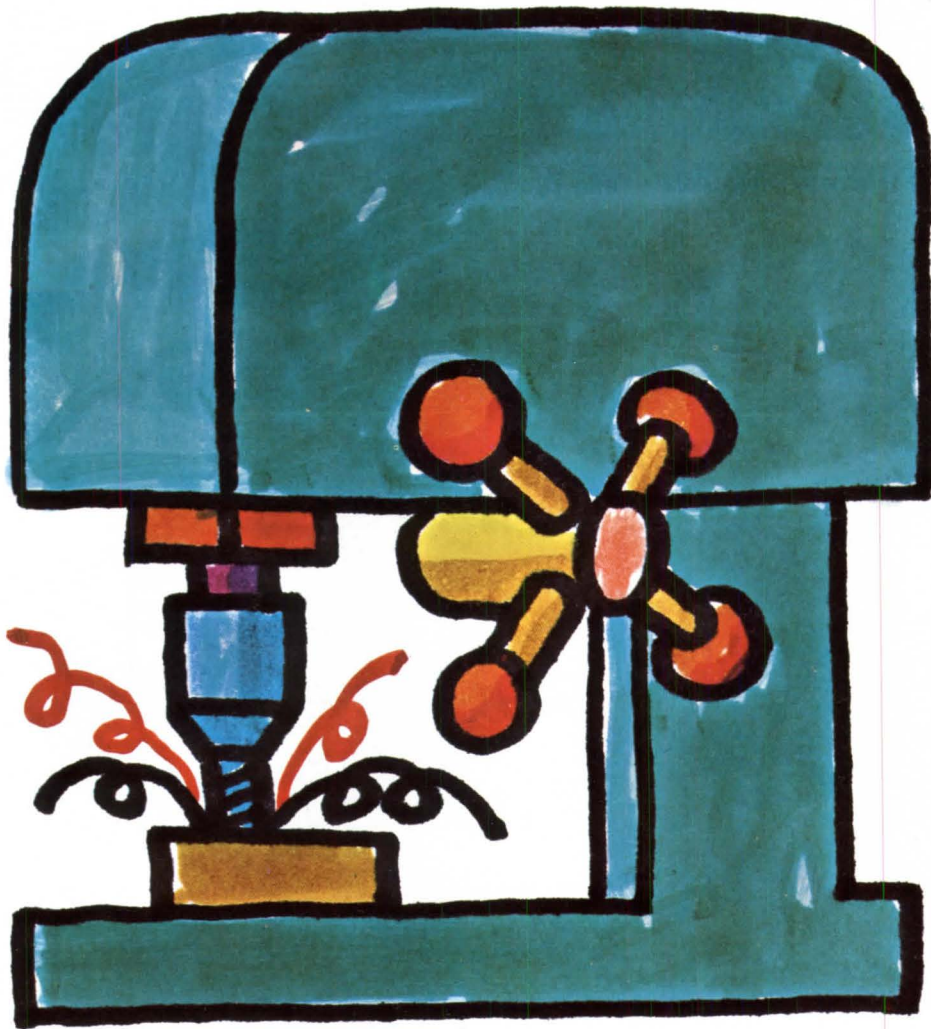
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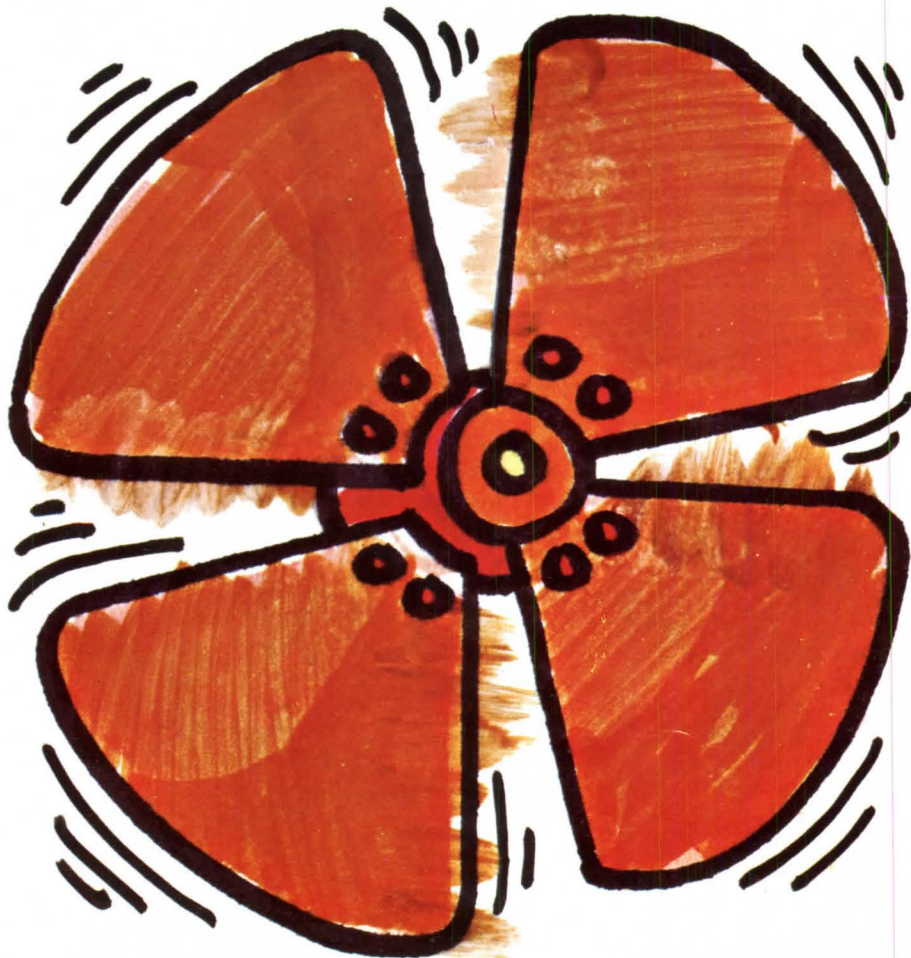
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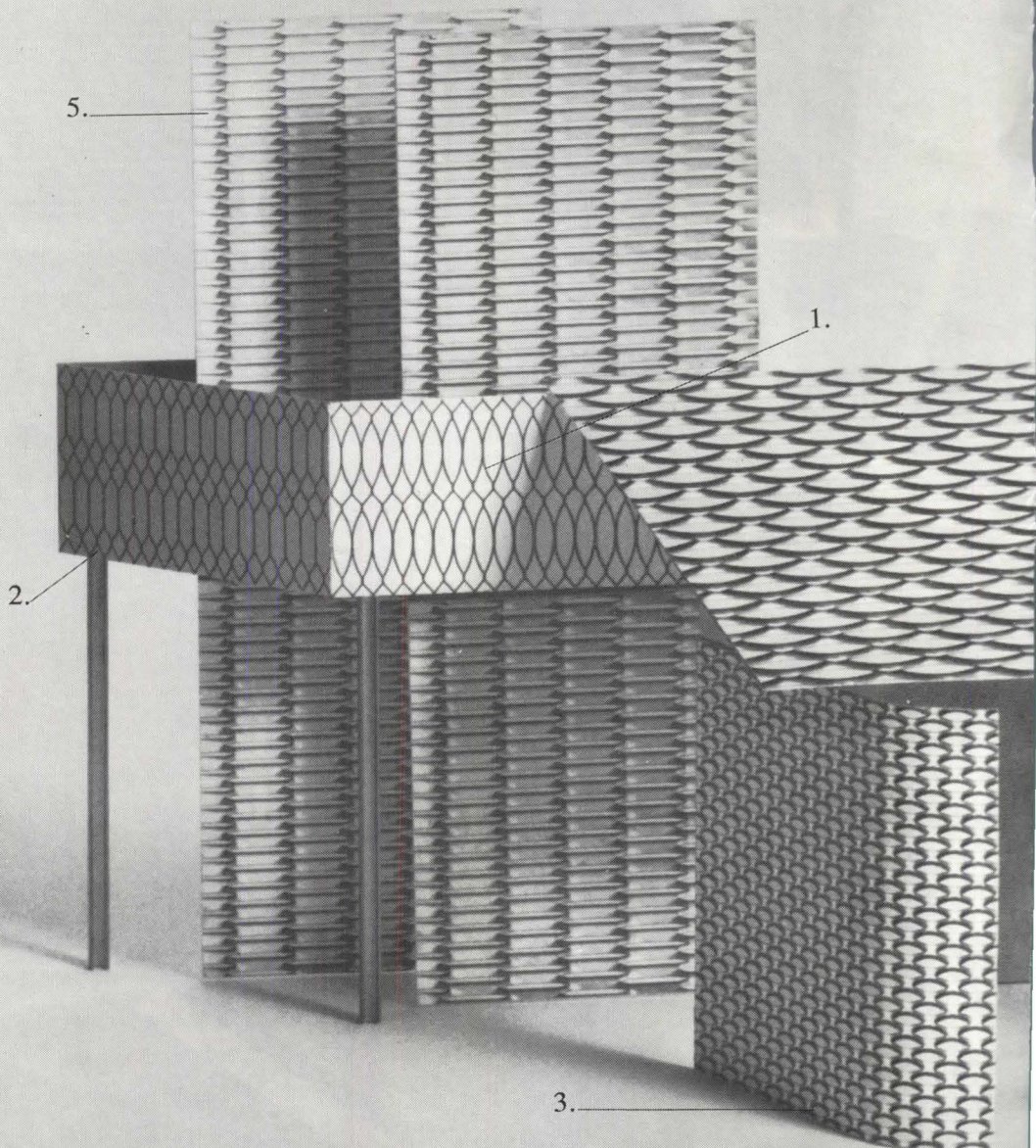


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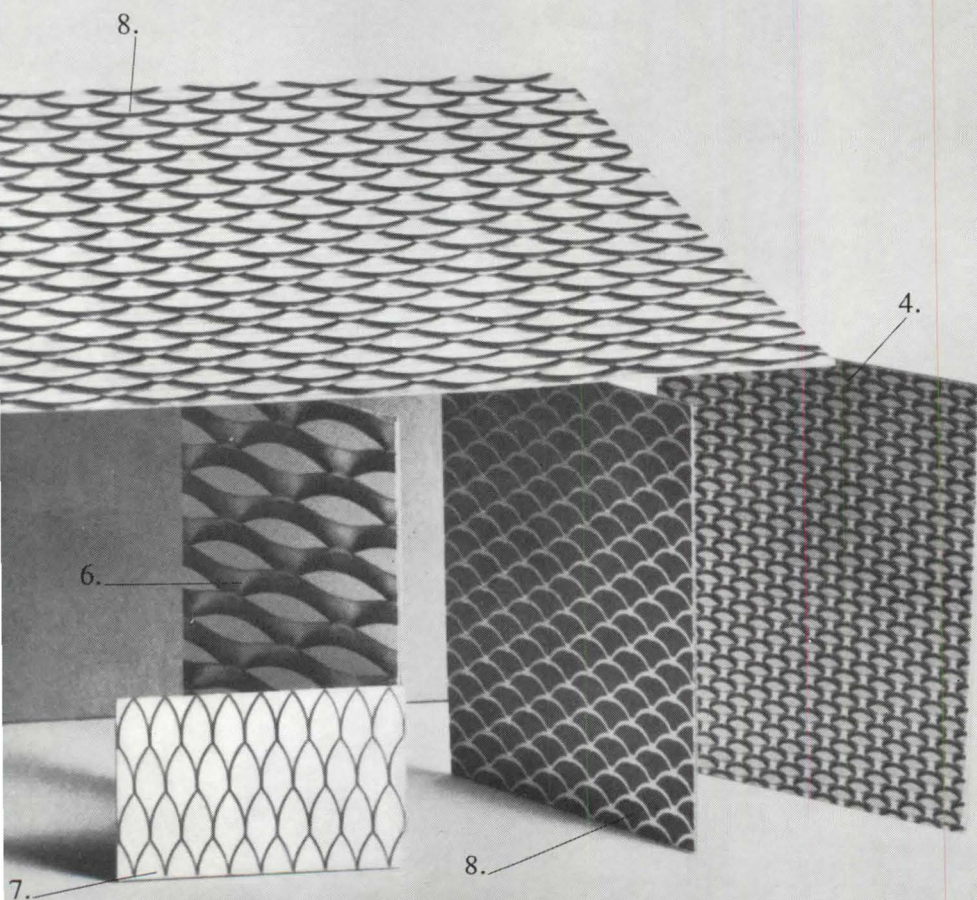
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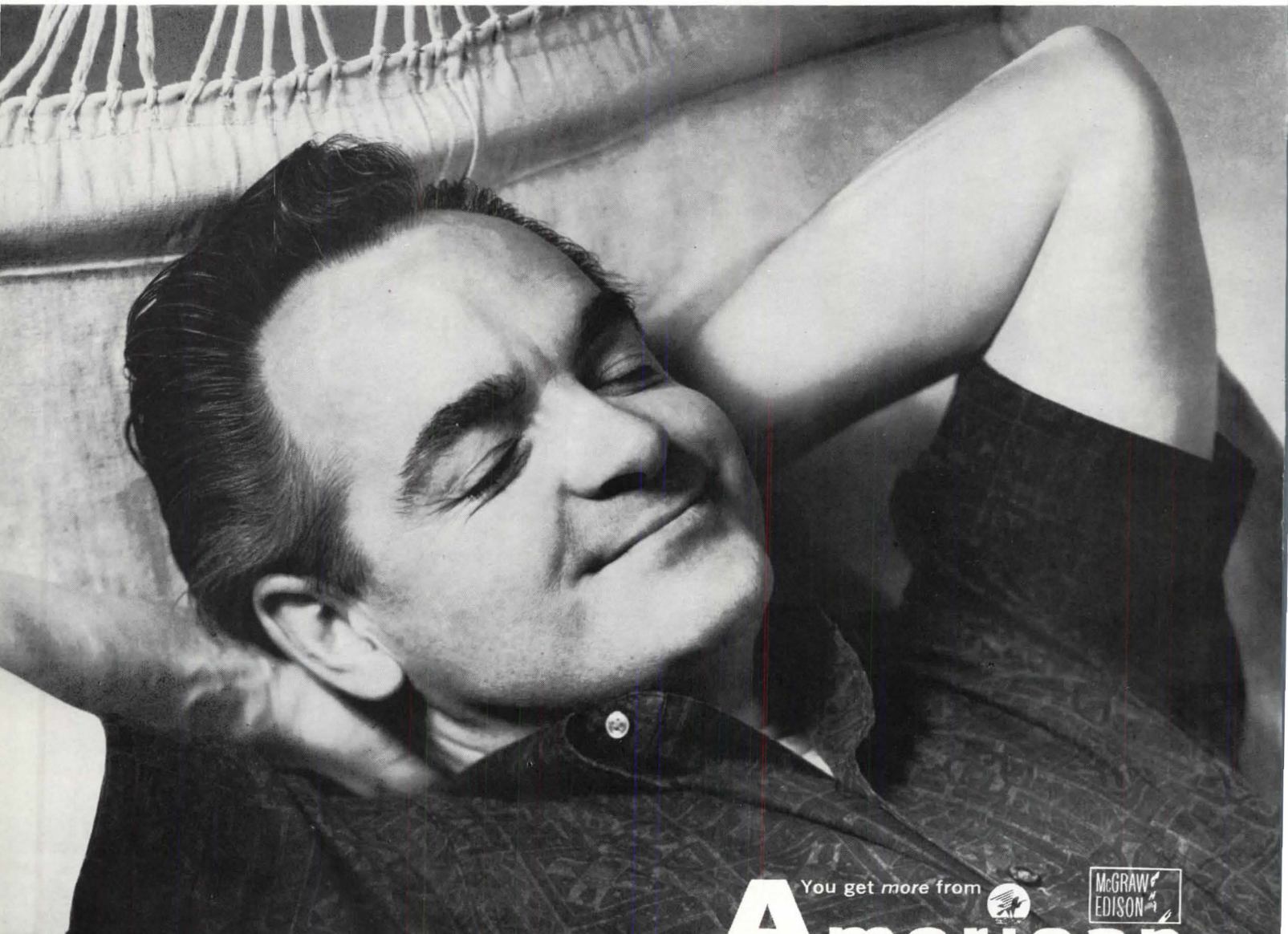
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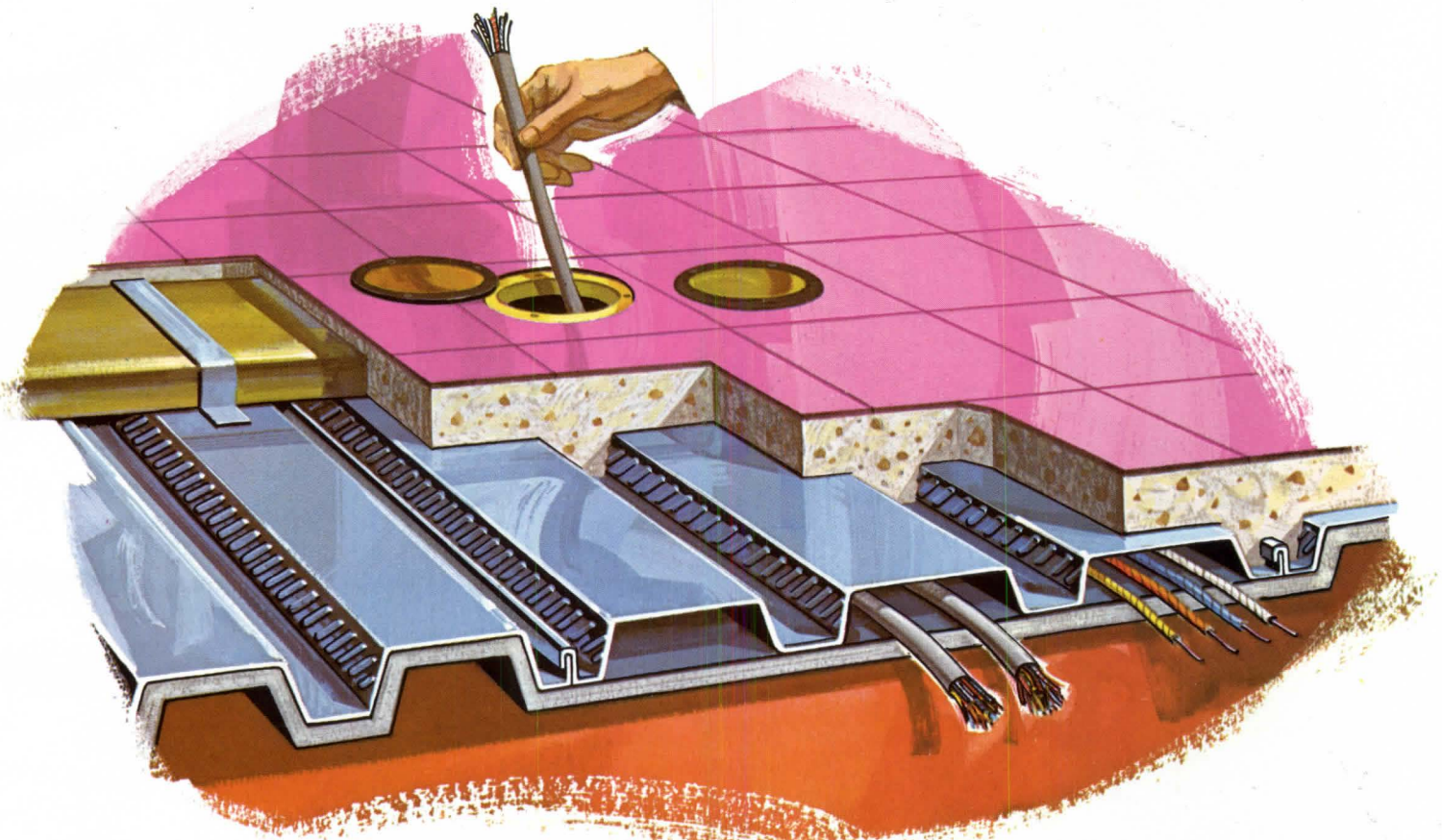


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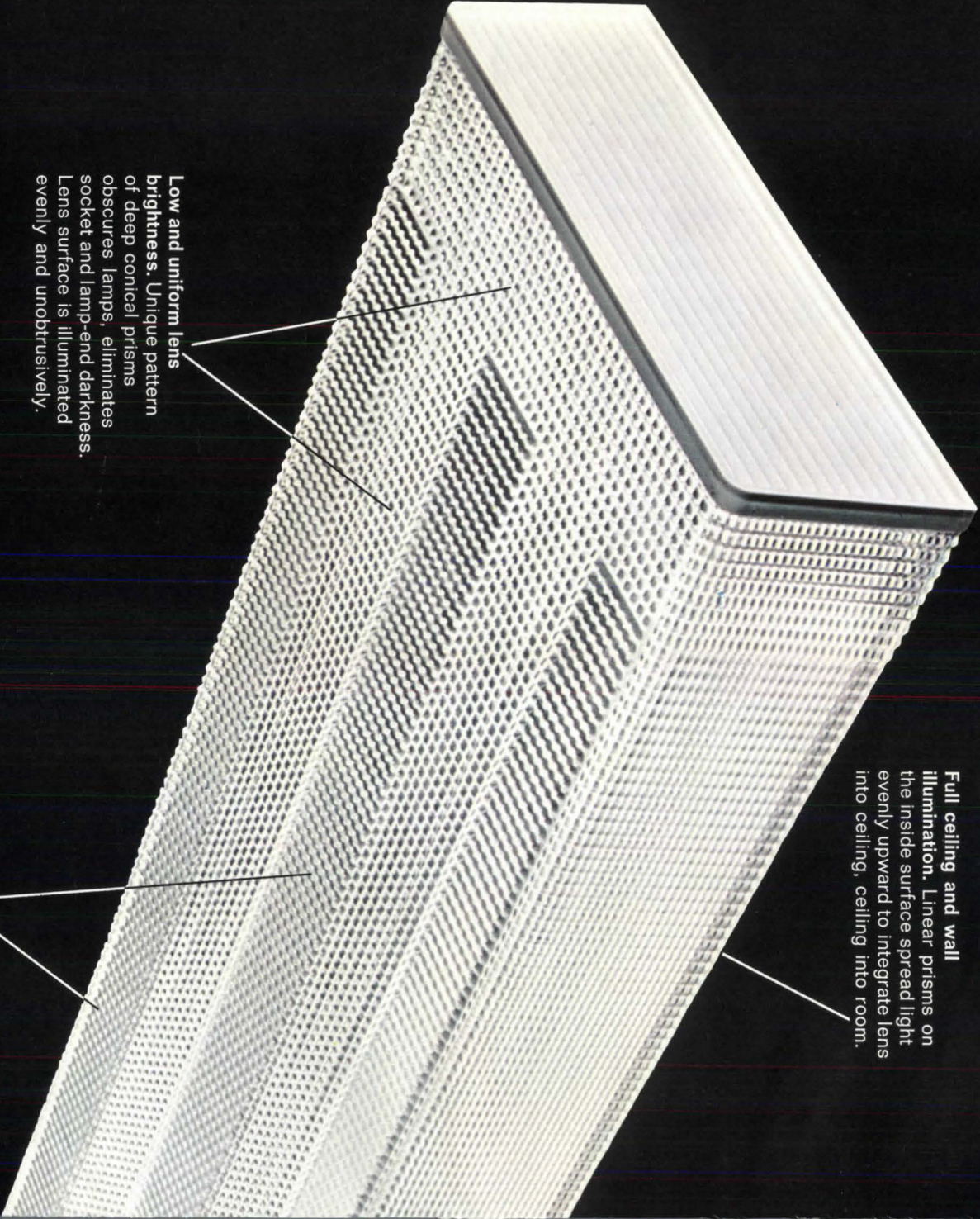
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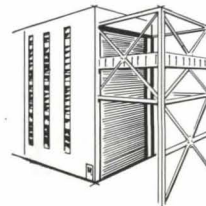
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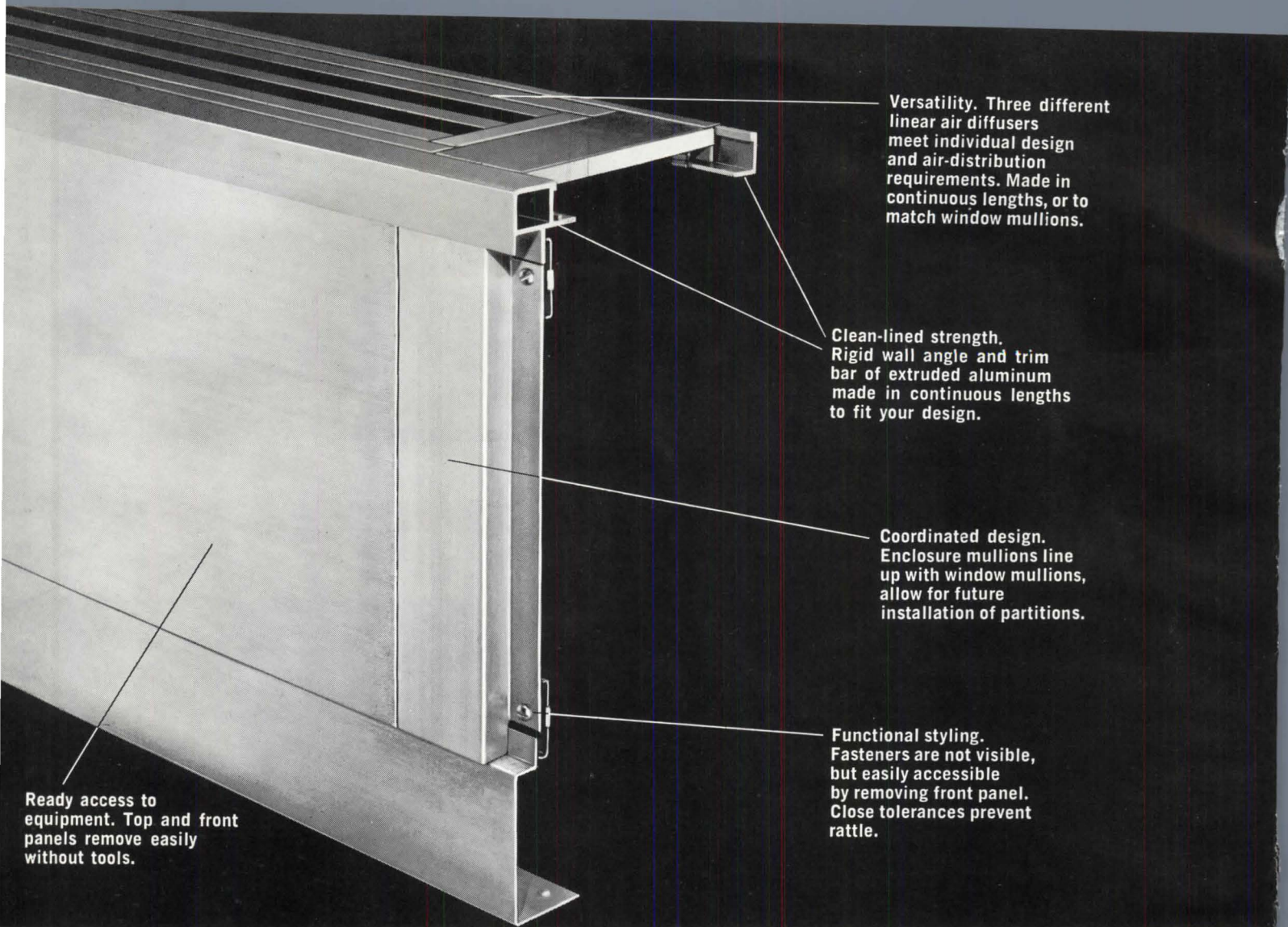


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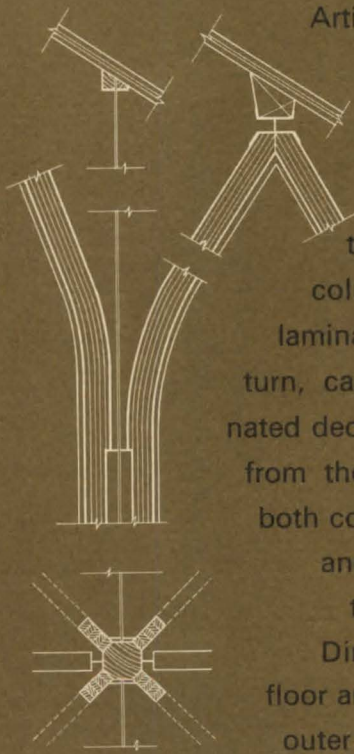
**JOHN STORRS INVESTIGATES THE USE OF NATIVE WOOD
FOR AN IMAGINATIVE RESTAURANT AND COCKTAIL LOUNGE.**

One of a series of design innovations commissioned by Weyerhaeuser Company

Weyerhaeuser Company has commissioned a number of leading architectural firms to create design innovations which highlight the potential of wood in public and commercial buildings. This original design by John Storrs, architect of Portland, Oregon, is the fifth in the series.

"The branching arms of laminated arch and columns create an atmosphere of dining in a grove of trees."

"The project is a restaurant and cocktail lounge designed to exploit the human and structural qualities of wood. The exterior form of the building is inspired in part by the great peaks that dominate the mountain ranges of the Pacific Northwest. Outside columns in the loggia introduce the structural development of the interior spaces. Here the branching arms of laminated arched columns create an atmosphere of dining in a grove of trees. The feeling is reinforced by natural light that falls through a generous skylight at the peak of the building.

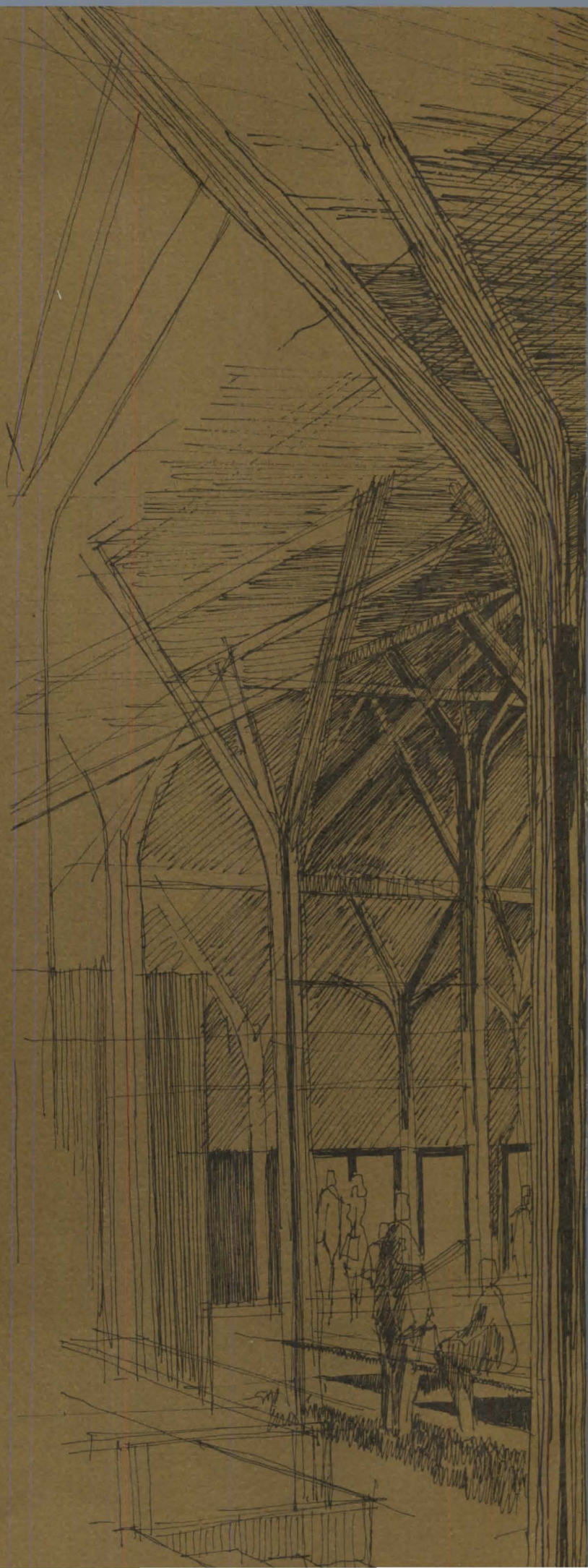


Artificial light is directed upwards from a point on each column where it branches outward to support the roof. The arched column branches receive laminated purlins. These, in turn, carry rough-sawn laminated decking running upwards from the perimeter, providing both completed roof structure and an appropriate visual texture in one element.

Dining areas on the main floor are tiered upward to the outer reaches of the interior.

The bar and lounge rest below. Both are placed to absorb views of the fountain in the center well of the building."

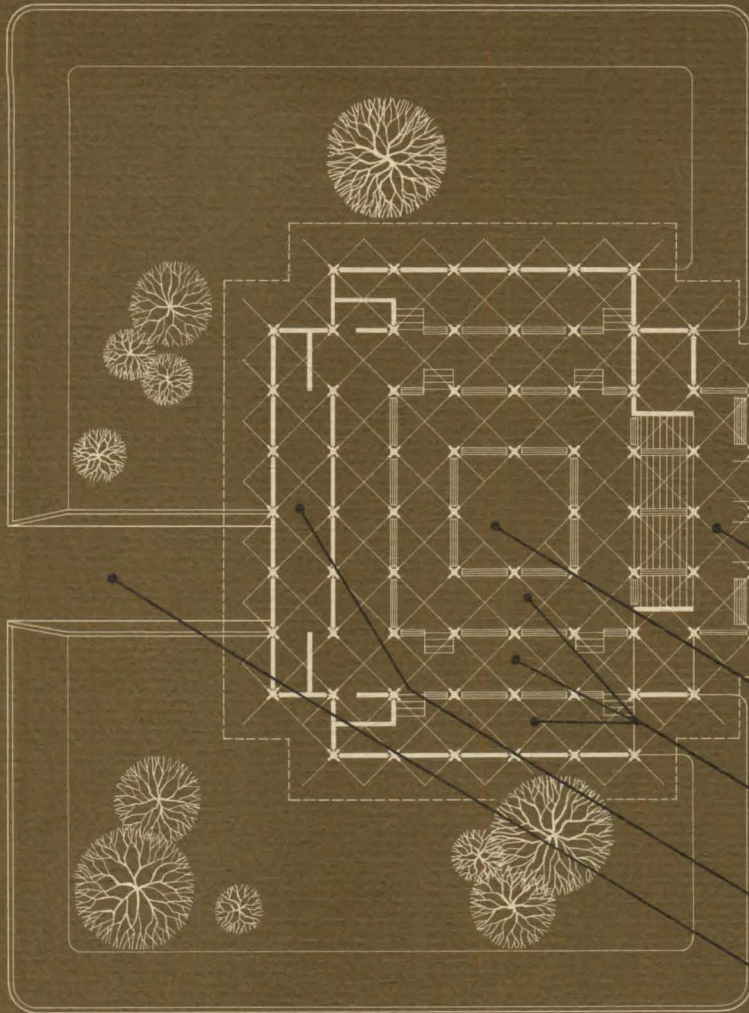
John Storrs





"Endless opportunities for creative joinery."

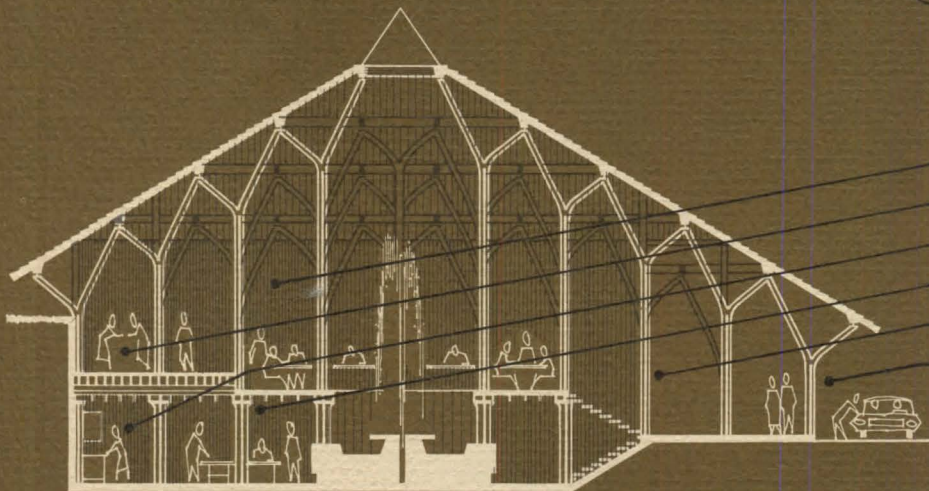
Storrs notes that the structural scheme of the building calls for moderately light construction. "It is designed to provide a rich variety of wood connections permitting endless opportunities for creative joinery—notching, dapping, bolting and even pegging. Specifications would include hemlock, fir and rough-sawn Western Red Cedar to give color and textural contrast. The exterior is surfaced with extra long handsplit cedar shakes."



UPPER LEVEL FLOOR PLAN

Plan of Restaurant (Upper Level):

- Loggia: The outside columns introduce the structural development of the great interior space.
- Entry Foyer: The grand central stairs lead up a half-level to the restaurant, flanked by stairs leading down a half-level to the cocktail lounge.
- Fountain and Pool: At an intermediate level between the restaurant and cocktail lounge—a focal point to be enjoyed by both.
- Tiers of Dining Levels: Making possible optimum viewing of the central fountain from the furthest reaches of the restaurant.
- Dish-Up Kitchen: With lifts and stairs from food preparation kitchen on lower level.
- Service Drive: Cut through the berm and servicing the kitchen on the lower level.



SECTION

Section Through Center.

- Restaurant
- Dish-Up Kitchen (Upper Level)
- Food Preparation Kitchen (Lower Level)
- Cocktail Lounge
- Entry Foyer
- Loggia

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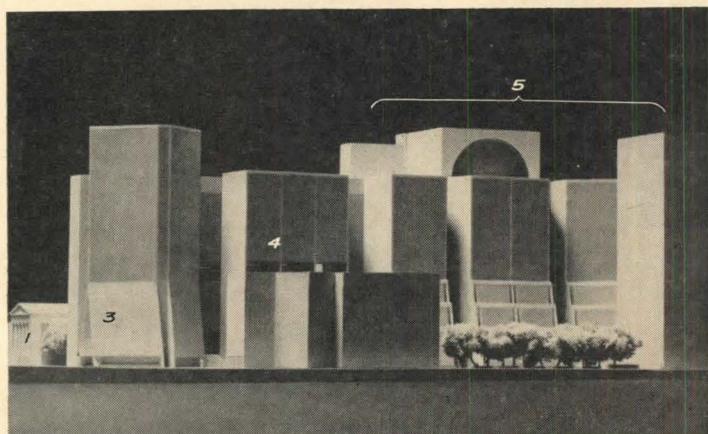
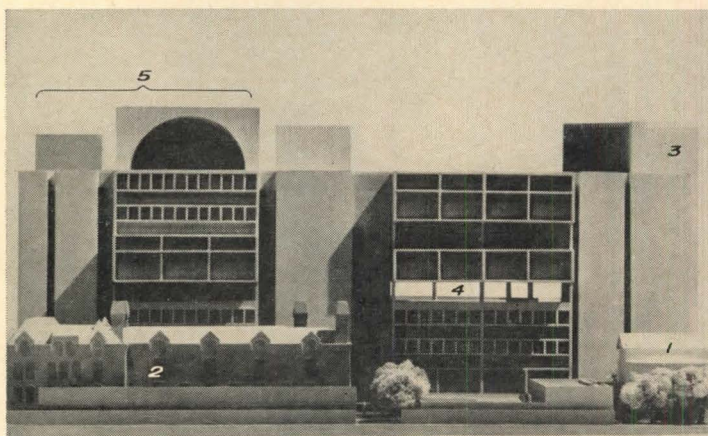
DMJM Project Delayed

LOS ANGELES, CALIF. Sunset International Petroleum, client for Daniel, Mann, Johnson & Mendenhall's winning entry in P/A's thirteenth Annual Design Awards Program (see JANUARY 1966 P/A) announced recently that another development scheme would precede the building of the DMJM project. The DMJM design, an urban nucleus (a cluster arrangement of stores, offices, and apartments) in Sun-

set Mountain Park, which is land owned by Sunset in Santa Monica, will be postponed in favor of a more conventional one on a catty-corner site of filled and contoured land. According to one source, "conventional" means single-family residence units.

We hope the delay does not become permanent and that Sunset will not forsake the pioneering kind of planning that went into the DMJM design.

Philadelphia College of Art: The Third Wave



PHILADELPHIA, PA. Founded in 1876 as an outgrowth of the Centennial Exposition, the Philadelphia College of Art (PCA) has two distinct styles of architecture on its grounds. And in 1976, one hundred years after its founding, the college will have a third.

The first of these styles is the neo-classicism of John Haviland's granite and stucco building (1). Originally a school for the deaf and dumb, it was occupied by the college in 1893. That year, the college also moved into the brick, turreted Victorian buildings (2)

built in 1852 by Frank Furness. This past March, Louis I. Kahn revealed his designs for a new \$15 million campus complex. The Haviland and Furness buildings will be retained; the former for administration offices, the latter as a student union and student dormitory. But the major portion of the college—the library, instructional buildings, dormitories, student union, auditorium, gymnasium and theater (to be built in that order)—will bear the indelible stamp of Louis I. Kahn.

The nine-story glass and concrete Library Tower (3) will mark the official entrance to the college. The Tower will have a ground floor auditorium seating 350, two floors for exhibition purposes, and six floors for the library, Art Education Department and design center. On the roof, Kahn is planning a landscaped garden. The roofs of the other buildings will be similarly developed as roofless rooms for students to wander in, gather in, or study on. For Kahn, the roof areas will "recapture the land" serving as campus for the asphalt locked college.

The strongest elements of Kahn's design for the first phase of PCA's expansion—the Library Tower and instructional buildings—are the great, hulking monoliths directly behind the library, which will contain the classrooms, studios, and galleries. These glass and concrete instructional buildings will use a combination of stepped trapezoids and high-rise slab construction to catch the maximum amount of natural daylight. Even here in academic spaces where PCA students will seek to liberate their muses, Kahn has managed to liberate the student. The fourth floor of the first instructional building (4) will be a wall-less garden area—in Kahn's words, "a relief area . . . a free area away from the bondage of use." In the next three instructional units (5), Kahn has grouped the rooms around a

gigantic light shaft that will run from the roof to ground level, forming the interior walls of the entire rear complex of studios.

Kahn, whose career has been closely tied to academic halls (he recently became the Paul Philippe Cret Professor of Architecture at the University of Pennsylvania), wanted to make the "campus interweave with the buildings." He has done this and much more. With the use of the open spaces, the light, and roof areas, Louis Kahn has given his design an air of freedom and surprise—a creative spirit.

Atlanta Firm to Design Renewal For San Francisco

SAN FRANCISCO, CALIF. The last five-block area of the Golden Gateway renewal area here will be developed by investors from Atlanta, Dallas, and New York. Needless to say, the outside interests stepping into this highly chauvinistic city have caused some raised eyebrows and raised voices. But John Portman, Trammell Crow, and Cloyce C. Box were the only bidders on the renewal land who offered to buy and develop the entire area, not just a portion of it.

Although specific plans have not been announced, the \$150 million development, to be designed by Edwards & Portman of Atlanta, will probably include office towers, retail commercial areas, two theaters, and other entertainment features. The entire site will be covered by a two-story garage, the roof of which will be a pedestrian plaza. The land will be purchased and developed in four separate parcels. In the first parcel, a place must be set aside for a repertory theater, a long-time San Francisco project. Sasaki, Dawson, DeMay Associates of Watertown, Mass., will be site planners.

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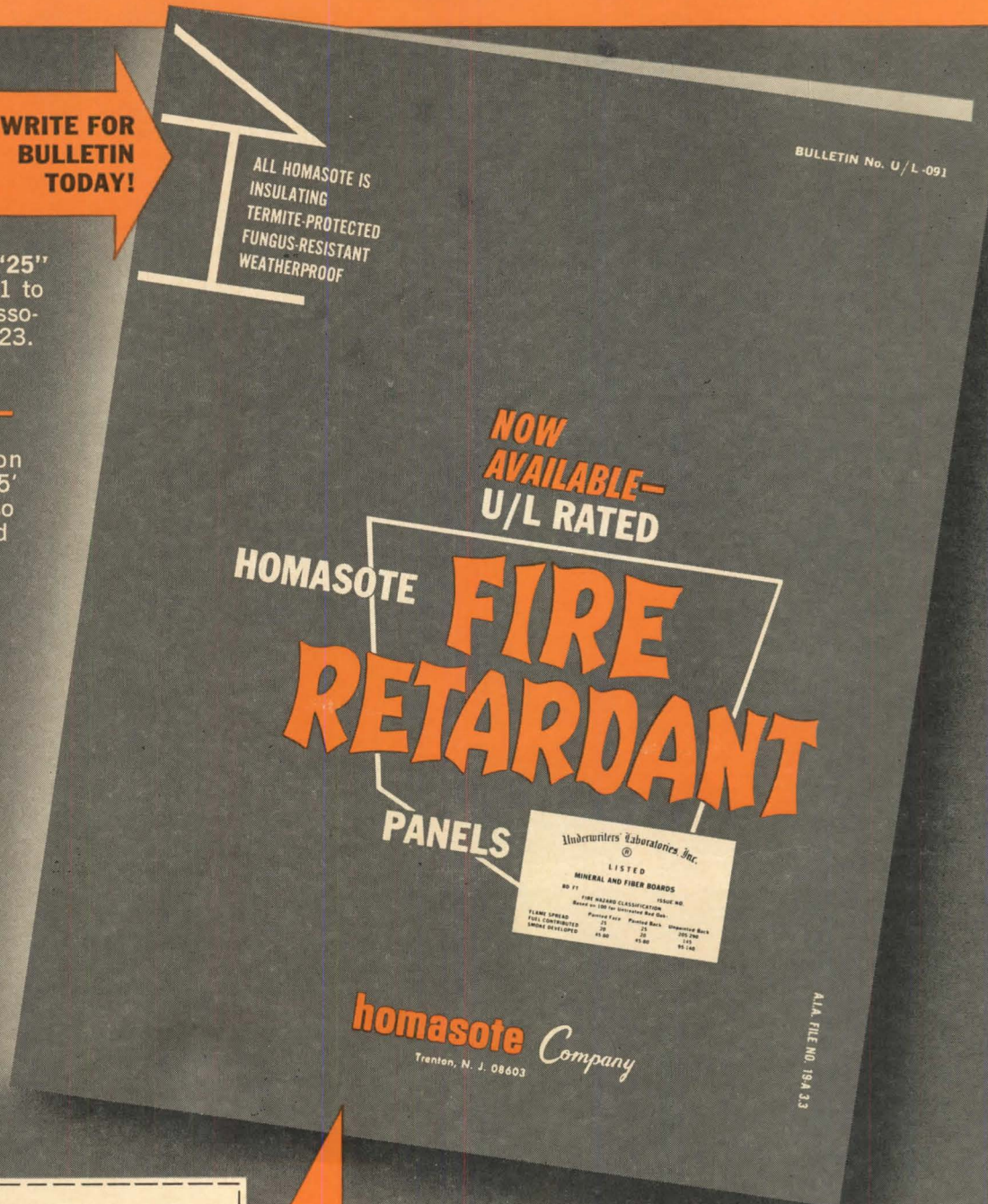
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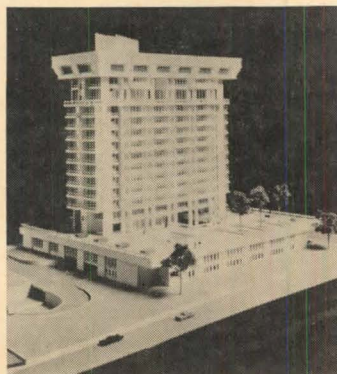
BOSTON, MASS. The new home for the Boston Architectural Center (in process photo above) opens this month with dedication ceremonies, a new products exhibit, and a conference on "The Future of Architecture." The building, designed by Boston architects Ashley, Myer & Associates (see pp. 71-2, MARCH 1964 P/A), serves as stomping grounds for the Boston Society of Archi-

tects as well as a matriculation center for would-be architects who work during the day. Five years of evening classes, a thesis, and five years experience in architectural offices are sufficient qualifications for the state exam. Future BAC programs will include continuing education for practitioners; adult, nonprofessional education, and interprofessional meetings.

St. Louis Competition



ST. LOUIS, MO. Late in March, Mayor Alfonso J. Cervantes announced that the city, together with the Downtown St. Louis, Inc., Association, will sponsor a national architectural competition for the design of the St. Louis Gateway Mall, which will stretch from the riverfront Gateway Arch (Eero Saarinen's 1947 competition-winning design) 18 blocks to the west. Open to all registered architects and landscape architects in the U.S., the competition will have St. Louis architect Charles E. King as professional



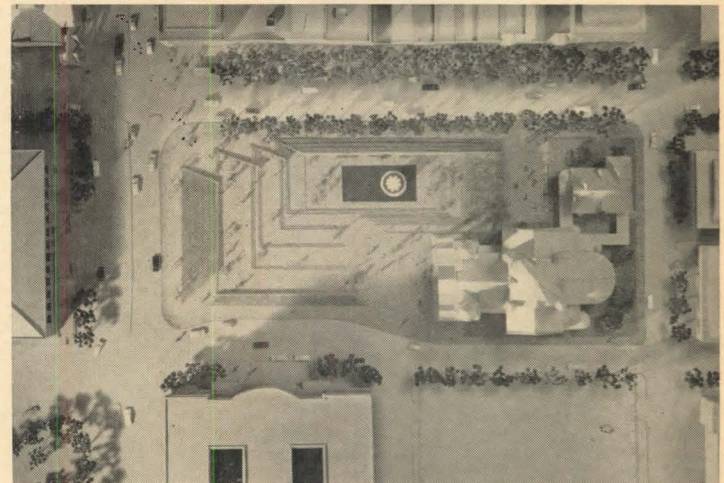
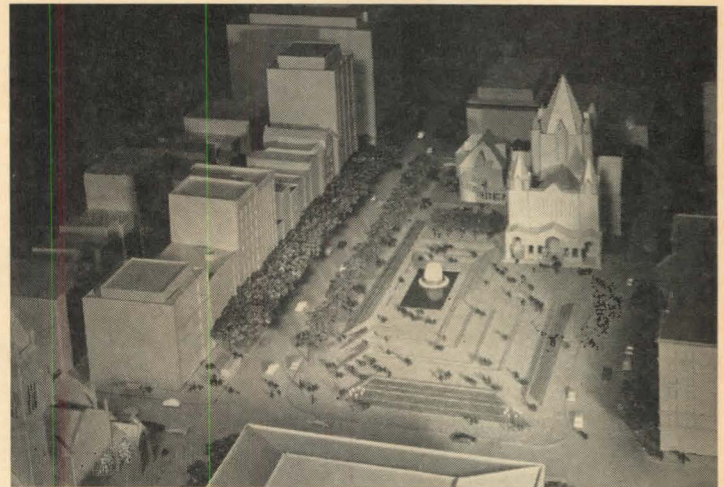
advisor. Announcements will be mailed in June.

Mayor Cervantes also re-

vealed the plans and model for the new international headquarters building for the Pet Milk Company. The building (shown here), designed by Memphis architect A. L. Ayde-

lott, is scheduled for completion by 1968. The concrete building will sit on a large plaza base overlooking the Mississippi and the Gateway Arch.

Copley Square: A Competitive Face-Lifting



BOSTON, MASS. Sasaki, Dawson, DeMay Associates, Inc., won first prize in Boston's Copley Square competition: \$5000 and a contract to provide specifications and supervise construction. Their winning design (1, 2) shows low walls, fronted by evergreen shrubbery, that define the west end of the square. Inside these low walls, the plaza descends in gradual concentric levels to a rectangular reflecting pool and fountain. Along the north side of the square and along the curb across Boylston Street are lines of trees that both screen the street-side shop fronts and define the square. Corner directional walls open a path to the Old South Church at the northwest corner of the square. As Stuart O. Dawson puts it: "The offset position of Trinity Church is countered by the gently fan-

ning stairs and the sunken pool and fountain. Diagonal pedestrian movement is encouraged; the cascading steps gently entice the pedestrian visually and actually into the square. While views from all sides into the plaza are unimpeded, once within the space, a sense of enclosure is provided by the strong evergreen edge and low walls."

The jury (composed of Chairman Pietro Belluschi, Dan Kiley, Hugh A. Stubbins, Asa S. Knowles, Wilhelm V. von Moltke, Sidney N. Shurcliff, H. Russell Beatty, José Luis Sert, Roger C. Damon, and Bryan E. Smith) called it a "brilliantly presented solution," and praised especially the location of pool and fountain, and the way the Old South Church is brought into the Square.

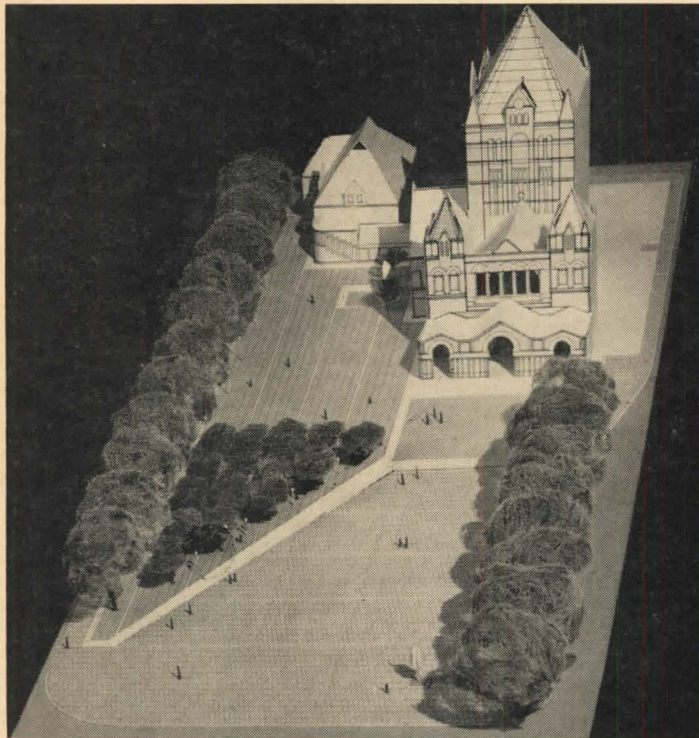
Judging was done in early

March, but the results were kept a closely guarded secret until mid-March, when Boston Mayor John F. Collins announced the winners of this significant national competition. "Even the jury didn't know the winners," said Charles G. Hilgenhurst, the Professional Advisor. They had voted by secret ballot among six finalists selected from 195 entries.

As soon as Boston's City Council approves a \$50,000 allocation, which will go for architectural fees and which will represent 10 per cent of \$500,000 in "beautification funds"

Copley Square ready for use next summer.

Second prize (\$2000) went to Cooper & Auerbach of Washington, D. C. Their design (3) emphasizes both Trinity Church and the importance of pedestrian traffic across the square, subordinating landscaping, sculpture (at the west edge of the square opposite the church), and paving to the church itself. From the west entrance, the square slopes gently to a series of four steps just in front of the church. Two strong lines of tall maple trees flank the square north and south. According to the



3



4

Boston hopes to get from the Federal Government, Sasaki, Dawson, DeMay will start on specifications. If Federal funds are forthcoming, work on the square should start in October. If not, Boston will have to raise the money privately and work may be delayed. In any case, the city hopes to have

jury, this was a "simple and effective statement," and they praised especially the tactile surface of the paving slate.

William A. Gould & Associates of Cleveland won third prize and \$1000. More than the other entries, their solution (4) emphasized the relationship of the square to Boylston Street

to the north. And a wide V-shaped group of trees leads off Boylston Street into the square. Also more than the others, their landscaping forms a direct visual access to Trinity Church. It was this latter element no doubt that led some members of the jury to praise

this solution as the boldest.

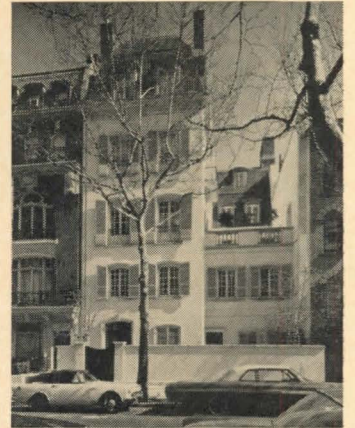
Both Boston and the architectural participants of this competition are to be congratulated for the quality of their work. The competition was, as it was meant to be, a milestone in contemporary national urban competitions.

Manhattan Town Houses: A Rare Breed

NEW YORK, N.Y. Completed last December, the Manhattan residence of art patron-philanthropist Paul Mellon is a gracious addition to what may be New York City's most handsome residential block, 70th Street between Lexington and Park Avenues. Designed by H. Page Cross, the style is that of the Parisian town house, complete with ivory-colored shutters, yellow stuccoed exterior, and a mansard roof of dark tiles. In front of the house is a walled dooryard with two trees, which enforces the air of quiet repose produced by the street's curbside rows of towering sycamores. This block was part of a parcel of land sold by its original owner with the provision that all houses built there must stand back 10' from the street. This covenant has given the street more spaciousness, which, in crowded New York, is akin to grandeur.

But what makes the house distinctive, besides Cross's carefully thought-out architectural treatment, is that it exists at all. It is one of what most authorities believe to be two *completely* new town houses built in Manhattan since World War II, and possibly for longer than that (for the other, see page 160). According to the Standard Abstracts, there are only 2758 privately owned houses in Manhattan for its 800,000 inhabitants. The number of these houses with single-family occupancies is even smaller, probably around 500. Costs are the main deterrent to house building and ownership in New York. Land prices are exorbitant, and so are taxes. Mrs. Grace Dodge, who keeps a spacious town house on Fifth Avenue boarded up, is said to pay \$90,000 a year in city property taxes. And the problems of getting domestic help and adequate maintenance and protection are more than most people want to cope with.

Despite these drawbacks, the number of town houses in Manhattan is increasing. Al-



though none are being built from scratch, many are being converted from rooming houses, which the city is trying to eliminate. Each year, the codes on rooming houses are tightened slightly, like a noose around an outlaw's neck, and they are being sold and converted into houses, mostly for two-family occupancy. If a house has more than two families living in it, it comes under the rent-control restrictions—limiting rents—as well as more restrictive building codes, and it is currently more attractive financially to limit the occupants.

Around the city there are pockets of town-house renewal. And when the city's Housing and Redevelopment Board put the first of 400 brownstones in its West Side urban renewal area on the market, they were swamped by potential buyers. The majority of these were young couples, with mortgage money, who wanted to restore the houses (which sell for about \$30,000 apiece, and take almost again as much to repair) and live in them. The town house is no longer the province of the very rich. But, of course, the rich and famous still live in them. Architect William Conklin, who has a town house on Manhattan's East Side, has as neighbors, in adjacent town houses, Brian Aherne, Tammy Grimes, Christopher Plummer, and Catherine Cornell.

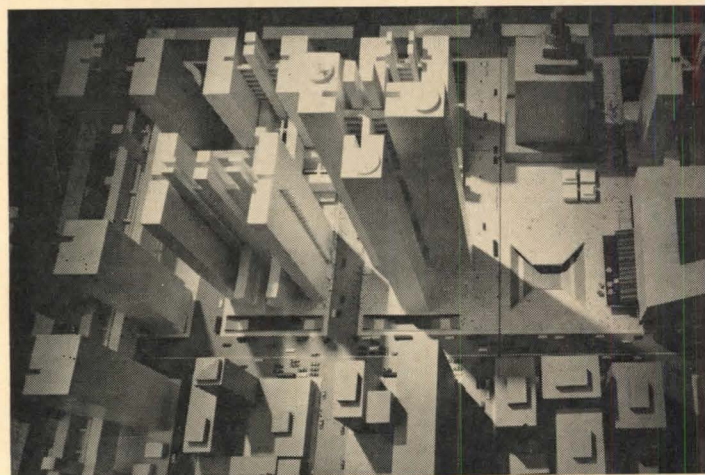
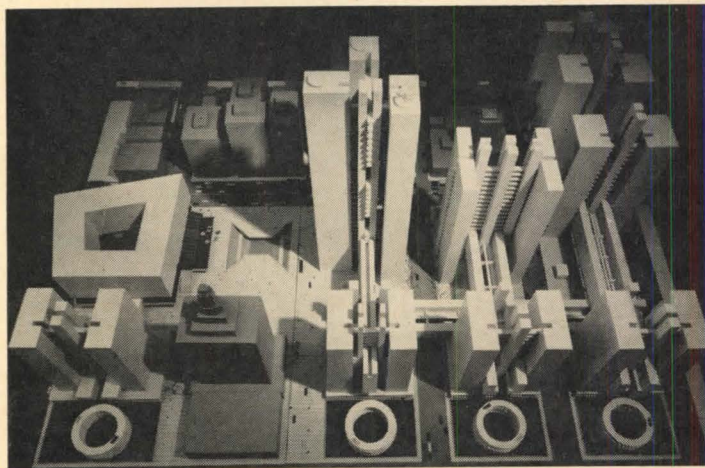
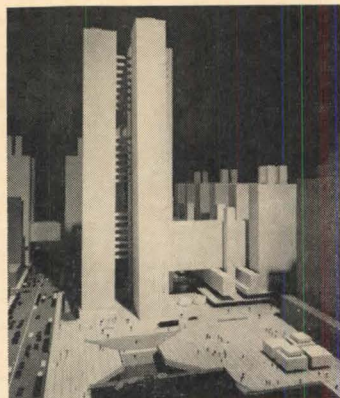
And, of course, a disproportionate number of architects have chosen to live in town houses. Five other members of Conklin's firm alone live in town houses; so do Edward Durell Stone, Bruce Graham, Edgar Tafel, and others.

Fortunately, town-house living is attractive enough, despite its hazards, to insure that private houses will not disap-

pear from Manhattan. In many areas, town-house owners are banding together, the way lords of castles did in days of yore, for protection and common commiseration. These associations often share the cost of communal planting and protection, and they provide a forum for sharing the particular joys known only to Manhattan home owners.

OAKLAND OVERTURE

OAKLAND, CALIF. Oakland has more aesthetic potential than any city its size (population: 367,548 in 1960) in the U. S.—and less to show for it. It has San Francisco Bay, a fair-sized lake a stone's-throw from the center of downtown, and a backdrop of high hills. But Oakland's downtown area has degenerated into a shabbiness that is not quite genteel, a drabness that is only partially alleviated by the color of building materials and plantings. Mostly what Oakland lacks is the ex-



citement generated by a carefully integrated central area with easy access, a variety of building types, and a multitude of businesses, services, and entertainments that draw people to it. Fortunately, Oakland, un-

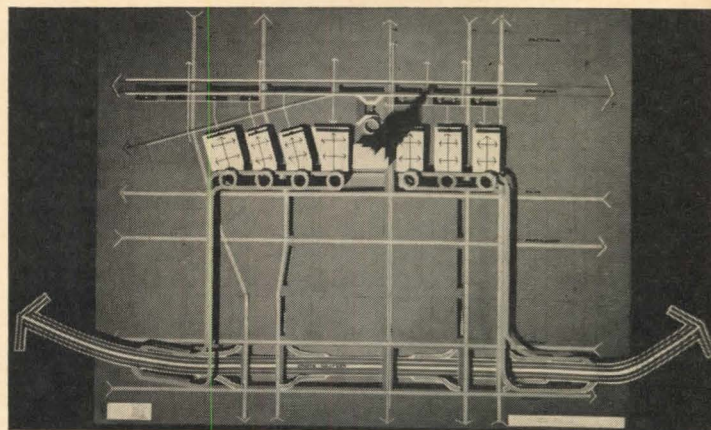
der the guidance of a new City Manager and a foresighted City Council, is acting before the problems become overwhelming.

Latest addition to proposals for renewing Oakland is a pilot

plan, a sort of architectural come-on, which will add a six-block area in the heart of Oakland's business district to the already planned Corridor Redevelopment area. The plan was prepared by Rai Y. Okamoto, San Francisco architect, at the request of the Oakland Redevelopment Agency, who wanted a plan to show to the City Council in demonstrating the need for incorporating the area into the redevelopment plan for the Oakland Corridor. The City Council has approved the addition, and it is about to move into the survey and planning stage.

Okamoto's suggestions are most striking for the carefully

proposed by the Redevelopment Agency include a 55-story office-hotel, located across an open plaza from a convention hall, a repertory theater, movie houses, high-rise office buildings, retail facilities, restaurants, specialty shops, and service facilities. Noticeably lacking are specific provisions for apartments or residences; but since the proposal is not yet fixed, any one or more of the high-rise structures might become dwellings. In fact, the entire plan is flexible. The important points are the suggested arrangement of spaces, the provisions for access by road and subway, the parking facilities below grade, to be controlled



thought-out juxtapositions of new high-rise structures with existing buildings, for the shapes suggested for these new structures, and for the seemingly effortless flow of open spaces among buildings, with provision for a separation of pedestrian and vehicular traffic (see photo). Basic elements

by computer, and the circulation paths among structures by elevated walkway and at-grade malls. If plan becomes practice, Oakland should have a downtown center as alive as a small-scale Rockefeller Center, and a skyline to make even the most skeptical visitor from across the Bay take notice.

Low-Income Housing: A Dreary Dearth

The Fosters—mother, father, and six children—live in five rooms on New York City's West Side. Their rent, in a city-owned tenement, is \$52.25 a month, a decidedly modest rental for New York, but there's a catch. The bathtub is in such disrepair they can't use it. "It's been this way since we moved in two months ago," Mrs. Foster told a *New York Times* reporter recently. "We've had to go to relatives to take our baths." Yet even with this major inconvenience, the Fosters have improved their lot. Before they moved, from another city-owned tenement, the Fosters shared a five-room apartment with 13 other persons.

Overcrowding is only one of

the pressing problems facing low-rent urban housing, and it is a problem beyond the scope of architecture to solve. It also seems to be beyond the ability of Government. "We never rent for more than the legal number of occupants," explained Frank L. Lazarus, New York City's Commissioner of Real Estate recently. "But once it's rented, how they pile in! There are more cousins and uncles than you can shake a stick at. Some of the tenants illegally rent out rooms or beds. It's not the landlord's fault."

Overcrowding is precipitating a push for more low-income housing, but, according to an informal P/A survey, demand is still far outstripping supply and what is supplied

dangerously ignores architectural quality.

The economic and political conditions under which low-income housing is pursued make it unlikely that much quality will result. "There is no 'low-cost' housing of quality in San Francisco, nor in any other major urban center," M. Justin Herman, executive director of San Francisco's Redevelopment Agency, says flatly. "There is, however, housing of good quality which is priced below the market, and much more will emerge—primarily through the redevelopment process."

No Incentive to Architects

A large part of the fault for this dearth of architectural quality stems from a lack of incentive to architects. In New York City, for example, where the need for low-cost housing is perhaps most pressing, where the conditions are worst, the incentive is least. There, despite years of effort by the AIA, the fees set under the Mitchel-Lama law, which provides for privately built low- and middle-income housing, are about half what the Public Housing Administration pays. Despite this inequity, some architects heroically undertake these projects, almost always at a financial loss.

Subsidies

The way Justin Herman and others have attacked the quantitative lack of low-income housing is by providing government-built housing that provides an indirect subsidy. In these apartments, low-income families (usually thought of as those with incomes under \$4000 per year, although this limit may vary with family size) can live by paying 20 per cent of their annual income in rent. Herman's plans for San Francisco call for 500 units of housing for the elderly in the newly designated Yerba Buena urban-renewal area, and 200 units of scattered public housing in the Western Addition area. These public efforts are admittedly small, and San Francisco's Housing Authority has just received permission from the city's Board of Supervisors to lease an unlimited quantity of private units for public housing. Some of 2300 planned moderate-priced private housing in the Hunter's Point urban renewal area may

be leased this way. San Francisco is also considering a rent subsidy program.

With today's means of construction, housing costs are so great that the resulting rentals are more than many families can afford.

According to Philadelphia's Housing Association, "There is an emerging consensus in the housing field that the only way both to generate demand for high levels of moderate and low-cost construction and to provide families who need them right now with the means to pay for decent housing—new or old—is through adequate housing subsidies aimed directly at the families in need."

The Federally-approved rent-subsidy program, under which landlords are reimbursed for the proportion of rent greater than 20 per cent of a tenant's income, is at present merely a token. With \$12 million authorized, not many low-income families can be helped. New York State's rent-subsidy program, for instance, provides \$3,500,000 to house low-income families in middle-income public housing. Under New York law, middle-income developments can allocate up to 20 per cent of their units to low-income families supported by the program; but according to New York State estimates, the money set aside, after administrative expenses, will only help some 2100 families. This number hardly dents the area's vast low-income housing need. New York City alone has 6335 publically financed apartments awaiting construction. Countless more are needed.

Quantity

In Boston, where the planners hope to keep a stable population of about 700,000 in the city center, 5000 more low-income public-housing units are planned by 1975 (bringing the total to about 17,500). They hope to disperse these units evenly throughout the city in clusters of not more than 100, located on renewal or vacant land. Boston realizes it cannot meet the entire need for low-income housing, and it hopes to get suburban areas to change zoning laws to make low- and middle-income housing possible on vacant land there.

Chicago has 4756 units in the construction, design, or land purchase stage, and plans

to gain about 750 more units from leasing arrangements in privately planned buildings. Forty-one per cent of all Chicago units have three or more bedrooms.

In Washington, there are 6000 applicants for Housing Authority space. And although Chicago has 38 projects open, only three are under construction, 12 in the final planning stage, and three in initial planning.

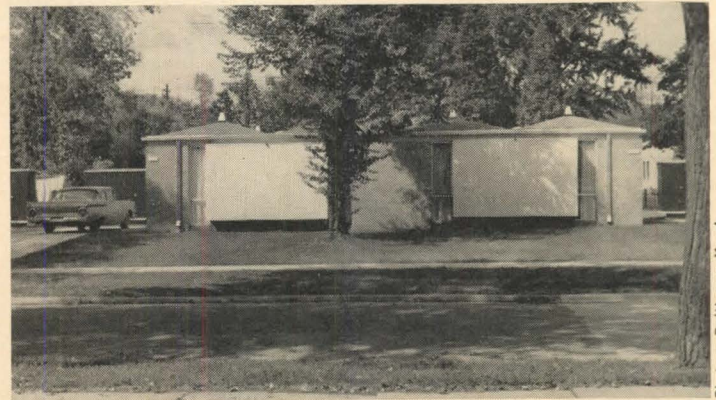
Philadelphia has 274 low-income dwellings (mostly of low-rise construction) in the planning stage. But Philadelphia Housing Authority points out:

lem: the provision of decent housing for low-income families."

But if the volume of low-cost housing is appallingly slight, its architectural quality is abysmal. Even such enlightened urban renewal leaders as Justin Herman, who lives in a high-rent town house in San Francisco's Golden Gateway project (where town house rents on urban renewal ground run from \$370 to \$515 per month) have yet to develop architectural quality in low-cost housing. Herman at least acknowledges the need: "Design individuality can make



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"One basic fact about renewal should be reiterated: Renewal does not and cannot now provide subsidies for the construction of new housing. Therefore, renewal alone cannot now, and probably should not, be counted upon to attack our most pressing housing prob-

urban life worthwhile, a fresh experience. We *must* insist on it or all we do is meaningless."

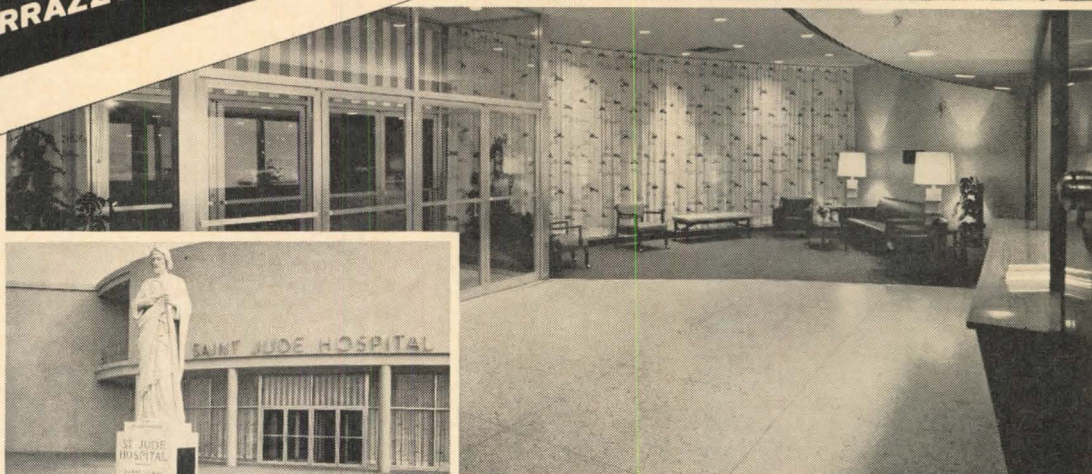
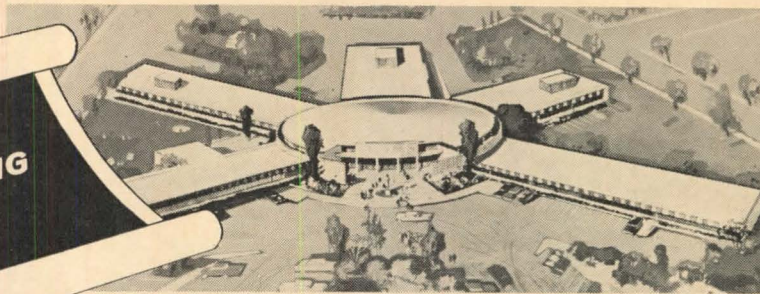
And James W. Gaynor, New York State Commissioner of Housing and Community Renewal, points out somewhat wistfully, "It is a very sorry record indeed that shows only one major innovation in low-rent housing in a generation—rent subsidies."

Two Quality Projects

Only two U.S. public housing projects in recent years have come close to architectural attractiveness—neither of them in densely populated urban areas. One, completed about three years ago, is in Mount Clemens, Mich., designed by Meathe, Kessler & Associates

Photos: Balhazar Korab

**A HILLYARD SPECIFICATION
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St. Jude Hospital in Memphis, Tennessee, founded by Entertainment Star Danny Thomas for the study and care of children's diseases. Architects: Mahan-Shappley, Memphis.

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SPECIFICATION AND HOW TO APPLY: Onto a perfectly clean, stain-free floor, apply in thin, even coat with lamb's wool applicator. Let dry until pressure of fingers pulled across the surface produce a squeaking sound. Buff after application. Apply second thin coat and buff for added lustre.

COVERAGE: 600-900 sq. feet per gallon depending on porosity of floor.

TECHNICAL DATA: NVM—10.5% minimum. Film properties: Drying time—45 minutes maximum. Appearance—free from particles; semi-transparent. Tackiness—none. Water resistance—no loosening of film; no removal of gloss. General Appearance: Color—light, contains no pigments or dyes. Odor—non-objectionable at any time. Viscosity—heavy bodied liquid mixture.

GUARANTEE: When applied in accordance with manufacturer's directions, it is guaranteed to meet all claims made for it.

MAINTENANCE: Sweep daily with a Super Hil-Tone treated dust mop (do not use an oily mop dressing). Buff periodically. When floor is soiled, clean with Super Shine-All or with Clean-O-Lite (if a sanitizer is desired). Traffic lanes may be patched in and buffed to blend in with the rest of the floor. Reseal as needed, depending upon traffic and usage.

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REFERENCES: Sweet's Architectural File, A.I.A. Building Products Register, Hillyard A.I.A. File No. 25G.



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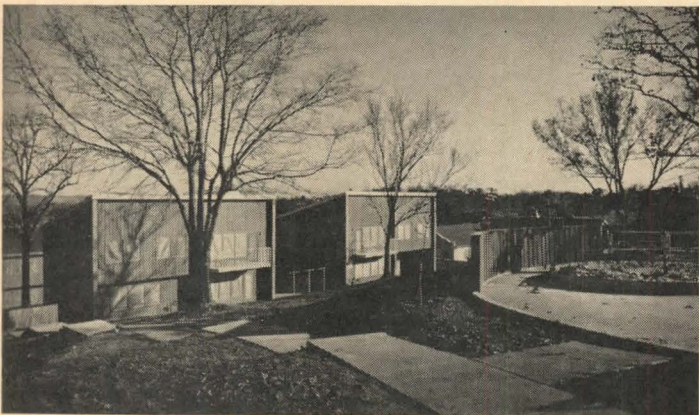


(see p. 60, JANUARY 1960 P/A). Consisting of 60 units (1,2,3) in 25 one-story buildings, the project was completed for under \$10,000 per unit with the

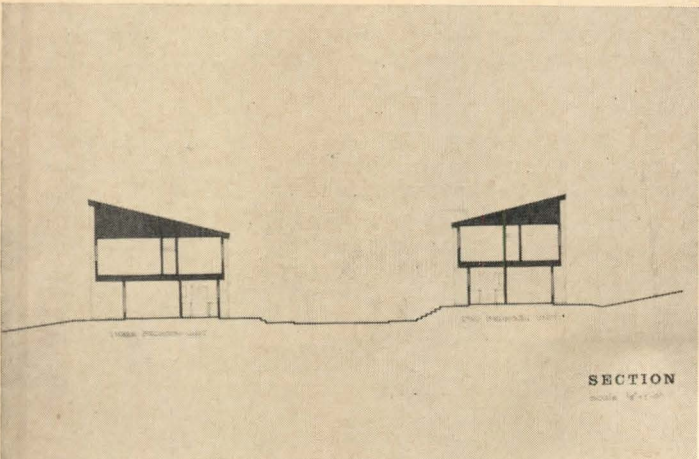
aid of a prefabricated roof unit and prefabricated closets that extend beyond the exterior walls of the building. Rents begin at \$21 a month.



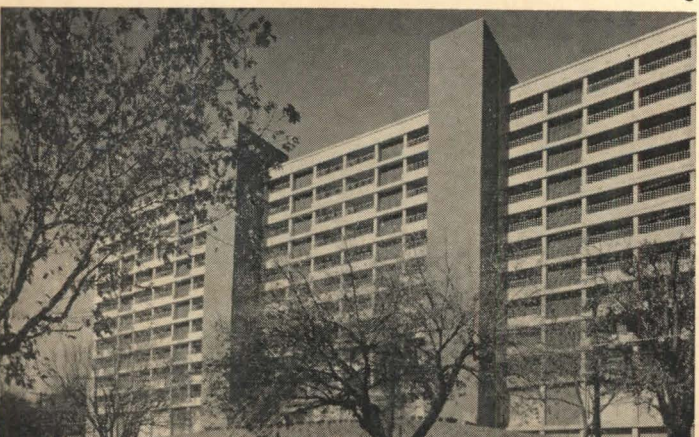
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The other, in Hot Springs, Ark., was completed last year and was designed by Wittenberg, Delony & Davidson, Inc., on a beautiful wooded site (4,5,6,7). It consists of 375 units, and comprises four building types: a high-rise structure of reinforced concrete and brick; a one-story row-house complex for the elderly; a one-story row-house of conventional housing; and a system of four dwellings clustered around a central court. The architects built all but the high-rise building for about \$12,000 per apartment. But rents run from a minimum of \$25 per unit per month to a maximum of about

\$50, with rents based on 20 per cent of a tenant's income rather than on the size of the unit. Court complex units are built of wood frame with brick dividing walls and end walls; roofs are of preassembled wood trusses. Landscaping will be completed this spring.

In each of these cases, distinction came from the ingenuity and taste of the architect. While it is true that building and land costs were lower in these areas, where a relative lack of demand keeps prices down, it is also true that the architects made a successful attempt to provide a pleasant place to live in. It can be done.

ERRATA

On pp. 53-4 of last month's P/A, engineers Farkas, Barron & Jablonsky were incorrectly credited with devising a method of slip-forming the tapering legs of the Niagara Falls observation tower. B. M. Heede, Inc., with offices in San Francisco, Montreal and Rye, N.Y., conceived the idea. In a letter to P/A, they state: "It was only after 20 years of slip-form experience that we had the nerve to attempt a four-way tapered structure."

We also incorrectly attributed the U.S. Expo '67 Pavilion to Buckminster Fuller and The Architects Collaborative. Cambridge Seven Associates, Inc., not TAC, are in charge of landscaping, exhibits, traffic and platforms. Apologies to all.

Syracuse Students Speak Out

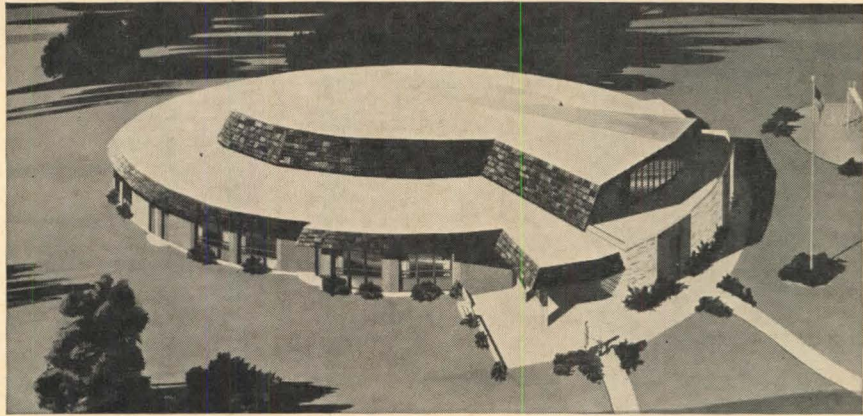
SYRACUSE, N. Y. In March, a full month or so before balmy spring weather makes the "cause" behind a student demonstration open to question, architectural students at Syracuse University boycotted their classes for two days. Their Gandhian-like silent protest was over the teaching of architecture at Syracuse. Following the two-day intellectual fast, they presented a 42-page prospectus calling for specific curriculum and procedural changes.

Although the formal preface to their written suggestions was puerile enough to make Mary Worth blush—"We have the means at our disposal for great

have no fear of not being able to enjoy the finer things in life," they said; "we want a say in what our future is going to be," they said—the concrete suggestions were, for the most part, so detailed that either the students are very brash indeed, or the teaching and curriculum at Syracuse need a careful re-evaluation. Their proposals ranged from a plea for unlimited cuts to a proposal of a joint student-faculty committee to legislate architectural school affairs, such as curriculum changes and faculty appointments. And they were specific about what they want taught and how. Examples: jewelry and metal, ceramics, structural design, business administration, more student selection of juries, interuniversity competitions. Even the physical conditions of the teaching environment got detailed treatment: "tackboards on all walls" and "electrical outlets at every desk." And they ended with a plea (or was it a demand?) for a photography center.

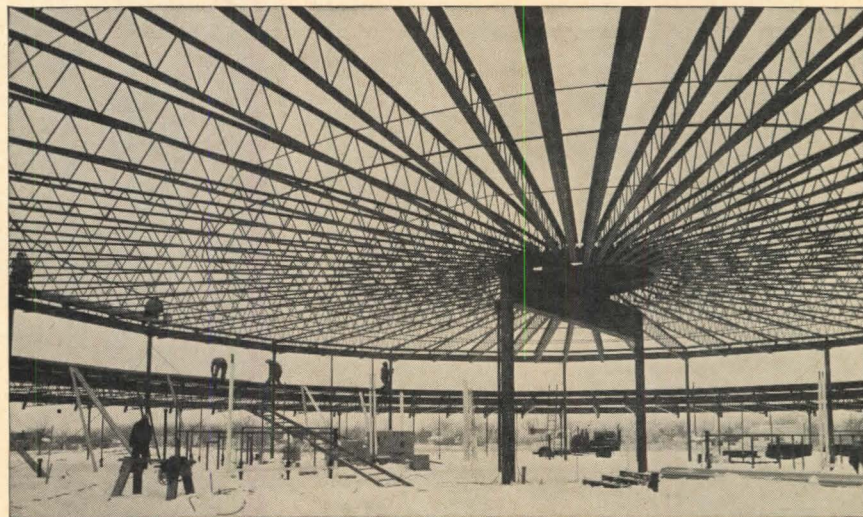
"Many of these suggested changes have merit," says Dean Kenneth Sargent, "but they shouldn't be made overnight. A curriculum should evolve. Otherwise you are in danger of losing the type of architectural program that has attracted the student in the first place. Syracuse is a middle-of-the-road school. It is an architectural school, not a design school, or a construction school."

And Sargent would like to see more liberal-arts courses taught to architectural students. "Students should know more about the people they will deal with as architects," he explains. What the students seem to want is less liberal arts and



Location: Aurora, Illinois; Architect: Robert F. Mall, A.I.A.

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you stretch a point—to architecture, such as jewelry and sculpture. To an outsider reading the student petition, it was obvious they should learn something about the English language.

Changes in Syracuse's architectural program are difficult, because in many cases they require the approval of the school of liberal arts, as well as of the architectural faculty. The way the program is currently set up, architecture is a major in the liberal arts program. Students get a Bachelor of Arts degree from the liberal arts school at the end of five years, and can then gain a Bachelor of Architecture after one additional year in the architectural school.

Whatever changes result from the petition, they will be gradual. But one thing that hopefully will be retained, if better directed, is the obvious spirit of the students.

Syracuse curriculum discussions come at a time when architectural education

throughout the U.S. is coming under close scrutiny. According to an AIA study now underway, of the 80 architectural schools in this country, 60 are thinking of changing their aims and methods. Writing in *The New York Times*, critic Ada Louise Huxtable said: "Architectural education still follows the 19th-Century master-student formula, with emphasis on present practice rather than the methodology of future solutions. The semester problem of a single building type or a grandiose architectural complex in pure design terms is still common."

Some feel that archaic teaching methods are leaving students ill prepared to face contemporary problems. Others feel that a poor use of physical space in schools is depriving many worthy applicants of architectural training.

Whatever the problems and whatever their eventual solution, it is heartening to note that both faculty and students are concerned about them.

Libraries Lauded



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WASHINGTON, D.C. Eleven U.S. libraries have been named in the Library Buildings Award Program sponsored jointly by the AIA, the American Library Association, and the National Book Committee. In three categories—college/university,

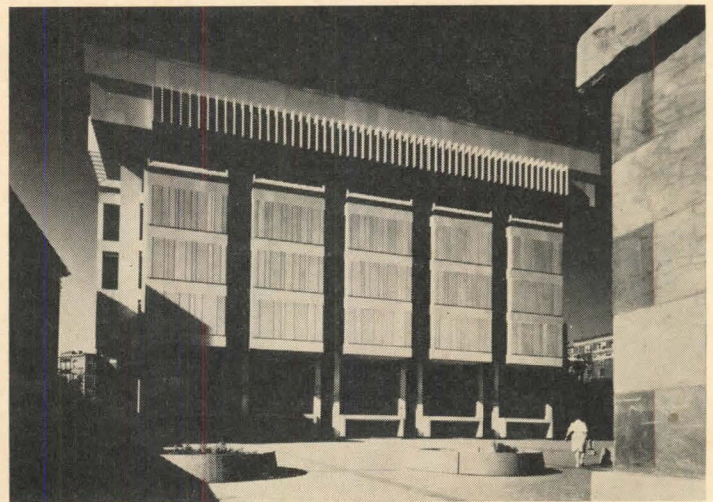
public, and school—the seven-man jury (architectural members: Harold Spitznagel, chairman, of Sioux Falls, S.D.; Ulrich Franzen of New York; George Vernon Russell of Los Angeles) granted only one honor award. It went to the

Magnolia Branch of the Seattle Public Library designed by Kirk, Wallace, McKinley & Associates of Seattle (1). Awards of Merit went to the W. Clarke Swanson Library in Omaha, Neb., by Leo A. Daly Company of Omaha; New Jersey State Library in Trenton by Newark architects Frank Grad & Sons (2); Casa View Branch of the Dallas Public

Long Island, by Los Angeles architects Richard J. Neutra and Robert E. Alexander; the Countway Library of Medicine at Harvard Medical School, by Cambridge architects Hugh Stubbins & Associates (4); and the University Research Library at the University of California at Los Angeles, by A. Quincy Jones and Frederick E. Emmons of Los Angeles (5).

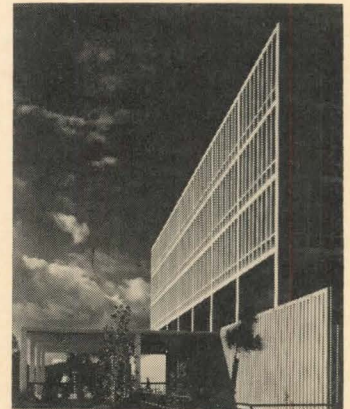


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Library by William H. Hidell of that city; the Wilmot Branch of the Tucson Public Library, by Nicholas Sakellar & Associates of Tucson; the Salt Lake City Public Library, by Edwards & Daniels of Salt Lake City; South Branch of the Berkeley Public Library (3), by Berkeley architect John Hans Ostwald; the McBean Library at Cate School in Carpinteria, Calif., by Santa Barbara architects Arendt/Mosher/Grant; the Swirbul Library at Adelphi University in Garden City,



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Competitions

May 16 is the deadline for submission of entries to the Prestressed Concrete Institute's awards program. Any structure using precast or prestressed concrete, completed within the last three years, is eligible. Entries should be sent to PCI Headquarters, 205

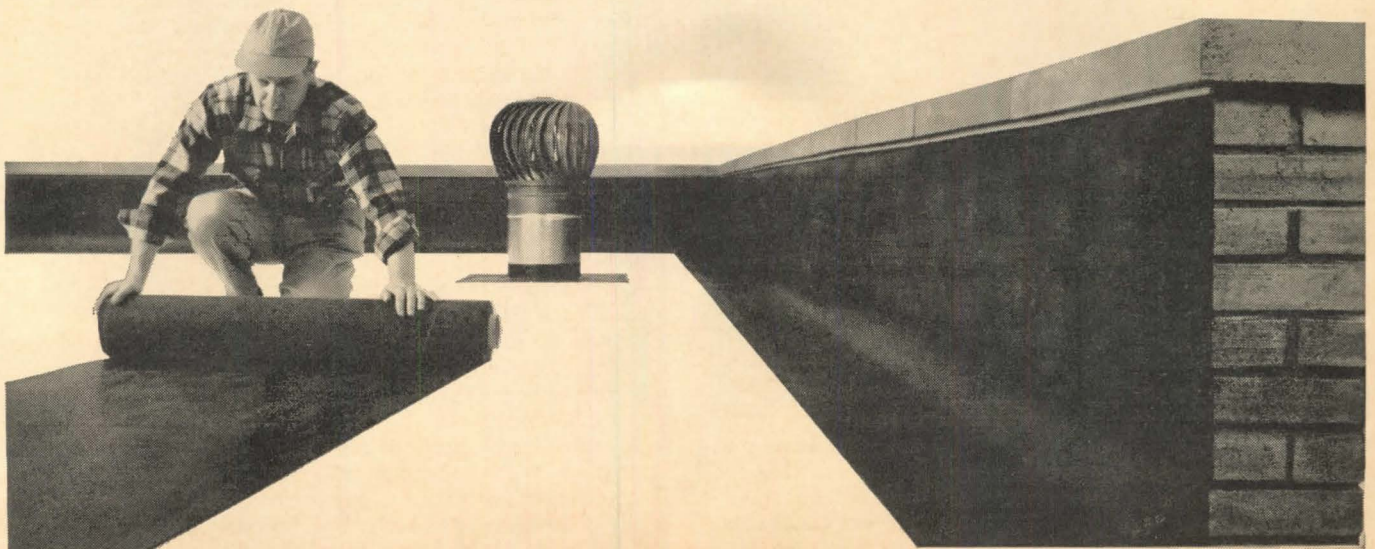
West Wacker Dr. Chicago, Ill. 60606. . . . The James F. Lincoln Arc Welding Foundation invites submission of papers on the effective use of arc welded steel in building construction. The only requirements are that the building be completed after June 1964 and that the entrant be involved in the design, planning, fabrica-

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It cuts on-the-job installation costs and is a joy for roofing contractors to work with. Doesn't it sound like it's worth a try? For more information, contact The Dow Chemical Company, Plastics Sales Department, Midland, Michigan 48640, or consult Sweet's Architectural File 8g/Do.



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tion, or erection of the structure, using arc-welded steel. Deadline for papers is June 15. Some 24 prizes, totalling \$50,000, will be offered. Those interested should contact The James F. Lincoln Arc Welding Foundation, Cleveland, Ohio 44117. . . . July 1 is the deadline for receipt of entry forms for the Theatre Architecture Exhibit sponsored by the AIA and the American Educational Theatre Association (AETA). Projects under contract for construction or completed since January 1958 are eligible. Entry forms and additional information are available from AIA chapter offices and from Arthur C. Risser, Exhibit Coordinator, School of Engineering, Wichita State University, Wichita, Kan. 67208.

PERSONALITIES

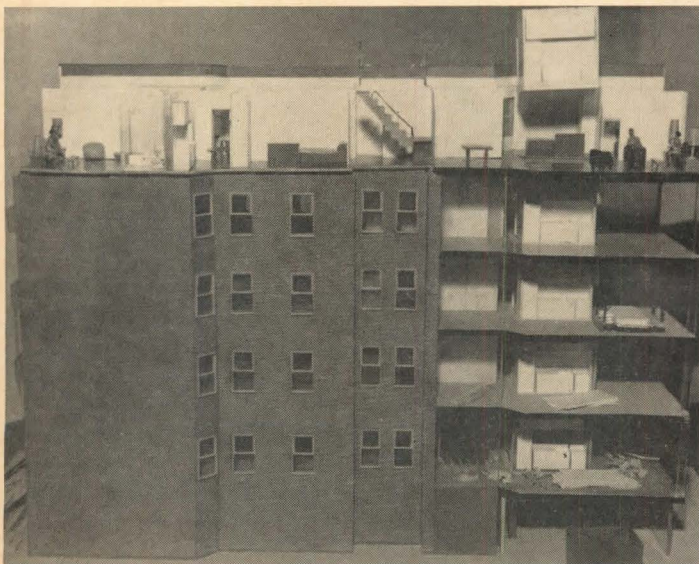
William Slayton, Commissioner of the Urban Renewal Administration for the past five years, has been appointed director of Urban America, Inc.'s, new Urban Policy Center in Washington. . . . **Alexander Girard and Henry F. duPont** have received the Elsie de Wolfe Award from the New York Chapter, AID. The presentation was made last month by Philip Johnson. . . . **Loran L. Stewart**, president of

the Bohemia Lumber Co., has been named president of the Western Wood Products Association. . . . **John F. Kourmadas**, past director of Editorial Services and Publications of the National Association of Secondary School Principals, has been appointed director of information for the Urban Institute in Washington. . . . **Rai Y. Okamoto**, San Francisco architect of Okamoto/Liskamm, has been named urban design consultant to the Regional Plan Association, Inc., a voluntary non-profit citizens' association to promote development of the New York-New Jersey-Connecticut metropolitan region.

Awards

Charles Luckman, in a unanimous resolution by the California Assembly, was lauded for his "good works and incalculable contributions to our nation's culture". . . . **Bernard J. DeVries** of Muskegon was presented the Michigan Society of Architects' Gold Medal for achievement in public services and his contributions to the profession. . . . The AIA has given its second award for Collaborative Achievement in Architecture to the firms and individuals who participated in the creation of San Francisco's **Ghirardelli Square**.

Rehabilitation Goes Through the Roof



NEW YORK, N. Y. Late last month, workmen cut a hole in the roof of a decaying tenement building on New York's lower East Side. In a way, the

ancient Egyptian medical practice of drilling holes in patient's skulls to let out evil spirits. The evil spirits the workmen hoped to release were those that haunt

law tenements. Their stairways reek of urine; paint and plaster peel from walls and ceilings; windows are broken; garbage litters their courtyards; heating plants are broken; and bathrooms are, in many cases, practically unuseable.

In this case, it is hoped the surgery will bring about "instant rehabilitation." Cutting an 8' square hole through the building from roof to basement, workmen then gut the building, removing plumbing fixtures and piping. Discarded items are placed in a steel box lowered through the hole by a crane. When the debris is removed, the crane then swings in prefabricated bathroom and kitchen units. Workmen install them, and the hole is repaired. Once the process is perfected—it is the brainchild of California engineer Edward K. Rice — by the Tishman Research Corp. (an arm of the Tishman Realty and Construction Corporation), which is making recommendations on

the details, it is thought that tenements may be able to be rehabilitated in as little as 48 hours.

Rehabilitation is usually a costly process, but the engineers hope to convert apartments in three experimental tenements for around \$7000 apiece. This is as low as the cost of some newly constructed low-income housing in less affluent parts of the country, but it seems a staggering improvement in New York City, where new low-income housing may cost \$20,000 per unit. Initial financing for the project is coming from the Federal Government, which is putting up \$390,000 for development costs, and from the Carol Housseman Foundation, which owns the buildings. When work is finished, the Federal National Mortgage Association will underwrite a 40-year mortgage.

It is through experiments such as this, that a glimmer of hope exists for the future of our cities.

WASHINGTON/FINANCIAL NEWS

BY E. E. HALMOS

The AIA's enthusiastic support of three key urban-development programs now before Congress gives a hint of both promise and hope.

The promise threads through three Federal proposals: the Demonstration Cities Act; the Urban Development Act; and the Housing and Urban Development Amendments (HR 12341, 12342, 12939, 12946, 13064, and 13065). These bills are evidence of a Congressional "finding" recognizing quality of urban design and construction, as well as emphasizing broader, regional-style planning, are critical domestic issues.

The hope is that Federal agencies (principally the newly-created Department of Housing and Urban Development) won't make design and planning decisions with its own staff. The architects are urging Congress to insist that HUD appoint an interprofessional advisory group of some kind to act as consultant.

Meanwhile, Congress is still struggling with questions of financing these programs (along with other projects such as the anti-poverty, highway, and beautification programs).

Hearings before Congressional committees did indicate, however, that most legislators favored the idea of obtaining adequate, non-Governmental help to determine standards and criteria. And there are some precedents to cite: the recently appointed committee to consult with the Architect of the Capitol on new buildings; similar groups already consulting with the General Services Administration and the Veterans Administration. HUD, meanwhile, announced that it was prepared to start an exhaustive study of building codes, zoning, and taxation as soon as Congress gave it needed funds. (The study was authorized in 1965, to see if some sort of standardization and coordination could lower building costs and give designers a freer hand in use of materials and methods.)

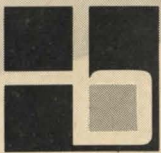
As to prospects for passage of any substantial portion of the legislation itself, most observers agree it is a little early to make any safe bets. No strong opposition has appeared, excepting on proposals to aid private developers in their planning and land acquisition. But the specter of a tax in-

Bayley windows daylight the school

Mansfield Elementary School, Port Murray, N.J.
Architect—Jules Gregory, Lambertville, N.J.
Contractor—Louis Hajdu, Inc., Alpha, N.J.

Architect Jules Gregory created an environment to make learning a joy. This vital school focuses attention on the interplay of children to the world around them. The architect chose Bayley steel classroom windows because section strength avoided sight line clutter while permitting use of large gray glass lights. Permanent steel windows are economical, initially and through time. For steel or aluminum windows and curtain walls, application assistance, and responsible performance contact

The William Bayley Company,
Springfield, Ohio. Also see Sweets,
Catalog 17a/Bay.



BAYLEY



creases in an election year could easily affect Congressional willingness to authorize the additional funds required.

Transportation Department: A Shifting of Gears

One Presidential proposal that was getting considerably less than an enthusiastic reception was the plan for the creation of a new Department of Transportation (principally S 3010).

If authorized, such a department would certainly affect architects, since it would consolidate in one department such agencies as the present Bureau of Public Roads, the Federal Aviation Agency, and others. The mammoth programs administered by these agencies have provided a steady source of work for the construction industry as a whole.

Predictably, the to-be-anticipated negative reaction on the part of Congress has little to do with the administrative logic of the consolidation. What worries Congress is that the new department may further erode its own powers. Under present law, the administrator of the roads program (and of FAA) is a Presidential appointee subject to Congressional approval. Under the new law, however, such men might become minor bureau chiefs under an assistant secretary. Another concern of Congress is that the Interstate Commerce Commission and FAA, specifically set up by Congress as "independent" agencies that maintain their own control of policies and spending, would soon lose their power to the proposed department. Finally, many are afraid that such an agency would toss all existing revenues (including the jealously guarded Highways Trust Fund and annual grant funds of FAA) into a common pot, to be spent in other areas.

D.C. Stadium Suit

One unusual action involving Washington architects could have long-range implications.

This was initiation of a \$150,000-damage suit against the architect-engineers, contractors, and materials suppliers who designed and built the \$20-million District of Columbia Stadium (completed in 1961). Within two years of its

completion, cracks began to appear in the Stadium's concrete structure; these were attributed to a chemical reaction between aluminum conduits and chemical additives used to aid curing of the concrete. It is alleged that the architect-engineer firms "breached" their contracts by "failing to supervise the work properly, and prepare plans with acceptable engineering standards."

Financial

• Most disturbing sign on the business horizon—for the construction industry in particular—is Washington's growing concern over inflationary trends in the economy.

The immediate Administration reaction was all-out effort to get industry to cut back on its plans for plant and equipment expansion (now estimated at \$45 billion or more). Any substantial cut-back could affect nearly half of the total construction business.

In Congress, the reaction to indexes showing steep rises in costs was a rumbling for cut-backs in Government programs—anything, in fact, that might forestall the need for a tax increase any time before the November elections.

• Costs of construction, meanwhile, kept on climbing—largely as a result of runaway labor wage agreements. The Associated General Contractors said that cost of construction materials have increased 3 per cent; cost of owning and operating equipment has jumped 18 per cent; average wages are up 42 per cent; contractors' bid prices have risen 7 per cent.

• Except for housing, however, the construction economy continued on its booming way: in February, value of new construction put in place was \$4,600,000,000—up 9 per cent over a year ago. Housing continued its only slightly interrupted downward trend: In February, new privately owned housing starts were at a rate of 1,318,000 units—down 11 per cent from February a year ago.

• Taxpayers continued their strong support for public works construction projects, through elections in January. A tabulation by the Investment Bankers Association showed voters had approved \$234 million worth (89.5 per cent) of all such bond issues presented to them.



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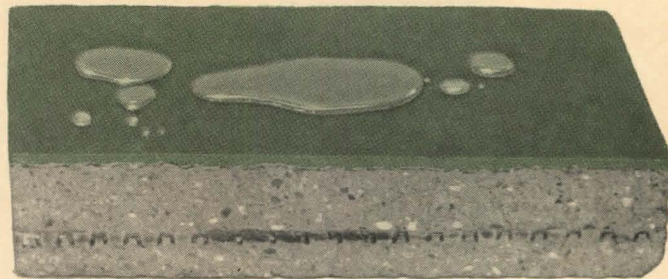
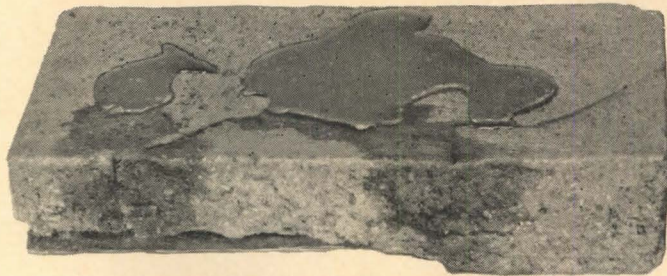
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Concrete disintegrates...



...G-E Silicone Traffic Topping doesn't!

Let it snow and rain.
Let it freeze and thaw.

General Electric's new silicone rubber Traffic Topping protects walkways, ramps, parking areas, porches, swimming pools, balconies and other traffic areas against moisture damage.

Once on, Traffic Topping stops costly maintenance. It won't let water in, yet "breathes" to let any moisture out. Because the base material is silicone rubber, the most durable, weatherproof elastomer known (the same as Silicone Construction Sealant), Traffic Topping stays flexible and moisture proof.

Traffic Topping won't crack, it's not brittle, and it forms a tough bond to concrete, wood, steel and other floorings. It's remarkably skidproof and is not damaged by salt. Grease and oil are easy to remove. It never needs painting.

To date, no other outdoor coating has been able to stand up to weather and wear for very long. Traffic Topping will. For many years. On patios, steps, garages, runways, for instance. Anywhere there's water and traffic. For complete specifications, test results, application data, color selection and local distribution, please write Section Q5201, Silicone Products Dept., General Electric Co., Waterford, N.Y. 12188.



Quick, easy application. Just prime the surface, add catalyst to Traffic Topping, mix and trowel on. No expensive equipment needed. Only one coat is usually required, so application costs are low.



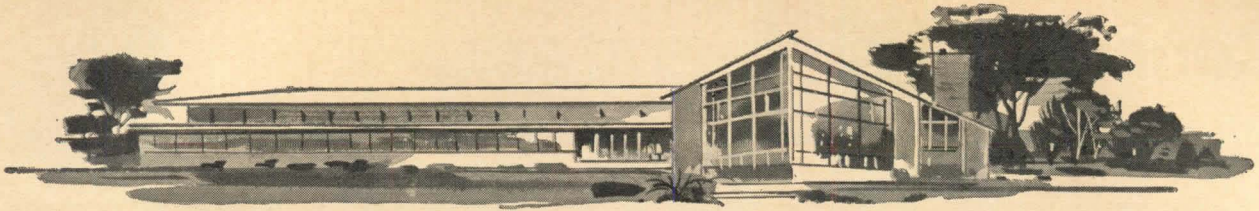
Permanent flexibility. Traffic Topping is resilient... expands and contracts without cracking even at temperatures as high as 300°F, as low as -65°F.



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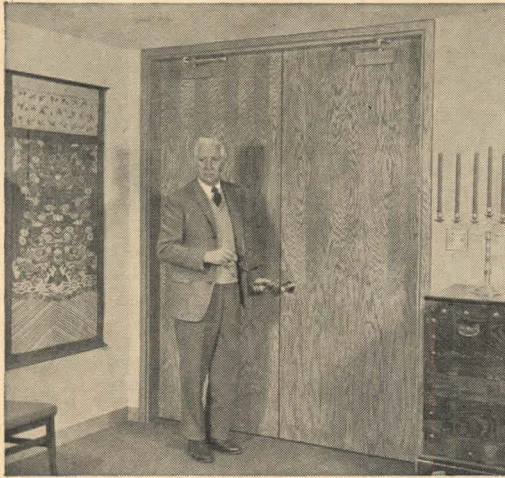
GENERAL  ELECTRIC

On Readers' Service Card, circle No. 439



FOR DOOR CONTROL designed to meet every school building need

CHOOSE NORTON CLOSERS AND UNI-TROLS



PRESIDENT'S DINING ROOM

Series 7000 narrow projection door closers with covers; aluminum covers to match door hardware, wood covers to match door paneling. PRESIDENT'S DINING ROOM for the elegance of matching wood. An attractive closer installation for this formal dining room. POOL DIRECTOR'S OFFICE, an aluminum closer with an aluminum cover for an attractive installation that's impervious to this corrosive high humidity location. CAFETERIA entrance, a match between closer cover and door hardware to contrast with the dark door finish.



POOL DIRECTOR'S OFFICE



CAFETERIA ENTRANCE

Any door within a school can have unique or special requirements. These doors by their location, traffic pattern, adverse environment or esthetic requirement can pose a problem in the selection of proper door control.

Norton makes the most complete line of surface-mounted door closers and unitized door controls. When you specify Norton controls, you can choose from a selection of types that have been designed to meet all of the specific needs of your school doors.

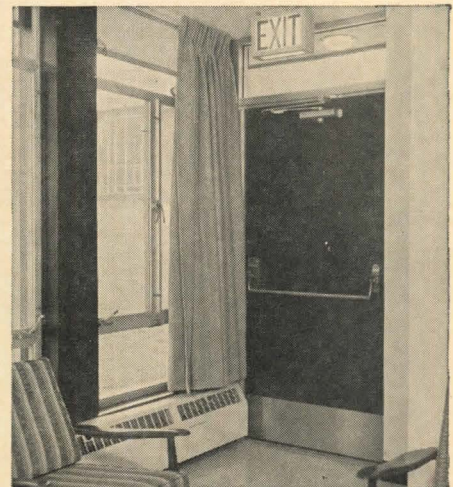


PATIO ENTRANCE



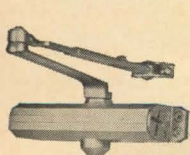
GYMNASIUM ENTRANCE

Series 1600 Tri-Style Closers to match the narrow lines of modern aluminum doors. PATIO ENTRANCE, an attractive installation invisibly mounted to the top jamb providing control for this outside door. Even with a prevailing west wind, the door is under control at all times. GYMNASIUM ENTRANCE, positive consistent control even during the heavy traffic through these high frequency doors.



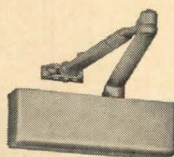
INFIRMARY DOOR

Series 6100 Uni-Trol door control, a combination of door closer and door holder. INFIRMARY DOOR, an attractive installation in the school infirmary. During open hours, the door is held ajar to avoid congestion.

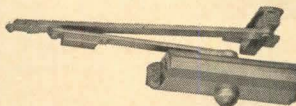


SERIES 1600

Tri-Style®



SERIES 7000



SERIES 6100



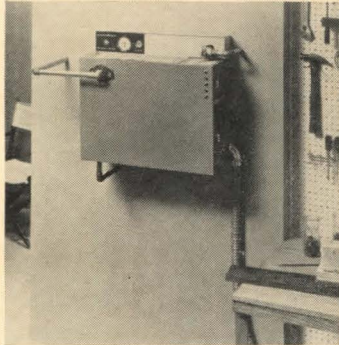
NORTON® DOOR CLOSER DIVISION

372 Meyer Road, Bensenville, Illinois, 60106

1117

Air/Temperature

Electric Boiler Package



The "Electra" boiler is the first product in the electric heating field for this manufacturer. Designed for use in hydronic baseboard heating systems, the boiler is available in four sizes, from 34,000 to 82,000 Btuh, for residential applications. Wiring is complete and controls are mounted in place. Since it weighs under 90 lb and is approximately the size of a suitcase, the boiler saves space and can be wall-hung. American Radiator & Standard Sanitary Corp., Plumbing & Heating Div., 40 W. 40th St., New York, N. Y. 10018.

On Readers' Service Card, Circle 100

Redesigned Units Heat and Cool

Re-engineered and restyled fan-coil units in two basic sizes are suitable for heating-cooling systems in residential and commercial buildings. Enameled steel cabinets can be installed free standing or partially recessed. The "VRS-4-150" has an air-flow capacity of 150 cfm, and the "VRS-4-300" is capable of moving 300 cfm. Air flow is said to be "whisper quiet." Commercial Heating and Air Conditioning Div., Crane Co., 4100 S. Kedzie Ave., Chicago, Ill. 60632.

On Readers' Service Card, Circle 101

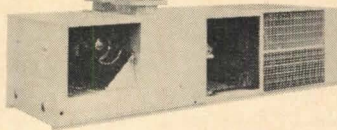
Control for Winter Air Conditioning

A recently developed solid-state control permits air-conditioning equipment to operate in freezing temperatures to cool computer rooms, restaurants, de-

partment stores and other places where excessive heat is generated by people, lights, etc. Despite the need for air conditioning, some systems have to be shut down in very cold weather; the new control, weighing 4 lb, operates from -20F to 115F. It varies the fan speed to control the rate of heat rejection from the outdoor section of a unit and maintain constant temperature and pressure in the outdoor coil. This prevents the indoor heat-absorbing section from freezing up. Carrier Corp., Syracuse 1, N. Y.

On Readers' Service Card, Circle 102

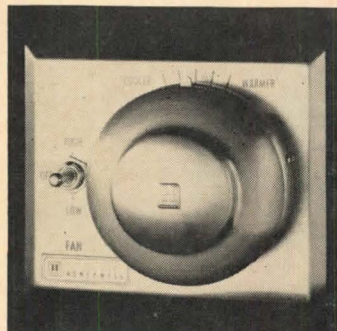
Year-Round Roof Unit



Commercial air-conditioning unit supplies 180,000 Btuh of electric cooling and 300,000 Btuh of gas heating. It provides two stages for both heating and cooling so that output is reduced during non-peak periods. Low ambient control is factory installed for cold-climate applications. Unit is 37" high so it can be hidden behind a parapet wall; it weighs 1700 lb. Day and Night Mfg. Co., 855 Anaheim-Puente Rd., City of Industry, Calif. 91747.

On Readers' Service Card, Circle 103

Fan-Coil Control



Electric thermostat designed for four-pipe (heating/cooling) fan-coil systems includes a two-speed fan switch that eliminates the need for a separate switch. A center dead band in the line voltage prevents sudden switching between heating and cooling due to minor room temperature

changes. Switching the fan off automatically shuts off the cooling system. Thermostat range is from 55 F to 95 F. Honeywell, Inc., Commercial Div., 2727 S. Fourth Ave., Minneapolis, Minn. 55408.

On Readers' Service Card, Circle 104

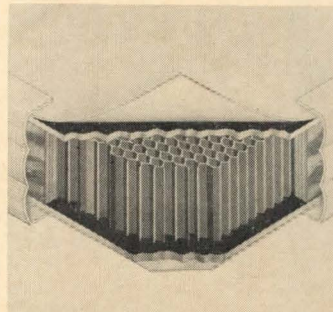
Construction

Plywood Plus

An aggregate coating applied to exterior grade plywood sheets costs less than stucco, according to the manufacturer's comparison study. Plywood is 3/8" thick; a 1/4" asbestos backing is optional. The fine aggregate provides a surface said to be maintenance-free. Sheets can be nailed, stapled, shot, or glued, and are suitable for siding or roofing. Architectural Specialties, Inc., 850 S. Van Ness, San Francisco, Calif. 94110.

On Readers' Service Card, Circle 105

Five-Ply Roof Panels



Roof panel sandwiches, 3" x 48" and up to 20' long, have aluminum-over-Masonite skins and a resin-impregnated honeycomb core—all bonded together with heat and pressure. Designed for covering patios and carports, the panels will span up to 16'. They reflect heat, have leakproof joints, and will stand up under heavy snow loads, says the manufacturer. Panel joints are sealed with a butyl sealant and covered with aluminum battens. Hess Mfg. Co., Quincy, Pa.

On Readers' Service Card, Circle 106

Doors/Windows

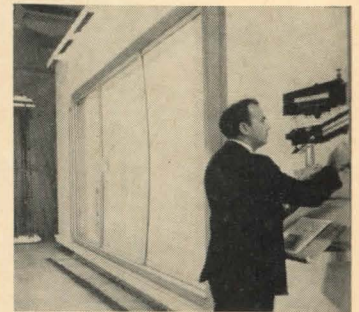
Thin Glass

Tempered safety glass is now available in 1/8"-thicknesses. "Air-cushion" process makes it possible to manufacture flat, thin

glass with good optical properties. The glass withstands heavy impact and meets safety requirements of all building codes governing safety glasses for the home. Although developed for storm-door glazing, it may also be used in schools, house trailers, and shower enclosures. Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

On Readers' Service Card, Circle 107

Door for A Florida Patio

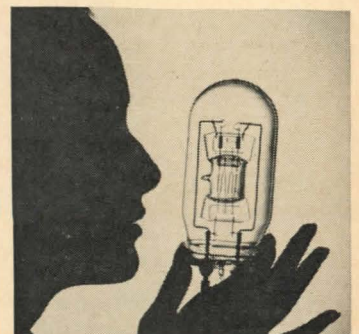


Sliding glass door designed to survive hurricanes has been tested in winds up to 125 mph. Available in the economy-price range, it features reversible panels that may open from the left or right side, a screen, and heavy-duty weatherstripping. Photo was taken during vacuum-chamber test. Premiere Aluminum Products, Inc., 18233 S. Hoover St., Gardena, Calif. 90247.

On Readers' Service Card, Circle 108

Electrical Equipment

Display Lamp Improved



This 750-w tungsten-halogen light source for use in motion-picture studios or large display areas will last four times longer, and give four-and-one-half times greater total light output during life than previous models, says the manufacturer. The "halogen regen-

erative cycle" cleanses the inner bulb wall of tungsten particles and redeposits them on the filament, using bromine as the regenerative agent. This "Quartzline" lamp is somewhat smaller than the one it replaces and is the first of a new improved line of incandescent, focusable spotlight lamps. General Electric Co., Nela Park, Cleveland, Ohio 44112.
On Readers' Service Card, Circle 109

Steady Volume



A small transistorized unit, which can be connected to any sound system, automatically regulates the sound level when different persons speak into a microphone. Suitable for public address or paging systems. "Soundservo" requires only one adjustment to establish a permanent maximum volume level. Vega Electronics Corp., 1161 Richard Ave., Santa Clara, Calif. 95050.
On Readers' Service Card, Circle 110

Making Fountains Go

Line of pumps is designed to develop large water patterns in commercial-size decorative water fountains. The pumps are bronze, with heavy brass wrap-around screen intakes that eliminate the need for a separate strainer. Submersible pumps need no pump pit and are available in 1/3, 1/2, 3/4, and 1 hp models. Barnes Mfg. Co., Mansfield, Ohio.
On Readers' Service Card, Circle 111

Safety First

A differential circuit breaker that switches off current before it can harm a person has been patented by a safety expert with the purpose of preventing accidents. The transistorized electronic device can be installed by any qualified electrician and uses about the same power as an electric clock. The "Safety Sentry" de-

fects current flowing to ground external to the current developed by light bulbs and appliances, and is capable of reacting to .001 amp within .03 sec. The Rucker Co., 4700 San Pablo Ave., Oakland, Calif. 94608.

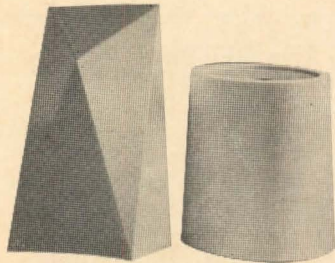
On Readers' Service Card, Circle 112

Furnishings

Pour à Floorealis

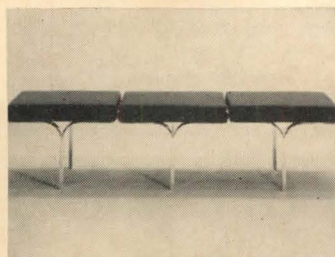
A seamless floor-covering that dries in hours, "Porafloor" can be applied directly over any floor. Offered in a variety of colors, plus the inevitable (and exasperating) "decorative flakes," the floor is said to be colorfast, stain- and scuff-resistant, nonslip, and easily cleaned. Nemo Tile Supply Co., 177-02 Jamaica Ave., Jamaica, N.Y. 11432.
On Readers' Service Card, Circle 113

Supercan



It's a planter . . . it's an "accident" . . . it's a trash receptacle! Available in several geometric shapes and sizes top- or bottom-emptying, colors are integral, and the Fiberglass material is maintenance-free and weatherproof. Several textures, variety of colors. Can be used almost anywhere, indoors or out. Architectural Fiberglass, 2020 S. Robertson Blvd., Los Angeles, Calif. 90034.
On Readers' Service Card, Circle 114

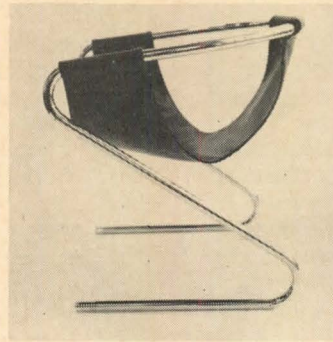
Link Along



John Behringer's modular link bench allows a variety of lengths, arrangements, and rearrangements. The links, of

aluminum is brushed or polished finish, are joined, on the job with the supplied tie-bars and tool. Cushions are foam rubber over a plywood understructure, and are removeable. JG Furniture, 160 E. 56th St., New York, N.Y.
On Readers' Service Card, Circle 115

Sling with a Zing



Designers Andrew Morrison and Stylianos Gianakos have streamlined the sling chair. The frame is chrome tubular steel; the seat, with double welted edges, is Naugahyde or saddle leather. Dimensions: 25" x 24" x 26". Zographos Designs, Ltd., 510 Madison Ave., New York, N.Y. 10022.
On Readers' Service Card, Circle 116

Fabric for Floors

Facilon P.F.C. (protective floor covering) protects gymnasium floors when used for nonathletic events. The nylon fabric is reinforced with Caprolan, is said to lie flat, resist puncture, tearing, and abrasion, and prevent costly repairs to floors that might otherwise be damaged by scratching, scuffing, and stains. Available in solid colors or woodgrained pattern. Sun Chemical Corp., Facile Div., Dept. F, 105 6th Ave., Paterson 4, N.J.
On Readers' Service Card, Circle 117

Services

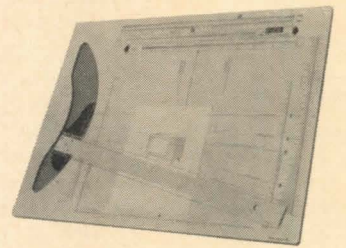
Al Capone Never Had It So Good

A Chicago firm specializing in the production and engineering design of shooting ranges for municipal buildings and sports clubs offers a diversity of equipment and controls. Marksmen, while never leaving the firing line, may choose their distances from the targets, which "quietly speed to

and from them on the mono-rail Targimatic System." A central electronic control panel makes it possible for an operator to conduct matches and supervise practice at the same time. Washable acoustical materials control ricochet shots and muzzle blast noise in individual shooting stalls. Low-priced traps are available for recovery of clean lead; one such trap will stop "even the hottest magnum loads." Indoor and outdoor ranges are planned by this world-wide corporation. Shooting Equipment, Inc., 4616 W. 20th St., Chicago, Ill. 60650.
On Readers' Service Card, Circle 118

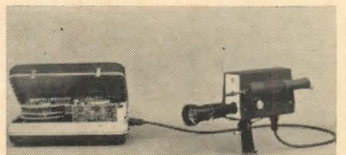
Special Equipment

In Perspective



Specially designed board and T-square simplify perspective drawing. Scales are printed on 24" x 30" x 5/8" solid plastic board. Modulux, Inc., P.O. Box 525, Oconomowoc, Wis. 53066.
On Readers' Service Card, Circle 119

On-Site Movies



Portable, transistorized television recording camera, said to be the first of its kind, is suitable for pre-bid site surveys and in-progress reports on large construction projects. Hand-held camera weighs 7 lb, and recording equipment in shoulder bag weighs 23 lb. Video and sound, operated by one man, will record 30 min. of broadcast quality tape. Battery-powered camera is engineered for shooting in available light

The project: Caulking of joints between limestone panels



... of new facade for Montgomery Ward building, State & Adams Sts., Chicago, Illinois. Architects: The Perkins & Will Partnership, Chicago. General Contractors: Ragnar Benson, Inc., Chicago. Caulking Contractors: Great Lakes Contracting Company, Chicago.

The architects approved Betaseal[®] 500

The contractors and client were pleased with the choice. The reason is simple. Betaseal 500 is the best one-part polysulfide sealant available. It conforms to TT-S-230 specs. It is easier to handle and more economical. It has excellent elongation and adhesion. It protects joints longer against leakage. Send coupon for details today.



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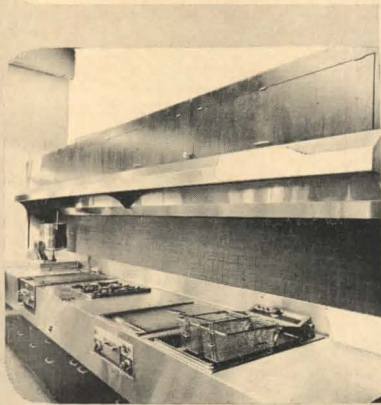
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AUTOMATION WITH A FLAIR

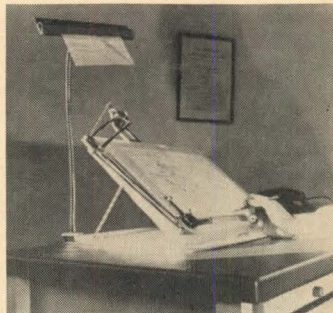
DESIGN SERVICE – The Gaylord Ventilator is adaptable to all equipment – upon request we will provide design services and layout drawings for each of your installations showing not only our recommendations for the utilization of the Gaylord Ventilators but complete air engineering for the job – at no cost or obligation.

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and the wideband magnetic recording system known as "Coniscan" has more picture-taking sensitivity than is possible with film cameras. The mechanical simplicity and use of solid-state circuits has cut the size of the recorder; and price is said to be competitive with a professional 16-mm sound-on-film camera. Westel Co., 298 Fuller St., Redwood City, Calif. 94063.

On Readers' Service Card, Circle 120

Compact Drafting Kit



Desktop combination includes small drafting machine, inclined stand, and wooden frame covered with a translucent sheet of plastic for drafting surface. The drafting machine has a set of two springs, designed to keep it in balance at any inclined position up to 45°; it can also be lifted off the board and swung up out of the way. Reflected light passing through the plastic sheet eliminates shadows and acts as a light box for tracing. The "Tecnostyl #610" is an economical space saver. Tecnostyl Div., Alexander-Addimax, Inc., P.O. Box 4441, Pasadena, Calif. 91106.

On Readers' Service Card, Circle 121

Surfacing

Chemistry Makes It Safe to Shake Hands

Chemical treatment of nylon and other fibers keeps carpets permanently free from static. Cleaning will not impair the effectiveness of the treatment, which also helps prevent soiling, according to manufacturer. All "Royalweve" carpets are being treated by this process and will be especially suitable for hospitals, motels, offices, and other public buildings. Mand Carpet Mills, 8330 W. Third St., Los Angeles, Calif. 90048.

On Readers' Service Card, Circle 122

STANLEY

Automatic Sliding Entrances

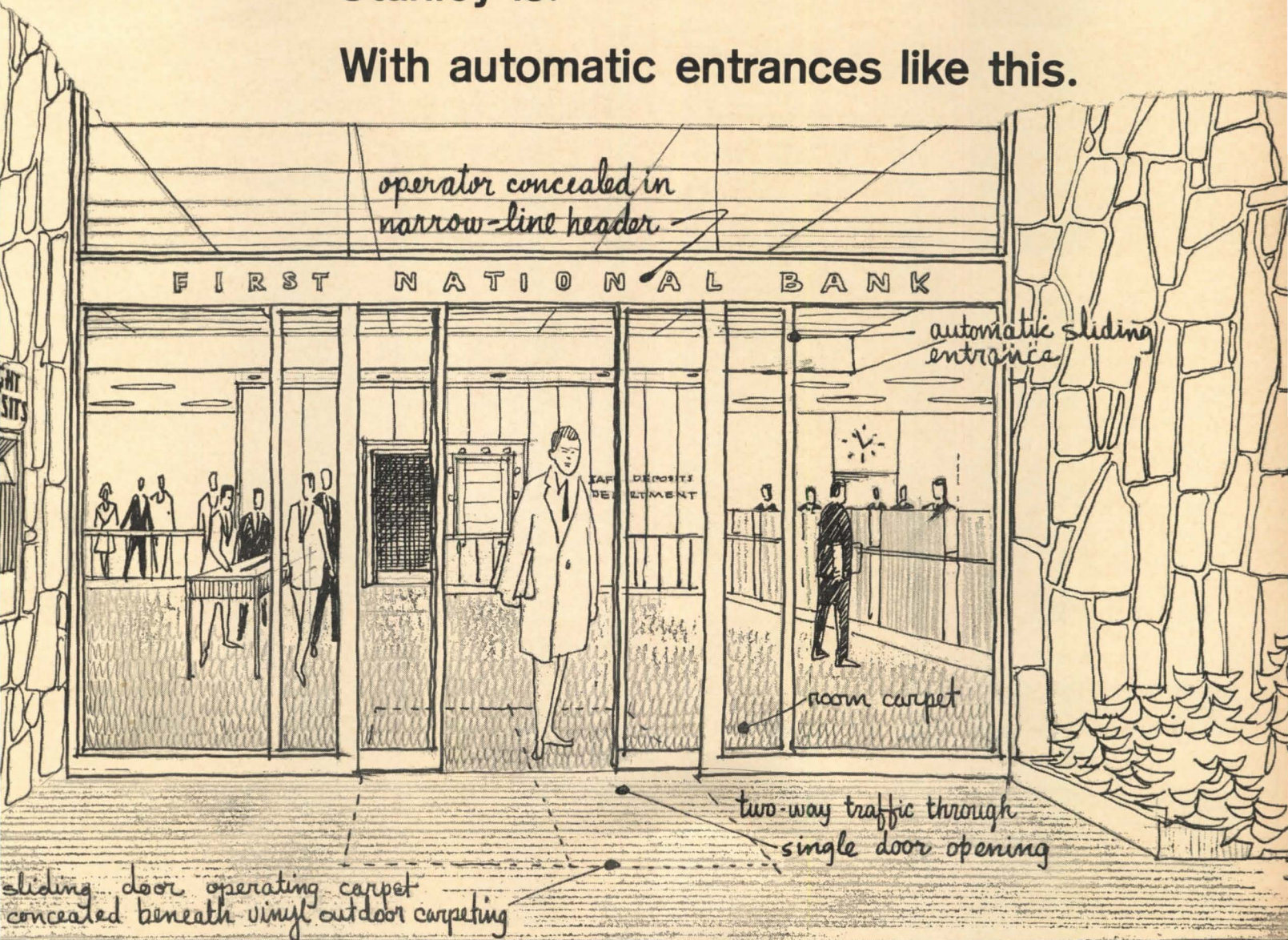
See your nearest
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- | | |
|---|---|
| <p>ARIZONA Phoenix Stanley Building Products, Inc. 4836 North 16th Street 602, 279-0324</p> <p>CALIFORNIA Los Angeles Hay Agency 4324 W. Jefferson Blvd. 213, 731-0871</p> <p>Sacramento Fontaine Door Co. 200 27th St. 916, 442-1542</p> <p>San Diego Hay Agency 1460 Island Ave. 714, 234-6648</p> <p>San Mateo Stanley Door Operating Equipment 4007 Pacific Blvd. 415, 349-2501</p> <p>COLORADO Denver Builders Service Bureau 1221 Bannock St. 303, TA 5-5244</p> <p>CONNECTICUT Hartford (exchange) The Stanley Sales Company 95 Hampton Avenue Needham Heights, Mass. 203, CH 9-6226</p> <p>FLORIDA Miami Chuck Taylor, Inc. 270 N.E. 183rd St. 305, 624-2688</p> <p>Orlando William A. Slater Co. 723 Brookhaven Drive 305, 423-3680</p> <p>GEORGIA Doraville Hatcher Sales Company 3596 Oakcliff Road 404, 451-6211</p> <p>HAWAII Honolulu Theo. H. Davies Co., Ltd. P. O. Box 3020</p> <p>ILLINOIS Elk Grove Village Jed Products Company 239 King St. 312, 439-8080</p> <p>Rock Island Jed Products Company 312 20th Street 309, 786-4574</p> <p>INDIANA Indianapolis Jed Products Company 3529 N. Hovey 317, WA 4-2646</p> <p>IOWA Des Moines The Roland Company 2920 S.W. 9th St. 515, AT 3-0409</p> <p>KANSAS Kansas City, Mo. Edelman-Lyon Company 325 W. 80th Street 816, EM 3-2460</p> <p>LOUISIANA New Orleans A. Willie McDougall Company, Inc. 909 So. White St. 504, 822-4100</p> <p>MARYLAND Baltimore G. W. Blanchard Co., Inc. 857 Park Ave. 301, SA 7-0511</p> <p>MASSACHUSETTS Needham Heights The Stanley Sales Company 95 Hampton Avenue 617, 444-7768</p> <p>MICHIGAN Grand Rapids Jed Products Company 3015 Madison, S.E. 616, 243-9163</p> <p>Royal Oak Jed Products Company 31270 Stephenson Hwy. 313, JO 6-7922</p> <p>MINNESOTA Minneapolis Pella Products 929 Washington, South 612, FE 5-4134</p> <p>MISSOURI Bridgeton Thos. J. Finon Co., Inc. 12409 St. Chas. Rock Rd. 314, 739-0130</p> <p>MONTANA Great Falls The House of Glass 811 First Ave., N. 406, 445-1371</p> <p>NEBRASKA Omaha The Roland Co. 191 1/2 Military St. 402, 536-8820</p> <p>NEW MEXICO Albuquerque Welch-Erwin Corp. 4019-C Edith Blvd., N.E. 505, 344-3547</p> | <p>NEW YORK Buffalo A. O. Stilwell Co. 85 Great Arrow Ave. 716, 877-4300</p> <p>Rensselaer Crowford Door Sales Albany Company, Inc. Sherwood Park 518, 477-9374</p> <p>Rochester The Maurer Co. 31 Richmond St. 716, 454-4990</p> <p>Syracuse B. R. Johnson & Son, Inc. 5900 South Solina St. 315, HO 9-3244</p> <p>Woodside, L.I. Joseph Shaw 61-10 34th Ave. 212, 651-6363</p> <p>OHIO Cincinnati Jed Products Company 4452 Sycamore Road 513, SY 1-3273</p> <p>Cleveland Jed Products Company 8616 Garfield Blvd. 216, DI 1-1146</p> <p>Columbus Jed Products Company 865 W. King Ave. 614, 291-4267</p> <p>OKLAHOMA Oklahoma City Murray R. Womble Co. 121 N.E. 26th St. 405, JA 5-7417</p> <p>Tulsa Murray R. Womble Co. 216 East 16th St. 918, LU 4-2414</p> <p>OREGON Portland Bohm Automatic Door, Inc. 4075 N. Interstate 503, 282-4547</p> <p>PENNSYLVANIA Blawnox Pittsburgh Jed Products Company 313 Freeport Road 412, ST 1-3666</p> <p>Harrisburg Hershock's, Inc. 1513 N. Cameron St. 717, CE 8-7331</p> <p>King of Prussia The Sellers Company 396 E. Church Road 215, 248-1806</p> <p>TENNESSEE Memphis Maury and Company P.O. Box 12106 901, CL 2-7301</p> <p>Nashville John W. McDougall Co. 41st & Indiana Avenues 615, 297-3595</p> <p>TEXAS Dallas Automatic Door Control Co. 1175 109th St. Grand Prairie 214, AN 2-1474</p> <p>Houston Shelton Greer Co., Inc. 3025 Maxroy Street 713, 864-4487</p> <p>Lubbock Door Automation Sales & Service 308 East 34th St. 806, SH 4-7584</p> <p>San Antonio Samuels Glass Company 221 Newell Ave. 512, 227-2481</p> <p>UTAH Salt Lake City Building Specialties Co., Inc. 1340 South First West 801, 484-7882</p> <p>VIRGINIA Richmond Tranco Sales Corp. 2515 Grenoble Road 703, 282-6936</p> <p>WASHINGTON Seattle Automatic Doorways 4401 Wallingford Ave. N. 206, ME 2-5686</p> <p>Spokane The Carswell Co. South 123 Wall Street 509, RI 7-1575</p> <p>WISCONSIN Milwaukee Jed Products Company 11605 W. Bluemond 414, SP 4-1350</p> <p>DIST. OF COLUMBIA Washington G. W. Blanchard Co., Inc. 6210 Chillum Place, N.W. 202, TU 2-6210</p> <p>CANADA Toronto, Ontario Pilkington Bros. Ltd. 55 Eglinton St., E. 416, HU 7-2471</p> <p>No. Vancouver, B. C. Nor-Wes Contract Hard. 1075 Marine Drive 604, 988-5221</p> |
|---|---|

Who is doing something
to open doorways to design freedom?

Stanley is.

With automatic entrances like this.



Help us strike a blow for freedom of design! Get information on Stanley automatic sliding entrances. Write us for Folder No. M67-COM. Look us up in Sweet's. Or check under "Door Operating Devices" in the Yellow Pages for the name of the Stanley distributor nearest you. Stanley offers a complete line of famous MAGIC-DOOR™ operators (pneumatic, hydraulic, electric), controls and accessories for doors that swing, slide or fold. Stanley Door Operating Equipment, Division of The Stanley Works, New Britain, Connecticut.

THE
STANLEY
WORKS®

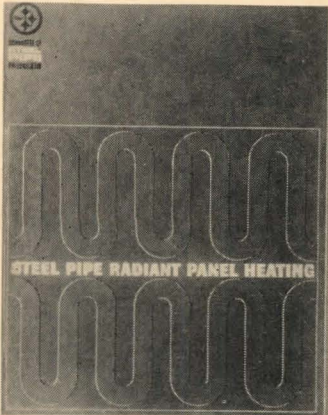
CONSULT YOUR NEAREST MAGIC DOOR DISTRIBUTOR LISTED AT LEFT

On Readers' Service Card, circle No. 414

MANUFACTURERS' DATA

Air/Temperature

Making a Play for the Radiant Business

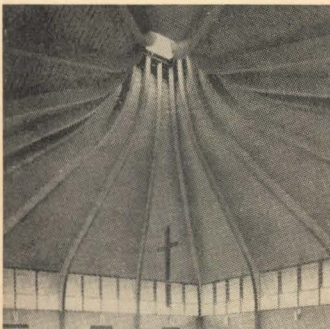


Brief prologue to AISI booklet traces radiant heating back to ancient Korea. But for more modern methods, "Steel Pipe Radiant Panel Heating" goes on to steel the scene in three acts: (1) General Information; (2) Panel Construction; (3) Technical Information. Booklet covers design, installation and efficiency of floor, wall and ceiling panels, with photos, detail drawings and performance charts. 20 pages. Committee of Steel Pipe Producers, American Iron and Steel Institute, 150 E. 42 St., New York, N.Y. 10017.

On Readers' Service Card, Circle 200

Construction

Arch-itecture

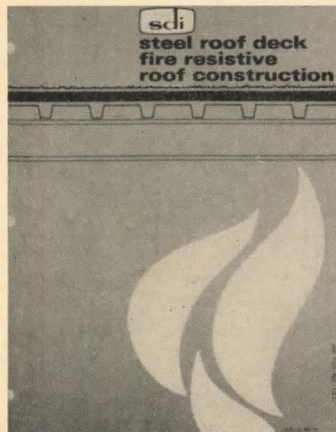


A comprehensive brochure on Southern Pine laminated arches is generously illustrated with photographs of completed structures, engineering tables, construction details, graphs, and color charts. Explanatory text covers the wide variety of Koppers prefab laminated units from cross vaulting, domes, and parabolic arches to "A" frames and "X" arches.

frames. Design procedures are discussed and specifications given. The handsomeness of wood plus the strength added by shape and lamination (the diagonal span of one cross-vaulted structure is 308') makes these arches a valuable design component. A section on solid timber double tongue-and-grooved decking is also included. 34 pages. Koppers Co., Inc., Unit Structures Dept., Peshtigo, Wis.

On Readers' Service Card, Circle 201

Fire Ratings for Steel Roof Decks



Brochure summarizes nine roof assemblies using steel roof decks that have been given 1½- to 4-hr fire ratings. Decks are topped by concrete, shredded wood fiber mat, wood fiber-board insulation, or mineral-and-fiberboard roofings; various ceiling materials are used. One deck assembly on open web joists with suspended metal lath and vermiculite plaster ceiling and built-up roofing is said to be the first without concrete to obtain a 2-hr rating. Construction details, insurance cost chart, and explanatory text. 8 pages. Steel Deck Institute, 9837 W. Roosevelt Rd., Westchester, Ill. 60156.

On Readers' Service Card, Circle 202

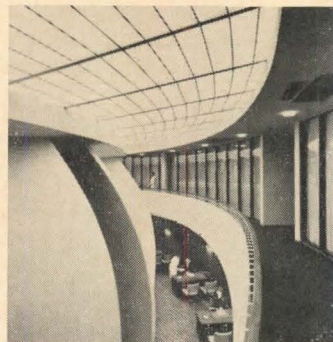
A Stand of Timber Products

"Building and Industrial Products Catalog 1966" is divided into eight indexed sections: Decorative Paneling; Overlaid Surfaced and Specialty Plywood; Softwood Plywood; Siding & Sheathing; Hardboards; Gypsum Building Products; Glass-Fiber-Reinforced Panels; and Southern Hard-

woods; Gypsum Building Products. Descriptions, short specifications, recommended uses, and technical data charts for dozens of products are generously supplemented with photographs. Georgia-Pacific Corp., P.O. Box 311, Portland, Ore. 97207.

On Readers' Service Card, Circle 203

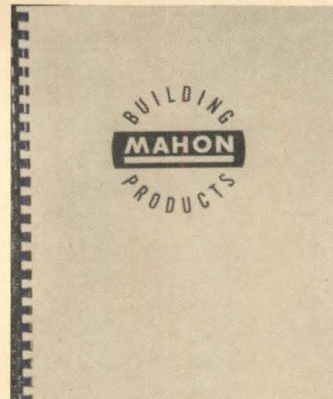
Glass-Fiber-Reinforced Panels



Pamphlet lists properties and available shapes and sizes of glass-fiber-reinforced plastic panels. Brief details show standard construction for walls and roofs. Tables enable designers to match glass-fiber panels with name-brand metal or asbestos-cement panels. Skylight in Wyoming National Bank at Casper, Wyoming, is shown. 8 pages. Filon Corp., 12333 S. Van Ness Ave., Hawthorne, Calif.

On Readers' Service Card, Circle 204

Steel Decks and Walls

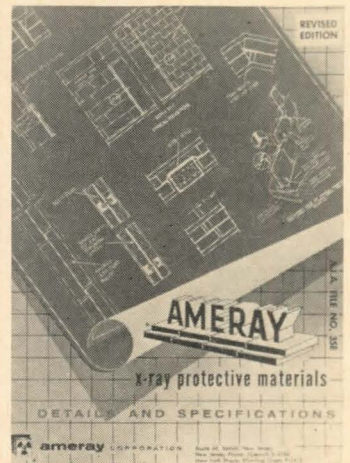


Metal structural and other building products for commercial and industrial construction are described and illustrated in a spiral-bound catalog. Six types of products are presented: (1) insulated metal

single sheet siding, and walls for interior partitions; (2) rolling steel doors, grilles and shutters; (3) steel cellular sub-floors; (4) floor decks with air-distribution ducts; (5) steel roof decks; (6) ceiling systems for air distribution. Text is supplemented by charts, graphs, tables, photos, schematic diagrams, drawings, and cross-sectional views. 68 pages. The R.C. Mahon Co., 6565 E. Eight Mile Rd., Detroit, Mich. 48234.

On Readers' Service Card, Circle 205

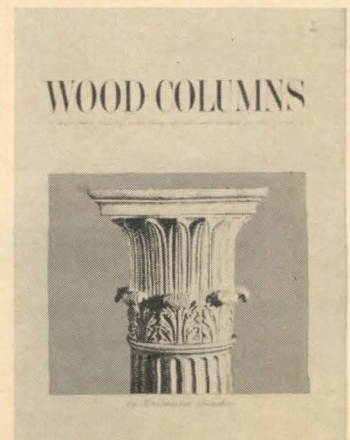
Insulating With Lead



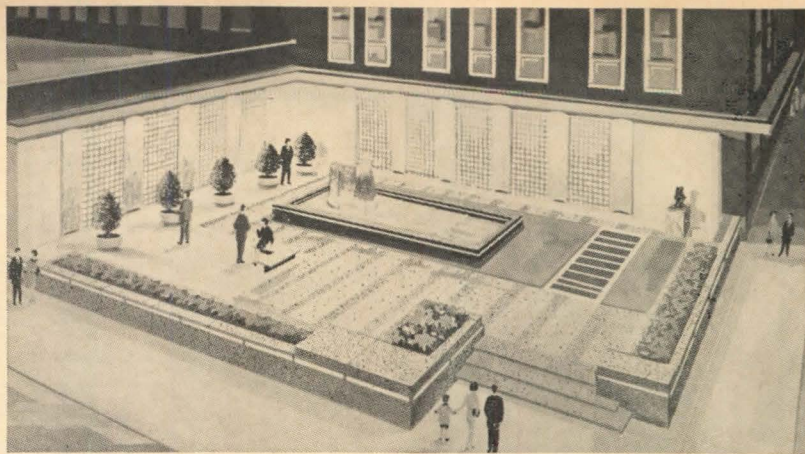
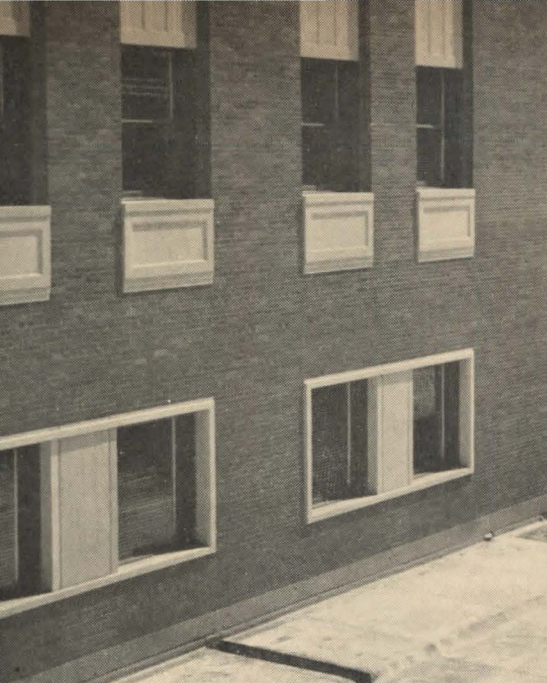
Booklet illustrates construction details for insulating X-ray rooms with lead-core cinder blocks, lead-insulated lath and panels, lead-lined doors and frames, and lead-glass control windows. Specifications for these plus accessories. 34 pages. Ameray Corp., 87 Canfield Ave., Dover, N.J.

On Readers' Service Card, Circle 206

Catalogued Columns

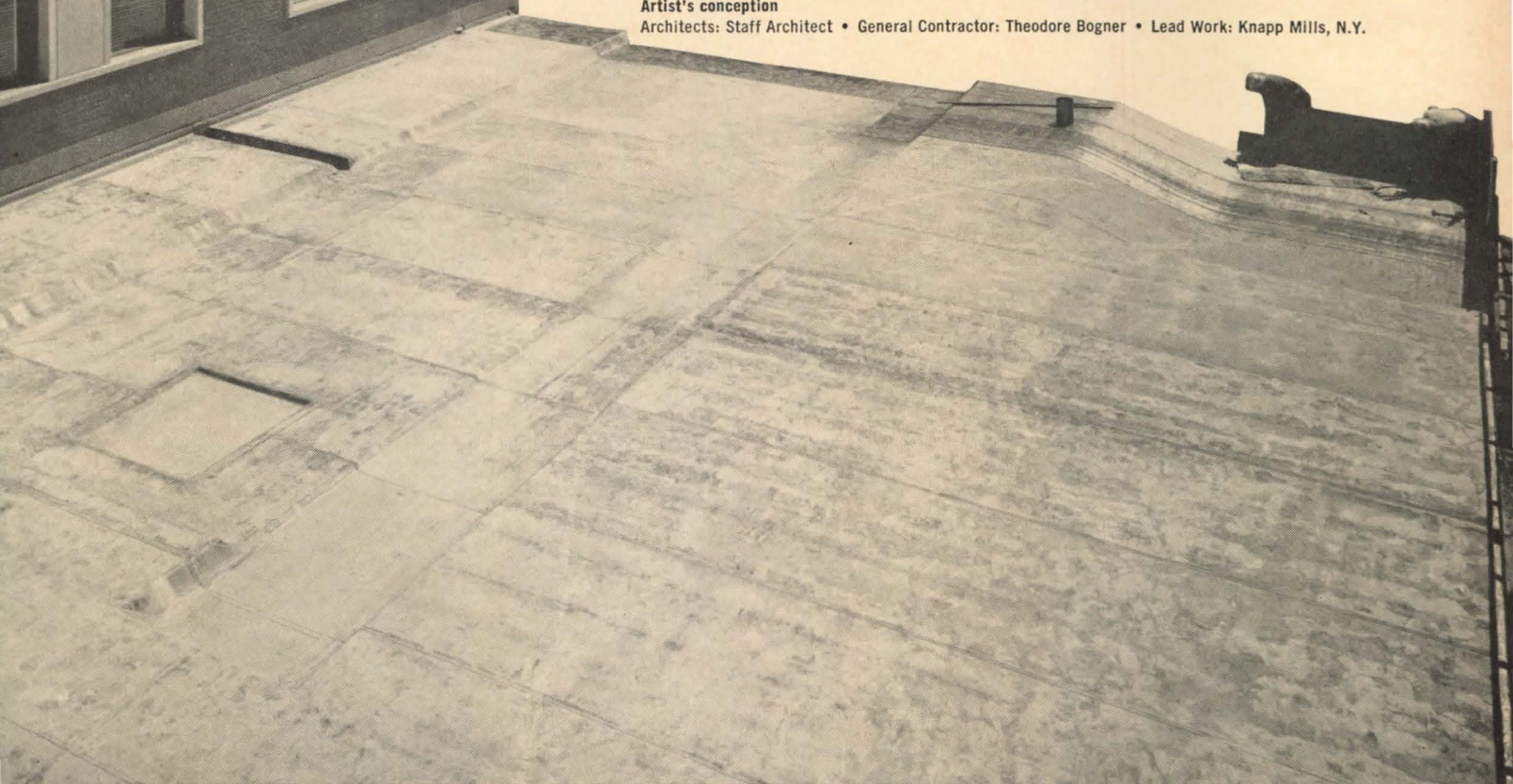


Plain and fluted columns with Roman, Greek, Attic and other



Artist's conception

Architects: Staff Architect • General Contractor: Theodore Bogner • Lead Work: Knapp Mills, N.Y.



This 6-pound lead membrane being installed at the American Electric Power System's Canton facility serves as a totally impervious roof for an

underground computer room and as a foundation for a beautiful landscaped street level terrace.

PUT A LEAD ROOF UNDER YOUR POOL!

Roofing a vital underground computer facility while at the same time permitting the installation of a street-level terrace immediately overhead, complete with reflecting pool and landscaped garden, has proved no problem for the American Electric Power System in Canton, Ohio.

The answer to both problems was provided with the selection of approximately 3,500 square feet of 3/32" thick sheet lead. The importance of continuous computer service justified the installation of an impervious roof of lead across the entire structure.

Another reason for choosing lead included its longevity. Lead will outlast the building it shelters. And lead instal-

lation costs are competitive with other metals. Yet, unlike other metals, lead conforms to the workman's will and the roof's irregularities. It doesn't "spring back."

For further information on waterproofing or roofing with sheet lead write: Lead Industries Association, Inc., Dept. N-5, 292 Madison Ave., New York, N. Y. 10017.

29



LEAD INDUSTRIES ASSOCIATION, INC.

Look Ahead with Lead



Decoration on wall of Etruscan Tomb painted about 500 B.C.

MEARS THERMOSTATS LAST AGES TOO!

We wish to unveil three secret tactics we employ in the manufacture of ageless Mears thermostats: First, we equip each thermostat with a snap-action switch that prolongs its own life by closing contacts in a micro-fraction of a second completely eliminating arcing. Next, we provide every Mears thermostat with a rugged cast metal trim ring and base so it won't warp or bend even when mounted on an uneven surface. Finally, we don't settle for just an attractive metal face plate; we go a step further and give it a vinyl protective finish that won't chip, crack, scratch or stain.

Is that all there is to the manufacture of a thermostat that lasts ages? No. We have other secrets, too. But they're secret.

For more information about ageless Mears thermostats, write:
Department PA-566.

MEARS CONTROLS, INC.

Mears thermostats are sold exclusively through qualified electric heating manufacturers



13725 S. W.
Millikan Way
Beaverton,
Oregon

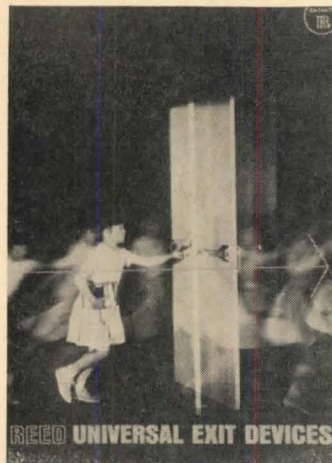
On Readers' Service Card, circle No. 459

are fabricated from lock-joint wood staves. Load-bearing capacities, stock thicknesses, flashing instructions, and specifications are included with photos of 16 standard columns. 12 pages. Hartmann-Sanders Co., 1717 Arthur Ave., Elk Grove Village, Ill. 60007.

On Readers' Service Card, Circle 207

Doors/Windows

Exit Line



Exit doors are opened by pushing the hand bar forward instead of down. Manufacturer claims this method is safe, even for small children. Brochure describes 13 types of bar-opening devices with specifications, charts, dimensions, and photos. Finishes include polished or dull brass, oil-rubbed bronze, chromium plate, aluminum, and stainless steel. Trim and miscellaneous accessories also available. Reed Door Devices, Eaton Yale & Towne, Inc., P.O. Box 58, Wood Dale, Ill. On Readers' Service Card, Circle 208

Lock Stock By Arrow

Cylindrical interiors and locksets for residential, commercial and institutional applications are manufactured in a standard and a "deluxe" series. Cylindrical housing is cold-rolled steel and cylinders are solid brass with five-pin tumblers. Knobs are brass, bronze, aluminum or stainless steel; plus three special knobs—a marble, a rosewood, and a colenut knob. The catalog is this manufacturer's latest on architectural locksets. Photos, descriptions, dimensions. 16 pages. Arrow Lock Corp., 4900 Glenwood Rd., Brooklyn, N.Y. 11234.

On Readers' Service Card, Circle 209

Electrical Equipment

Vertical Transit

One-man lifts for warehouses, parking garages, and industrial uses are specified, described and photographed in two-color leaflet that includes system components, controls, and safety devices. 4 pages. Man-Lift Corp. of America, 26-12 Borough Pl., Woodside, N.Y. 11377.

On Readers' Service Card, Circle 210

Glowing Geometry

Catalogue shows lightweight plastic lighting fixtures in shapes that include spheres, cones, domes, and cylinders. The ribbed plastic fixtures are available in plain colors or candy stripes. They can be hung from single or multiple pendants, or wall-brackets. Dimensions and data. 12 pages. Glowtex Lighting Products, Box 5037, 2001 Peninsula Drive, Erie, Pa. 16512.

On Readers' Service Card, Circle 211

Finishes/Protectors

Stretch Coat



Elastomeric coating for roofs combines DuPont's "Hypalon" and "Neoprene" for roofing systems that are said to have good weathering, flex, and elongation properties. Originally designed for use on thin-shell concrete roofs of unusual geometric shapes, they are now suitable for use on a variety of substrates, including exterior grade plywood and certain types of insulating materials. Two pamphlets give descriptions, coverage charts, and very brief specs. Coatings for concrete masonry, interior wall coverings, below grade damp-proofing, and curtain walls are

also included. Surface Engineering Co., 834 Ohio, St. Louis 3, Mo.

On Readers' Service Card, Circle 212

Forever Sealed

Folder gives specifications, properties chart, and explanatory text on rubber elastomer membranes and "Neoprene" sheeting water barriers. The materials are said to form a permanent, watertight envelope covering foundations and underground structures, and to retain their flexibility around irregular shapes in temperatures from -40F to 275F. "Sure-Seal" color-coated roofing, flashing, and expansion joints are also included. Construction details, specifications, and recommended membrane field splices. 4 pages. Carlisle Corp., Tire & Rubber Div., Carlisle, Pa.

On Readers' Service Card, Circle 213

Furnishings

Quothe the Brochure, Nevamar

Brochure presents Nevamar's laminated plastics: newest is the "Electra" series, 10 marbled patterns, which, according to the manufacturer, have "a three-dimensional effect"; "Colormates," 32 solid colors coordinated with each other and with the "Electra" series; "Fresco," 39 wood-grain patterns with sap marks embedded in the surface by a special process; and others. Specifications, performance data, samples available. 16 pages. Nevamar Co., Odenton, Md.

On Readers' Service Card, Circle 214

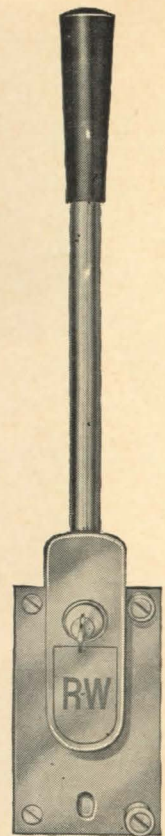
Varied Vinyls



Loose-leaf notebook shows two dozen patterns Moderncote contributes to the vinyl wall-covering market. Some are Tedlar-coated, many are simulated "cloths," some good "Real Woods," (1/85"-thick

One successful secret of the Richards-Wilcox 380

Operable Classroom Wall



It's just a lever, but with a quick, easy 180° turn, classroom space can be converted to meet your changing instructional requirements. It makes team teaching easier.

It's uncanny how this manually-operated lever locks the complete wall in place—top, bottom, and sides. The tight perimeter seal gives superb sound control.

In operation, the Incomparable 380 is all mechanical—no motors, no electricity, no pneumatics, no hydraulics, no floor fixtures of any kind.

The 380 operates so easily that a 90 lb. teacher can open or close a 1500 lb. wall in less than 30 seconds.



In Operable Classroom Walls, there's nothing like the R-W 380—and certainly nothing like the lever pictured above. In the small photo, you see it in operation.

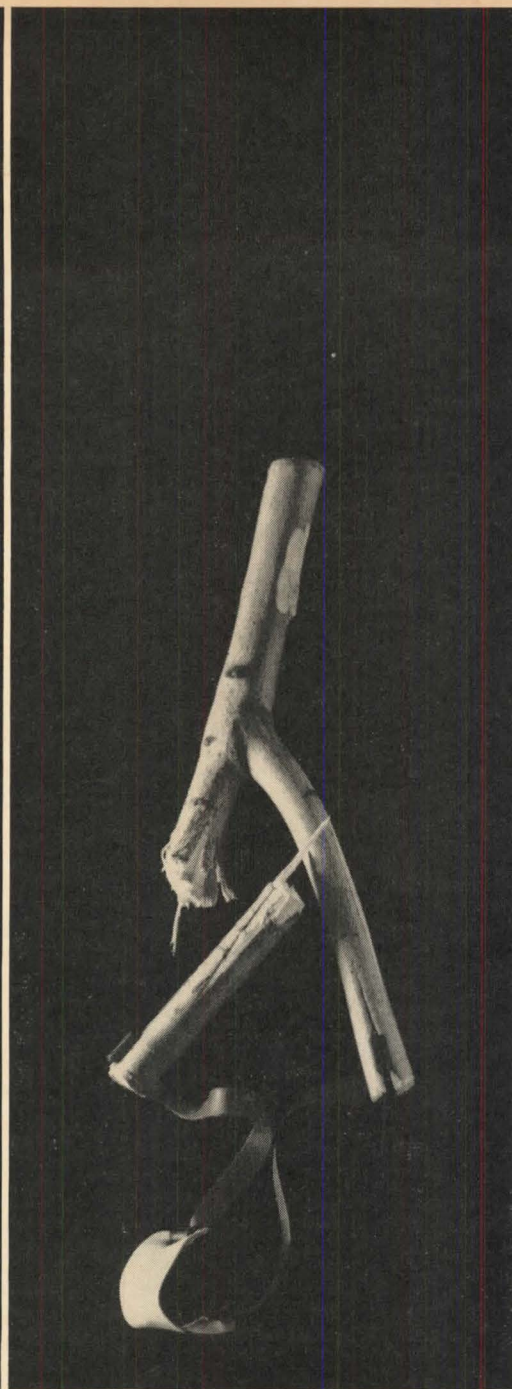
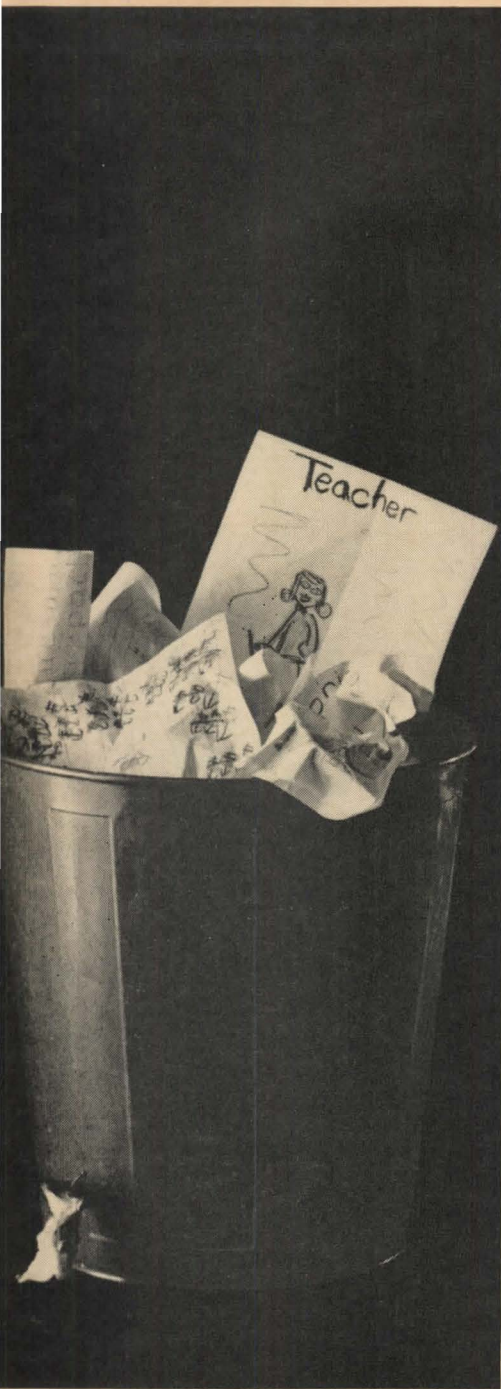
To find out more secrets that make the R-W 380 unique, write for Catalog F-266.

HUPP
CORPORATION

RICHARDS-WILCOX DIVISION

120 THIRD STREET, AURORA, ILLINOIS 60507

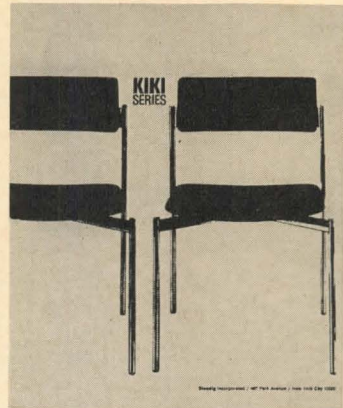
On Readers' Service Card, circle No. 444



vener on a fabric backing), and some startling "Silk Screen Designs," many with flocking, giving an Op-Art effect. Tab index, specifications. Moderncote, Inc. Box 353, New Castle, Ind. 47362.

On Readers' Service Card, Circle 215

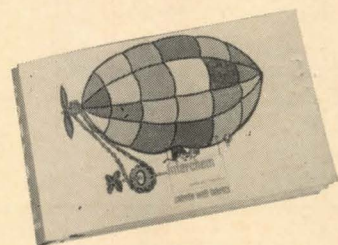
Kiki Series



A well-designed brochure shows the starkly elegant Kiki Series of chairs and tables designed by Finnish architect Ilmari Tapiovaara. Intended for varied usage, all chairs (save one) and tables are stackable, and chairs can be linked or fastened to the floor. Optional units: removable writing arms in two sizes, a church kneeler, a plexiglass book holder, and a connecting table. Frames are of oval steel tubing in polished chrome finish. Stendig, Inc., 487 Park Ave., New York, N.Y. 10022

On Readers' Service Card, Circle 216

Well-Covered Subject



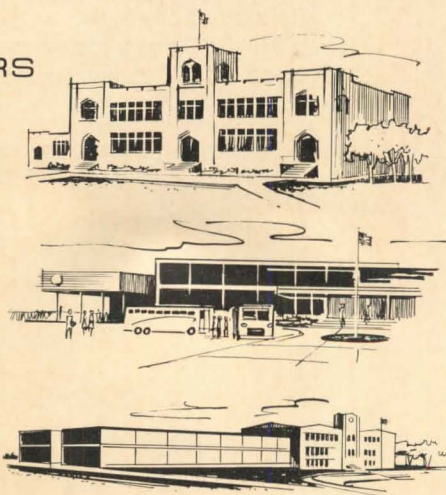
Adapting a maxim, "One sample is worth a thousand words," a compact 6" x 9" booklet presents the full line of 14 vinyl wall-covering fabrics with an 8" x 5" swatch of each style and smaller swatches of the available colors in that style. Interesting textures and fine colors, particularly, "Coarse Texor" and "Mentor." Interchemical Corp., Coated Fabrics Div., 837 Buckingham St., Toledo, Ohio 43601.

On Readers' Service Card, Circle 217

DONLEY PRE-ENGINEERED SUCCESSFUL INCINERATORS FOR EVERY SCHOOL NEED

Every new building can use a Donley pre-engineered incinerator. Donley provides the package . . . dimensional drawings, parts, burners, doors, air vents, grates, etc. for installation by local masons.

Flue-Fed or Direct-Fed, large capacity or small, constant or varying requirements . . . Donley is the efficient, automatic incinerator for schools, high rise apartments, commercial buildings or wherever common burnable refuse happens. Easy, too . . . just specify Donley. Write for handy selector chart and new incinerator catalog.

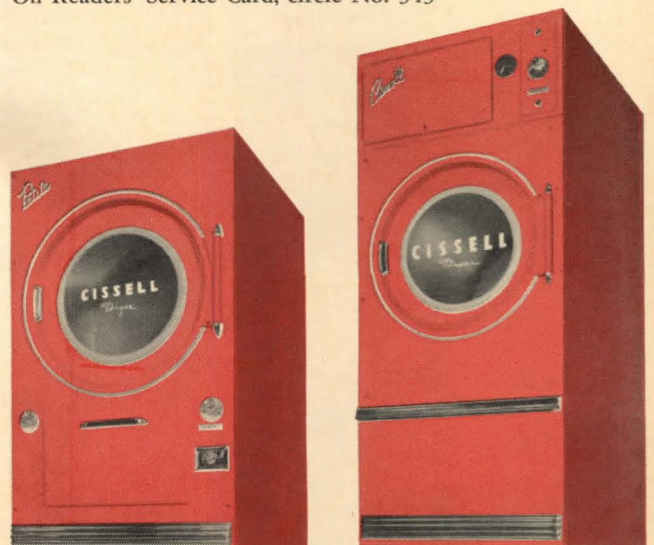




Hasn't snagged yet... and won't ever!

The basket perforations on Cissell's Petite Dryer are extruded. This means there are no sharp edges or rough points to snag delicate clothes and linens. And those perforations will never wear sharp, even after many years of constant use. But no-snagging is just one tenant-pleasing point. Some others: 16-pound dry weight capacity • Fast drying — approximately ten pounds in twenty minutes • Two temperature selections — 150 degrees and 185 degrees • De-wrinkling cool-off period at end of drying cycle • 28" basket drop to provide soft, fluffy drying. The Cissell Petite has features to please the apartment owner too. Small size, 48" high, 28¾" wide, 30" deep. Economical operation with either gas or electricity. Easy installation. Complete safety protection. And, literally any color in durable, mar-free paint. The larger, 25-pound dry weight Compact, with one-pound-per-minute drying, is designed for economical operation where larger capacity is essential. W. M. Cissell Mfg. Co., Inc., Louisville, Kentucky.

On Readers' Service Card, circle No. 343



Petite

Compact

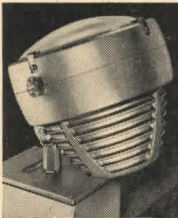
CISSELL®



PENCIL BEAMS

looking for a powerful shaft of light that can sharpshoot targets hundreds of feet away?

Try a Pencil Beam. This remarkable new source punches a brilliant needle of light clear across a city block, on only 120 watts. Pencil Beams are perfect for sparkling-up tall buildings, too. With tight ribbons of light that add height and drama . . . without blinding glare or big-beam slop.



Ask us for a desk-top demonstration. It will brighten your day.

STONCO

© 1966 STONCO ELECTRIC PRODUCTS CO., KENILWORTH, N. J.

On Readers' Service Card, circle No. 415

Special Equipment

Tread Lightly



Nonslip aluminum stair treads and abrasive, cast thresholds in many sizes and nosings fit a variety of installation requirements. Filler material between metal ribs contains aluminum oxide grains forming a hard, abrasive surface. Cast thresholds with scored tops are available in "Ferrogrit," "Alumogrit," "Bronzogrit," and "Nicklogrit." Catalog contains dimensioned profile drawings, photos, and installation details. 20 pages. Wooster Products Inc., Spruce St., Wooster, Ohio 44602. On Readers' Service Card, Circle 218

Stacked Files

Modular filing units can be used for desk-top "work stations" or stacked to cover whole walls. File cabinet shells have adjustable support angles to accommodate the eight easy-to-carry drawer sizes. All drawers have lids and are fabricated from lightweight steel or disposable corrugated kraft board. Catalog gives sizes and prices; many in-use photos of various arrangements and put-together details are also included. 24 pages. Graphic Systems, 925 Danville Rd., Yanceyville, N.C. 27379. On Readers' Service Card, Circle 219

PROGRESSIVE ARCHITECTURE NEWS REPORT

REINHOLD PUBLISHING CORPORATION
430 Park Avenue, New York, N.Y. 10022

EditorJan C. Rowan

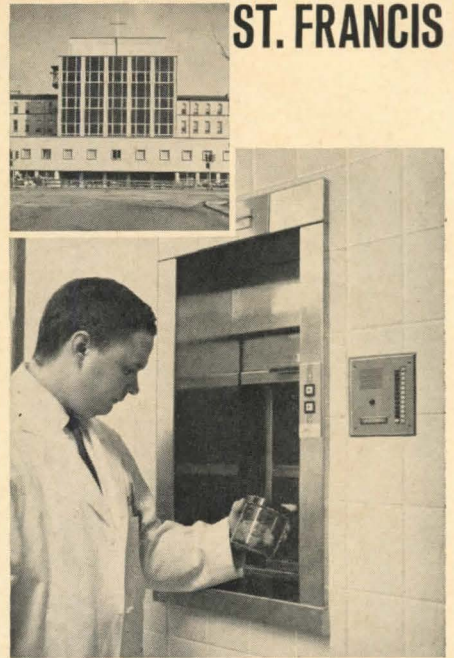
Associate EditorE. K. Carpenter

PublisherP. H. Hubbard, Jr.

Advt. Sales Mgr.W. R. Evans, Jr.

Production Mgr.Joseph M. Scanlon

7 MATOT DUMBWAITERS SPEED MEDICAL AID AT ST. FRANCIS



At St. Francis Hospital, Evanston, Illinois, 7 dumbwaiters in combination with an intercom system are being used to increase hospital efficiency. With a new addition increasing their capacity from 385 to 516 beds, the new system was introduced to relieve the added burden on their staff.

The lifts are used in different areas:

- Surgery to pathological specimen
- Surgery to blood bank
- In-Patient specimen lab to 4 patient floors
- X-ray film storage to filing
- Pharmacy to store room
- Lab clean-up to store room
- Medical records to store room

BENEFITS: The new dumbwaiter with the intercom system provides St. Francis with 4 important benefits: 1.) Service is speeded up in critical areas; 2.) Closer infection control can be maintained during surgery; 3.) More patients can be serviced with less help; 4.) Efficient operation . . . no frenzied corridor dashes, less breakage and thefts.

Matot specializes in developing units to solve any problem, and provides free engineering services, too.



Write for descriptive brochure!

D. A. MATOT, INC.

1533 W. Altgeld Avenue · Chicago, Illinois 60614
312 Lincoln 9-2177

Specializing in Dumbwaiters since 1888

See our catalog in Sweet's **23a**
Mat **S**

On Readers' Service Card, circle No. 381

Durable Repairs of Concrete Easy with Plasticon

No undesirable patched appearance

Solution to a difficult repair and maintenance problem—how to make thin layers of new concrete stick to old surfaces—is found in a new product, "Plasticon".

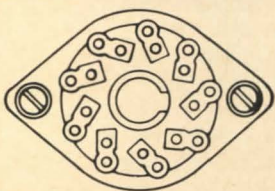
Used instead of water with portland cement and sand, this forms "Plasticon Fortified Mortar". It reinforces the mix, adheres firmly to existing concrete, eliminates need for chipping or roughing of old surfaces, formerly necessary when newly-applied mortar is less than 2 inches thick. No catalysts or tricky proportioning.

Plasticon is suitable for use on concrete surfaces, indoors or out . . . floors, pavements, steps, decks, curbs, drives, sidewalks. Excellent for repair of structural concrete, precast sections, railings, pillars, panels, forms. Uniform concrete color. Write for Bulletin 707L.



Maintenance Inc., Wooster, Ohio

On Readers' Service Card, circle No. 379



**YOU CAN
REDRAW THIS
DETAIL IN
2 HOURS OR...**

**do it with Stanpat in 60 seconds and
spend 1 hour 59 minutes creatively!**

Engineers and draftsmen should use their time creatively. Let STANPAT prepare any symbol, diagram, spec, detail, title block, or any other drawing that appears in your tracings repetitively. Simply apply the STANPAT in seconds directly to your drawing. It will be accurate . . . permanent . . . perfectly reproducible . . . and you will gain more creative time!

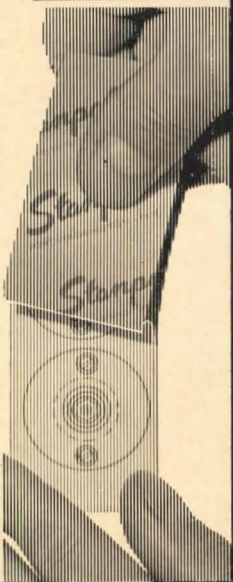
Drawing-board time should be used for creative problem-solving . . . not for repeated and re-repeated rendering of often-used elements. STANPAT changes draftsmen from drawing-machines to creative assets. It's like adding another draftsman to your staff! You save checking time, too.

But it has to be STANPAT if you want STANPAT's advantages: pre-printing on finest tri-acetate; crisp, clean reproduction even with microfilm, matte surface that thrives on erasures; no ghosting problems. Send for literature and samples today.

*faithfully serving the engineer
for over two decades*



STANPAT PRODUCTS INC.
Covert and Main St., Dept. Q5
Port Washington, N.Y. 11050
Telephone: 516 883-8400



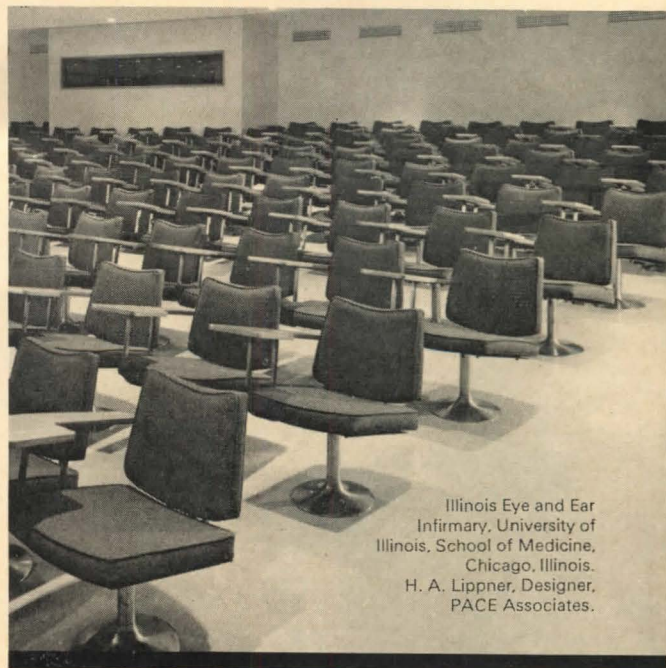
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Look Ma, No Steps!

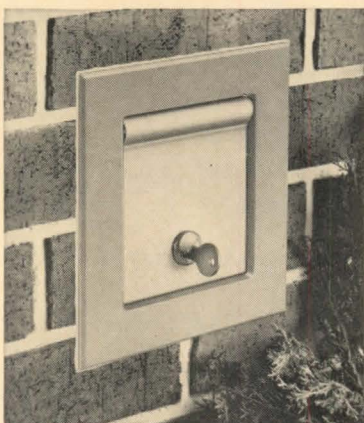
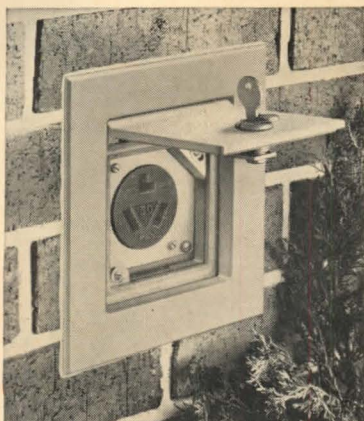
New CHF No. 468 used with 4° bevel mounts on flat, sloping auditorium floor—eliminates need for steps, yet gives each row of seats proper level for visibility and hearing. Another "first" for CHF. For details on new no-step seating for schools, universities and auditoriums, write CHF 468, Chicago Hardware Foundry Co., North Chicago, Illinois.

CHF



Illinois Eye and Ear
Infirmary, University of
Illinois, School of Medicine,
Chicago, Illinois.
H. A. Lippner, Designer,
PACE Associates.

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Open-and-Shut Case Against . . . Vandals—Weather— Unauthorized Use

Open the new P&S 4600 for access to switches and grounding devices at their most sensible, most convenient locations.

Shut out vandals, weather and unauthorized use with the locking cover that's flush and can't be pried open.

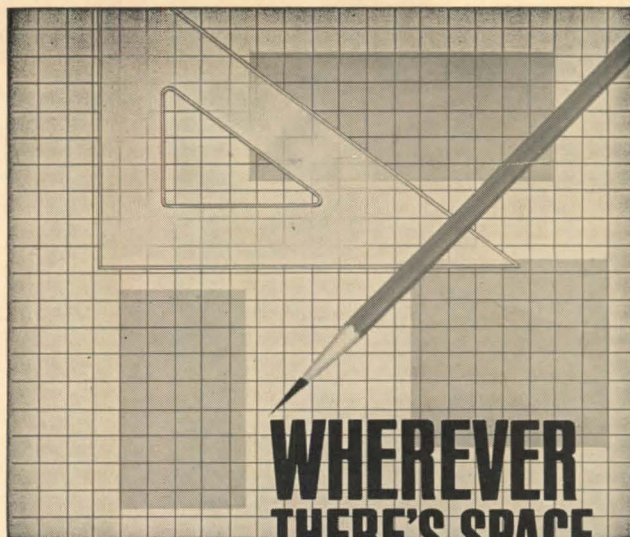
The 4600 is constructed entirely of non-ferrous metals (nothing to rust) and sealed with neoprene gaskets to keep out the elements.

Now that you can specify the new 4600 there's no reason for not having outlets and switches where they make the most sense—even in unprotected outdoor areas around schools, factories, public housing, parks. Need more suggestions? Write Dept. PA 566 for complete specifications.



Pass & Seymour, Inc., Syracuse, New York 13209
Boston • Chicago • Los Angeles • San Francisco

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WHEREVER THERE'S SPACE

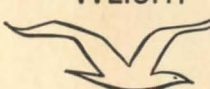
there's a Norris Walk-In to fit

Wherever there's space, there's a Norris walk-in cooler, freezer, or cooler-freezer combination to fit, for Norris walk-ins provide complete installation flexibility. Available with or without floors, Norris walk-ins are pre-fabricated in two- and three-foot wall sections, four-foot door sections (7½' high), and can be set up in one-foot increments in any size—in almost any space—in new or existing buildings. The only tool necessary is a light hammer.

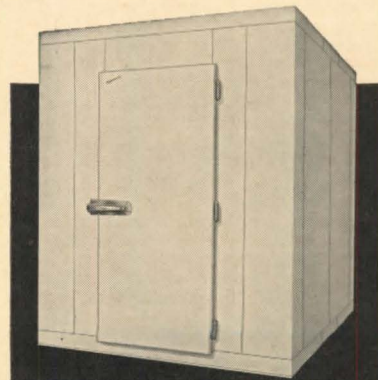
The modular panels of Norris walk-ins are all-metal—no wood to absorb moisture—and extremely light-weight. Standard exteriors are bonderized steel finished in white baked enamel, interiors are 22-gauge galvanized metal, with custom exteriors or interiors optional at extra cost. Ideal for every industrial, commercial or institutional refrigeration need, Norris walk-ins can be supplied with the proper self-contained or remote refrigeration equipment to meet any application.

WRITE FOR DESCRIPTIVE LITERATURE!

**LIGHT
WEIGHT**



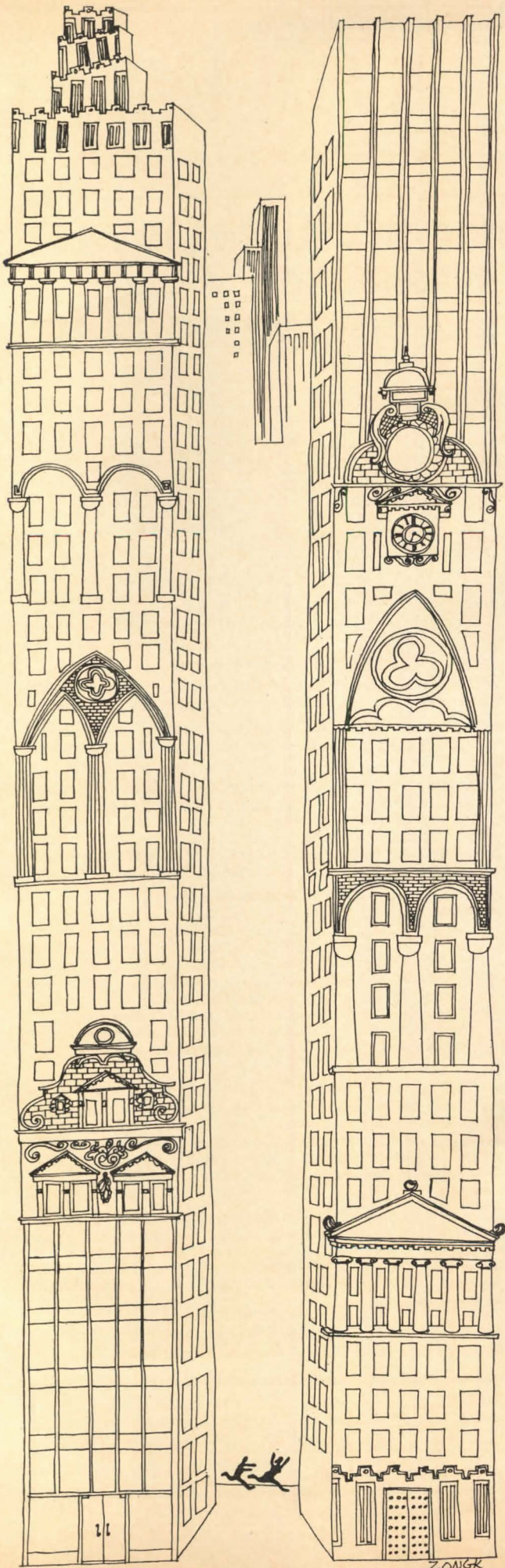
as low as
4½ lbs.
per sq. ft.
—reduces
freight costs



Norris

NORRIS DISPENSERS, INC.
2720 LYNDAL AVENUE SOUTH
MINNEAPOLIS 8, MINNESOTA

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NEXT MONTH IN P/A

Oceans of printers' ink and miles of T.V. film have been expended recently on the problem of "ugliness" in our environment. Virtually all of the examinations of this question, from high governmental offices and professional organizations down to the local garden club level, have been superficial in nature.

In the June issue of PROGRESSIVE ARCHITECTURE, the editors examine the problem from the source to the product. The institutions, corporations, towns and cities, schools, churches—the people and organizations, in other words, who are responsible for the "beauty" or "ugliness" of our surroundings—are put under searching scrutiny. This will be a how-when-and-why documentation, not a geranium-planting, get-rid-of-the-junkyards dilettante's glance. It will be an issue every professional owes to himself and his community to read and study deeply.

The June issue of P/A, plus eleven more exciting issues when you fill in the "Subscriptions" section on the Readers' Service Card in this issue. (See Table of Contents for page number of Readers' Service Card.)



THE PRESCON MEMO NEWS

THE PRESCON CORP.: 502 CORPUS CHRISTI STATE NATIONAL BUILDING — CORPUS CHRISTI, TEXAS 78401

© The Prescon Corp. ®

SPACE—THE RESULT OF ELIMINATING 211 COLUMNS IN WEBB BUILDING BY POST-TENSIONING

More rental space, greater space flexibility, reduction of number of required columns, and shallow floor depth were considerations analyzed before selecting post-tensioning for the Webb Building in Arlington, Virginia. Three structural systems were evaluated before a decision was made. In the final design, the few columns required allowed such space management efficiency that the owner, M. T. Broyhill & Sons Corp., reported requests for office space totaling 212% of rentable space!

The structure was originally designed for 70 psf live load, but was later changed to 125 psf live load for the first five floors above grade, and 100 psf live load for the remaining four floors. The load factor was changed to accommodate heavy office equipment.

The roof slab and the nine floor slabs above grade were post-tensioned using PRESCON positive end anchorage tendons. The slabs were 8½" thick, cast of 3500 psi regular weight concrete. Each slab was divided into three pours.

Floor slabs measure 123'8" x 153'8" with approximately 19,000 square feet to each floor. Slabs were designed as rectangular flat plate panels spanning 20 feet in the N-S direction and 25 feet in the E-W direction between column centers. All main reinforcement in slabs was Prescon post-tensioning tendons except for the addition of conventional reinforcing bars over the columns. The total structural frame cost was \$3.28 per square foot, including all structural change orders.

Conduits were not included in the floor but with the Prescon post-tensioned slab, telephone and electrical outlets could be placed within a 2" point desired by the tenant without fear of cutting steel reinforcing. Another advantage of post-tensioning



The Webb Building in Arlington, Virginia.

the slabs was the elimination of deflection in the slab which reduces problems in the placement of partitions.

Prospective tenants were particularly impressed by the speed and ease in placing partitions and the higher floor loadings possible.

The Webb Building is a joint venture of M. T. Broyhill & Sons Corp., and Dr. Clifford A. Webb, Sr. The Architect is Michael G. Kasen, Annandale, Va.; structural engineers—Ellers & Reaves, Consulting Engineers, Memphis, Tenn.; Contractor—Allen Bros. & O'Hara, Inc., Memphis, Tenn.; tendon placement and stressing—East Coast Steel Placing Co., Arlington, Va.

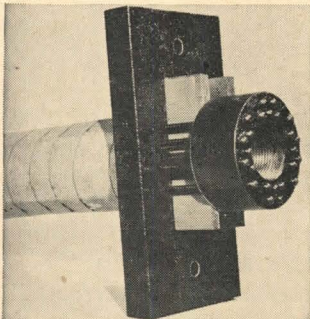
The Prescon System offers numerous advantages.

For the owner it means graceful, functional construction with maximum space utilization, and long spans with minimum material usage. For the architect and consulting engineer it means assistance with design and engineering when needed, and assurance that Prescon can be specified with confidence. For the contractor it means tendons delivered to the job site, completely assembled, clearly identified and ready for the forms, plus a Prescon representative to instruct his men in tendon placing and stressing procedures, using stressing equipment provided by Prescon.

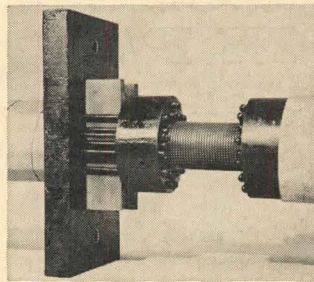
Prescon tendons are available in two types: the grouted type and the mastic coated type. Either can be used in cast-in-place or in precast structural members. Your Prescon representative can show you many examples of applications in foundations, compression rings, cast-in-place slabs, beams, girders, as well as precast tees, girders, etc., in structures designed for many different uses.

If you are not already receiving the PRESCON NEWS, a tabloid paper, which discusses many of the structures using the Prescon System, write PRESCON to include your name on our mailing list. Other Prescon publications include general and technical brochures, and one devoted entirely to applications in parking garages.

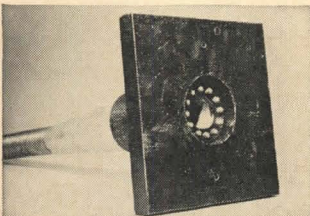
The Prescon Corporation
 General Offices: 502 Corpus Christi State National Building
 Telephone: 512-882-6571 Corpus Christi, Texas 78401



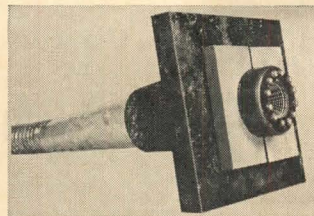
Example of the stressed end of a coupled tendon.



Here two tendons have been coupled. In final stage the ends and threads are mastic coated and covered with a sleeve.



With limited working area and/or coupled tendons, the donut hardware is used. This is the un-stressed condition.



The donut washer and bearing plate in a grouted tendon with split shims in place after stressing.



Typical Tendon Profile Utilizing "Load Concept of Prestressed Concrete Design"



UNRETOUCHED PHOTO OF SUMMITVILLE TILE INSTALLATION

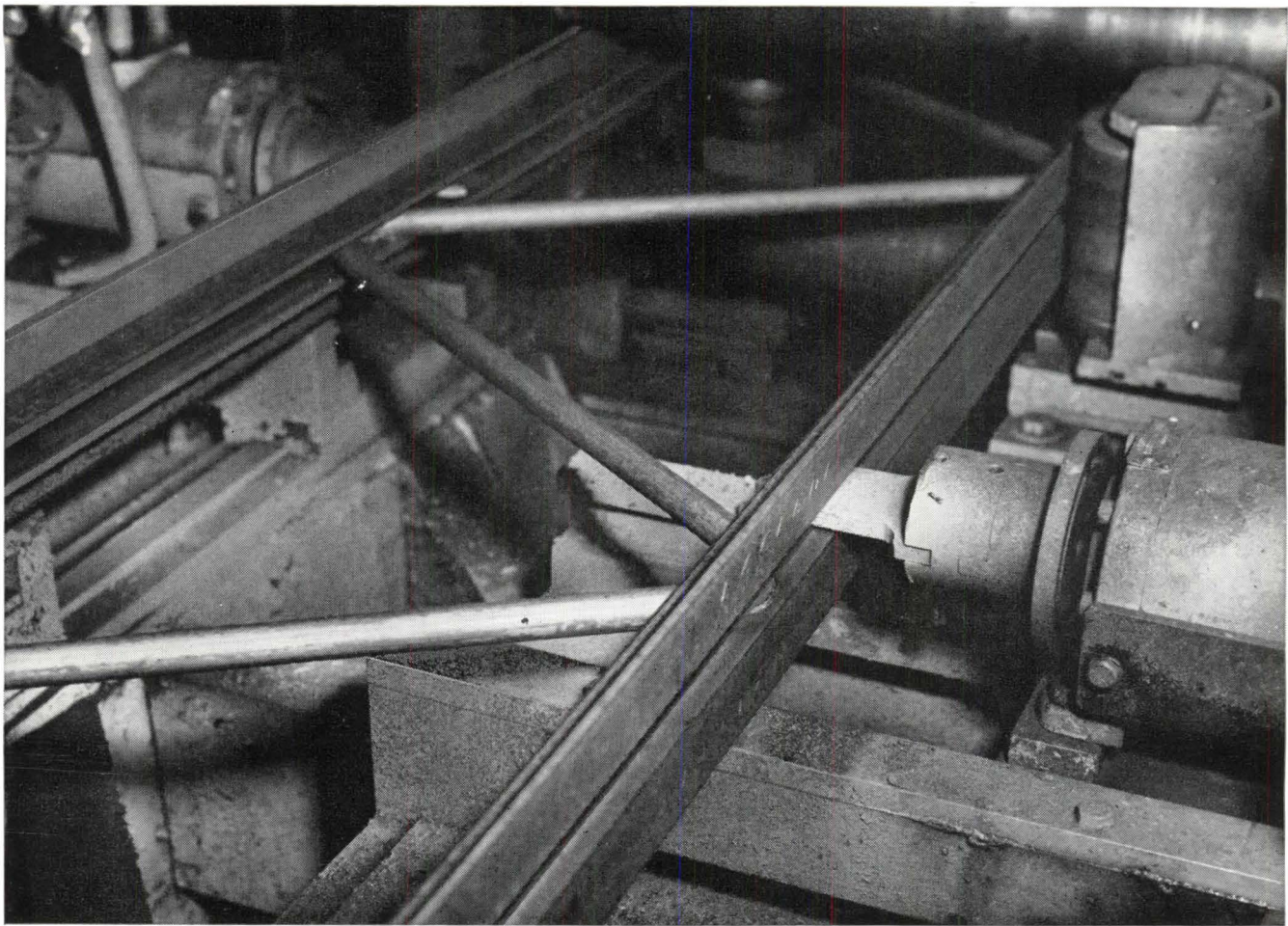
GO ON... ADD YOUR TOUCH OF CREATIVITY

Summitville extruded Quarry Tile is a "creative tool" for the design innovator. A wide range of natural colors, sizes and contours offer virtually unlimited opportunities for designing "total floors"... unique and complete. For decor, for interest, for durability, for beauty, for economy, for no maintenance—think Quarry Tile... by Summitville Tiles, Inc., Summitville, Ohio.

Summitville[®]
QUARRY TILE



Member—Tile Council of America



Q. *Why the weld tests on panel points?*

A. To verify the **STRENGTH** of Laclede Joists

Quality control at Laclede Steel means two things: 1) do everything to make the finest joist possible; 2) verify that joist quality with rigid tests and inspections—the most complete in the industry.

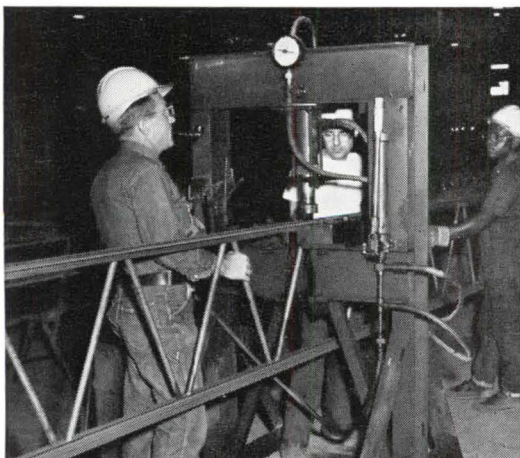
For instance: all panel points of Laclede Open Web Steel Joists are electronically-controlled resistance welded

with high ampere-low voltage current and great pressure, forging the members into permanent union. Precise automatic control of current and pressure eliminate variation.

To verify that uniform strength, each panel point is tested on the line immediately after welding.

In addition, welds of selected completed joists are shear-tested to 2½ times the required design strength (left).

Quality control of this scope is virtually unique in the construction products industry. It assures the highest standards of design, construction and performance when you specify and use Laclede Steel Joists.



LACLEDE STEEL COMPANY

St. Louis, Missouri 63101
Producers of Quality Steel for Industry and Construction



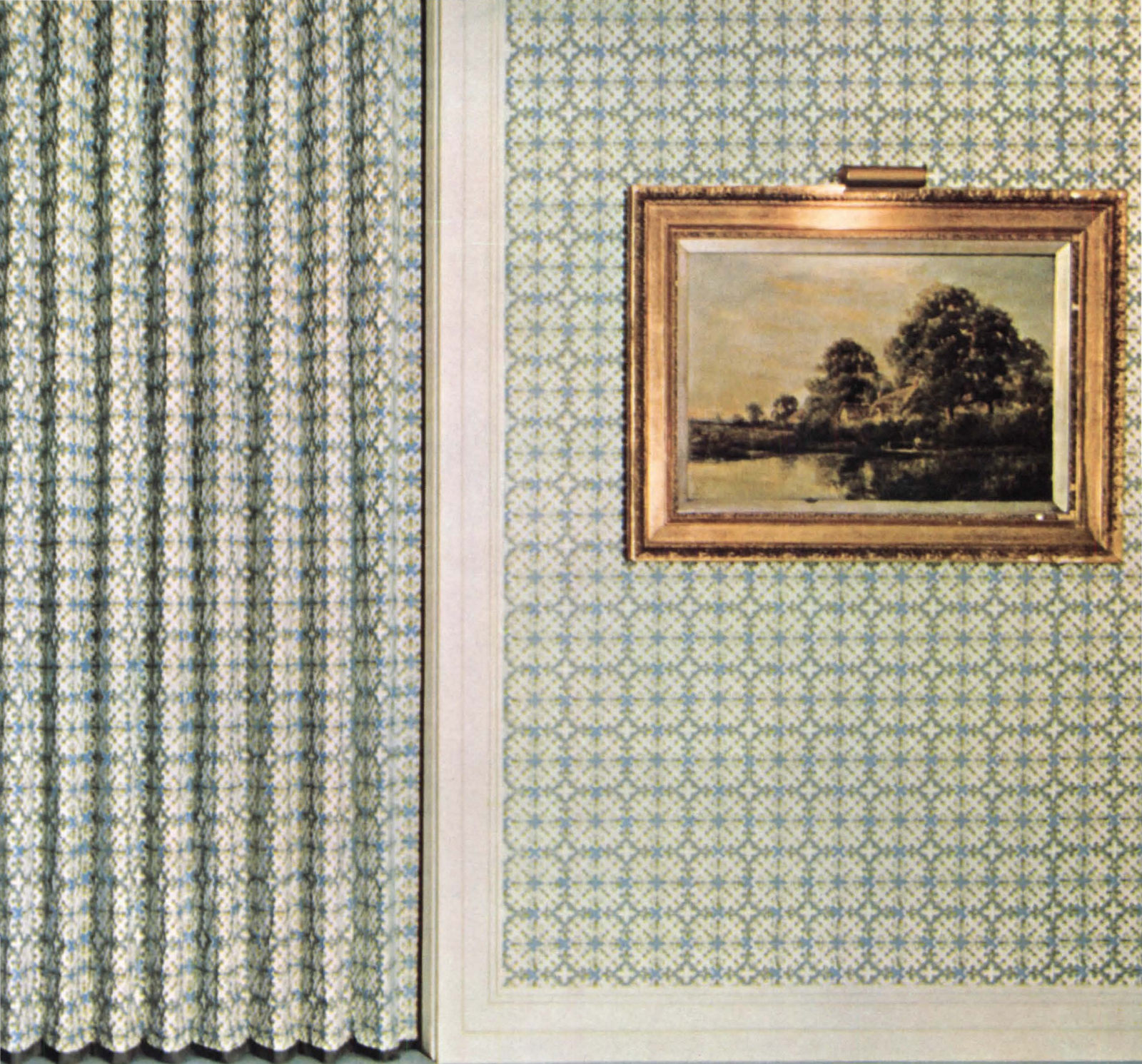
*“Do you know you
can now specify ‘Tedlar’*
on Soundmaster
operable walls?”*

“Yes, Modernfold. What’s new?”



Modernfold operable walls in an unlimited choice of colors and custom

Over 10 years ago, we recognized a responsibility to produce the best vinyl material possible for folding partitions. At that time we established our own plant to produce vinyl coated material. That facility has grown considerably. In fact, Moderncote,



designs . . . to harmonize, contrast or match any interior setting

and "Cord Mesh" vinyls for Modernfold's Soundmaster. We can supply Cord Mesh 36 and 48 in over 400 color options, in dozens of textures. Variations include silk-screened patterns from our own designer collection; your own custom designs, or even corporate logos and emblems. For the first time you can combine space flexi-

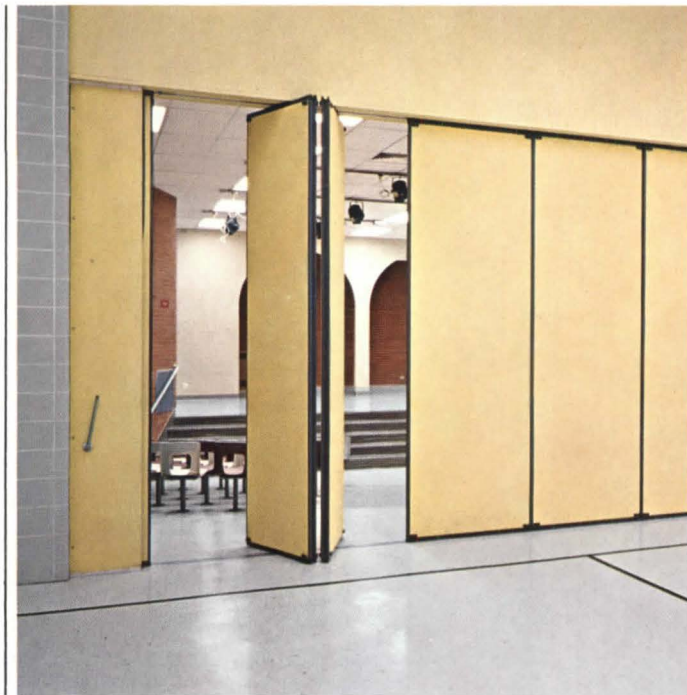
bility with exciting operable wall finishes.

Possibilities exist for special fabrics in all types of commercial buildings—hotels, motels, restaurants, offices, conference rooms—even in schools. We cannot offer everything, but we think we can offer more than anyone else in the industry. We would like to show you all we can do.



Now Modernfold offers 'Tedlar'* on operable walls

(makes vinyls as stain-resistant as ceramic tile)



ACOUSTI-SEAL 51—BEST SOUND CONTROL OPERABLE WALL MADE. STC 51. (TEST DATA AVAILABLE UPON REQUEST.)



SOUNDMASTER—LEADER OF THE MODERNFOLD LINE WITH SUPER-TOUGH CORD MESH 48 CAN NOW HAVE TEDLAR STAIN RESISTANCE.

"Tedlar" is an optional extra, when specified, that stops staining agents that are foes of all vinyls . . . oil, grease, wax, lipstick, crayon, marking pen . . . even ball-point pen. "Tedlar" is so inert that stains hardened by time can be removed with such strong solvents as acetone, without harm to the vinyl. □ Vinyl is virtually maintenance-free—"Tedlar" surfacing makes it even better. □ It is easy to specify "Tedlar":

Soundmaster—Outer covering shall be "Cord Mesh 48" with "Tedlar" polyvinyl fluoride film laminated to surface.

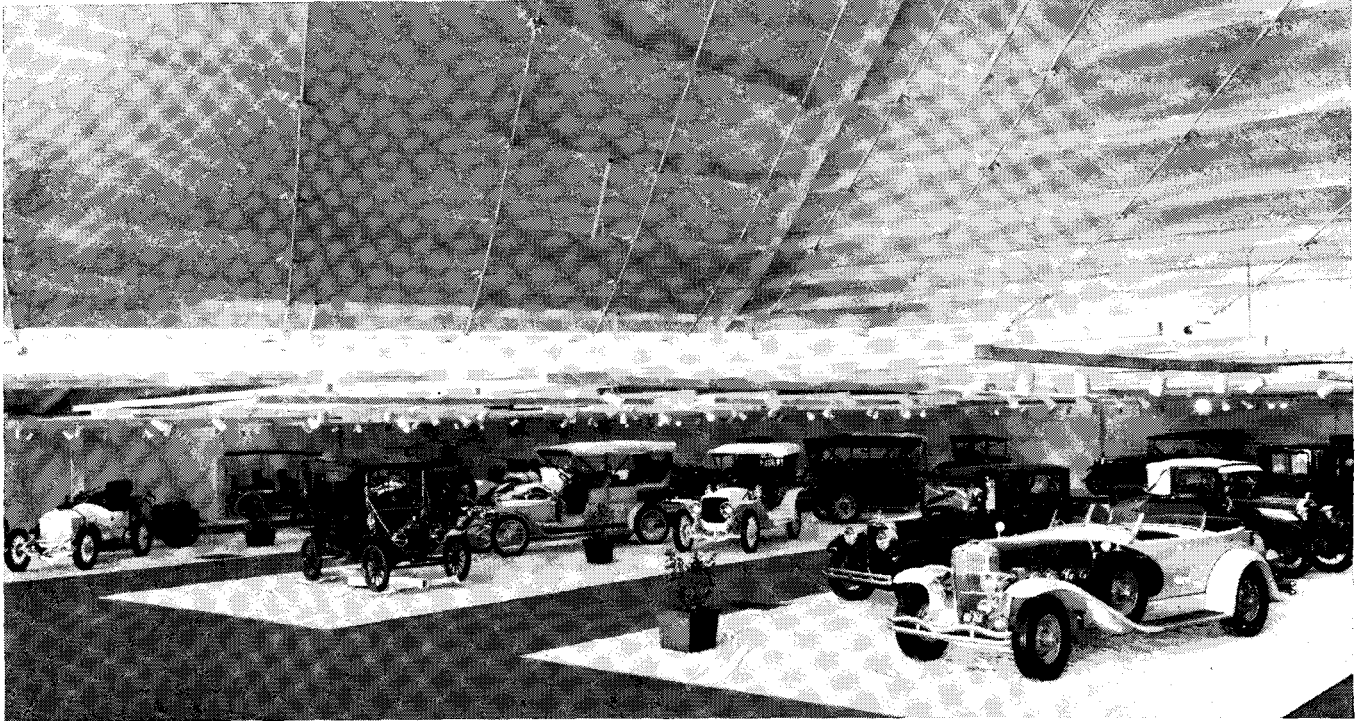
Acousti-Seal—Panels shall be surfaced in (specify one: Moderncote 33, 33L or Newport) with "Tedlar" polyvinyl fluoride film laminated to surface.

*Dupont registered trademark.

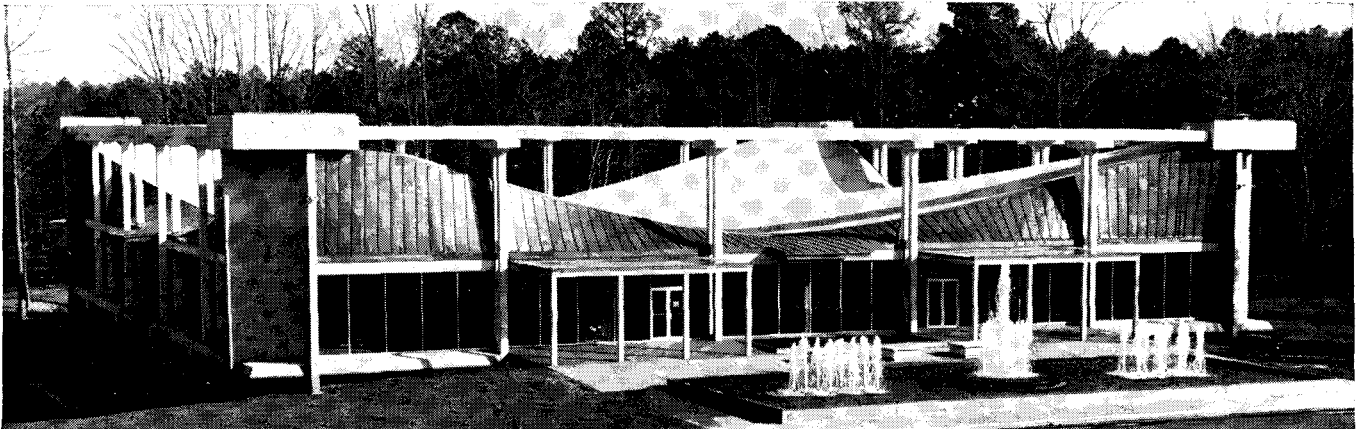


NEW CASTLE PRODUCTS, INC.

STEEL CABLES SUPPORT ROOF



OF ARKANSAS AUTO MUSEUM



It's the Museum of Automobiles, located on Petit Jean Mountain, near Morrilton (about 60 miles northwest of Little Rock, in central Arkansas). Owned by Winthrop Rockefeller, the structure houses more than forty antique vehicles.

The roof's unique construction provides a column-free exhibit space of 22,500 sq ft by hanging 24 high-strength steel bridge cables from four 35-ft-high corner posts. These are held erect by a squared variation of a compression 'ring.'

Radiating from the four corner posts, the steel cables pass through a cruciform steel strut back to each adjacent corner post. The strut stabilizes the roof and divides it into four equal parts. A grid of wood purlins is connected to the cables and roofing is nailed over it.

Bethlehem supplied about 4,100 ft of 1¼-in. steel strand for this structure. Every inch of it was prestretched and measured to conform to the precise requirements of the roof design. We also furnished a number of clamps and anchor sockets. *Bethlehem Steel Corporation, Bethlehem, Pa.*

Architect: Ginocchio, Cromwell, Carter & Neyland, AIA, Little Rock
Roof consultant: Severud-Perrone-Fischer-Sturm-Conlin-Bandel, New York
General contractor: Pickens-Bond Construction Company, Little Rock



*Steel for
Strength*

BETHLEHEM STEEL



AT ONE MAN'S FINGERTIPS . . .

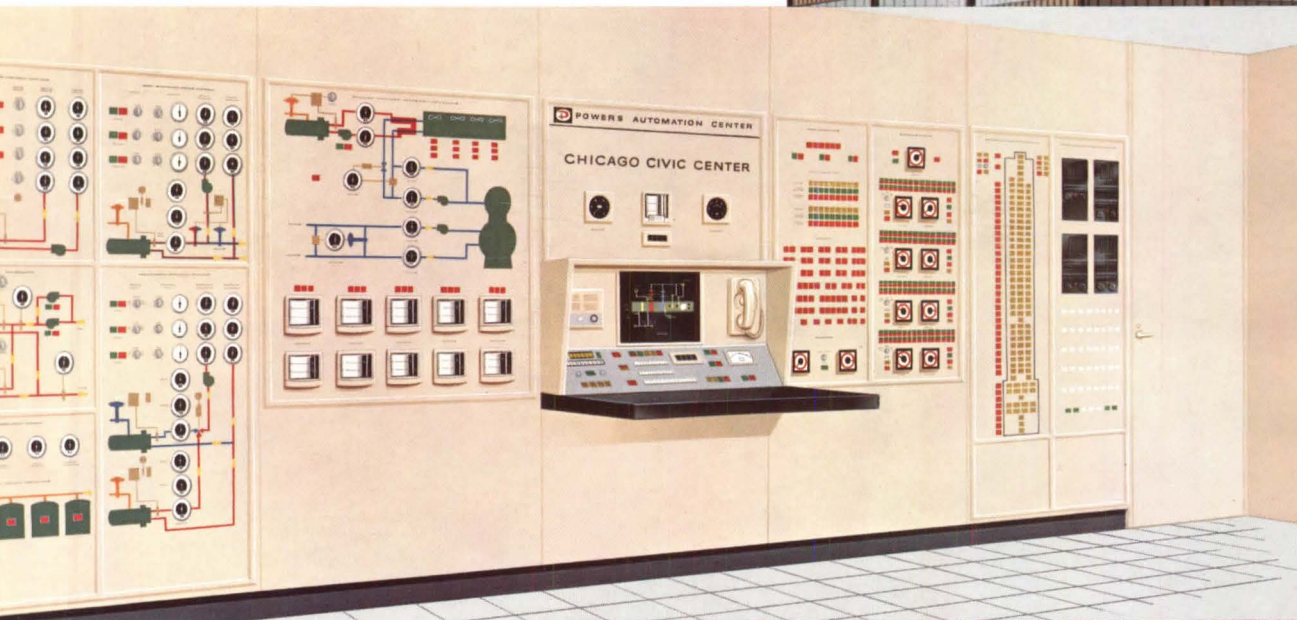
Supervision and Control of 2,754 Separate Functions in Chicago's New Civic Center.

Powers Automation Centers extend the hands, eyes, ears, voice, and memory of the operating engineer to indicate, adjust and record the operation of:

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- Fire and Civil Defense Alarm Systems
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A Powers Service Contract insures continuing operating economies throughout the life of the building.

For further information, call or write Wayne Norin at Powers' home office.



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Public Building Commission of Chicago
Mayor Richard J. Daley, Chairman.

Supervising Architect:

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OUR 75th YEAR



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**This A-frame
is the toughest guy
on the waterfront.**

**And,
it's all Western Wood.**

The Hawaiian waterfront is rough on buildings. A tropical climate and extremely high humidity can make maintenance almost a full-time job. Unless, of course, the building material specified is Western Wood, as in this sugar warehouse.

Long-span laminated A-frames were treated with preservative for extra durability. Once up, they practically take care of themselves.

Thanks to the natural insulative properties of Western Wood, condensation—a damaging problem in sugar storage—is kept to a minimum.

Let's not overlook the long-span challenge met by Western Wood. The completed warehouse is 132 feet wide, 152 feet long and soars 75 feet high . . . providing 20,196 square feet of unobstructed storage area.

This A-frame sugar warehouse is another example of Western Wood tackling a tough job with strength and durability. For more information on its capabilities

to meet your building challenges, clip the coupon. We'll send you the Western Wood Technical Manual free. You'll also want the informative Douglas Fir Use Book for \$5 cost.

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New...all-new

Permon[®]

and

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**vinyl
wallcoverings
are here!**

We offer breathtaking beauty... through glorious spectra of color, exciting new designs, creative textures.

A new dimension in style and color such as you have never seen before in these famous wallcoverings.

New U.L. listing, too.

This important design event was sparked by the absorption of Frederic Blank & Company, original producer of Permon and Fabron, into Stauffer Chemical Company. In keeping with our new look and new ownership, we've moved our headquarters to the Decoration and Design Building, 979 Third Avenue, New York City. So we have a new face all around... with the added advantage of now being part of a company basic in vinyl resins.

Come see an all-new concept in wall styling at the D&D Building next time you're in the neighborhood. Or write to Stauffer Chemical Company, Wallcoverings, 979 Third Avenue, New York 10022.



Our desk is soundproof. Also moveproof.

Ouch!

It really hurts to watch some moving men handle an office desk. Bump, bump, bump. Then pretty soon it's goodbye desk. (And you'd be surprised to know the number of times office desks are moved. In one company alone that we know of, a desk has been moved 5 times in just 6 months!)

The answer, of course, is our 500 line desk. It's moveproof.

We've put a special honeycomb core inside the walls to give them unusual strength. So when the desk is moved on a dolly, the walls won't buckle. And the drawers won't get out of whack.

Another thing. The drawers are soundproof. Slams are muffled by the honeycomb inner wall, and by the 100 lb. felt that lines the walls inside the drawer opening.

Everything about our desk is made the way office furniture ought to be. Furniture that looks beautiful and works beautifully—a solid investment for the management who pays for it.



ART METAL INC
JAMESTOWN, NEW YORK



GLASS MAKES A GRACEFUL ENTRANCE

Designer and builder, Ivar Lovret has achieved an exterior treatment as dramatic as a Broadway hit with this striking installation of translucent glass. This modern material, constantly gaining in favor in contemporary structures, is an accomplished performer. In its dual role, it effectively screens with light instead of darkness while flooding the interior with flattering, borrowed illumination. Specify Mississippi glass. Available in a wide variety of patterns at better distributors of quality glass.

7/32" HYLITE in entrance and office partitions, Pomona, Calif. *Glazing:* City Mirror & Beveling Works, Inc., San Gabriel, Calif.



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88 Angelica Street • St. Louis, Missouri 63147
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LARGEST DOMESTIC MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

Patio courts in the Wilson Park Apartments, Castellamare, Calif., are divided with light for privacy and wind protection with partitions of 7/32" textured BURLAP and 1/4" BURLAP MISCO (wire).
Architects: Pollock and Drazan, Pacific Palisades, Calif.
General Contractor: Geo. A. Fuller Company
Glazing by: Ful-Trim



HIGH IN INTEREST AND UTILITY

Always reflecting the modern mood, translucent, light diffusing patterned glass combines interesting texture with practicality... creates settings of lasting freshness and beauty... makes them different, unusual, exciting.

Plan now to capitalize on the many exclusive advantages of Mississippi glass—the glass that adds imagination, utility and variety unmatched by any other glazing medium. See your nearby Mississippi glass distributor.




Lustrous, obscure 7/32" BURLAP glass in office building, Bellflower, Calif.
Owners, Builders and Architects: Lane and Brodie
Glass: Downey Glass Company
Glazing: Hal's Glass Company



NEW CATALOG

Contains pattern descriptions, light distribution charts, transmission data. Send for your free copy today.

See our catalog in Sweet's 



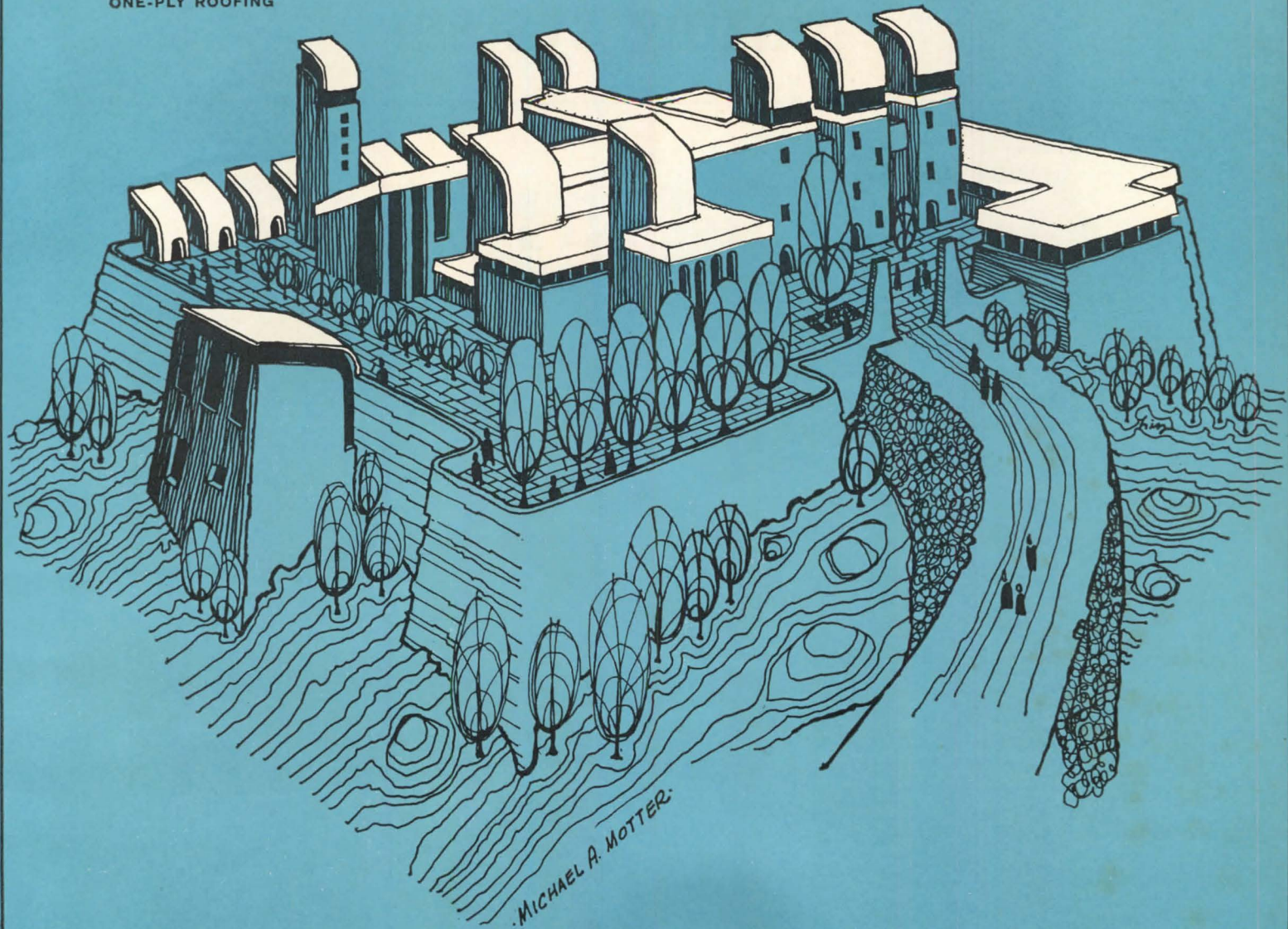
H-#1-66R

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BFG[®]
ONE-PLY ROOFING



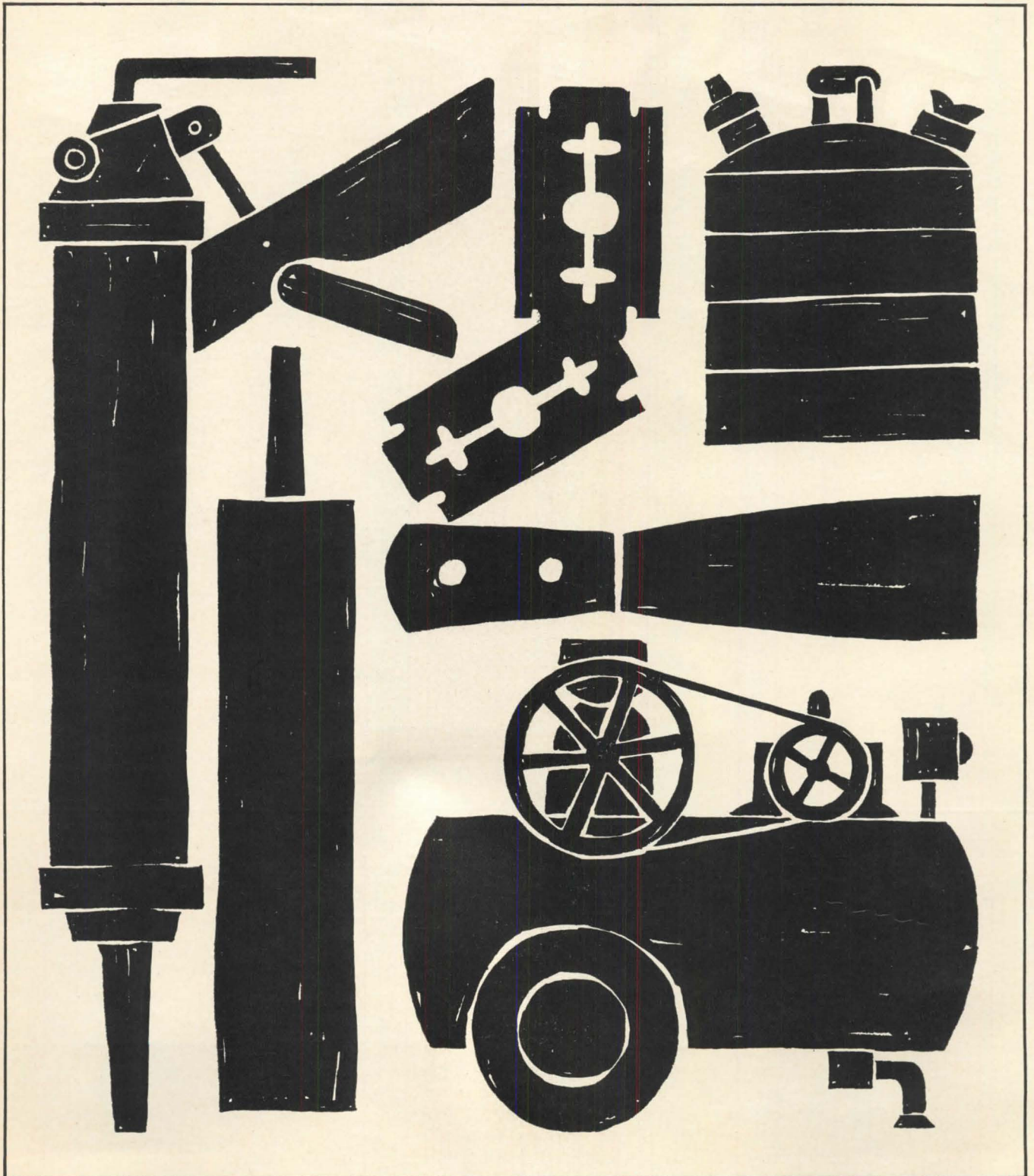
Toss us a curve or give it to us straight.
We'll cover for you.

Go ahead with your far out roof designs. Make them curved. Make them steep. Make them flat. Or a combination of all three. No problem. B.F. Goodrich has a remarkable new roofing system that conforms to unusual contours, works beautifully on flat roofs, too. Its name is BFG One-Ply. One-Ply is a laminate of DuPont Hypalon[®] synthetic rubber backed with neoprene-bound asbestos. It's light. Flexible. Easily installed. Fire resistant. Self-flashing. And so watertight, we guarantee it five years against leaks. Want complete information? Write B.F. Goodrich Building Products Dept. PA-24, Akron, Ohio 44318

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**This is a complete
glazing system**



...so is this



(new PTI 606 Architectural Tape Sealant*)

Ours is the simple system. Developed and tested, and now specified on some of the largest commercial buildings being built.

PTI 606 is a new kind of tape sealant. One that works. It's compressible—35% to 50% is all that's required for a permanent seal.

It's weatherproof, made of 100% solids and pliable year after year. Immune to water, extreme heat and cold. Won't flow. No auxiliary sealants, scaffolding, guns or clean-up needed.

PTI 606 knows no season. Applies as easily under summer sun as during winter cold. Installation is an inside job.

There's more to PTI 606 than anyone could squeeze into an ad or article. Let us send you, or your department, a copy of the details. Write now.

Recent installations using PTI 606 Architectural Tape Sealant include—Montgomery Ward, Chicago; Park Plaza Hotel, New Haven; Carlyle Condominium, Chicago; 201 E. Chestnut Condominium by Dunbar Builders Corp., Chicago; Barrington High School, Barrington, Illinois

*Patent Pending

PROTECTIVE TREATMENTS, INC.

Subsidiary of Helene Curtis Industries, Inc.

4401 W. North Ave., Dept. P-5, Chicago, Ill. 60639

- I'd like assistance on preparing specifications. Please have your PTI architectural representative call.
- I'd like to see your demonstration of new PTI 606 Architectural Tape Sealant.

Name _____

Firm _____

Address _____

City _____ State _____ Zip _____

A four-pipe system isn't always the answer.

Why waste a penthouse view on a cooling tower?

There's a rent-paying tenant atop this new office building—because it's heated and cooled with G-E Zonline.

At first, the F&A Development Corporation was considering a four-pipe system for the new People's Savings Bank office building in Bridgeport, Conn. "But as plans evolved," says Bennett Delle Bovi, project engineer of F&A, "it became obvious that General Electric Zonline would do everything a four-pipe system would do—and free an extra 5% to 10% in usable, rentable floor space."

Here are some other benefits F&A found in G-E Zonline:

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40% SAVINGS on first cost, compared with the estimates for a four-pipe system.

CHOICE OF STYLE in exterior grillwork. A special grille was designed for the Peoples's Savings Bank to complement the building's architectural styling.

INTERIOR FLEXIBILITY was a consideration, too. Zonline units will fit over doors

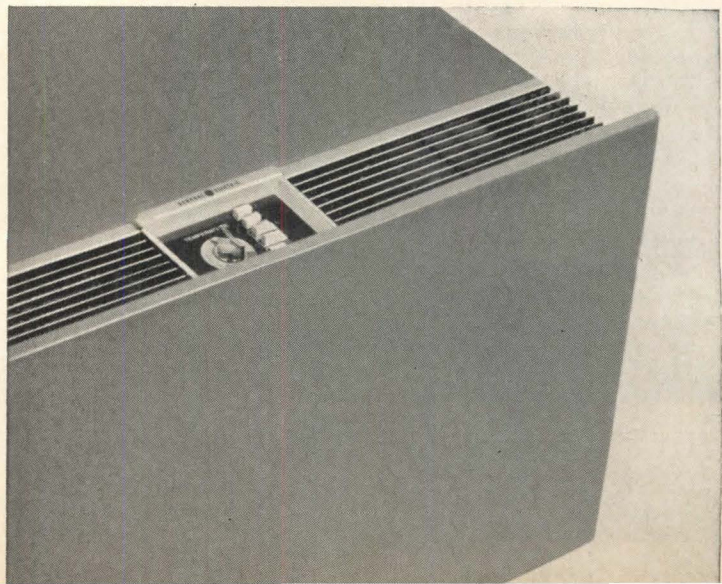
(Marina Towers, Chicago) or under window seats (Century House, Lincoln, Neb.).

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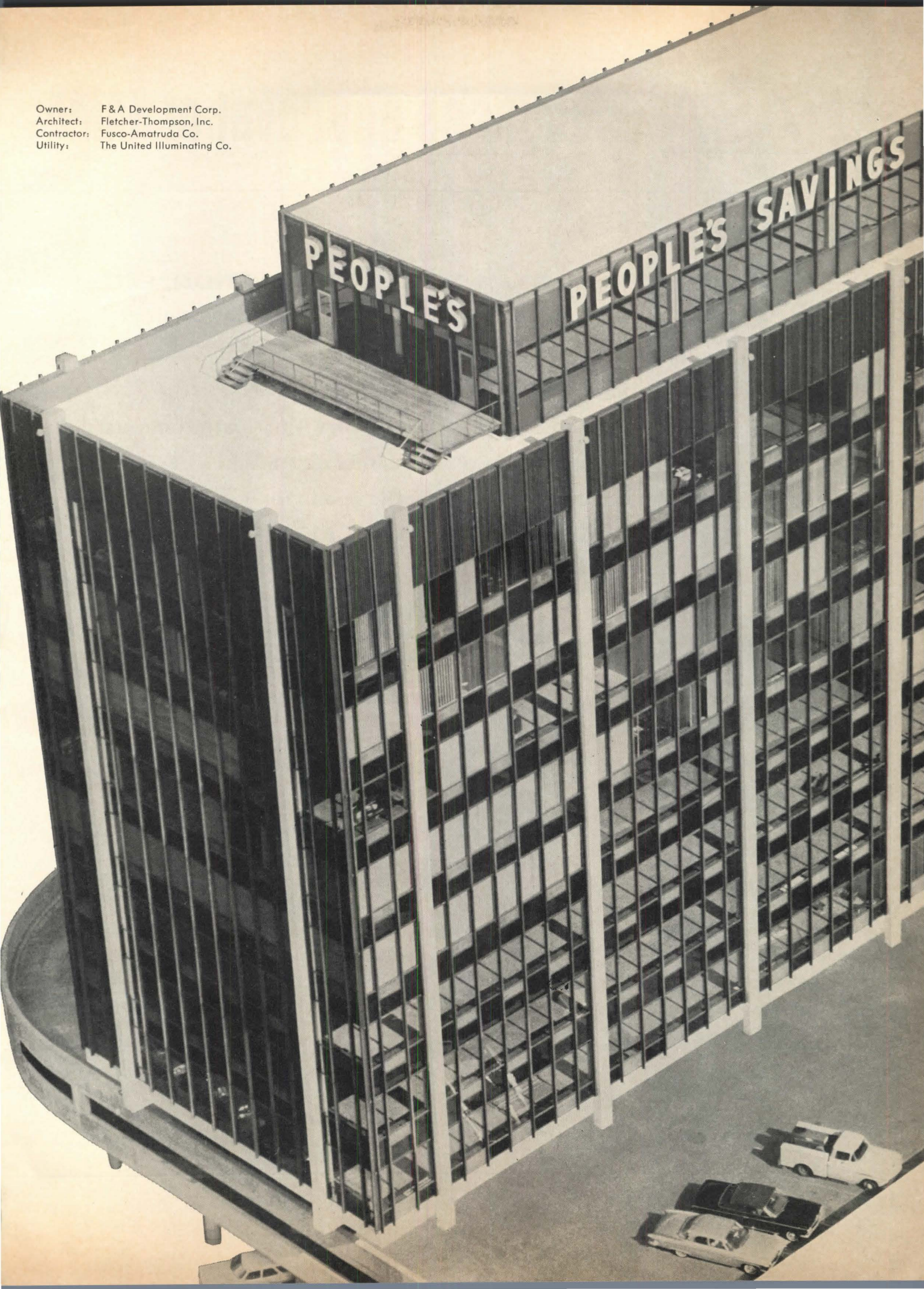
For motels, dormitories, garden apartments, nursing homes and medical centers—and high-rise construction like the People's Savings Bank office building, G-E Zonline heating/cooling systems can almost always make dramatic savings in space and first cost. Call your General Electric Zonline Air Conditioning Sales Representative for the facts.

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by Frank S. Fitzgerald

Technical Director
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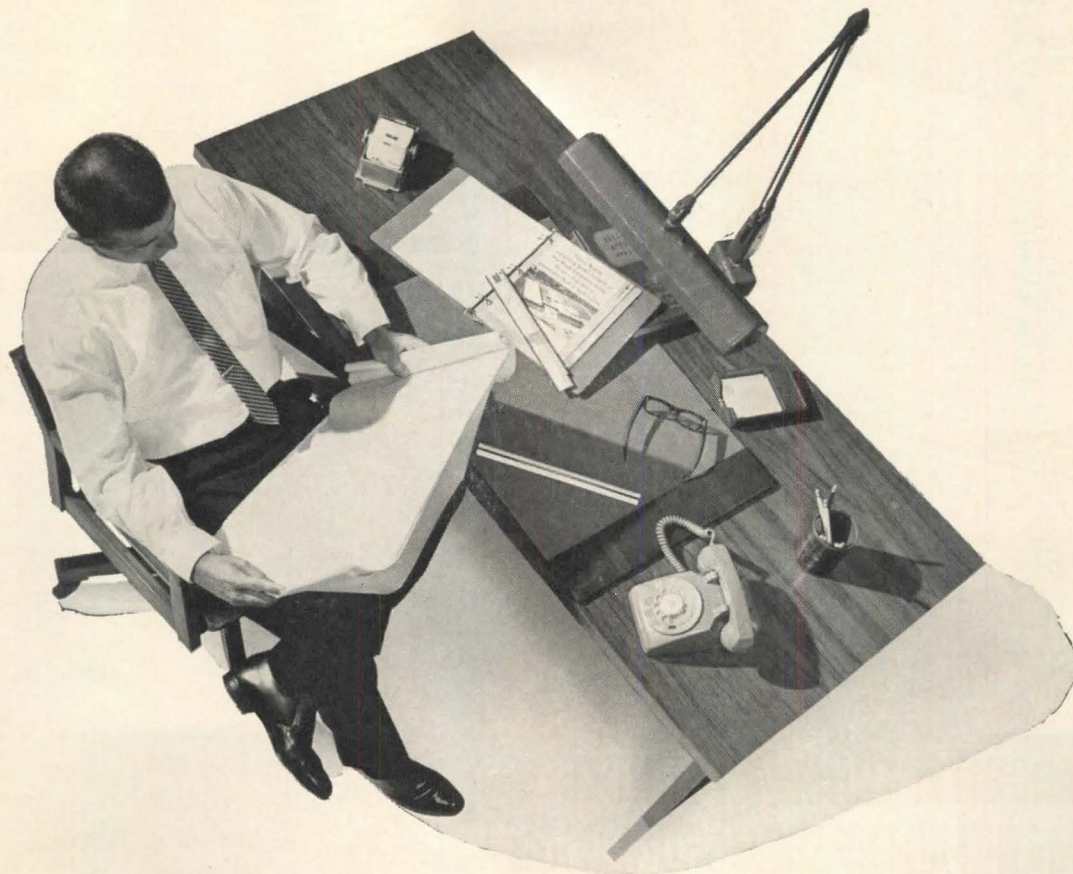
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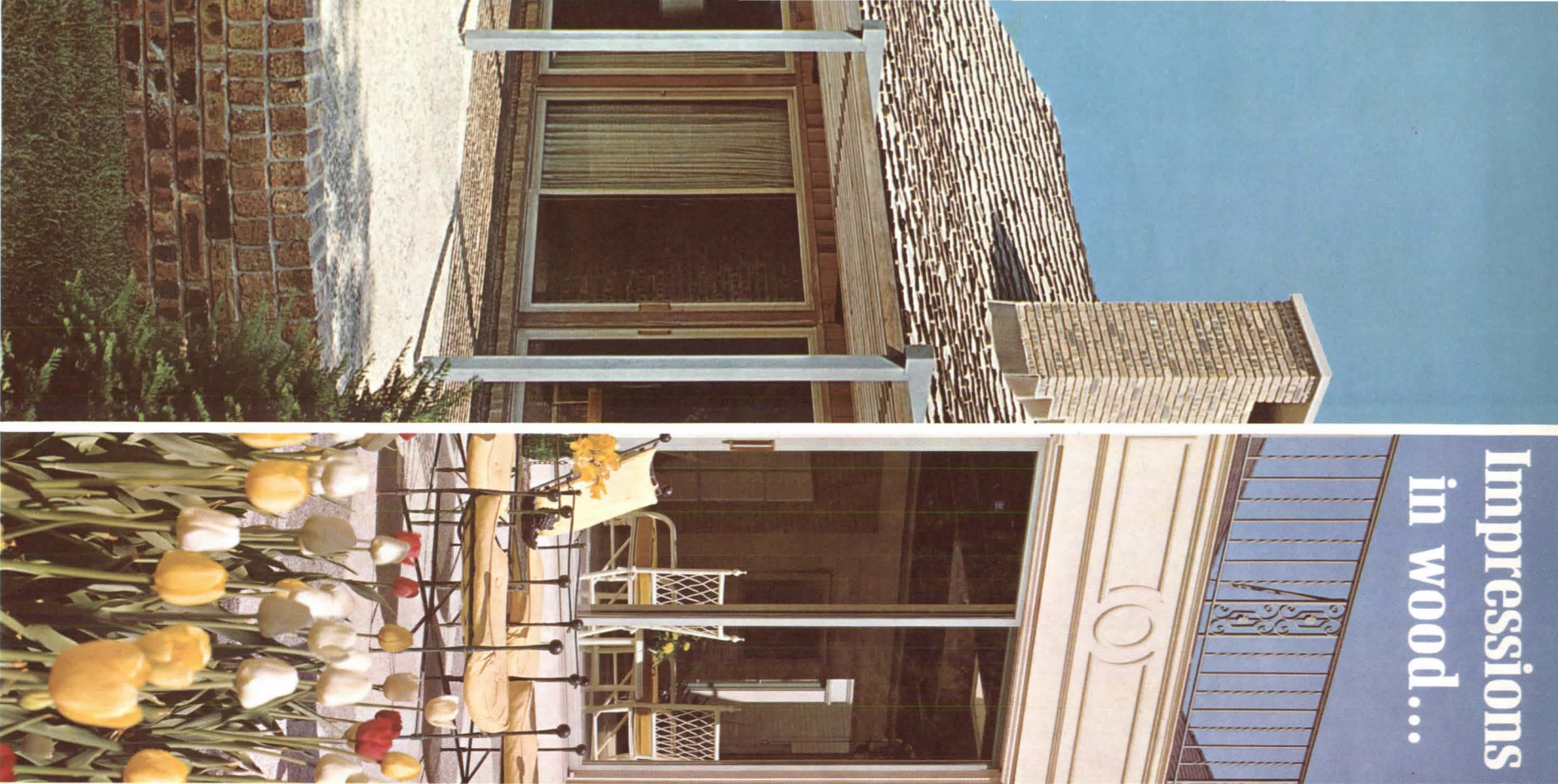


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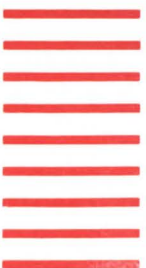
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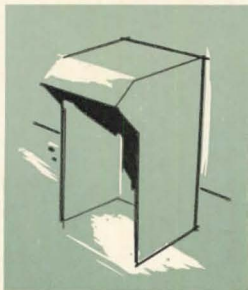
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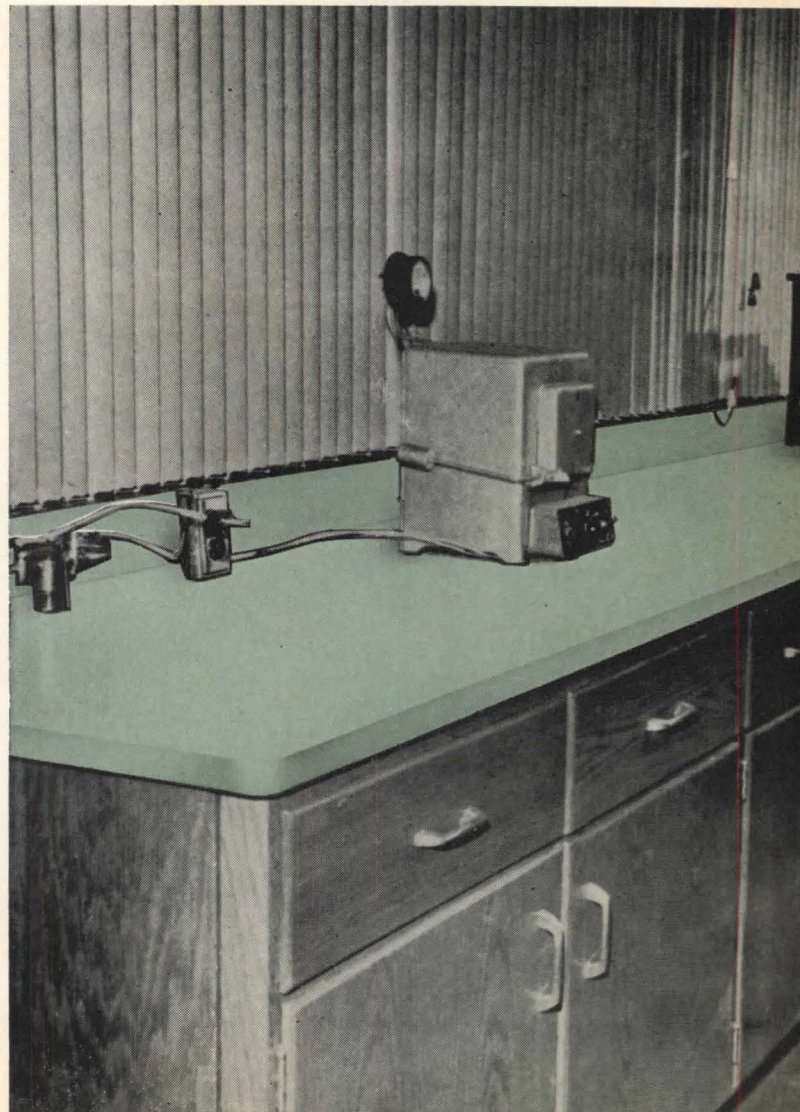
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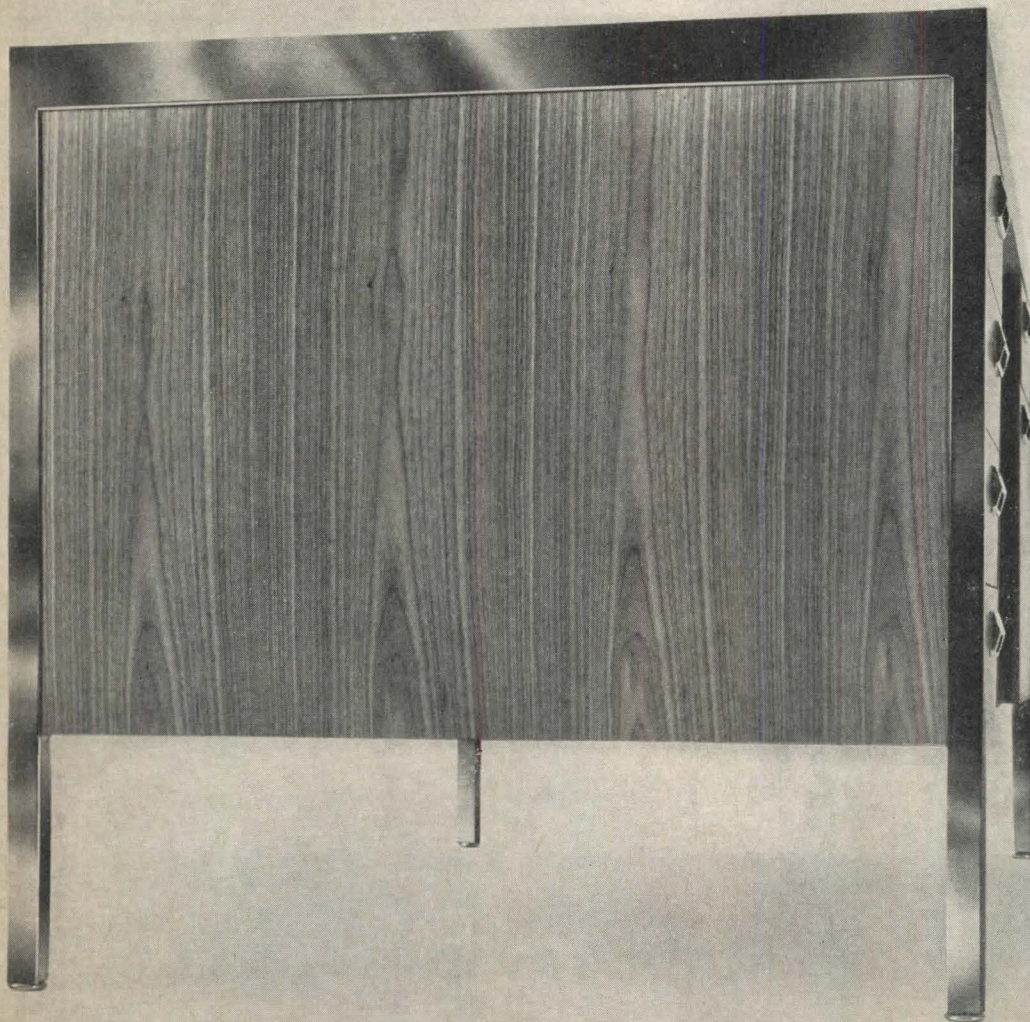
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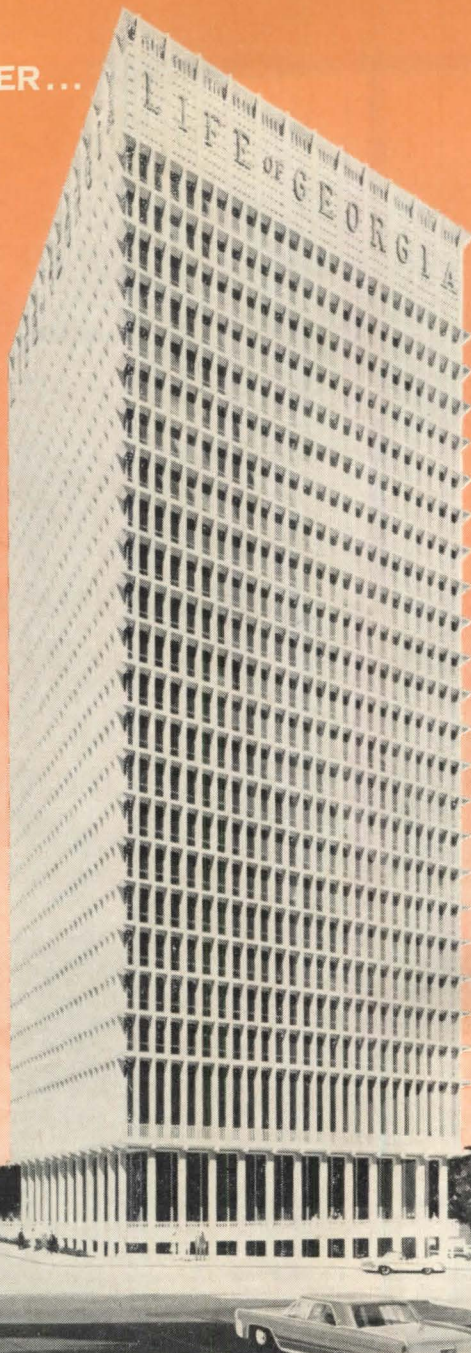
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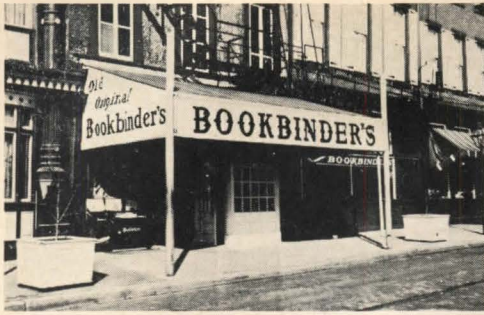
The engineering firm also pointed out that "dependability" was probably the most important reason for recommending copper. In multistory buildings, repairs to the plumbing system are difficult and costly work. ■ Copper eliminates the possibility of rust-caused trouble in future years, and solder connections, tube to fittings, are superior to threaded joints for leak-proof joints.

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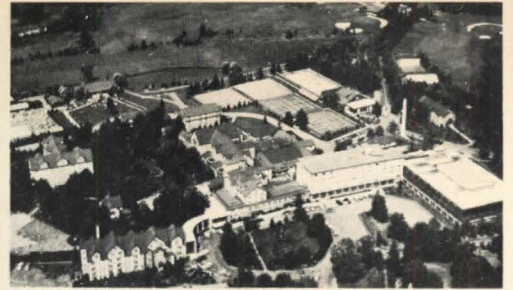
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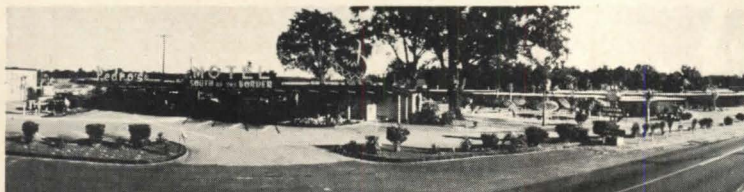
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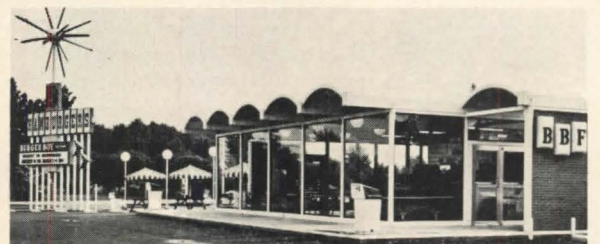
Sheraton-Belvedere Hotel
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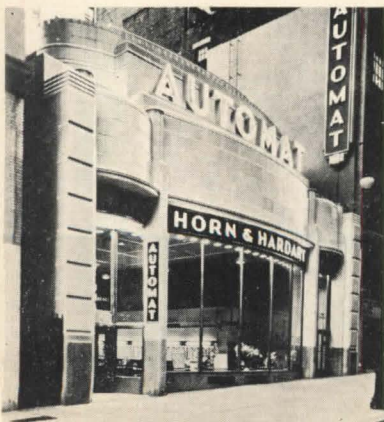
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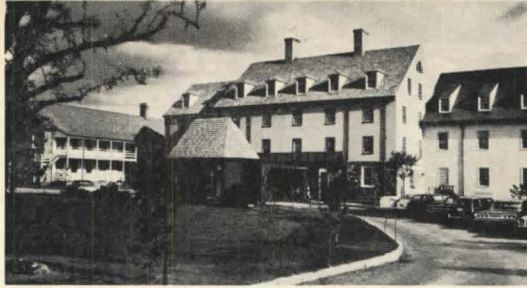
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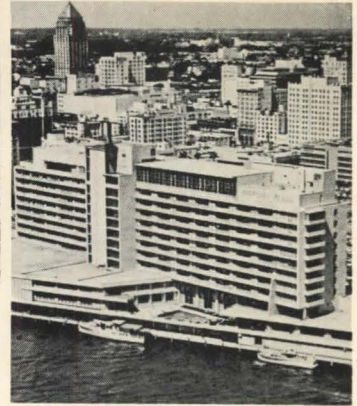
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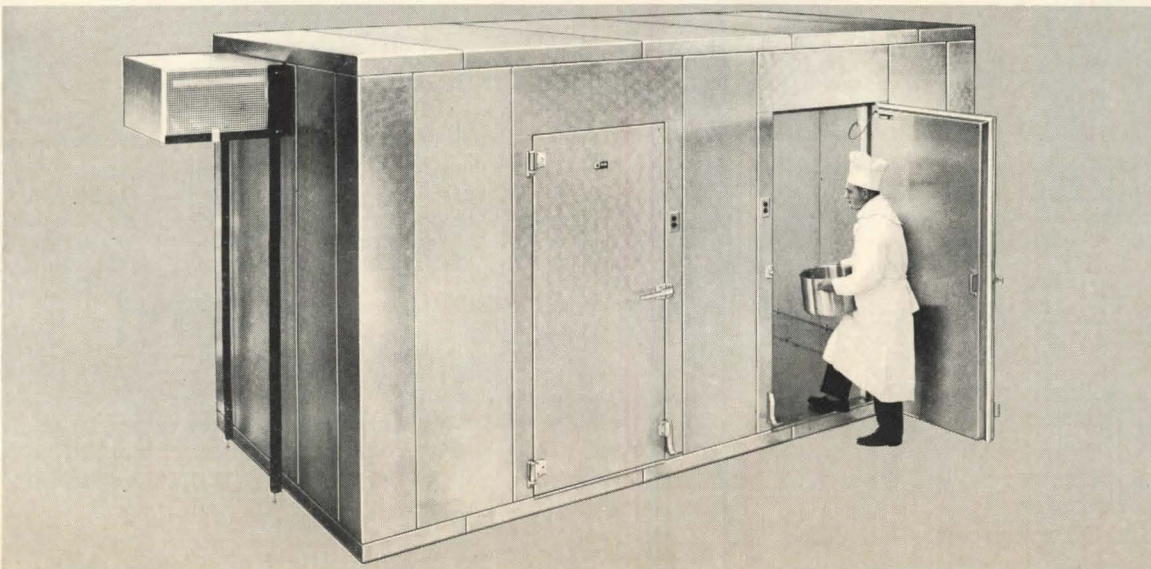
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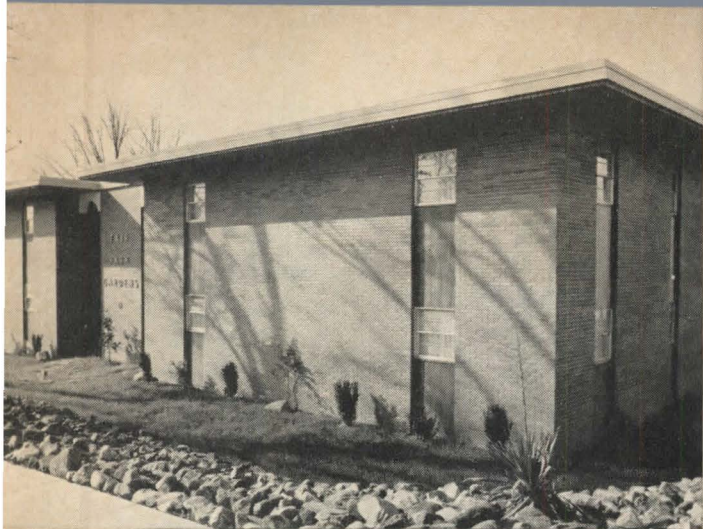
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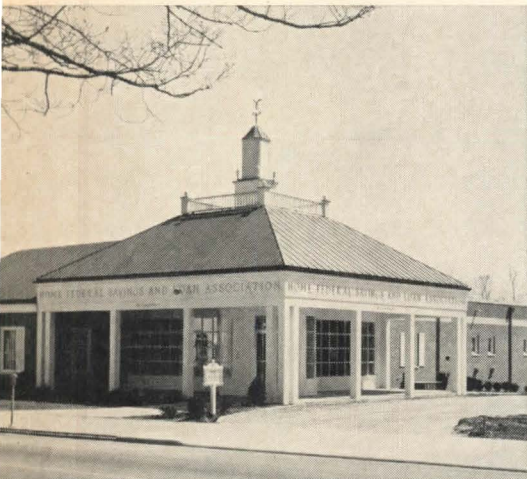




\$24,500 SAVING: 35,400 sq. ft. Fair Park Gardens Apartments, Little Rock, Ark. *Architect:* Cowling and Roark, A.I.A., Little Rock, Ark. *Electrical Engineer:* George Ellefson. *Contractor:* Glenn Henry, Little Rock, Ark.



\$20,000 SAVING: 19,000 sq. ft. Den-Mar Nursing Home, Rockport, Mass. *Architect:* Di Meo Associates, Stoneham, Mass. *Engineer:* Joseph Sestito & Associates, Malden, Mass. *Contractor:* Feldman Construction Co., Rockport, Mass.



\$10,000 SAVING: 5,200 sq. ft. Home Federal Savings and Loan Association of Cincinnati Building, Wilmington, Ohio. *Architect/Engineer:* Richard R. Grant, A.I.A., P.E., Wilmington, Ohio. *Contractor:* A. P. Cleveland and Sons, Wilmington, Ohio.



\$13,700 SAVING: 120,000 sq. ft. Wachovia Bank and Trust Co. Building, Raleigh, N.C. *Architect/Engineer:* A.G. Odell & Associates, Charlotte, N.C. *Contractor:* T. A. Loring Co., Goldsboro, N. C.



\$10,000 SAVING: 18,500 sq. ft. Gloria Dei Lutheran Church, Forestville, Conn. *Architect:* Jeter & Cook, Hartford, Conn. *Engineer:* James S. Minges & Associates. *Contractor:* Wadhams and May Co.



\$63,000 SAVING: 675-student, 60,000 sq. ft. Hampshire High School, Romney, W. Va. *Architect:* Robert J. Bennett, Morgantown, W. Va. *Engineer:* Ballard & Mayfield, Canton, Ohio. *Contractor:* Baker & Coombs, Inc., Morgantown, W. Va.



\$13,000 SAVING: 32,000 sq. ft. stamping plant of McIntosh, Inc., Berne, Ind. *Architect:* C. E. Notzel, Detroit, Mich. *Heating Engineer:* Berne Electric Co., Berne, Ind. *Contractor:* David Poor Construction Company, Warsaw, Ind.

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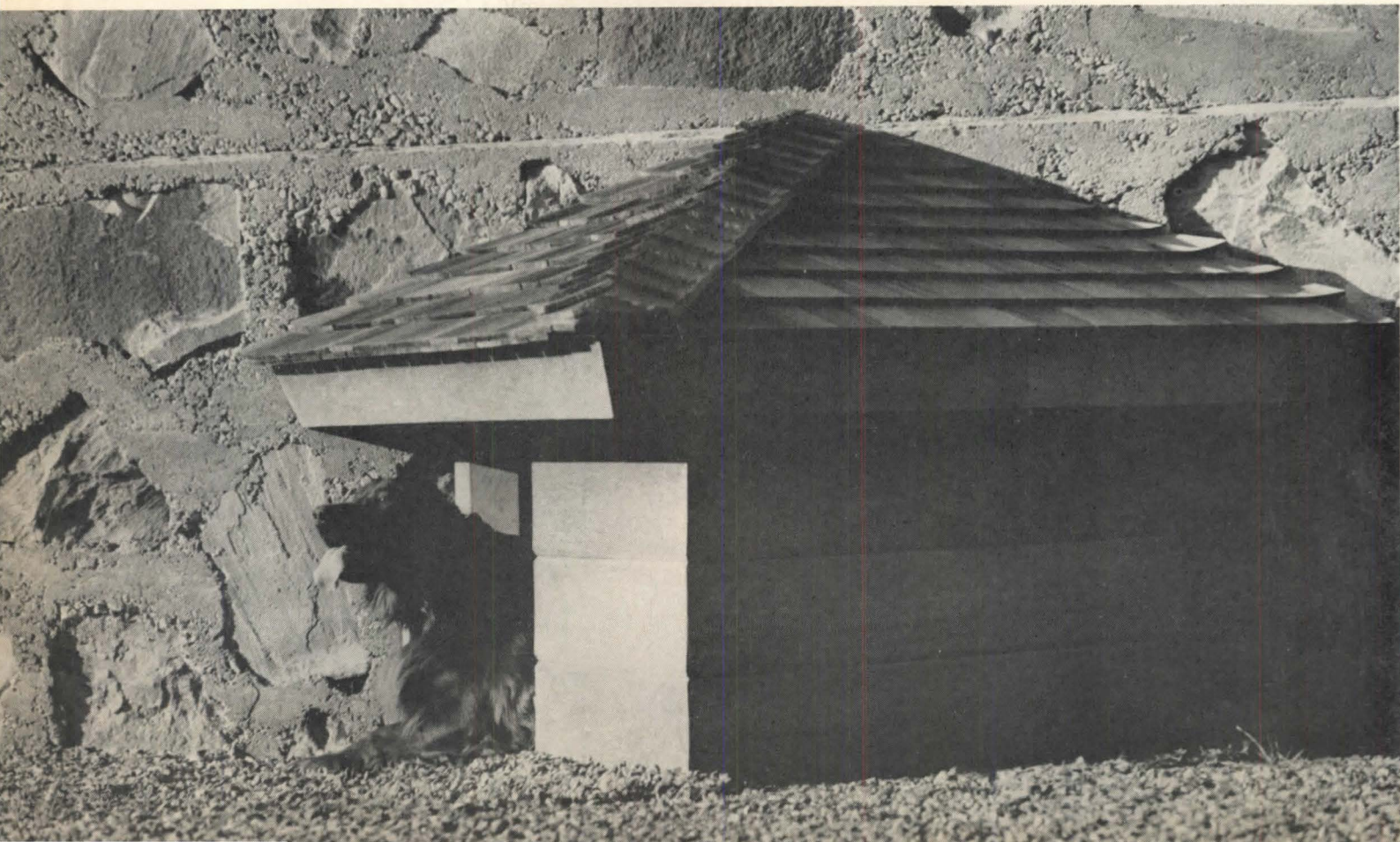
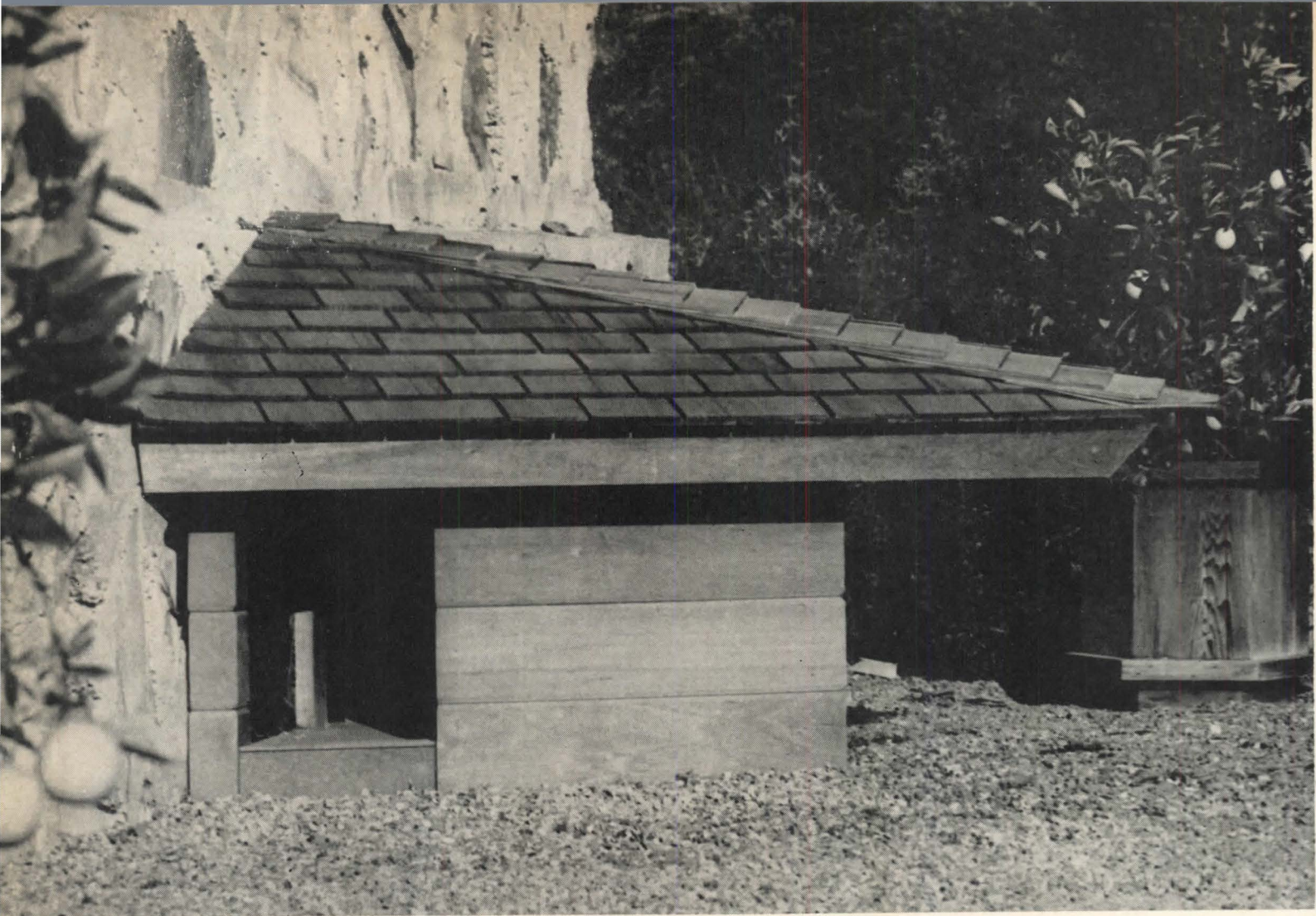
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FRANCIS BACON



EDITORIAL

An architectural problem could be defined as simply the task of designing a building desired by a client. This I discussed previously in connection with that by-now famous question raised by P/A Design Awards juries: are houses a valid architectural problem. Since this issue of P/A is devoted to housing (and houses), I would like to approach that same subject from a different point of view. Assuming that an architectural problem is defined as the search for a solution to the way man lives, are houses a valid architectural problem?

The difficulty of this question is that no satisfactory answer can be given unless one really knows what is the correct, meaningful, desirable, happy—or whatever other qualities one seeks—way of life wanted by the people. Is, for instance, the “American way of life” that hack writers and speakers shout so much about the same for a wasp suburbanite as for a Southern Negro or a Harlem Puerto Rican?

The U.S. is that famous melting pot that never quite melts. The subduing of national traits is quickly replaced by economic stratification with all the concomitant differences in living habits, social ideals, status imagery, and other patterns that evolve inevitably. Nor do migrations ever cease, either within the borders or from abroad. The influx of Spanish-speaking Puerto Ricans and of English-speaking Southern Negroes are equally important to the present evolution of so many of our larger cities.

Architects inevitably tend to think of solutions in formal terms. Justifications for the shape of things usually follow instead of preceding the original form concept. One therefore suspects that much of the present clamour for cluster-housing is caused not so much by the worry about the growing land shortage in the more dense urban conglomerations, or a serious analysis of what is a preferred way of life, but by the desire to have an opportunity for a massive architectural expression that is possible in a cluster-formation and not possible when units are free-standing.

No doubt from an *aesthetic* point of view, an environment consisting of densely urbanized patches surrounded by virgin territory is more appealing than the suburban sprawl, but are we sure that this is what is sought by the public at large? Are we by now so imbued with the Mediterranean tradition of dense, communal living, and the patriarchal system, that one can assume a universal desire for social intimacy and less need for individual privacy, even if that privacy is illusory? Or, on the other hand, are we completely Anglo-Saxonized by the minority whose language we all eventually speak that we simply must have our little castles where we can feel stand-offish and wiggle our fingers at the alien world a few feet away?

It is answers to these sorts of questions that will determine in the end what types of habitations we shall have. Ululations of architects, or architectural philosophers, or architectural historians, are cries unlikely to be heeded by those who still *can* make a choice where they want to live and how they want to live. And it is this choice that will determine whether individual houses are, or are not, a solution to the way of life and therefore whether they are, or are not, a valid architectural problem. ■

Jan C Rowan

HOUSES AND HOUSING

The May issue has traditionally concentrated on the custom-designed house. However, this year, the scope of the issue has been enlarged to include some broader aspects of *housing*, some of which have been considered beyond the pale of architecture: the mobile-home industry, the developer house, housing the poor, and even the construction business itself. The subjects included in the issue reflect a growing recognition on the part of the architect that he cannot retreat into the province of the special or the custom-designed, but must take part in shaping a housing industry that is shaping so much of the environment without him.

Several factors are forcing the architect to a broader commitment: the War on Poverty has again focused attention on substandard housing conditions, the campaign on old age has produced wholesale numbers of retired citizens with special social problems and special housing requirements, and, finally, the war on ugliness

has brought about the realization that the responsibility of the architect may be to the "mass-produced" rather than to the "custom-tailored."

These pressures are reflected in the architects' impatience with the "professional" practice of sitting back and waiting for the client to come courting; and in a desire to take a more active role in the community. One architect joins a developer as partner, and "captive designer"; two *solicit* a job in migrant-worker housing; and a group of ex-students from Yale are hustling to become entrepreneurs and builders as well as "architects."

The gap between the architect and the general housing market is legendary: the architect is usually pictured as sailing off on some grandiose Corbusian spatial scheme that fails to take into consideration what it feels like to live in an architectural monument. The average American homeowner appears bogged down in thinking of architecture in terms of fashionable components, in terms of "things": bay windows, peaked or flat roofs, patio or porch, Early American or Spanish Colonial, sink or mop closet, etc. The developer is a villain willing to build only what "will sell and has sold," and unwilling to think in any other real-estate terms than those of the regular subdivision lot. The result is a rather complete lack of communication that can lead to a quasi-serious publication of current popular housing terms (see "Glossary of Real Estate and Home Builders' Terms").

The situation is not completely hopeless. The major articles in this issue illustrate that, in some areas at least, the architect has expanded his role from the limits of "aesthetics and the single building," and is taking an active part in shaping the environment, coping with both practical consumer needs on the one hand and the requirements of architecture on the other. The result does not seem to be a limitation on his formal imagination, but rather an expansion of data coming from the environment that can feed that imagination.

At the Sea Ranch development on the West Coast, for example, the architecture and planning are molded from the characteristics of a particular landscape and climate, and makes the resident more aware of his surroundings than the formalized, regimented, and standardized parklike suburbia could ever do. To the architects concerned with migrant-worker housing, the problem of shelter itself is secondary to the problem of creating a network of community services that will improve the general living conditions of the group. For their housing, they have borrowed a product developed by industry (photo, facing page).

While it may be discouraging to find the students and faculty at the University of Minnesota turning a mobile-home project into a 2000 A.D. cosmos of plug-in architecture (unexamined for economic or social feasibility now or in the future), it is encouraging to discover one practicing architect in the business of *manufacturing* and designing mobile homes—coping with more tangible problems in the low-cost housing field. He feels that, without any doubt, the industrially produced home falls within the domain of the field of architecture.—MD



GLOSSARY OF REAL ESTATE AND HOME BUILDERS TERMS

A brief guide to the abstruse lexicon employed by our home builders, developers, and real estate agents in vending their wares to the American public. Terms and quotes are taken from newspapers in San Francisco, Los Angeles, Washington, D. C., Miami, Chicago, New York, and Houston. — JTB, Jr

ancestral home: A builder house in the upper-middle-class price range on half an acre or more.

architect on premises: He works for the builder and can make on-the-spot changes of closet locations.

architectural: When the builder is willing to admit to having a designer: "Each apartment is a functionally perfect architectural unit" (Miami).



bathroom: One of the three most important rooms in a house in terms of advertising mention; others are kitchen and entry. Most important item in bath is the "vanette" or "vanitory," which must be mica if not marble.

bi-level: Garage and living areas usually on grade with bedrooms reached up a few steps: "New bi-level on a nice level fenced lot" (Washington).

brick: A prestigious material usually used in conjunction with another: "Brick Cape Cod," "Brick and alum. siding English Tudor home" (Washington).

bouffant stairway: A curving one (New York).

cathedral ceiling: Early home-builders' term; beams exposed to ceiling peak, usually with composition board or plaster between.

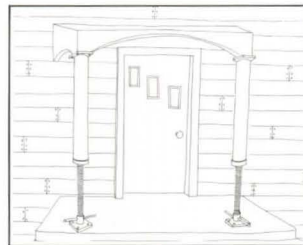


center hall: Attribute of Colonial now finding favor with other brands; there is a crossbreeding among types, which has produced rather exotic hybrids.

choice: One may take his pick of façades to paste on stock plans: "Choice of six beautiful fronts on one fabulous floor plan" (Houston). Also, **choice locations:** There are no others, of course: "Choice locations close to all schools, shopping, houses of worship and freeways" (Los Angeles).

Colonial: Usually two stories, with the requisite columns

either flat on either side of the entrance or expressing a portico or porch; amenable to variation as in semi-Colonial, cul-de-sac Colonial, Dutch Colonial, Colonial ranch, etc.



contemporary: More prevalent in the West, where patios, atriums, broken roof lines are used; more traditional areas push contemporary Colonials, contemporary ranches, contemporary bungalows (believe it or not).

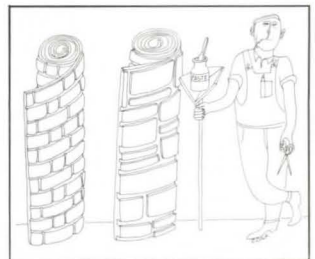
custom: One may select units of various sizes and varieties from the builder's collection: "Completely customize your

home by selecting from an extensive list of custom features . . . often at no extra cost" (Los Angeles).

decorator: A cachet term for finishes and appliances; "decorator tile entry and wall-paper" (Los Angeles).

dishwasher and disposal: The two absolute necessities for any speculative house or apartment.

Early American: Where one cannot see the house for the wood and wrought iron and (in "ancestral homes") brass. The carriage lantern on the front porch is obligatory, as is the mass-produced gold eagle over the door.



elevations: Also known as "fronts": "Several elevations available" (Houston).

entry: The front hall, another of the three most important areas of the house: "Grand Entry Foyer," "True Center Hall Reception Foyer With Twin Guest Closets" (New York).

estate-sized: More than a quarter acre, also "small estate"; more miniscule site is the "estatelet"; see **junior executive**.

exciting: The latest wrinkle: "An exciting new furnished model home in Polynesian styling—Tahitian Sunset" (Los Angeles).

fireplace: Enjoying a renaissance as a necessary sales item; "Cathedral-ceiling and wall-length fireplace" (Washington).



floor plan: What goes on behind the elevation; includes such delights as "Master Suite Royal with Private Bath, Antoinette Boudoir-Sitting Room (Doubles as Fifth Bedroom)" (New York).

formal: Usually used in conjunction with dining room; indicates that there is a special room set aside for eating.

fronts: See elevations.

FHA: Source of all good things: "New FHA 'Cold War' Vet Terms" (Los Angeles).

grand: Interchangeable with fabulous, unique, once-in-a-lifetime, sweetheart, prestige, charming, beautiful, elegant, supreme, etc., etc.

handyman's special: Largely unfinished inside; one can say goodbye to his next two vacations.

junior executive's special: Tract house on an estatlet that is all client can afford; as soon as he makes Sales Manager, he will be out of here and into Fairfield County like a shot.

kitchen: The third of the most important areas of the house: "Mica kitchens with glow ceilings and breakfast bar" (Miami). Attitude is shown in "Rec. rm. for Dad, dish washer and disposal for Mom" (Washington).

master planned: They did not take down all the trees: "Master planned by the greatest environmental scientists and artists of our time" (Los Angeles).

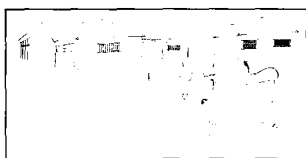
mica: Substitute name for famous surfacing material when others are used; housewife translates immediately.

modern: Toned down contemporary. Always starts not from design style but from up-to-dateness of kitchen and bathroom equipment.

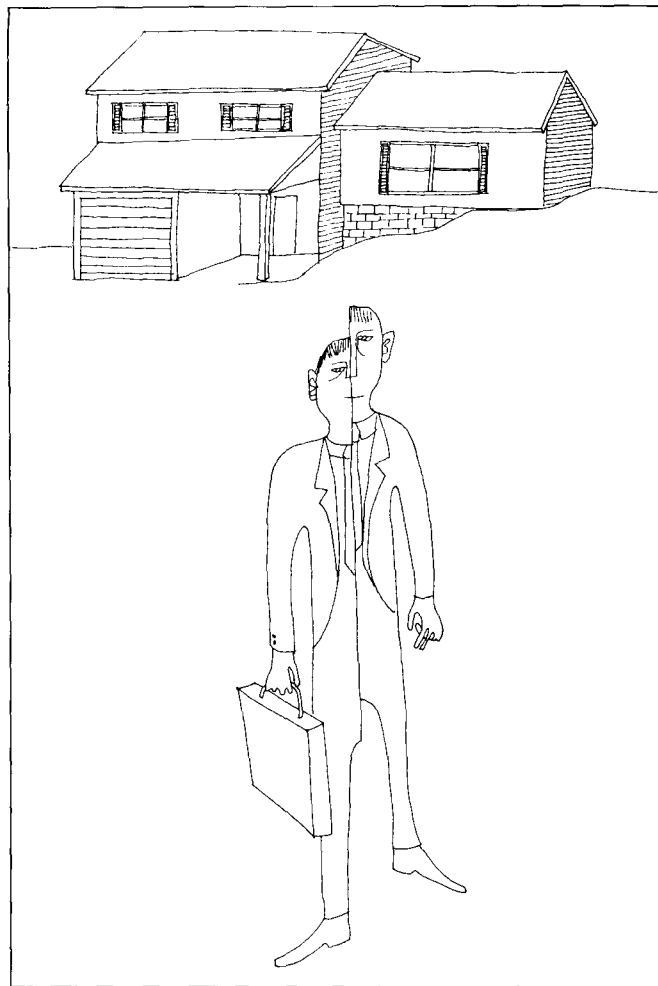
Mr. & Mrs. Medicine Cabinets: Two-in-one bathroom.

optional: It is going to cost you: "optional carporte [sic]" (Miami).

picture: Has gone out of style in referring to windows, presumably after it came to symbolize the worst of tract housing; still used for other apertures; "picture view glass doors" (Miami).



raised ranch: A ranch with aspirations to other levels; when it becomes a splanchn, it has made it.



rambler: One-level house: "Rambling rambler" (Washington).

ranch: One-level house.

recreation room: Also known as family room, rumpus room, evidently becoming property of younger members of family: "Teen Haven, a large fun rec. rm." (Washington).

resort atmosphere: Provided in development of smaller houses or town houses around a clubhouse, swimming pool, golf course, etc., for the "over '40s family" (Los Angeles): "Ultimate in relaxed adult living, with no children under 18 and one spouse 45 years or older" (San Francisco).

sculptured: Usually, use of dimensioned wall or ceiling tile: "Sculptured living room ceiling" (New York).

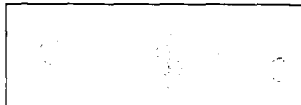
service porch: The back porch.

semi-: Indicates variation on anything — semi-Colonial, semi-split, etc.

splanchn: A ranch with split-level tendencies, or vice versa.

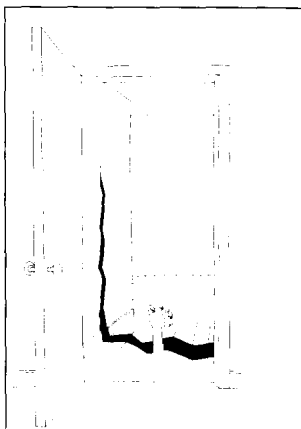
split-level: Usually on two levels, but sometimes with three in which case, a tri-level). In latter case, garage, family room, and work area are frequently lowest level, living areas on intermediate

level, and sleeping at upper level (usually over the garage). A basement often forms a fourth level.



stagger-split: Even more involved than the above; also, what homeowner does when trying to negotiate to the upper level after suburban cocktail party.

sunken: What makes it all split, splanchn, or stagger; getting to the living room and/or dining room down those steps.



Town Homes: Town houses, a growingly popular form, particularly in the West: "Choose from Town Homes where architectural styles vary from Colonial, English, Contemporary, New Orleans, Spanish, and a host of other designs . . . the Creole, the Nassau, the Bayou, the Morocco, the Granada, the Natchez." (Houston); "Custom design and the intermixing of models creates an exciting individuality of façade" (San Francisco).

traditional: A term that can cover the mating of Castilian and New Orleans with a trace of Colonial (center hall) thrown in; it's all someone's tradition, isn't it?

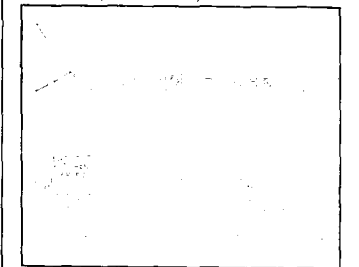
unique: See grand.

undergrounding: Abolition of overhead power-lines à la Lady Bird Johnson; "undergrounding of services" (Miami).

view location: If there is a rise in grade on site, everyone is presupposed to have a view from some window: "Situated on view locations" (Los Angeles).

wall-to-wall, w/w: Practically anything that covers a large area: "W/w brick fire-places" (Washington); "Wall to wall nylon carpeting" (Miami). Carpeting, incidentally, is a prime item of mention in real estate promotion.

wallpaper: A corner, right behind carpeting, ceramic tile, and all-electric appliances: "Wallpaper accents throughout" (Houston).



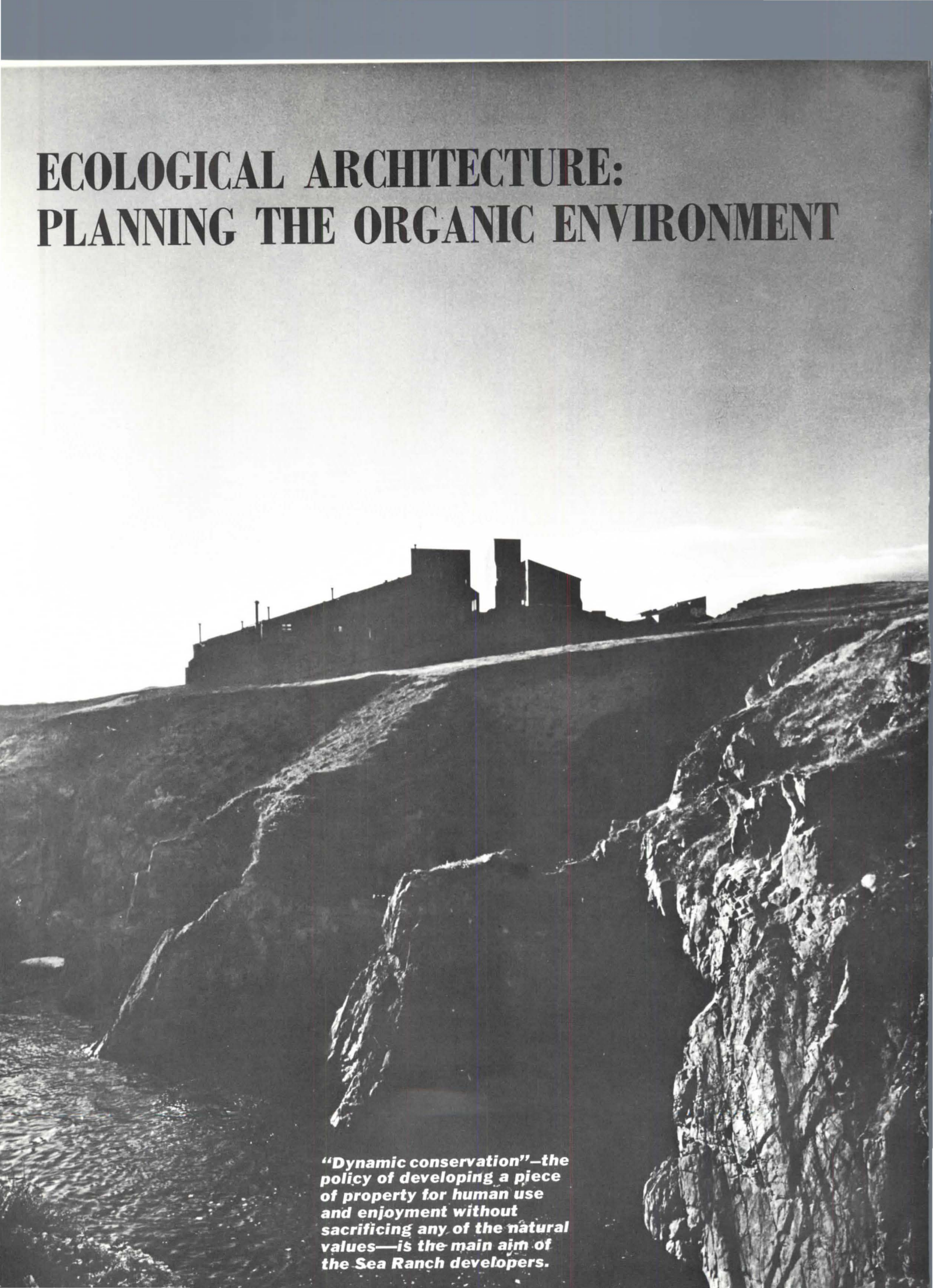
Western: Term used only in the East; "unique Western ranch" (New York).

Williamsburg: The Federal eagle approach again, but on a higher income level, affording wallpaper just like the Governor's palace and Federal spigots in the bathroom.

young: A second-hand house; "young and adorable, Cape Cod, move-in cond." (New York).

your own: Obviously something that will eventually belong to you; also used now in connection with both rental and condominium apartments: "Your own individual screened Florida room [balcony]" (Miami).

ECOLOGICAL ARCHITECTURE: PLANNING THE ORGANIC ENVIRONMENT



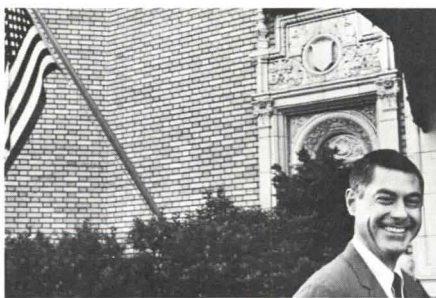
“Dynamic conservation”—the policy of developing a piece of property for human use and enjoyment without sacrificing any of the natural values—is the main aim of the Sea Ranch developers.

From the basic premise of preserving as much of the natural environment as possible, a West Coast developer has sparked an ecological approach to architecture and planning that has resulted in "organic," highly regional structures, a long-range commitment to land management, and a community of "second homes" that captures the illusive quality of natural beauty. The philosophy of design was a growing one, evolving slowly from deliberations on the part of the client's architectural director, Al Boeke; the landscape architects, Lawrence Halprin & Associates; the architects, Joseph Esherick & Associates, and Moore, Lyndon, Turnbull & Whitaker. Between them, they have evolved a community that requires a re-adjustment of suburban living habits, of suburban real-estate techniques, and introduces a broader concept of land ownership, use and stewardship. The story of Sea Ranch is one of a slow education between client, geologist, architect, real estate salesman, and the public.—MD

The site, which is about three-and-a-half hours traveling time from San Francisco, is a spectacular stretch of sea coast—14 miles long, with a flat field rising to low hills crowned by thick forests.

It was not what Al Boeke, architect and Vice-President of Planning for Oceanic Properties (a division of Castle & Cooke) had been looking for: It was not land of the type of urban development characteristic of the company. But it was a splendid site for a "second-home" vacation community; it could be a long-term, real-estate investment; and it could be developed *properly*. Moreover, it was a beautiful piece of property that was going begging. The state, which had thought of buying it for a park, had withdrawn the offer. Zoning laws permitted anything and everything in the area, and, if left to the typical West Coast developer, it would be chopped up in short order. The challenge was to preserve the character of the land while putting a relatively dense development on it; building was to enhance the property, not destroy it.

For Boeke, the position of corporate architect is the only way of accomplishing good planning of any scale to make an



Al Boeke

impression. "I could work 40 or 50 years as a private architect in L.A. and my work would be swallowed up by the city. . . . If you are not actually a business partner of the 'client,' it is harder to find out the basic facts about the company, what its motives are, how much money it makes, what is really possible. If you're not on the inside, it is more difficult to remotivate the company. What the state of building needs is more Robert Simons, rather than individual architects."

Boeke's role at Sea Ranch is that of design manager rather than architect. After deciding on the purchase of the land, he assembled a team of experts in advertising, public relations, and real estate and law. Lawrence Halprin & Associates were retained as landscape planners; Joseph Esherick & Associates, and Moore, Lyndon, Turnbull & Whitaker followed at a later date to design model houses and a condominium. During the first six to eight months of meetings, the real-estate company tried to anticipate the needs of the area, and the feasibility of the project. An interesting sidelight on the proceedings at this point was the conflict that arose between the real-estate company, which wanted instant recreational facilities, and Oceanic Properties, which felt these were not that essential to the initial development and sale of the land. To a certain extent, it was a conflict in values between a suburban, country-club-oriented sales agency, and a more unconventional nature-oriented developer. The conflict ended with Boeke setting up his own real-estate division that had its own sales force. As it is, the Boeke team itself sometimes has difficulty understanding the more unique aspects of the development; the sale of the conventional lot is more familiar and compatible to them than, say, the more difficult task of introducing the public to the notion of living in a condominium apartment in the middle of a countryside.

The development goal is to provide as much free land as possible. The property was to be purchased over a period of seven years, while developing and selling enough to meet the land payments and at the same time keeping two-thirds of it as open space. This contrasts with the typical development project, which usually plans to meet cost after two years and make a high profit—10 to 25 per cent after taxes. This either pushes plot prices sky high, or, more commonly, the development is reduced in quality, land is bought in small parcels that are subdivided *ad infinitum* to extract the most profit. A large, well-endowed corporation can afford one or two real estate projects, among a portfolio of 10, which can be slow on returns.



In relation to Waipio, a new Hawaiian town, and Hamilton, a new town in San José, Sea Ranch is the "sleeper" of Oceanic Properties.

However, it turned out to be a sleeper in the true sense of the word. At Sea Ranch, Boeke took several real estate risks: Considerable capital was invested in a condominium unit and model homes, and in developing and preserving the natural landscape. The potential buyer was presented with a rather special natural environment, and a few stringent restrictions on exterior design that Boeke insisted on, in spite of considerable timidity on the part of Oceanic's management. Would it sell? Fortunately, the first increment went splendidly. The company expected to sell 100 lots the first year, yet it sold almost that many in eight months. The condominiums went on the market in July 1965; by December of that year, all but two had been sold. The project is well underway, and a new condominium is planned, together with a hotel.

Boeke's success has in large part been due to his choice of planner and architects, Halprin, Esherick, and Moore; their basic understanding of the land and the environment; and Boeke's sensitive direction and balance between the necessities of the market, the personal direction of each architect, and the project's goals.

Boeke functioned as that most necessary mediator between the architect and the businessman. At times he was the educator, at times, the educated. Out of his desire to preserve the quality of the land, he emerged with a project that has several unusual features, some of which may have startled even him. Out of a desire for a dense town-house type of development, he emerged with Moore's exciting condominium structure. Out of the Halprin office came not only a landscaping planning job, but a more profound understanding of the land, a deeper analysis of the ecology than he had originally anticipated. And out of these studies have come an organic approach to planning that is not only aesthetically involved with the landscape, but ecologically involved as well, and demands a long-range commitment to land management.

"If you can learn the history of a land over a hundred years, the knowledge can tell you what processes are at work in the region—both constructive and destructive. From these, you can learn how to use the land, how to plan a development; where to locate buildings, roads and plantings. You do not necessarily have to conform to the processes at work, but at least, if you choose to go against them, you are in a better position to estimate the consequences and the costs."

DICK REYNOLDS, GEOLOGIST FOR
LAWRENCE HALPRIN & ASSOCIATES

Site Planning:

*Lawrence Halprin & Associates,
Landscape Architects.*

Man is usually bumptious enough to presume that he is independent of his environment: that he can control it, air-condition it, heat it, decorate it, and generally bend it to his will. The planning of Sea Ranch was not a landscaping job in the more traditional sense; it was not a matter of decorative design, but of broad environmental planning that used the natural features of the landscape as its base. It is a bare beginning in ecological planning.

The Columbia Encyclopedia's statement on ecology is the following:

"Ecology: Scientific study of plants and animals in relation to their natural environment. Ecology is concerned with such problems as anatomical and physiological adaptations of living things to environmental conditions (e.g., amount of moisture, light, temperature, wind, and kind of soil), interrelations in plant and animal communities, and succession. By succession is meant the series of stages leading to the ultimate establishment of a climax community or climax area. A climax community is mature and relatively stable representing the final stage of development of the existing climatic conditions of a particular region . . . succession is well observed where plant and animal life begin to inhabit land previously bare."

The land at Sea Ranch was not virgin: It had a history of logging, agriculture, and grazing. Hedgerows had been planted in the fields to cut the wind, sheep had eaten their favorite grasses at the edge of the bluffs and contributed their share of erosion; recently, the forest had been so carefully protected against fire, it had

grown into a massive tangle of second growth that choked out the larger trees.

The most salient characteristics of the land, then, were the long cyprus hedgerows and the fields, forest, and a strong wind from the Northwest, and relatively cool climate.

The task of the Halprin office was to introduce heavy population densities to the land, and make it habitable for a summer, resort population. The master plan for 5000 acres called for condominium sites, single-family house lots, a restaurant, recreation area, airport, golf course, village center and a hotel.

Given the requirements of preserving the quality of the land and coping with the elements, there were only two or three alternative locations to development of the land: in the woods, crotches of the hills, or along the cyprus hedgerows. However, by taking into account the climatic factors, the sun, wind, and topography, the architecture could be fashioned to provide its own protection on the more exposed portions of the land; the Halprin studies contributed heavily to the devel-

opment of the condominium and housing units.

From the point of view of long-range, real-estate values, it was undesirable to string the development along the coastline, hogging the oceanfront. Rather than paralleling the shoreline, the hedgerows provided an excellent backbone for a perpendicular development. Here, housing could be more or less tucked into the natural framework, and care was taken not to mar the unforested slopes of the lower hillside by housing or severe road cuts. The tendency to begin the development on the low-lying terrace still reflects, however, a remnant of the developer's habit of rushing to exploit the shorefront. The forest area, which lies above, was not considered seriously in the initial phases of the development, but, as it turns out, this might have been an ideal place to start: Dense housing could be placed in the woods, where it is protected from the elements, and from sight, and the exposed terrace could be left in a natural state, providing excellent views. Presumably, forest property would not be as attractive as ocean sites, but, as it is, the forest lots have sold remarkably well. They afford greater privacy, and some have breath-taking vistas, far better than those available to some shore squatters.

Recognizing somewhat belatedly the value of developing the forest property first, Oceanic has decided to place the second condominium in the woods rather than on the ocean terrace as it was originally planned.

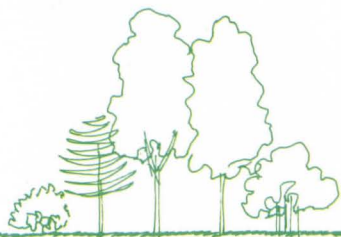
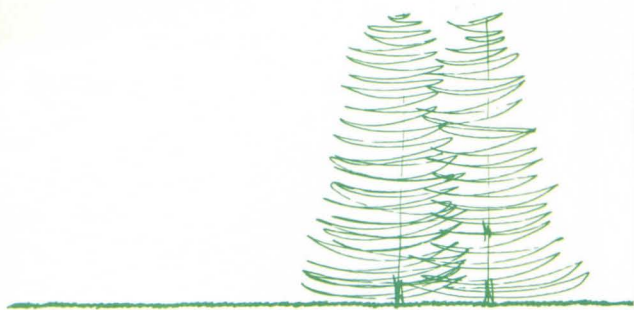
During the planning stage, Dick Reynolds undertook a series of soil tests. These had not been requested by the client, but they did lead to several interesting refinements in the general plan and have been the basis for agricultural and planting programs.

The approach of the Halprin office has led to system of land planning that implies a long-range involvement with the property. "You cannot just create a situation and leave it," says Reynolds. "You can plan it so that it requires the least amount of care, but it still needs continuing attention. To preserve the hedgerows, for instance, additional plantings are needed; to preserve the open fields from brush and erosion, mowing, grazing, or burning needs to be done at regular intervals. The sheep grazing needs to be programmed throughout the area; the forest needs regular clearing. The cluster system and open-space plan permits easier care of the land, but it needs long-term attention." In recognition of this, Oceanic has recently decided to employ a range manager.

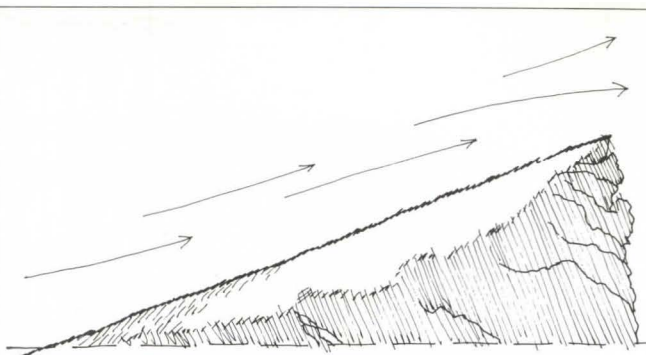
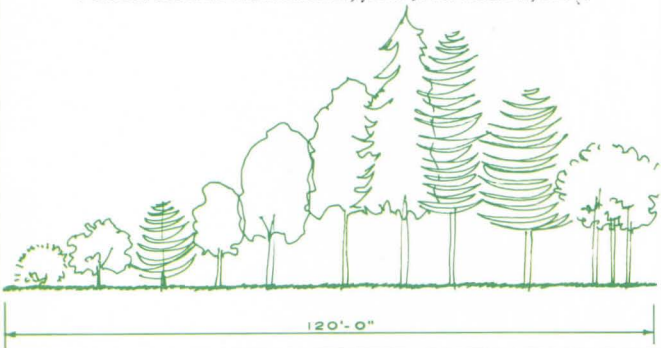


Typical development down coast from Sea Ranch.





Vertical Isotach distributions, from J. M. Caborn, 1957.



Design Conclusions

Behavior of wind over obstacles was studied to determine most suitable angle of roofs—if housing were placed to windward side of hedgerows and had to provide its own protection. Just as a rock (top) carries wind up and over a slanted surface to provide a protected area to its right, so the houses (above) could be shaped to guide the patterns of the wind. The Esherick houses were subjected to wind-tunnel studies, whose results influenced the final designs. Sod roofs were added on some of the structures to further integrate house and landscape.



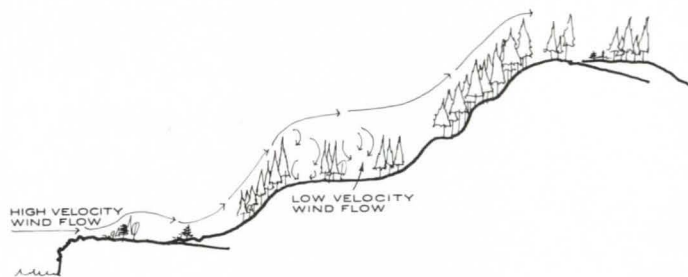
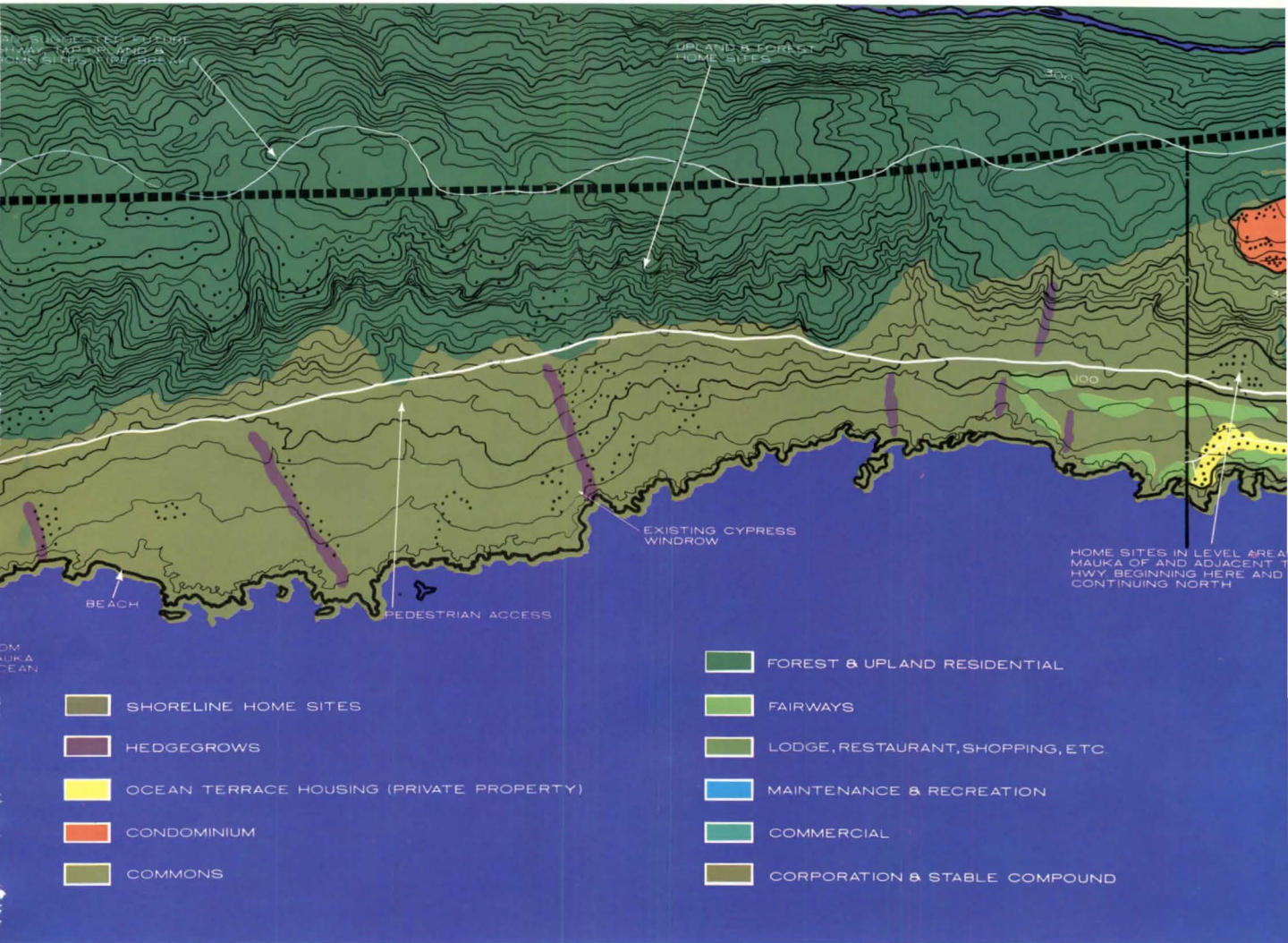


Soil Studies (below)

In the ocean terrace area, Dick Reynolds made a series of soil studies analyzing the location of different types, their depth, texture, permeability, drainage, natural fertility, and erosion characteristics and water capacity. In addition, surveys were made of the grassland vegetation type, and from these were drawn up plans for recommended usage, in architectural planning, planting, and grazing. The studies have been helpful in identifying very local characteristics of the area that modify and refine the master plan. For instance, one area slated for single-family housing was found to have very poor drainage in the winter, when it becomes a bog. Two possibilities now present themselves when this area comes up for development: The area can be filled in, or a condominium-type of structure on

piles would be feasible and would also preserve the extraordinarily rich vegetation in this particular locale. The soils also revealed a highly erodable soil patch adjacent to the area slated for the village development at the very extreme north end of the property. The erosion area is unsuitable for agriculture or planting but would be ideal for pavement cover. The village may well be shifted in the final design. "You never know what will be the precise use of a soil study," says Reynolds, "but it provides you with an invaluable wealth of information. You are forewarned."

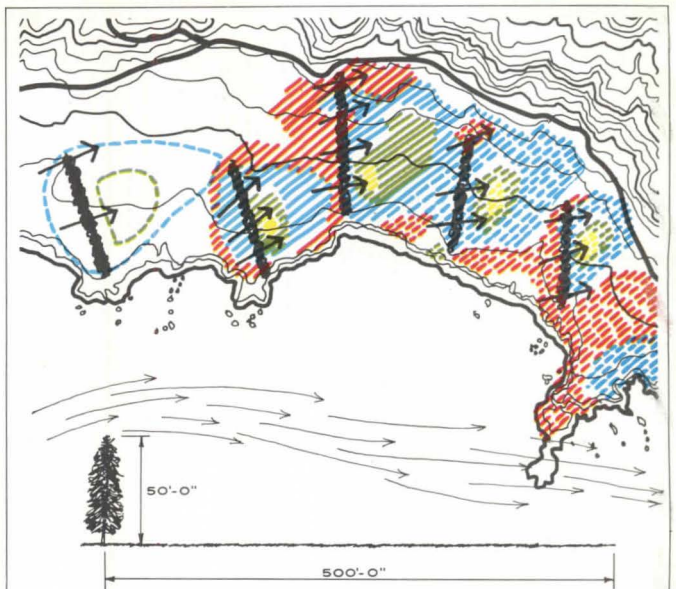
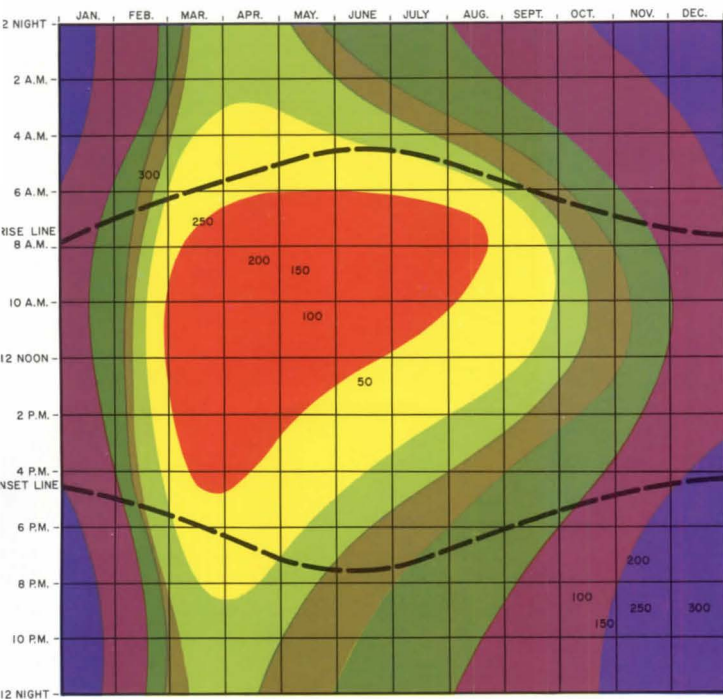




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| | 1. PASTURE, 2. AGRICULTURE W/ CONTOUR PLOWING 3. COMMERCIAL FOREST |
| | 1. AGRICULTURE (W/ WIND PROTECTION IN BAYWOOD SOILS) 2. PASTURE 3. COMMERCIAL FOREST |
| | 1. PASTURE 2. AGRICULTURE W/ WIND PROTECTION 3. COMMERCIAL FOREST |
| | PASTURE |
| | RANGE |
| | 1. COMMERCIAL FOREST 2. RANGE 3. AGRICULTURE W/ IRRIGATION AND FERTILIZATION |

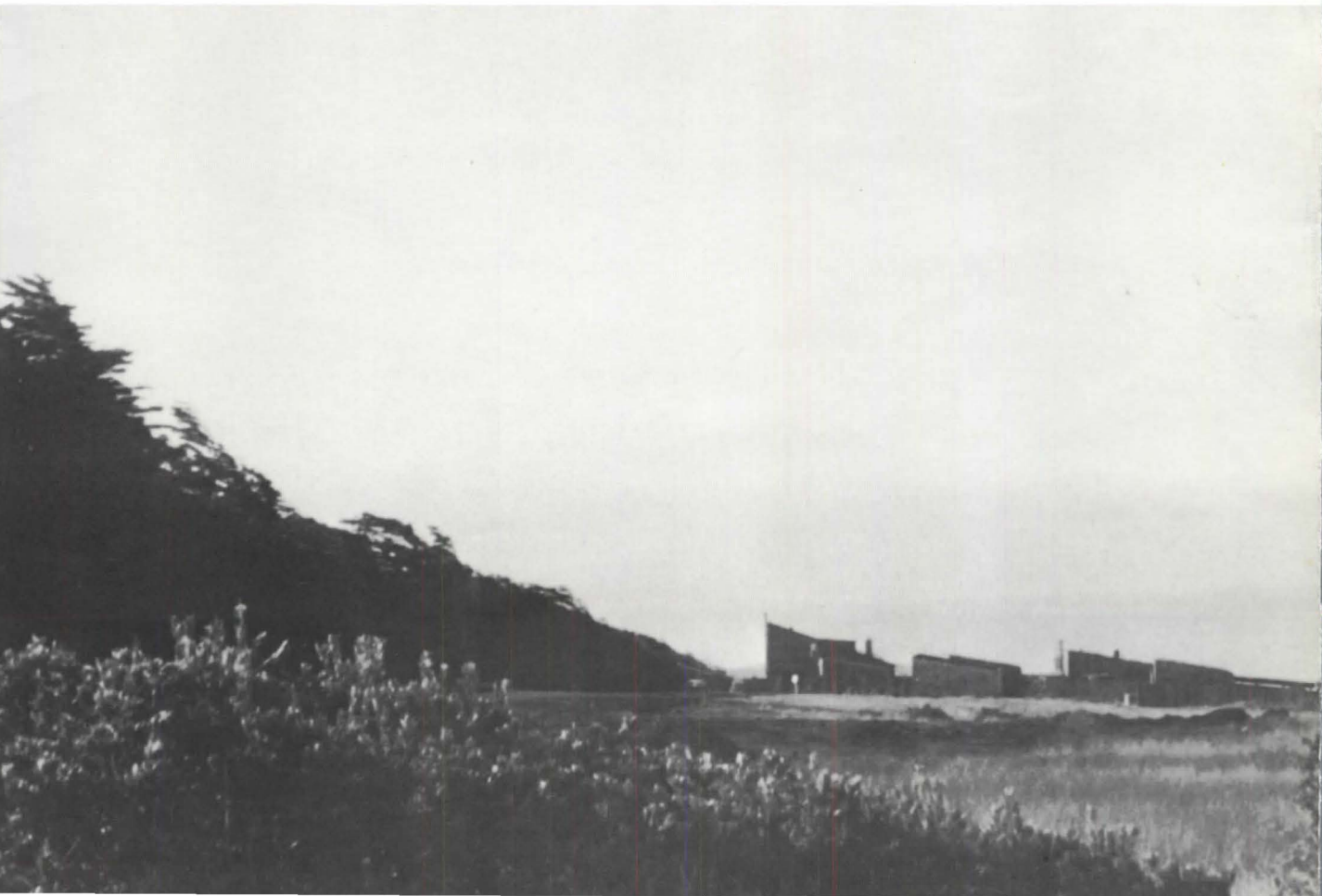
Table of Bioclimatic Needs

This chart shows how human comfort can be achieved at different times of the day and year at the Sea Ranch. Red area indicates that, normally, 50 Btus of radiant heat per hr/per sq ft are needed for human comfort. (This is the equivalent of a person standing in open sunlight in shorts and light sportshirt.) Yellow indicates need for light shirt and trousers; light green—heavy shirt, slacks; olive—sweater, slacks; dark green—windbreaker, trousers; violet—heavy wool suit; blue—light overcoat.



Wind Studies

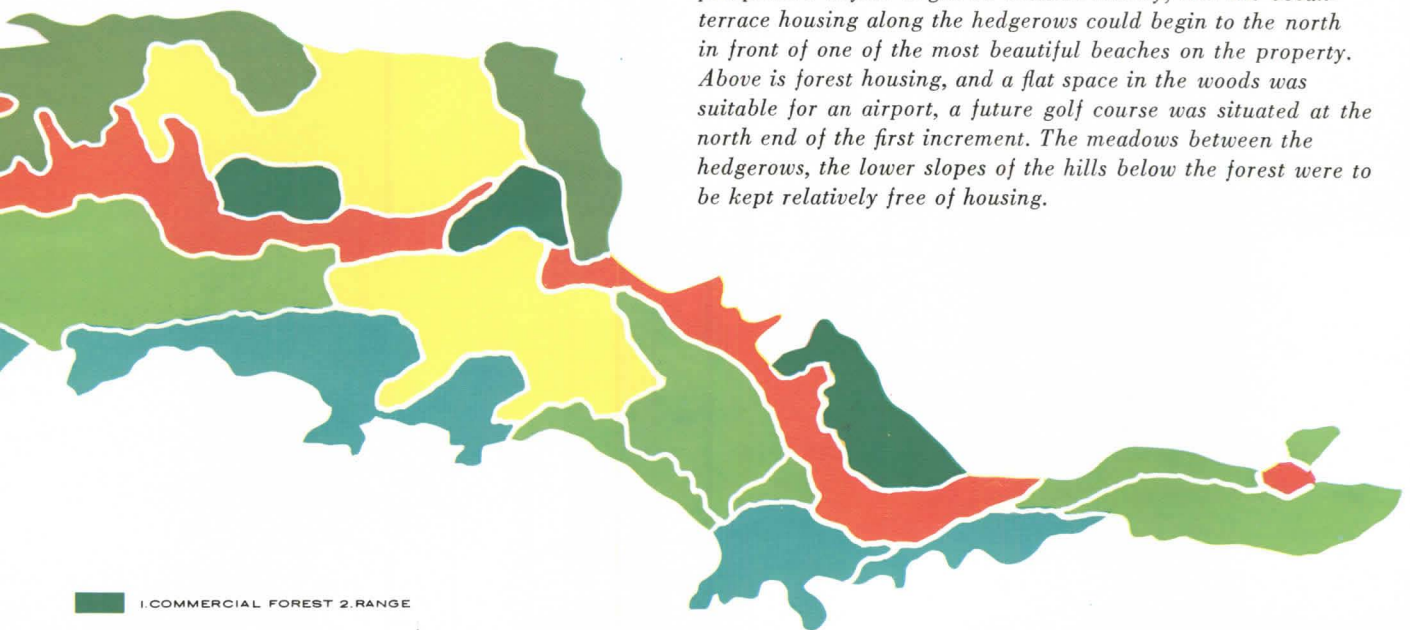
Summer wind-shadow map (above) shows the extent and degree of wind protection afforded by the cypress windbreaks lacing Sea Ranch coast. Green and yellow colors indicate areas where normal wind velocities are reduced approximately 50 per cent or more on leeward sides. Blue areas indicate zones where wind velocities are below normal. A similar map was prepared for the winter wind configurations. Plantings (right) illustrate how hedgerow configurations might be beefed up to form stronger, more gradual barriers against the wind. Existing hedgerows are composed of two rows of trees, which bear the full brunt of wind. By planting low shrubs on windward side, wind is carried up gradually over a natural line of trees.





Master Plan (above)

The development begins at the south end of the property, where the road approaches the shore and the land is most spectacular. Here, the variety in topography permitted the simultaneous development of different kinds of housing and facilities: Rougher terrain southward was suitable for larger house lots; next to them, the open fields with spectacular views were excellent for a close-knit condominium development providing its own protection. A restaurant or hotel to accommodate prospective buyers might be situated nearby, and the ocean-terrace housing along the hedgerows could begin to the north in front of one of the most beautiful beaches on the property. Above is forest housing, and a flat space in the woods was suitable for an airport, a future golf course was situated at the north end of the first increment. The meadows between the hedgerows, the lower slopes of the hills below the forest were to be kept relatively free of housing.



- 1. COMMERCIAL FOREST 2. RANGE
- RECREATION
- STABILIZATION W/DUNE GRASS

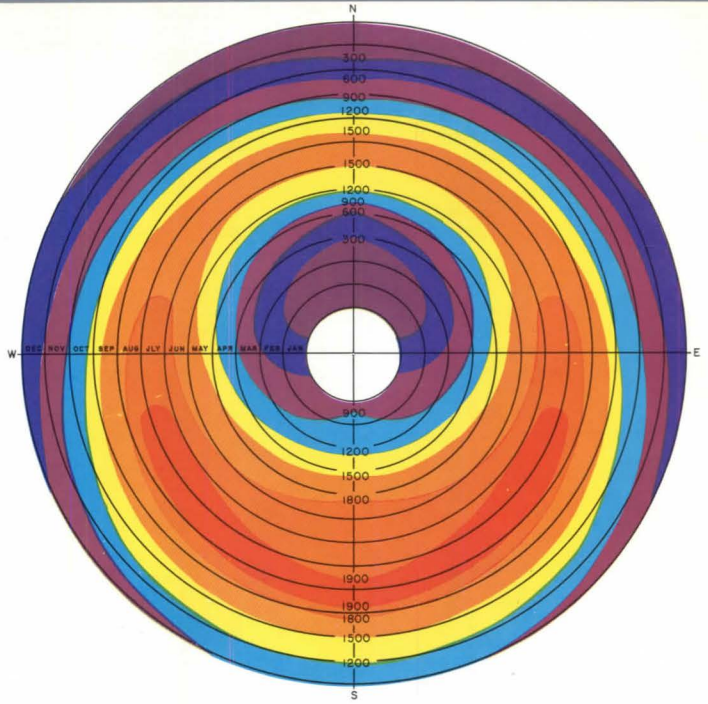
Climate Studies and Hedgerow Housing:

Lawrence Halprin & Associates, Landscape Architects;
Joseph Esherick & Associates, Architects.

The strong winds on the ocean terrace dictated a very particular type of architecture. The six model houses designed by Joseph Esherick & Associates followed closely the clues given by the climatic studies of the Halprin office. From general studies, it was found that, contrary to popular myth, the Sea Ranch is not part of the habitual fogginess of the area but is a regular banana belt of relatively sunny climes. Studies of radiation impact on both vertical and horizontal surfaces guided the two architects, Esherick and Moore, toward structures with large window areas or skylights to capture as much heat as possible.

Wind—the most salient climatic feature in the area—was studied for both summer and winter patterns. Velocities were measured in the field and around the hedgerows to locate exposed and protected areas on both sides of the trees.

To shelter them from the Northwest wind, the houses are oriented toward the south, with parking spaces and most gardens positioned on the leeward side of the structures. The houses themselves have slanted roofs to throw the wind up and over the open areas; where the gardens are positioned toward the wind, they are protected by airfoils along the top of the fences. Esherick would have preferred to cluster the houses more tightly together for protection and visual effect, and group them together off one cut in the road. "The most important thing visually is to cluster the automobile," says Esherick. "The car is the most disturbing element in the landscape." Because of sales, problems in the parceling of land, this was impossible to achieve. As a whole, however, the group blends in with the landscape, and echoes the wave-shaped formations of the hedgerows.

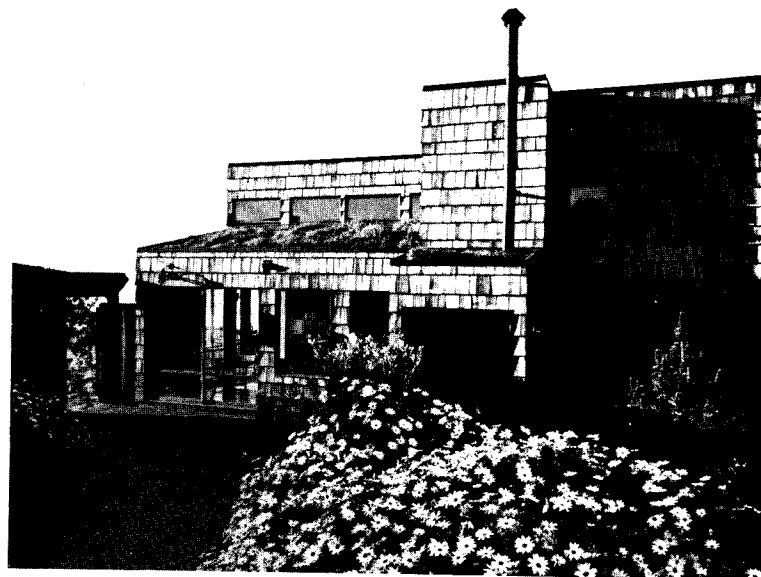
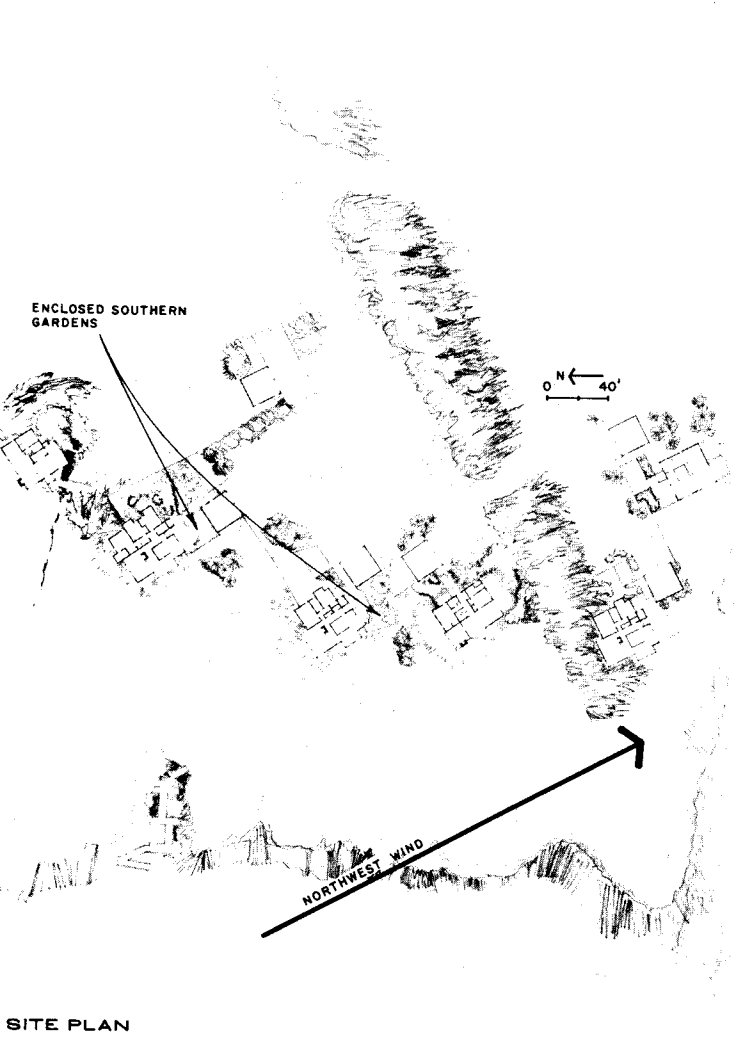


Radiation Impact Chart

Chart illustrates the amount of solar energy received per hr/per sq ft on sloping surfaces such as a rooftop or wall of a building each month of the year and for each cardinal direction. This information can be useful to architects and engineers in calculating the amount of natural energy available for interior space heating. (Surface orientation, 45° above horizontal. Contour interval, 300 Btus per sq ft/per hr.)

“When a stable relationship has been reached in a landscape,” says Reynolds, “the form, color, line, and texture are in harmony; in a disturbed landscape, there is cacophony.”



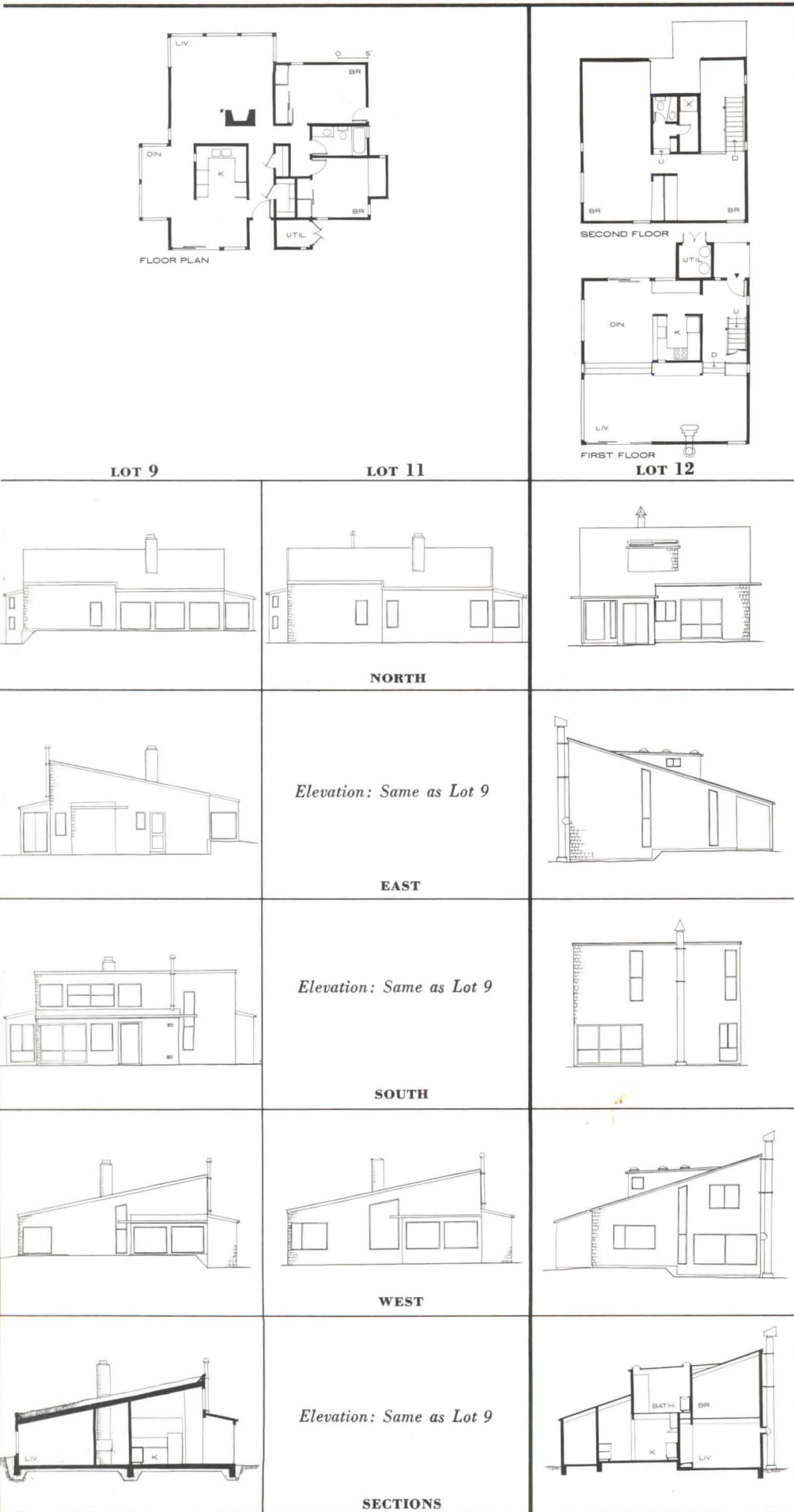


Model houses and site plan by Joseph Esherick & Associates.



Hedgerow Houses (Continued)

Individual owners can design and build their own houses at Sea Ranch, but the model homes by Esherick were built to demonstrate how to cope with the climatic factors and to set the tone for the community. The plans cover a wide range of possibilities: two story, with two or three bedrooms; one story, with one, two, or three bedrooms. Two houses, those on lots 9 and 11, have the same plan, but the north and west elevations are changed



slightly to suit the different views of each site.

On the inside, Esherick wanted the houses to be quiet and sheltered; planning was to be fairly conventional. "Living patterns don't change that much from town to country," says Esherick. "Adult and children cycles still conflict; privacy is still important." Unlike the Moore condominium units, which are more open, the model houses have regular bedrooms with doors. The only unusual features are some cell-like bedrooms for the children, and two back-to-back baths for the price of one, and the interior is left rough and unfinished. The Esherick houses are just conventional enough to deceive the suburban housewife. One buyer who has just moved in, has painted the walls aquamarine and covered the rough wooden floor with fake stone-imprinted linoleum. "How am I going to keep those rough boards clean," she complained. "And look at those windows. None of them are the same size. How am I expected to go out and buy shades in a department store for those crazy shapes." The shades that came with the house were made of rustic sail-cloth fabric. "But they had seams in them," she continued, "not down the middle, mind you, but somewhere, anywhere, irregular-like."

Design Restrictions

The suburban housewife's comments on the preceding page are interesting because they highlight one of the difficulties the Sea Ranch project faces in future years. Till now, the project has been under the control of a small group of architects. As houses go up, however, the tone of the development might go the way of all suburbia. The process of acclimatization may be slow for a population that is basically urban, recreation-oriented, and not accustomed to appreciating the peculiarly erratic qualities of a natural environment. To help guide the project toward its goal of preserving the natural

beauty of the area, the corporation has drawn up a series of restrictions to control the character of the buildings and preserve the open land spaces.

All plans from houses must be submitted to a design committee for approval. (The committee consists of three members, one of whom must be an architect.) A list of design restrictions have been drawn up limiting some of the architectural characteristics: for instance, all exterior finishes must be natural; no reflective materials are permitted; and the color range is carefully controlled to shades of brown through gray and subtle greens. No metal fences are permitted, except possibly for a tennis court area, etc.

The land itself is divided into three categories: private; private restricted; and common. To assure that the commons are preserved, the deed is set up so that the owner of a private lot becomes a member of the landowners' association, through which he has a share in the common lands. He has a right to vote on how these are used, but his share is not negotiable, the land cannot be partitioned, and his share is transferred if he sells his property to the next owner. Under present land laws, these conditions are not fully assurable; property rights are such in this country that the individual has practically inalienable rights to his land: The

legality of the association might be questioned.

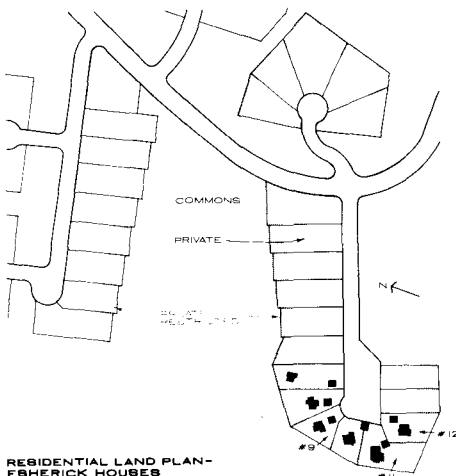
One of the difficulties in selling land at Sea Ranch lay in persuading the owners that they were paying not for a lot of particular dimensions, but that lots were priced according to location, view, and ease of building. Moreover, they were also buying into a share of adjoining common land. To help sales somewhat, a private-restricted area was drawn up on the outside of the lot. It belongs to the owner, but he cannot build upon it or plant any type of vegetation not indigenous to the area. All planting not native to the area must go on inside the garden wall, in the private area of the lot.

All these provisions are intended to assure that the natural landscape comes sharply up to the building or fence line, and that the commons be indistinguishable from the private, restricted area. No park or lawn will destroy the character of the land.

Boeke had considerable difficulty in persuading management that the restrictions would not inhibit sales. He felt they were imperative to preserving the character of the land. They are flexible enough not to restrict any brilliant architectural design, yet at the same time they provide a framework governing the over-all appearance of the community.



Whimsical murals and plantings inside garden walls.



RESIDENTIAL LAND PLAN - ESHERICK HOUSES



"When you make a place, you know it. It is identifiable and has a life of its own."

WILLIAM TURNBULL

"The principal proposition underlying our work is that the first purpose of architecture is territorial, that the architect sets out the perceptual stimuli with which the observer creates an image of place."

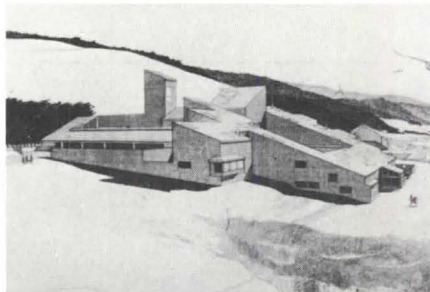
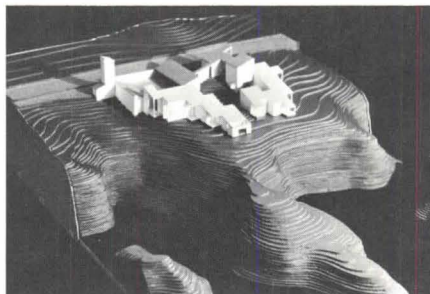
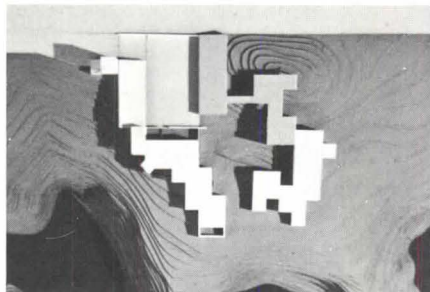
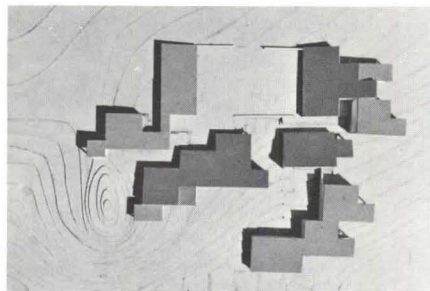
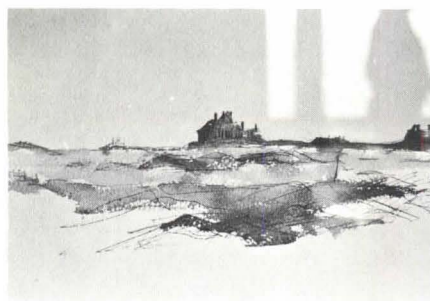
DONLYN LYNDON

Condominium:

Moore, Lyndon, Turnbull, Whitaker, Architects.

The site chosen for the condominium was a grassy, windswept field bordering a rocky shore where the waves break high against the cliffs. It is a place at once barren, rugged, and grand. Because of the scale of the condominium project, Moore was able to make an architectural statement in keeping with the scale of the particular site; Esherick, limited to the design of small individual houses, made architecture recede into the landscape; if carried one step further, they might well have been built underground. With the condominium, Moore was able to capture the feeling of the land, rough water, the wind and rocky shore; and translate it, magnify it, and shape it into a single indisputably human statement.

Several factors besides size contributed to the strength of the condominium design: the Halprin studies, Boeke's criticism, Turnbull's obsession with color and scale in the landscape, Moore's preoccupation with interior architecture, and the Moore, Lyndon, Turnbull, Whitaker composite philosophy of territorial architecture. These factors overlap, intertwine, and are often inseparable in the development of the design. Although all of these represent individual points of view, each contributes to the principal philosophy of design—the definition of a particular place: be it the buyer's desire to identify his unit within a structure, Turnbull's desire to identify the color and scale of the building with the site, Moore's precise definition of interior and exterior places, or Lyndon's more intellectual description of the scientific, intuitive data gathered from a particular place. Although sometimes in conflict, most of the "arguments" contributed to the same cause, and strengthened the design as it evolved.



Preliminary Designs

Siting: the first task confronting the Moore office was to locate several condominiums on the assigned site. To do this, the designers used a box of sugar cubes that later, quite arbitrarily, became the module for the individual dwelling unit within the condominium structure. The cubes were arranged on a model of the site to fulfill the following requirements. Each unit was to have:

- (1) A distinctive ocean view. The conventional picture-window with views directly out to sea was considered undesirable. Vistas down the coastline were preferred.
- (2) Direct accessibility to the site.
- (3) Southern exposure (preferred).
- (4) Protection from the wind by the total arrangement of units.
- (5) Screening from roads by walls or trees.

The units were grouped in clusters, fitted to the contours of the land but held together by an axial path down the middle.

First Design: The program for the first condominium called for nine dwelling units. Boeke was thinking in terms of townhouses. "But," says Turnbull, "we were aiming at simple massiveness, not 24 ft individual units. The individual units are grouped under a single roof plane, which creates the illusion of a greater single volume than actually exists."

In the first design, they are positioned around central court, but not tightly enough to provide enough protection from the wind.

Second Design: Here, the interior court is more sheltered, and the units pulled together more tightly. The numerous porches, however, proved too expensive; many of these were lopped off for economy's sake. A tenth apartment unit was added for additional income for the developer.

Third Design: Labeled "the prison" by the sales department, this version of the condominium is stark, with plain wall surfaces; skylights admit most of the light. Sales objected that it was too monolithic: An owner would not be able to point to a particular area and say, "That is my place."

Fourth Design: the last proposal to emerge was a much more articulated structure, "better architecture" say the architects, "better sales" said the management.



Layers of Enclosure

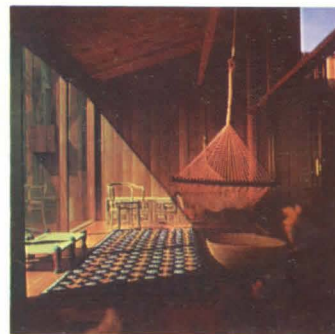
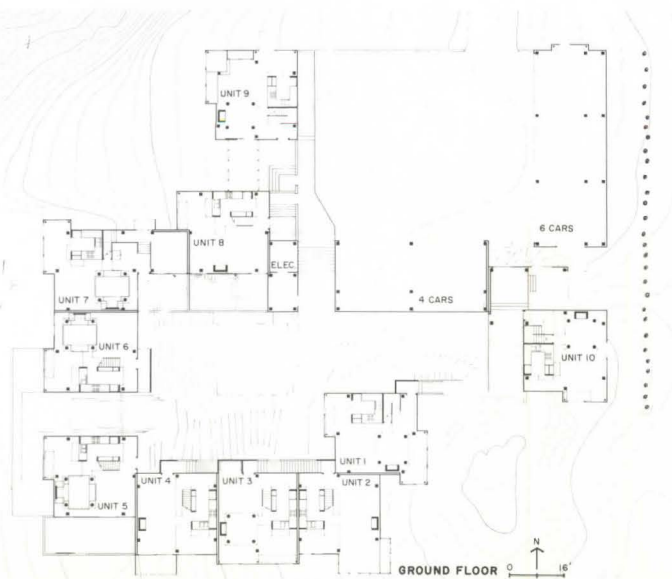
“Our work has for some time been concerned with establishing several degrees of ‘inside,’ marking first a place in the landscape, then progressively segregating places outdoors and in, so that the user-observer can be continually aware of his location in a structured scheme . . .



“...The distinction, therefore, between an ‘inside’ and an ‘outside’ is the very basis of all architecture, and the modulation from one to the other is and has always been one of the primary elements of the architect’s art—whether by the hierarchic concentricity of Peking’s walled cities, the diaphanous reversal of French Gothic Cathedrals, or by the literal and phenomenal transparency often used by Le Corbusier.

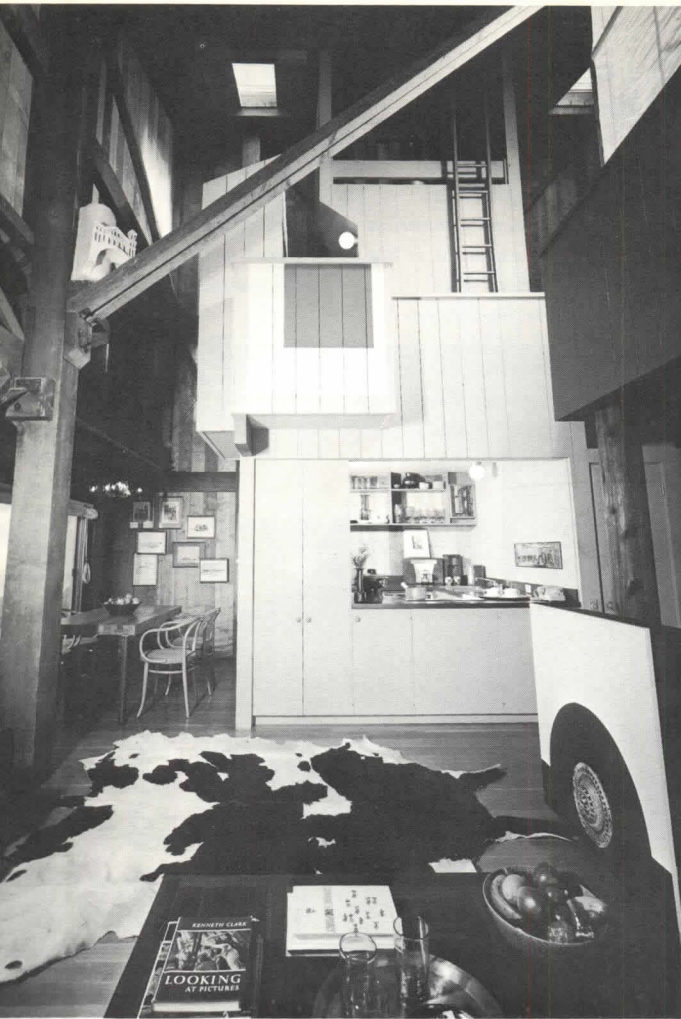


*“Color factor
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“For the Sea Ranch, we envisioned, at the outset, a quite closed and distinct main space with a controlled supplementary volume in which one could sit at the edge of the windy and spectacular coast.”

DONLYN LYNDON



At the condominium, the sequence of spaces proceeds from the wild landscape to the glass edge of the porches, from the glass edge to the solid walls of the structure, and from the borders of the rooms to the limits of the four-poster.



"None of us ever entirely outgrows the love of the doll's house, or, usually in vicarious form, the love of squatting under the table. Camping and sailing are two adult forms of play analogous to the 'my house' pretences of a child. In both, there is the fascination of the miniature shelter which excludes the elements by only a narrow margin and intensifies the sense of security in a hostile world."

FROM *Heavenly Mansions*,
BY JOHN SUMMERSON

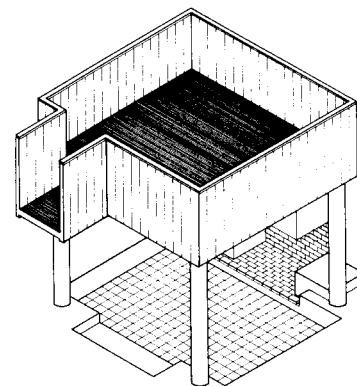
The giant piece of furniture designed by Moore for the interior of each condominium unit is an intensification of interior space, a house within a house.

Moore's idea was to create a slightly different environment from that fashioned by suburban regimentation. A holiday is to be a festival, a tent, a gathering. With this in mind, few of the bedrooms are proper "rooms," but resemble tents pitched on top of a giant four-poster; kitchens are tucked into the space under the legs.

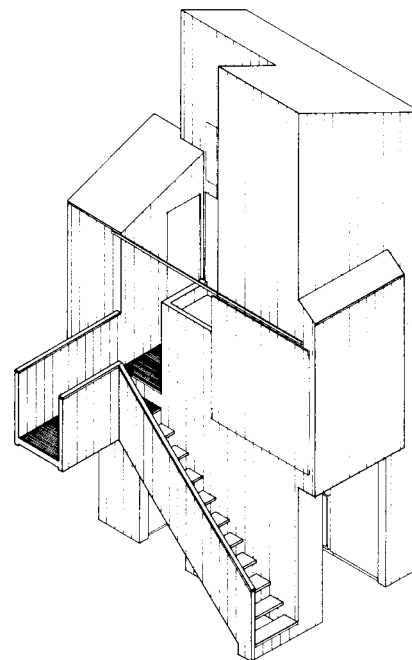
The arrangement may call for a special kind of buyer: a bachelor, or a childless couple, since many families have objected to the lack of privacy. The condominium in progress at the moment will have more conventional layouts with at least one space closed off. However, for many prospective buyers, the condominium may simply require a period of adjustment, a time to get accustomed to the irregularity of it, to recall the irrational pleasures of nook, cranny, and tent. As Lyndon put it, in *World Architecture 2*: "In working we do not reject games, postures, or the apparently arbitrary fancies and associations of those for whom we build, but rather seek to fashion from these a sensible order that will extend our own, and our users', ability to perceive and assimilate the delights and complexities of an untheoretical world."



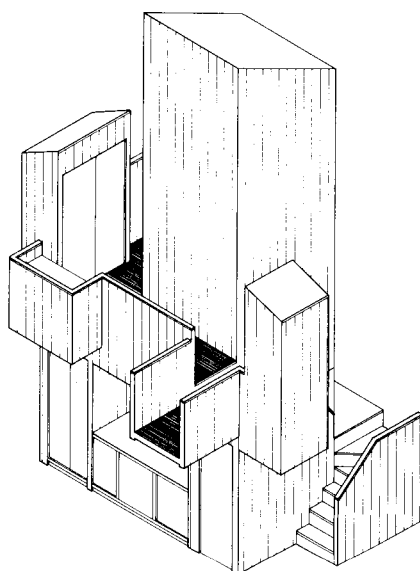
The condominium is a heavy timber construction: 10" x 10" columns, 4" x 10" girts. Diagonal bracing was developed by Patrick Morreau. Mathew Silvia, the builder, figured out an ingenious fastening system (above), using a circular metal plate to join the bracing members to the wall. Cost per sq ft was high, due to large amount of air space used.



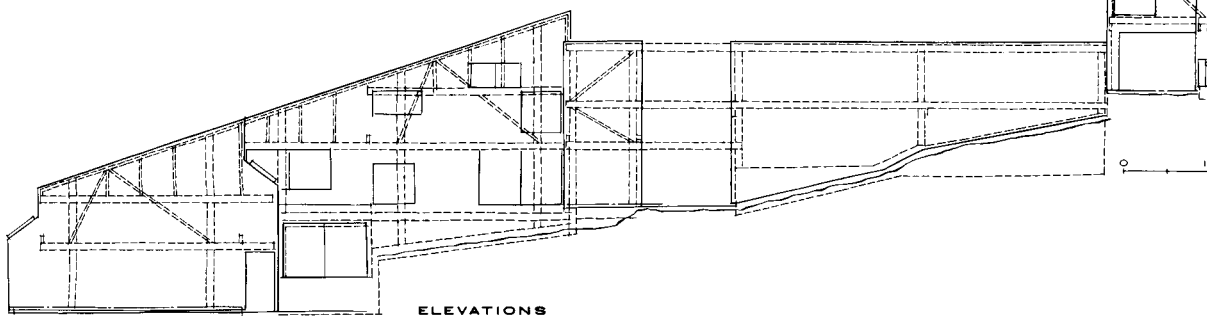
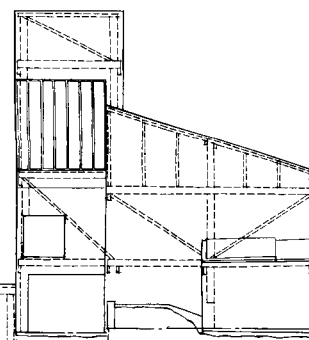
FOUR POSTER



KITCHEN / BATH
(TYPE B)



KITCHEN / BATH
(TYPE A)



ELEVATIONS

HACIENDA GETS ITS JUST DESERT

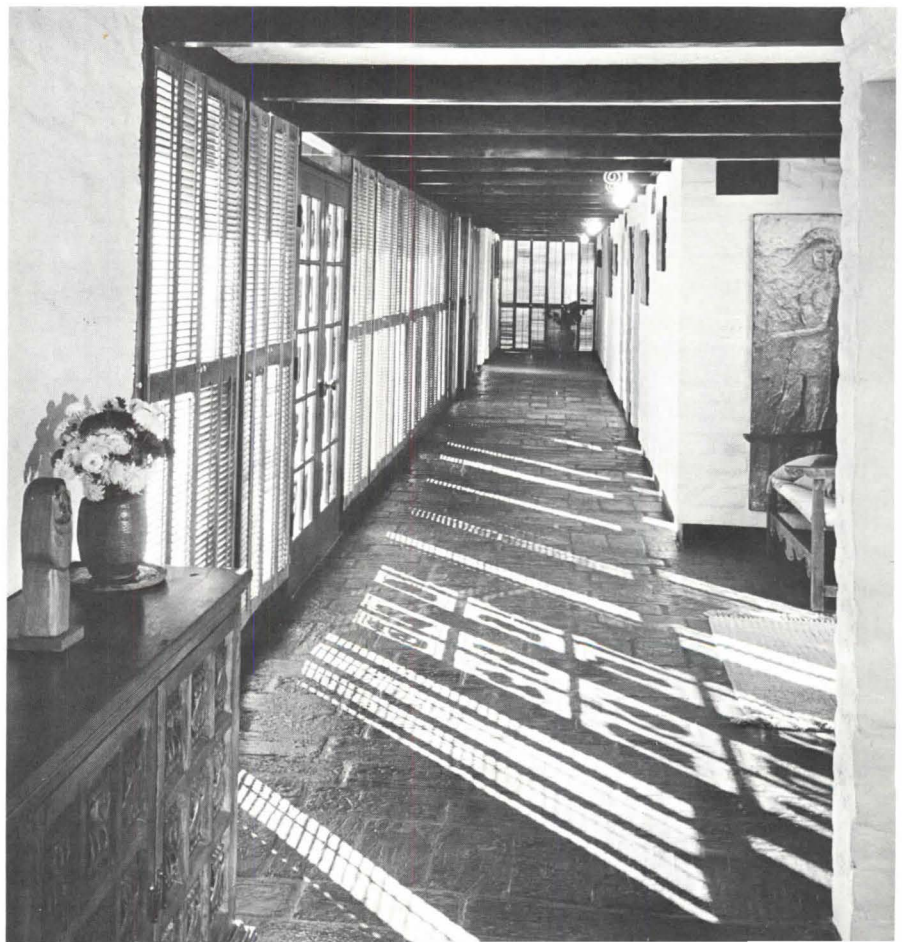
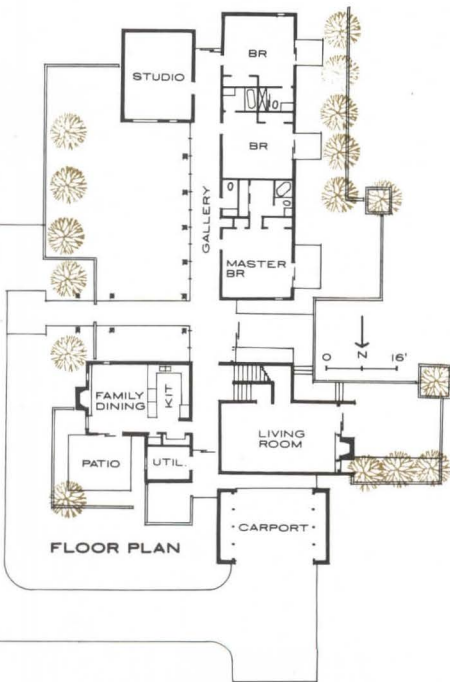
Name and Location of Project: Residence for Bennie M. Gonzales, Paradise Valley, Arizona. **Architect:** Bennie M. Gonzales. **Site:** One-acre lot in an incorporated town immediately northeast of Phoenix, restricted to one-acre lots with no commercial development permitted. House site left unchanged except for patio areas, which were grassed and planted with olive and palm trees. **Program:** A residence for the architect and his wife and their two children. The house was also designed as a representative example of the architect's work, for client consultation, and as a showplace for material and finish samples, etc. **Structural System:** Wood joists on load-bearing concrete block. **Mechanical System:** Roof-mounted electric units. Heating gas-fired, roof-mounted. Thermostatic controls. **Major Materials:** Slump concrete block with painted mortar wash interior and exterior. Prefinished fiber plank exposed on interior ceiling; built-up roofing. Ground flooring of burnt adobe, balcony of wood. **Cost:** \$50,000, approximately \$13 per square foot plus landscaping cost. **Photography:** Bill Sears.

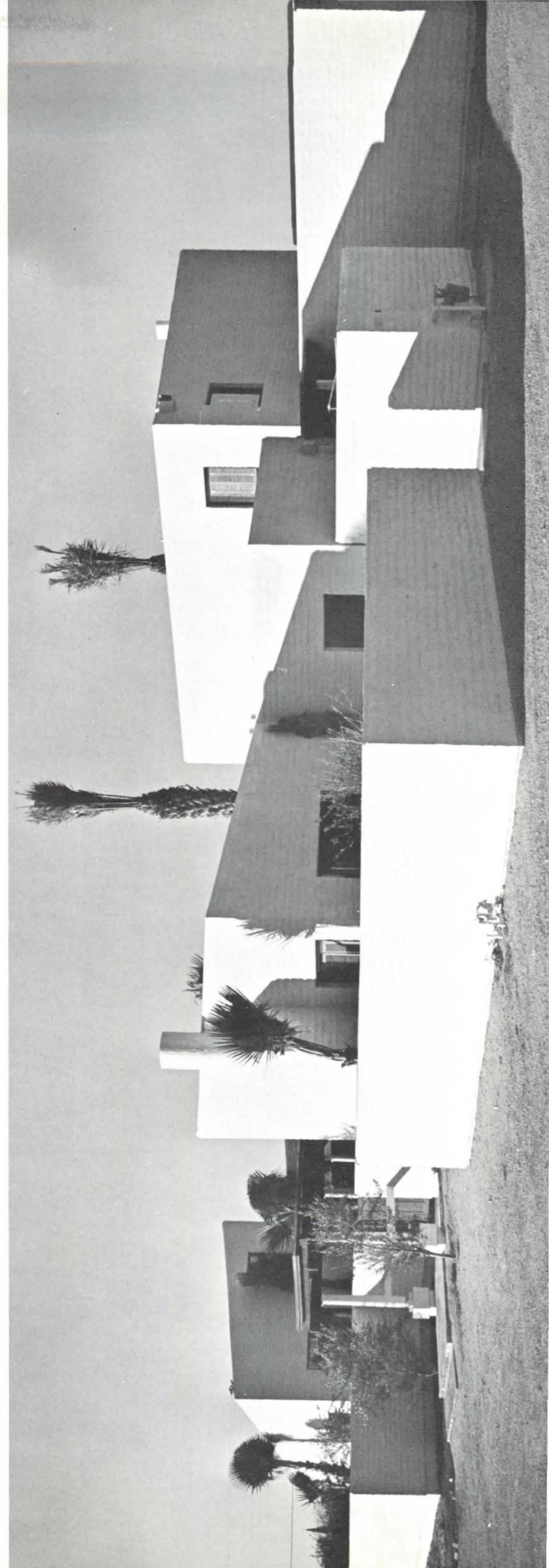
The Gonzales house, located in Paradise Valley on the border of rapidly expanding Phoenix, sits on a patch of desert where 35 years ago small boys hunted rabbits and stoned sunning diamond-backs amid the sage brush, way beyond the sight of the most outlying city house.

The style of the Arizona desert house has traditionally been dominated by one of two conflicting influences. The first is that of the native Indian-Spanish-Mexican culture, whose people built sensibly with the available materials for the existing climate; the other is that of the conquering gringo, who wrested the country from its owners by war and purchase, and built with no more consideration for the lessons of the native architecture than he displayed for the conquered people.

Desert building requires a special "simpatico" for the climate and the building techniques required to master it. A Colonial split-level house (see "Glossary," this issue) on the desert is as aesthetically and environmentally correct as a horned toad on a doiley.

The Gonzales house is a desert house that is in reality a happy collection of houses: It is divided by the gallery north and south; and by the entrance passage-







1



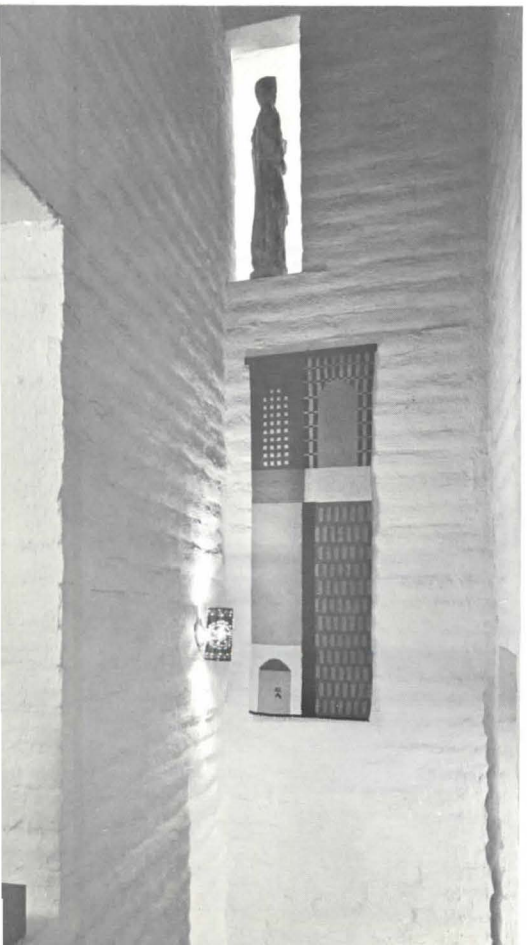
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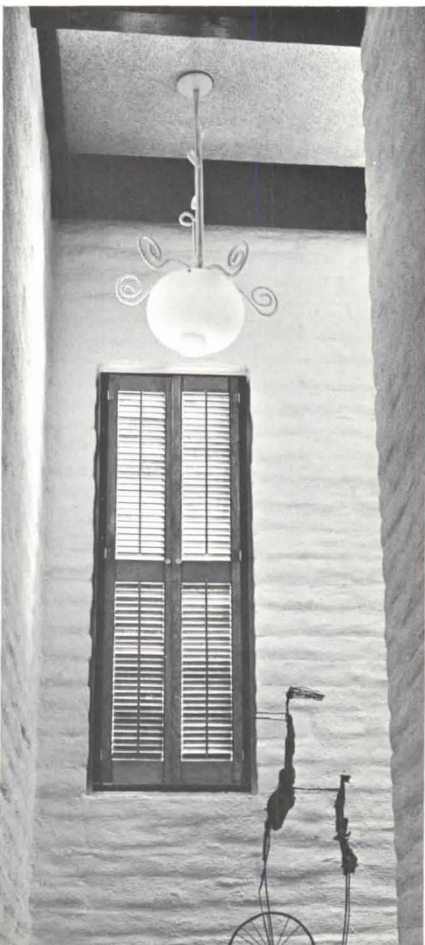
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4



5



6

way east and west. The low walls are reminiscent of the old haciendas, and the slump block with mortar wash texture exterior and interior is texturally right. The plan takes advantage of the ample space the lot afforded. It is oriented to views of Camelback Mountain to the east and the city lights of Phoenix and sunset to the west. Wooden shutters control the sun and afford privacy; no drapes or curtains were used by the architect. The fireplaces are not a necessity, although they are used during cooler weather. At present, one is being used as a flued sculpture niche. The house is completely air-conditioned.

The columns and doors, obtained from a demolished house, form a happy combination with the house furnishings: lamps of bent concrete reinforcing bars, traditional chairs, tables, and chests of the Southwest, and the charming eclectic sculptures that dot the house.

The structural system is simple, with a happy disregard in places for total structural economy. Witness the staggered beams over the continuous girder spanning the gallery columns, for example, whose positioning pleasantly disregards the maximum moment of a continuous beam in controlling the decorative pattern of beam ends and voids. The somewhat quixotic truncating of the box forms by the roofs add considerable interest to the elevation and can have a very practical application, for, although Arizona gets little rain, it often gets it all at once.

If, in the description of a house, it is mandatory to classify its forms stylistically within the context of contemporary architectural fashion, we might describe this house as Arizona Gonzales. But this is, of course, ridiculous, for people do not live within classifications but within the houses that are classified. Gonzales has built a pleasant house to live in, in the tradition of desert building with formal and spatial respect for its environment. It is hoped that Paradise Valley can hold out against the encroaching Phoenix better than the desert jack and the diamondback.—FW

(1) View of living room, from the dining balcony. (2) Den. (3) Western elevation, with Camelback Mountain in background. (4) View of living room, as seen from gallery. (5) Stair passageway down from dining gallery. (6) Stair landing.



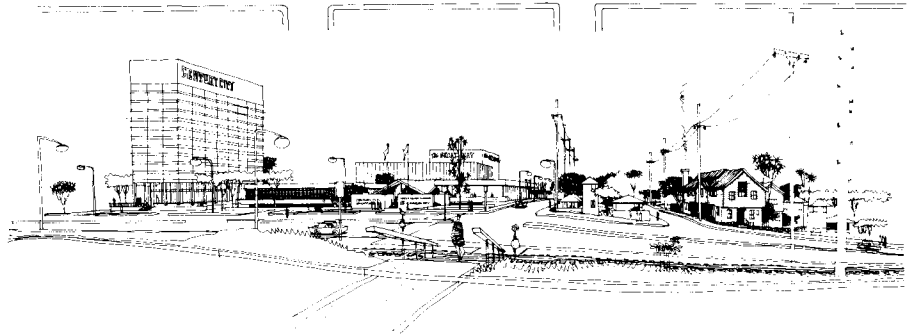
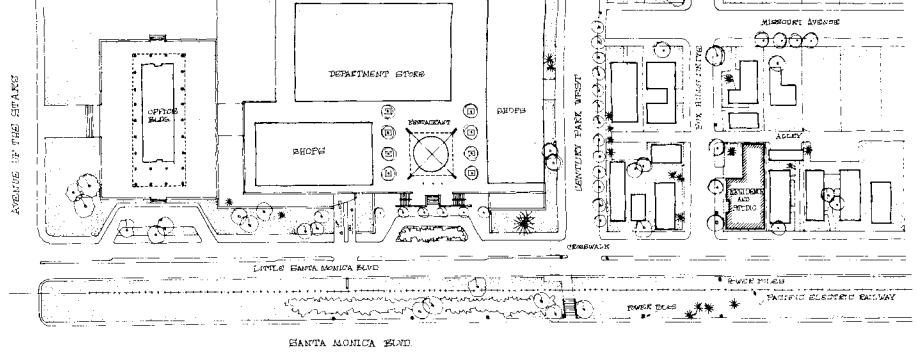


BARN ON THE BOULEVARD

A remodeling job usually produces surprises, to architect and passers-by alike, but there are few surprises to compare with this small house, a typical wood-frame house on the exterior that explodes into an exceedingly atypical space on the interior. The shell of the house dates from 1950; the remodeling, from 1965. The earlier work was done by a local builder who shall be nameless; the newer work is by and for Quincy Jones, by the firm of A. Quincy Jones & Frederick E. Emmons. Affectionately called "the Barn," it is actually home and studio for Jones, and is just down the street from the official office (both have a Santa Monica Boulevard address, but are actually several miles apart). It is also a home-away-from-home for 10 architectural students in their fifth year at the University of Southern California; the students spend four afternoons a week at the Barn. The place was originally built as a photographer's studio; now it is a photographer's challenge. All space is difficult to convey two-dimensionally. This house being *all* space, this is especially true.

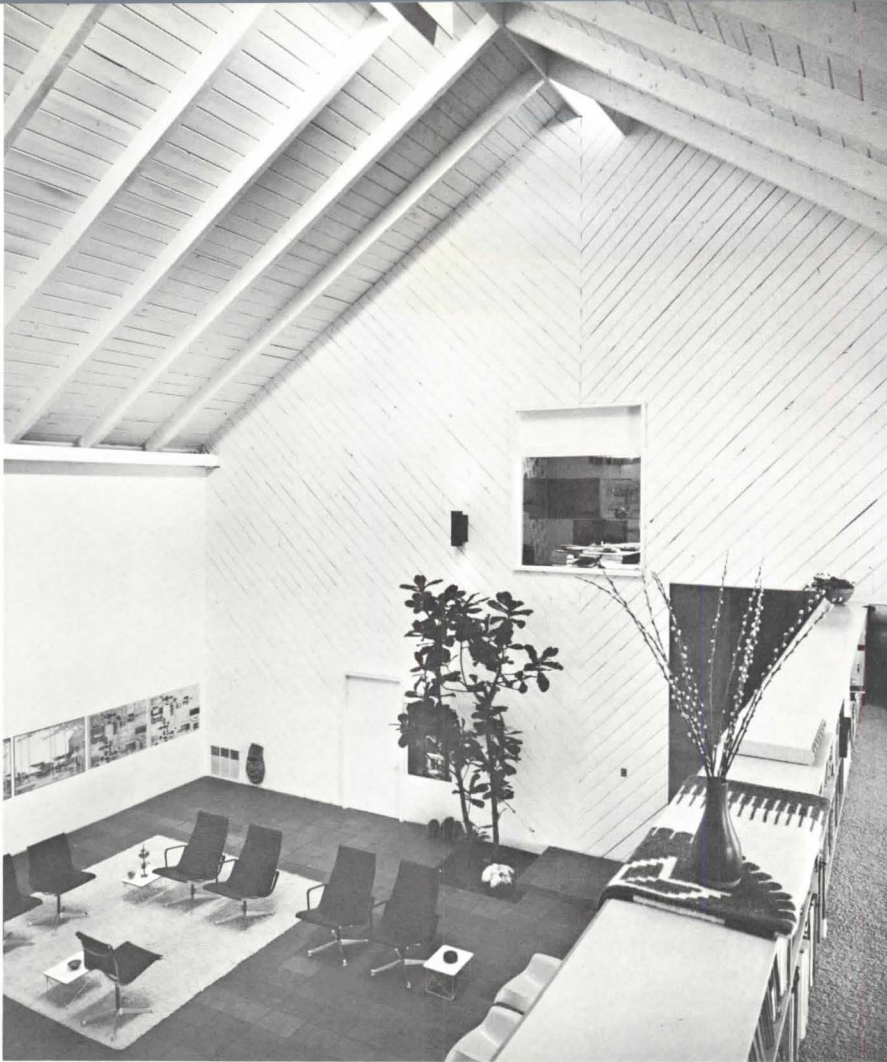
From the entry (right), one begins to glimpse the size of the large studio, approximately 30' x 40' in area, and about 30 ft high at the ridge beam. Walls are painted white. Floor is new, having been set on top of new radiant heating that was installed over existing floor slab. Brick floor is a new product, an extruded common brick 10" x 16" x 1½". Room is kept relatively free of any furniture arrangements that appear to be unmovable to keep this room freely adaptable to seminar groups, client presentations, slide showings for groups up to 80, etc.

Looking back toward the entry (facing page): The whole studio is awash with light. Original building had exterior light only at north and south ends, and at upper level of east wall. Jones added skylights, four operable vents in the roof, and opened the entry with large expanse of obscure glass.



As house and "Barn," the remodeled studio is an anomaly in its commercial surroundings. The only major change in the exterior was to move the entrance from the north end of the building to the east. Santa Monica Boulevard, on the north, is now extremely busy and parking is not permitted at any time. Redwood resawn panels define the new entrance (right), turning into the entry and continuing indoors as wall surfaces. Brick at entry is same color as the redwood, and also continues inside. The building exterior is painted white; roof is black.

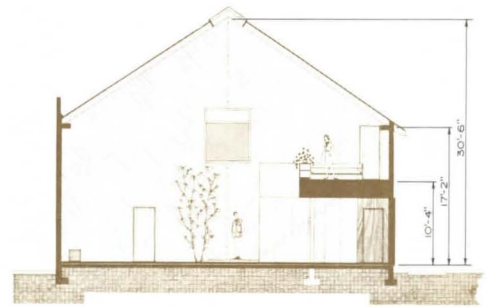




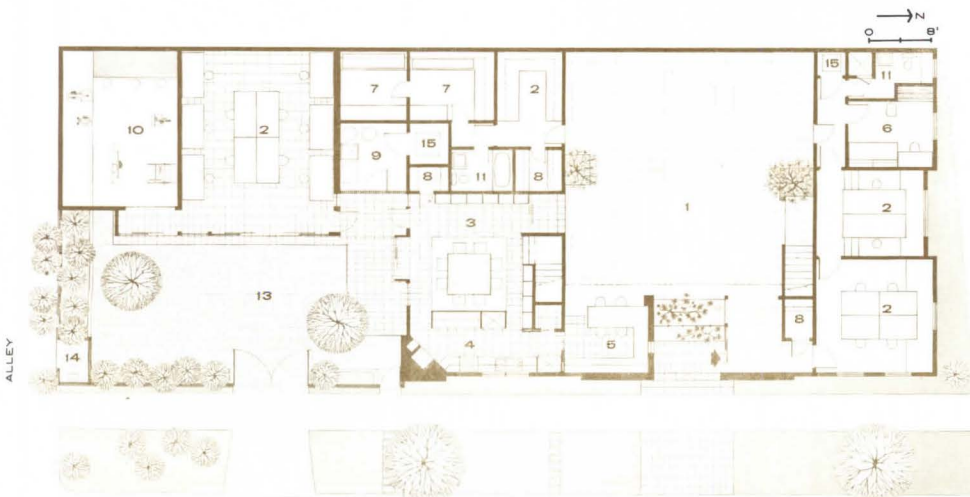
Upstairs, looking down into the large studio (left). Ledge of balcony is used for projection equipment; white wall receives slides (several simultaneously), as well as movies, and can also be used for presentation, as shown here. Skylights include architect's solution for darkening the space during daylight hours. "Bonus" of skylights is that, at night, they reflect street signs and moving cars, a colorful surprise to those inside.

Bedroom-sitting room (below): Floor plan shows king-size bed that is not yet installed. Wall of books has replaced a wall that was previously solid, wainscotted below, wall-papered above. Small drawers are mainly for 35-mm slide storage. Birch door leads to dressing/bath area, above which is a loft, reached by ladder, with bunk beds for visiting children.

"Window" from bedroom-sitting room (facing page) looks across main studio to "window" of upper drafting room.



(1) Studio; (1A) Balcony; (2) Drafting Space; (3) Dining; (4) Kitchen; (5) Alcove; (6) Guest Room; (7) Darkroom; (8) Storage; (9) Laundry; (10) Shop; (11) Bath; (12) Bedroom/Sitting Room; (13) Garden; (14) Trash; (15) Utilities.





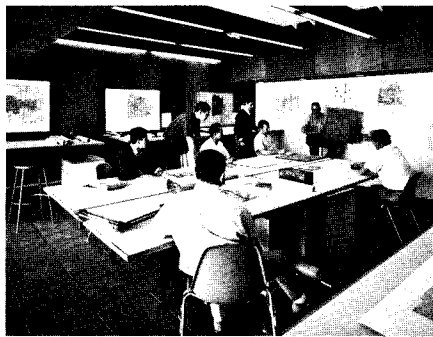


Large studio, shown being used for a seminar (facing page). Home is very much mixed with school and office in the Barn; home drafting area is visible through large window opposite; pillows at upper right indicate location of guest sofa, which is actually a double bed on a platform base that moves out from under the counter.

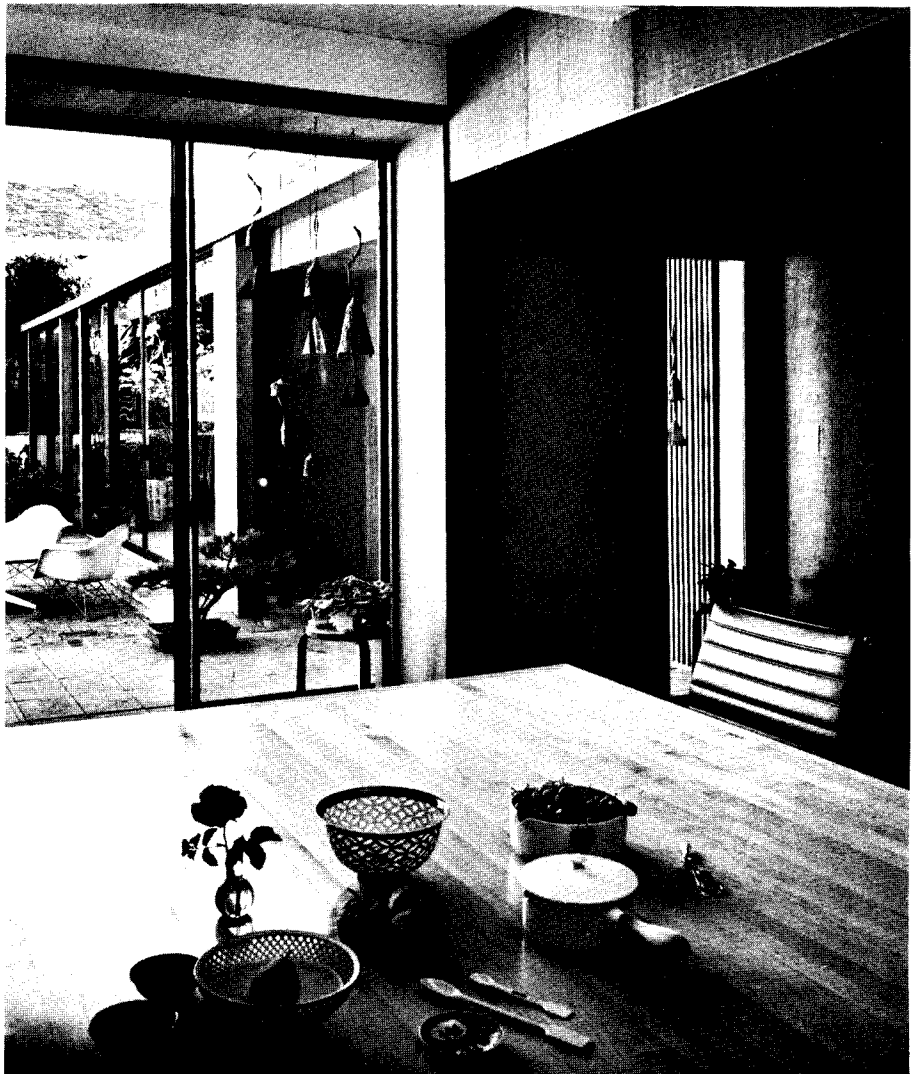


Originally, the balcony ledge (right, top) extended to the ceiling; the large studio had also been partitioned, but not so that it reached to the ceiling. Originally, too, the alcove leading into the kitchen was closed off. Pantry alcove now provides service counter between kitchen and large studio.

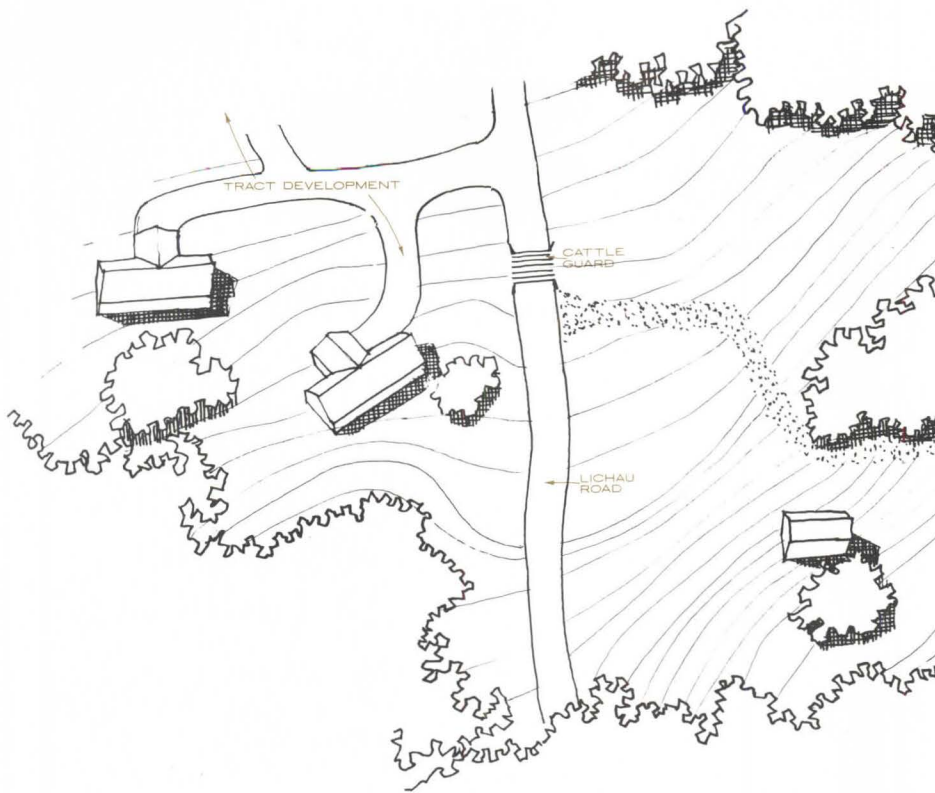
Drafting studio (right, center), remodeled from carport, opens onto patio; the patio thus doubles as outdoor entertaining and outdoor teaching area. Woodworking and model shop was created from remaining part of the old carport. Quincy Jones has been a visiting professor and critic at U.S.C. School of Architecture since 1951. The 10 students in this group spend four afternoons a week at the Jones "Barn."



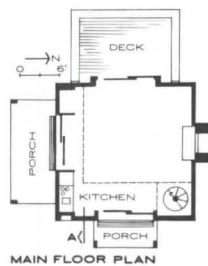
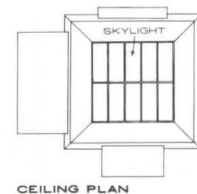
Dining room (right): The original building was essentially closed off from the rear patio, with only a small double-hung bay window where the sliding-glass door is now installed. A wall originally followed the line of the lowered ceiling area, which conceals ducts carrying forced-air heating from utility room to upper level. By removing the wall and incorporating what had been a hall into the dining space, the room is large enough for the architect's design of a table that is 6 ft square. Top of table is of maple flooring. Bells were made by Paolo Soleri, the Arizona architect. Most of the furniture in the house is from Herman Miller, except for pieces designed by the architect (dining table, square coffee table, built-in furniture).



ONE RIGHT CAN'T RIGHT A THOUSAND WRONGS



Architects: Kosovitz, Knox & Nairn. **Site:** A wooded knoll near Penngrove, Sonoma County, California; less than one hour's drive from San Francisco. **Program:** Design a weekend house for a bachelor. **Structural System:** Standard wood frame construction except for battered walls. **Mechanical System:** Three small electric wall heaters. **Major Materials:** Exterior: cedar shingles. Interior: re-sawn redwood 1 x 6's. **Consultants:** Ephraim G. Hirsch, Engineer. **Cost:** \$16,300, including all equipment, septic tank and leaching field, water and electric connections. **Photography:** Joshua Freiwald; except for center-strip panoramas, Maude Dorr.



Within a mile or so of each other in Sonoma County, 45 minutes outside San Francisco, are a new suburban development and a custom-tailored country home designed for a bachelor lawyer. The site is spectacular: a hilltop so high its head is usually out of the fog, overlooking the valley or a sea of mist below. On one side of the hill, however, construction is taking the typical turn toward the clichés of American picture-book planning and architecture; on the other, a conscientious look has been given to the site, to indigenous forms, and to the more abstract ideas of the client.

"We did have an ideal client," says Kosovitz. "He understood his needs, but could discuss the design problem without mentioning room sizes, relationships, etc. He wanted an exciting spatial enclosure that could be maintained easily, and be adaptable to solitary living, or to entertaining. He was willing to sacrifice floor area for volume."

The architects placed the cabin at the edge of the knoll, overlooking the valley and removed from the parking area and the road. From the entrance pathway, the

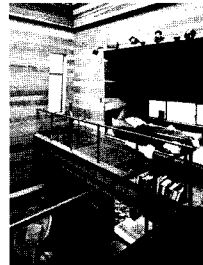
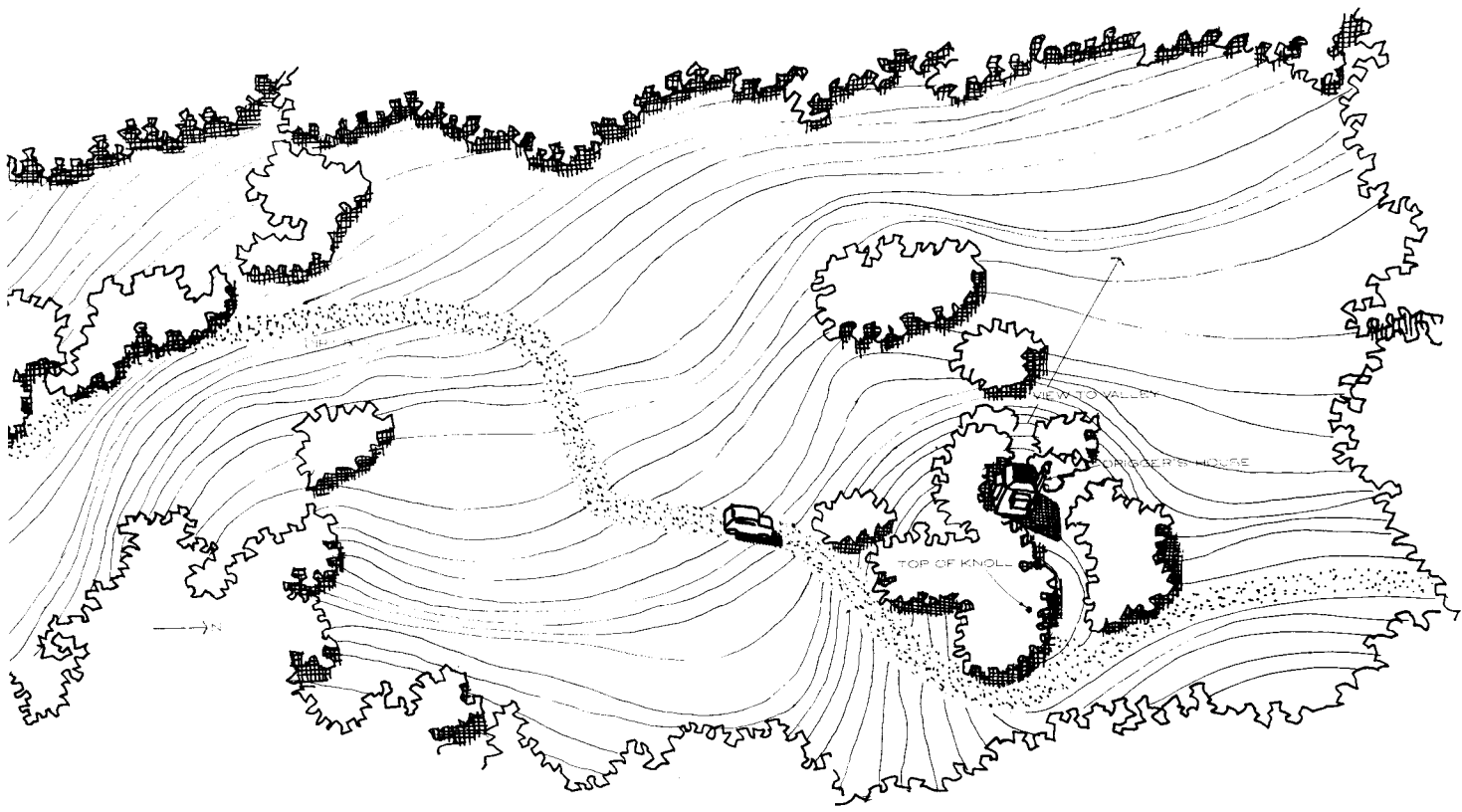
structure is hidden and the first element to appear is the tall chimney, crowned by a large pot that was designed, made, and installed by Eric Norstad, a noted ceramicist. The shape of the house was suggested by the pump houses in the valley below; the tower form also has the connotations of a retreat and haul-up-the-ladder get-away.

What emerged from the combination of images was a strong two-story structure—a tower with slanting sides and a skylight above. The tower core is the basic container in the design, and to it are added a variety of subsidiary volumes and spaces: sleeping alcoves, porches, chimney and a tall, shallow window casement. On the interior, this produces a surprising variety of elevations: open, closed, two story, one story. The tower volume is always maintained, however, and emphasized by the continuous redwood sheathing.

The result is a strong, individual, yet curiously indigenous little building. The cheap but indigenous materials that are used on the exterior weather well but do not require a fancy finish. The shingled

style recalls Bay area architecture; the form recalls a pump house. But the specific images are fully incorporated, fully metamorphosed by formal sense of the architect.

The development over the hillside is less fortunate perhaps in the degree of sophistication of client and architect, but it will have the most influence on the countryside. In a lone telephone booth (already installed on the suburban street expecting houses), builders and salesmen have left their cards wedged into the corners. In a moment of desperate whimsey and unprofessional immodesty, Kosovitz pulled out his card, marked it with a large inscription "You Need Help" and added it to the roster of advertisers.—MD



ARCHITECTURE SWINGS LIKE A PENDULUM DO

Two young architects not only search out their own clients; they also approach building as a fun activity.

Are you ready? Two lumbering mountaineers just out of Yale Architecture have a project going called Prickly Mountain, which is a budding sun-and-ski area near Sugarbush and Mad River, Vermont, and they're putting down the Establishment by acting as entrepreneur and speculator, and contractor and craftsman, as well as architects, and doing the whole blooming thing themselves. It's architectural blast-off.

Both 26, both still somewhat Beatle-browed, Bill (Ringo) Reineke and David Sellers are Samsons up there in that spectacular valley on their own 600-acre mountain tract with their checkbooks and their folk songs, with their two dogs—Kodiak and Potato—and they're dressed in plaid lumberjack shirts over surfers' pullovers with pants hung on wide elastic, clip-on suspenders, and construction boots, and they're surrounded by the smells of damp, fresh-sawn lumber and the acrid propane-gas warmer. With the polyethylene sheets on the windows flapping in the breeze, they're talking up their ideas, like, beautiful—particularly Sellers, who comes on with words like a Mack truck.

"The architect is irresponsible today," Sellers says, "in terms of that he thinks there again he has to sit in his office and wait for some client to come up and say, all right, build me that. But I think the architect has gotta change his whole scope if he's going to survive as an integral part of our future society; I think he's gotta play the role of the entrepreneur as well. He's gotta combine Zeckendorf, the Rand Corporation, and a great architect all in one. And maybe that's

more than one guy; maybe that's five guys working together."

Ringo Reineke carries on, "It's hard to believe that an entrepreneur could come up with a better idea than some professional people who are spending their lives thinking about these things. I'm sure that a lot of architects have a lotta ideas about things that should be done, or possibilities, and they, you know, stow them away and do nice drawings about them. But they don't act."

So this young, new generation of architects proclaims that the architect ought to take the lead and ought to go out and find an entrepreneur, telling him that the country needs a new town over there or a community here, or that this is the right place for a new high-rise office building.

And that's what they've done at Prickly Mountain, where they got the financial backing by persuading friends through their bursting energy and dynamic talk, and they bought the land themselves—not being willing to wait for their first commissions to come to them—and are building houses to sell, themselves. Already, they've sold parcels to other young architects, who are beginning to flock up there to build for-sale houses in a share of the speculative game. And the whole community is already master-planned.

Traditionally, the schemes of youth are

rampant. Those of Sellers and Reineke are being lifted aloft.

When asked why he was so unusually interested in economics, Sellers burst out, "I'm not 'interested'; I *have* to know it. I think that the architects who don't know how things are paid for, and who don't know why things have got to make money, I think, are irresponsible to their field. Architecture has got to be a profit-making thing; there's no question about it. It's a commodity; it's a saleable item; and it's gotta be made to work for somebody, or else he's not going to spend dough on it. It seems to me the least responsibility you have if you want to put up a building for some guy who is going to put out a lot of money is to be at least economical and efficient.

"But most architects can't make anything that his client can afford even though any half-wit speculator seems to be able to make something that doesn't leak, stays warm, and you can see out of, and he usually does it so people can afford it—and he gets rich. That seems out of the scope of most architects. And, to learn to be economical and efficient has to do with knowing how the thing is going to be built."

So Reineke and Sellers and Louis Mackall and Jonathan Hall, the two other young architects building on Prickly Mountain, are also constructing the houses they designed. Six buildings are now on the site in various stages of completion:

(1) The completed Tack House, a sprouting pyramid (color photo) designed by Sellers and Reineke, that is used by them now as office, drafting room, and living quarters.

(2) The Pope House, a split pyramid that Sellers and Reineke are now completing (with the aid of a contractor) for a Wall Street broker.

(3) The Bridge House, an in-progress, for-sale ski lodge designed by Sellers, who has a sensitive feeling for siting. It is entered from the up-hill side across 80-ft bridges then explodes toward the view of the valley.

(4) A house designed for sale by Reineke that is a spiral of staggered pyramids and perhaps the most controlled on the lot. It will provide a crows'-nest view of the panorama.

(5) A house nearing completion by Louis Mackall, an architecture student still at Yale; it has two series of irregular platforms within a polygonal envelope.







(6) A house under construction by architect Jonathan Hall.

What's happening architecturally up on those slopes is, to put it mildly, different from the usual ski bums' accommodations—it's also not totally similar to most recent architecture. Ostensibly, it's not planned and ordered like the entrepreuring side of the game; ostensibly, it just happens. This is the work of the new generation that is still sprouting out of the box with the seeds of the diagonal, pyramidal, zigzag zigurat, mushrooming dare. This is the work of young architects involved in the joy of building, the joy of creation, who are rediscovering the fun and games of architecture and building, of improvising new solutions during on-site construction, of calculating tactile surprises and imaginative detailing.

Especially, they've got the joy in tactile surprises going for them. What they praise is the virtue of the building process as a source of inspiration, and the virtue of allowing things to happen when they do. These are architectural happenings.

Not coincidentally, much of the work of Reineke and Sellers is done in collaboration with the young bearded New York sculptor, Ed Owre, who considers his contribution primarily one of "working things out together" with the architects—as opposed to creating sculpture as such. Some of the pleasures the three have worked out are a sink in Owre's Gold-Rush kitchen, made of a square hunk of wood remaining after a salad-bowl factory had removed the bowl from a log. A ladder that has one unexpectedly wiggly rung is one of the tactile surprises that give these guys pleasure. Like theatrical happenings, which are theater-and-art works put on primarily by painters and sculptors, these architectural happenings also start with a sculptural approach.

This on-site improvisation—the working drawings and detailing (sometimes only isometrics of framing) being done as the work progresses—is an attempt to get beneath the veneers of the creative process, to seize the seeds of architectural ideas and to encourage their germination and their growth.

As Ringo Reineke explains, "When you have a joist that you put in that happens to be 6 ft too long, and you put 'em all in, and there are some others going the other way, they may start to develop something."

"Then you can see what they are generating," Sellers adds.

"But if you had had something drawn," Reineke continues, "and you cut them up to follow the drawing before you put them all in, that would be it, and you wouldn't learn what the pieces are doing themselves."

"What can come out of this is another way of designing," Sellers explains. "It might be possible to design the seed of a building: If you can take the simplest, most important thing and call it the seed, then the building may just generate itself. This way, you make a building program itself. It is a growth process: It starts with nothing and it evolves."

"Improvisation is, I think, something that an architect does on a drafting board, and I think he does so with a high degree of inefficiency. When you do it on the site, all of its aspects are revealed, and any order which it sets up it automatically evident."

"For instance," Sellers points out, "interior siding has to do with a visual impression entirely, so you can nail the boards up and leave spaces between them so you can see the silver insulation through; you can use boards of different

thicknesses, and that's OK, too."

"If you look at a composition like that," Reineke continues, "it is just like some kind of graphics on the wall. So if you are building a wall, why not make something of it?"

To those with more established architectural tastes, chance and indeterminacy may not seem to be real elements of art. Sellers counters, "There's no such thing as a totally determined object. Art is discovery to a great degree. When an architect goes into one of his spaces, he says, my God, I didn't notice that, or I didn't perceive that, or it looks different than I imagined. And so you discover something, and maybe what you discover is seemingly right. But there was an indeterminacy about it when you started because there was something that you didn't know about. The chance, in that case, may have been that you would never find it out. And that has to do with how much your perception is able to cope with a single thought. Maybe the skill of architecture is the degree to which you can cope with the greatest number of variables."

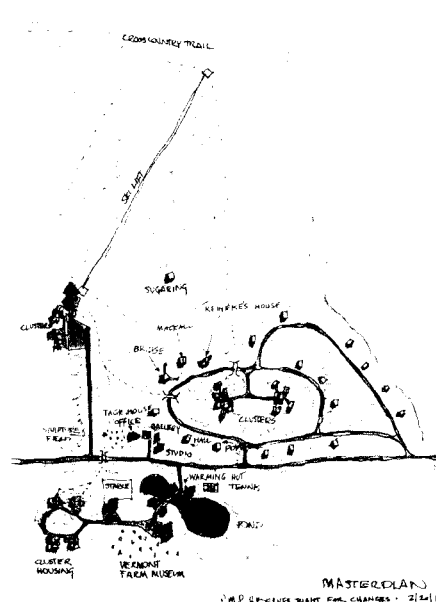
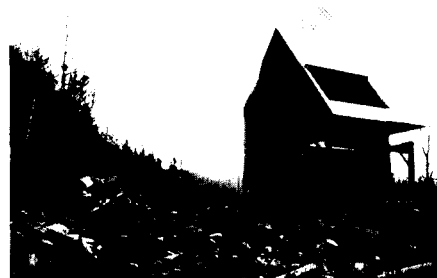
"To me, it is existential. It all has to do with how we feel about how one has to act, and live, and be aware, and be alive, and have his senses in his fingertips, in this particular age."

But how can this create anything other than all the mess that the International Style revolted against, critics may ask?

"Now wait a minute, I think there is a big difference between what we're doing and what they revolted against. Those things had all the qualities of the same things that we're revolting against. The International Style is just as much a façade as the things they revolted against. Even Mies had excess extrusions. And Randolph and Saroyan and those guys.

"We are revolting again at a different scale. We may pitch a roof because it is more economical and efficient, but also so that when you're at the top of your building you know you're at the top. And these are real things—how you live—rather than what somebody is going to think of the thing as a picture."

That's the way they think about architecture today. Pause now. As the booze pours on, they get the banjo and the autoharp down from the wall; and as the exposed plumbing gurgles through the Tack House, and the dogs scratch and bark for entry, and the smoke leaks out of the Franklin stove, these building



speculators, these 26-year old land magnates, run through a couple of favorite folk songs.

The question that the Prickly Mountain project raises principally concerns land usage. In this age of expanding population on a nonexpanding planet, in this age when megalopolitans are flocking to see the remnants of our unspoiled, natural terrain, how can ostensibly serious young architects go on dotting isolated sculptures-for-living throughout the countryside without being accused of despoiling the land in a kind of high-class Levittown manner? What do they teach them in school nowadays?

"One of the things we cannot do," Sellers protests, "is to finance a multi-million-dollar, gigantic project, though I think we could perhaps design it."

Reinecke adds, "If there were people up here we would be making a town. But we have to start by getting the people by building them houses."

So they're doing first what they can, and, anyway, the master plan already shows cluster housing, which will probably come along in time. However, what seems not to have been taken into account in this architectural summer

camp activity is that a single-building town could be built in an additive way—on an open-ended scheme—and ultimately satisfy these architects' present goals as well as the necessities of serious planning and land usage, and coping with the automobile.

After the folksongs, they had enough steam up to make a conclusion. And the discussion turned back to the subject of architects being their own entrepreneurs.

"Do you know what the official AIA position on that sort of thing is?" somebody asked.

"They probably object," Sellers came back. "But that doesn't matter, OK? The

AIA is too small. It is almost irrelevant not to bother even talking to them. It's not in their scope. They're off with the guy who is obsolete already. And, if the AIA wants to come along in and be responsible about it, why hooray, but I'm not going to wait for them, and I'm not going to bother wasting my time trying to convince them."

"Then," one critic asked, "do you think the AIA ought to take stands on where we need towns and buildings and what we need?"

"Sure, absolutely. . . . And someone ought . . . the goddam Government oughta be pumping a lotta research money into that because maybe they're the ones who'll end up, in the final analysis, as the only ones who ever have a big enough scope to . . . uh . . . to be concerned. . . . Who else, so it's the Government maybe, or it's an architect . . . and maybe the AIA, who's supposed to represent the summation of all those architects, and perhaps—which is supposed to be their symbolic . . . uh . . . decision-maker—perhaps they can be responsible and do some research, a little bit of advertising for what is right, for what they need to do . . ."

How 'bout that? It figures.—CRS

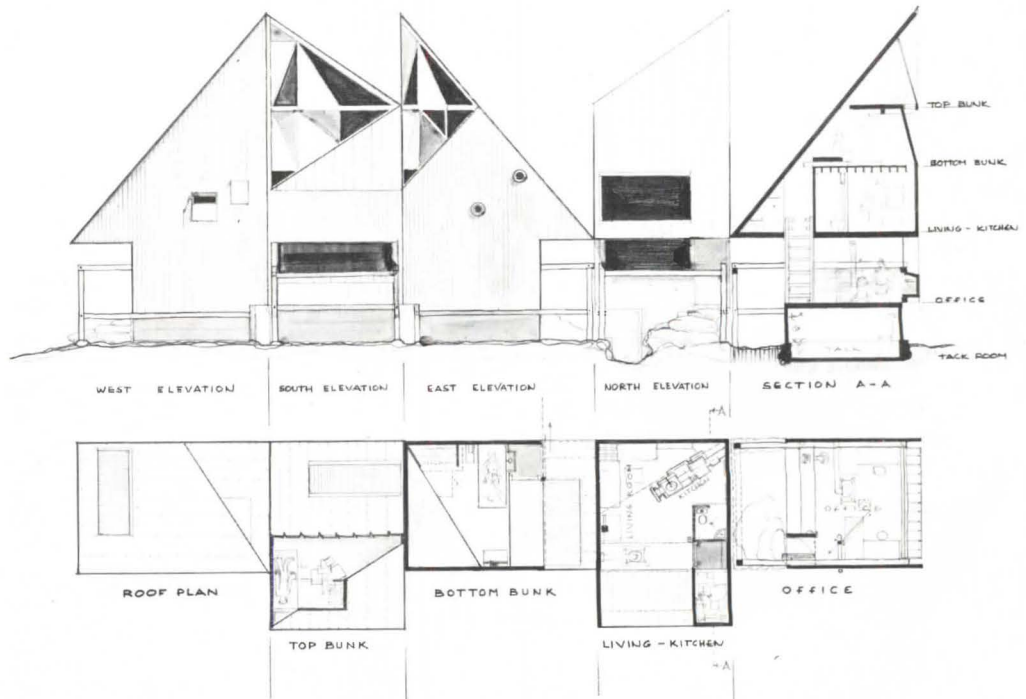


Tack House

What Reinecke and Sellers are doing in terms of architectural design is a paradigm of the new generation: breaking out of the box into a diagonal world and putting uncommon materials at the service of common functions.

The Tack House is a sprouting pyramid that starts with an ordinary gable roof and grows up at one corner into a tassel of triangular windows and colored panels around the

frigerator and stove in plexiglass niche (4-5) project outside building line. Old objects are put to new uses: stools are taken from old ice-cream parlor (6); a rake becomes a tie rack. Dining-room table hinges down for use and rests on wooden post anchored in the floor (8-9). Heating pipes and gay plastic plumbing lines are left exposed for decorative effect. Sink (10) is salad-bowl manufacturer's left-over, scooped out of a block of wood.

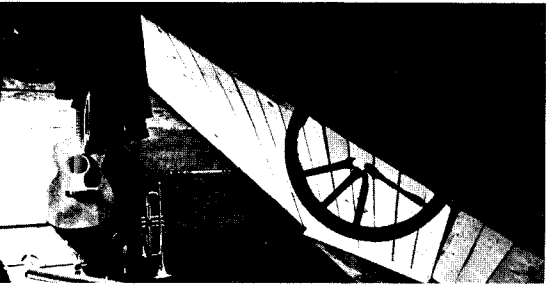




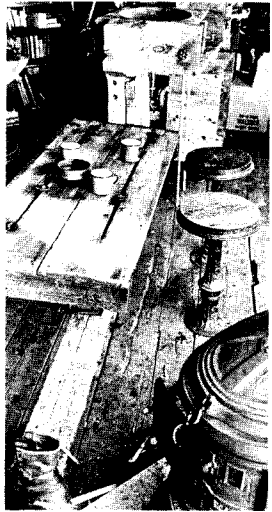
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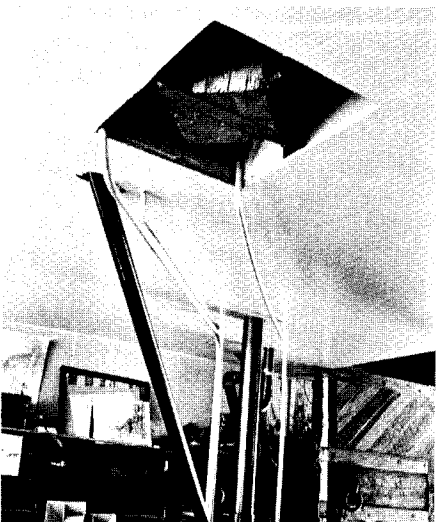
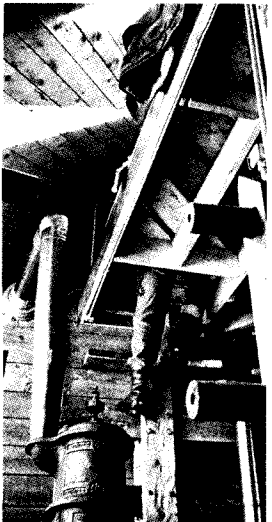
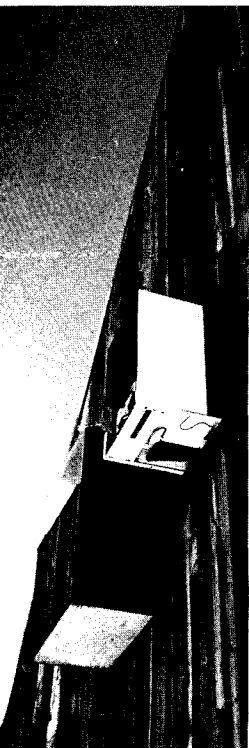
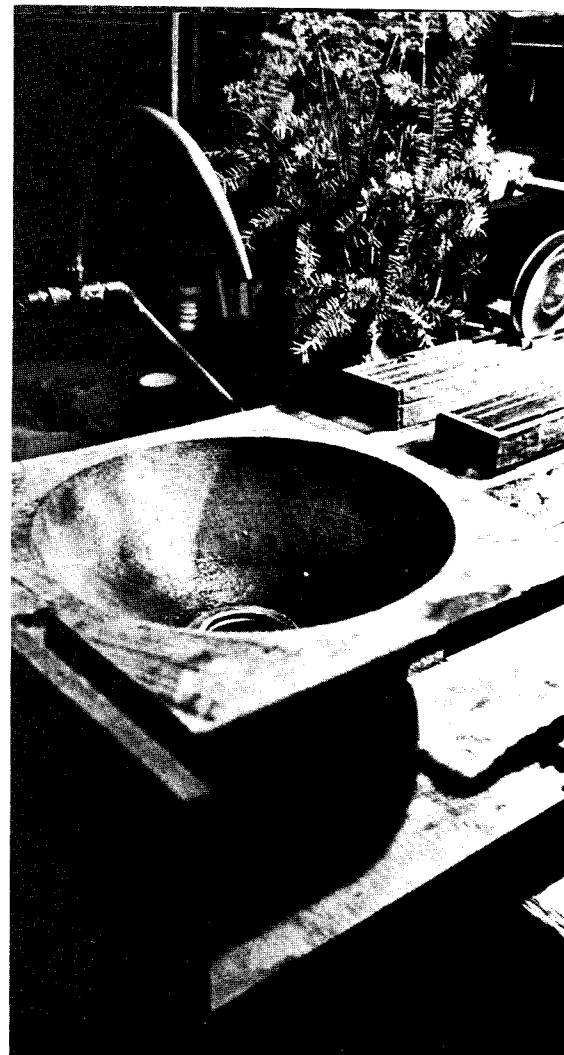
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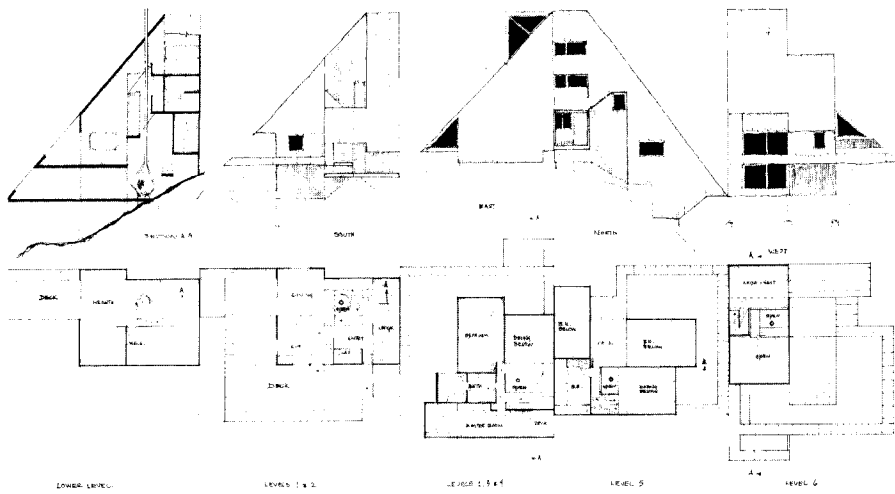


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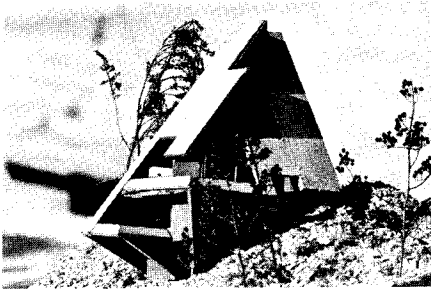




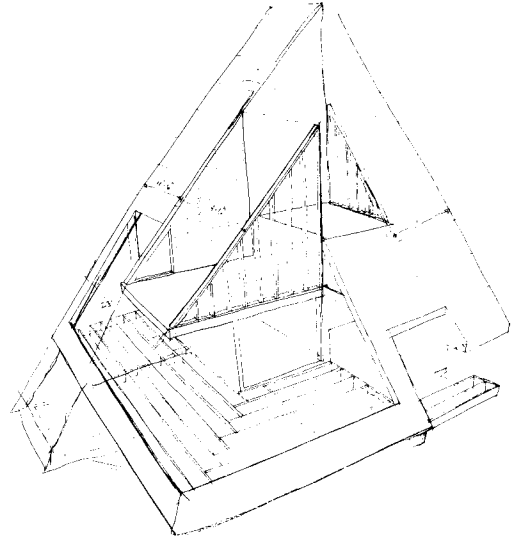
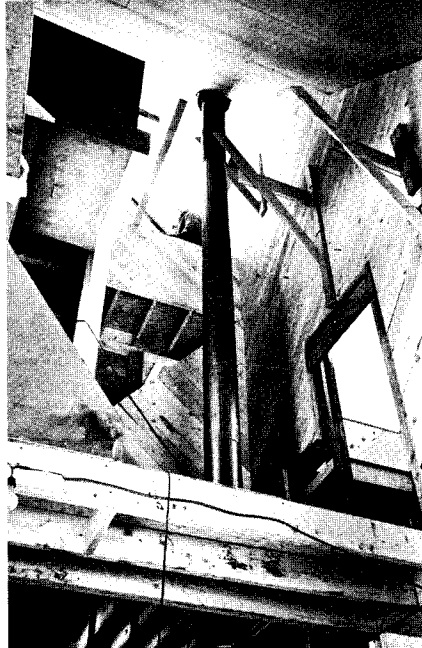
Pope House

Designed by Sellers and Reinecke for a Wall Street broker, this house (1) is being built by a contractor using isometrics as working drawings. The house sits on rocky slab that becomes floor on lowest level; roof is made of 6-in.-thick, 4' x 12' stressed-skin plywood panels performing double duty as both cover and structure. Cost of house was \$8.75 per sq ft, and expenses were cut by eliminating all interior trim; instead, borders of plywood panels were painted bright colors rather like pin-striping of old automobile covers. With whimsical adaptability, 4-in. tongue-and-groove roof planking becomes stand for sink (3), decking (4) circumvents trees. Interior (2-5) is dominated by a continuous 60-ft space from top to bottom of building within which triangular shapes pile up in a sculptural heap.

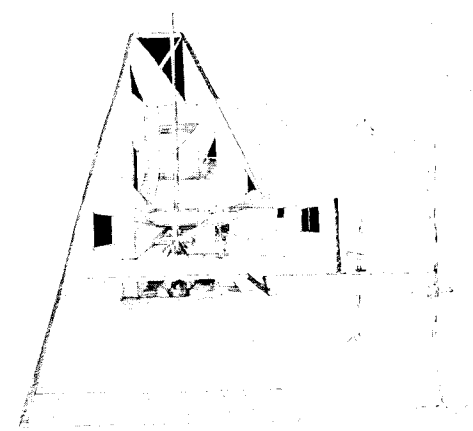
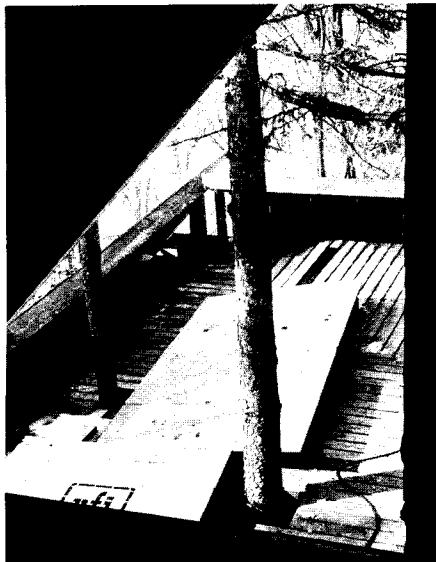
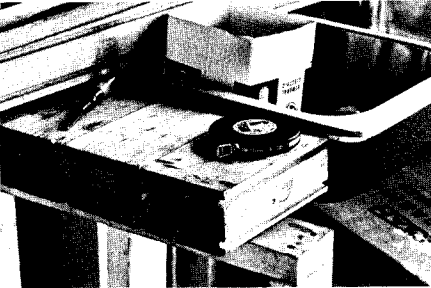
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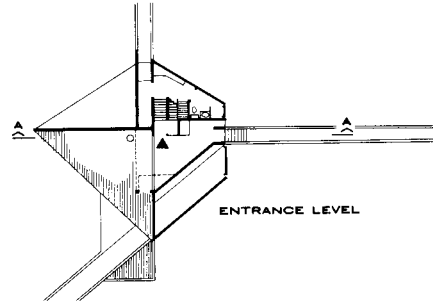
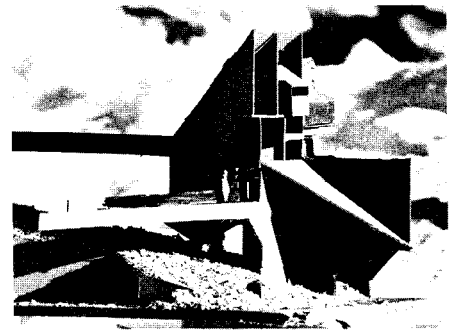


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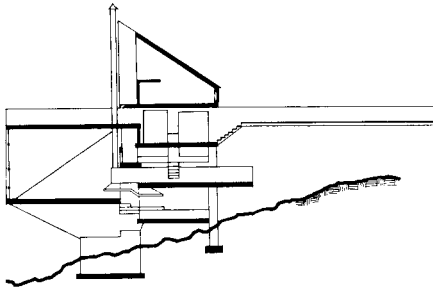
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Bridge House

Designed by Sellers, this house gets its name from the long walkway that joins the hillside and third-story entrance. Another bridge, at right angles to the first, leads out to a barbecue ledge and sun-bathing rock. Working with Owre, the house is an experiment in making the furniture determine the structure of the building: Instead of placing beams at ceiling height they are positioned at furniture-level to serve as chairs, countertops, and tables. Plywood beams are used instead of heavy timber.



ENTRANCE LEVEL

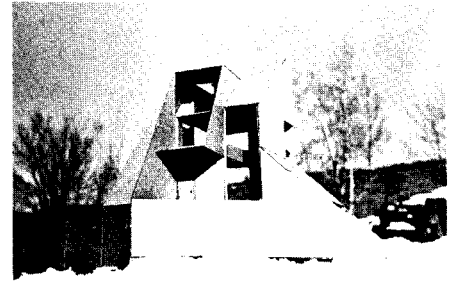
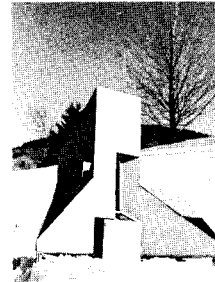


SECTION A-A



Reineke House

Also to be built on speculation, this one has a central tower as its core, buttressed on the sides with triangular projections that rest on the ground. The center of the house is a 16-ft cube at the second level; nearly every room has a sun deck. Work will proceed with Owre on the job at the very beginning. "We feel that Owre can be used a great deal more than he is at present," says Reinecke; "in this house for instance, colors could be determined as the structure goes up and this could influence the form of the house as it develops." The hope at present is to build it, sell it quickly, put the money into another design, build, sell, build, sell, build, sell. . . .

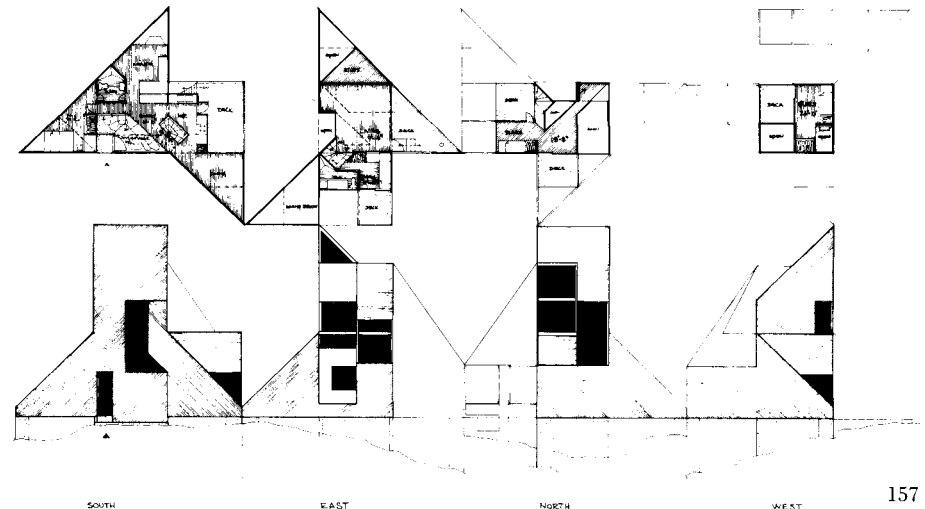


ENTRANCE - FIRST LEVEL

SECOND - THIRD LEVELS

FOURTH LEVEL

FIFTH LEVEL



SOUTH

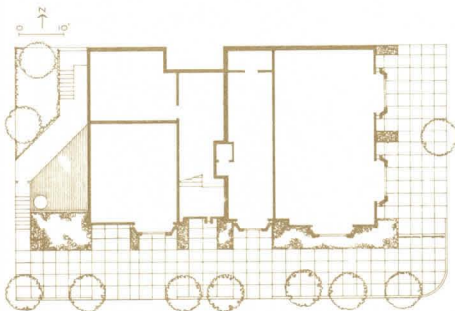
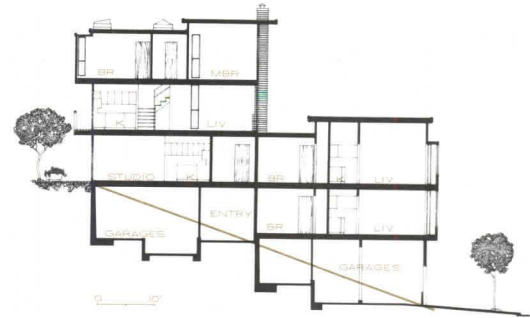
EAST

NORTH

WEST

BUILT TO A HARMONIOUS SCALE

Name and Location: 300 Hill Street, San Francisco, California. **Architect:** Jonathan D. Bulkley. **Site:** Lot 38' x 75', sloping diagonally up from corner at an angle of 36°. Adjacent row housing is of one- and two-family units. Building covers 80 per cent of lot area. **Program:** An apartment house designed with the minimum number of units for the site to meet competitive cost of rental units in the area. An "owner's apartment" to be included. **Structural System:** Standard wood frame. Staggered stud partitions with wool acoustic material between apartments. Floors covered with wool acoustic and acoustic fiberboard, carpeting, and pads. **Mechanical System:** Heating, forced air. **Major Materials:** Exterior: cedar shingles untreated and unfinished, redwood trim, painted aluminum sash, built-up roofing. Interior: walls of gypsumboard; ceilings, sprayed acoustic. **Cost:** \$95,000 total cost; \$12.50 per square foot. **Photography:** Joshua Freiwald.



"The design was one intended to harmonize with the area in which the building is located and the rather jagged profiles of the semi-Victorian houses along the hilly streets," says Bulkley. The older houses, many almost a century old, are reminiscent of the characteristic charm of San Francisco. They remain dotted among the stuccoed moderns of the 30's and the modified moderns of today to remind one

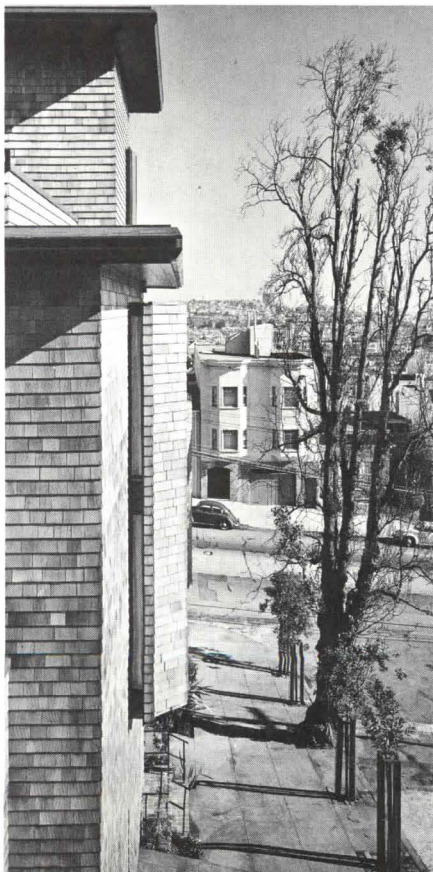
of the beautiful peninsula city before the sprawl of Los Angeles began to creep up the coast.

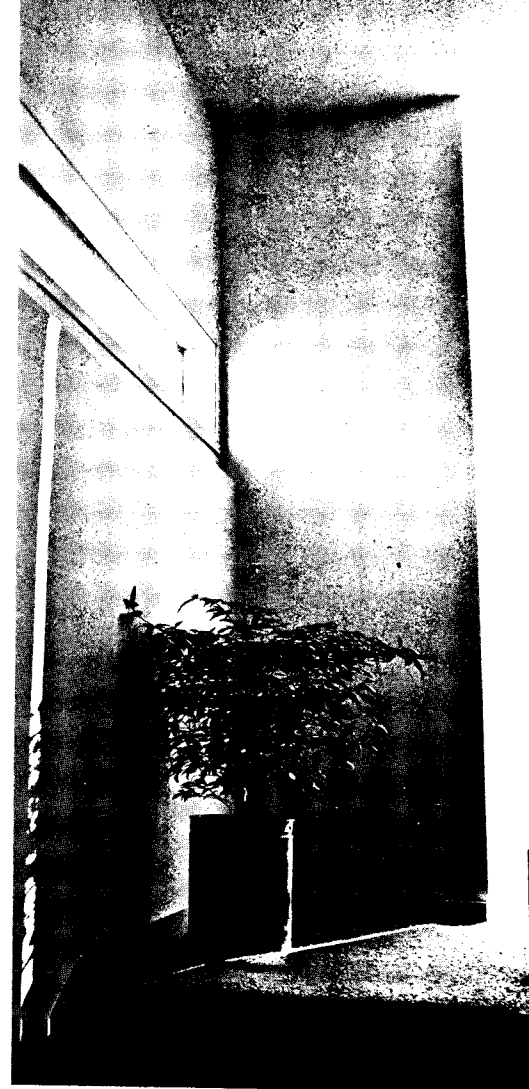
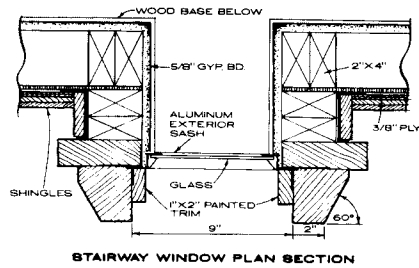
Bulkley turned the steepness of the site to his advantage. The architect gave every apartment a southern or eastern exposure by offsetting the living areas on four levels with a fifth, used for off-street parking. His design of the slope also permitted an increase in outdoor living area through the utilization of roof areas for terraces and by making the backyard area accessible on two levels.

Bulkley separated the building mass to keep it in scale with smaller surrounding structures. He used a single material to express the building as an entity and retain meaningful expression of the individual forms. The bay windows, which have traditionally been San Franciscoan for almost a century, were a pleasant way to increase the natural lighting in a foggy city and add interest to both the apartments' interiors and the building's façade.

Sitework was considerable, though minimized by stepping the building up the hill. Landscaping was limited, since the building covered 80 per cent of the site; one monumental tree, however, remained on the sidewalk.

The tenants are happy about the sound-proofing, which is used in all separating surfaces between apartments. Public acceptance of the building seems to be satisfactory, but the architect reports that some prospective tenants have said that they would not want to live in such a "ridiculous-looking" building. These were undoubtedly people from out-of-town—probably Los Angeles.—fw

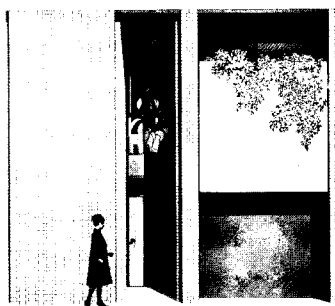




IT CAN BE DONE IN MANHATTAN

"It is my specific task to show a not-yet-existing building in its real surroundings. This might be called an impossible undertaking because . . . seasonal changes, variations of daylight and artificial lighting . . . changing weather conditions. The stationary elements would have to be shown in ever new relationships to moving objects. . . . We will also have to take into account the changes adjacent buildings and the whole neighborhood may be subject to—changes that may, within a short time, produce a completely new picture. No matter how true I try to be to reality, reality will always be somewhat different."

HELMUT JACOBY, *Architectural Drawings*



Name and Location: *Jacoby Townhouse, 767 Greenwich St., New York City.* **Architect:** *Leonard Feldman & Associates; Helmut Jacoby, Designer.* **Site:** *Former lumberyard on the expanding fringes of Greenwich Village.* **Program:** *Combination living and studio space.* **Structural System:** *Brick cavity and filled cavity bearing walls; steel bar joists first floor, wood joists over.* **Interior partitions,** *wood stud with plasterboard.* **Mechanical System:** *Heating and cooling: ducted system, gas-fired.* **Major Materials:** *Exterior of exposed glazed brick and precast concrete; interior of glazed brick, painted gypsum panels, white terrazzo floors. Ceiling T & G combed grain fir.* **Cost:** *Accurate figure impossible, since Jacoby did much of the work himself.* **Contractor:** *Helmut Jacoby.* **Photography:** *Alexandre Georges.*



The Jacoby house, on the outer fringes of expanding and fragmented Greenwich Village, is located in an area that has never fully recovered from its association of violence in earlier days, when the police traversed the district in patrols and its reputation rivaled that of "Hell's Kitchen." The present environment is a combination of old houses that were once—some still are—frequented by artists, sculptors, writers, and others without visible means of support. It is a changing neighborhood of old houses, and faceless speculative apartment nonentities.

The Jacoby house is in the center of the melee. The back windows embrace the charm of 80-year-old backsides, where a picket fence proudly proclaims land ownership of a bit of first-floor roof. The view is of back windows and air-conditioning protuberances from the small first-floor businesses on the adjacent street. Jacoby's slot stairway windows look into an odd-shaped neighboring court filled with builders' debris from remodeling work on the neighboring house. The high study window over the house's entrance gives more of a view of sky than of the anonymous apartment houses across the narrow street.

The street still has the architectural

charm of the elements that made Greenwich Village a village, although mixed with deteriorating tenements, street debris of inadequate garbage collection and the indifferent aim of curbed dogs.

Jacoby designed his house, modestly scaled for people, on the site of an old lumberyard. The measurements of its scale will apparently remain, for of the houses on either side, one has already been remodeled and the other is in the process of being remodeled. In this neighborhood, war between restoration of a worthwhile environment and the take-over of the faceless block building, Jacoby has struck a modest but well-aimed blow.

Jacoby the Contractor

Jacoby studied at technical schools in Berlin and Stuttgart, and the Graduate School of Design at Harvard for his B.A. in architecture. He is a well-educated man and a brave one. He undertook to be his own contractor. He made shop drawings and supervised construction in the field—a supervision simplified at times by a Herculean brother-in-law who set the ground floor bar joists single-handedly.

Jacoby says there were a lot of coordi-

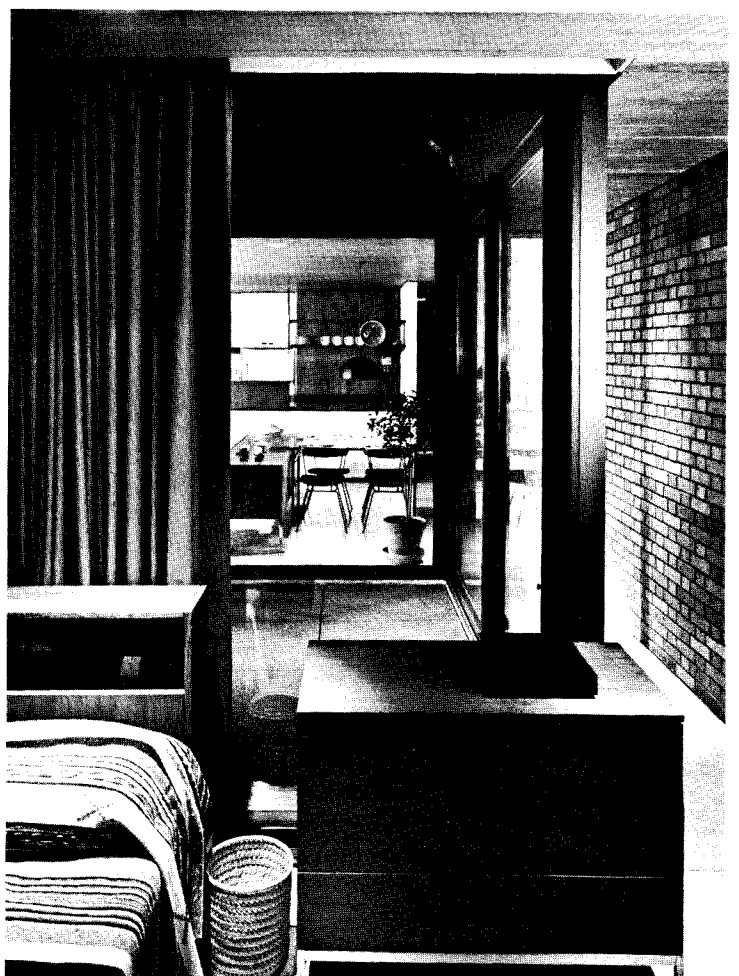
nation problems. People called him at his midtown office with simple requests, such as, "Where do I put a load of sand; a car is in your driveway." Problems were further complicated by an alert police department, which reached a peak of issuing summonses on behalf of the enraged sidewalk. However, it eventually became cooperative when Jacoby made the police realize the richness of design involved.

The zoning of the lot is for a business and residential location, which makes it an ideal studio site. This was also fortuitous in that Jacoby was able to cover almost the total site with his building. A backyard would have been a nuisance: It would soon have become the litter-basket for trash from the surrounding windows. Instead, he perforated the center of the house to provide his own private, central court. The court also separates the dining and sleeping areas while making the private glass box with tree accessible to all three areas.

This Observer's Detailing Comments:

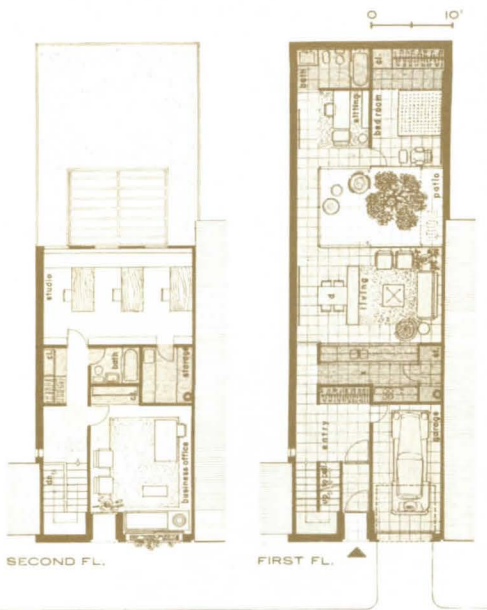
The detailing is excellent, with all of the careful consideration of a Jacoby rendering. Its execution is good for an economy











residential job, but poor in terms of the quality of Jacoby's detailing system. The concealed lighting over the stair sets off his favorite brown, this time in brick, and the simple placing of bar bent rings into the brick for the roof-access ladder is both precise and clean detailing.

A bit of charm is in Jacoby's detailing of the crab-apple tree in the open court, although he chose a somewhat unorthodox method of support. It is held up from the basement with a Sears Roebuck jack under a section of wide flange, which supports the first-floor bar joists—a simple solution to an otherwise expensive framing problem. Perhaps the tree could be lowered and raised to brighten basement wash-day activities.

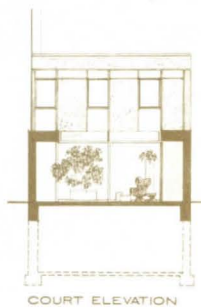
The garage has a white integral terrazzo floor, carried in from the living area. This does not express a Jacoby veneration of the automobile, but the very practical consideration that, in New York, the automobile occupies some of the best space, and a hope on Jacoby's part of reclaiming this prime floor area for studio space.

There is a little strangeness in the continuous vertical joint at the brick return of the entrance, although the detailing as

a whole exhibits a fine perfection in exterior detailing. The feature strip of the interior partitions allows the ceiling to pass over the nonstructural partitions, while the strip is reversed at the juncture of plank ceiling and brick wall to allow the ceiling to float.

In summing up the experience of designing and building his own house, Jacoby remarked: "Life is so dull if you don't try something like this. I had to get it out of my system. . . . Designing was the fun, and my advice is, don't build in New York. . . . Now that it is all over, I don't think of design; only if there is enough heat." When asked if he would do it again, he thought a moment and replied, "When this wears off, yes." What would you do differently? "Get a good contractor." It is this writer's opinion that Jacoby could not have had a better one than the one he had.

Usually, the architect who chooses to devote himself to making renderings of buildings does so because he sees buildings as pictures. Jacoby might see buildings as fine graphic art, but he certainly was not willing to render unto the tradesman what was Jacoby's.—FW



COURT ELEVATION





Rock-bottom "housing" for the migrant worker is in the ditchbank. Here, migrant families are joined by the "ditchbank wino," who works only long enough to buy alcohol; here, too, the local teenagers frequently appear, late at night, pelting the campers with rocks. To take an accurate census of migrant families, the California OEO has been using a low-flying plane, piloted by sanitation and housing specialist Ralph Gunderson.



PHOTOS: JOSHUA FREIWALD



SHORT-TERM HOUSING FOR A LONG-TERM PROBLEM

The Problem

California's agricultural industry is huge, employing some 500,000 workers, supplying some 40 per cent of the nation's table food, and taking in annual receipts of over \$3,600,000,000. The average annual income of seasonal farm families, an aggregate of all who are old enough to go out in the fields, is \$2500.

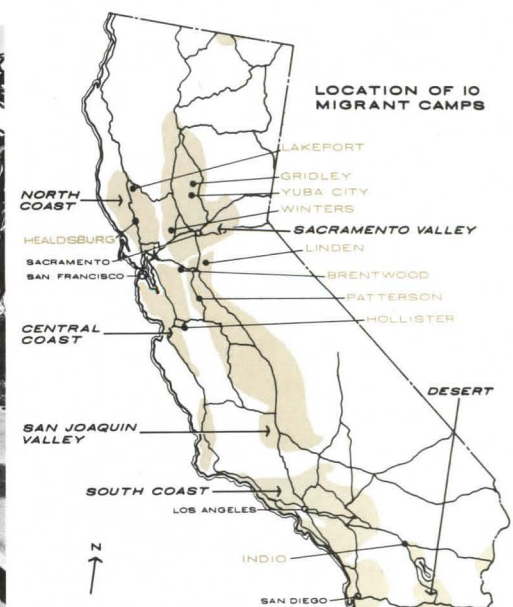
Rural housing in general is of dismal quality; Governor Brown's Advisory Commission on Housing Problems has estimated that there are 200,000 substandard units in the rural agricultural areas of California. Highway 99, running the length of the state and lined with farm workers' shanties, has been termed "the longest slum in the world." But for the 5 to 10 per cent of California's farm workers who go on the road, traveling up and down the state, following the harvest for a living, housing is worse than substandard. A state map from the Farm Labor Office tells migrants what to expect in the way of housing throughout the state: housing for single men is generally "available"; on-farm housing for families

is "scarce" or "very limited"; and trailer camps, motels, and other rentals are "usually available." The map does *not* mention that family housing, when available, can cost as much as \$15 a week, and be considerably above the allowable occupancies set for courts and camps. The large families—four, five, and six children are not uncommon—present their own problems of overcrowding.

With no shelter available, many families are forced to camp in ditchbanks and under bridges, where the most elementary sanitation and comfort is lacking. But despite the varied types of shelter, the common denominator for migrants is a vast sense of social isolation. Migrant workers do not belong to any community, are not wanted by any community. They are herded off after the harvest, and while in residence are beyond the reach of such basic services as schools, day-care centers, clinics.

Growers and local officials have consistently ignored the plight of the migrant. Until last year, a large supply of Mexican labor (150,000 last year) provided an effective means of keeping domestic labor at substandard wages and conditions; the *braceros* were also, in effect, a captive labor force that could be shuttled into any area to keep domestic labor from organizing. With the stormy and long-delayed repeal of the *bracero* law last year, this imported labor supply is now cut off. The growers still claim there is an inadequate supply of domestic workers; other Californians suggest that an adequate supply depends only on decent wages and decent working conditions.

"The Grapes of Wrath" is a timeless epic, as affecting today as when it was written. Unfortunately, the life of the migrant farm worker has changed little since the 1930's. During the Depression, the Farm Security Administration initiated a program of model camps, clinics, and community centers for migrants, but these efforts have long since been abandoned. Now, in the 1960's, a new attack is being made on the wretched existence of these forgotten Americans. The Office of Economic Opportunity, with architects Sanford Hirshen and Sim Van der Ryn as consultants, has launched a program of temporary shelter in California that will put 1000 units in use by the time of the 1966 harvest. Presented here are the beginnings of this challenging work: the state's involvement in it, and the architects'—and the first two completed camps.



Response to the Problem

Early in 1965, California became the first state to apply for Federal funds under Title III-B of the Economic Opportunity Act ("Assistance for Migrant and Other Seasonally Employed Agricultural Employees and Their Families" for housing, sanitation, education, and child-care). With a grant of \$3,800,000, the state OEO director, Dr. Paul O'Rourke, envisioned 10 camps—100 units each—of short-term, temporary housing.

O'Rourke had already made a name for himself (and some enemies) by his courageous concern for the migrant. Hirshen and Van der Ryn were impressed with his toughness and iconoclasm. They themselves are struggling against the prevailing apathies, finding themselves among a growing group of "underground" architects who are "discontent with the inability of the profession to concern itself with significant social problems." They were convinced that conventional techniques would not meet the migrant problem. O'Rourke was skeptical of "ivory tower" architects, but asked them to explore some of the newer technologies.

Hirshen and Van der Ryn then began an intensive search, cross-country, for a building system. For \$500, such a unit must be large enough to house a family and be adaptable to the needs of a migrant family, be easily erected by unskilled labor, last three to five seasons, be suited to the climate (temperatures can reach 125 F in the summer in southern areas), and be pleasing in appearance.

At the University of Michigan, the architects learned of a new building material—kraft paper bonded to a polyurethane core—and of a Canadian firm that was developing an accordion-like unit from it. They asked the inventor of the "plydom" unit, Herbert Yates, to join them in California and continue development of the system. Then followed a feverish period of refining the system, testing it, modifying it. The three men developed a lightweight floor system. They developed suitable ends for the units, and studied interior arrangements. Then work was begun on a plumbing and utility core.

During the spring, the First Governor's Conference on Farm Worker's Housing was held, initiated by O'Rourke and attended by some 300 growers, housing officials, workers' representatives, and others. It was necessary to stimulate local support for the temporary-shelter pro-

gram, since the OEO funds, although already granted, are available for these facilities only if requested by a specially formed Community Action Council. This would be difficult: The growers were hoping to get Mexican laborers back, and

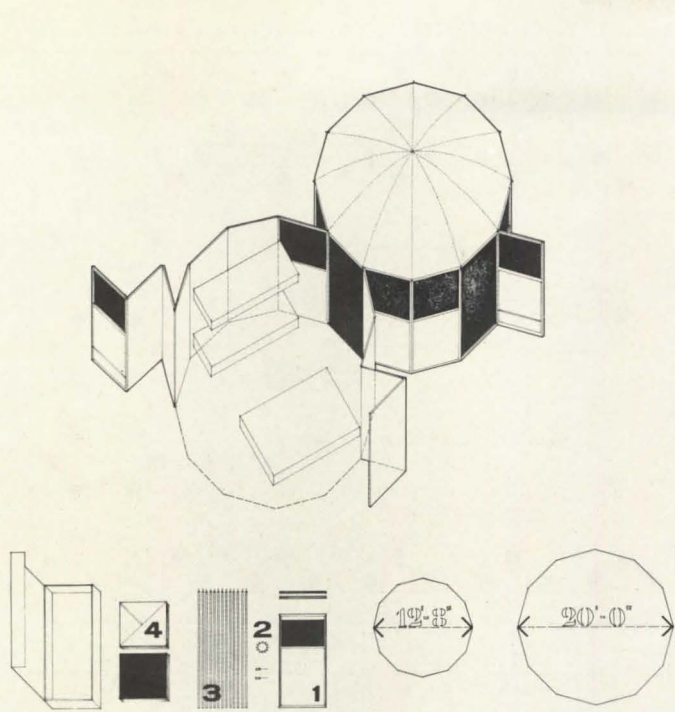
were reluctant to help attract a stable seasonal domestic work force. Housing officials were also reluctant, deriding the temporary units (on display at the conference) as "paper houses," and opposing the large outlay for temporary units.

COMMENTS BY HIRSHEN AND VAN DER RYN:

"Physical design, and architecture in particular, are offensive words to the people who formulated the War on Poverty. The most important reason is that 'good design' and architecture have generally not been identified with programs that have helped the urban or rural poor; in fact, it is the other way around. While the architectural press has praised the fine design of a number of renewal projects as creating a better urban environment (for the upper-middle class and cognocenti), most housers and social planners have seen renewal create only worse conditions for low-income families, since renewal builds less dwelling units than it removes and thus worsens the total housing stock. Many active in the War on Poverty see architecture as a plaything for the rich (indeed, Sargent Shriver is quite an architecture buff), and a status symbol not having much to do with poor people or their problems.

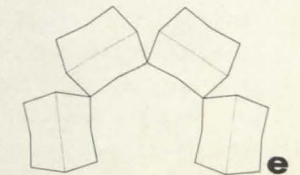
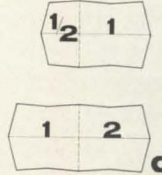
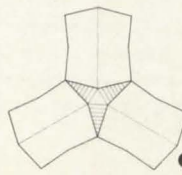
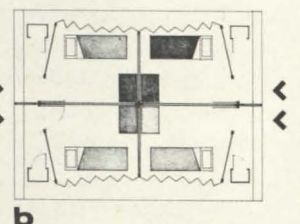
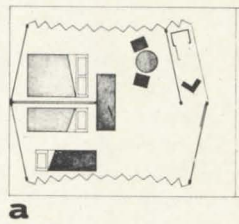
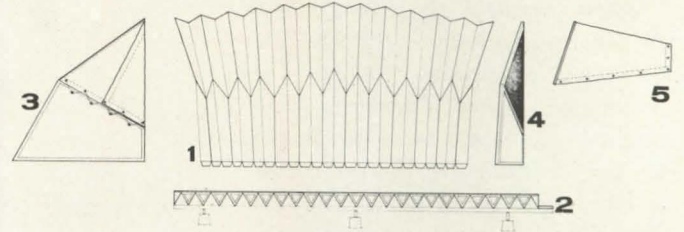
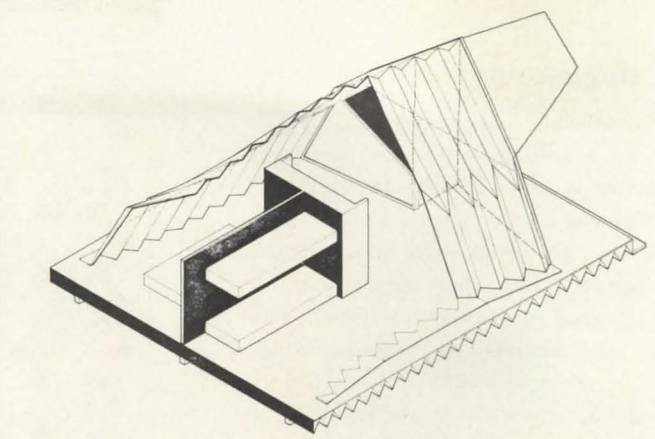
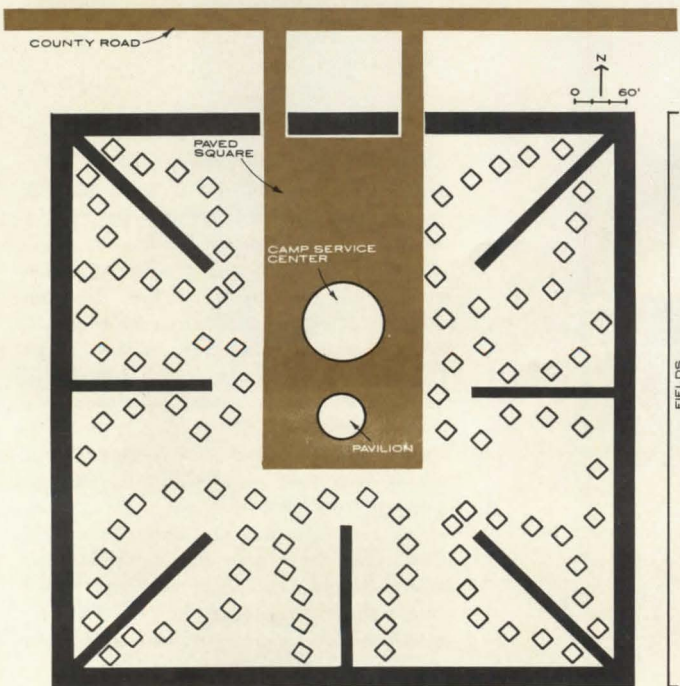
"Perhaps equally important, a whole generation of planners has grown up in an academic world where the physical determinism of the last century has been largely discredited, and where the quality of people's lives is seen as largely determined by personal factors and social structure. In this view, the physical environment is largely passive. Provide people with a stable family structure, adequate nutrition and health care, a good education, equal job opportunities, a sense of personal dignity, and the good life will follow. Public housing is often cited by the social planners as an example of a failure of a mere improvement in physical environment to produce a significant difference in the pathology of poverty.

"We sketch out this background because it is important to understand the bias, and often outright hostility, toward architects and what architects do, that we first found in dealing with those dedicated to improving the social and physical environment of the poor. This bias is found throughout the Economic Opportunity Act itself, since, except for very limited instances (such as the migrant program), it prohibits the use of antipoverty funds for "bricks and mortar" purposes. The current rumor that the Community Action Program may be shifted from OEO to the new Department of Housing and Urban Development may represent a recognition that social and physical planning must go hand-in-hand. It may also represent an effort by the social planners to penetrate the heretofore impenetrable physical-determinist and middle-class fortress of the HHFA. In any event, on the fact of the evidence, this bias against architecture is largely justified, since, except for a few tiny efforts (Karl Linn and his urban information centers, Hatch and ARCH in Harlem, and Roger Montgomery's Urban Design Center in St. Louis), the architectural profession has not taken any initiative in trying to meet the physical end of social problems. Almost every architectural student for the last 20 years has felt his pulse quicken at the promise of the millenium in low-cost housing, yet there have been few real ideas and almost no action. Bucky Fuller, and the research program in plastic housing at the University of Michigan, alone come to mind in this question. Meanwhile, under the pressure to provide low-cost flexible housing, a huge mobile-home industry has evolved without any assistance from the architectural profession. The only contact that most architects are likely to have with this important source of adequate housing for low-income families is when his local AIA chapter says the local trailer park must go, a victim of the AIA's War on Ugliness. To work on significant design problems with a social orientation, architects must seize the initiative, create their own clients and framework, prove their worth. This is what we have tried to do."

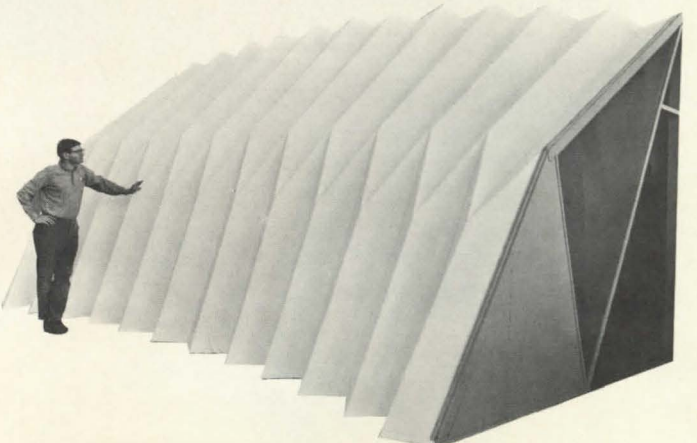


At the Governor's conference, Paradome unit was recommended only for extremely short-term use. It encloses 123 sq ft, and folds into a 3' x 3' x 9' package. Each panel is framed with aluminum and faced with rigid vinyl. Roof is an insulated, nylon-reinforced vinyl, supported by an umbrella-like framework of aluminum tubing.

The architects prepared schematic site plans to show their general recommendations. In plan, a camp should have "simplicity and clarity of organization without regimentation," they stated. At the center is the day-care facility, locus also of the clinic and other group facilities. Since the camps are not permanent settlements, it is hoped that a community feeling can be "built in" through natural meeting places, with the privacy of the individual family being respected through private spaces, indoors and out. Because of dust, the front of each dwelling is oriented away from the access road, yet each family must be able to look out on its most important possession, its car.



Plydom combines curved surfaces with corrugated construction to produce an extraordinary rigidity. With each corrugated "beam" exerting a movement opposed by an equal force, the structure is in permanent tension. It has been tested for wind loads in excess of 120 mph. The polyurethane will last indefinitely, and has superior resistance to fire, heat, and impact. As presented at the Governor's conference, the 314-sq-ft Plydom consists of the prefolded structural shell, 3/4" thick, with factory-applied polyethylene finish (1), 20' x 24' floor deck of plastic-coated particle board with integral foamboard beams, wood runners, and leveling jacks (2), glass-fiber-screened ends (3), aluminum door (4), and canvas canopy that can be buttoned down during cold spells (5). The floor system was designed for delivery in three lightweight sections, each 8' x 20', requiring no site preparation; however, the architects found a concrete slab cheaper and without handling problems. Plan variations are as follows: for family use with a small sheltered porch for clean-up at the entrance (a); for occupancy by four single workers (b); and for combination into larger units (c, d, e).



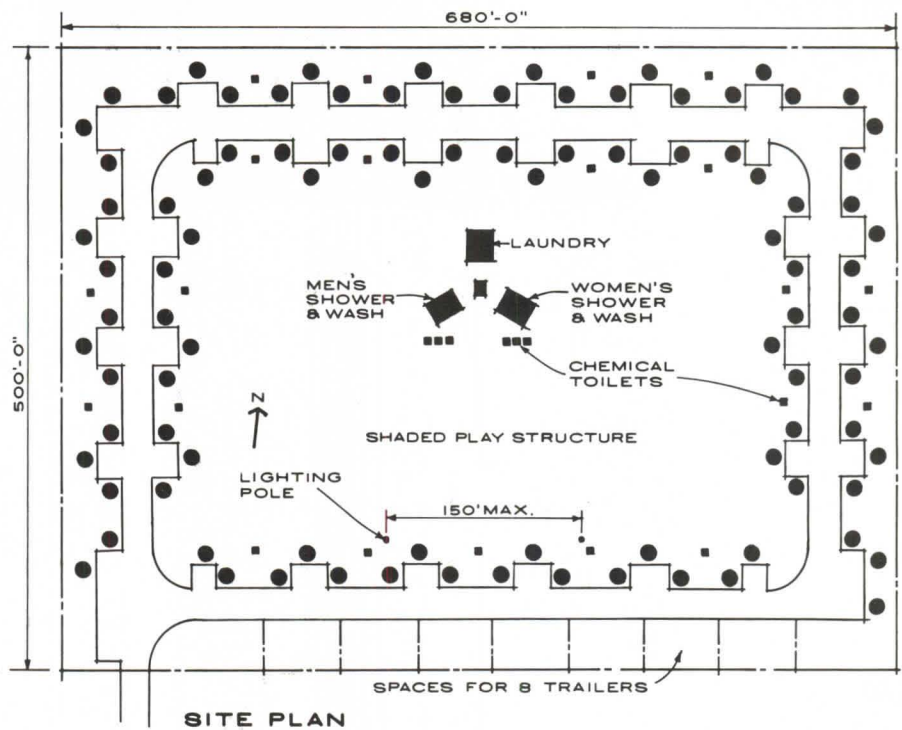
A Beginning: The First Camp

OEO officials looked long and hard for a site near Linden for the first camp. Twenty growers refused to lease land, before one finally agreed to provide a 10-acre site. The camp would fill a desperate, if not fully recognized, need; in an air-and-ground survey the year before, OEO and local officials had counted 380 families in the area camping either in ditch-banks or in overflow numbers in trailer and cabin courts.

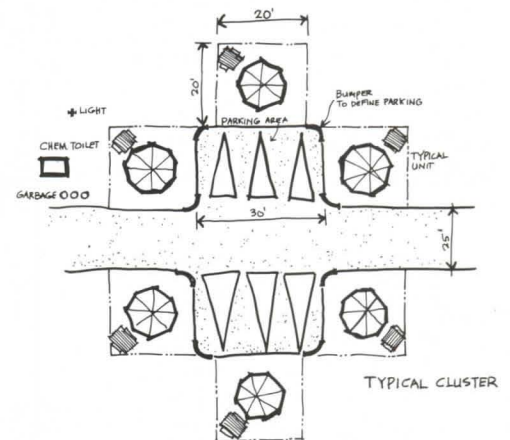
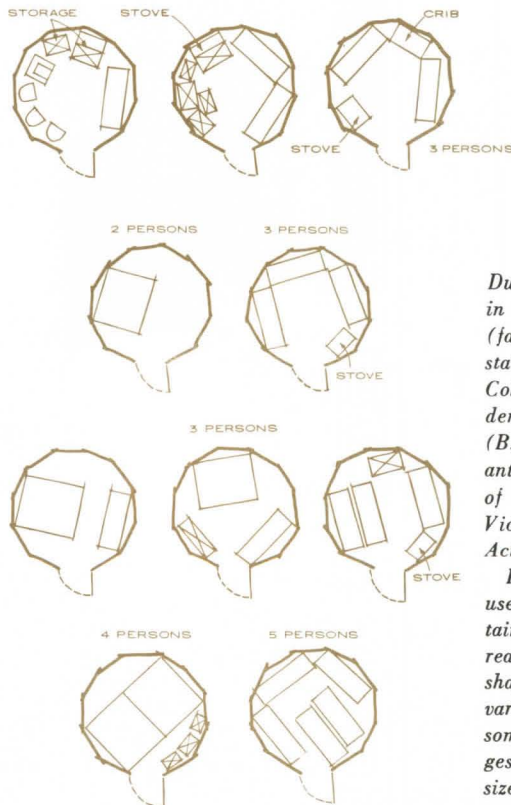
Almost overnight, the rolling hills of the San Joaquin Valley—rich with cherries, tomatoes, peaches, walnuts—had sprouted a new crop: Paradomes. Evaluating the camp now, a year later, Hirshen says that “as professionals, we’re not particularly proud of this camp, but the important thing is that it was done at all.” One of the major by-products was to make visible to the community a problem that it had previously refused to acknowledge. And, from the road, the camp is indeed unmistakably visible—the multicolored units even suggesting a carnival come to town.

The Linden camp is a vast improvement over life in the ditchbank, although the conditions in the camp are at best only primitive. A report evaluating the camp, made last July under the direction of Sim Van der Ryn, concluded that these Paradomes were only adequate for the most short-term living: “Without giving the visual impression of camping, the facilities are just as inconvenient and troublesome as camping.” (There are larger Paradomes, however, with 20’ diameters instead of these 12’-8” units, which would alleviate many of the problems cited.) Specific criticisms and recommendations dealt with the following: lower wall panels (should be of stronger material); exterior storage (would help interior arrangement); showers (should be more private, for the women); refrigeration of food and safe food storage during the day (problems that were not considered in planning).

Van der Ryn is emphatic about the need to evaluate architecture after it is in use. He and Hirshen were also concerned, during the early stages of their work on migrant housing, to make a careful study of the values and needs of migrant workers and families, hoping to avoid the unlivable design, such as is common in public housing, that relieves one stress while substituting another.

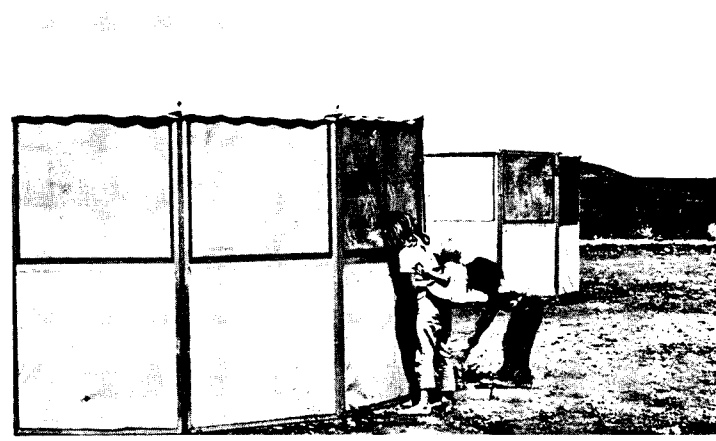
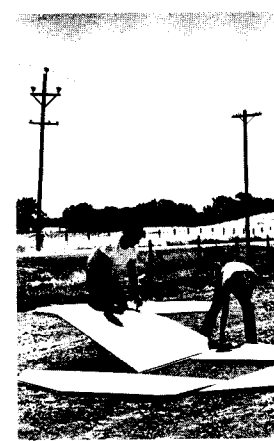


The camp is fenced in, with all grass removed for fire protection. At the center are the service elements—laundry machines in several Paradomes, and showers in Portahouses (prefabs that bolt together with a central plumbing core). At the center of the camp, also, is the day-care facility, with a surplus parachute supplying much-needed shade. Paradome units for individual shelter are clustered in groups of threes; several families share a chemical toilet. A large family is assigned several Paradome units.



During the four-day building of the camp, in May 1965, key persons were on the site (facing page, top left): Ralph Gunderson, a state OEO official; Sanford Hirshen (B. Arch., Columbia, 1959), who has an office with Van der Ryn in Berkeley; Sim Van der Ryn (B. Arch., Michigan, 1957), who is also Assistant Professor of Architecture at the College of Environmental Design; and Joe Artesi, Vice-President of the sponsoring Community Action Council in Linden.

In the follow-up study, the various interior uses of space were noted (left). Despite certain problems with the units, the general reaction to them was favorable. The round shape gives the interiors flexibility and variety, although visiting neighbors report some difficulty in finding the door. The biggest drawback to the Paradome unit is its size, 12’-8” in diameter.



The Second Camp: Still a Beginning

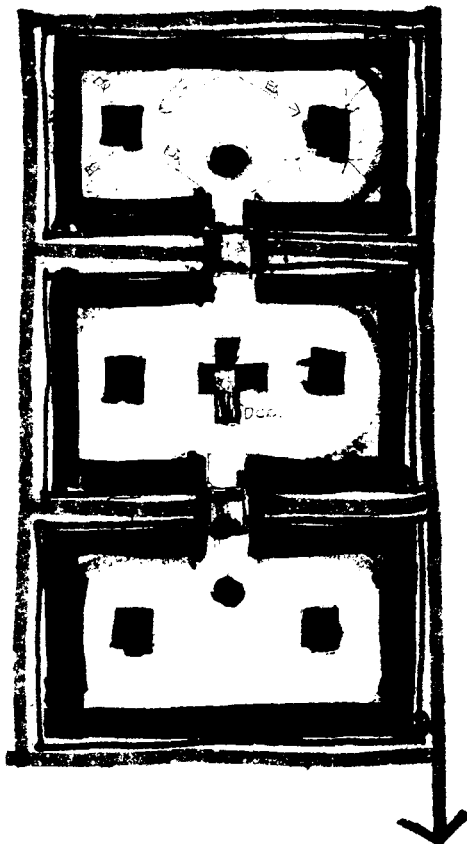
The second camp was erected at Indio, California, during two days in March, with 100 units of corrugated polyurethane suddenly unfolding on 5 acres of state-owned land. The Indio camp incorporates all the key concepts of Linden, now carried much further.

Site planning is "simple and democratic": Three clusters emphasize the central importance of the nursery school; also at the center of the community will be an auto-repair shop, a sewing room, and a woodworking shop. In each cluster are located the toilets, showers, and laundry, with the laundry portion outside, but under cover, as an economy measure for this less private function.

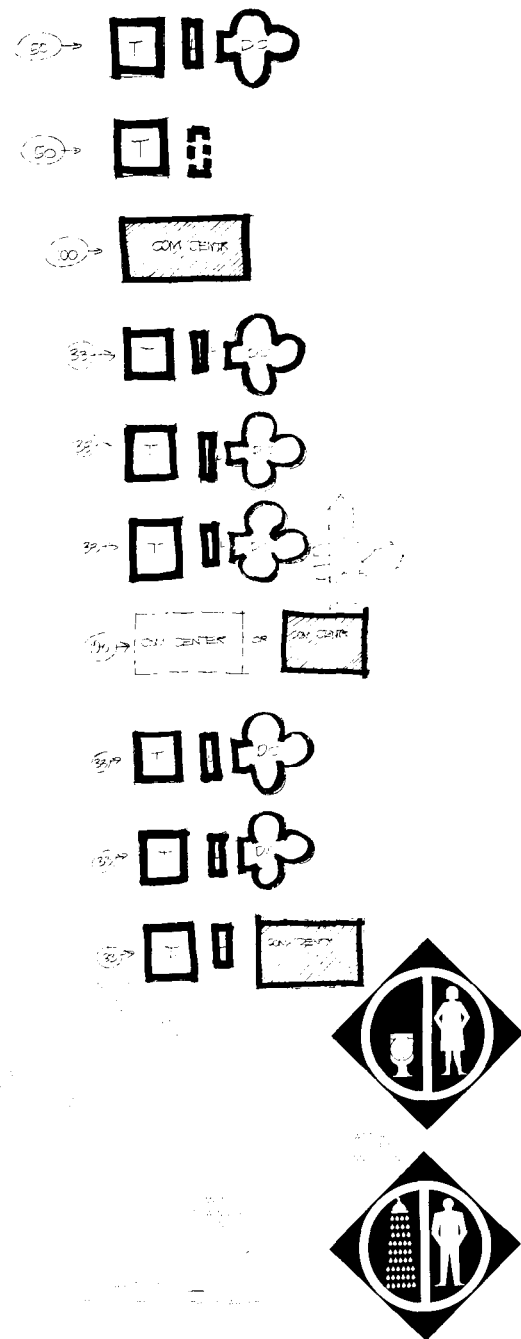
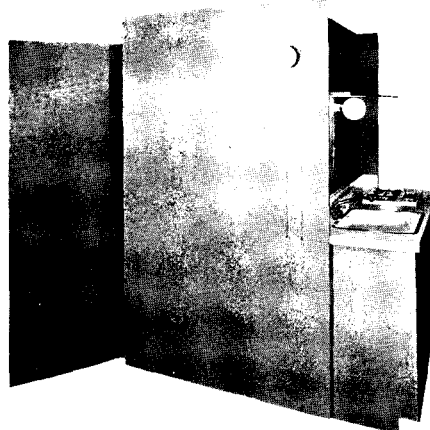
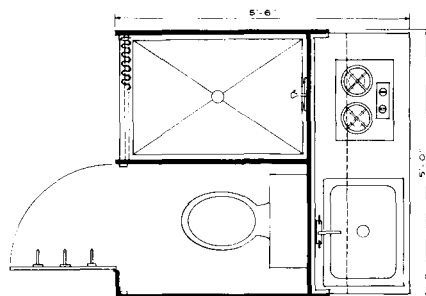
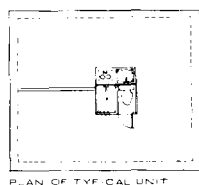
For the first time in these camps, the toilets have been provided with some privacy (toilets are in an improved ratio of one to every two families; showers are also in a 1:2 ratio; hot-water sinks, 1:4). Total costs per unit (limited to \$500 for the Paradomes at Linden) are \$1000 for these units at Indio; the figure includes heating, evaporative cooling, cooking, washing, and complete furnishings of beds, chairs, tables. The cardboard CARE chair designed by Ron Beckman will be among the furnishings. Including all site development, the cost per unit is \$2000.

The only disappointment to Hirshen at Indio was that the local agency did not accept the original design for the nursery facility, which would have used several Plydoms joined in a U plan (as proposed at the Governor's conference, page 169, and elaborated by Hirshen for the Indio camp). Instead, a conventional one-room structure was built (similar to Hirshen's design for the laundry-toilet buildings), with the clear knowledge that fewer children would be served than if several Plydom sections had been used.

The cost of this "disposable architecture" is such that it can be amortized in five years. Writes Hirshen: "This prevents the institutionalization of temporary shelter for a work force that many experts hope will no longer be required in the years to come, and will have to be retrained. The flash-peak camps are thus only a way-station to a better life for migrant families." By consistently referring to these units as shelter, not housing, Hirshen emphasizes that they are not a full solution to the housing needs of these workers, but only a beginning.—EP

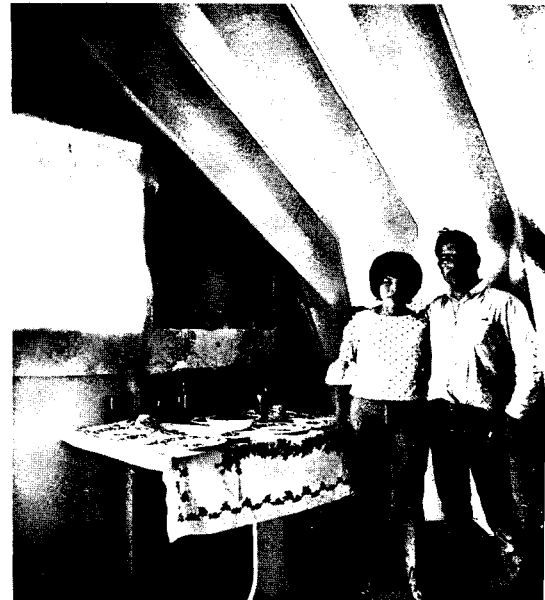
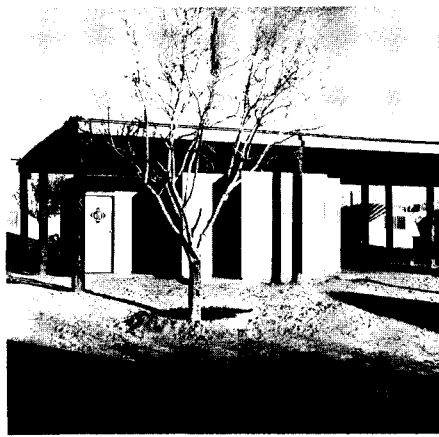


The focal buildings within the camp include a play structure that was an incinerator, the only building existing on the site (facing page, left center), and one of the laundry-and-shower buildings by Hirshen (facing page, left bottom). Within one of the units is the experimental plumbing core for four fixtures (below), with combination vent, drain, and trap of plastic (right). A system of signs was developed that would be readily understood by all (far right).



At Linden, it was thought that the individual units were too far from the central facilities, a situation that is improved at Indio by dividing the 640' x 350' site into sub-areas (see site plan and early studies, above). The contractor, Mrs. Zelda Eliot, was on the job two months. She speaks enthusiastically about the camp: "I haven't made any money here, but I wouldn't take a million for this experience."

Plastic piping has been used throughout, and all electrical service is underground. Union labor was used exclusively, and the construction was subject to the full rigors of state housing inspection. Others who were involved at Indio with Hirshen include Davis & Morreau, structural engineer; Yanow & Bauer, mechanical engineer; and Barbara Stauffacher, graphics. Plydom is a product of International Structures, Cornwells Heights, Pa.; Paradome is made by Outdoor Fibre Products, Chelsea, Mich.



THE PHOENIX: AN ADDITIVE ASSEMBLAGE

LIKE a living vernacular language, the Phoenix House seems a gangling, growing thing. Its growth was in two areas, both of which are reflected in the name, Phoenix House: first, the evolution of the changing program, as the architects and clients communicated with and educated each other; and, second, the growth of the visual image as an additive assemblage. The latter proclaims the Generative Style of a new generation of architects. Showing four differently articulated faces to the inconsistent winds, the shed-on-shed-on-shed house—a traditional New England house exploded—would not, as P/A Editor Jan Rowan explains at the end of this article, have received a passing grade when he was in school. The Phoenix House may not easily get its message across to everyone today, either.

Although communication has been a concern in the arts—at least, since the proponents of “art for art’s sake” staged their self-isolating stand—artists today seem more and more to assert that art not only *need* not, but *cannot possibly* communicate—any more than two people fully can, from Gogo and Didi in Beckett’s now 11-year-old *Waiting for Godot* to the querulous quartet in Albee’s more recent, *Who’s Afraid of Virginia Woolf?*

Perhaps man’s inability to get through to others is a fundamental cause of the layman’s lack of understanding of and disinterest in the art of architecture. In this vein, the two salient features of the Phoenix House—its program and the resulting aesthetic image—are discussed below in a concurrent but noncommunicative dialogue, which is in the different vernaculars of two different generations: On the one side, the client, Ralph Ingersoll, who castigates a mythical architect; and on the other, the architects, T. M. Prentice, Jr., and Hugh Hardy, whose words have been edited to form a synthesized “discussion.”—CRS

BY RALPH INGERSOLL
(All the characters in this story, including me, are imaginary.)

All I wanted, God, was to build a house in the country that I could really afford—for myself and my wife—a place where I could work and she could cook for me. I wanted it to be small enough, and so thoughtfully laid out that she could take care of it (and me) by herself, free even of part-time help and social-security deductions. But I also wanted it to be a thing of beauty, which somehow said to the world, and to me, who I am—or thought I was: A man with a feeling for clean lines and sound proportions, for surroundings that would be at once restful and reassuring and exhilarating.

So I hired an Architect. . . . Now there is that ringing in my ears again, and although the ashes are still warm, the shivering won’t stop . . .

I have to wait a little before I can describe Architect to you. I’m still too nervous. This is not because he is the villain. He is not. He’s the hero; I’m the villain. That’s the whole moral of

this tale.

At first, everything went swimmingly.

I told him what I wanted—and I used to be quite an articulate fellow.

There . . . I’m calmer now . . . I think I can describe him to you: my Architect, my Hero, my Conqueror.

I chose him carefully.

He was a young man, still in his twenties, with a burgeoning reputation as a modern, but still a little short on clients. He had graduated from an Ivy League architectural school, finished his apprenticeship with a big name. But mainly, for what I thought to be my purpose, he had both imagination and charm. I wanted working with him to be fun. I’d never had a house designed for me before and I had high hopes for the satisfaction of a joint creation, which is how, in my naïveté, I looked at the project then.

As I’ve said, at first things went swimmingly.

I told him that, because I came from a long line of Yankees, and had grown up and lived most of my life in New England, I reacted happily to shingled roofs,

A SYNTHESIZED ARTICLE
BY T. M. PRENTICE, JR. &
HUGH HARDY, ARCHITECTS

The Phoenix House got its name because it rose on the site from the ashes of a house that had burned. A nice piece of romanticism. The previous house was a traditional one that had a front door with two windows on each side, and the same number of windows north, south, and west, and paid no mind to the view. It could have been in a mountain or a valley.

Ralph Ingersoll sat down on the site with his pipe, Indian-like, with the burned wreck behind him and said, “Let’s see, if I were going to put up a tent, I’d put it here; so this is where the living room should be.” He also said, “New England houses have small rooms and small windows, and they act like a valve: They push you out in the summertime, and pull you in in the wintertime.”

The hope was to make a house out of materials and shapes that would sit beside the river and not look as though it shouldn’t have been built there. It was to be built in Connecticut on the Housatonic

River. And all up and down the river are buildings built of clapboard.

However, the clients did not want a traditional house. They wanted a contemporary something. But what did that mean? We were going to glue all the bleeding ends of the 20th Century together in one house.

The Ingersolls are an older couple, both of whom had been married before, and they were building their first home together. Ralph Ingersoll had had a dazzling, meteoric career as a writer and as the editor of *PM*; he had also worked on *The New Yorker* and at *Time-Life*. He’s a rugged individualist, and still the publisher of several newspapers. Mrs. Ingersoll is interested in ceramics and wanted a pottery workshop. She admires “lyrical” architecture, and had lived in the art world most of her life.

Since they were only just married, they didn’t know how they were going to live together at all. It wasn’t as if they were bringing a way of life to a house. They were making their way of life up as they made the house up. They were programming their lives at



steeply slanted, and to clapboarded walls, whose angles were hard and clean, and to ornery individuality.

But, I added, neither my wife nor I were really ancestor worshippers; we lived contemporary lives and knew it. We had a lovely site for our dream house, and we wanted not only to look out on it but for our house to be part of it. So bring on your thermal pane glass if it fits; we have no taboos and we believe in modern technology and using the materials of our time.

You are free, free, free, as a creator—that was the gist of what I said.

The whole beginning of the Architect-client relationship is misleading. The Architect *seems* so interested in his clients—interested in them for their own sake, as individual human beings. His attentions are flattering, disarmingly intimate. He wants to know such things as do you both sleep in the same bed, and do you take baths or showers. He really seems to care.

Floor plans are fun things anyway: lines to be erased and scribbled over, endlessly changed to satisfy your slightest whim.

Then comes that wonderful day when he shows you the first model—of trim white cardboard, set perkily on thick brown cardboard, cut to suggest the contours of the land, with little sticks set up to show where the trees are.

By the time he has gotten you to the model stage of the first house you've ever built, your Architect has you cold. He is your alter ego, your superself, bringing your deepest dreams to reality. This house *is* you, your soul seems to cry out. This is what you've always been yearning for; and it is this marvelous young man who is doing it all, just for you.

(What if the first cost estimates are twice what you expected—and can afford? Who measures true creativity and the satisfaction of the soul in dollars? Somehow, you'll find the money!)

Then come the months that seem to confirm the illusion—the months after the contracts have been let. When the foundations are poured and the framing goes up, you get to think that the building is yours, if only because each month you are paying (bigger and bigger) bills for its construction.

The first crack in the illusion came, I think, when my wife, who

was as bemused as I, tried to move the stove in the kitchen a couple of feet, to get a broom closet in the corner. Neither Architect nor I, at that time, had any idea she was so old-fashioned; she was actually thinking in terms of how the kitchen would work, since she was the one who would be working in it.

"If you please," said Architect primly, "kitchens bore me, but because I knew you were interested, I took particular pains with this one. Its lines are *quite* pure—with the stove exactly where I put it."

We went back into our box.

Then the framing was done, the walls up, and the plaster on.

"But the walls all run together into the halls," said my stupid wife, who, each day, was clearly becoming stupider; "so I can't paint the rooms different colors, and I like different rooms to have different colors."

"I do believe you do," said Architect. There was a note of coolness in his voice now. "But only white has that clean feeling that the sculptured quality needs."

I could, at this juncture, simply have divorced my wife—paid her off and told her to go live some place else. Clearly Architect had revealed her as a trouble-maker. Now I can see that it would have been better for her if I had; her little face is so drawn and sad as she sits beside me in the embers.

But the truth had not come to me yet.

I think it was the books that gave me the first premonition.

I have so many books; being a writer, I just can't seem to help it. In *The* house, I had simply presumed they would line the walls of my living room as they always had. But then came that awful morning when we were standing in the unfinished living room itself, the air heavy with the moisture of drying plaster.

"When do the bookcases go in?" I said foolishly.

I could feel my young man freeze.

"What bookcases?"

"Oh . . . the bookcases for my books."

I could have sensed the end, but I was still bemused. Architect laid a hand on my shoulder in the friendliest fashion.

"You mustn't worry at all," he said. "Of course, you should have brought it up before, but it isn't at all too late." He explained it all to me as to a child: "The sym-

the same time.

But because the time schedule was so short—they came to us in August and wanted to move in in April—there was no program analysis: asking, what do you mean by all these words like "traditional," "contemporary"; what is this stuff all about, what are you doing it for, why should you live like that, why should you have rooms, live in a tent. It requires an enormous amount of investigational effort to discover, really, not what architecture is, but what the *words* are.

"We hired you to design a good line for the house," the clients said. That's very strange.

The architectural profession is constantly teaching the public that architects make shapes. The public is not teaching architects that; it's the reverse. The architectural profession says, "You're raising money? Look, I'll give you a rendering, and it'll help you raise money, because I'll give you a shape to raise money with."

I cannot tell you how much the public, having been taught by architects, forces the profession into that corner. But it's not their fault.

The client sincerely believes that what they are hiring in an architect is a person who can take a lot of things that they want and jam them all together into a shape. And the first day—and architects actually *do* it—they draw them a little doodle and say, "Well, here's your house." And the clients go home and have a little love-nest feast about *my* shape.

Rather, the first thing you have to do is say what the hell the pieces are. It hasn't become *architecture* yet. The first thing is to get the clients to pay attention to the exploration of their *problem*.

My God, if architecture is a profession—like medicine for instance—the patient comes to the doctor when he has a pain. And I suppose you go to get some pills. But if you have any sense at all, you go to the doctor to find out what's the matter with you—not to find out what color the pills are going to be. If doctors' clients demanded, "We want the pink pills because Maude had the pink pills," they would never find out what was wrong with them.

So it's not a question of defining a shape. The successful defining of shape depends on a successful program analysis. And that is not the same as "functional

requirements" or a planning chart like a flow diagram.

I think the latter may be the best that a school can do toward solving these problems—to point out that something does precede design—but schools now (and only recently) attack it only at the urban level, and I think it has to occur at all levels.

How can a client possibly know what it is to make a piece of architecture: the delicate choices made early in the game that influence the life of a project? And if the client can't possibly know that, then later on it doesn't make any damn difference whether it is of wood or plaster or jingoboard; it really is too late. The problem was that maybe there shouldn't have been a wall there at all; maybe it should have been a window. And that kind of decision depends upon planning, and that kind of planning depends upon analyzing somebody's program.

We did not have time to force the Ingersolls to investigate the problems at hand correctly, like this.

And the process changes all the time. A guy who gets on a bicycle for the first time somehow gets the hang of it and gets around the block, and he thinks he can ride a bicycle; but he doesn't recognize at the same time how wiggly his path has been.

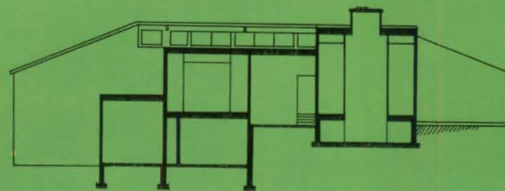
So the program evolved as we explained. For instance, Mrs. Ingersoll didn't say she wanted to be in the thick of things—to have her ceramic shop in the middle of the house near the kitchen—until after she'd seen the first scheme.

Then, for another example, we didn't leave the kitchen for Mrs. Ingersoll to plan; we had planned it. And she started taking it apart and putting it back together again. How much can you resist, though, that's the point. It's their house. You can advise them only. That's all any of us are doing. The kitchen as it now stands is hers totally.

The matter of not being able to paint the rooms in different colors is really after the fact. You see, it couldn't be a question if everything else had proceeded properly. In other words, if the client and the architect had been proceeding along the same route, it couldn't end up as a problem that one intended to paint one room mauve and one magenta and they had to meet in the middle of the hallway—as what?

It's all a matter of communica-





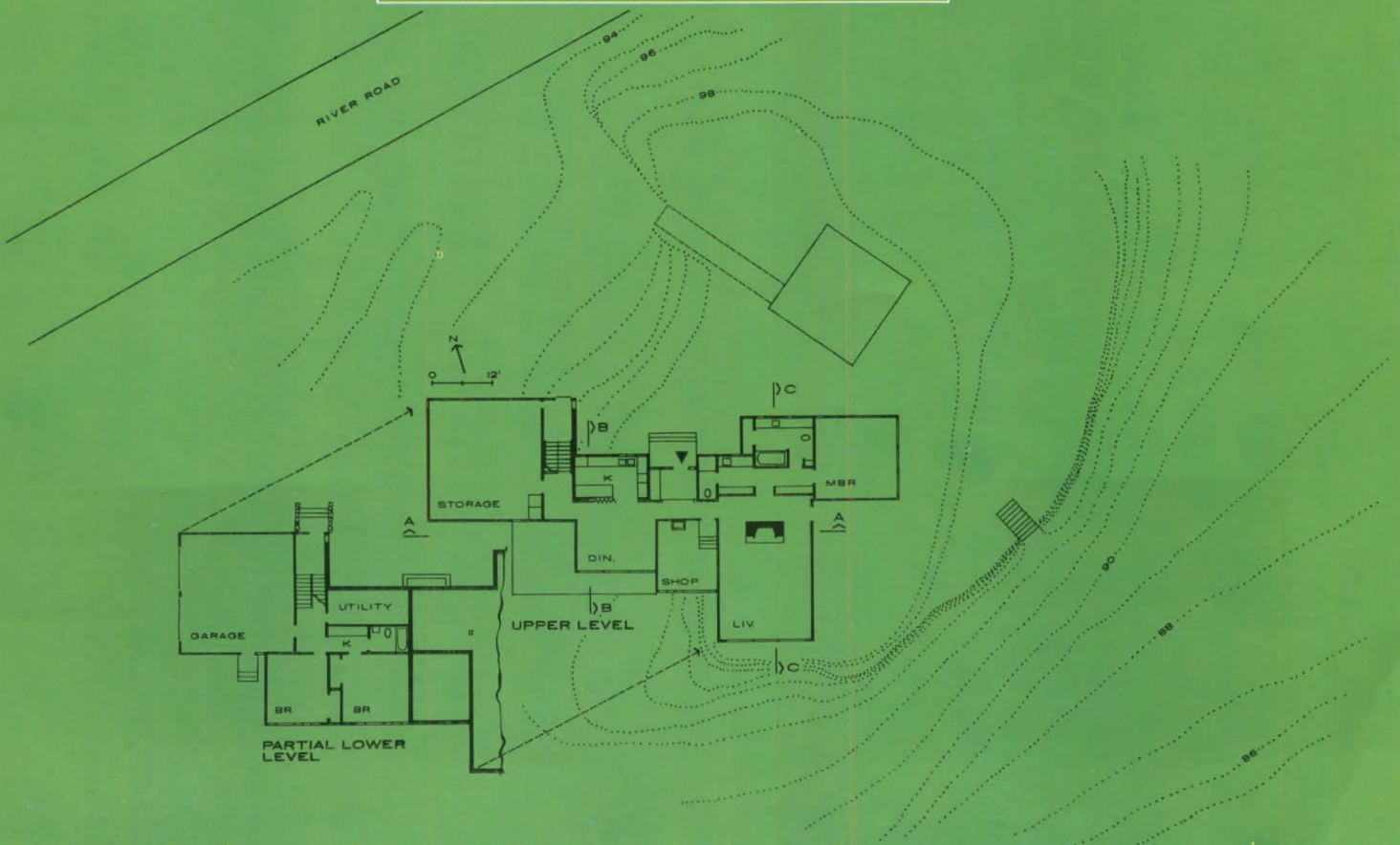
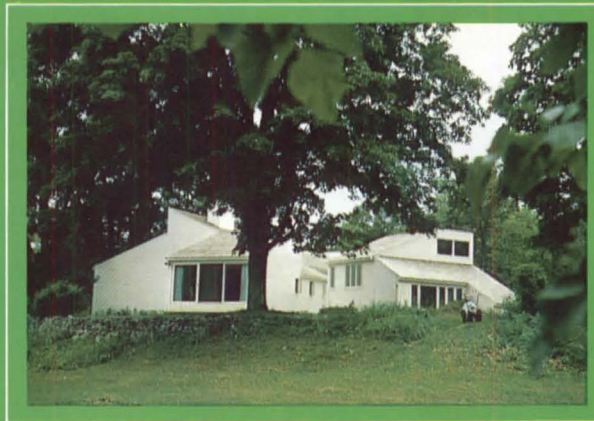
SECTION A-A



SECTION B-B



SECTION C-C



metry of these walls just can't take books against them; you must think in terms of mass. To tamper with the walls now would be like taking hammer and chisel to a Rodin sculpture to make it fit a niche in a garden wall.

"But," said I with a sigh, "that's an Architect's job—to take care of little things for his clients. We'll find a place for your books—somewhere. How many books have you?"

I said I'd find out and, with the aid of a yardstick, I did.

"Three hundred and fifty-nine running feet" was what I told Architect.

"I know just where to put them," he said.

I've not tried to describe The House. It would all be too painful. It is gone now, and tomorrow will be another day. But I have to tell you about the books. There was a hall that passed the entrance to the living room, and the back side of the hall rose a sheer 16 ft to where it met the steep slope of the ceiling. (Remember? I told you how I loved sharply sloping roof lines.) By putting bookcases into *this* wall, from floor to ceiling, it neatly absorbed the whole 359 running feet of books—and there they were in the next set of plans.

"But I'm a writer, not an acrobat," were the last sensible words I remember uttering. "Not only do I love my books and want them near me, but I need them and I need to feel them around me all day long, every day. I just haven't the time to put on a space suit and get in a rocket to be ejected up to where I can lay my hands on one whenever I want it."

I can see that my mind was already loosened from its stays, because I wouldn't *really* have had to get into a rocket ship to reach my books; I could have reached them easily with a simple scaling ladder and an alpenstock.

After I lost the battle of the books, the end came quickly.

I know I behaved badly—Architect was right; it *is* unseemly for a grown man to burst into tears. Obviously, I *had* to be told now. Architect waited for the tears to dry and then he sat me down on a pile of lathing and explained it all to me gently and patiently.

"An architect," Architect said, "is a creator. The structure he creates comes out of his creative soul. What he has wrought is *his*, no matter who 'owns' it in the technical sense. A painting by

Picasso remains Picasso's, however many times it's bought and sold in the market place. And if you 'owned,' temporarily, a Picasso, would you claim the right to touch it up—just to make its colors match some draperies your Aunt Mabel left you?"

Architect's logic was irrefutable, but it was like me, as I was then, to try to refute it.

"But," I stammered, "we are not talking about a painting. We are talking about a house in which human beings—namely, my wife and me—are to *live*. My wife may be—I think she is—a work of art; but I am not. I am both crotchety and imperfect—and I spill things. How can I, at my age, aspire to the integration of my life into a work of art?"

"Ah," replied Architect, his "ah" at once understanding and sympathetic, "your problem is not new. It is, if I may say so, inherent in the modern architect-modern client relationship. Most modern architects just shrug it off, as artists always have shrugged off the heathen environment life forced upon them.

"But not *I*," he rattled on briskly. "I have worked out a solution, which, I am hopeful, will revolutionize both architects'

tion—and recognition. When the studs were up and silhouetted against the sky, for instance, Ralph Ingersoll said, "I want the books around me." It was too late.

Anyway, books are part of the background of a person's life. Nobody uses *all* of them with any frequency.

So what's the answer? The answer is not to get the Ford Foundation to subsidize a program in educating research architects and to issue a five-page, gilt-edge booklet about how to do it. Nor the AIA, nor anything. So what's the answer?

The Image

What resulted as an architectural application of our evolving program has three aesthetic features: the siting of it, the single-volume form that is repeated throughout the house, and the additive manner in which these forms are assembled.

The house sits on a hillock from which there is a view to the east over a small valley and one to the south over some white capped rapids of the Housatonic River, which otherwise bows around the hillock as a calm ribbon of water.

As you get out of your car and go up the hill toward the house, the view of the river is withheld by a writing studio, which sits on the foundations of the former house that had burned, and by the house itself, which is basically windowless on the north, the courtyard side, which is exposed to the road. Between them is a slot that squeezes out a narrow view of the Housatonic—a forced perspective tunnel that points up the river—which you can just catch out of the corner of your eye as you approach the courtyard entry. Then you go into the house, and you get a big blast of the white rapids through the window walls on the south. The majority of interior spaces therefore face this way. Because the clients enjoy the early morning sun, the master bedroom faces over the valley to the east.

Outside, between the south and east exposures, is a negative corner of the house that is windowless to provide a sheltering backdrop for an outdoor terrace that faces the southeast.

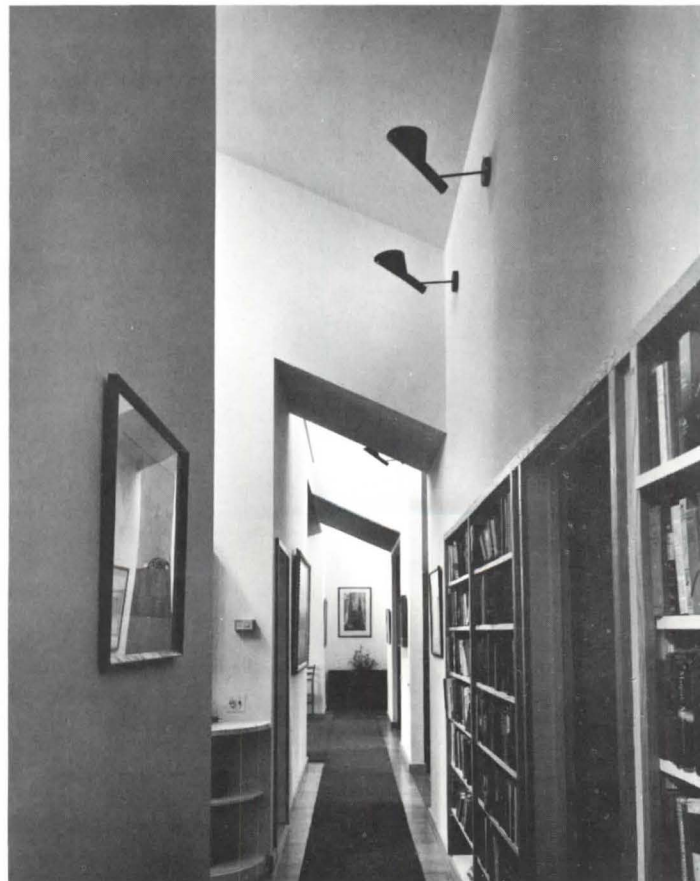
Inside, all the rooms were to shed down to the views, so that you got, we thought, an enormous emphasis on them. The interesting thing is that both the exterior massing of the house and shed, as well as the interior volumes, work to force the perspective. (But, strangely, if you do that to a room, it makes it appear very short from front to back. We could use that to greater effect.)

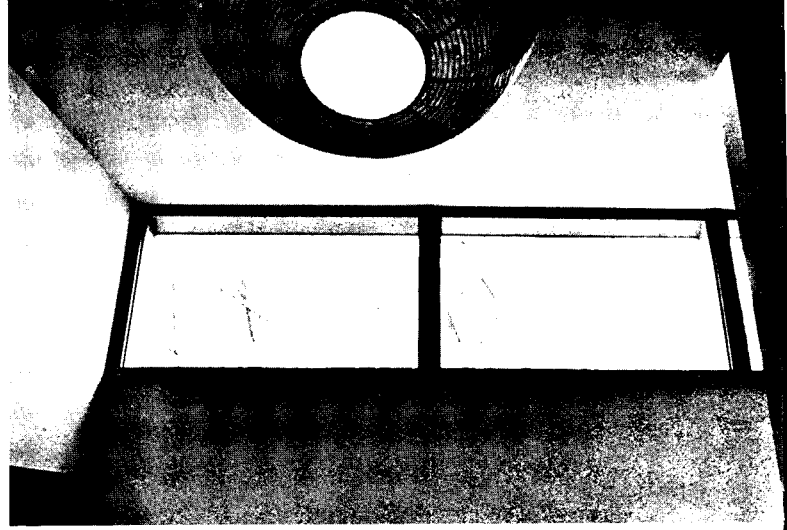
The sheds have to slant down to the view because, if you slant the roof up, the view becomes unimportant (and a southwest view would be impossible this way because of the sun). We were taking planes and smacking them either against the view or against the sky.

So all rooms have a single shape, since we were working to have the outside the same skin as the inside—with no waste voids. When you walk in, there isn't an inch that you can't see in each volume. Every end wall of every room is a section.

To show this form clearly, we eliminated the header over each window wall, because it would have shadowed the light that was supposed to smack off the ceiling and emphasize the view. Eliminating the headers brought us to a roof framing method that, as you'll see in the details, was different but also produced a well-ventilated roof structure.

Early in the design, we rooted





and clients' whole approach. After I finish designing—creating—the interior of my houses (now a recognized function of the creative architect), I don't just call it a day and walk away with a grimace. Knowing the frailties of my clients, I take them into account and anticipate . . ."

It was at this point that my poor wife, who had joined us, interrupted.

"You mean that you're going to do our furniture for us?"

"But, of course."

"And the colors—of the curtains, the upholstery, and the rugs—these, too . . .?"

"But, of course. I'll explain what I need when we're a little further along."

"But . . ." my wife's eyes were very wide now, "there will be people in the rooms too . . . and they will have to wear clothes and the colors may . . ."

"You've put your finger on the very spot! That's just what I was trying to explain when you butted in. But you haven't a *thing* to worry about. I give you a handbook. It has all the directions for how to live in my house: how to live consistently, how to bring

out the best in what I've created for you. All you have to do is follow the directions. I can give you the proofs to read now, but I'd rather wait until we have the diagrams drawn—and it's all much easier to read after it has been bound."

Architect did himself an injustice. When, finally, he gave us the rough copy he'd thrown together, we didn't need the diagrams. The little numbered paragraphs were perfectly clear. We only had to change the time we were allowed to have breakfast in the dining room by a few minutes a day to keep the natural lighting in hand. We could go into the living room whenever we liked—if we were dressed in the right colors. The places we were allowed to sit in, and the hours set aside for sitting in them, were perfectly reasonable. No one with an eye for mass and proportion—no one who could really *appreciate*—could object to any part of the scenario; it was all so sensible.

So there is absolutely no excuse for our having burned the place down—before we even *tried* . . . absolutely no excuse.

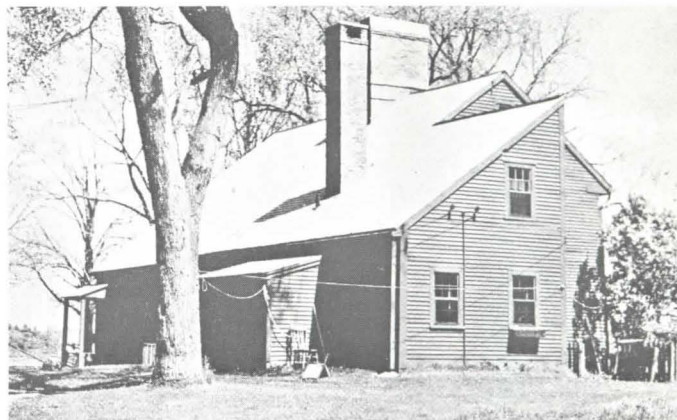
around in Samuel Chamberlain's books and picked out all the kookiest things that happen (see photo below)—not all the most organized, straightforward axial, symmetrical solutions that people had in the New England vernacular, but all the additive stuff that is also traditional in architecture, where you add more of something you already have because of additional needs.

Inside, the house hangs together on a spine: There is movement back and forth down the corridor; light changes, roofs change. It is always open even acousti-

cally, for all rooms borrow space from the corridor. The only really pure corridor is a little patch that belongs to *no other space*, between the entry and the living room.

Light is sometimes scooped over your head to a room at the north, sometimes comes straight down, sometimes bangs off a wall. Different things happen as you go down the corridor. When the light came through as we said, the clients called up to tell us how tickled they were.

And they had not asked us for any of that.



ALL works of art speak their own language, but the works of architecture pose a double peril for translators because they are products of an applied art and therefore have double meanings. The first is the meaning of the application to functions, with which most clients and laymen primarily concern themselves; the second is the meaning of the art forms, with which architects all too frequently concern themselves exclusively. Somehow, both of these meanings must be made to coincide in something other than a bad pun.

What the Phoenix House says to a previous generation of architects is in a new dialect. As Jan Rowan explained, "We were taught to package everything in a very simple container. It was a question of how to squeeze various functions into a basic rectangle. If you wanted to, you got more complicated, and had two rectangles with a link between: This was the typical plan of that era. If you wanted to be a little more fancy, you had a rectangle and a little circle next to it, with a link, which was the lobby, say, to the office building. Basically, you had to squeeze things into a very simple rectangular container.

"Now if you couldn't do it . . . well, that was bad. I remember, at school, the guys who were not so-called good designers just couldn't squeeze everything in, and they had something coming off a rectangle—suddenly, at one end, it began breaking up. They just had to accommodate some more functions, which they couldn't squeeze into that simple boxlike form.

"The comment of the head of the school was typical: 'Well, you know, you failed here. Look what happens. You just did not know how to push it in.' I remember that very clearly. It meant that, within that idiom, you didn't know how to create a simple statement, or a simple form, which is the rectangle—the simplest thing you can do.

"What is happening now is just the reverse: People almost force the thing to break out."

At least architects can understand this changing language. But the great unanswered question is, How do we cope with the noncommunication between architecture and clients, both before building begins and afterwards? We can know facts without feeling them—without knowing them, in our hearts, to be true. How can we speed up the educational process, so that the client can understand the basic problems in his heart at an early stage of the design process? Is tyranny—by either party—the only answer?

The parallel but non-meeting dialogue above—fictitious as it may be—provides no answer. But to end the discussion with an element of reality, a note from Ralph Ingersoll to his architects must be quoted: "I am glad we didn't burn *our* house down, because we love it more every day."

COOPERATIVA TIERRA

Claudio Caveri is an architect who has created not only his own home, but also his own community—both the physical and social structure of it. Some eight years ago, Caveri and his wife joined three other families in starting a cooperative community at San Miguel, an hour-and-a-half from Buenos Aires, Argentina.

Since then, the community has grown—there are more families (six, at present; with a future maximum set at 10); more children (30, at present); and more buildings (including a public school for their own and other children; arched portico,

below). But the aim of the community remains the same: to overcome the contemporary family's self-isolation by creating a social structure based on interdependence. The privacy of the individual family remains—each has its own home, and eats in its own dining room (except for one day a week, when meals are shared and community affairs are discussed). Chores are fully shared, with cooking rotated week by week, and there is full cooperation in financial matters—the earnings of each go into the community purse. Some earnings are derived from weaving and furniture-making; and in addition to Caveri, architect and woodworker, one of the men is an agricultural engineer, and another is a bank clerk.

In his architectural practice, Caveri need take only those commissions that will give him fullest design freedom. He has recently finished a controversial church in Buenos Aires; his other work is primarily religious or residential. In his personal life, he believes he has found a depth he would not have found alone; his belief in "honest work done with joy" is one that he can share with all those who live in these buildings they have jointly built.



Buildings have been designed to be constructed by hand, and by those inexperienced in building. Walls are brick or stone rubble, covered with stucco. Roofs are brick, in the old Spanish tradition. Forms and spaces, although an interpretation of Spanish colonial architecture, have a universal quality.



STABILE HOMES

Since World War II, the travel trailer industry has fostered a profitable offshoot, the mobile home, which today emphasizes stability over mobility, and makes a big bid for a large share of the low-cost housing market.

It is a young industry, and bursting with facts and figures about its growth: In 1964, it proudly reported that it had topped the "blue chip" billion-dollar mark in retail sales. Lately, it is fond of pointing out that four million Americans live

in mobile homes, mobile-homers are fast becoming more respectable (higher income brackets are filtering in), and the range of occupations is broadening. Occupational percentages are frequently listed in a prestigious but slightly irrational order: Professional, Technical: **5.1%**; Managers, Proprietors: **5.1%**; Sales Workers: **2.8%**; Craftsmen (Skilled): **21.4%**; Craftsmen (Unskilled): **18.8%**; Service: **4.4%**; Laborers: **6.8%**; Household Workers: **.5%**; Farmer: **1.1%**;



1946



1948



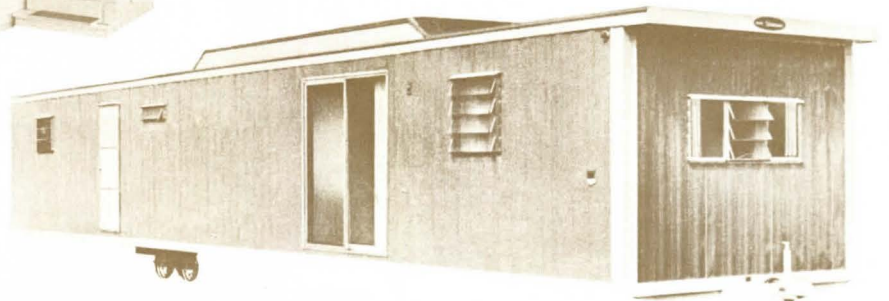
1951



1960

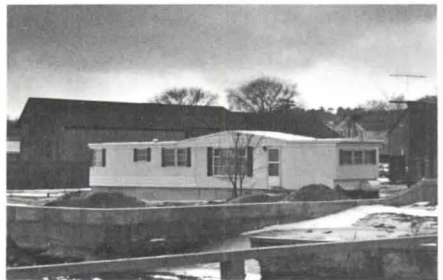
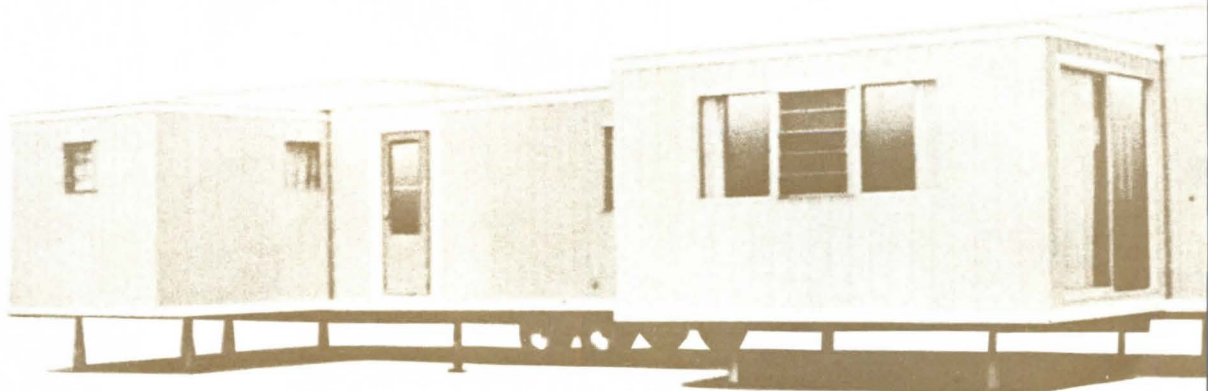


1961



1963

1964



Old and new mobile homes in conventional environment.

SILHOUETTE PHOTOS COURTESY KIT MANUFACTURING COMPANY, INC.

Military: 7.8%; Other (Retired; Semi-Retired; No Occupation): 22.3%.

Mobility—or rather, the lack of it—affords another statistical delight. One survey, by *Trailer Topics*, reports that 41.1 per cent of respondees had not moved once in five years; 26.1 per cent had made one move, but that was into the mobile home itself, which did not really reflect mobile-home family movement.

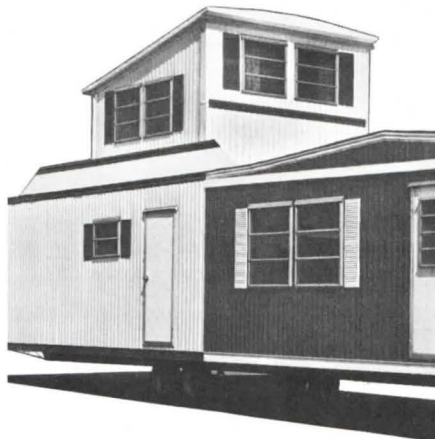
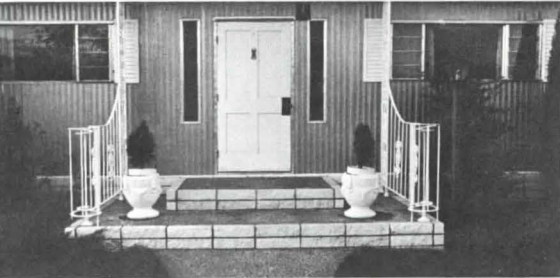
For some, mobility is a necessity, but for the majority it represents a psycho-

logical escape-hatch (“I can move if I have to”) and a way out of real-estate taxes. (The industry is not fond of drawing attention to the latter fact, since it is a major issue in many communities.)

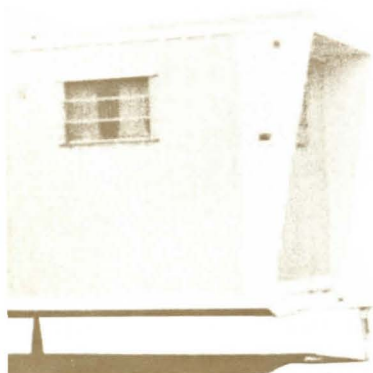
Growth is measured not only in terms of sales, but also on the basis of unit size, which has grown longer and longer (from 25 ft to 60 ft and more), and wider and wider (from 8 ft to 10 ft to 12 ft). Some manufacturers say the bigger the better; others see it mushrooming right out of the market. Prices range from \$3000 to \$12,000—some can reach the \$30,000 mark by combining two units—but the average price is about \$5600 for a 10' x 12' x 55', or roughly \$10 per sq ft.

The industry, which hopes to give the conventional low-cost house—and the apartment building—a run for its money, was proud to note that, for every five conventional homes, there is one mobile-home unit.

An interesting statistic that no one mentions much is that there is actually only one architect/manufacturer in the business.



Design styling at the Kit Manufacturing Company shows shift from travel trailer production to the mobile home. Units of the 40's are small, streamlined; later models are larger, less mobile, but still carry streamline tattooing. In the 60's, units are frankly stable and sport house motifs both fake and real.



Home-furnishing fads dictate interior design concoctions, and publicity photos aim at upgrading the consumer image from shirt-sleeve to white-collar worker.



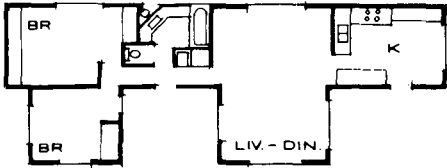
Design and Production

The industry depends for its growth on public acceptance of the mobile-home unit in conventional housing environments.

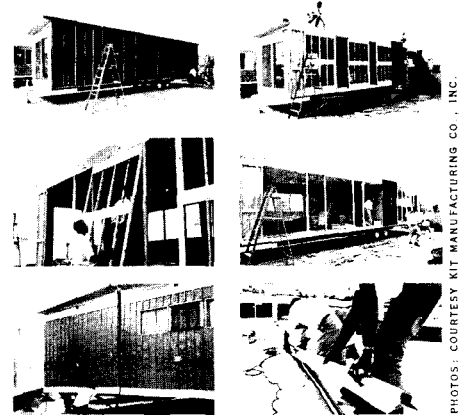
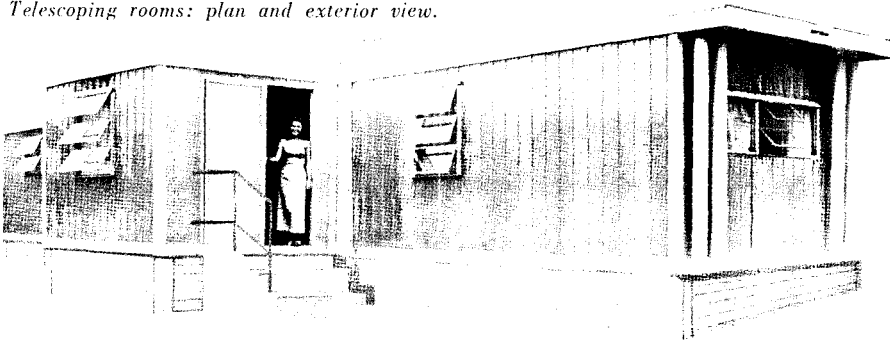
According to James Hill, the one architect/manufacturer in the business (his company is appropriately called House of Architecture): "The industry claims that if we only had more parks we could sell more units, but a more realistic approach would be to say that if the appearance were right, the demand would be there and the zoning laws would be permissive. As it is, mobile homes are designed by

everybody: the owner and his wife, the sales manager and his wife, the secretary and the sweeper. The architects are no help; they are still immersed in custom design and haven't realized the potential of the production line."

In an effort to become more like the conventional home, mobile-home units have been expanded or doubled up, additional rooms telescope out, hinge out, or are simply built out. Sun rooms, cabanas, patios, etc., are familiar accretions, but all are simply timid modifications of the long long look, and the unit still appears to belong more to the road than the conventional lot. The trailer look could be avoided if the units were used as components for more imaginative groupings, such as Hill's courtyard arrangement (right).

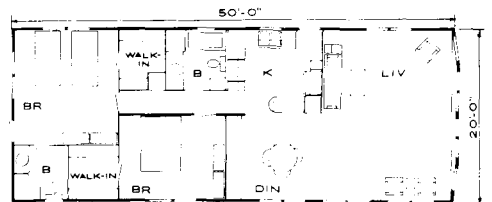


Telescoping rooms: plan and exterior view.



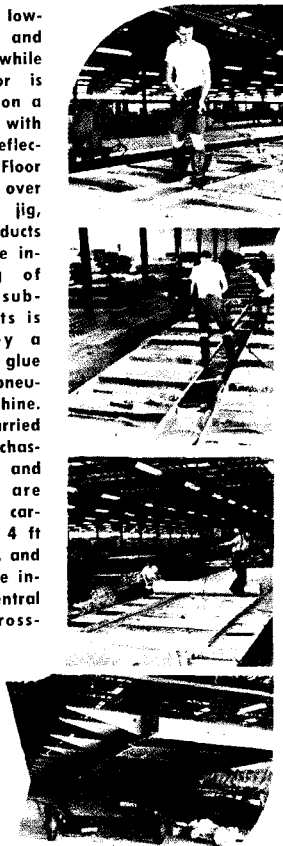
PHOTOS: COURTESY KIT MANUFACTURING CO., INC.

Double-wide assembly and plan.



FLOOR: Chassis is lowered onto axles and heavy-duty tires, while 4-in. wood floor is being assembled on a jig and fitted with fiber glass and reflective insulation. Floor is then flipped over onto a second jig, where heating ducts and plumbing are installed. Gluing of 5/8-in. plywood sub-flooring to joists is speeded up by a pump-and-nozzle glue applicator and pneumatic screw machine. Floor is then carried via monorails to chassis, and wood and steel sections are joined by 5 1/2-in. carriage bolts every 4 ft around perimeter, and 3-in. lag bolts are inserted through central intermediate cross-members.

**RICHARDSON
HOMES
ASSEMBLY LINE**

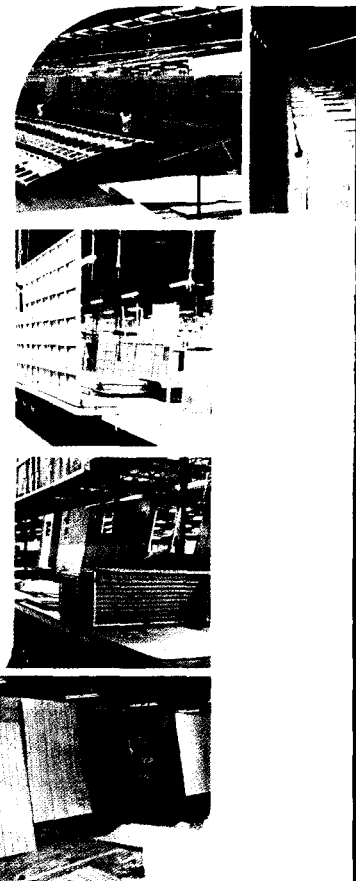


PHOTOS: COURTESY RICHARDSON HOMES CORPORATION

WALLS are assembled on A-frame jigs fitted with measuring tapes. Windows, doors, etc., are laid out over tapes from blueprint measurements. Construction is 2" x 2" studs on 16-in. centers. The studs and beams are screwed at dado joints. The horizontals, plus top and bottom sill plates, give rigidity to walls and act as base for exterior metal finish. Monorails move walls to assembly line and hold them in place while being nailed to floor.



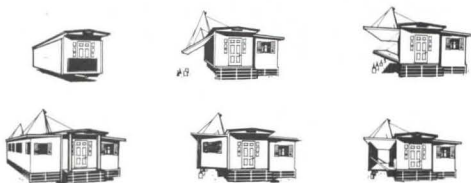
ROOF trusses are built on jigs using 3/4" x 1 5/8" top and bottom cord. Top piece is longer, to shape roof into an arch supported by 2" x 4" block in center. Eight plywood gussets are plated on, glued and stapled. Trusses are then transferred to main assembly line. (Cabinet work and rough wiring is also done at this stage.) Final assembly includes insulating roof, setting windows, hanging doors. Aluminum siding is fastened to five horizontal beams attached with No. 8 screws. Then, appliances, drapes, and furniture are installed.



Another tell-tale mark of the trailer is the slick aluminum finish and the lingering pink-and-turquoise coloring. "There is no reason why natural materials can't be used for the exterior," claims Errol McRill, a park designer. "The metal box, with its interior lined with a lacquer-base imitation wood finish, is a perfect container for a fire." McRill's experimental design (below, right) calls for simple red-wood siding.

The image of the industry suffers as a whole because there are no regulations concerning structure. Quality ranges

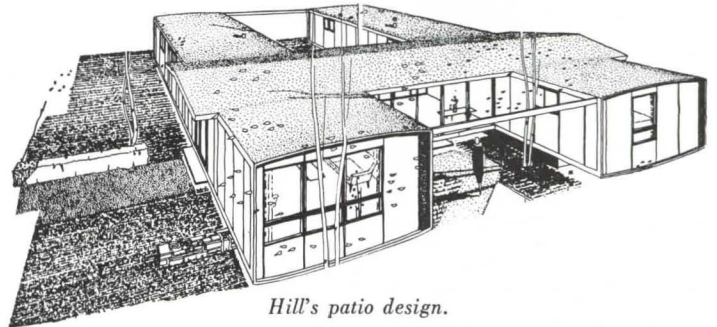
Cabaña add-on construction, fold-out rooms



from the tacky to the solid. The major control is a stamp of approval issued by the Mobile Home Manufacturers Association and the Trailer Coach Association. These organizations are drawing up a structural code to be enforced on state level, and they have been instrumental in promoting plumbing, heating, and electrical codes in three states.

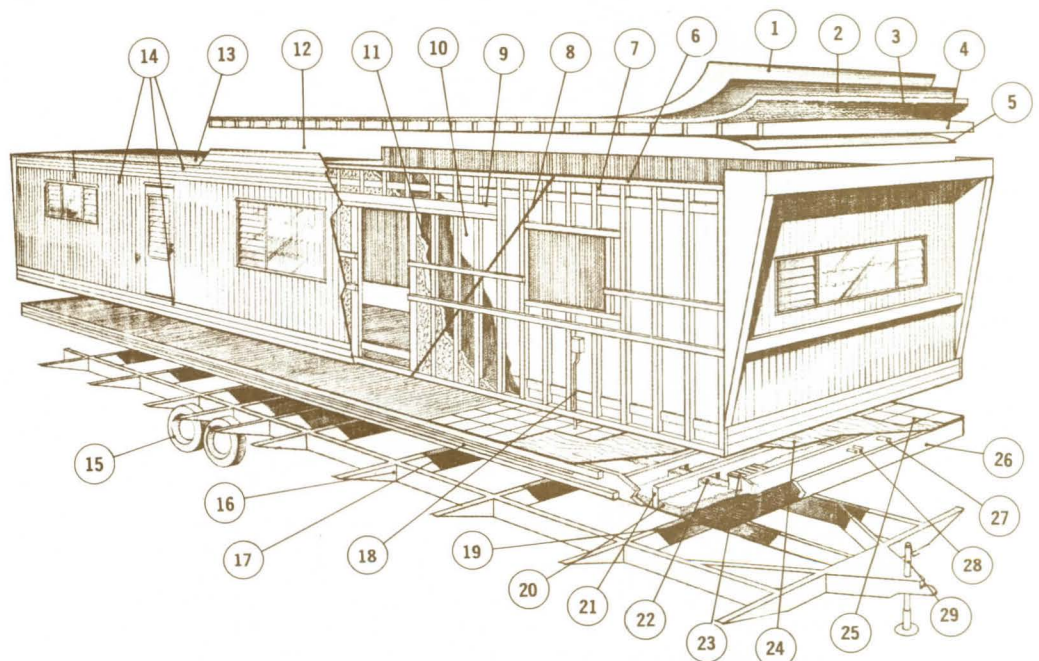
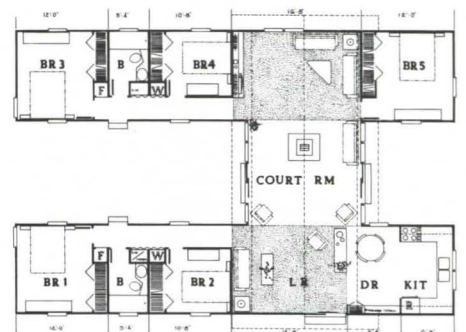
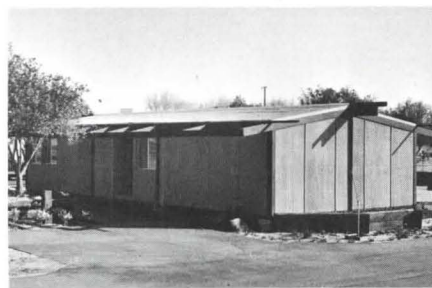
One might assume, on the positive side,

that a lack of restrictions would permit the industry to experiment with new materials and construction techniques. However, one journey through a mobile-home factory (below, left) shows that, although production may be programmed to follow modern assembly-line techniques, the processes and materials are quite similar to on-the-site, conventional home construction.



Hill's patio design.

McRill's natural-wood siding.



- 1 — 30 gauge galvanized roof overlapping both sides and ends.
- 2 — Asphalt impregnated hemp board.
- 3 — 2" high density fibre glass.
- 4 — 2"x6" rafters tapered to 2"x3", 40" from outer end.
- 5 — 1/4" ceiling panels.
- 6 — 2"x2" plate on top of studs.
- 7 — 2"x2" and 2"x3" studs, 16" on center. 2"x3" and 2"x4" used around windows and doors.
- 8 — 1 1/4" steel triangulation bracing.
- 9 — 2"x6" lintel over Panaview door or 2" LAMINATED LINTEL over EXPANDING ROOMS.
- 10 — Sidewall panels glued and nailed to studs.
- 11 — 1 3/4" high density fibre glass between studs.
- 12 — Awning rails (drip cap) both sides front to rear of unit.
- 13 — Awning rails (drip cap) both sides front to rear of unit.
- 14 — Pre-painted aluminum siding.
- 15 — Goodyear tires and wheels on 4500 lb. axles.
- 16 — Zieeman chassis — 7" channel with formed steel cross members and outriggers.
- 17 — Raceway for Romex wiring.
- 18 — Convenient outlets fastened to studs.
- 19 — Asphalt impregnated hemp board between each floor joist.
- 20 — 1 3/4" high density fibre glass between each joist.
- 21 — 10" open web laminated floor joist.
- 22 — 6" round heat ducts laid on fibre glass through open web of joists, one duct to each register.
- 23 — Floor register with adjustable dampers.
- 24 — 5/8" drain plywood glued and screwed to all joists and perimeter floor members.
- 25 — Vinyl flooring.
- 26 — Hot and cold water pipes inside floor.
- 27 — Front drain member connects to central 3" drain under bathroom.
- 28 — Clean out access hole making forward drain accessible for direct cleaning if clogged.
- 29 — Hitch jack.

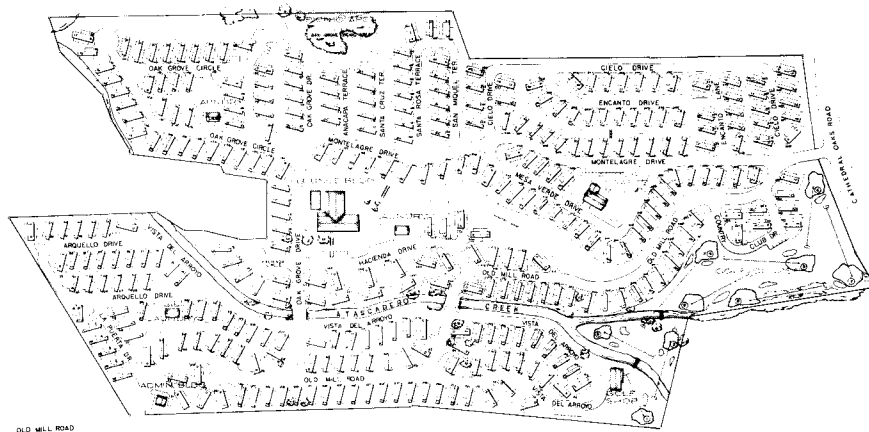
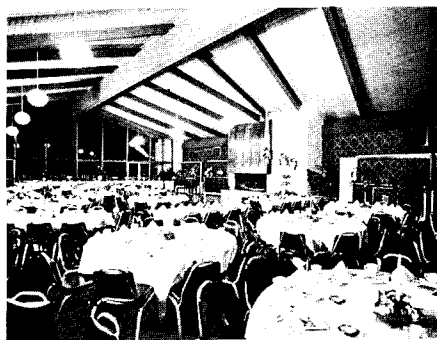
EXPLODED DRAWING OF ANGELUS MOBILE HOME

rules are too rigid, the manager turns out to be a tyrant, and the neighbors noisome, the mobile homer can always—move.

From the point of view of the manufacturer, the park opens up new markets,

attracting people who otherwise might not buy a mobile home or who might not have a place to put it. The park is an asset to the community; it increases land values and revenue. It is an excellent use of

multiple residential zones R3 or R4 on the outskirts of a community—that is, until the time arrives that the surrounding area is built up sufficiently to warrant apartment construction.



The center of the community is the clubhouse, which is often elaborate in scale and décor (photo at top shows architect James Wilde's clubhouse for Swan Lake). Many activities that, in the conventional residence, are centered in the home itself—entertaining and hobbies, for example—have here been shifted to communal centers such as the clubhouse, the laundries, and arts-and-crafts centers. Many parks have social or recreation directors who plan events for the residents.

HII WE LIVE AT PARK CITY, AND WE LOVE IT!



Millionaire's Playground

The mobile-home park is not only for the retired, for those on restricted budgets; it is also a place for the wealthy, for the millionaire who wants to get away from his enormous mansion, and the hordes of gardeners and household help.

Blue Skies Park, formerly owned by Bing Crosby, is one of the most noted millionaire playgrounds. Here, the wealthy



SDAY, JUNE 16, 1964



Family Makes Record—A record was made at Smith College in Northampton, Mass., during Commencement Week. Four Bishop women of three different generations were celebrating—one her 50th reunion, one her 20th, one her first and one was graduating. Nancy Clamba Bishop, daughter of Mr. and Mrs. Richard E. Bishop, Jr., of Newburgh Terrace, graduated from Smith College this June. Present at her graduation and attending their own Smith Class Reunions were her paternal grandfather, Mrs. Richard E. Bishop, Class of 1944, her aunt, Mrs. H. Rogers Bishop, Class of 1944, and her cousin, Miss Jequerin Bishop, Class of 1962, all of Bronxville, N.Y. It is an unusual coincidence that Nancy was not only born on her paternal grandmother's 50th birthday, but also graduated from Smith College on the anniversary of her grandmother's 50th class reunion.



The Richard E. Bishops are residents of Bronxville, N.Y., and of Blue Skies mobile home park, Palm Springs, California. From about May to October, the family lives on the East Coast, where Bishop, a millionaire, has his business interests and a large house. During the remaining months, they live in a diminutive Mount Vernon (right) in the park, and enjoy themselves. According to the Bishops, there's nothing like a mobile home. Not all the homes they have ever owned—townhouses in New York, summer houses by the beach, or even the old homestead (above)—ever offered the freedom, fun, or friendliness of park living.

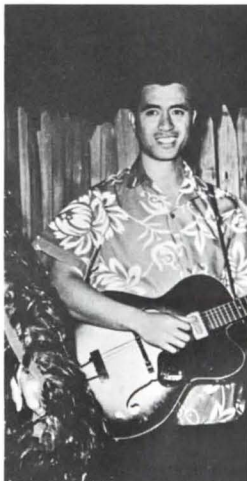
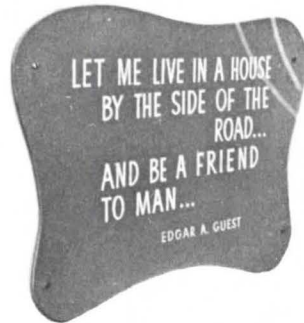


The Blue Skies Park revolves around a miniature golf course in the center, serviced by a loud-speaker system and Musak. Parties, with or (nowadays) without Bing Crosby, are frequent, roads are named after the stars, and the mobile homes are hidden under fanciful structures; some trimmings, such as the railings and fountains in house (bottom), can add up to an extra \$20,000.

live it up from about October to May; they come from their estates in Bronxville or Seattle to settle in diminutive shelters. They relax, play golf, swim, and hold an occasional rollicking costume party with outfits supplied by one of the inhabitants, who is head of the wardrobe of Metro-Goldwyn-Mayer.

The most striking aspect of the park is its whimsical architecture. Unrestrained by any suburban conformity, the most elaborate, fantastical, and expensive concretions are built around the mundane

mobile home. Egyptian, New Orleans, Mount Vernon or Chinese visions so transform the aluminum core, that it is often difficult to find the original unit. It is obvious that the mobile-home unit, far from imposing production-line conformity, can permit the most imaginative variations. Enough money can turn a pumpkin into a palace.



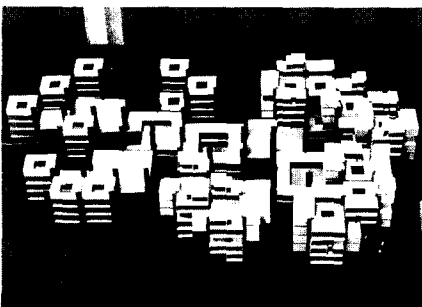
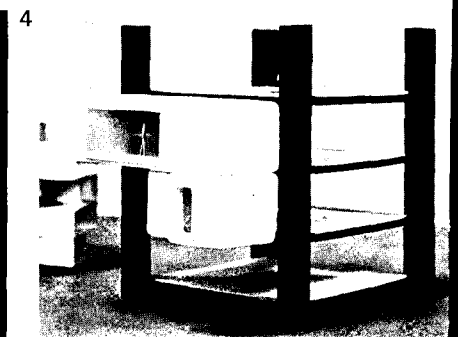
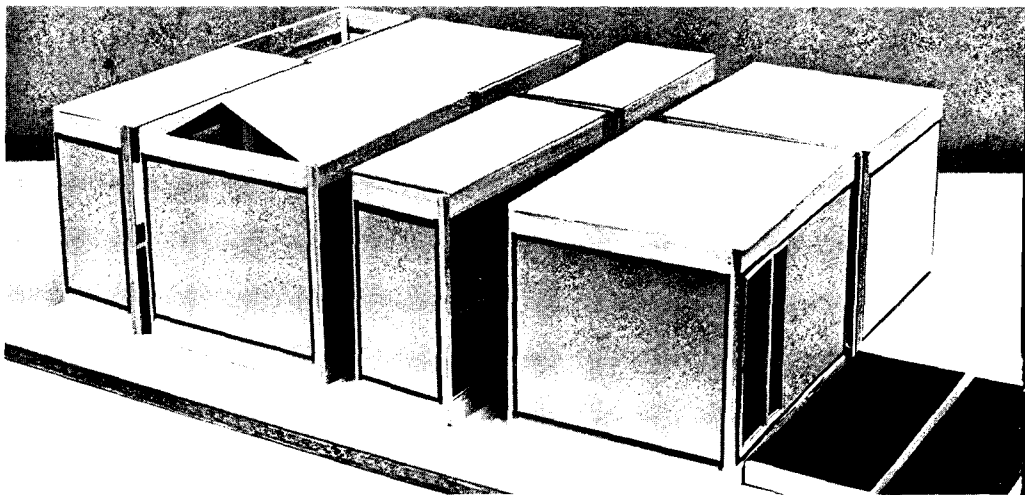
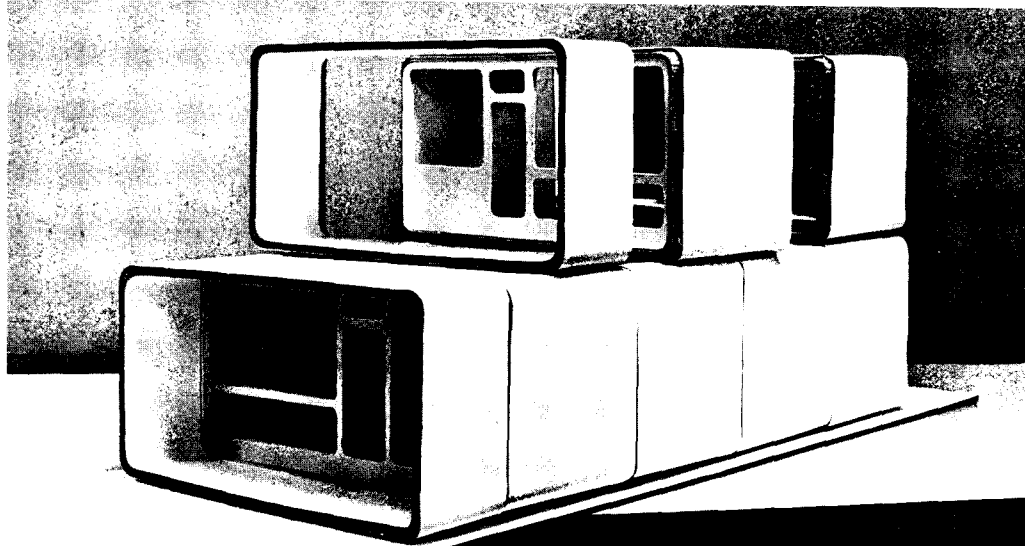
Students Envision Mobile-Home Living in 2000 A.D.

The architectural profession is beginning to realize that mobile-home design falls within the province of the profession. This year, students at the University of Minnesota were given the problem of studying the industry and designing a project. Rather predictably, however, the preliminary findings were discouraging enough to throw the whole project out into the more imaginative realms explored by Le Corbusier for plug-in disposable housing. The assignment turned out to be to design an armature for a plug-in community in the year 2000, with densities far greater than the average mobile home park.

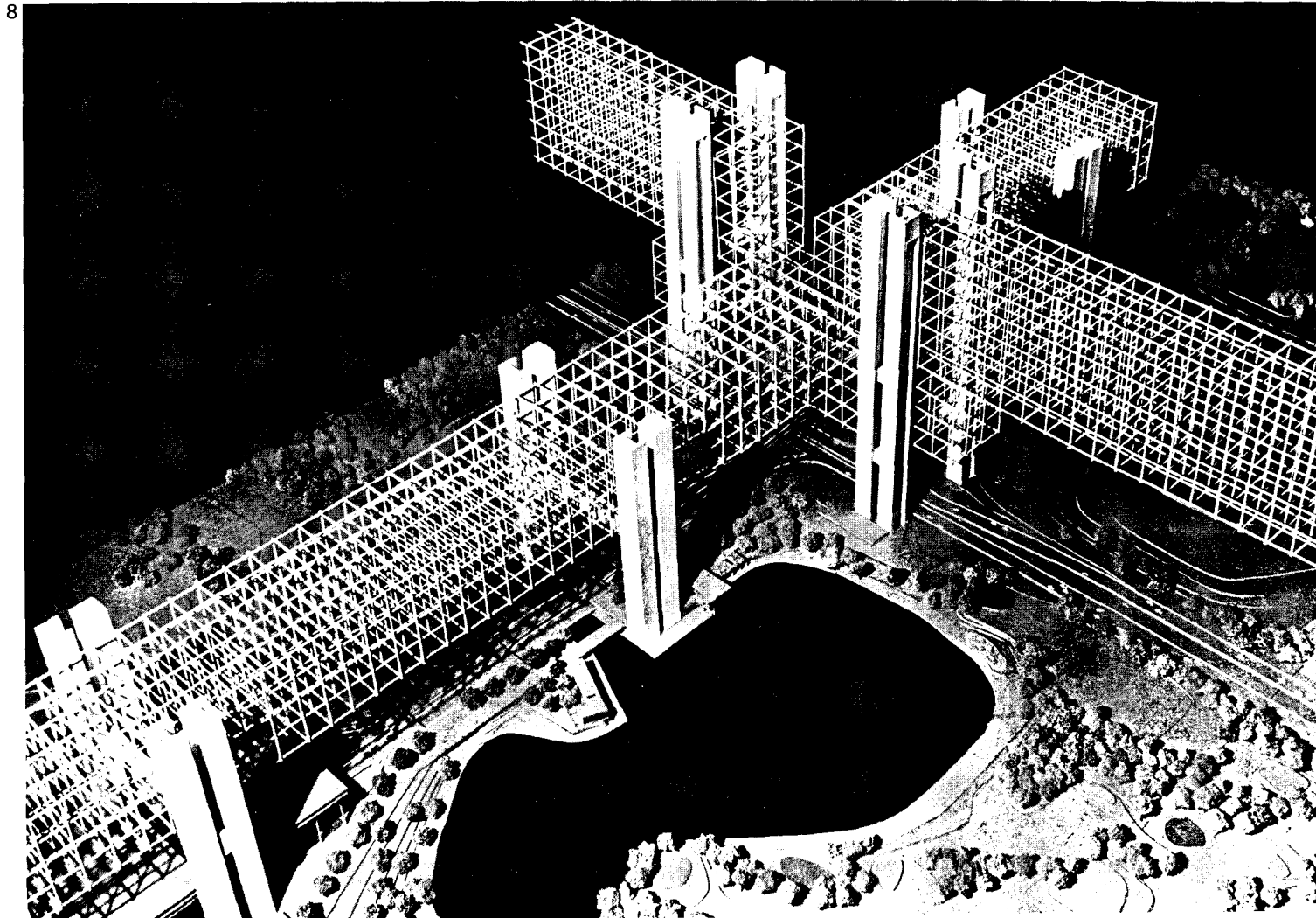
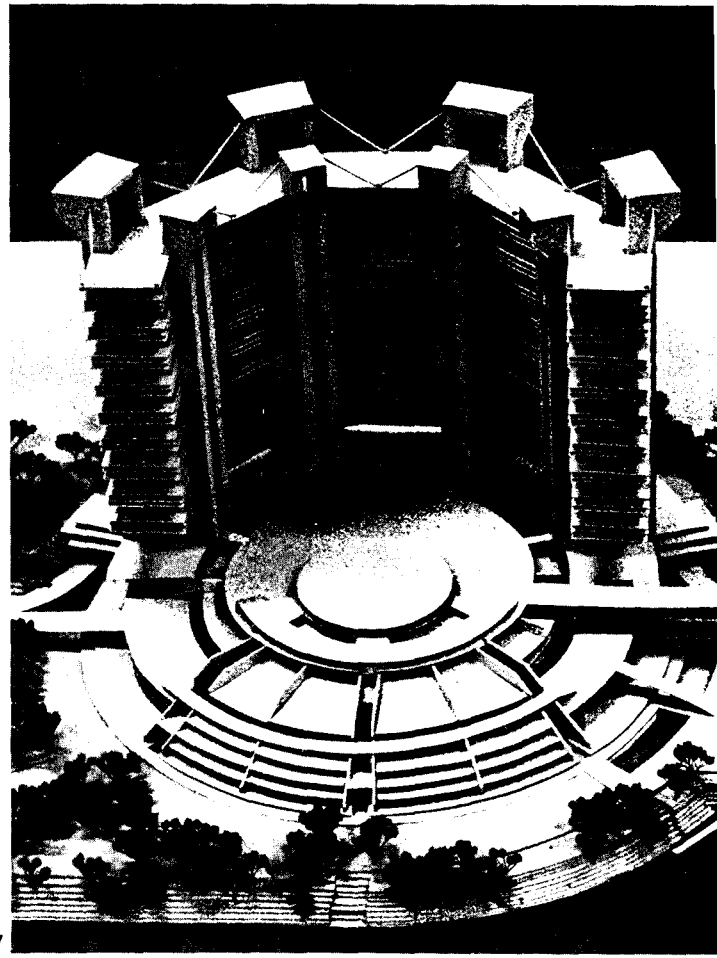
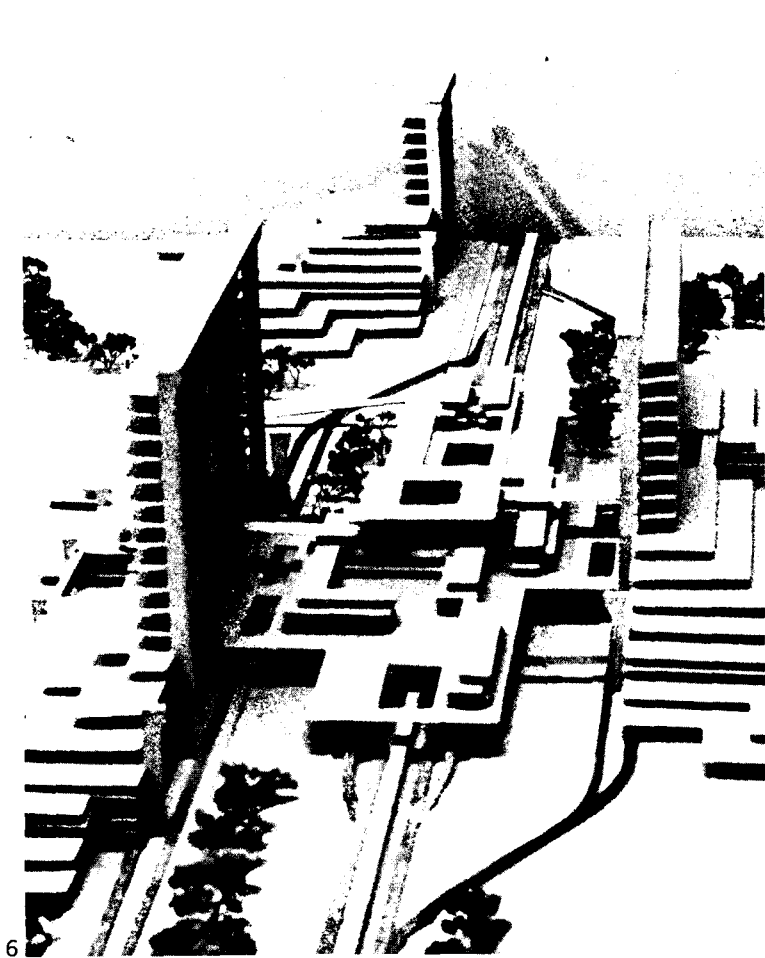
Given this program, the projects were mostly breathless in their scale and scope, and had little to do with the problems of the industry today. The size of the armatures often baffled the venerable jurors, who had difficulty imagining cities in the sky a full 60 blocks long. However, many of the awesome designs were trying to establish small neighborhoods within the cosmos of a city, and some realized the necessity of preserving as much recreation land as possible.

Unfortunately, the students were so far ahead of the game that it was impossible to judge whether the armatures themselves might be so expensive as to defeat the economy of the prefabricated unit. Although they conceived of transporting units via helicopters, for example, many of the designs were confined to the long trailer look derived from the road days.

It was regrettable that the project could not have been closer to the present-day problems and needs of mobile-home housing and design. As such, it could have been useful to the industry, and the disciplines imposed would have been more realistic. As it was, the projects present some interesting potentials, some interesting pies in the sky.

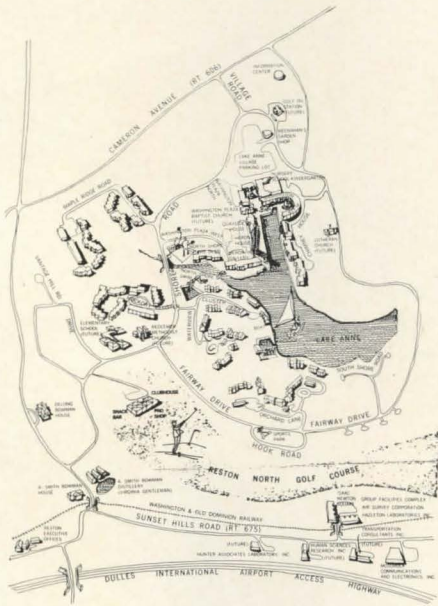


Student Winden's plug-in disposable unit (1) breaks up into sections and stacks. Cox's version (2) is an assemblage of rectangles; walls lie flat while traveling, floor slab contains utilities. Sandell's armature (3, 7) is broken up into sections with air space between them. Each level has a walkway and can hold three stories of disposable units. Mazzara's plastic containers (4, 5) plug into towers; piers contain utilities. Both LaFrance (6) and Sandell (7) place their towering armatures on thruways overlooking countryside. Myklebust's enormous grid (8) houses 15,000, at 400 persons per acre. Each 60-ft cube holds 10 living units. The structure is 300 ft above grade; the landscape far below is reserved for recreation.





LAKE ANNE VILLAGE CENTER: A PLANNED COMMUNITY NUCLEUS



resolutions unpredictably sprout their own imperfections. Everyone by now is familiar with Reston's solid architectural achievements: its good taste, the submersion of crude commercialism, its cluster housing, the integration of shops and apartments, the ban on automobiles and the reinstatement of legs as the means of locomotion, the focus on the outdoor recreational life, etc. It may just be time to take a few pokes at the pudding, to play Lucifer and question the validity, desirability, and conse-

quences of the heavenly life.

The Reston Village Center does raise innumerable questions: What's the nature of a village? Can you plan it? Or does it grow? Can a developer dictate a way of life and public taste? The dilemma of the center is that it smacks of the unreal; it is like a stage set drawn within the imaginative scope of one man—it is immutable, and somewhat dead. There are several reasons for the Reston predicament: they concern scale, focus, homogeneity, and overplanning.

The first completed village center at Reston, by Whittlesey, Conklin & Rossant, raises several questions as to planning a small town center and giving life and credibility to the controlled architectural environment.

The first village center of Reston, Virginia—Lake Anne—opened last December to folk dancers leaping, English handbell ringers ringing, puppets puppeting, choirs singing, and a final assemblage climaxing the event with an "antiphonal concert of suitable music." Reston as a whole has been praised so lavishly in both the architectural and lay press that its virtues are only too well known. One resident actually thinks that all the *Te Deums* have done Reston more harm than good: Potential buyers may be scared to death of living in paradise, and advertisements with obscure quotes from Latin philosophers, vouching for the good life, may be putting on a bit of the old dog. Like any Utopia solidified in concrete, Reston resolves an entire set of problems but at the same time the



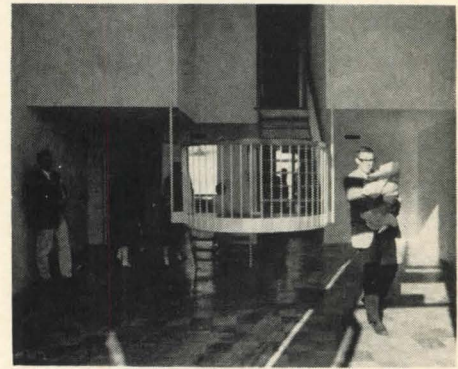
Photos: Maude Dorr, except as noted



Living on Lilliputian Scale

A serious reason for the incredibility of the Village Center is the strange sense of scale. The complex seems like a toy in which the characters play at the game of life. Robert Simon, the developer, did set out to make a sport of living. Each village was to focus on an activity, a recreational diversion. Village I is supposed to center around a lake and water sports; Village II will be designed for the horse set, and so on. The strategy is based on the assumption that play rather than work is the catalyst for social groupings. In this new world, writers will not congregate in one spot and professionals in another; conversations will not revolve around molars, novels, or navels, but groups will cluster together on the basis of golf, conversations will revolve around points and scores, and tensions will arise when jod-purred junior gets his first glimpse of the bikini-briefed swimming girl who lives over the hill in Watertown. It seems like a logical solution for a society galloping towards a four-day work week, early retirement, and plenty of leisure time. But it also demands that the sport in question be absorbing, and have enough scope to preoccupy body and soul for eighty-odd active years.

Now this is just what the first Reston center does not provide. It is a make-believe sailing village pitched on the edge of a bathtub. It is trying to make an ocean out of a frog pond and verges on the pretentious, mocking the inhabitant who is founding a way of life on sailing to the supermarket to fetch a six-pack. The comedy has its root in the disparity between the grandeur of the dream and the misery of the facts. The lake is small. The architects had to play up a motif when there was not much to play with. They made a massive pier of Renaissance proportions and devised a curving baroque complex worthy of Venetian canals. In recognition of the disparity between the ideas and the space, the architects—perhaps deliberately—broke down the scale of the buildings, broke up the façades with multiple facets. But the illusion is destroyed on two accounts: A brief look down the waterway to the lake brings to view the Chlothiel Smith town houses that sit on the opposite shores with all the exaggerated clumsiness of fat ladies in bold printed dresses. Their huge, oversized



Small store and apartment above sport big motifs: grand forks and escalier.

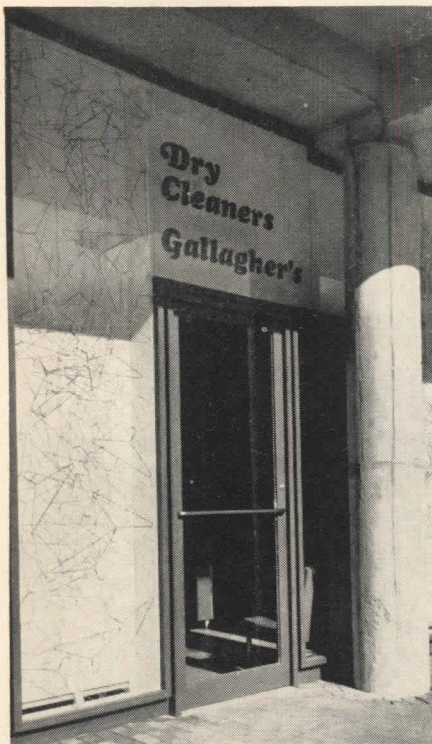




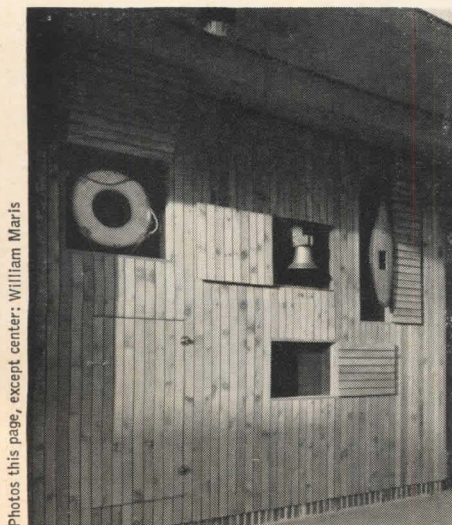
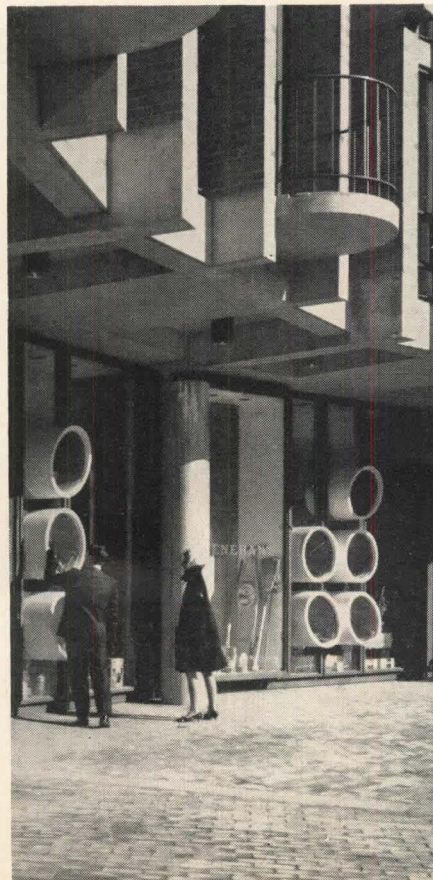
windows create an odd picture of elephantiasis, and as a whole they make the Village Center buildings that are closer at hand look smaller. The second disturbing note is that the individual units within the grand scheme are in fact quite small. There is the curious feeling that one is walking onto a stage set of accentuated and false perspectives. The apartments above the shops are quite pretentious in their layout, with a central staircase suspended in a two-story space. The size of the room, however, does not warrant the grandeur of the gesture, and again the effect is that of an impressive, prestigious motif borrowed from the castle to adorn the modern upper-middle-class broom closet. The small scale of the apartments and their self-conscious and immediate relationship to the piazza gives the decided impression that they are playing the part of the cute little-apartment-above-the-square. The architects have not achieved that peculiar balance between private and common spaces so characteristic of Parisian squares such as Place des Vosges.

The dichotomy of scale is carried around to the rear of the building. Although the architects have quite sensitively placed a small raised garden between the parking lot and the entry door (effectively blocking the onerous automobile), the entire sweep of the complex is muddled by a hodgepodge of buildings in front. The shape of the building is tantalizing—one would like to see more of it, but the expectation is never fulfilled.

On the practical, nonaesthetic side of the picture there is the problem that, in some areas, the Village Center is already too small and has no place to go. The Community Center auditorium is already bulging with activities, and since the teen-age group has taken over the "Rathskeller," the slightly younger set wants a hang-out of its own. There are more professionals who want offices there than there are spaces, and apartments are being converted to commercial or business use. Since the pedestrian plaza is the controlling nucleus of the complex, it appears it is already bursting at the seams and growth will have to take place outside of the plaza area. The architects have already made use of the space above the supermarket for the kindergarten playground but the rooftops of other buildings were not programmed

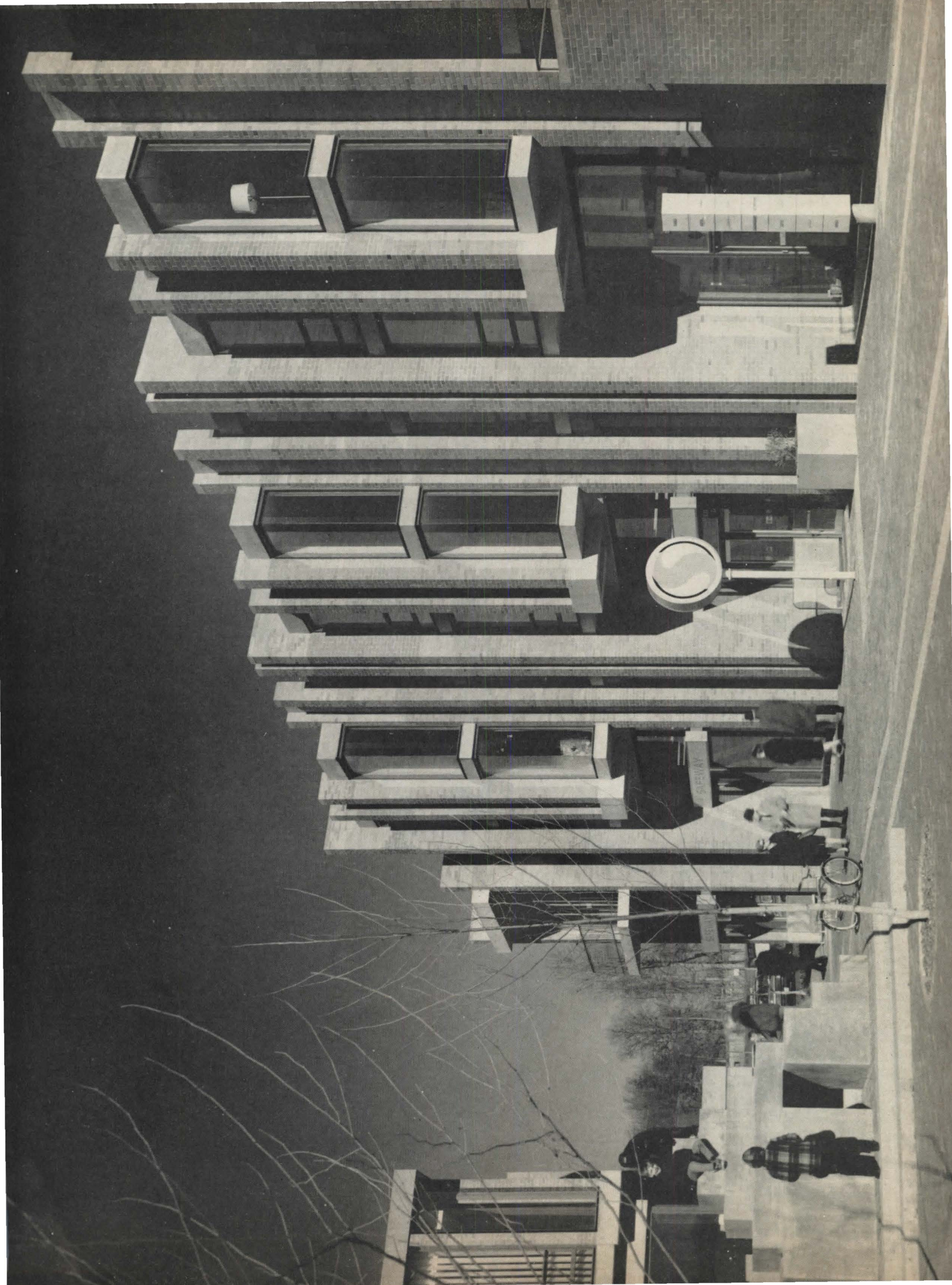


Shopping piazza: dry cleaner, hair-stylist, bar, and hardware store.



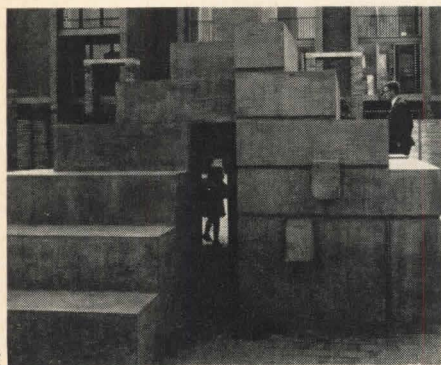
Photos this page, except center: William Maris

Photo facing page: William Maris





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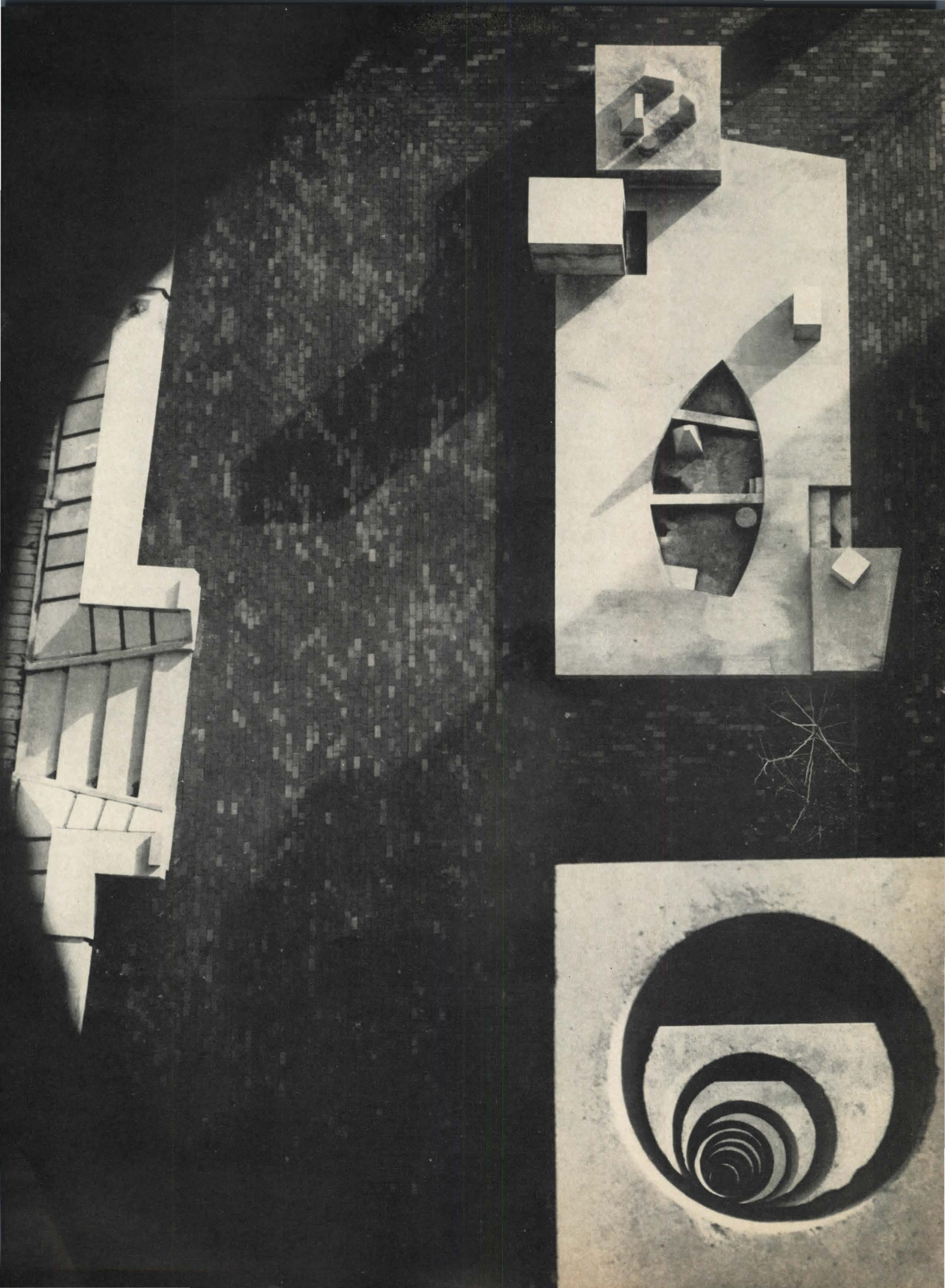
for expansion. The dilemma only points up the fact that it is almost impossible to predict the use and growth of a complex. Rather than setting up a rather rigid architectural framework, it would seem more realistic to provide an expandable system, one that could be shaped and modified by growing needs while at the same time preserving the central focal point of the pedestrian square. But that requires a more complex, four-dimensional concept of planning.

Good Taste and the Good Life

One resident at Reston made the comment that the tone set for the center by the architects was admirable: "I feel as if they thought of me first as a person, not as a potential dollar spender." The commercialism of the center has indeed been subdued. Storefronts and signs have been designed by the architects with tasteful whimsy. Products or by-products of the store have been used to announce their wares and services. A large band-aid and toothbrush marks the drugstore, mobiles of hangers advertise the cleaners, and a series of mirrors identify the beauty parlor. The art store was allowed to do pretty much what it wanted, on the assumption that the owner would naturally have good taste. The result is subdued; it is tasteful, playful, yet it nevertheless contributes to the oppressive feeling of control, of planning. There is very little room for accident, for individual expression.

Both in plan and in façade, Reston raises the perplexing question: Is too much planning self-defeating? The very character of a village is, after all, defined by its activity, its diversity, its accidents. The planners and architects have taken this into account in the step-by-step development of the town center; it seems inconsistent that the same principles are not applied in the first village center.—MD

Reston Village abounds in play sculpture, and recreation: Rossant's fountain (1) and pyramid (2) are clearly items to be toyed with, not just looked at. Lookout (3) is for boat racing referees; frozen lake (4) for skating. Gonzalo Fonseca, a sculptor, worked on premises during construction; his sun boat (facing page) lies below high-rise tower.



Good to the Last Drop

BY WILLIAM J. MCGUINNESS

Steam condensate recirculated to toilets can help eke out dwindling water supplies. McGuinness is the Chairman, Department of Structural Design, School of Architecture, Pratt Institute, Brooklyn, N.Y.

Water, the once free and abundant element, is now in short supply. Because of this shortage, we cannot wait for the old-fashioned cycle of using and polluting water, letting it run off to water courses, evaporating to form clouds, and then falling again as rain. Faster methods are available, such as desalination techniques (p. 209, APRIL 1966 P/A), and re-using uncontaminated water.

The question, "Would you bathe in used water?" is no longer rhetorical, since by now many people probably have done so. Many processes are available for reconstituting water, but no one is sure to what lengths we will have to go to salvage water for our dwindling resources.

If potable water is to be the end product, the standards for reconstituting it must be set by health authorities. However, when purity is not important, there are many sources of water that can be re-used. And at least one company is developing a conservation program in its own backyard.

In New York City, which is presently suffering an acute water shortage, thousands of building owners are purchasing steam from Consolidated Edison Com-

pany. This commodity has been distributed from a central plant since 1882. It has an interesting, and now useful, by-product—water.

Con Edison has developed secondary uses for city water and steam condensate, and started a conservation program 15 years ago in one of its own office buildings. Instead of wasting water from water-cooled air-conditioning units, from drinking-water coolers, and cooling water from air compressors, Con Edison collects the water and pipes it to the flushometers of water closets. Later, another source was added: the condensate from steam-driven centrifugal compressors and from steam-operated absorption chillers. The combined sources of re-used water enabled the company not only to flush toilets but to feed make-up water to the cooling tower.

This program was described by Mel Schwartz of Con Edison at a meeting of the American Society of Heating, Refrigerating and Air Conditioning Engineers.

| SOURCE | GPM |
|--------------------------------|------------|
| Centrifugal compressors | |
| 500-ton capacity | 16 |
| 1100-ton capacity | 35 |
| 2300-ton capacity | 74 |
| Absorption machine | 12 |
| Reheat coils | 5 |
| Economizers | 15 |
| Air compressors | 17 |
| Drinking water system | 15 |
| Ice-cube machines | 6 |
| Compressor bearings | 58 |
| Total | 253 |

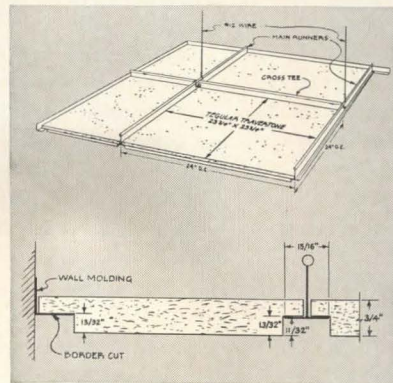
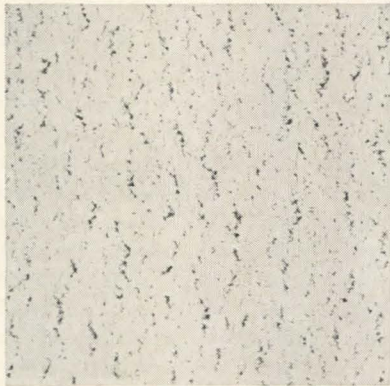
He summarized the flow-rate of re-used water in the accompanying table.

Before installing the equipment for recovering the steam condensate, the owner estimated that the re-used water would save \$3100 annually. To obtain this, the company required an estimated \$20,500 in capital expenditures. However, the actual cost of installing the system came in under the estimate.

The re-used water is kept entirely separate from the potable water supply. Water to be re-used is piped into a 1200-gal collection tank in the basement. From there, the water is pumped to an 8500-gal storage tank located on the twenty-second floor. Coolant water from the refrigeration equipment for the building's drinking water system goes directly to the tank on this floor.

Con Edison does not know how many of its customers have installed equipment for salvaging used water, but many have inquired about the methods used. At present, the responsibility for saving water rests with the building owner and his consulting engineer. In many cities, however, water conservation is a vital matter that is comparable to the national issue of purifying and re-using water from industrial wastes. Cities may one day develop techniques for salvaging steam condensate from central sources so it can be used for potable water. The condensate seems to be a natural source because it has already been purified by the distillation process of changing from steam to water.

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The panels are finished with a washable vinyl latex paint. They clean quickly and easily with a moist cloth or sponge. If desired, they can be repainted without noticeable effect in acoustical efficiency. Made of non-combustible mineral fiber, Tegular Travertone carries the UL label with a Class I Flame Spread rating. Tegular Travertone Fire Guard is available with a 2-hour UL

Time-Design rating for a floor-ceiling assembly (3-hour beam protection).

As for acoustical efficiency, Travertone's N.R.C. specification range is .65— .75. Average attenuation factor is in the range of 40 decibels (ceiling STC 36). Light reflectance is high, with no unpleasant glare ("a" light-reflection coefficient).

Tegular Travertone is available with or without ventilating perforations. Panel size is 24" x 24" x 3/4", for installation in standard exposed, suspended grid. The panels can be easily removed, too, for quick access to wiring, plumbing above.

Like to know more about new Tegular Travertone? Write: Armstrong, 4205 Watson Street, Lancaster, Pa.

Ceiling Systems by **Armstrong**

Both A Borrower and A Lender Be

BY HAROLD J. ROSEN

Specifications writers make time for research on new components by exchanging information to build up files of re-usable material. Rosen is Chief Specifications Writer of Skidmore, Owings & Merrill, New York, N.Y.

Because specifications are important contract documents that give essential instructions to contractors, the writing must be clear, complete, and accurate.

For these reasons, specifications writing is one form of writing where plagiarism is encouraged. Unlike most writing, which requires original material and presentation, 80 per cent to 90 per cent of specifications language and format is copied from old specifications, manufacturers' literature, and from previously developed standards. This procedure frees the specifications writer for research and investigation of new materials and equipment.

There is a compelling need to assemble and use old material that can be readily adapted and woven into the new specifications. It takes much too long to write an original specification, and there are obvious advantages to using standardized clauses that have proven satisfactory in the past.

Specifications writers are willing and eager to exchange information and pass on standard paragraphs and clauses prepared for recopying time and again. Only 10 to 20 per cent of specifications must be specially written for a particular building.

Some materials and some workmanship will be the same, whether the building is a school, hospital, university, or a church. Language describing the work can, and will, be identical, whatever the building type.

For example, the technical section on "excavation" does not depend on the

building type but relates to site conditions. A competent specifications writer files standardized clauses to describe site problems such as clearing and grubbing, stripping topsoil, sheet piling, rock excavation and payment for same, dewatering, underpinning of adjacent buildings, protection of existing trees, footing drain tiles, etc.

Another example of re-usable specifications writing is the technical section for "concrete." It is concerned with the foundation and structural system, and whether or not concrete will be used as an architectural treatment for exposed exterior walls and panels. Here again, a specifications writer uses standardized clauses and previous specifications. He has compiled all of these, and uses them as a basis for specifying and describing the building under consideration, tailoring them to the project at hand.

With the standard work quickly completed, a specifications writer can spend his time investigating and analyzing special materials and equipment for the unusual features of a building.

The science of building technology and construction is developing faster than ever before. Contemporary architectural design, for example, has fostered a new industry—metal-and-glass curtain wall manufacturing. This has stimulated the development of new metal alloys, finishes, and sealants, and it has a terminology all its own. Manufacturers in every field of building materials are working on new and better products. The demands of owners and users give added impetus to the search for new solutions. Changes in other fields, such as medicine, education, and banking, make new planning criteria necessary.

Change makes added demands on a specifications writer and he must have more time for studying the special requirements of a project.

Even before specifications are begun, the writer will be consulted, since he is an expert in materials. He will be asked such questions as: What exterior materials and windows are suitable for the façade? Is there a window, economical in initial cost, which ventilates properly, requires little maintenance, and will last for the life of the structure?

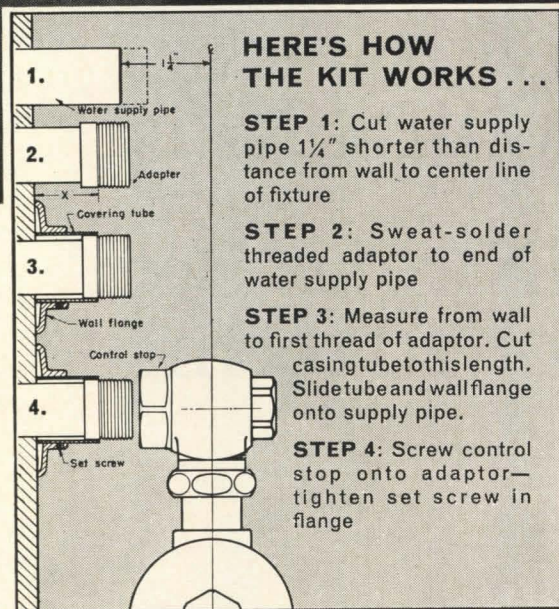
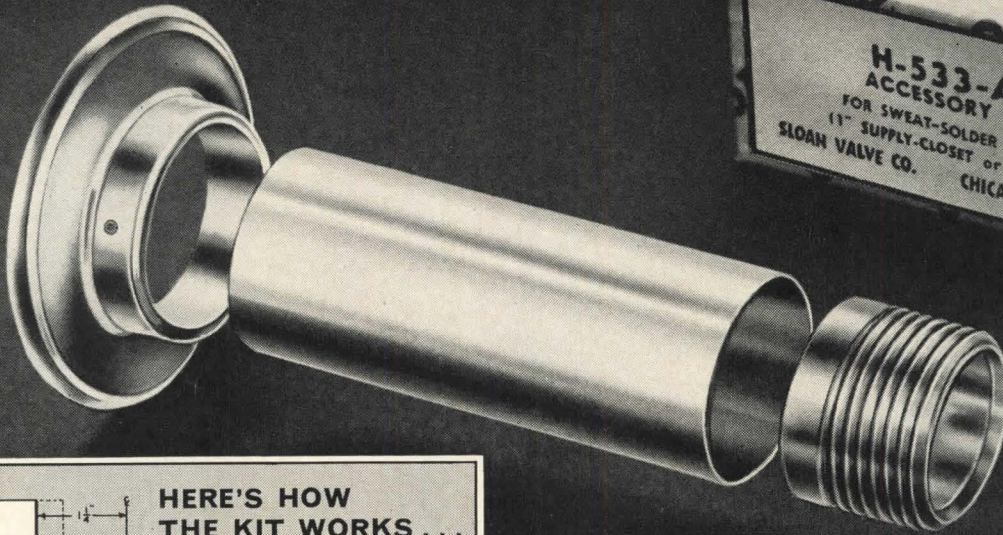
If a metal curtain wall is to be used, considerable research will be needed to insure the adequacy of the system chosen. Through the painstaking efforts of architects, specifications writers, engineers, and building materials manufacturers, metal curtain-wall systems were developed to overcome leakage, fastening problems, corrosion, etc. The specifications writer was instrumental in bringing these problems to the fore and in cooperating with manufacturers to overcome them.

Which new materials and equipment can be designed into today's building? Literally dozens of new products are introduced every month. If materials are to be used for the first time, the specifications writer should work closely with the manufacturer to make certain the product is carefully described and will perform the work intended.

Where new answers to building requirements are sought by owners and users, the designer transforms ideas into working solutions, and the specifications writer advises on the feasibility of putting new components together. This seeking out and developing of solutions to special problems presented by a departure from the norm is another important function of the specifications writer.

Thus, with all the time-consuming demands of new materials and techniques, specifications writers need to keep run-of-the-mill work to a minimum by repeating existing, accurate standards in the bulk of their specifications.

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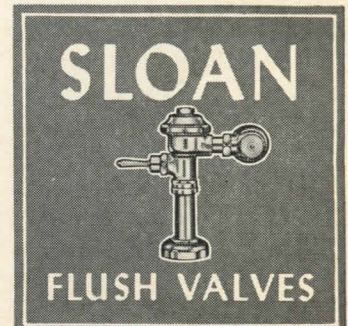
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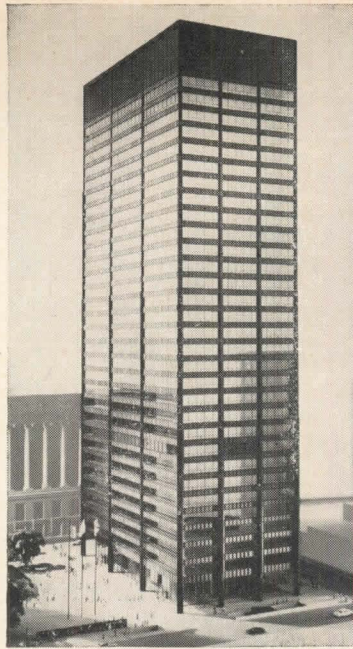
simple parts—a threaded adaptor, a Chrome Plated casing tube, and a Chrome Plated wall flange with set screw. The threaded adaptor, which is sweat-soldered to the water supply pipe, permits the threaded control stop of a flush valve to be installed in the usual manner. Shown at left is the step-by-step procedure for installing.

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The Architect and the Subcontractor

BY BERNARD TOMSON AND
NORMAN COPLAN

P/A's legal team discusses two decisions in which the architects' interpretations of the contract documents and their decisions relative to work performance were binding on the subcontractor.

An agreement between a general contractor and a subcontractor may provide that any interpretation of the plans and specifications by the architect which is binding upon the general contractor shall also be binding upon the subcontractor. Such provision has generally been upheld as valid and enforceable unless fraud or collusion is established. From a general contractor's point of view, such a provision is highly desirable in order that he not be caught in the middle between differing interpretations of contract documents.

The typical application of such a provision is illustrated in the New York case of *Wood & Co. Inc. v. Alvord & Swift*, 232 App. Div. 603, in which a general contractor's agreement with the owner provided that the architects "shall interpret the drawings and specifications, and their decision as to the true intent and meaning thereof . . . shall be accepted as final and conclusive." This clause was incorporated by reference into the contract between the general contractor and a subcontractor who was to furnish the installation of the heating and ventilating apparatus in the building to be constructed by the general contractor. The latter contended that the subcontractor had failed to complete the work and that some 25,000 ft of radiator connections had not been covered. Whether or not the subcontractor was required to cover these connections was dependent upon an interpretation of the construction contract, which provided that "all high pressure, reduced pressure, low pressure, high and low pressure drip piping, all concealed heating risers and radiator connections, steam return, drip and vapor piping shall be covered." The subcontractor contended that the word "con-

cealed," appearing in the clause above quoted, excluded radiator connections, since they were exposed. The architects, however, construed the clause as including radiator connections, and the Court ruled that such interpretation was binding upon the subcontractor.

Where a subcontract provides that not only an architect's interpretation of the contract documents shall be binding upon the subcontractor, but that the architect's decisions relative to the subcontractor's performance are also binding, similar legal issues may arise. For example, in a recent New York case (*Eastern Fireproofing Co., Inc. v. Lasker-Goldman Corp.*, N.Y.L.J., 2/9/66) the issue before the Court was whether a clause in a contract between a general contractor and a subcontractor, which provided that the subcontractor was "to do all things and be bound by all rulings of the architect to the same degree as [the general contractor] is bound," was applicable and conclusive in respect to a claim of the subcontractor against the general contractor for repair work in the approximate sum of \$30,000, which had been performed by the subcontractor. The general contractor had entered into a contract for the construction of a high school and had subcontracted for the installation of certain roof decks. The subcontractor contended that this work had been exposed to freezing and thawing cycles, resulting in erosion of the roof deck material and he furthermore asserted that this exposure to the elements was the fault of the general contractor.

The agreement between the general contractor and the subcontractor provided that the subcontractor was not to be liable for any damage as the result of the failure of the general contractor to waterproof the work within a reasonable time, or for any other damage due to negligence of other trades. The subcontract also provided that the subcontractor was to perform its work to the satisfaction of the architect for the project. When the contract was entered into,

the parties to it planned to have the subcontractor start the roof deck work during the month of October. In September, there was an exchange of correspondence between the general contractor and the subcontractor in which the general contractor called to the subcontractor's attention the dangers of performing such work in winter weather; the subcontractor, in turn, requested assurance that waterproofing would be completed within 10 days of the completion of its installation.

Although some of the material for the performance of the work was delivered to the site in the early part of November, the subcontractor did not begin work until the end of November. The first pouring of any section did not commence until the middle of December, and all sections of the roof, except those of the auditorium, were poured by the end of the month.

In January, the the architect directed that cores be taken from the roof deck and tested before any finished roofing was applied. He had found that the roof was "spalling": it varied in thickness, being in places less than the 2 in. required due to erosion of material; and reinforcing mesh protruded above the top of the deck. The roofer, who had come on the job for the purpose of waterproofing the deck, well within the 10-day period requested by the subcontractor, was ordered to suspend operations by the company bonding the roof, on the ground that the deck surface had wet frost on it.

Thereafter, the architect, in a series of letters, detailed the corrective work to be performed by the subcontractor to make the roof deck satisfactory to him. The Court interpreted these letters as a conclusive ruling that the fault lay with the subcontractor and that the damage resulted from his delay in performing the work. The Court concluded that, under the terms of the subcontract, the architect's determinations were binding unless shown to have been effected by fraud or bad faith.

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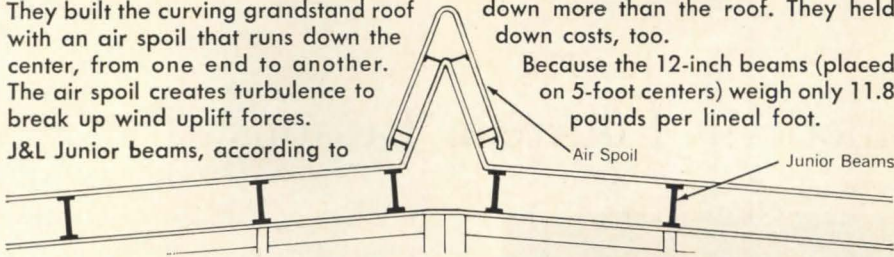
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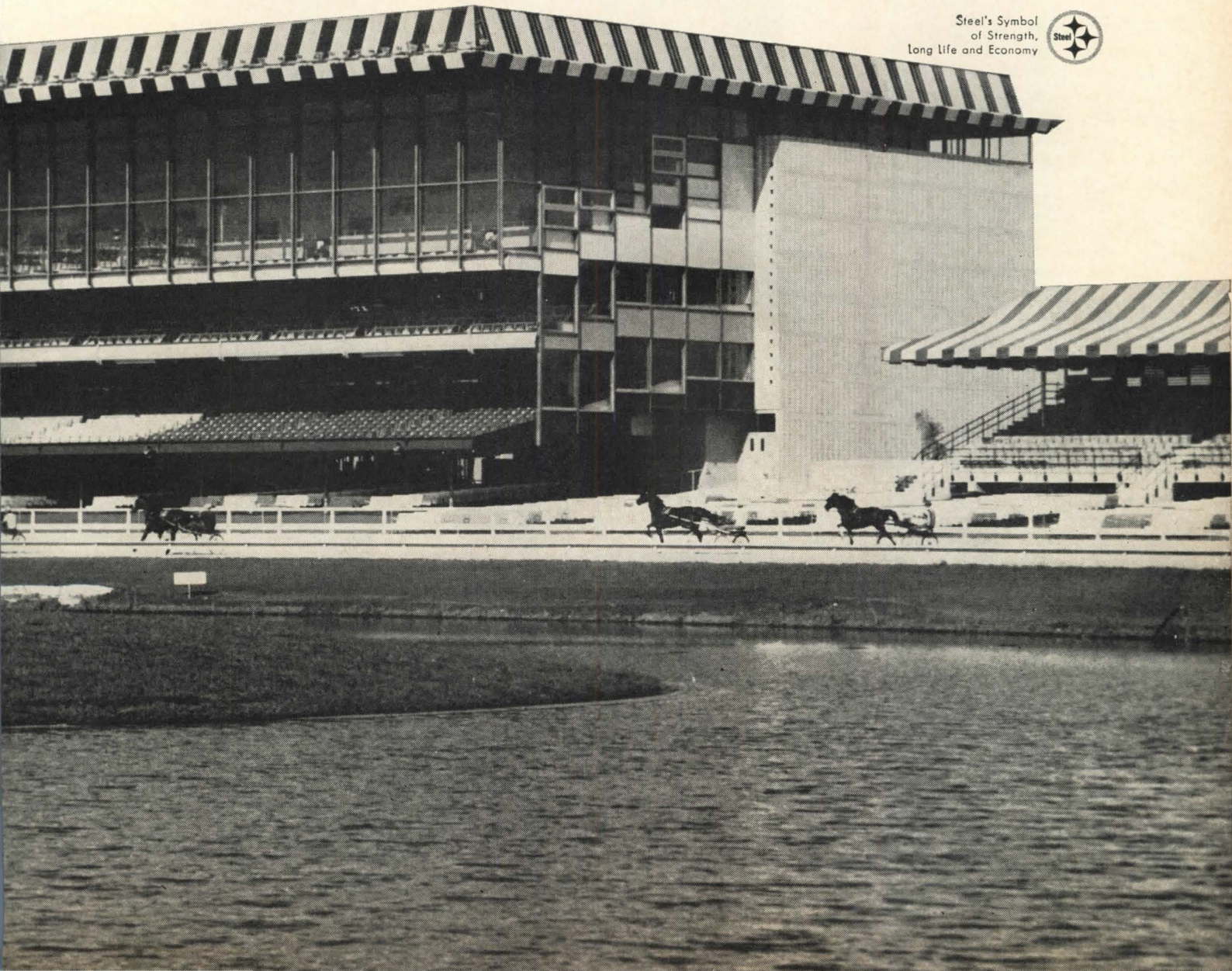
• Architect: Robert E. Hansen, A.I.A. • Consulting Engineers: Walter C. Harry Associates • Steel Fabricators: Peden Steel Company • General Contractor: Porcher Construction Company • Completed: 1965 • Owners: South Florida Harness Raceways, Inc. Wm. A. Weir, Construction Coordinator, Pompano Beach, Fla.



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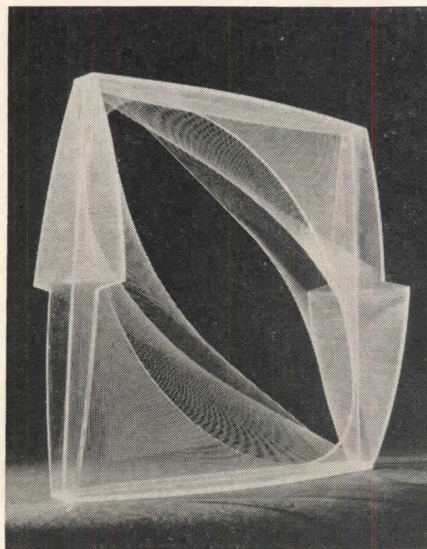
From Cosmic to Cosmetic in Fourteen Lessons

BY PETER COLLINS

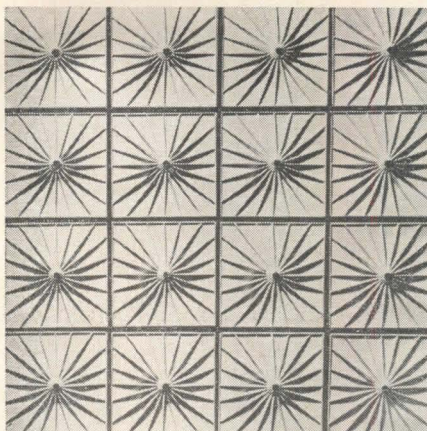
STRUCTURE IN ART AND IN SCIENCE. Edited by Gyorgy Kepes. VISION + VALUE SERIES. George Braziller Inc., 215 Park Avenue S., New York, N. Y., 1965. 189 pp., illus., \$12.50. The reviewer is Professor of Architecture at McGill University, Montreal, Canada. P/A presented a review of his book, *Changing Ideals in Modern Architecture*, in the December 1965 issue.

This is a collection of essays by eminent specialists—working in widely diverse fields—a mathematician, a psychologist, a physicist, a metallurgist, a sculptor, two engineers, three architects, two city planners, and two art historians. The texts were presumably assembled to convince connoisseurs of painting and sculpture that the concept of “structure” is the basic principle of order behind every new creative thought and act. To achieve this end, Kepes first presents a series of essays by scientists (since current scientific concern with the structure of the cosmos is obvious and irrefutable). He then introduces a series of essays on engineering, architecture, and city planning, which, since their subject matter can be described as both a science and an art, constitutes an equally obvious (though not an equally irrefutable) transition to his main theme. The book terminates with a series of essays on painting and sculpture, whereby the reader is expected to conclude that Kepes’ thesis—that art and science are essentially inspired by the same principles—has been proved.

Whether one is predisposed toward his intentions or not, his attempt to achieve them in this book is inconclusive, since it suffers from a disadvantage inherent in all compilations of this type: namely, that since the various contributions have never been editorially correlated, the reader is expected to accomplish the correlation himself. Though Kepes en-



Naum Gabo's "Linear Construction," The Phillips Collection, Washington, D.C. Photo: Herbert Matter. (Taken from p. 19.)



Pier Luigi Nervi and Antonio Nervi: Palazzo Del Lavoro, Turin. View through roof structure. (Taken from p. 109.)

nunciates a number of prefatory remarks about the importance of “interthinking,” it would have been more profitable to the reader if he himself had undertaken the onerous task—if he had studied all these essays and written a book explain-

ing to us exactly how these subjects all intimately relate to one another. As it is, the reader will not only experience some difficulty in relating the various disparate ideas, but may even harbour the suspicion that some of these essays were not specifically written for the book at all, but were already formulated before their authors were invited to visit Boston or to contribute in writing to Kepes’ M.I.T. symposia.

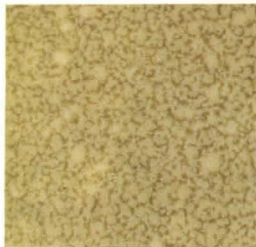
It is true that the editor prefaces the essays with a three-page introduction and a four-page summary intended to act as a synthesizing catalyst, but it is too nebulous to be really effective. He chides his readers for having “failed to live up to the 20th Century challenge,” but omits to substantiate the rebuke. He remarks patronizingly that “the infant Macaulay thought that he knew everything worth knowing,” but this remark tells us only that he knows even less about infants than he does about Macaulay. He asserts that “it is no quibble to separate the notion of structure from such related concepts as order and form,” but makes no attempt to explain how the three separate ideas are related.

It is precisely the manner in which structure relates both to order and to form that should constitute the subject of this kind of inquiry. The 19th-Century Rationalists, for example, seem to have accepted as axiomatic the idea that form follows structure, and that structural equilibrium implies some sort of symmetry. Had they had the advantage of seeing the many enlarged microscopic photographs of natural structures in this book, they would have been even more sure of their second notion (though it does not ever seem to have occurred to the editor). But in the first essay of the book, the author, a physicist, claims among other things, that: (1) structure is simply form seen inside, as a definite arrangement of localizable parts; (2)

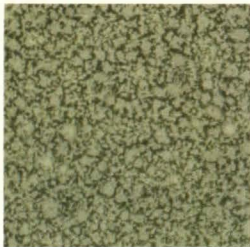
Continued on page 218

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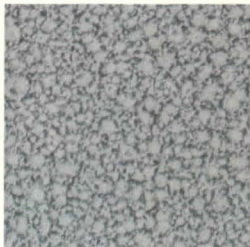
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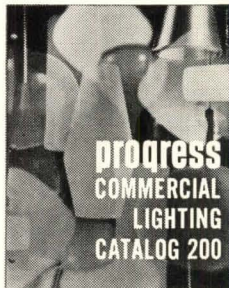
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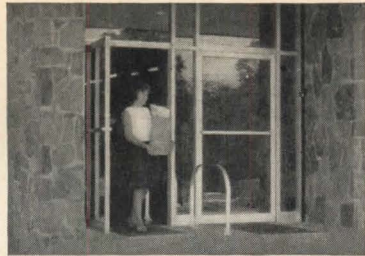
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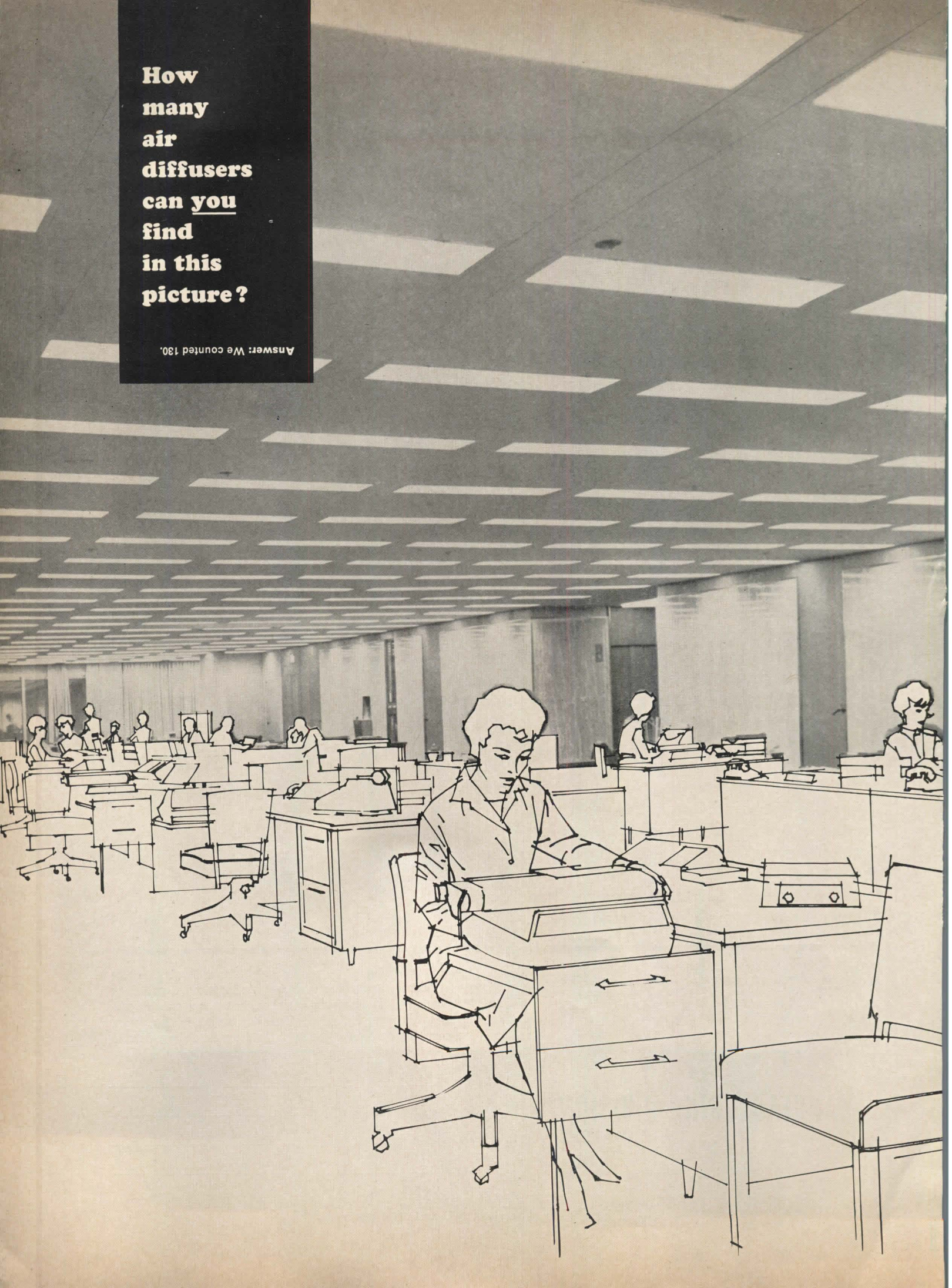
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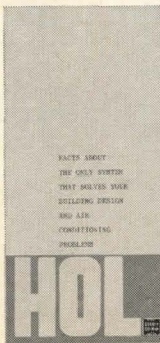


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Continued from page 210

that we do not know what "order" means if it is to apply in all realms of science; and (3) that there may well be no such thing as chaos. Thus, within the first 22 pages of his compilation, the Editor's basic contention is shown to be philosophically futile.

Those who are deeply concerned with the extent to which the best modern painters or sculptors share the scientist's microcosmic or macrocosmic vision of the world will find all the essays in this book of equal interest. Those who are committed to the Neo-Plasticist and Constructivist creed that good architecture can only be created by the exclusive collaboration of painters and scientists will be mainly attracted by the essays at the beginning and at the end. But I shall only attempt to discuss the essays by engineers and architects that appear in the middle.

The first is a lengthy essay by Buckminster Fuller, which begins by defining structures as "patterns of inherently regenerative constellar association of energy events." He then proceeds to demonstrate his well-known thesis that the only structures worth bothering about are tetrahedral (or "tetrahedral" as

he terms it, thus making it sound like a new patent tranquilizer, which of course it is).

A useful and thoughtful study appears by Eduard Sekler of three terms frequently employed by writers on architecture: structure, construction, and tectonics. To clarify the terminology, he suggests that we limit "structure" to mean an abstract concept concerning a system of arrangement, "construction" to mean the concrete realization of such a system, and "tectonic" to mean the expressive qualities resulting from the play of forces and arrangements of parts. In support of the latter *idea*, he aptly quotes the French 17th and 18th Century axiom that it is not enough for a building to be firm; it must also look firm. In support of the latter *term*, he shows that it was used by German authors in the 19th Century. However, in my opinion, he does not sufficiently emphasize the fact that it was used by them in a much broader sense (as his own quotation from Wölfflin amply demonstrates).

According to Sekler: "Through tectonics, the architect may make visible, in a strong statement, that intensified kind of experience of reality which is the artist's domain—in our case the ex-

perience of forces related to forms in a building." It is a pity, therefore, that this strong statement by the author should be unnecessarily watered down by traditional historical appeals to "the reality of Paestum or the Parthenon"—temples that no one living has ever seen except as fragments, and which, even as fragments, have little relevance, either structurally or constructionally, to 20th-Century technology. Moreover, having stressed the importance of tectonic values, and illustrated their exploitation by Mies van der Rohe, he has evidently shrunk from illustrating buildings by other famous modern architects that either ignore or pervert such values. He describes the shock of discovering that the construction of an attractive-looking building "seems to have little in common with the architectural expression in front," but tactfully illustrates this point with photographs of a 500-year-old mosque in Isfahan rather than a building by a living master.

The next two essays, by Nervi, are entitled "Is Architecture Moving Towards Unchangeable Forms?" and "On the Design Process." Both are written with a terse precision and lapidary ele-

Continued on page 228



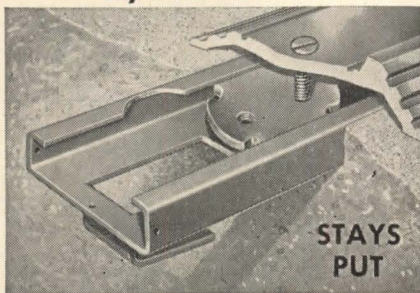
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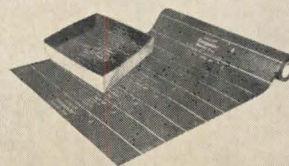
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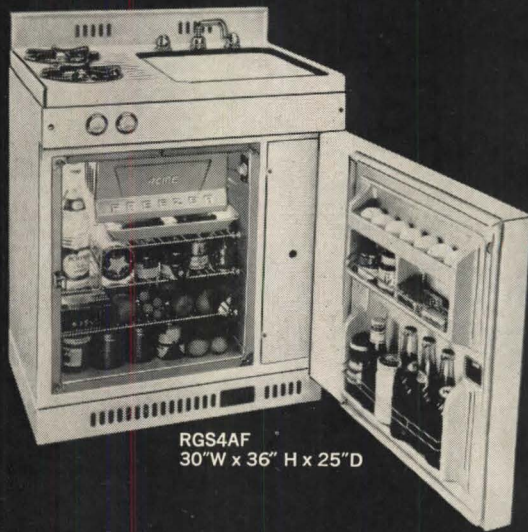
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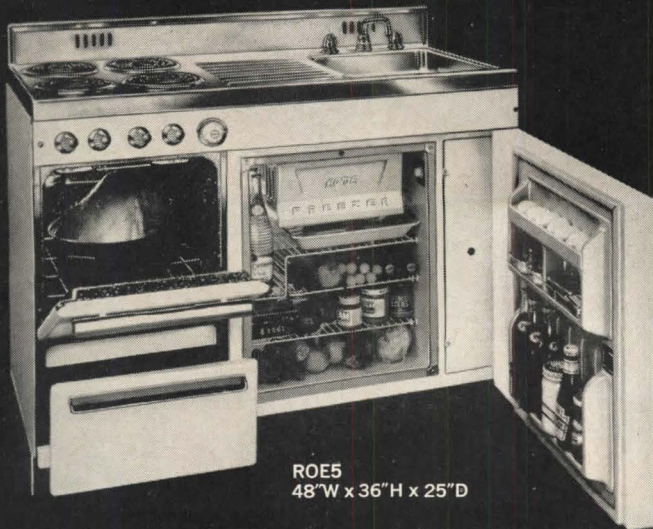
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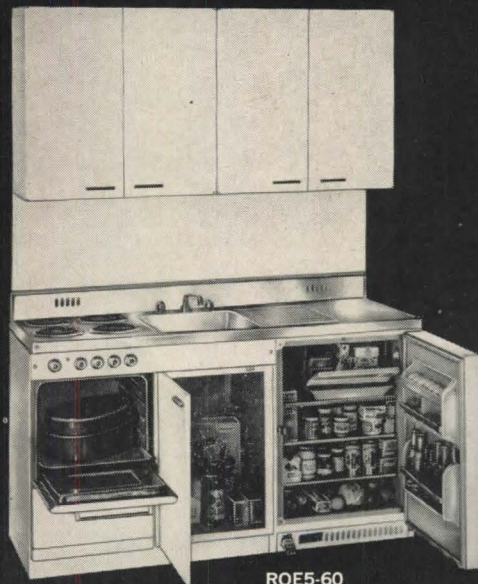
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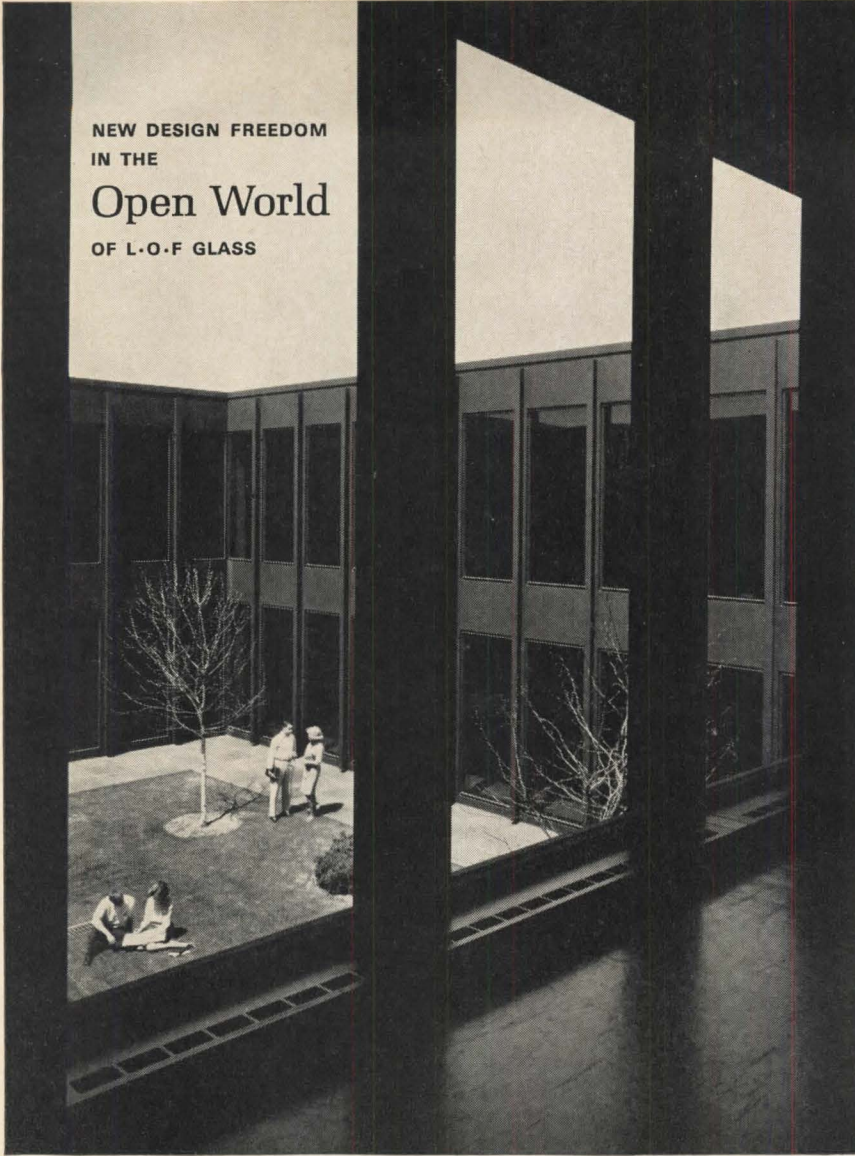
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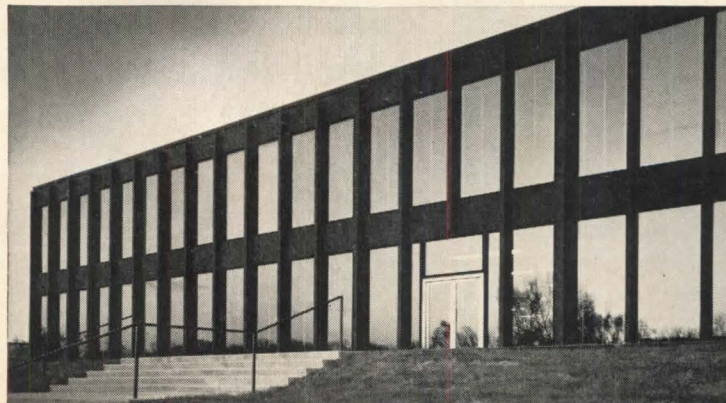
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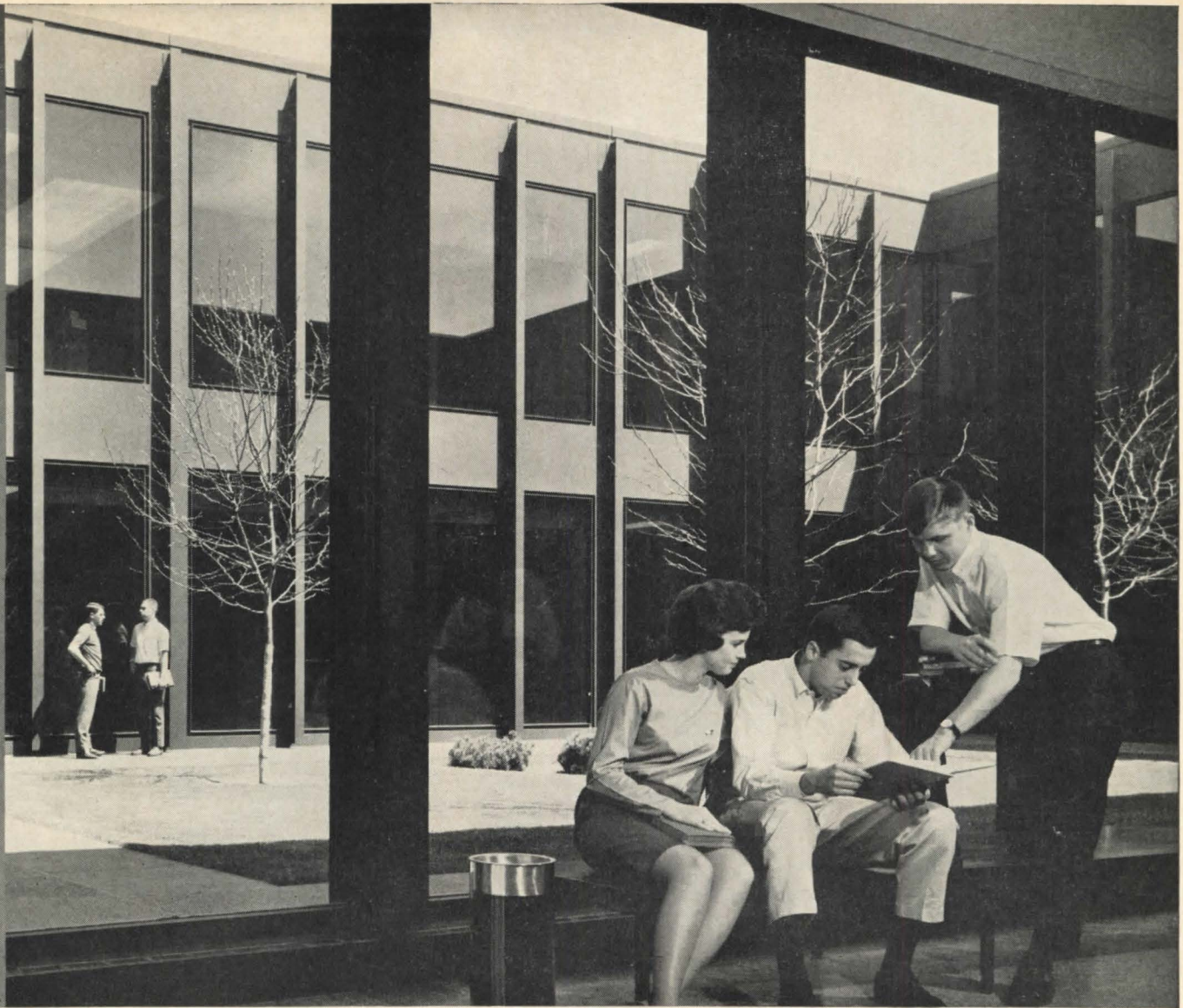
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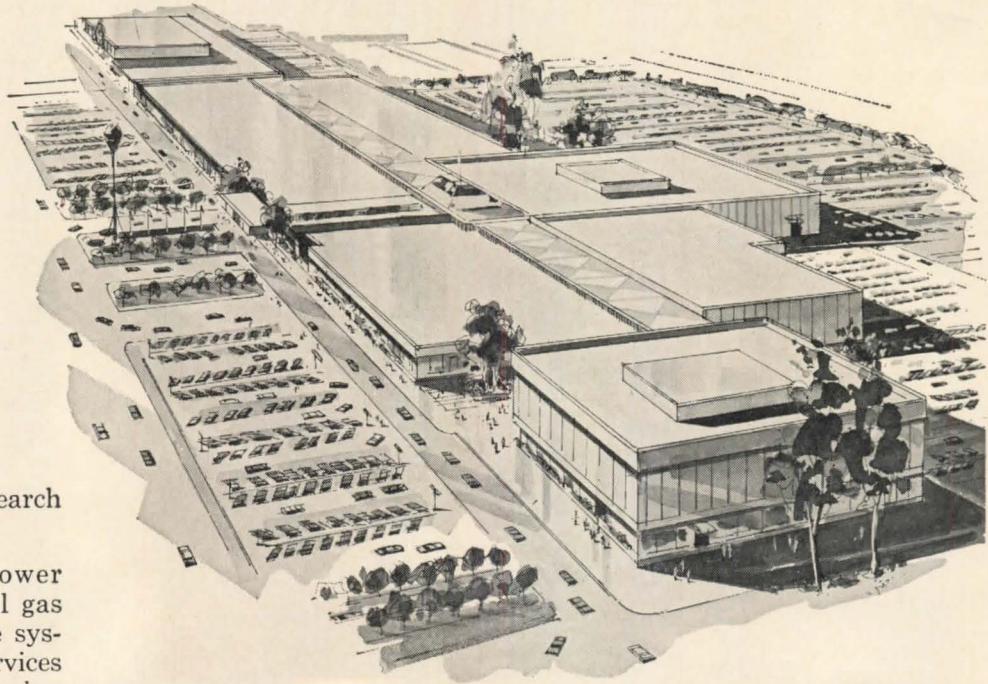
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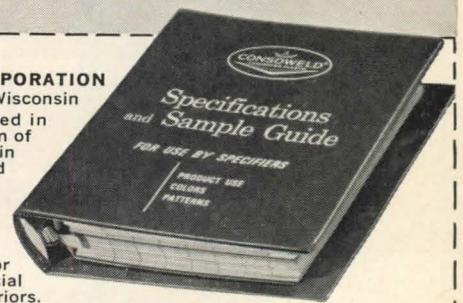
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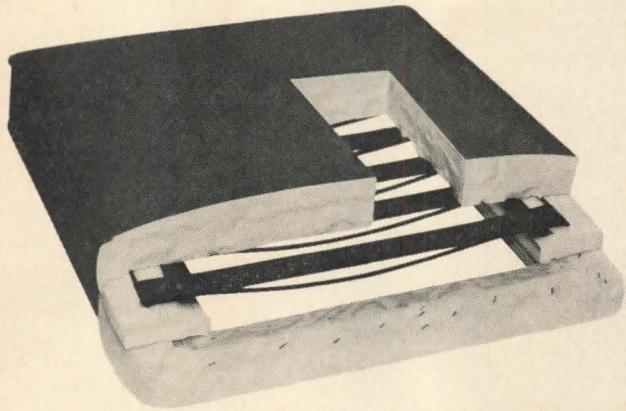
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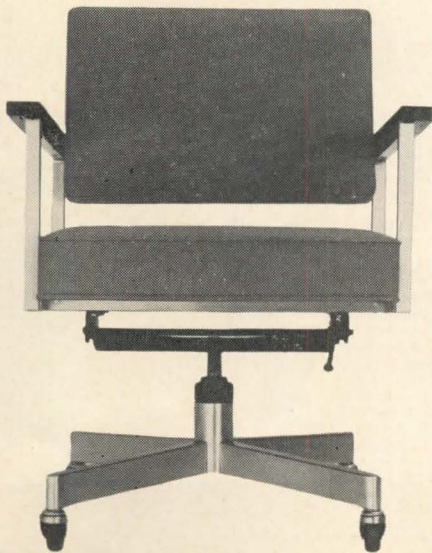


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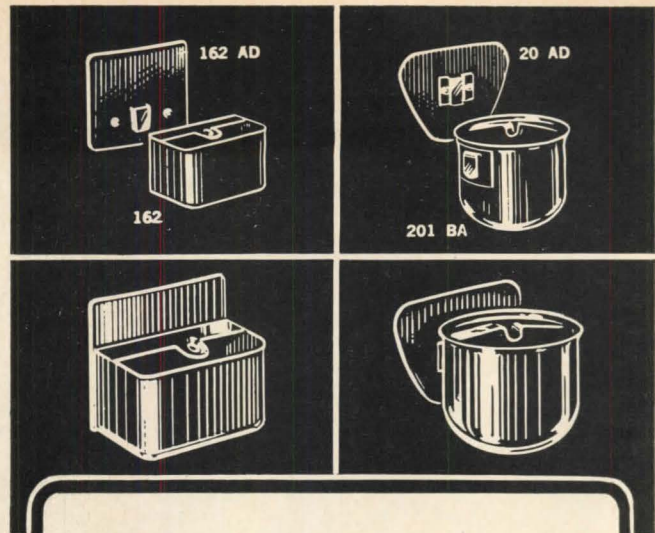
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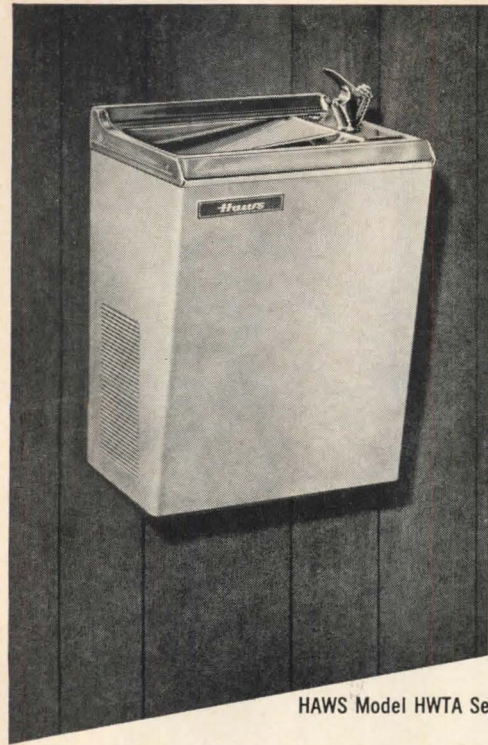
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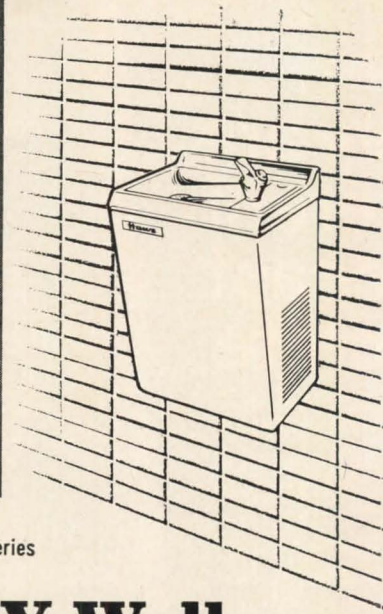
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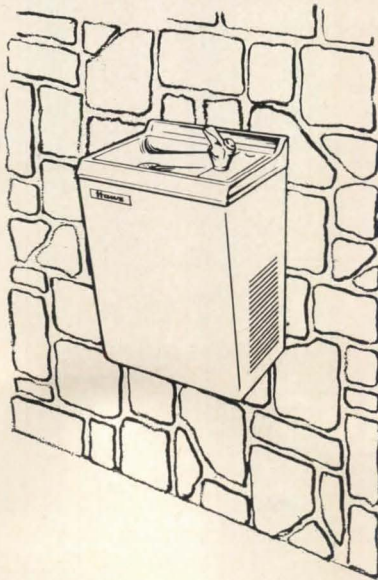


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gance reminiscent of Nervi's constructions in reinforced concrete. For this reason, his arguments are difficult to summarize. In the first essay, he explains why he thinks humanity is heading toward forms that, once reached, will forever remain unchanged and unchangeable in time. But it is worth noting that he refers essentially to structures of very large span, and specifically excludes "buildings for habitation." It might have been better, therefore, if the essay had been entitled "Is *Civil Engineering Moving Towards Unchangeable Forms?*"

The theme of his second essay is more abstract, but it is equally incisive, especially in its unequivocal denunciation of architects who design "buildings which do not serve the purposes for which they were built." But perhaps in some ways it is too abstract, because in his concern to emphasize the need to think out every architectural problem on its own, he seems to exclude the study of previous recent solutions of similar problems. Yet it may well be that the reason some buildings are, as he asserts, inadequate for their purposes is due to the reluctance of ambitious architects to pursue this form of research lest it inhibit their creative talents.

The last essay of the group is by Alison and Peter Smithson, and is called "Building Toward the Community Structure." After a brief introductory paragraph dismissing Richardson, Scott, and Garnier as merely builders of "big ugly blocks," the Smithsons explain one of their own designs, which evidently illustrates better than any other building, either projected or built, their contention that all buildings should be thought of from the beginning as "fragments." This new type of design is termed by them a "non-building building"—a most appropriate term under the circumstances, since the project they describe was rejected by the clients in favor of a scheme, now under construction, by Gollins, Melvin and Ward.

To conclude, then, it may be said of *Structure in Art and in Science* that as a compendium of miscellaneous essays by acknowledged authorities it is most valuable, but that as a treatise it is ineffectual for two reasons: firstly, because the reader is never given an example of any contemporary work of art that is considered by Kepes or his contributors to be "nonstructural"; secondly, because, even in its positive interpretations, the term "structure" seems to embrace too much. As an illustration of the first point,

Continued on page 236

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*"Even small lots can borrow space from the horizon;
midtown greens and lakelets can enrich this loan."*

RICHARD NEUTRA



The Space Saver Research House, first built by Neutra in 1932, tragically burned. Now again it faces Silver Lake. The charcoaled west front trees are replaced by tall shading louvers automated to follow the sun.

Bottom left picture "And the landscape of nature extends from the horizon right through our skin and millions of sense receptors into our innermost being."

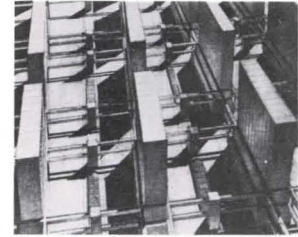
(The anti-heat glass penthouse island is surrounded by a reflecting water roof.) Bottom right picture "Even in midtown architects cannot abandon the green and red-blooded world for one that is anemic, drab, humdrum, sensorially impoverished."

The Richard J. Neutra Institute's Research House, Los Angeles, California, 1966 Richard and Dion Neutra, architects





**“Density amidst wide spaces is an age-old recipe.” Neighborhood project, Channel Heights, Palos Verdes, California.
Richard and Dion Neutra, architects.**



1. 2.

In this article we report Richard J. Neutra’s views on architecture and mass population. Because we feel carpeting is the concern of the architect, we confess to drawing Mr. Neutra out on the place of carpeting in a well-peopled world.

“Population explosion should be scientifically manageable, much more so than space travel,” says Neutra. “Architects can find ways to help—accommodating instead of vaguely dreading mass populations.”

Even in the difficult problem of mass habitation Neutra is steadfast in his respect for man’s basic nature. In every kind of structure and in every kind of situation, this is Neutra’s philosophy. Style and technique evolve naturally from service to man’s physiological-psychological needs.

“These primary needs stay with us; they do not obsolesce, and when needed projects are designed with these needs in mind, they too will be safe against obsolescence. Such projects are often now of staggering size, and we simply can’t afford their design if they do not support life and health.”

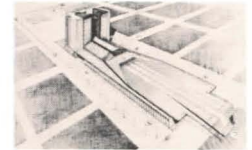
Neutra’s studies for an ideal town, “Rush City Reformed,” which he worked on in the early twenties, are certainly not obsolescent. In fact, they are more pertinent today with our increased pop-

ulation, our far-flung suburban fringe, and our noisy, sprawling, spur-of-the-moment cities.

“There can be no doubt that the prehistoric biological plan of nature was for human beings to be well spaced in the landscape. In the future, physiological needs will have to be artificially fulfilled if ever greater population densities are made agreeable.”

These needs are fulfilled in the Bewobau housing projects designed by Neutra and his collaborators recently near Hamburg, Frankfurt, Wiesbaden — German suburbia where land is scarcer than here. They contain hundreds of houses, some nine different types, on small plots. Interlocked yet protected by walls and hedges, each house is screened from the others, and lives within its own small, individually designed garden.

In this country the Richard J. Neutra Institute’s Research House in Los Angeles, where Neutra tests theories, materials, and, above all, human responses, proves what can be done with a tiny, midtown plot of ground. The Research House is built on a 60- by 70-foot lot, but it has space for three families, get-togethers, and seminars. Facing Silver Lake, it is on a highly trafficked street, but you don’t suspect this, once you’re inside the green hedge keeping out the city sidewalk. Here

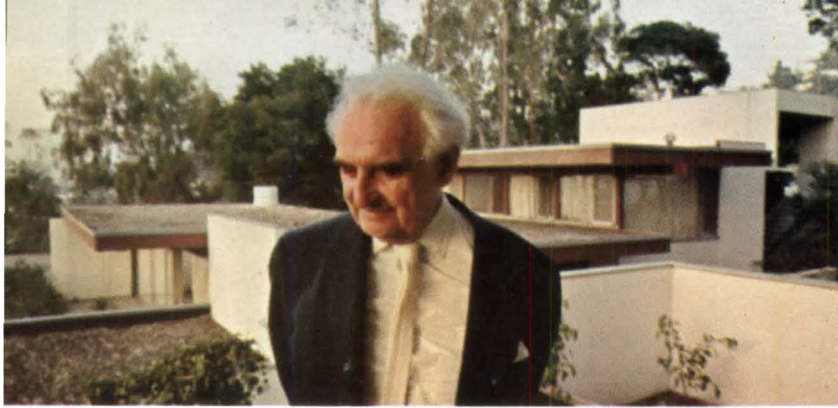


3. 4.

**1. The freeway passes a commercial link between domestic zones.
2. One-structure-downtown. Rialto bridges, paralleled by intimate small shops, cross over landscaped or covered parking areas, with a world of rolling traffic beneath.
3. “Ribbon City” with a backbone of high rise buildings and lateral exfoliations of complete residential neighborhoods, each self-centered.
4. Main rapid transit station with helicopter top.
All four pictures are from R.C.R. Rush City Reformed studies by Neutra in 1923.**



**“The big problem with an ever smaller spacing between human beings is setting the scene so that, some of the time, they can sense each other less.”
Bewobau housing project near Hamburg, Germany
Neutra and Associates, architects**



"Mohammed, a successful, real politician, if there ever was one, said: 'If I had two coats, I would sell one and buy white hyacinths for my soul.'"

Neutra, the humanist, is also Neutra, the magician. Trees, foliage, and small pools here and there outside the glass fronts on the first, second, and third levels (Neutra calls these pools "psychological moats") make you feel you're within a woods. Reflecting glass, heat-mirroring in different degrees according to orientation, multiplies trees and shrubbery and sky and pools beyond their limits by day—and even more so by night with dim, indirect, white illumination melting with moonlight. And the inch-deep pools, gently wrinkled by the breeze, reflect space. You see and feel only a world of nature, and you forget that a man has contrived it all within the tight central area of a vast metropolis.

The "cures for tightness" continue inside the house. It is full of expanses and experiences. Here glass lets in light and sky and reflecting pools so that rooms seem to go on and on in space.

Carpeting is one of the "space variegators." It varies and defines space for both eye and ear. It half-consciously sections off an area for specific use. Here is a carpet-quieted space for relaxed talking. There is a carpeted dining or formal conference

space. In between is wood, for Neutra likes to give the ear the variety of sounds one makes going from carpet to wood to carpet. He also likes a diversity of feeling for our many muscles which record resiliencies. He stretches space by inserting a "wealth of experience." It is not just a matter of square feet.

Perhaps his most surprising effects are achieved with lighting. At night by rheostatically dimming and again brightening lights, half-transparent glass superimposes mysterious images over floors and makes their surfaces seem to overlap and expand outward. Again a feeling of space is added. An entire room is given the warm glow of a fireplace with soft lighting from the toe recess of bookshelves skimming the carpet pile.

Having fully enjoyed the aesthetic, functional, and dramatic effects Neutra has achieved with carpeting, we asked him about its practicality in mass habitation.

"I once lived for a year in a Moslem harem, or rather, under the same roof with one. It had a great number of children and thin hardwood partitions. If populations reach that kind of density, the Oriental custom of rugs (which preceded our full-sized carpeting) seems a blessing, a foregone conclusion, almost

a necessity for survival.

"We can hardly depend on choices or decisions of the individual tenant as to how he wants to support, or mitigate his weight and impact on the floor, or cut down vibrations in his room which are being originated by his moving around chairs, trick-tracking or dancing on a noisy sort of surface, selecting a television program which may not coincide with the choice of his neighbors on the side, or the people below. Thermal and visual problems within his four walls can be his own affair, but when it comes to his acoustical spread, he is a public menace. Shall we live with plugs in our ears?"

"You ask me about carpeting. I am, with my zest for *science truly applied*, only interested in the mission of keeping humanity, in its ever remade setting, as sane and sound as we can. Well, carpeting may have been considered a luxury when people were scarce, and space between them large, but this will no longer be so when population densities are on the steep increase. To soothe nerves within and around rooms filled with ample humanity will be a formidably mounting job, unless people learn to move about as deftly as bats. I'm afraid they won't."

Neutra says he can see car-

pets used on ceilings, as partitions, or in lieu of them. "We can redirect sound where we want it, or swallow it up when we place such absorptive fabrics with judgment, underfoot, on walls, or overhead, as they best supplement each other."

Neutra went back to his main theme of how, in tightly populated cities, the architect must make up for man's loss of natural surroundings. "In the future they will have to be artificially substituted, and, nevertheless, their eternal role fulfilled if ever greater densities should be made bearable.

"Surfaces, however synthetic, must have a natural feel; that means they must tend to associate with ancient experience of mankind." Neutra mentioned how carpets have their link to grassy ground and the colorful spread of meadows in bloom.

"We shall never *learn* to be unnatural; rather we must learn to supply in much sensitive detail what our nature unavoidably needs."

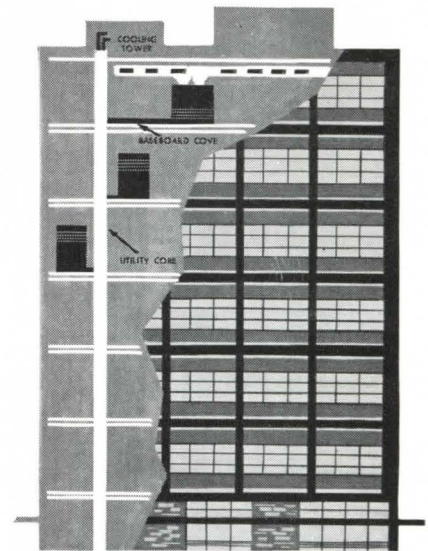
One feels that no matter how many men cover this earth Neutra would build a house that favors a man's growing, the way a friendly greenhouse favors a plant's. For Neutra's first love is man.

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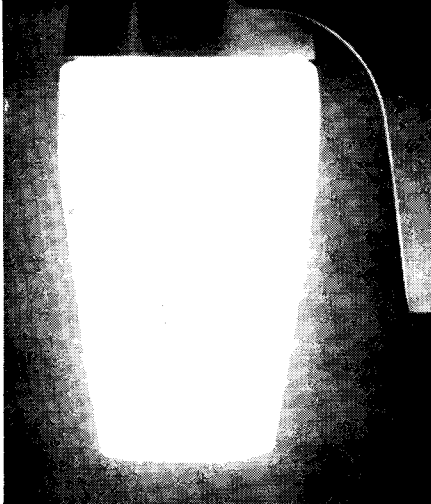
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236 Book Reviews

Continued from page 228

Bronowski (a mathematician), states that Henry Moore's sculpture is a good example of "structure" in art because the preliminary drawings are composed of "an accumulation of small nervous lines." But if this assertion means anything of relevance to the theme of the book, it means that if Bronowski had discovered that Moore sketched like Rodin he would have had to declare that Moore's sculpture was "uncontemporary" and hence art-historically bad. As regards the second point, one cannot help but conclude that "structure" for Kepes is comparable in scope to what "news" means for a journalist. For just as the latter presumably considers that everything he thinks worth printing is, *ipso facto*, news, so Kepes seems to think that every work of art he admires is, *ipso facto*, structural.

The present book is, therefore, only likely to stimulate strong enthusiasm among readers who habitually start at the front page of their newspapers, and then read doggedly on through politics, crime, finance, sports, births, entertainments, sports, and travelogues, interrupting their systematic reading only to glance mechanically at the illustrations, however familiar or meaningless the patterns may be. Indeed, since the Greek word *cosmos* meant both "order" and "ornament," this book might more appropriately have been called: *From Cosmic to Cosmetic in Fourteen Lessons by Various Authors*, and the name of the editor left off the spine.

Pecuniary Poetry

BY HARMON H. GOLDSTONE

SONNETS FOR MY CITY—AN ESSAY ON THE KINSHIP OF ART AND FINANCE. By Arthur Cort Holden. Schulte Publishing Co., 80 Fourth Ave., New York, N. Y., 1965. 231 pp., illus., \$8.50. The reviewer is a partner in the firm of Goldstone & Dearborn, Architects, and a member of the New York City Planning Commission.

Certainly no other book remotely like this has ever been written: 200 sonnets, separated by prose interludes into eight cycles, introduced by three forewords, and supplemented by 30 substantive footnotes, several dozen of the author's pen-and-ink sketches, an epilogue, a retrospective appendix and a bibliography—all about "the kinship of art and finance as factors in the development of the city and the moulding of man's environment."

As is apparent from this description alone, Arthur Holden has written a

Continued on page 240

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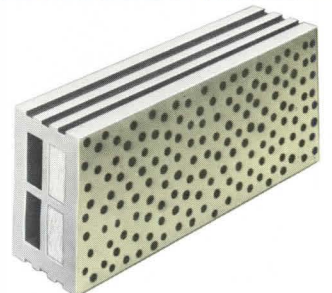
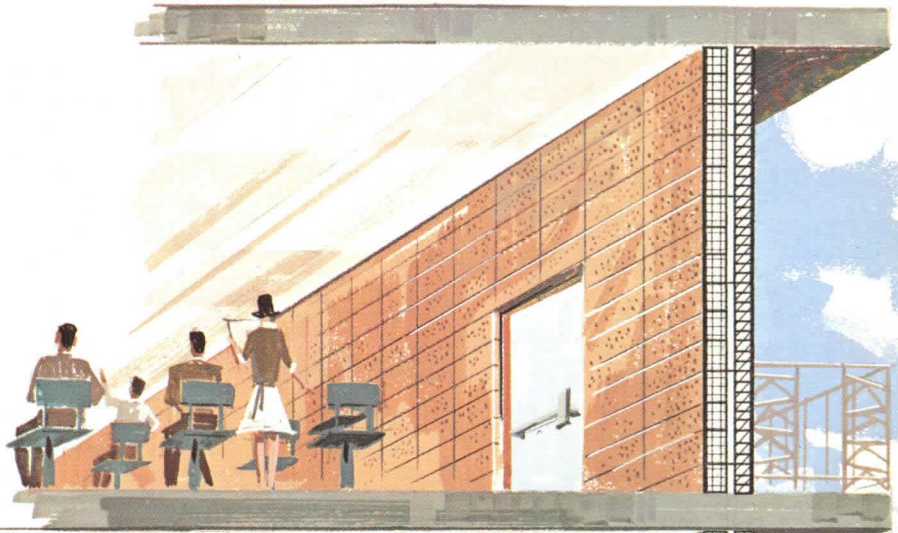
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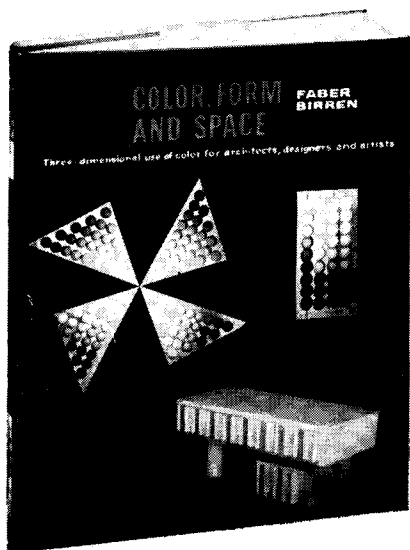
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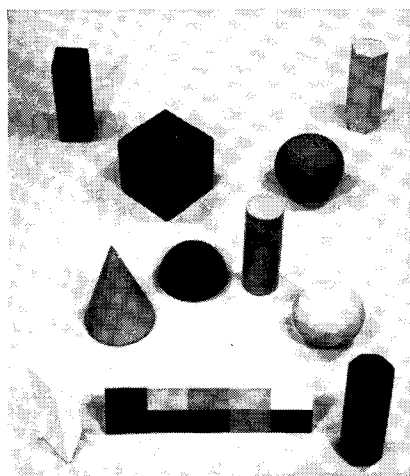
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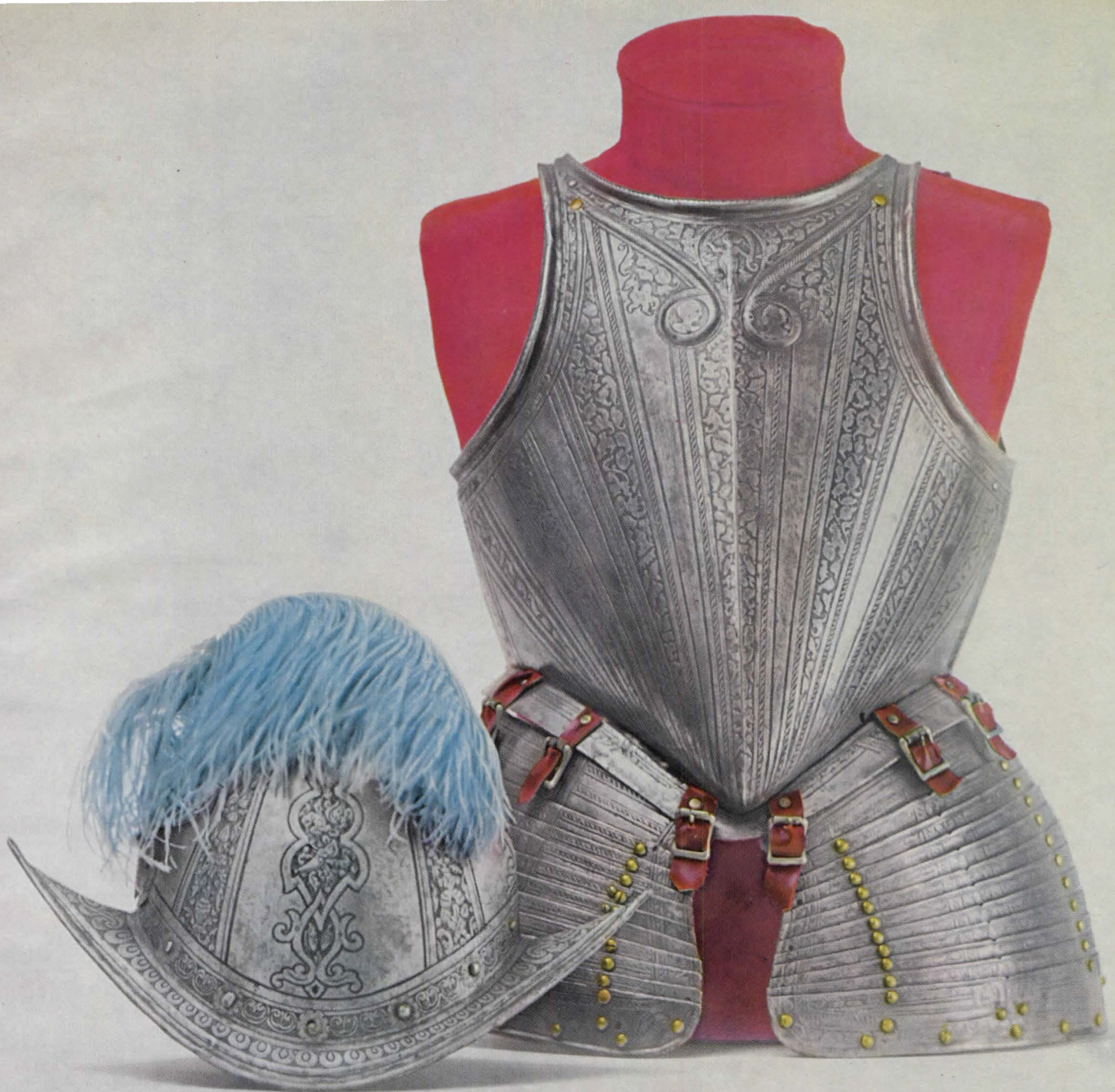
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Left: This is how the photograph of the morion helmet and breastplate was taken through 10 pieces of PPG Float Glass. From the Robert Abels Collection.

(Continued from page 236)

highly individualistic book, both in form and content.

He has chosen the sonnet as "a means for clarifying and compressing a single idea," in the belief that "rhythm and rhyme help to fix ideas in the mind" and that "emotion can be made to flow through the sonnet sequence . . . with far more lasting results than a reasoned appeal to the intellect alone." Just because these premises are often true of great poetry—in which thought and feeling, words and form seem inseparably one—it is dangerous to assume that they must always be true, and particularly dangerous in the case of didactic verse. This is a field in which even the most skillful slip. Wordsworth supplied a favorite illustration of what can happen when the precise particular is treated poetically:

*"And to the left, three yards beyond,
You see a little muddy pond
Of water—never dry,
I've measured it from side to side;
'Tis three feet long, and two feet wide."*

Nothing in *Sonnets For My City* quite equals this, yet the following quatrain comes perilously close:

*"A thousand dollars on a contract, paid
To purchase real estate, will multiply
Itself by five or ten, if sale is made
By operator who knows how to buy."*

SONNET II: TURNOVER

On the other hand, there are some terminal couplets that have the force of epigrams:

*"Money was meant to measure man's
desires
And not to veto what man's art
inspires."*

SONNET 53: LIGHT IN THIS ROOM

*"Art serves the truth when it finds
ways of giving
Imaginative thought to ways of living."*

SONNET 61: IMITATION AND
UNDERSTANDING

*"And hungry souls in choked-up streets
can't see,
Lost in its mass, the city that might be."*

SONNET 137: ASPIRING TOWERS CHANGE

And there are some sensitively expressed images:

*"Millions of lighted windows, ideas
seeking birth,
Mysteriously speaking, man-made stars
of earth."*

IN SONNET 52: LIGHT FROM THE WINDOWS

"Bustle and crowds and trucks, that

(Continued on page 248)

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Carl Sandburg

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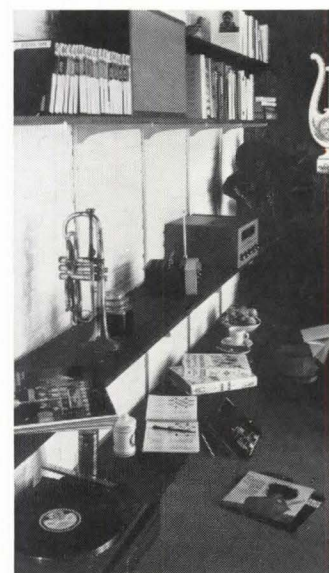
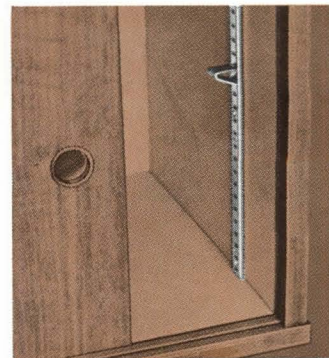
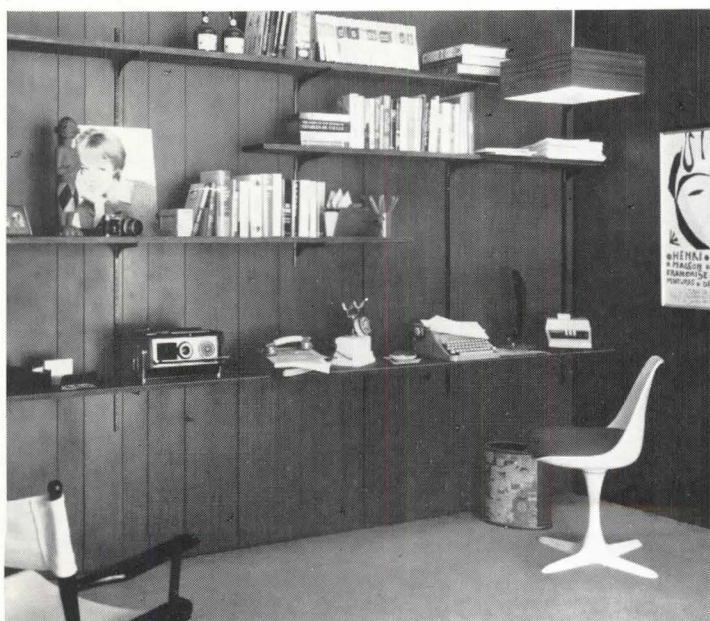
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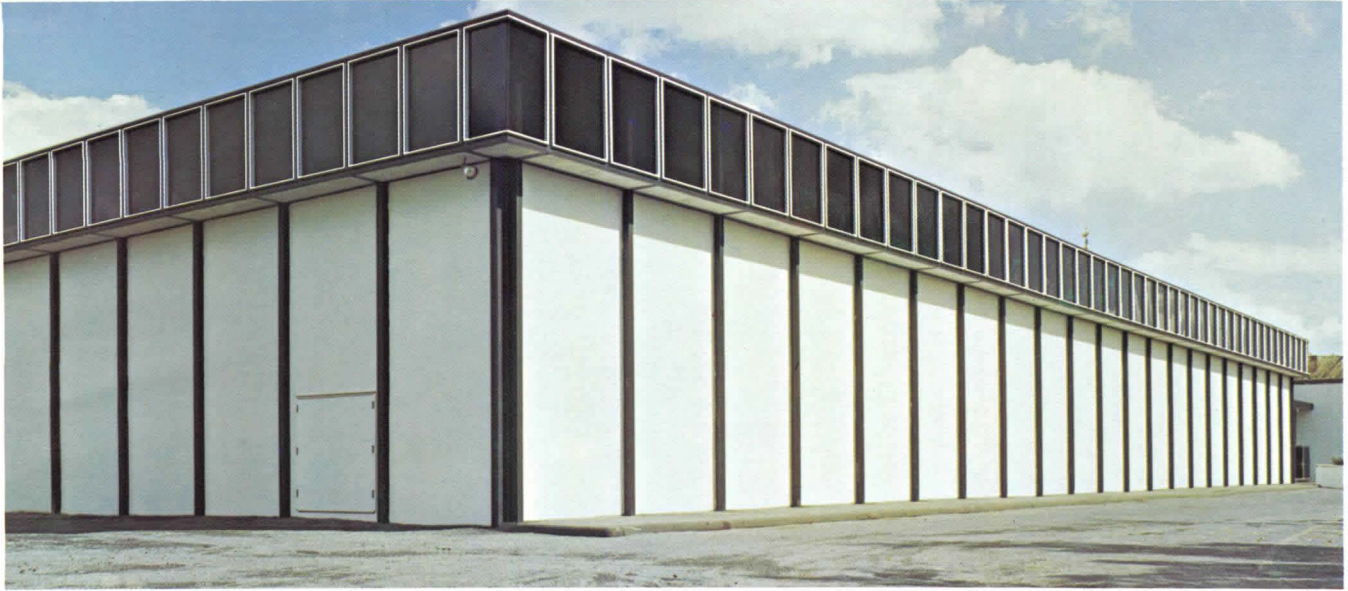
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... enclosed this 12-story Veterans Hospital

This new veterans' facility in Miami is built almost entirely of concrete. Its reinforced concrete frame is covered with precast exposed aggregate panels. Interior partition walls are concrete masonry. Even the utilities atop the structure are screened with precast concrete grilles.

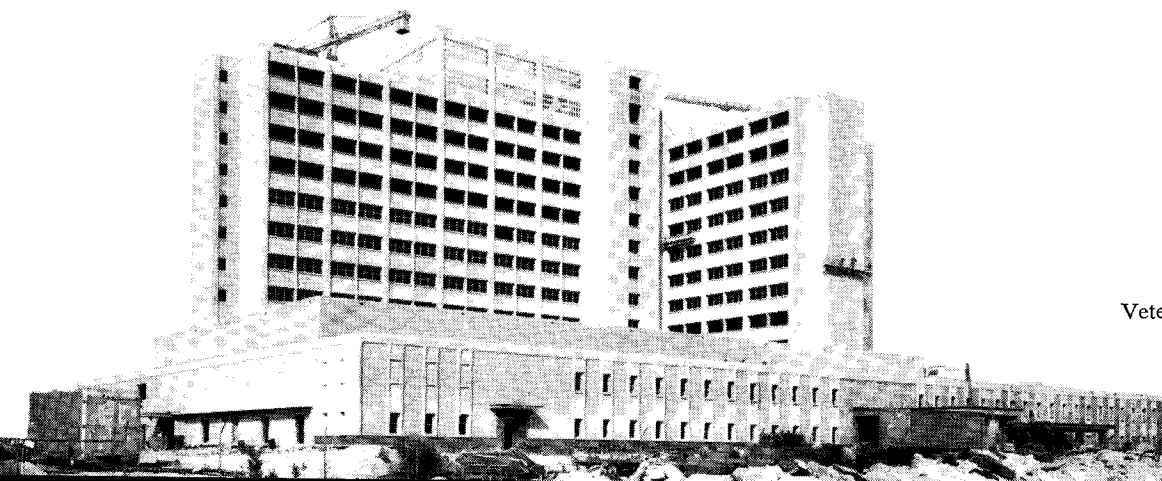
Lehigh Early Strength Cement benefits the entire construction team. Lehigh Early Strength Cement was used

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Bell Telephone Laboratories, Holmdel, New Jersey. Plant Design and Construction: Western Electric Co., Inc. Architect: Eero Saarinen and Associates.

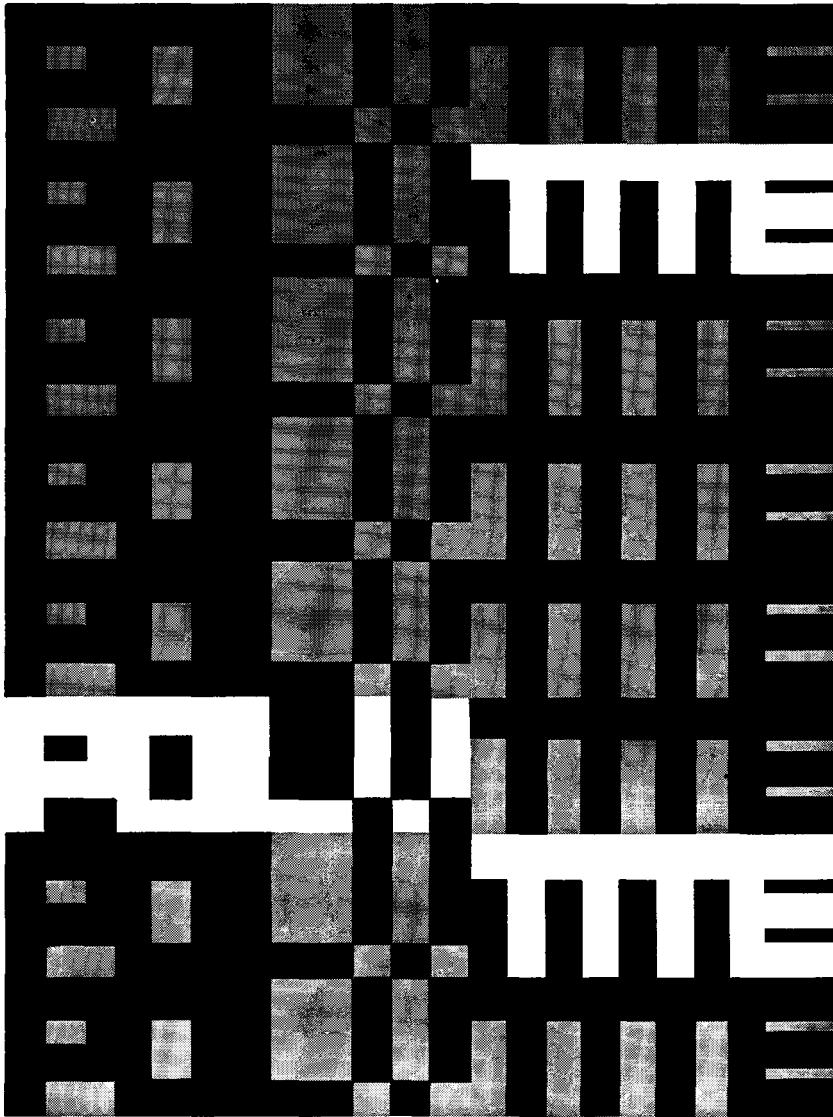
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(Continued from page 240)

*wait in blocks,
While in the slips are lighters loaded
listing;
Tough tugs that puff and shift between
the docks,
Swinging their tows, the ebbing tide
resisting."*

IN SONNET 153: THE HARBOR

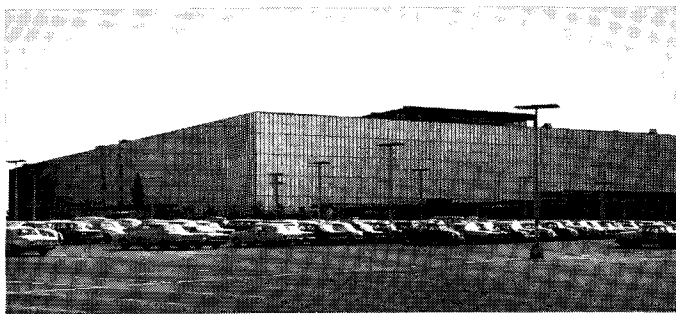
Yet it is not as poetry for its own sake that the book is intended to be read. The sonnets are meant to provide only one of several ways toward a single end. Together with the forewords, interludes, notes, sketches, and appendices, they epitomize a lifetime of thinking and working for a better urban environment. Just how extensive and intensive this has been, can be gathered from the five-page bibliography of Arthur Holden's published works in the fields of social and city planning, architectural history, economics, real estate, housing, urban aesthetics, government, zoning, and finance. And through this epitome run several clearly related chains of thought.

First, there is a nostalgia for the smaller, simpler city of his boyhood, when there were open spaces in which to play and when neighbors were friends. Second, an aesthetic revulsion against the crowded ugliness of the present urban scene, and a moral revulsion against the empty, selfish, and separated lives this has produced. And third, the conviction that something must and can be done about it.

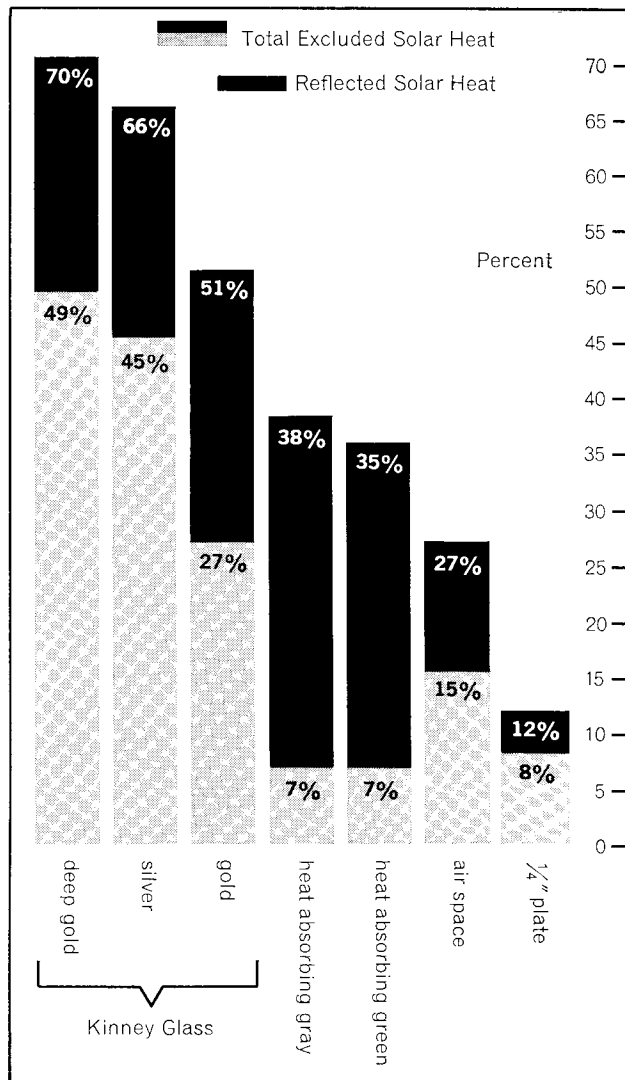
Holden finds two promising channels for action: the proper use of credit, and cooperative initiative. In a long and interesting argument, he traces the history of money and banking; he deplores the lack of imagination that limits credit to material values; he pleads for its extension to moral, aesthetic, and social purposes; he is convinced that finance is, or rather could be, a creative art. Interwoven with this theme is a plea for individual initiative—but not for rampant competitiveness. Individual action, he feels, should be contained within a cooperative framework. The single building should be designed in relation to the surrounding group, the project on a single lot financed as part of an entire block. In either case, however, the initiative should come from individuals voluntarily working together rather than from a paternalistic government.

In short, here is a liberal idealist in the great tradition of the 19th Century. His ideas are not fashionable or in keeping with current socio-economic cant; he speaks of God and Love and Beauty

(Continued on page 256)




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Continued from page 248

without embarrassment. Yet, perhaps just because of this, he is the more worth listening to. If everything were altogether well with our Welfare State, he might be dismissed as being merely backward-looking. But it is just possible that he may be speaking about an attainable future—a future that might be more worth reaching than the one toward which we are headed.

Random Shots at USA '65

BY ROBERT A. M. STERN
L'ARCHITECTURE D'AUJOURD'HUI: ISSUE 122, "USA '65". Edited by André Bloc. September-November 1965. Distributed by Wittenborn and Co., 1018 Madison Ave., New York, N.Y. The reviewer, holder of the J. Clawson Mills Fellowship of New York's Architectural League, has recently organized a show for The American Federation of the Arts gallery, called "Forty Under Forty," which will be on display until May 14, and then be circulated throughout the U.S.

Under André Bloc's editorship, *L'Architecture d'aujourd'hui*, the most encyclopedic of architectural journals, has produced a banal, lopsided, and graphically disorganized issue presumably intending to "show the actual state of the evolution of architecture and urbanism" in America in 1965, but, in fact, only concentrating on the established and the well-known.

To begin with, the issue is slap-dash: Messrs. (James) Joyce, (Sean) O'Casey, (Oscar) Wilde, and (George Bernard) Shaw did not, as Jan Rowan has already pointed out, collaborate with Kevin Roche on the Arts Center at Amherst and the Air Force Museum at Dayton, Ohio; the "*Projet pour un théâtre à Boston*," by Paul Rudolph, is actually that architect's design for the Arts Center at Colgate University in Hamilton, New York.

Not only is the issue carelessly edited, it is also erratic and unknowing in its emphasis. For example, though there is some mention in Bloc's introduction of the regional differences in American architecture, only the work of the so-called "Second Chicago School" is presented in detail, with routine statements by Victor Serfaty and Ira Bach given prominence over articles of greater complexity and commitment by George Danforth and Stanley Tigerman, who, in arguing for an architecture of "clarity," presents a most convincing statement of prevailing attitudes among post-Miesian

Continued on page 266

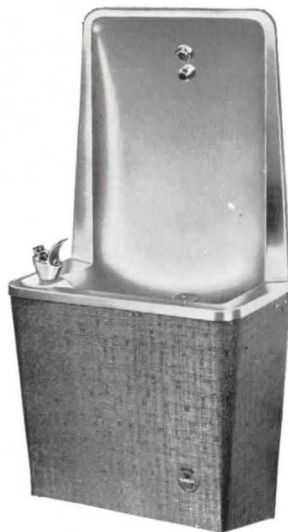


Wells Fargo Building, San Francisco, tallest building west of Dallas. **Owner:** Dillingham Corp. Honolulu, San Francisco. **Architect and Engineer:** John Graham and Company, Seattle and New York. **Plumbing Contractor:** Scott Co., Oakland, California.

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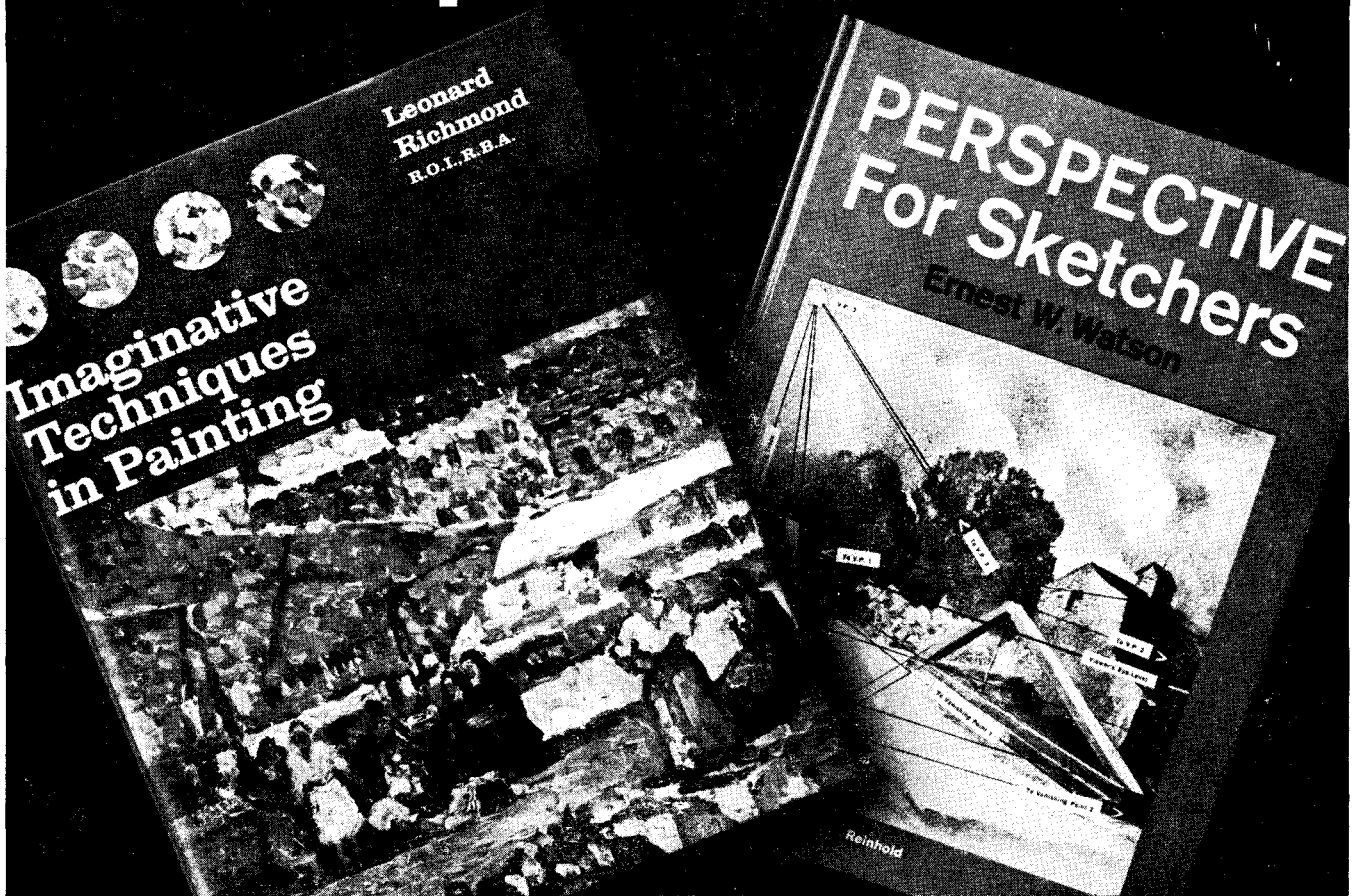
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about perspective

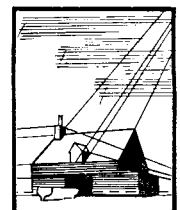
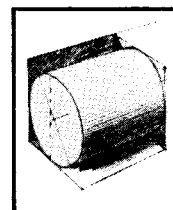
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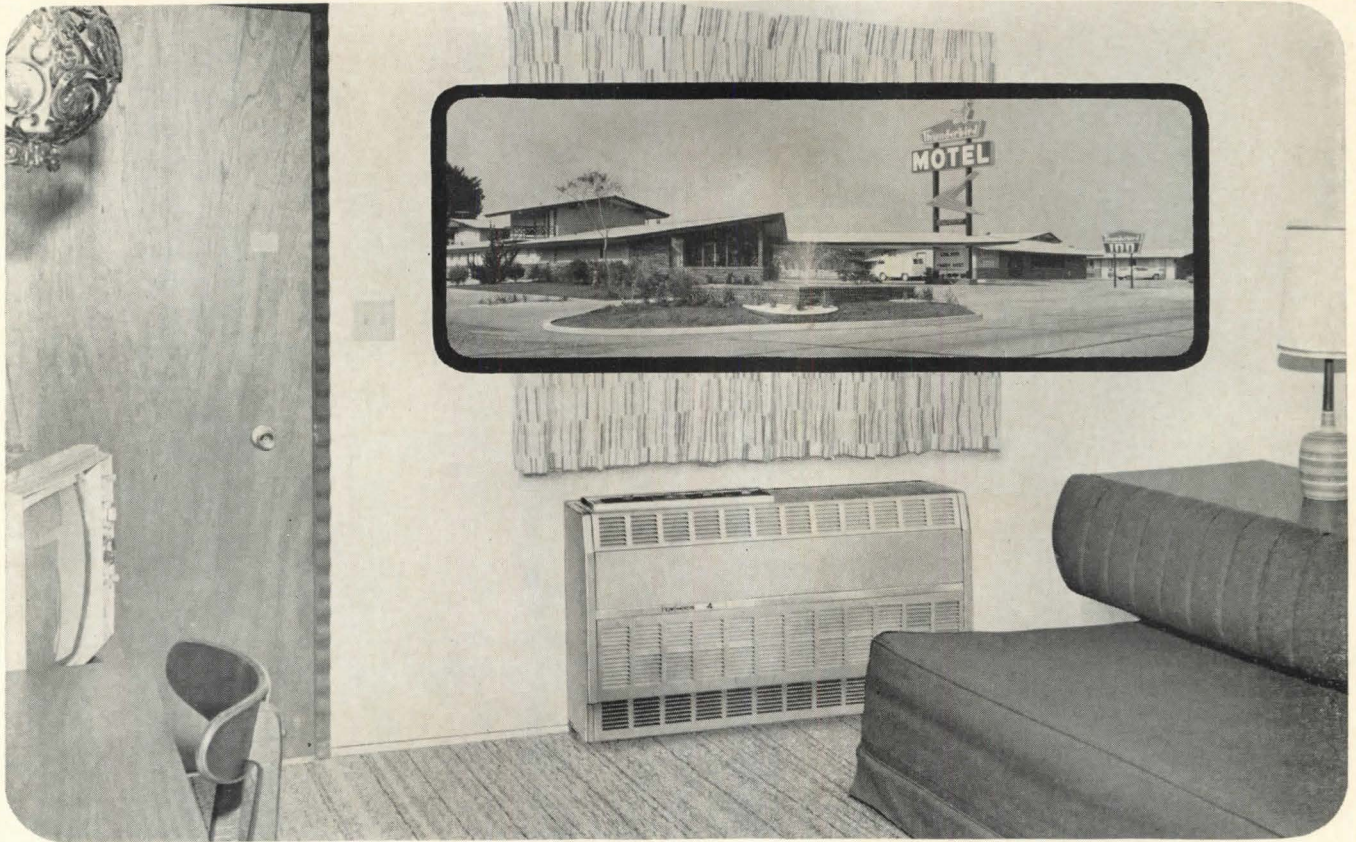


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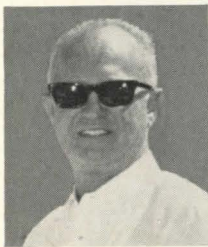
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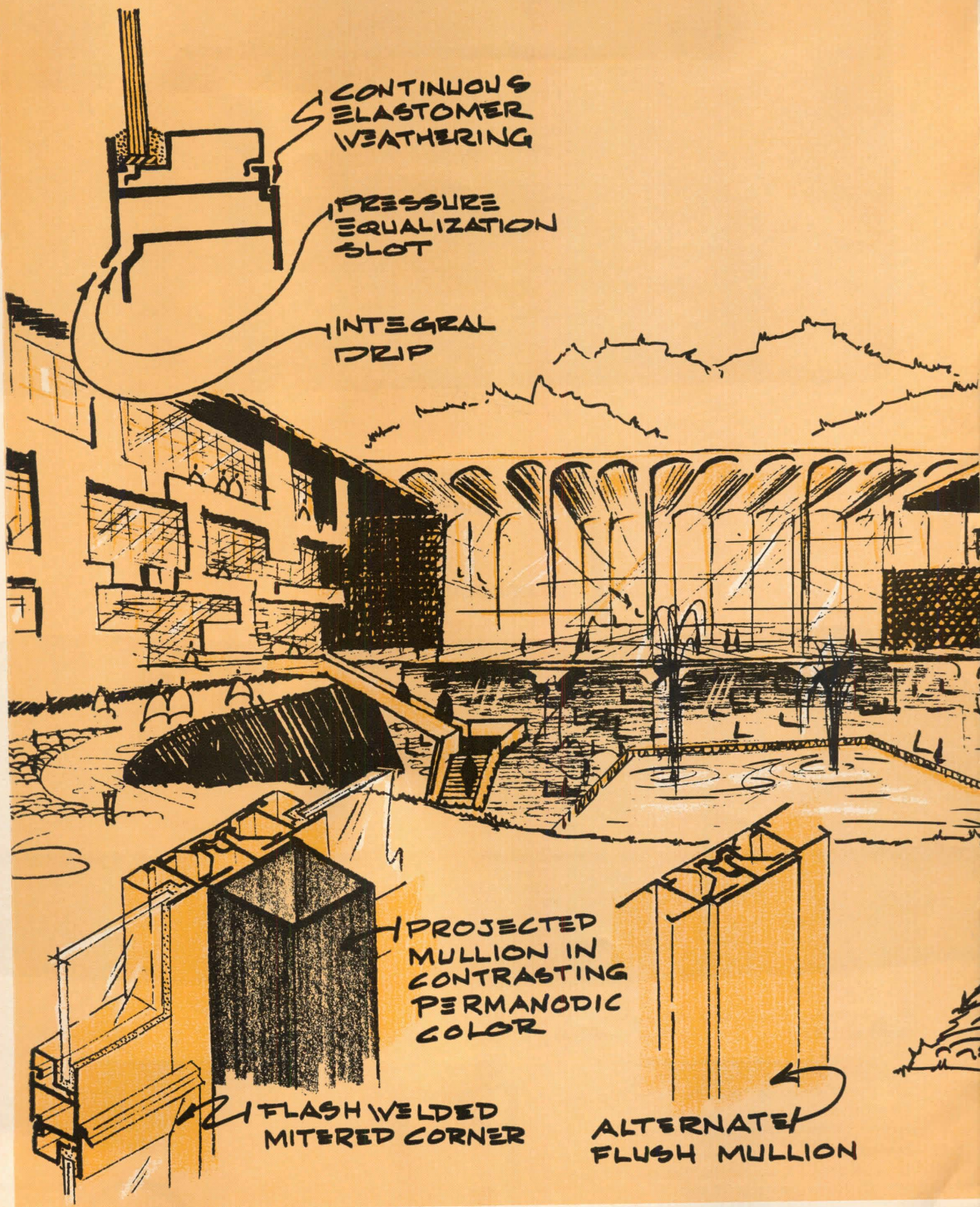
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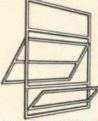


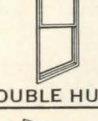


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| | PSF | 5 | 10 | 15 | 20 | 25 | 30 | CFM | .20 | .40 | .60 | .80 | | | | |
|  PROJECTED | 25 | 100 mph winds. Tested in 4 inch rain. | | | | | 2.86 | 35 mph winds. Tested in 2 inch rain. | | | | | 0.20 | | | |
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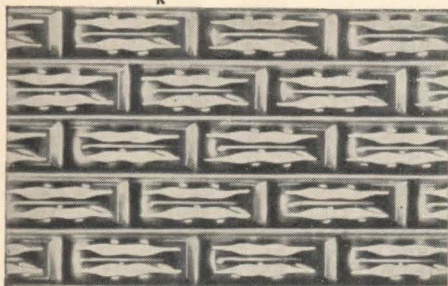
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architects in Chicago. Other regional centers do not fare so well. Boston is represented by Sert's work at Boston University, and not by his highly inventive solutions for Harvard; Kallman and McKinnell, and William Caudill's idiosyncratic Larsen Building are ignored, while Eduardo Catalano's Student Center at M.I.T. is only casually presented. The work from Los Angeles is uniformly dull—a product of the mistaken reverence for reputations that pays homage to Neutra when he designs like Luckman and Pereira but leaves out Ed Stone.

Philadelphia, a regional center rich in that "experimental architecture" Bloc applauds in his introduction, is not represented except for one project by Louis Kahn, though page upon page is lavished on work of doubtful innovation from such peculiar places, urbanistically speaking, as Aspen, Colorado, and Cranford, New Jersey. Venturi is represented at one remove by a sweetened derivation (SOM's Carmel Valley Old People's Village); Giurgola and Sauer not at all.

So it goes: From California, the work of Charles Moore and his partners is ignored, though Craig Ellwood and Pierre Koenig are both represented; from Connecticut, John Johansen is missing, though Victor Christ-Janer is not; while New York, hardly a regional center of urbanism, is represented by Lincoln Center, though Philip Johnson's project for Washington Square or even Edward Stone's for Columbus Circle might have at least ruffled a few feathers. Time and again, the dullest choices are made: Johnson's Epidemiology Building instead of his Biology Tower at Yale; Breuer's Federal Office Building in Washington, instead of his design for the Whitney Museum; Harrison's Science Museum at the World's Fair, instead of his Beaux-plan for Albany, and so on.

In the end, then, there are no conclusions to be drawn, for the shots have been random and the commitment weak. With no assessment attempted and no discernable editorial policy, "USA '65" is, in this reviewer's opinion, a not very notable failure from an editor who should have known better. Too bad. The time is right for this sort of compilation.

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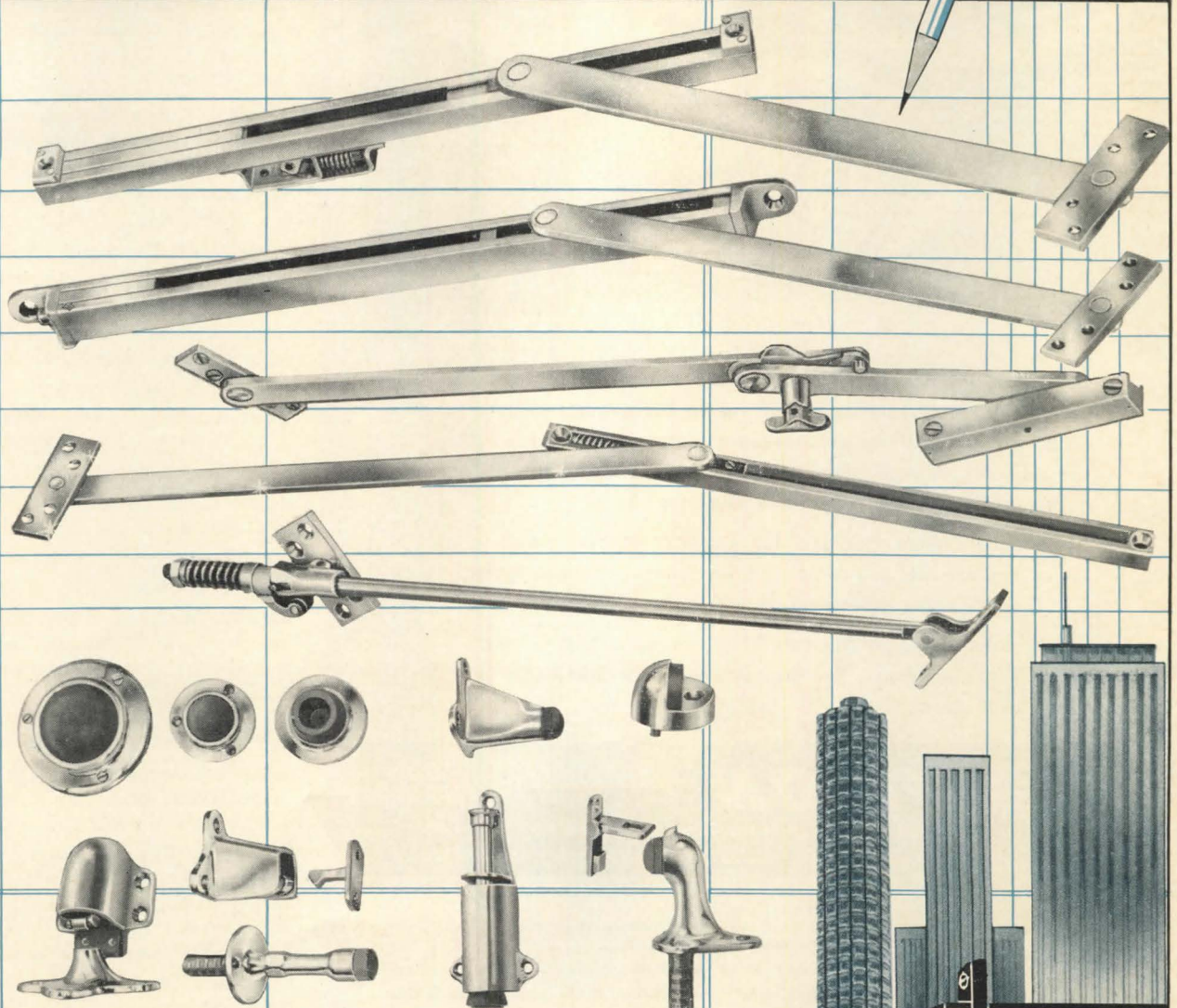
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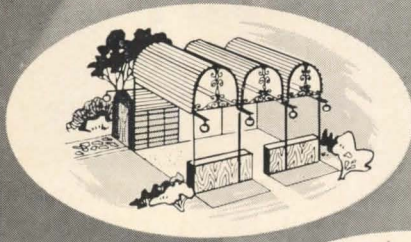
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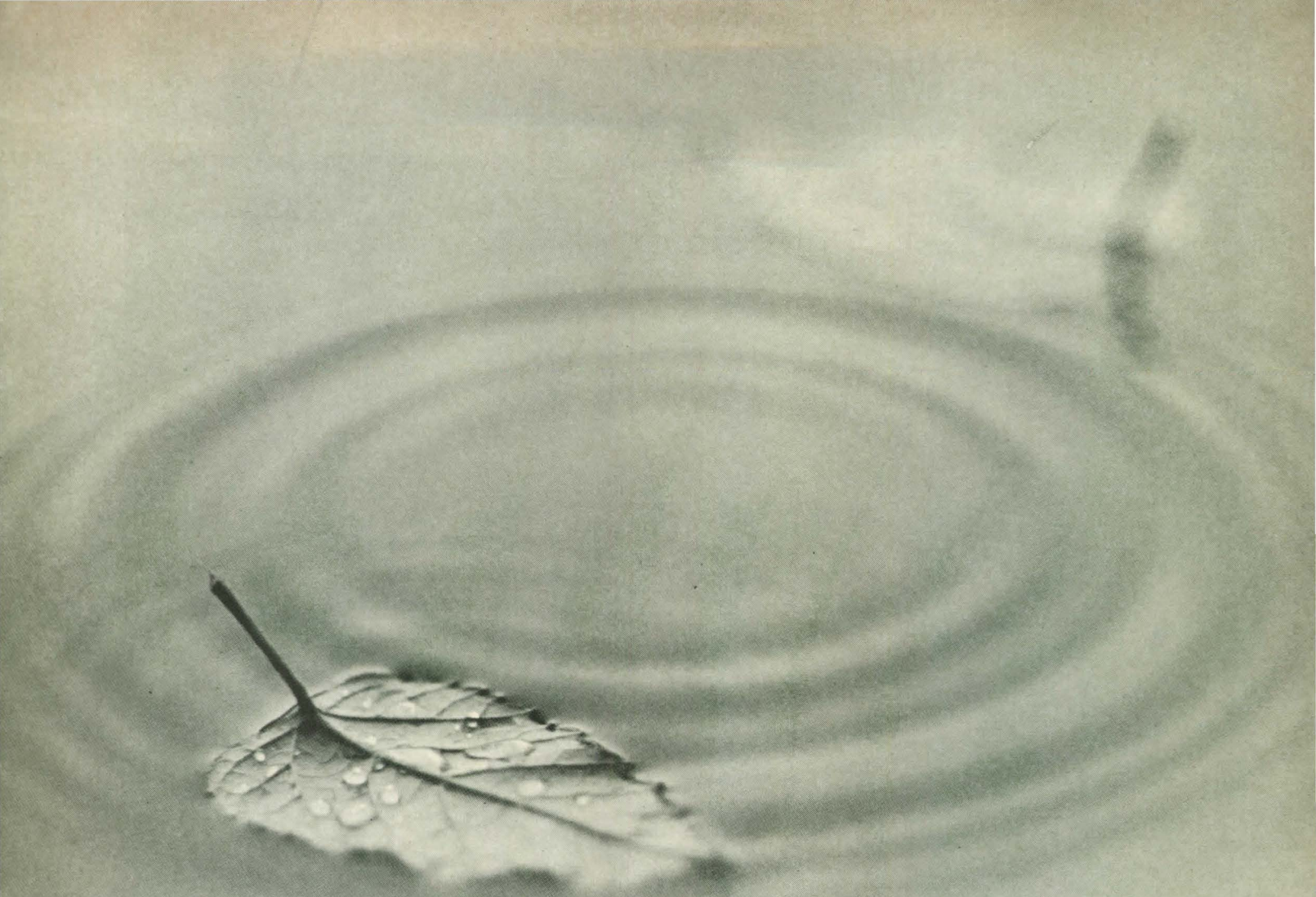
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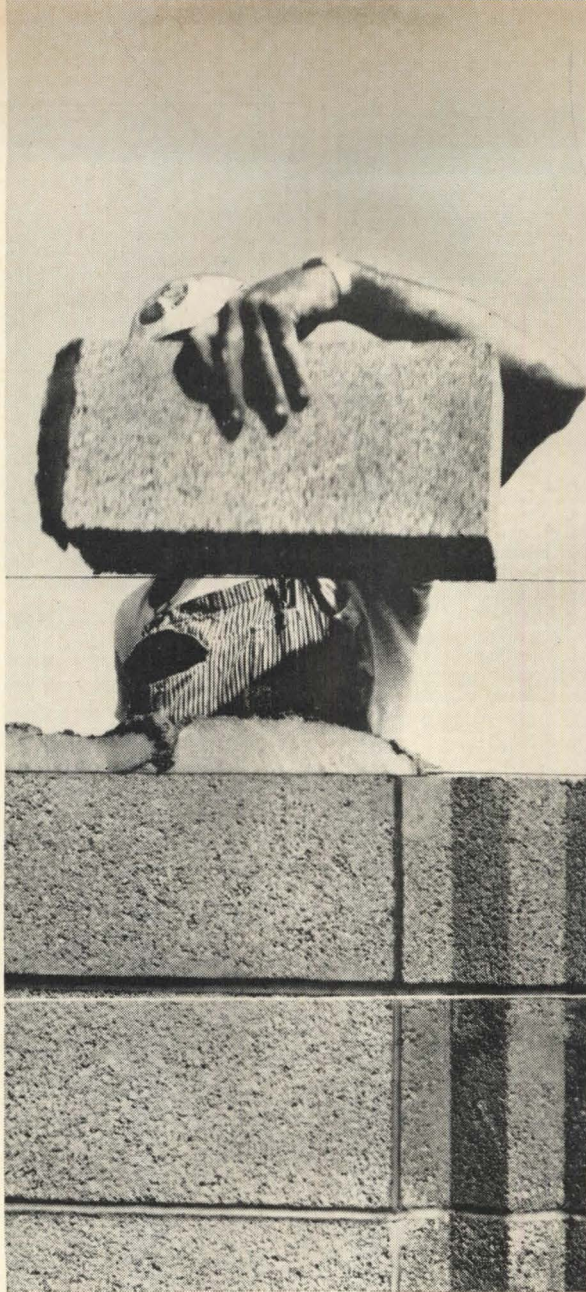
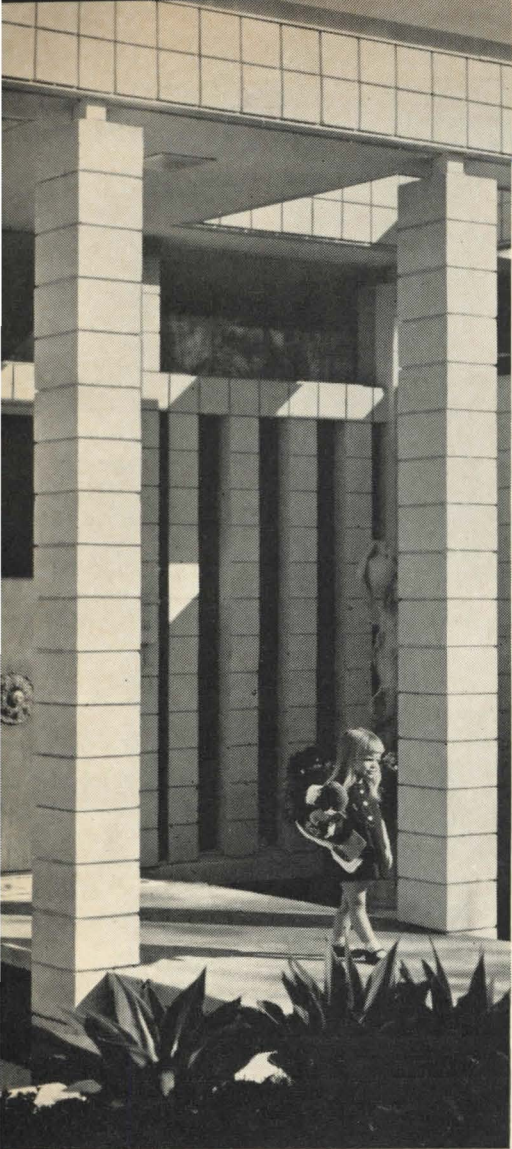
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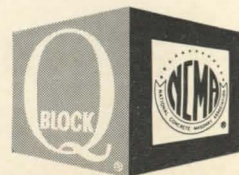
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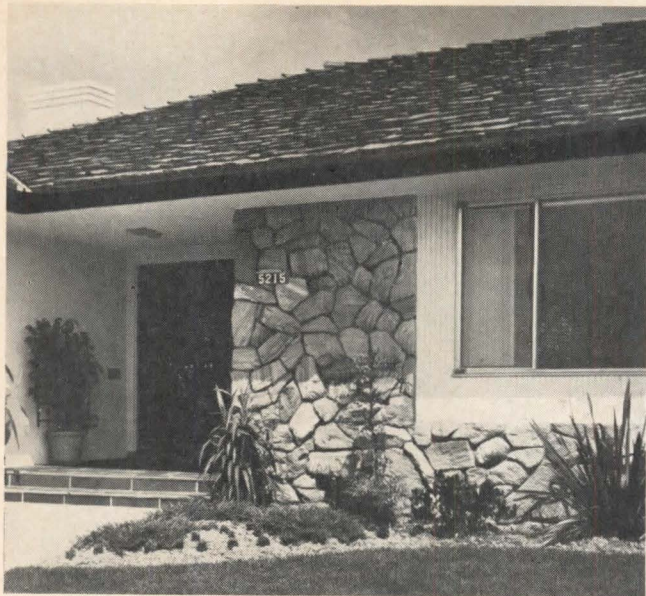
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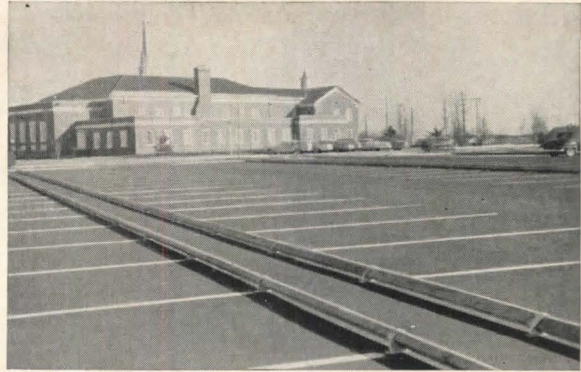


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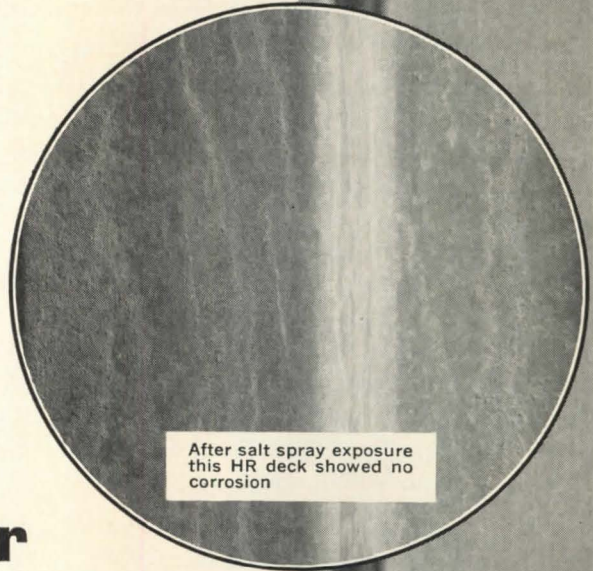
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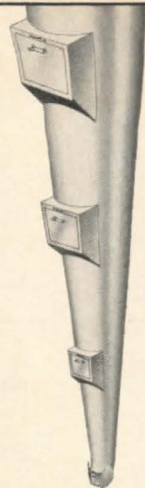
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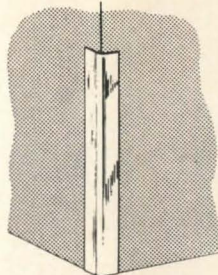
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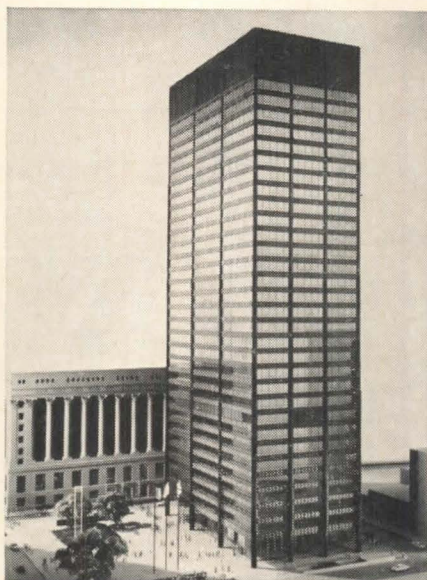
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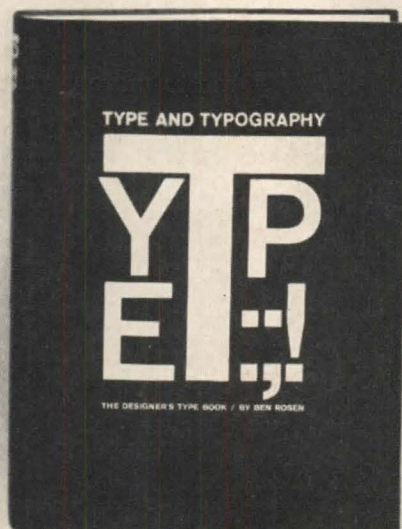
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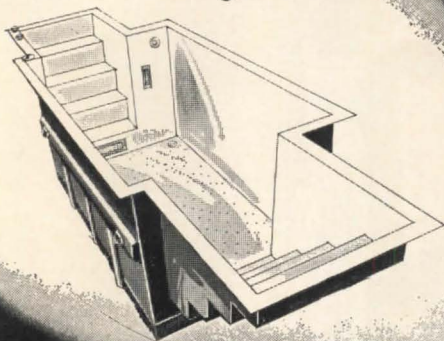
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Continued from page 268

ULRICH FRANZEN & ASSOC., Architects, New York, N.Y., have named ALLAN S. ANDERSON, SAMUEL E. NYLEN, and EDWARD A. ROSEN associates.

GOLEMON & ROLFE, Architects, Houston, Tex., have named MELVIN L. HILDEBRANDT as senior associate, and MALCOLM MCKENZIE CUTTING, RALPH C. WHITMAN, and J. D. BOGGS, JR., as associates.

Elections, Appointments

LEVINE ALPERN & ASSOC., Architects, Detroit, Mich., have appointed KURT WEBER-STROEBELE as chief architect and BERNARD REMER as chief designer.

BENHAM-BLAIR & AFFILIATES, Engineers-Architects-Consultants, Oklahoma City, Okla., have appointed DONALD L. WICKENS chief structural engineer.

HARLEY, ELLINGTON, COWIN & STIRTON, INC., Architects, Engineers, Planners, Detroit, Mich., have appointed M. FRED BENNETT as project administrator, and ALVIN F. BLAIR as administrative designer.

PHOTO CREDITS

Sea Ranch

PAGE 120:
Morley Baer

PAGE 121:
top: Ned Westover
bottom: Maude Dorr

PAGE 122:
Maude Dorr

FOLD-OUT, PAGE 123:
reverse side: Maude Dorr

PAGE 129:
Maude Dorr

PAGE 130:
Fred Lyons

PAGE 131:
Maude Dorr

FOLD-OUT, PAGE 133:
top row, black and whites: Morley Baer, except
top far right: Maude Dorr
bottom color: Fred Lyons

PAGE 137:
Morley Baer

Architecture Swings Like a Pendulum Do

All photos, David Hirsch except:

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(1) David Sellers
(3,4) C. Ray Smith

PAGE 157:
All photos, except top left: David Sellers

The Phoenix: An Additive Assemblage

PAGE 175:
Hugh Hardy

PAGES 179, 180, 181:
Maude Dorr

Stabile Homes

PAGE 184:
Bruce Blackwell

PAGE 185:
middle column, bottom: Hesketh

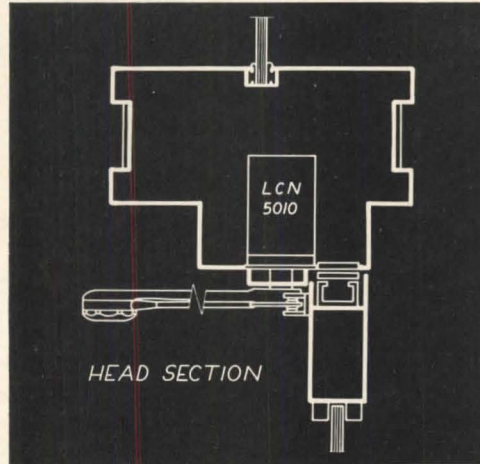
PAGE 186:
photo above floor plan: Hesketh

PAGE 188:
far column: Hill

PAGE 193:
bottom: Howard Heine

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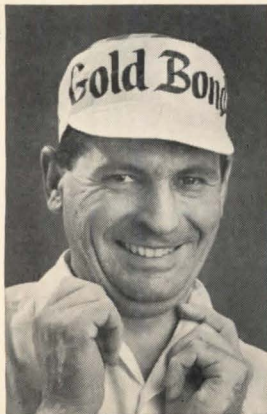
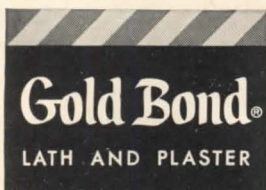
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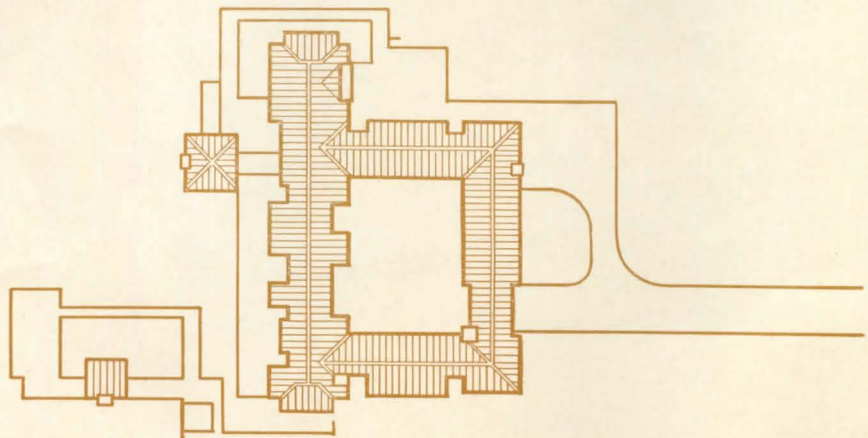
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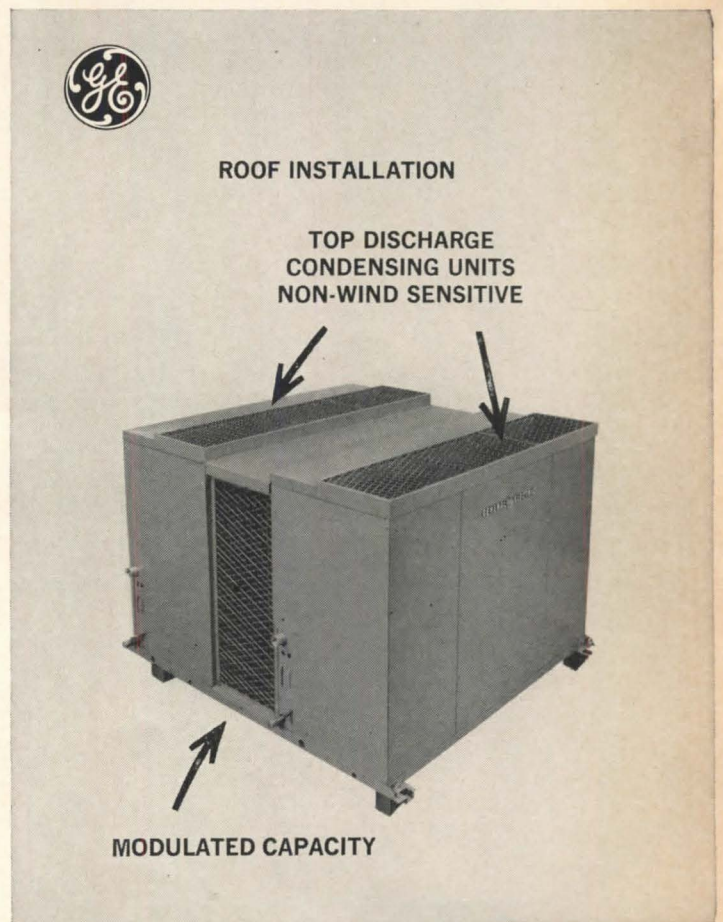
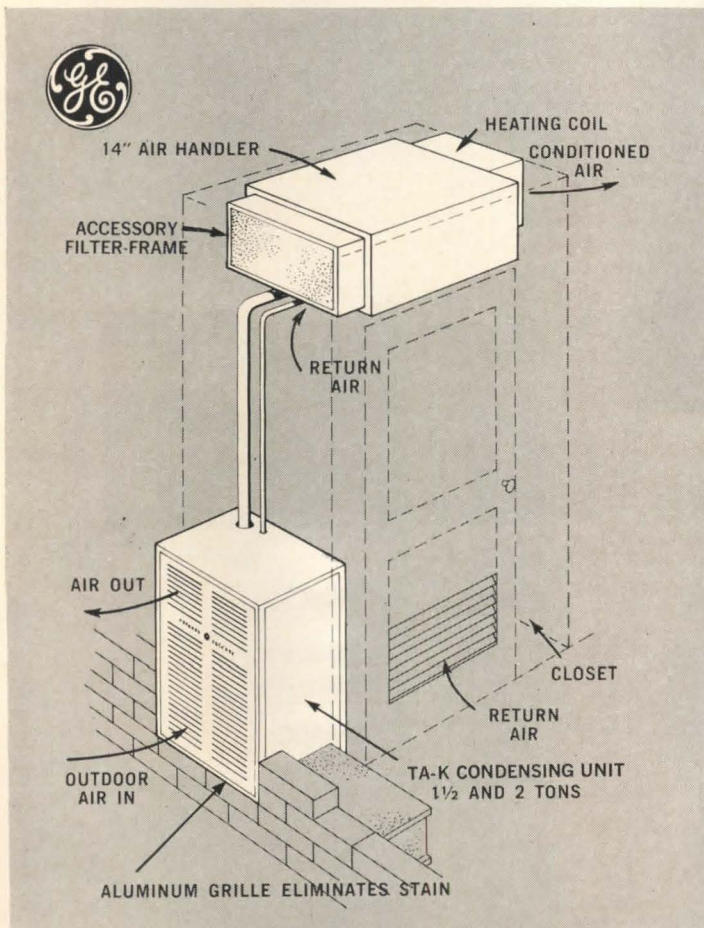
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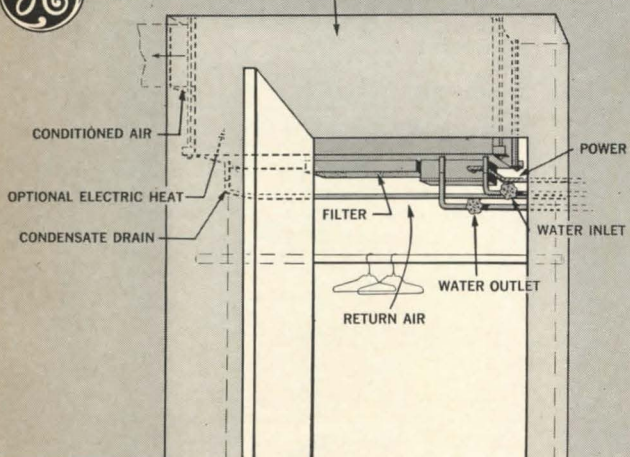
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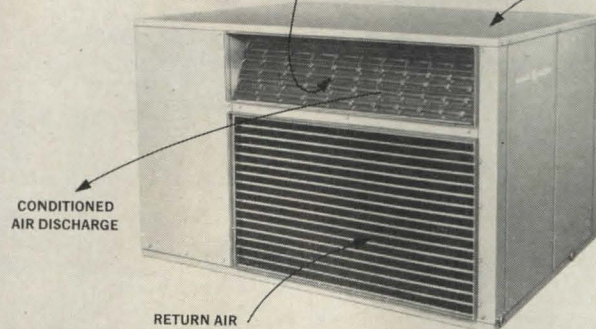


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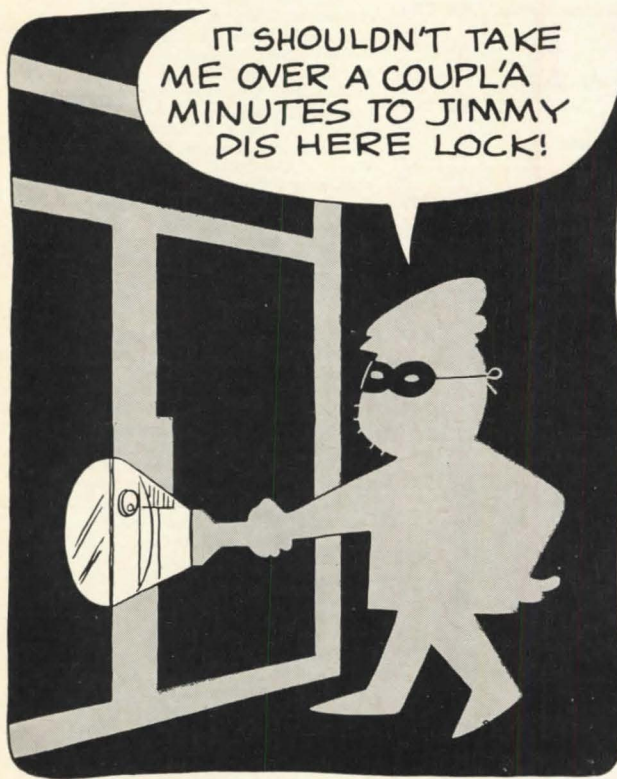
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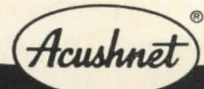
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