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September 1960

Journal

OF THE AMERICAN INSTITUTE OF ARCHITECTS



Hospitals • Committee on Hospitals and Health • Images of Home • Genus Architectus  
Cleveland's Third Reawakening • Materials for Construction • Paradox in Paradise

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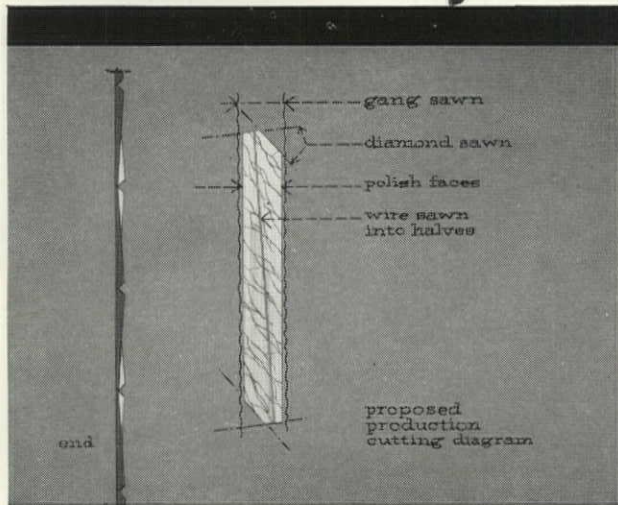
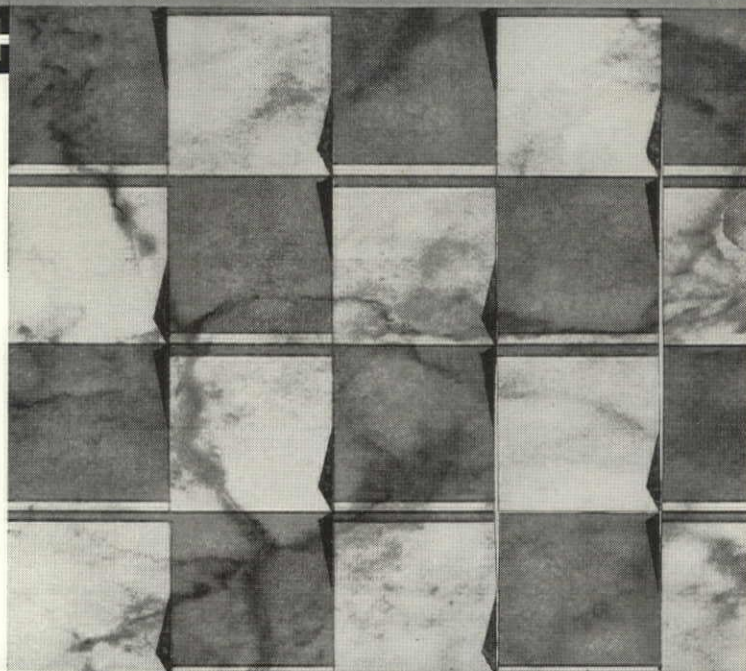
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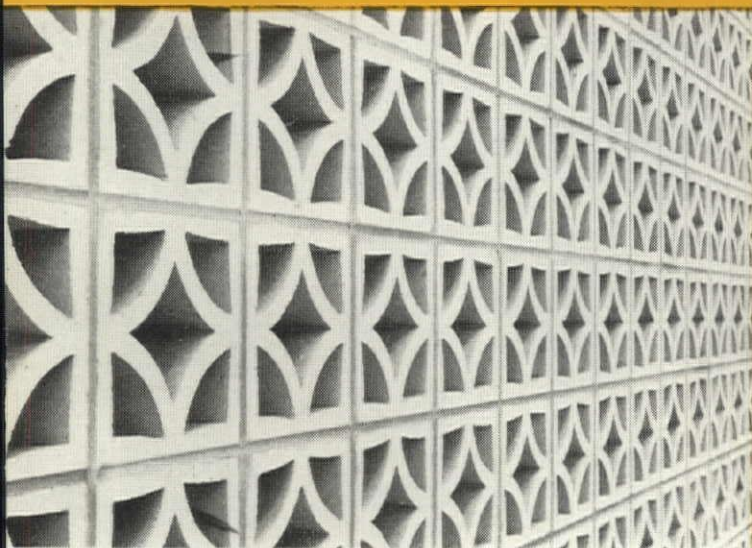
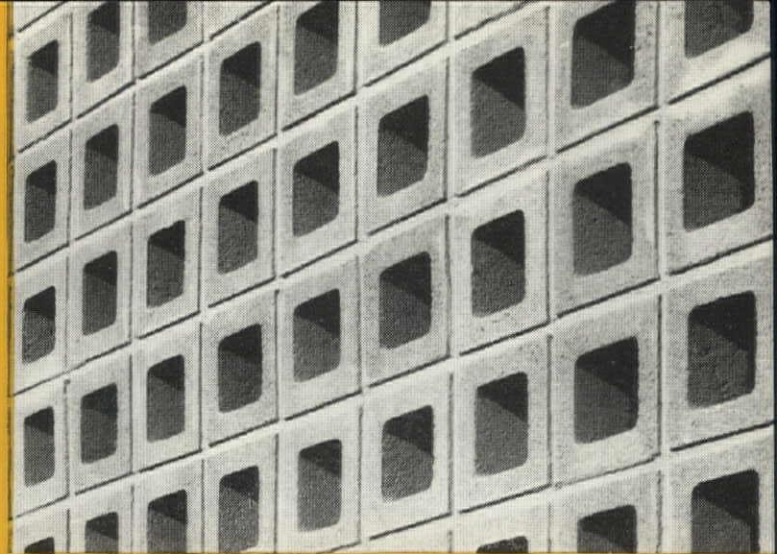
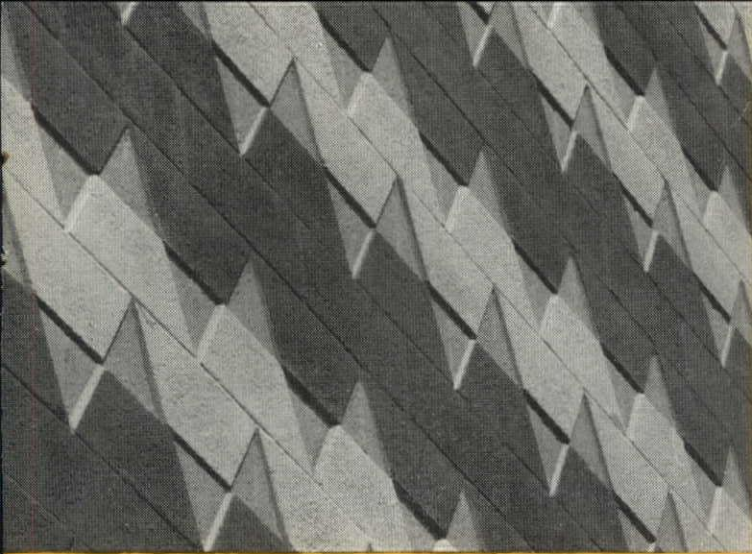
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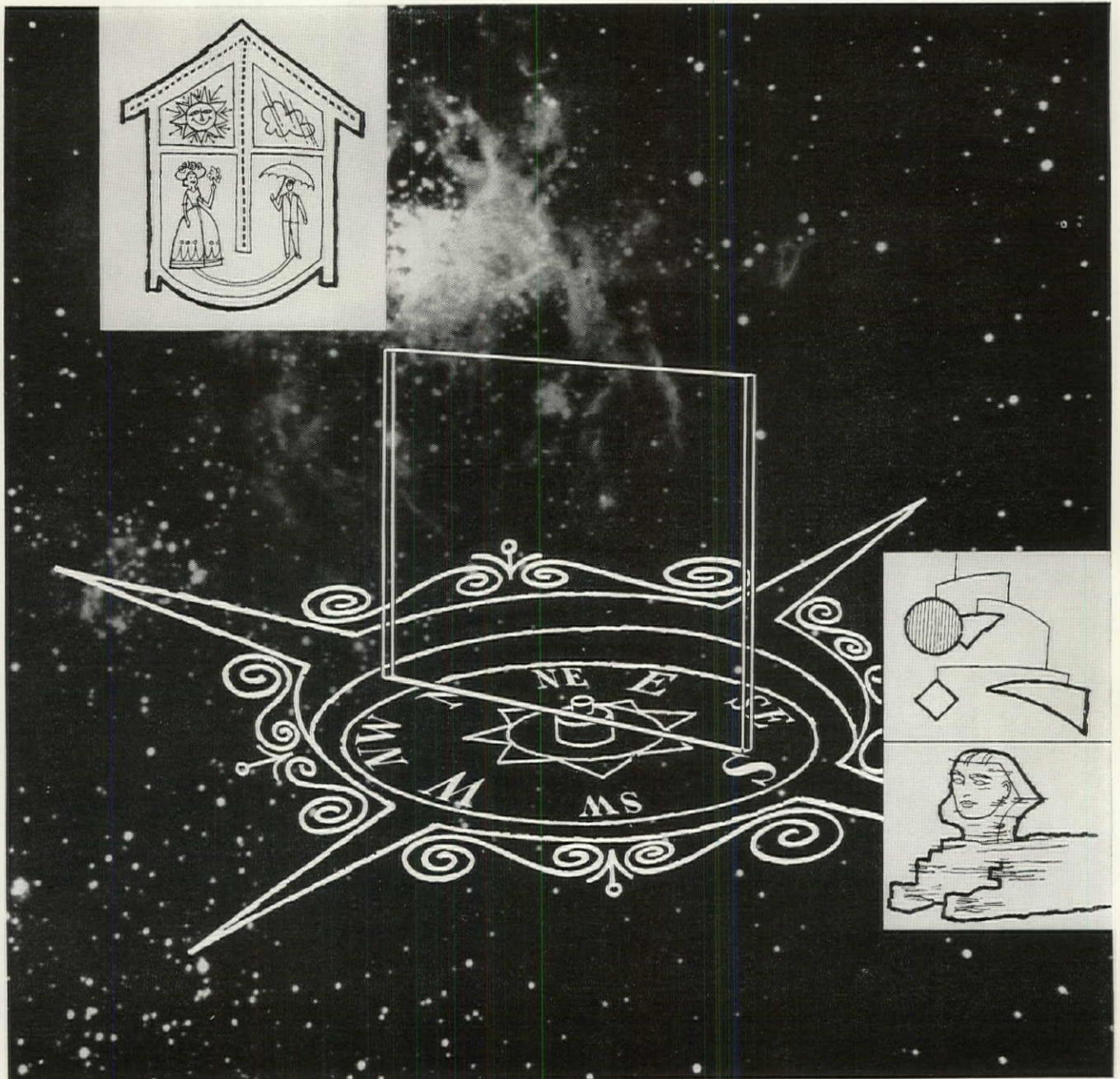
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### ...HONOLULU SHOPPING CENTER WILL BE ONE OF NATION'S BIGGEST

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The use of prestressed concrete is widespread; in the beams, girders and joists for the parking deck and the 25-floor office building, in street curbing, bumper strips in the parking areas, in lamp posts and in prestressed concrete piles which serve both as foundations and columns supporting the parking deck and mall level shops.

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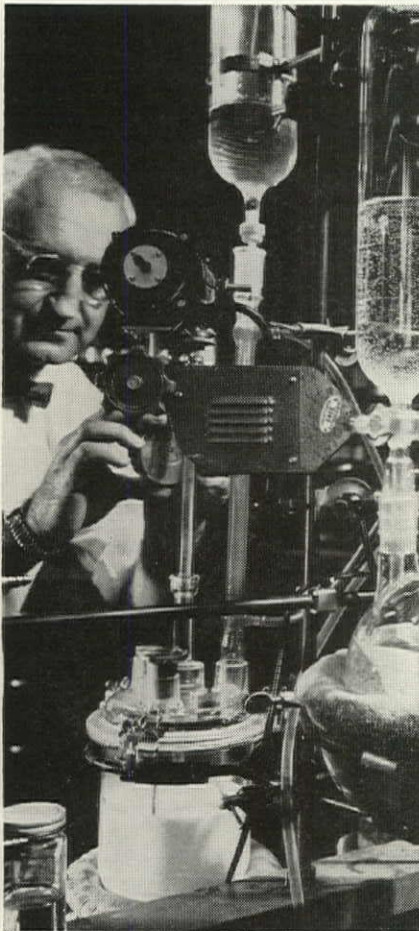
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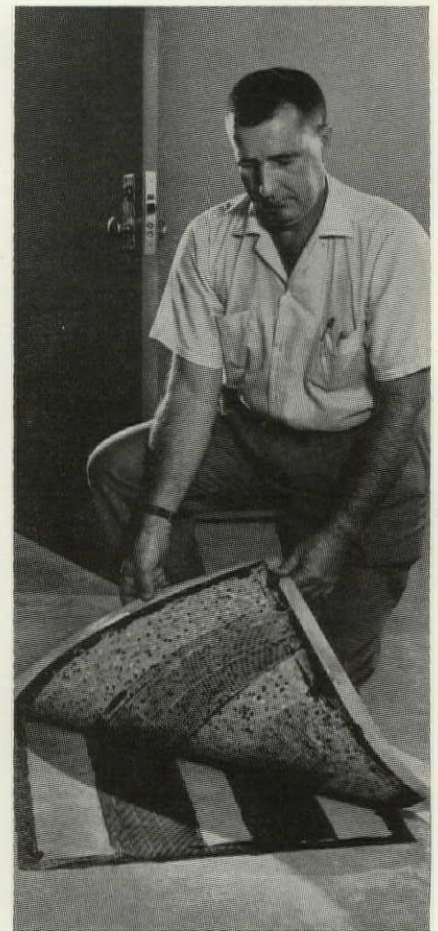
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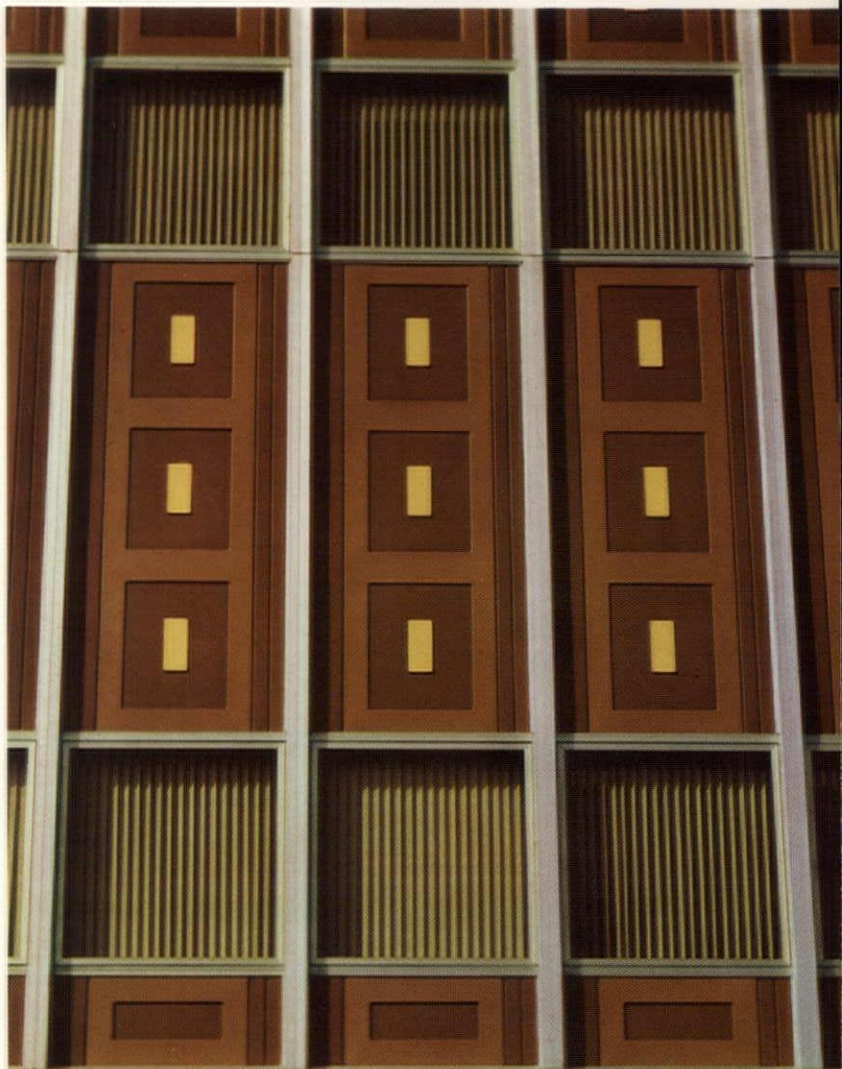
### with Porcelain Enamel Curtain Walls

The distinctive Western and Southern Life Insurance Company Building in Los Angeles dramatically illustrates how architectural horizons are expanded by porcelain enamel. Here, the architects have skillfully utilized the color and form possible with this architectural metal as functional components of their design.

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Fry, Los Angeles  
Contractor: P. J. Walker Co., Builders,  
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Panel Details ▶

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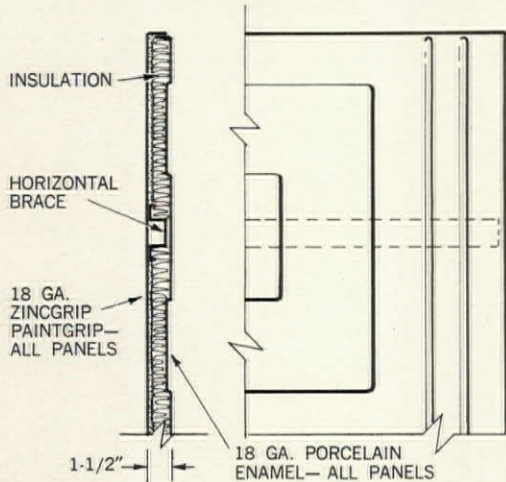
**1-10**

*Porcelain Enamel Curtain Walls / Office Building*

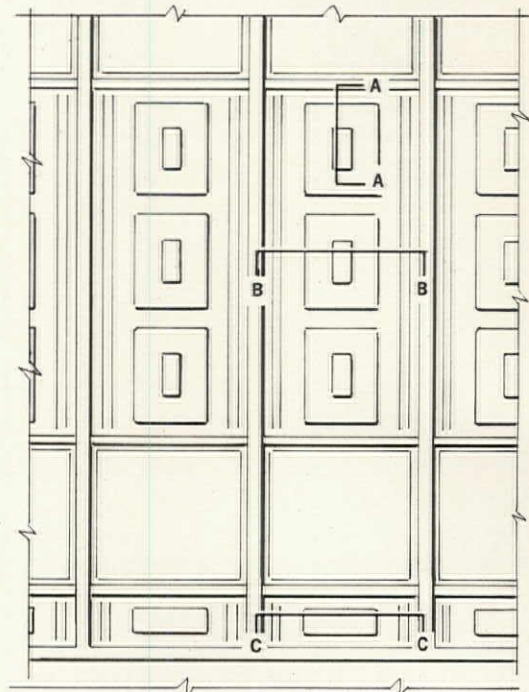
**Western and Southern  
Life Insurance Co. Building**

*Details of Embossed Porcelain Enamel Curtain Wall Panels*

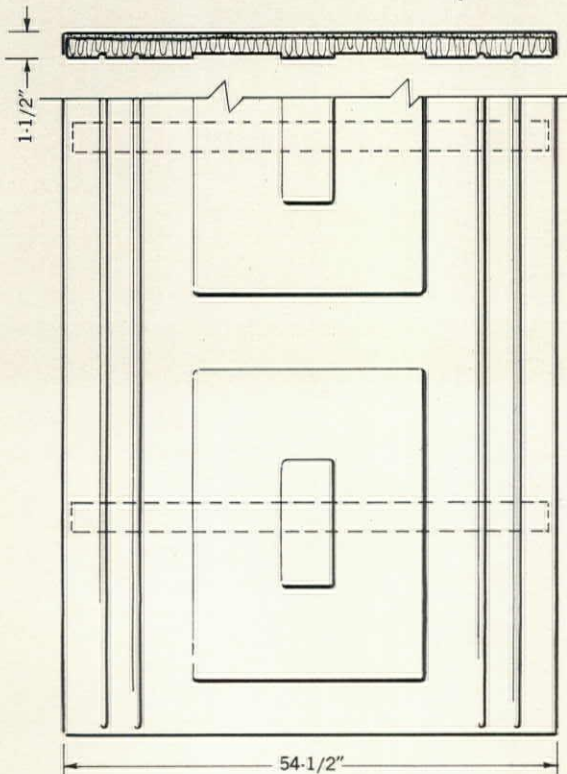
**A-A Partial vertical section of panel**



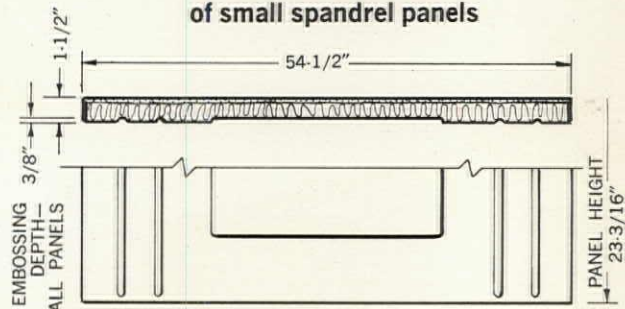
**Section of elevation of front wall**



**B-B Horizontal section of main panels**



**C-C Horizontal section of small spandrel panels**



Western and Southern Life Insurance Company Building, Los Angeles  
Architects and Engineers: Austin, Field & Fry, Los Angeles  
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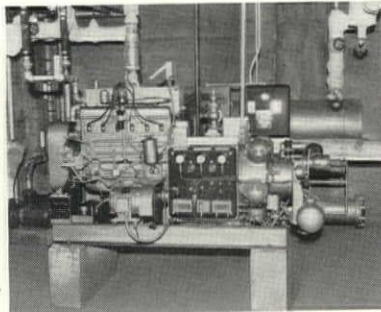
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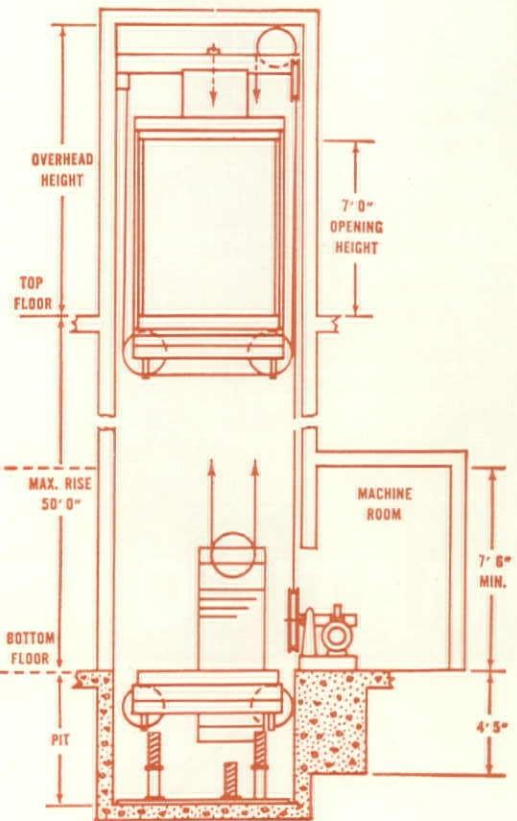
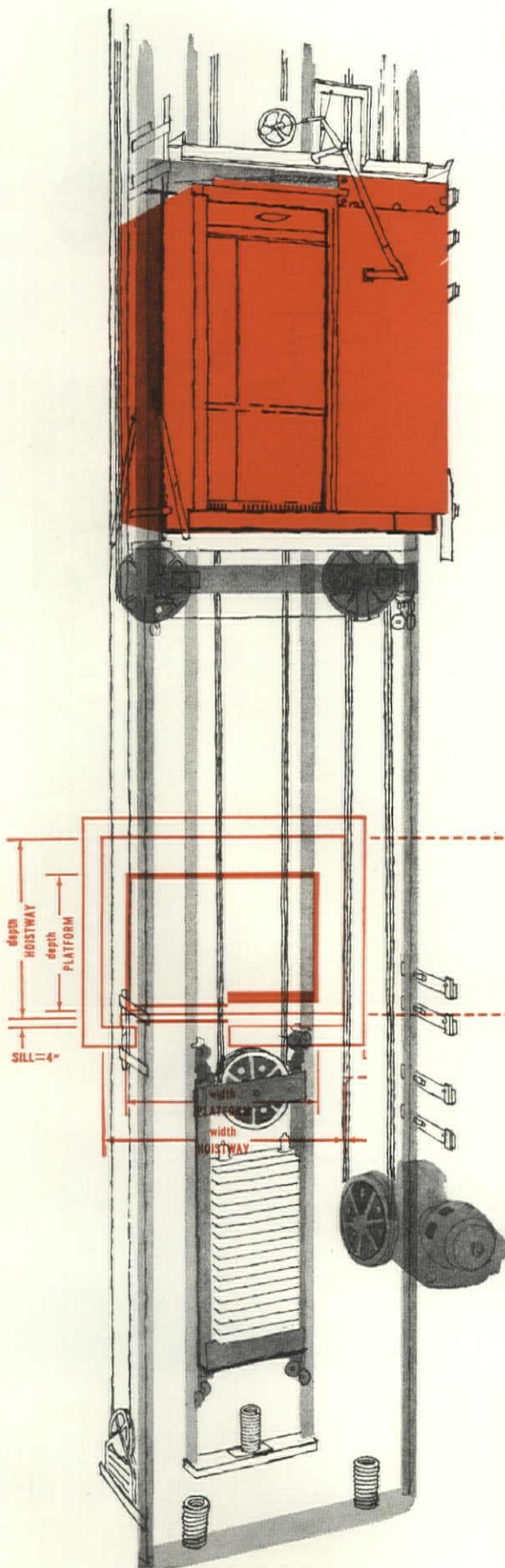
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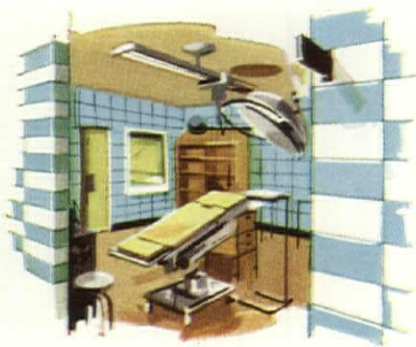
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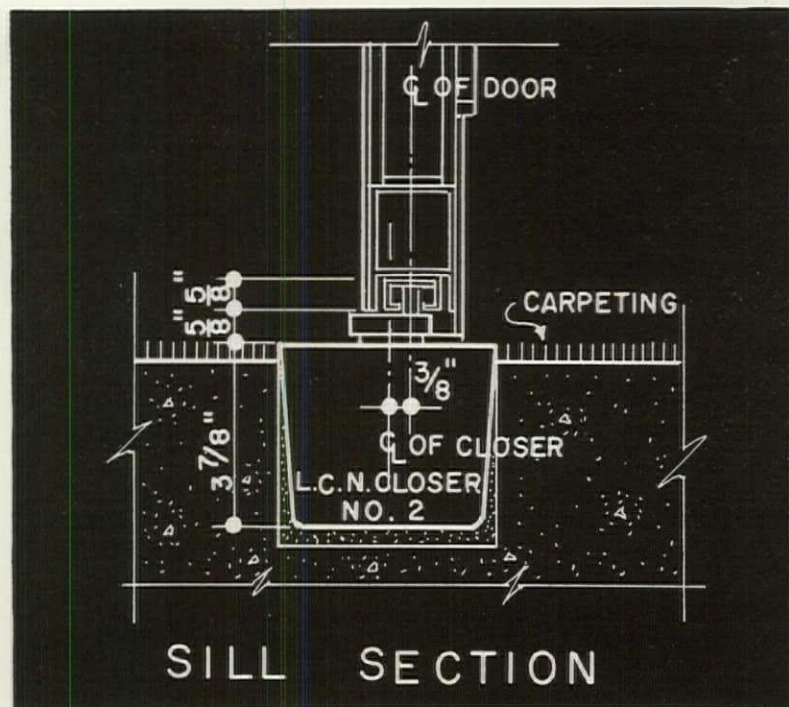
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Construction Details on Opposite Page



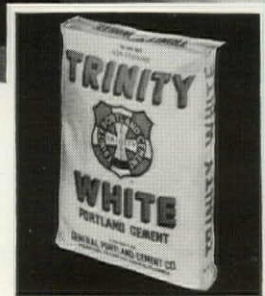
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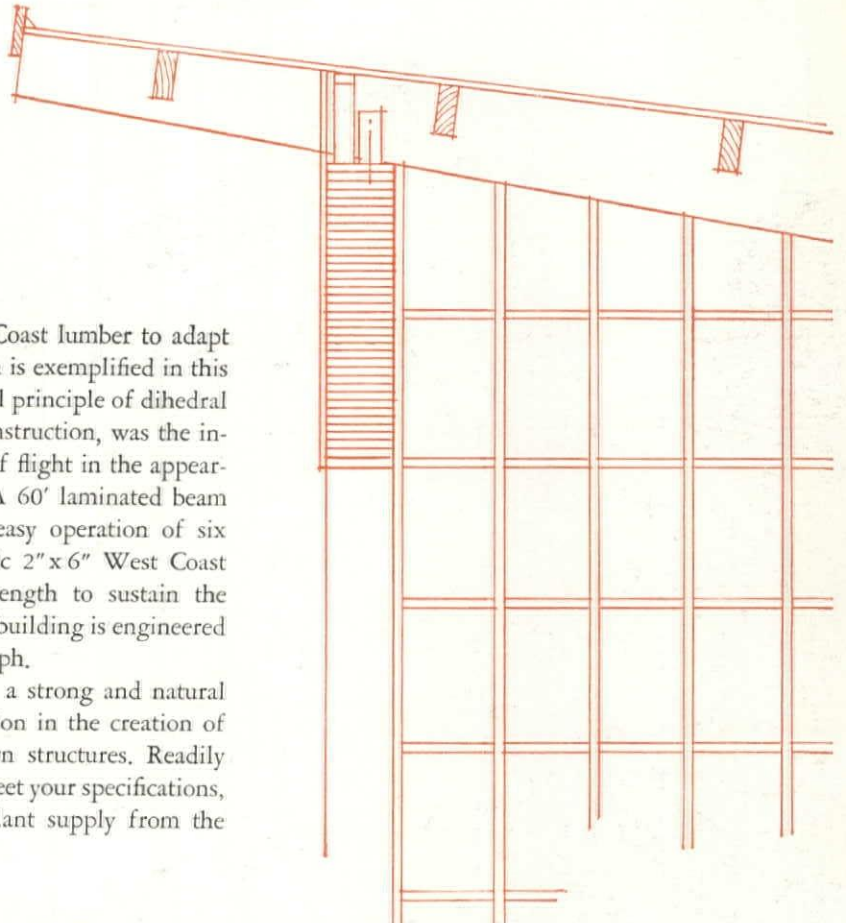


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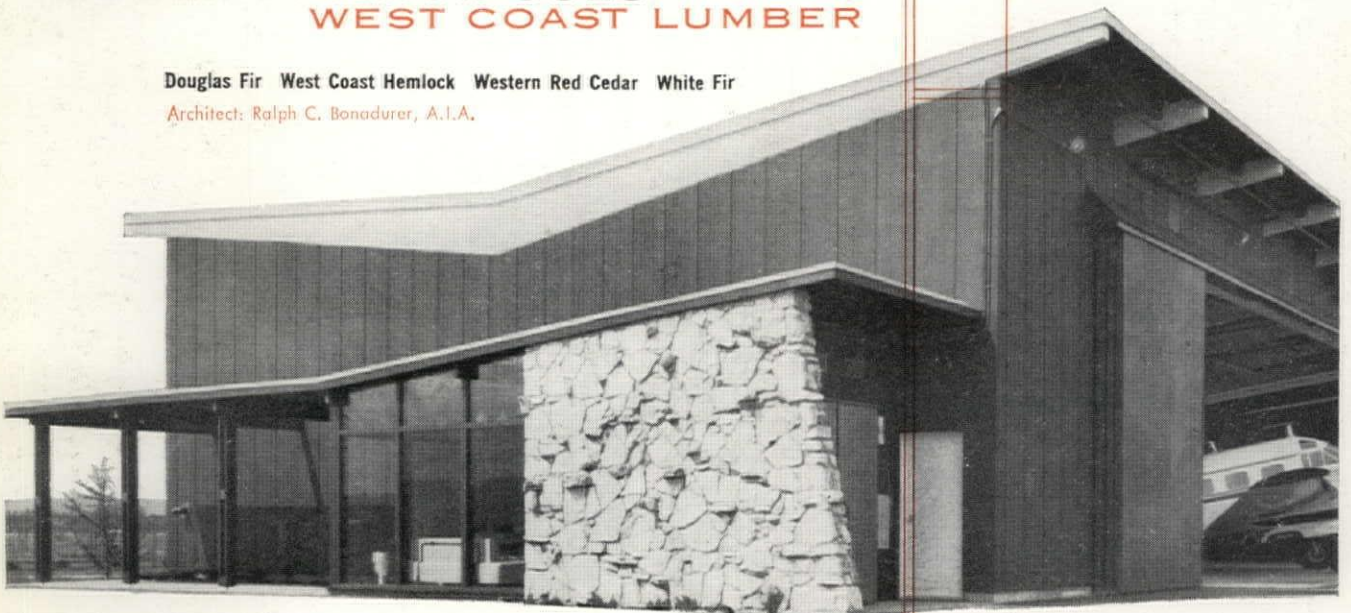
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Architect: Ralph C. Bonadurer, A.I.A.



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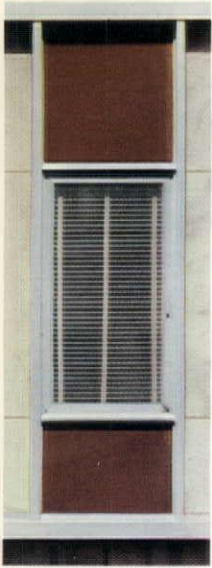
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NATIONAL BANK OF DETROIT

JOHN F. IVORY



## National Bank of Detroit puts trust in Steel

This handsome building is the first major office building financed by private capital in Detroit in 25 years. Rising 14 stories above busy Woodward Avenue, it's the new main office of the National Bank of Detroit. Much of its handsome appearance is due to a liberal use of Stainless Steel—170 tons of it in the exterior alone—and colored porcelain enameled steel panels. Here the architects have blended marble, porcelain enameled steel, and Stainless Steel in a building of quality and distinction that will stay attractive for many years to come.

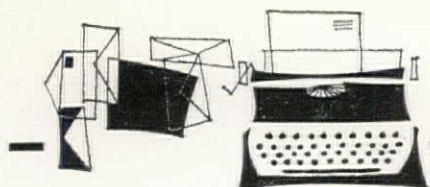
Stainless Steel mullions hold the white marble facing in place. Window frames are also Stainless. Windows are accented by colorful panels of porcelain enamel on steel. Mullions, frames and panels will require little or no maintenance for many years. This is important to an institution where *saving* is such an important word.

This bank was designed to complement Detroit's new Civic Center, which is being built just down the street. It's the beginning of an exciting rebuilding program that will depend greatly on modern steel. For a set of data sheets on the interesting details of this building, just write to: United States Steel, Room 6120, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

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## Battle Monuments

EDITOR, *Journal of the AIA*:

As an Honorary Member of The American Institute of Architects I have generously been granted the privilege of reading the monthly *Journal*. It was with some discomfort therefore that I have tried to digest Executive Director Purves' essay in the May 1960 issue.

A columnist has the manifest advantage of parading his views, regardless of their justness, before his captive audience. In the instant case Mr Purves suggests that he was running short of ideas so, as a *pis-aller* decided to devote this particular effort to condemning military memoirs and to flagellating the erection of battle monuments.

This brings to mind the story of the mediaeval painter who called in a cobbler to criticize the details of the rendering of a shoe, then promptly belabored him when he ventured to comment on the flesh tints.

Mr Purves surmises that the principal battle monuments scattered over Europe and elsewhere are likely to be American and not those of the countries in which the battles took place. I hope he does not bet at the races. If he would repeat his early visit to the battle areas of Europe he would find a battle monument in virtually every French, Belgian and Italian village on the battlefields (and elsewhere) as well as a goodly number of other battle monuments erected by all of the major combatant forces of both World Wars. Comparisons would be invidious, but having been closely associated with the efforts of the United States Government in this field off and on since 1923 I can assure Mr Purves that his surmise is most inexact. That he is disappointed in the quality of the great majority of battle monuments is regrettable, particularly so since all of those designed for the United States Government were the creations of members of The American Institute: to a simple field soldier the intuitive feeling of these creative geniuses for appropriate layout, and their superb sense of proportion, are awe-inspiring.

Your Executive Director ascribes the erection of battle monuments to curious and unhealthy sentimentality, to self-pity, to overindulgence in sentimental retrospection. Here he again is off base. The urge to erect monuments to perpetuate the memory of their military achievements (which have involved the ultimate in human jeopardy) has existed about as long as man could handle tools. The banks of the Nile have their succession of temples erected to this end—here the Pharaohs, modestly assuming close kinship with the Almighty, spread upon the walls the record of their campaigns, incidentally elab-

orating them with horrendous details which do no credit to these bloodthirsty reprobates. But their motives hardly seem to have been those which Mr Purves deploras.

It was to direct this human urge that the United States Government has tried to repress the erection by our combat units of monuments to their achievements—and the memory of the recently-fallen comrades—monuments which have tended toward poor structural design and execution, to put it mildly. In compensation our Government has durably recorded the achievements and sacrifices of our Armed Services thanks to the cooperation of Members of The American Institute of Architects.

And although he finds little satisfaction in the product I can assure Mr Purves that not a day passes without our receiving enthusiastic and unsolicited verbal or written approval of these memorials from the people closely concerned—those who took part in the campaigns, and the kinfolk of the Dead—people appreciate such concrete testimony to the achievements and sacrifice which are commemorated.

THOMAS NORTH, MAJ. GEN., USA  
American Battle Monuments Commission  
Secretary

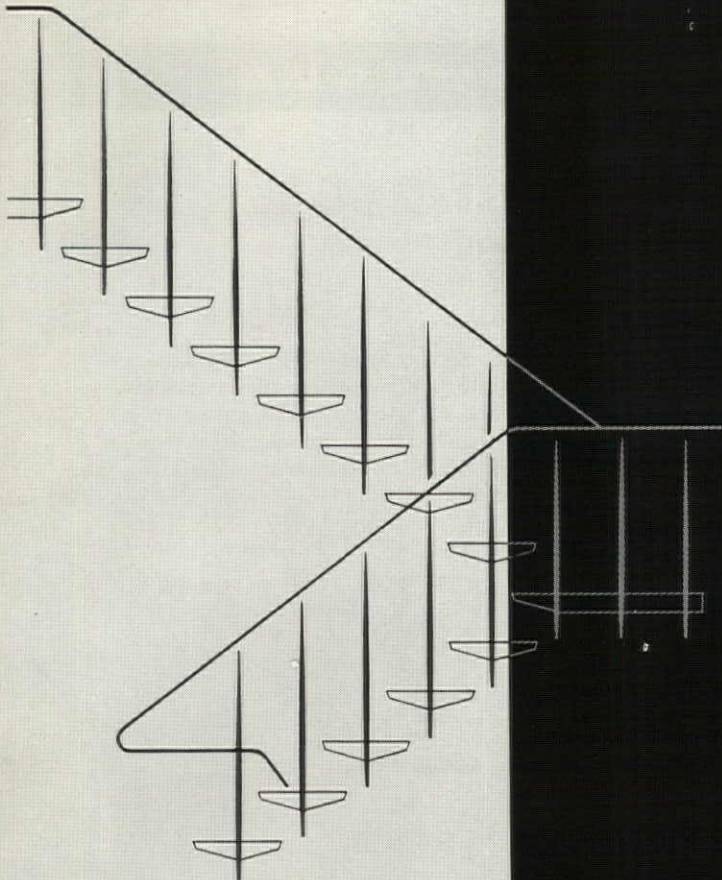
## A Reply

EDITOR, *Journal of the AIA*:

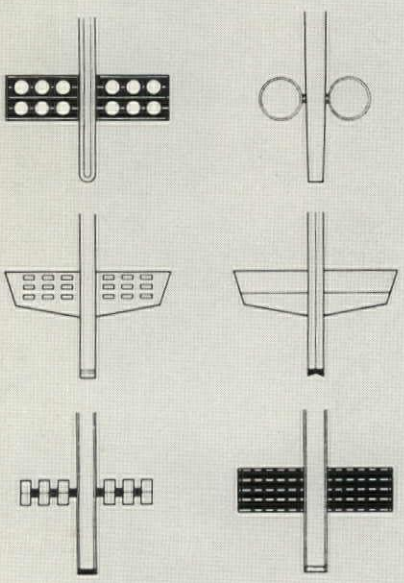
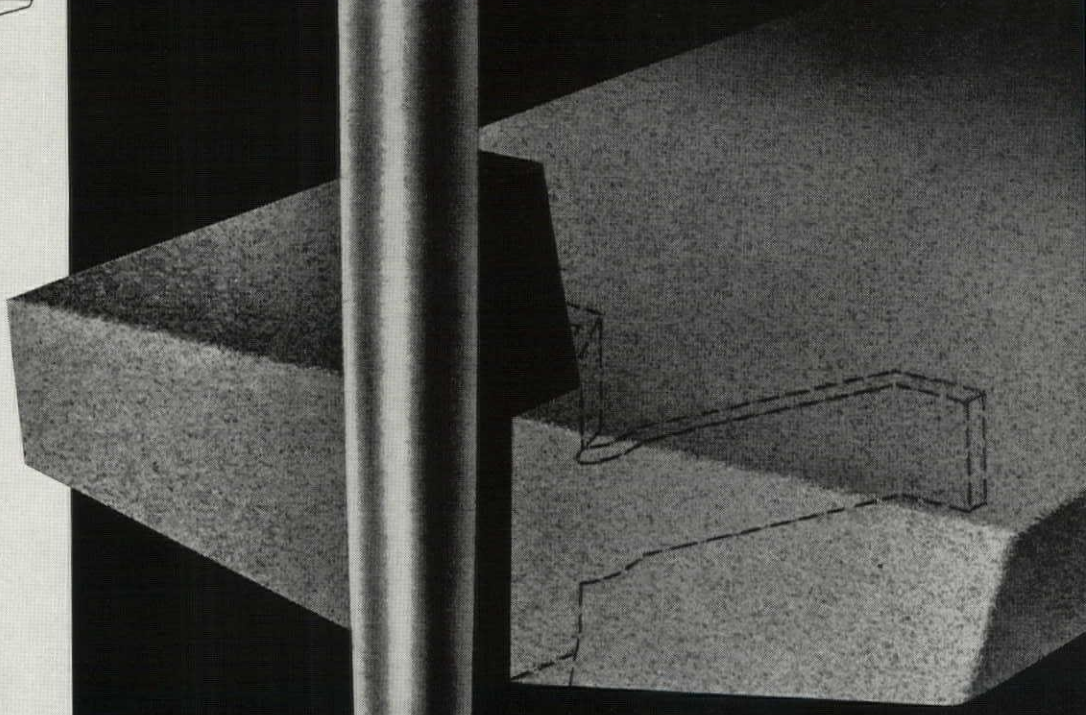
On reading General North's letter I re-read very carefully my own article to which he refers. I see no reason to retract, apologize or modify. The extent to which General North has read a meaning into my article, a minor and almost unconscious ingredient on my part, indicates an acute sensitiveness which may account for the extreme defensiveness of his letter. Although I am grateful to him for his contribution to my knowledge of architectural history, I would suggest that possibly mankind has progressed spiritually and culturally in the last 4,000 years. I doubt if the General's and my point of view will ever be reconciled but then I have acquired, in common with many others who have been in actual battle, a soldier's distaste bordering on a loathing for the monument which glorifies its creator rather than the men to whom it is dedicated. In making the foregoing observation I am not necessarily referring to those monuments which fall under General North's jurisdiction.

EDMUND R. PURVES, FAIA  
Executive Director  
The American Institute of Architects





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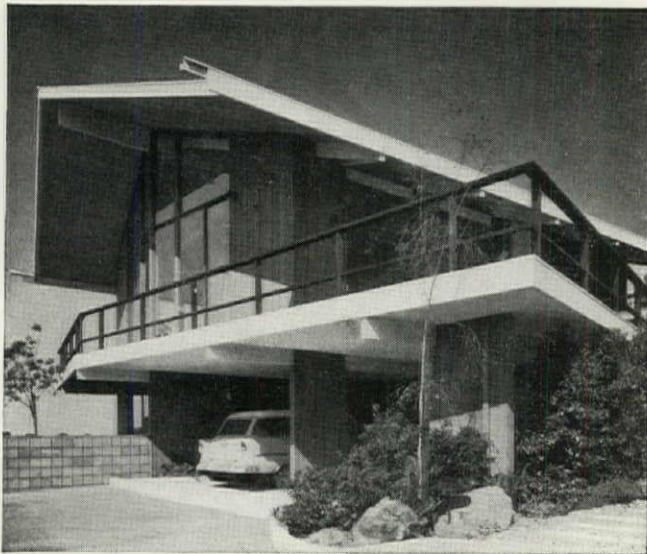


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# STAIN... OR PAINT?



Architect: Pietro Belluschi, Cambridge, Mass.  
Builder: Eichler Homes, Palo Alto, Cal.  
Cabot's Stains on exterior & interior

To answer this question, an architect weighs the advantages and limitations of each against the job at hand . . . effect, durability, and cost on wood surfaces inside and outside the home. Cabot's Stains, for example, answered all requirements for the home above. Here are the reasons for today's architect-led trend toward stains:

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- Economical — 1/2 the cost of paints.
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- Offer unique color effects in a wide color range.
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For best results, the best in Stains . . . Cabot's Oil-base or Creosote Stains.

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## LETTERS

### The Hunter Report

EDITOR: *Journal of the AIA*

I noted with interest the Report on the Profession [June 1960] and find, with surprise, that two common associations out in this area were omitted from the list. A great many offices, though they are reluctant to admit it, fall in the following layout:

REALTOR                      MERCHANT  
with a lessee ▷ OWNER - BUILDER ◁ BANK  
with land



ARCHITECT  
&  
ENGINEER

MONEY  
any source



OWNER ▷ NEGOTIATION  
with land                      with builder  
who helps finance



ARCHITECT  
&  
ENGINEER

We have associated on both these plans for years with no troubles, except in one case, and though it is hard on the ego it presents a problem that the Owner will not recognize. Many Owners will not commit themselves for preliminary plans until they have worked out a "deal" with a Contractor and then care only for "enough plans to get a permit." This method is sound in the eyes of the real estate man, contractor and banking outlets, as all parties do not want an outsider to move in and "steal" the prospect.

It exists, let's face it. I doubt if a law can be passed to stop it.

HARRY L. PERCY, JR  
Portland, Oregon

## Student Survey

EDITOR, *Journal of the AIA*:

I am sending you the results of a survey which was taken recently at the University of Illinois and feel it will be of interest not only to architectural students but also to practicing architects. The survey was sponsored by the AIA Student Chapter and was made among one hundred senior architecture students who will soon graduate. It consisted of seventy questions, thirty to be answered by straight "yes" or "no." The results showed the following:

### *The Typical Student*

The typical senior architecture student at U of I is single, Protestant, twenty-five years old and lives in an apartment. Politically, he is more often a Republican than a Democrat.

Although he spends the majority of his time on studies, his grade point average is 3.4. Structures is considered the most important course, and physics the most difficult. He has failed one course, been on probation once and has gone to summer school.

### *His Views*

He considers dedication the most important quality in teaching, and would like to see more liberal arts courses included in the curriculum. He feels we should have more visiting critics in design but does not think there should be more emphasis on sketch problems. He feels FLW is the greatest non-living architect. Kaufmann's Falling Water House, Bear Run, Pennsylvania, is his favorite contemporary building.

### *His Relaxation*

The average student reads at least seven books a year. He regularly reads one newspaper and the sports section is his favorite. He prefers classical music and enjoys Scotch. Frank Sinatra and Elizabeth Taylor are his favorite film stars.

### *His Future*

A job with Eero Saarinen would be most satisfying to him after graduation, although he would prefer to work in an office of less than ten persons. In most cases he does not plan to take further schooling. He would like to work in residential architecture and will join the AIA. Some day in the distant future he plans to own a Mercedes Benz 360 SL.

GERALD J. GRETHEN  
Vice President, AIA Student Chapter  
University of Illinois

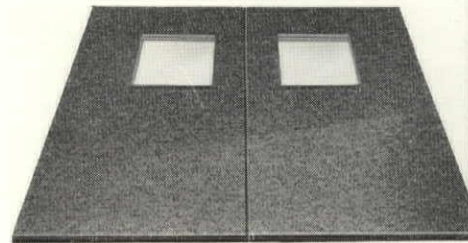
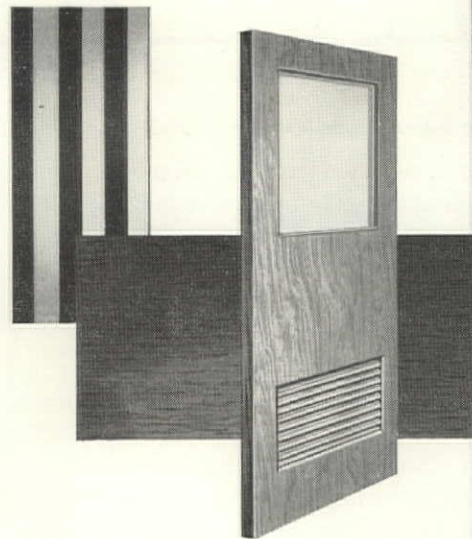
## More Technical Data?

EDITOR, *Journal of the AIA*:

I think the *Journal* has come quite a long way since it was begun . . . but I do think there is a shortage of explicit technical data in the magazine, although I am not certain that the *Journal* is the best place for such material to appear, particularly if the Institute must assume responsibility for its accuracy and applicability.

DAVID C. BAER, AIA  
Houston, Texas

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# NEWS

## Rome Prize Fellowships for 1961-1962

The American Academy in Rome is again offering a limited number of fellowships for mature students and artists capable of independent work in architecture, landscape architecture, musical composition, painting, sculpture, history of art and classical studies.

Fellowships will be awarded on evidence of ability and achievement, and are open to citizens of the United States for one year beginning October 1, 1961, with possibility of renewal. The Academy favors a two year fellowship. Though there is no age limit, the Academy aims to give the awards to young persons of outstanding promise, when such candidates apply. The fellowships carry \$3,000 a year, divided as follows: Stipend \$1,750, roundtrip transportation between New York and Rome \$600, studio supplies \$150, European travel \$500, and in addition free residence and studio or study at the Academy. A senior research fellowship, offered only in classical studies, carries \$4,000 a year, free study and residence at the Academy.

Applications and submission of work, in the form prescribed, must be received at the Academy's New York office by December 30, 1960. Requests for details should be addressed to the Executive Secretary, American Academy in Rome, 101 Park Avenue, New York 17, N. Y.

Founded in 1894, the American Academy in Rome is devoted to furthering the development of the fine arts and classical studies in the United States, by granting fellowships to American citizens, particularly to encourage younger architects, artists and scholars.

## New Switch: A Walking Tour

26

Boat trips and plane trips to foreign places having had their place in the *Journal* pages, we now turn to a plain, old-fashioned walking tour of interesting parts of New York City.

Under the direction of the distinguished architectural historian, Henry Hope Reed, Jr, the tours are sponsored by the Museum of the City of New York and are conducted each Sunday beginning at 2:30 PM.

Typical tours include Wall Street to the Battery, upper Fifth Avenue, Greenwich Village, famous

squares and other assorted areas of America's largest city.

Tickets for the walking tours are priced at \$2.50 for non-Museum members and may be secured by visiting or writing the Development Office, Museum of the City of New York, Fifth Avenue, New York City.

Tours are never cancelled because of weather—unless exceptionally poor, and no more than twenty persons are assigned to any one guide.

## Arnold Brunner Scholarship

Only a few months remain for architects with advanced professional backgrounds to apply for one of the nation's top architectural awards, the Arnold W. Brunner Scholarship, which amounts to \$3,000.

The Scholarship is offered annually by the New York Chapter, AIA, and calls for study in some special field which will contribute effectively to the practice, teaching or knowledge of architecture. Candidates may choose their field, according to E. N. Turano, Chairman of the Chapter's Scholarship Committee.

Projects for which the scholarship has been awarded in the past include a study of urban living through the movement of people, the creation of a traveling architectural exhibit for high school students, the compilation of a guide to contemporary architecture of Europe and a history of city planning.

Application blanks for the award and further information on it may be obtained from Peter S. Van Bloem, Secretary, New York Chapter, AIA, 115 East 40th Street, New York 16, N. Y. November 15 is the deadline for submitting choice of subject and an outline of proposed studies, research and travel.

## Job Available

The University of Colorado has announced an opening for the Headship of the Department of Architecture and Architectural Engineering. All inquiries and personal resumés should be sent immediately to: Professor C. A. Briggs, Chairman, Selection Committee, 212 Service Building, University of Colorado, Boulder, Colorado.

### Planning Committee Formed

Formation of the Lake Michigan Region Planning Committee, composed of architect-planner delegates from American Institute of Architect chapters in Wisconsin, Illinois, Indiana and Michigan has been announced through the Chicago office of Paul Frank Jernegan, AIA, newly elected term Chairman.

Composed of three delegates from the Wisconsin, Chicago, Indiana and Western Michigan chapters of the Institute, the members of the committee, each of whom serve on their local chapter planning committees, will function in the area of Public Relations Liaison. Although no statute powers governs the enforcement of the recommendations of the Regional Committee, recommendations of the newly formed group will be seriously considered and weighed by the members of industry, the public, and professional organizations and individuals in the field of planning due to the background and composition of the membership. The Lake Michigan Region Planning Committee will enter into areas and problems on a "Regional Planning Concept" and will offer its recommendations to industry, the public, and in coordination and cooperation to other professional bodies engaged in planning. Allied to the group will be an "advisory panel" of well-known planning officials specializing in the many different facets that compose the general field of regional planning.

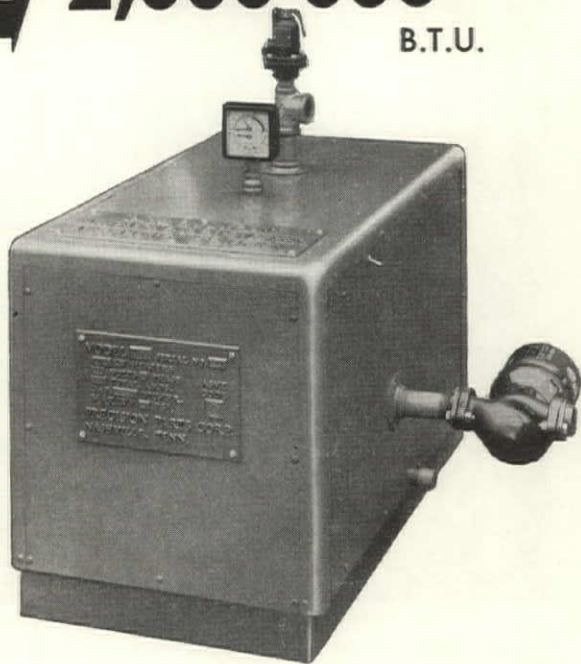
To serve with Mr Jernegan during the 1960-61 term are: Edward Duffield, AIA, Western Michigan Chapter, Vice-Chairman; S. Chan Sit, AIA, Chicago Chapter, Secretary; and William B. Baime, AIA, Chicago Chapter, Public Relations Liaison Officer.

### Names in the News

The Trustees of The Art Institute of Chicago have announced the appointment of *Richard Nelson Gregg* as Head of Museum Education. . . . Five Richmond, Virginia architects took part in the Virginia Art Teachers Conference held recently in that city. Serving as panelists in an architecture-art discussion were *Marcellus Wright*, FAIA, *Ben R. Johns*, *Thomas A. Gresham*, *Joseph V. Ciucci, Jr* and *Charles E. Wilkerson*. . . . *John Scacchetti* has been named President of the New Jersey State Board of Architects, and *Martin L. Beck*, FAIA, has been named Vice-President. . . . *Edward Colbert* of McComb, Mississippi, and *Alfred J. Petrilli* of Detroit, Michigan have won the grand prize of \$10,000 in the Second Annual Architects' Competition sponsored by The Ruberoid Company.

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*Suprema Flamingo Quartz*  
*Suprema Siskin Green*  
*Suprema Black Obsidian*  
*Suprema Milky White*  
*Suprema Blue Granite*  
*Suprema Pink Granite*  
*Suprema Light Gray Granite*

Recent installations in which Suprema Exposed Aggregates have been used are:

**Brown Palace—West Hotel**, Denver, Colorado  
Architect: William B. Tabler, New York, New York  
Mfg. by: Otto Buehner and Co., Salt Lake City, Utah

**Southland Center**, Dallas, Texas  
Architect: Welton Becket and Associates, Los Angeles, Cal.  
Mfg. by: Wailes Pre-Cast Concrete Corp., Sun Valley, Cal.

**Wayne State University, College of Education**, Detroit, Mich.  
Architect: Minoru Yamasaki & Associates, Birmingham, Mich.  
Mfg. by: Aggregate Surfaces, Inc., Dearborn, Mich.

For further information and samples, write to:

**COLONNA** & COMPANY OF COLORADO, INC.  
CANON CITY, COLORADO

## Metric System for US?

A bill (H.R. 7401) authorizing the National Bureau of Standards to study the advantages and disadvantages of adopting the metric system of weights and measures in the US has been introduced in the House of Representatives. The bill provides that the NBS conduct a program of investigation, research and survey to "determine the practicability" of changing from the present system of inches and ounces to the metric system of centimeters and grams. (Editor's note: An article discussing the metric system appeared in the August issue of the *Journal*.)

## More on UIA

Speakers announced for the Sixth Congress of the International Union of Architects (June, *AIA Journal*) include Professors Henry Russell Hitchcock of the US, Luigi Nervi of Italy and Jerzy Hryniewiecki of Poland. The three men will deliver papers devoted to the theme, "New Techniques and Materials—Their Impact on Architecture."

In addition to discussion and working groups that will be a part of the Congress slated for July 3-10, 1961 in London, there will be an international exhibition carrying out the theme of the meeting.

Complete information, including hotel accommodation registration forms, may be obtained from the Organizing Secretary, Sixth Congress of the International Union of Architects, Royal Institute of British Architects, 66 Portland Place, London, W1, England.

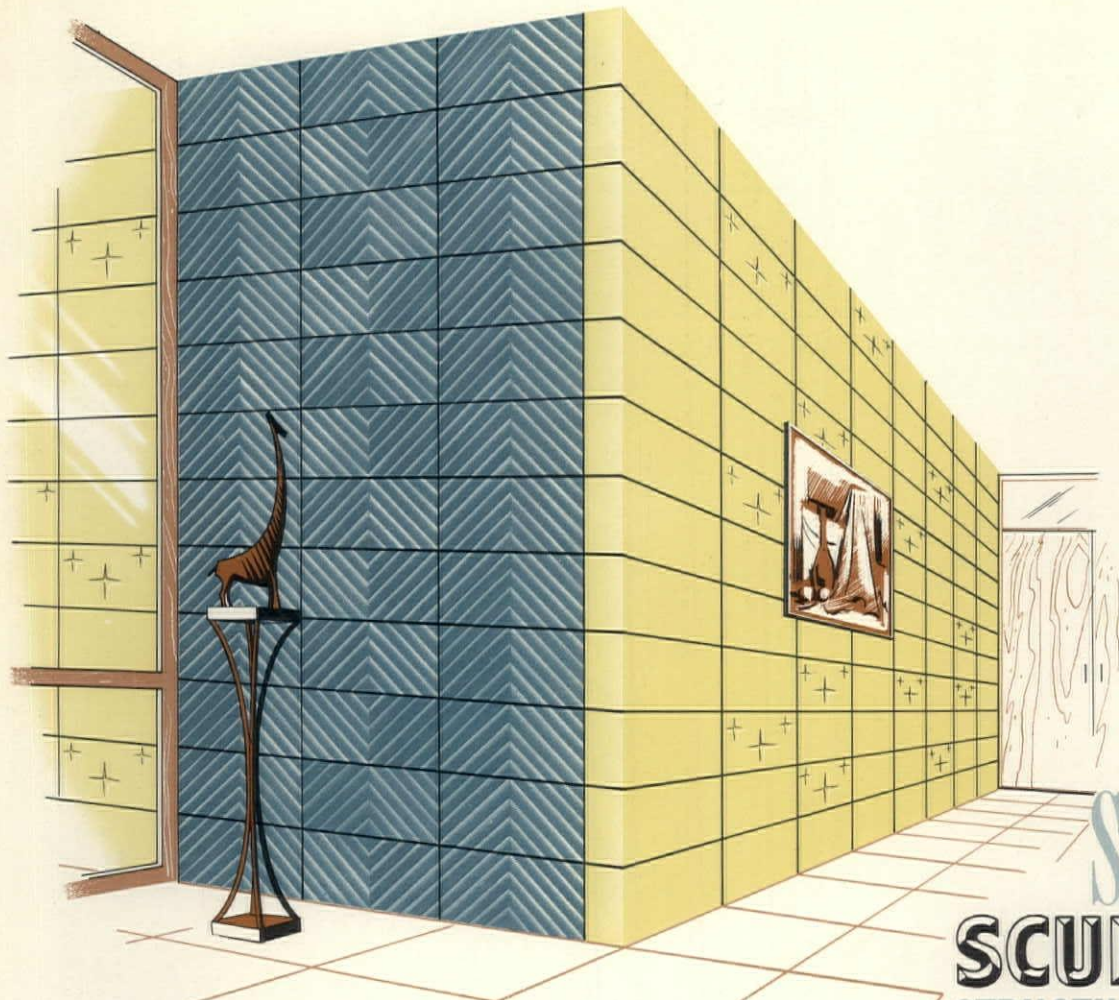
## Help for Program Chairmen

"The New World of Stainless Steel," a fifteen-minute color film on the uses of stainless steel is now available through the Commercial Research Division of Republic Steel.

Previewed at the Institute, the film is an unusual blend of sound and color photography designed as a showcase for the wide variety of uses of stainless steel in modern life.

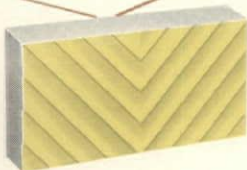
The film cost in excess of \$110,000 to produce and is non-technical in nature.

Now available for Chapter showings, the movie can be obtained without cost by writing Republic Steel Corporation, Commercial Research Division, 1436 Republic Building, Cleveland 1, Ohio. A complete listing of film titles also available for showing may be obtained from the same address.



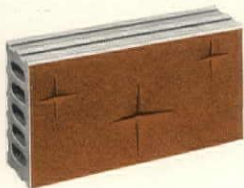
# STARK SCULPTURED STRUCTURAL CERAMIC TILE

## *Herringbone*



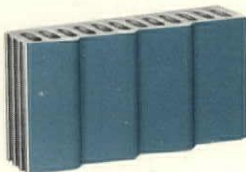
Versatile pattern that can be installed in various bonds to effect a wide range of overall patterns.

## *Galaxy*



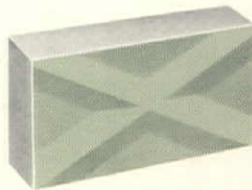
Deep-sculptured contemporary star forms. May be used as over-all motif or as decorative inserts.

## *Lower*



Especially suited for feature stripes and panels, installed vertically or horizontally, running or stack bond.

## *Classic*



Highly effective for large wall areas, particularly in institutional or monumental type architecture.

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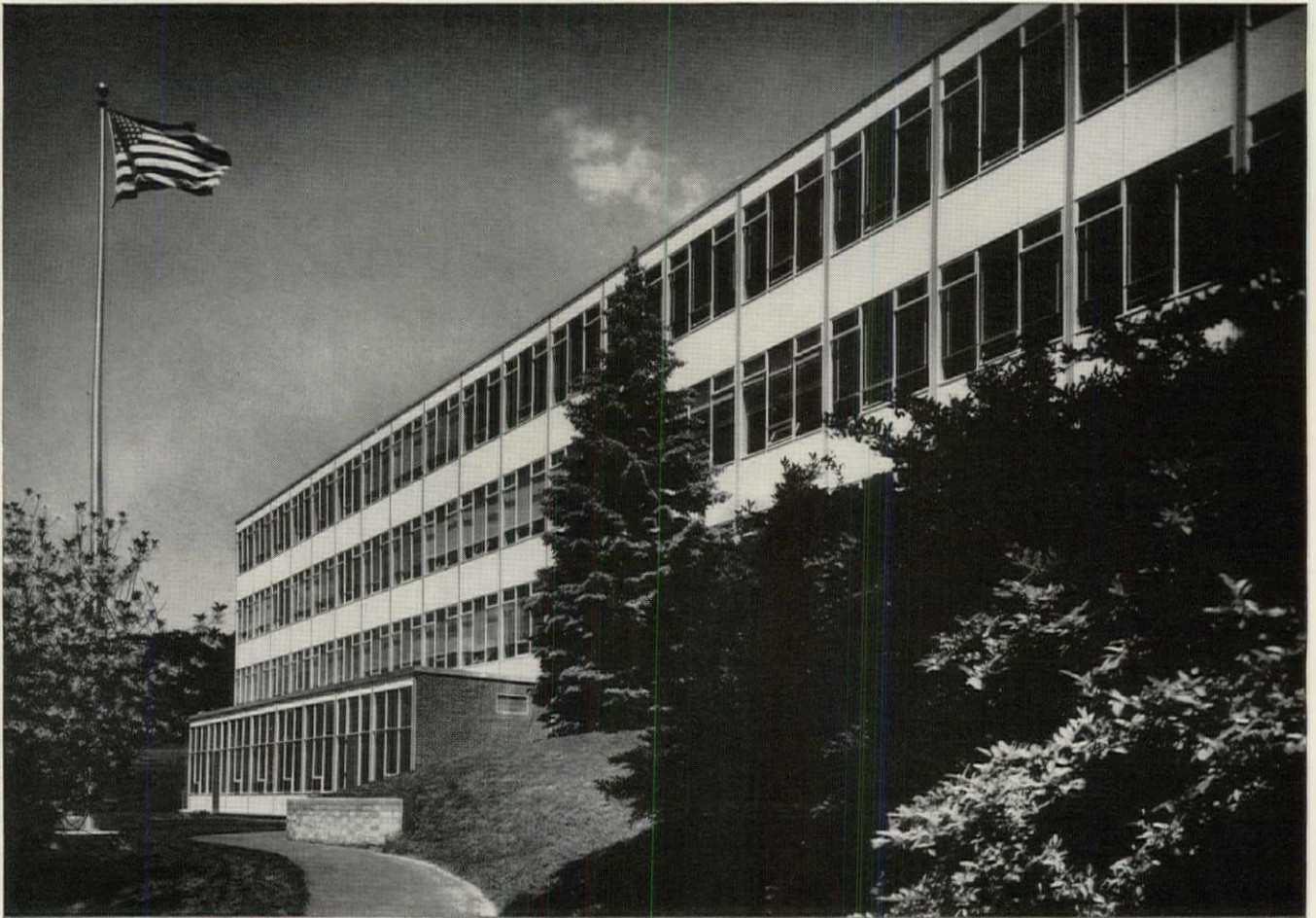
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A · I · A

Journal

# GENVS ARCHITECTVS CREATOR VARIETAS AMERICANVS

**T**HE PSYCHOLOGIST WHO STUDIES THE GENUS *Architectus Creator varietas Americanus* has first to identify the beast and then to capture him. It was clear to my colleagues and me that neither task would be an easy one when almost two years ago we undertook a study of creative architects as one project among several designed to discover those characteristics which differentiate highly creative individuals from less original and creative persons.

To identify the creative architects in the country I turned to the experts; first to Dean Wurster and four of his colleagues in the College of Architecture on the Berkeley campus of the University of California, and later to the editors of the major American architectural journals.

The task set Dean Wurster and his associates was to nominate a nationwide sample of architects whose work they considered outstandingly creative, creativity, in this connection, being defined as: Originality of thinking and freshness of approaches to architectural problems; constructive ingenuity; ability to set aside established conventions and procedures when appropriate; a flair for devising effective and original fulfillments of the major demands of architecture: Technology (firm-

BY DR DONALD W. MACKINNON  
DIRECTOR OF THE INSTITUTE  
OF PERSONALITY ASSESSMENT AND RESEARCH,  
THE UNIVERSITY OF CALIFORNIA, BERKELEY

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*This article is a modified version of an address given to the 39th Annual Convention of the National Council of Architectural Registration Boards, San Francisco, California, April 16, 1960*

ness), visual form (delight), planning (commodity), and human awareness and social purpose.

It was agreed that each panel member working independently would nominate those forty architects who, in terms of this definition, each judged to be most creative. In addition, panel members rated on a five-point scale the creativity of each architect in meeting each of the four conceptualized demands of architecture: Firmness, delight, commodity, human awareness and social purpose. They wrote a summary evaluation of the work of each nominated architect which indicated the reasons why he was nominated.

How well do experts, in this case professors of architecture, agree among themselves as to who are the most creative architects in the country? Had the agreement been perfect, the panel would have supplied us with forty names, the same forty being mentioned by each panel member. Actually they gave us eighty-six names. Of the eighty-six, thirteen were nominated by all five members, nine were nominated by four, eleven by three, thirteen by two, while forty were individual nominations being nominated by single panel members.

When all nominations had been received, each panel member was sent rating sheets for each architect not nominated by himself but mentioned by one or more of the other members of the panel. He was asked to rate these architects as he had rated his own nominees provided he knew them and their work well enough to do so.

In many instances the failure of panel members to mention an architect nominated by others had been a mere matter of oversight; in other cases the architect was known but his work was not judged to be creative enough to justify inclusion in a national sample of the most creative architects; and in still other cases the architect was just not known to the panel member who had not mentioned him in his original nominations.

When all nominating-rating sheets were at hand, the ratings given by all raters on the four dimensions of architectural creativity were averaged for each of the nominated architects and, in turn, composited to yield for each architect an over-all rating of architectural creativity.

Nominated architects (at this stage known to us only by a disguising code number) were then

listed in the order of magnitude of their rated overall creativity. At this point my collaborator in the study, Wallace B. Hall, and I examined the ratings and summary evaluations for each architect and prepared a listing of the architects in the order in which we would invite them to participate in our study. Only after this had been done did we break the code and discover whom indeed we were inviting.

The invitation to these architects was to come to Berkeley and to be studied in the Institute of Personality Assessment and Research by means of the assessment method, the distinctive method of psychological research which was developed in the Office of Strategic Services during World War II for the purpose of studying the functioning of highly effective individuals. Its essential feature is that the persons to be studied are brought together for several days at an assessment center, where they meet with each other and with staff members, and participate in a series of experiments, psychological tests and interviews covering the life history and professional career. To understand the development and functioning of highly effective and creative persons we believe it is necessary to observe, and if possible to measure as many aspects of personality as one can, and it is for this purpose that the highly varied, multidimensional observational and testing procedures of personality assessment have been developed and are being used in the Institute's study of architects and other creative persons.

### **Forty Creative Architects**

My hope was to win the cooperation of the first forty to whom I sent letters, but to get forty acceptances, sixty-four invitations had to be sent out. But at that I didn't fare nearly as badly as my colleague who sought to entice forty writers to come to the Institute for study. Whereas the writers often replied in anger at what they perceived as the audacity of a psychologist in presuming to study so ineffable and mysterious a thing as the creative process and so sensitive a being as a creative person, the invited architects responded courteously and even warmheartedly. Their sentences were grammatically formed and felicitously expressed and their letters were typed with novel arrangement on letterhead stationery of their own design so esthetically pleasing as to make their letters seem even more friendly acceptances of my invitation than they may have been intended to be.

Each of the forty architects who accepted the invitation to be studied spent a weekend in Berke-

ley being intensively assessed. They came in groups of ten during the winter and spring of last year.

But what of the twenty-four who declined the invitation to be studied? Are they in some way different from the forty who accepted? This, of course, is a problem which plagues us in all our researches, for we can assess only those who are willing to be subjects. With respect to psychological traits and characteristics we can never know what differences, if any, there are between volunteers and non-volunteers. But with respect to differences in creativity, if any, between the forty who accepted and the twenty-four who declined we have the answer, thanks to eleven editors on the staffs of *Architectural Forum*, *Architectural Record*, *Journal of The American Institute of Architects*, and *Progressive Architecture*.

These eleven editors, out of fourteen asked to cooperate in our researches, undertook to rank the sixty-four invited architects from most creative to least creative. Remember, though, that all sixty-four had been originally nominated as highly creative, so theirs was an extraordinarily difficult task.

The editors' rankings for all sixty-four were averaged separately for the forty assessed architects and for the twenty-four who declined to be studied. When the means for the two groups were compared it was discovered that the non-assessed group had a slightly higher mean rating of creativity than the assessed sample, but the difference was not statistically significant.

In other words, we can make no claim to have studied the forty *most* creative architects in the country. In the original nominations some of the most creative may have been missed, though this seems most unlikely. Of the sixty-four invited, some with the highest ratings turned us down, but some with lowest ratings also refused to be studied. But at least it can be said that we were able to study intensively a sizable and distinguished group of creative architects, and the data obtained from them are certainly worthy of note.

Having asked professors and editors to estimate the level of creativeness with which our assessed architects work, it seemed only fair to ask the architects themselves how they would judge one another's creativity. Thirty-five of the forty undertook to do so.

All told then we have three sources of evaluations of our subjects' architectural creativity: The ratings of the nominating panel of professors, the ratings of the editors of the major archi-

tectural journals and the ratings of the creative architects themselves.

How well do the members within each of these three groups agree among themselves in rating the creativity of the forty subjects? The answer is to be found in an examination of the intercorrelations of their ratings. If, for example, the editors' ratings were in complete agreement they would correlate +1.00. If in complete disagreement, they would correlate -1.00. And if there were just no relationship between them, they would correlate zero.

Actually, the inter-correlation of ratings of the architects' creativity is for the panel members .55, for the editors .88, and for the architects themselves .94. The agreement among the architects concerning their respective creativity is extraordinary. The agreement among editors is almost as spectacular. The agreement among professors of architecture is less good, but their lower inter-rater agreement is partly a statistical artifact determined by the small number of judges. There were only five of them as against eleven editors, and forty architects. But this is probably not the whole story. The possibility must certainly be entertained that the professors in their ratings are more individualistic, having more idiosyncratic perceptions and evaluations of creativeness in architecture. Also it seems not unlikely that both editors and architects are more expressive of stereotypic values to which the editors as taste-makers, deciding what gets published in the journals, contribute, and to which the architects as readers of the journals, respond. This is an intriguing problem which we hope to study in some detail before our research is completed.

We may now ask a related question: How well do the three groups of raters—professors, editors and architects—agree with each other as to creativity of architects? Here we discover that just as professors do not agree too well among themselves about the relative creativity of a limited sample of highly creative architects, so also their ratings show less agreement with the judgments of editors (correlating with them .39) and with the evaluations of the architects (correlating with them .31), while the ratings of creativity made by the editors and by the architects are in remarkable agreement (correlating .88).

### **The Youth of the Architect**

What are the young of the species like? I cannot say with certainty, since we have so far not captured any in our net. But we do know what the older ones say about their youth.

It is clear from their reports that certainly not all of them had the kind of happy homes and favorable life circumstances so generally thought to be conducive to sound psychological development.

Some underwent the most brutal treatment at the hands of sadistic fathers. These, to be sure, constitute the minority, but they appear today no less creative than those whose fathers offered them quite satisfactory male figures with whom easy identification could be made, though there is some evidence that they are not as effective or as successful in the financial and business aspects of their profession as the others.

Settling upon their life careers came early for some, one of whom already at four had decided he wanted to be an architect. Others were slow in coming to a professional identity, not deciding until several years past college that architecture was what they wanted to practice. In the case of several of these, the choice of a life profession was made the more difficult by virtue of the fact that they possessed so many skills and interests, providing them with the possibility of many quite different careers. Several were painters and sculptors before they became architects and some of them continue today these other artistic pursuits in a professional and not merely avocational fashion along with their architectural practice.

Almost without exception one or both of the parents were of artistic temperament and considerable skill. Often it was the mother who in the architect's early years fostered his artistic potentialities by her own example as well as her tuition.

Almost without exception the creative architects manifested considerable interest and skill in drawing and painting. Why they eventually became architects rather than professional artists is a question which can only be answered by a more searching analysis of our subjects' reports upon the development of their architectural careers.

In school and college the creative architects were tolerably good students, but in general not outstanding if one may judge from their academic grades. In college they average about a B. But what most clearly appears to have characterized their college careers was the independence with which they worked.

In work and courses which caught their interest they could turn in an A performance, but in courses that failed to strike their imagination, they were quite willing to do no work at all. In general, their attitude in college appears to have been one of profound skepticism. They were unwilling to

accept anything on the mere say-so of their instructors. Nothing was to be accepted on faith or because it had behind it the voice of authority. Such matters might be accepted, but only after the student on his own had demonstrated to himself their validity. In a sense, they were rebellious, but they did not run counter to the standards out of sheer rebelliousness. Rather, they were spirited in their disagreement and one gets the impression that they learned most from those who were not easy with them. But clearly many of them were not easy to take. One of the most rebellious, but as it turned out, one of the most creative, was advised by the Dean of his School to quit because he had no talent; and another, having been failed in his design dissertation which attacked the stylism of the faculty, took his degree in the art department.

Turning now to the question: What are creative architects like? I should like first to ask: How do creative architects perceive themselves? They think well of themselves as persons, and have an even higher opinion of themselves as architects. They are not modest, but considering their accomplishments there is no reason why they should be. When they were asked to rank themselves in the group of forty with respect to their relative creativeness in architecture 16% of the group put themselves in first place.

This good opinion of themselves in their professional role is repeatedly revealed. Creative architects have an image of themselves as responsible persons, and a sense of destiny about their professional careers. This includes a degree of resoluteness and almost inevitably a measure of egotism. But over and above these, there is a belief in the foregone certainty of the worth and validity of their creative efforts. This is not to say that these architects have been spared periods of frustration and depression when blocked in their creative striving, but only that overriding these moods has been an unquestioning commitment to their creative endeavor.

### **The Intelligence of the Architect**

How intelligent are creative architects? They are at least intelligent enough to report that they wish they were more intellectually gifted than they are. Actually, on the "Concept Mastery Test," a difficult, high-level test of verbal intelligence, the creative architects earn a mean score of 113, scoring as a group five points below research scientists and 12 points above undergraduate students. But their individual scores range widely from 39 to 179, and within the group the correlation of intelligence as measured by the "Concept Mastery

Test" and creativity in architecture as rated by the experts is  $-.08$ , not significantly different from zero.

Certainly this does not mean that over the whole range of creative endeavor there is no correlation between intelligence and creativity. There have been no feeble-minded subjects in any of our creative groups. Rather it suggests that a certain amount of intelligence is required for creativity, but beyond that point being more intelligent or less intelligent is not crucially determinative of the level of an individual's creativeness. It would appear that if, by some miracle, already creative architects were to receive that additional measure of intelligence which they so desire, all of their problems would not thereby be solved, nor their creativity necessarily increased.

Of the six values of men described by Eduard Spranger—the theoretical, the economic, the esthetic, the social, the political and the religious—two of these values, the esthetic and the theoretical, are prized above all others by creative architects. And despite the success with which they carry out their architectural practice their least valued value is the economic. For many people, perhaps for most, there is some incompatibility and conflict between the theoretical value with its cognitive and rational concern with truth and the esthetic value with its concern with form and beauty. If this is so, it would appear that the creative architect has the capacity to tolerate the tension created in him by strong opposing values, and in his life and work he effects a reconciliation of them.

Though the professional duties of an architect require a great deal of interaction with others, including colleagues, clients and contractors, this is not especially to the liking of the creative architect who tends to be an introvert desiring aloneness and time for contemplative thought and creative activity. On one of our tests of interpersonal behavior the creative architects revealed even less desire to be included in group activities than that expressed by the naval and civilian personnel who volunteered to man the Ellsworth Station outpost in Antarctica during the International Geophysical Year. Yet it is clear that when the creative architect has to interact with others he does so in a dominant manner, with marked social presence and consummate skill.

This separateness from others appears to underlie the persistent intensity and relative independence with which the creative architect works. His level of energy is high and effectively channeled. But this alone does not explain his creativity. His

rejection of external restraints, his freedom from crippling inhibitions and his independence in thought and action, all these contribute significantly to and make possible his creative work.

### The Perceptiveness of the Architect

The architects whom we studied were characterized by an unusual openness to experience, a wide perceptiveness of what exists within as well as what goes on outside. They have the capacity to admit complexity and disorder into their perceptions without being made anxious by the chaos, and the ability to form a new order out of the richness thus permitted. More than most they recognize the opposites in their nature, admitting into consciousness much which others would repress, integrating reason and passion, and reconciling the rational and irrational.

If, grossly over-simplifying psychological functioning, one were to say that whenever a person uses his mind for any purpose he performs either an act of perception (he becomes aware of something) or an act of judging (he comes to a conclusion about something), then our findings could be simply stated: Creative architects are predominantly perceptive.

But how do they perceive? In his perceptions, both of the outer world and of his inner experience, one may tend to focus upon what is presented to his senses, the facts as they are, or he may focus upon their deeper meanings and possibilities. We would expect creative persons not to be bound to the stimulus and to objects as they are perceived by the senses but ever alert to the as-yet-not-realized. In a test of these functions 75% of Americans are sensation-types responding only to what is given, while a mere 25% are intuitive types, alert to hidden meanings and possibilities. It is therefore a striking finding that 100% of the creative architects are intuitive in their perceptions.

Our researches are still going on. It appears most likely that further analyses will reveal some serious chinks in the armor of creative architects, but if I were to summarize what at this stage of our study most impresses me about the genus *Architectus Creator varietas Americanus* it is their openness to experience, their freedom from petty restraints and impoverishing inhibitions, their esthetic sensitivity, their cognitive flexibility, their independence in thought and action, their high level of energy, their unquestioning commitment to creative endeavor and their unceasing striving for creative solutions to the ever more difficult architectural problems which they constantly set for themselves. ◀



*The author's home in Bali—native construction, but arranged for Western comfort. Photo on next page shows the mist-shrouded volcanoes of Java covered with vegetation right up to their craters. These volcanoes form the only threat to existence in an otherwise ideal climate*

## Paradox in Paradise

AN ARCHITECT IN INDONESIA

**BY MILTON D. LOWENSTEIN** *who spent over a year in Indonesia as Housing Officer for the US International Cooperation Administration. He*

*is at present on the faculty of the new School of Architecture at the University of Arizona. Photographs used in the article are by the author*

► To build in native communities is an art involving much more than creating better shelter. The people who inhabit the buildings have hearts or feelings which seek the solace and stimulation that should be part of an architectural solution.

As I had been sent to Indonesia to help build better homes, I believed it was part of my job to thoroughly understand the feelings of the Indonesian people. Getting an inside understanding of people's hearts is not easy if they live in a society where concealing one's true feelings under all circumstances with polite equanimity is as normal as ours to keep properly clothed in public. From infancy, a child's association with adults inculcates a respect for personal dignity, and he accepts responsibilities befitting his ability. With other members of the family he does his share to make it a barrier against any encroachments from the outside world.

At first, guided by some previous experience in the Far East, I exhibited no concern about knowing the Indonesians any better than they chose to let me. But I was actually learning a great deal from observing their children, especially when they played with ours. Even though the language difference was a handicap, this, too, became the subject of games and offered opportunities to reveal personal qualities upon which mutual trust depends.

Meanwhile, the more general aspects of giving aid to "underdeveloped countries" were being learned through casual talk with groups of students to whom I was teaching western building techniques. The young men came from all over the archipelago, each with his own dialect, which had to be translated through an interpreter into the newly-adopted national tongue which they, as well as I, were attempting to learn.

The young men had all studied some construction and a little engineering and were rather enthusiastic—in their own indirect oriental way—about the application of the training to build fine model homes in Indonesia. Concrete, steel and even synthetic materials (like Formica) appeared in the sketches they made for improving the native bamboo and wooden types of buildings. No other protection was necessary in the lovely, almost changeless, climate of the islands. As encouraging the use of foreign materials was part of our foreign policy at the time, and as I was, in the beginning, unfamiliar with Indonesian architecture, I tried to carry out the education job that was demanded by the students and their sponsoring local governments.

I was not impressed with the efforts within and without Indonesia to substitute a foreign cultural

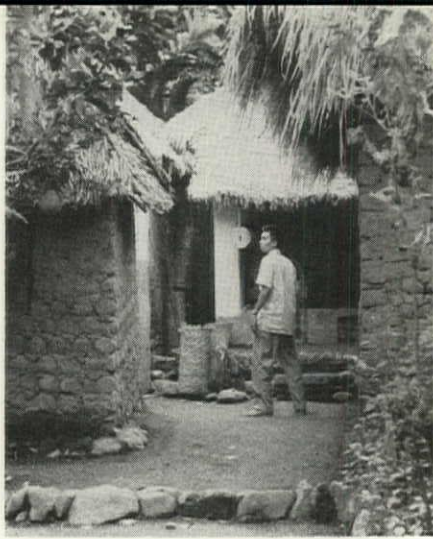
expression for what had proven adequate and had persisted for a thousand years, including 350 years of colonial domination. At the newly-started architectural school at Bandung, which was being staffed by the UN with professors from several western countries, the students wanted to study skyscraper construction. How was it to be applied in a country where sixty per cent of the population are small farmers and the majority of the rest live in small villages, many on the edge of jungles where tigers and elephants are hunted? Neither could such buildings help the larger cities like Djakarta, the capital, and Surabaya, one of the very few seaports. They were already so overcrowded with refugees from the bandit-infested rural districts that the existing sanitation and employment opportunities for the stranded refugees were inadequate. The crowding of additional people into multiple-story buildings on the narrow, hopelessly crowded thoroughfares, aside from



violating Indonesian sacred traditions, and aside from the high cost for the necessary imported steel and concrete, was preparing the urban areas for pestilence and possibly war for survival.

The indigenous architecture is functional—it can meet the practical demands of climate and the primitive hygienic needs of rural communities where space mitigates the danger of contagion. But to the people these requirements are not of architectural importance. The ancient religious traditions and social customs affecting buildings are as strictly enforced by *adat*, or village laws, as are our most stringently supervised building codes.

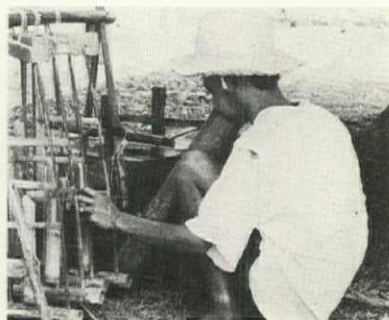
The size and location of a house does not originate with the needs of the family and site conditions. A design begins in Bali, for example, with the status of the owner. From this the sizes of the vertical supporting members of the house are determined. For the nobility the cross section is the size measured from the thumb tip to the wrist, while a mere farmer's house is allowed to have



*A typical desa or village in Bali. These houses are built of native adobe and roofed with thatch. Each function of the home is usually under a separate roof; some, such as the kitchen, are shared by several families. Eating, however, is a private matter and families rarely eat together except at communal feasts*



*The temporary school buildings erected by a local contractor for the Christian Teachers College at Salatiga collapsed a few minutes after classes were dismissed*



*The Balinese "one-man band"—the anklung player. The anklung, a series of bamboo rattles, is played with the left hand, the player blows across a hollow bamboo log which gives off a deep booming beat, and with his right foot he plays a cymbal-like affair. The "music" is unmelodic, but has a haunting flavor of jungle noises*

posts with a cross-section the size of the thumb's length to the first joint. Each function of the home is in a separate building. They are arranged and oriented according to sacred prescriptions. The shrine is on the side of the plot nearest a sacred mountain from where the gods descend. Only one-story structures are built with sometimes a kind of raised attic in the head family's home where the gods may visit. No Indonesian would allow anyone to live over his head!

I was able to adapt Indonesian architecture to modern uses when the American ambassador was asked for my services in designing a Christian Teachers College at Salatiga in Mohammedan central Java. With one exception, the foreign directors and staff of the college wanted the buildings designed in the colonial version of a European style. But backed by an American missionary, the late Dr John Hays, and encouraged by our ambassador, I designed all the buildings on the campus in the native style. The Indonesian members of the college staff and the students were enthusiastic, and it was reported that when President Sukarno, himself an architect, saw the plans he called them another Indonesian revolution!

This study and use of Indonesian architecture prompted me to try to convince the Indonesian construction students of the good points of their own traditional methods. Although they cheerfully cooperated in projects of building models of Indonesian buildings, my insistence that contemporary work follow the style of the models was often met by expressions of covert resentment. Were Indonesians too stupid or unworthy of being taught the latest engineering and architectural achievements of the West?

The more we tried to understand Indonesia and its problems, the more fascinated we became with the many highly developed indigenous art forms. The people gave them all the attention we usually devote not only to the movies, hobbies, theater, sports and the news, but also to religion and education. Dancing, which combines the epic treatment of history, the recreation of the theater and the inspiration of religion, is the most pervasively practiced of the arts. Sculpture is probably the next most practiced art.

We were introduced to Balinese dancing by one of the greatest former artists—Mme. Le Majeur, the Balinese wife of a Belgian painter, who abandoned western life forty years ago and has lived in the island paradise ever since. She explained the different types of dances which vary as do the architecture and language from one part of the country to another. All the dances are accompa-



nied by the *gamelan*, an orchestra consisting principally of percussion instruments.

Our little Balinese seamstress—a fifteen-year-old—was the head dancer in the community where we stayed. She went into the details of her repertoire, showing my wife and children the intricacies of make-up and costuming. We accompanied her deep into the jungle to witness ritual dancing. The performers, often in a trance-like state, would attempt unpredictable and sometimes dangerous actions, like seizing a *kris* (a native sword) and attacking the dancer who impersonated an evil spirit. When thwarted in his attempts the dancer might turn the sword against his own body and commit suicide in public.

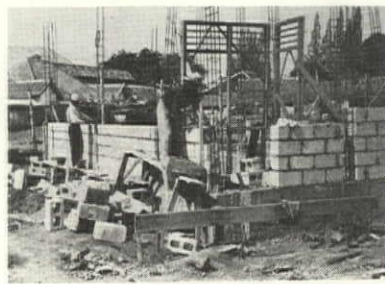
All art forms are deeply inspired and are a part of what we would call religion, but which also includes what we associate with national beliefs. Originally animistic, the native religions now include aspects of Hinduism, Buddhism and the Islamic faith. While the latter predominates, the emphasis varies with the location. In Bali it is Hinduism, and in central Java, Buddhism. The great temples, like the famous one at Burabudur, are encased with exquisite stone carvings. Burabudur is not a temple in the sense of being a place one can enter to pray, but is a terraced stone mantle over a small mountain. The sides of the walks are covered with bas-reliefs depicting the life of Buddha. Near the summit are tiers of bell-shaped stone sanctuaries pierced with holes through which a seated Buddha may be seen. After a thousand years Burabudur is still a sacred shrine.

With such a wealth of art traditions it seemed to me incredible that the young men looking forward to a career in architecture should turn away from their ancient heritage and attempt to emulate the West. Even after some rows of concrete block houses were built and the people who lived in them expressed their displeasure and desire for the native-type buildings, students demanded instruction in steel and concrete architecture. The Western type homes were larger than the Indonesian types, but the dwellers complained that they felt confined by concrete walls, and furthermore when the need to enlarge the homes arose it was impossible to build with the foreign materials.

Our stay of over a year was too short to enable us to restore confidence in the native culture as a source for Indonesian architecture among those who were preparing to create new homes. We can only dream about returning to what in a modern world recalled all the promises of the kind of ancient paradise for which we all yearn. ◀



*A slum clearance project in Djakarta had to wait for years for the squatters to leave. A fire finally wiped them out and the owners had to hastily erect a fence around the site and rush men and materials to the job to prevent the squatters from returning. In designing concrete, plenty of allowance must be made for human error, for concrete accurately mixed on the ground arrives in the forms in an unpredictable condition, having been carried in small buckets, shovelled, pushed with sticks or just kicked into place*



*The habit of frame construction persists in concrete masonry buildings for, though the walls are strong enough for load-bearing, they are not trusted. Reinforced concrete columns are built into even the smallest structure*



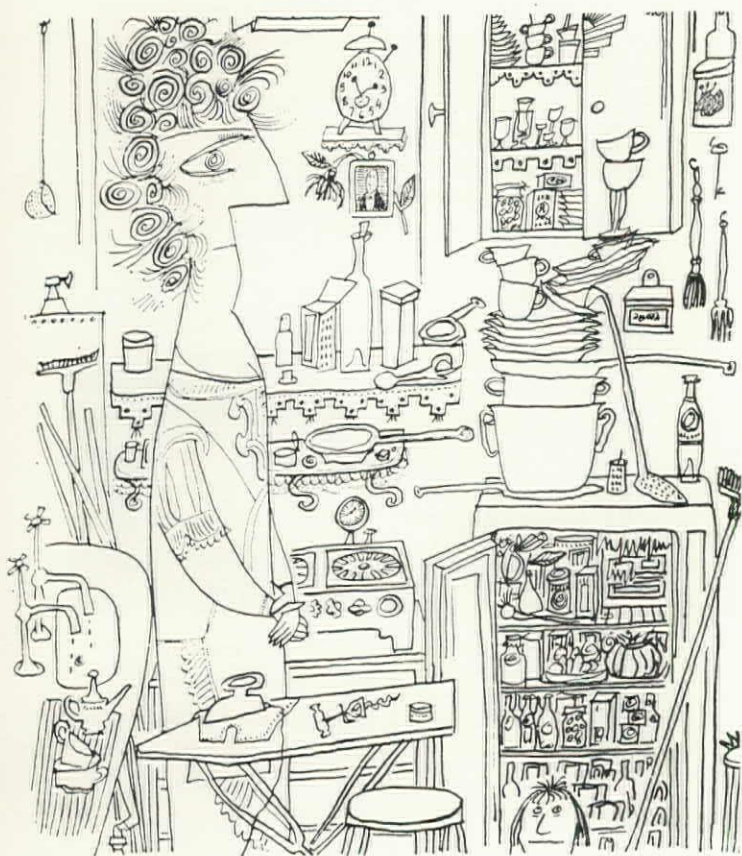
*Two of the classroom buildings designed by the author for the Christian Teachers College at Salatiga in 1957-58. There were other similar units, a circular library, dormitories, dining rooms, faculty homes, indoor and outdoor theater, student union, chapel and typical Javanese pavilions*



# Images of Home

BY RICHARD D. CRAMER, AIA

*Assistant Professor of Housing, University of California, Davis, California*

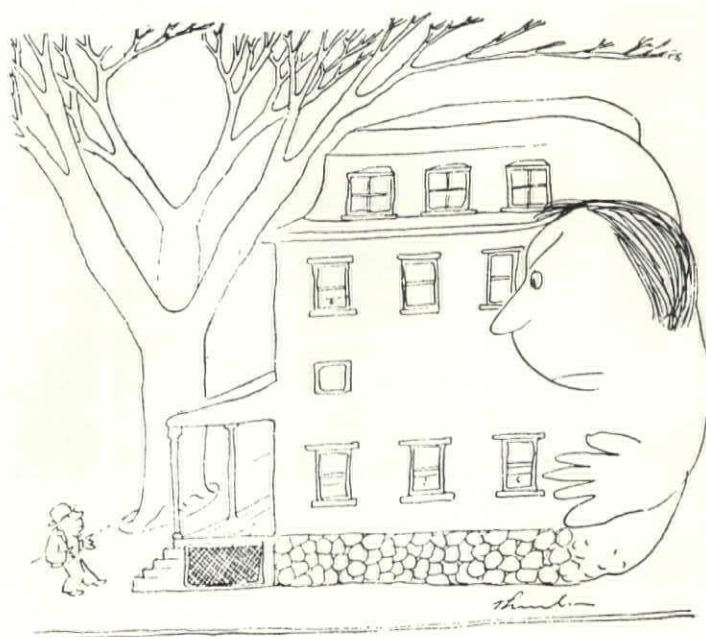


► The crucial word in the title of these remarks is "images." It refers to preconceptions about houses which people have in their individual and collective minds. These are of interest because they exert substantial influence on the kinds of houses that actually are built. One can speculate upon the nature of these images, their sources, and aspects of their function in shaping the housing that we have today.

Illustrations of the meaning of images of home can be found in the recorded comments of two of our most eminent social critics. The first is Saul Steinberg, who was educated as an architect but who has not to my knowledge practiced architecture. He has devoted his life to the conjuring up of a peculiarly penetrating kind of visual comment on the physical scene. Indeed, except for Lewis Mumford and Robert Woods Kennedy in his book "The House," Steinberg can probably be said to be the only commentator on the physical scene in our time and place. His drawing of woman in the kitchen has a good deal of impact; it illustrates more effectively than any verbal description can, what might be termed the *Hausfrau* image of home, of the house as a place of frustration which is created by the drudgery of

Mr Cramer will be remembered as the author of "Zoning, and What We Can Do to Improve It" in the January Journal, the article which brought forth the most comment in that entire issue.

The article brought so much comment from our readers and so many requests for copies that it was reprinted and has been widely distributed



detailed repetitive work and by the clutter of implements.

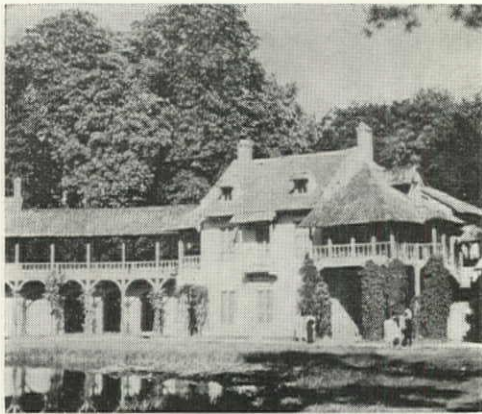
The second social critic is James Thurber who has not concerned himself specifically with the physical scene but specifically with the human scene; in his own words, with the war between the sexes. His drawing fuses house and woman and shows with devastating clarity the image held by MAN and WOMAN, more especially married man and married woman, toward the house. Again it is far more effective than any verbal paraphrase. Both of these drawings can be found in that eminent professional journal, *The New Yorker*, and are introduced to suggest the context in which the term "images" of home is used. The images that follow, however, are not aspects of houses as is the case with Steinberg and Thurber, but are images which encompass the whole house as a spatial and structural entity.

The first and by far the most prominent and ubiquitous of these images in America not only today but in all of its history is the house as a free-standing, geometric construction in space; a three-dimensional form made out of building materials which is surrounded by space, which can be viewed from all sides, and which accommodates but a single family. This is what we mean when we say "home." Seldom is the word "home" used in the connotation of apartment or of a segment of a row house. Even duplexes are viewed with some disdain. It is clear that the strongest, longest, most permanent of American images to-

ward home has been that of the free-standing individual house.

What is the source of this image? Since it was, if anything, stronger in the days of the colonies than it is now, precedent might be found in antecedents of the colonial population. Urban Europe has never been given over to large numbers of individual houses, but they can be found in rural Europe, as in rural areas in any part of the world. Two examples which stand, conveniently, side by side and which illustrate two distinctly different approaches to the problem of house design can be found in the gardens of Versailles where they were built by Louis XVI for Marie Antoinette. They were not in themselves influential in the new world but represent attitudes toward design which were and are used because they were well designed and because they are still standing and in good states of preservation today.

To the first (hamlet) we might apply the descriptive term, "vernacular." It is in other words, rustic, naturalistic, informal, made of local material, obviously a handmade product. It emphasizes textures and the natural qualities of materials—the kind of thing which is developed through generations if not centuries of human experience and which warms our hearts because it has a close visual connection with the earth and with nature. The second illustration (Petite Trianon) might be called, in contrast to vernacular, "contrived," because it is purely a geometric construction invented in the mind of man to create

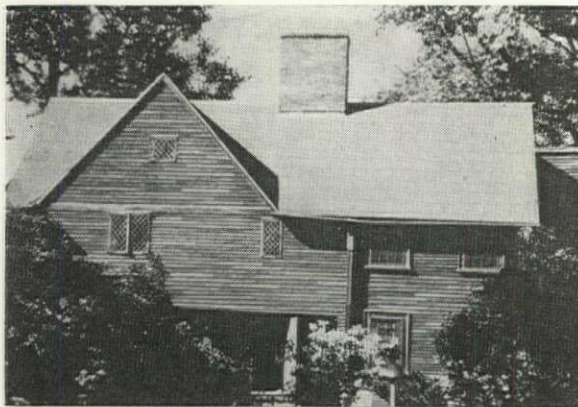


something which is peculiarly human because it is unnatural in the sense that it is not taken from or developed from nature. It is something which is designed to stand in contrast with the natural world as evidence of man's creative power. This point of view, of course, stems from the Renaissance which in turn was a revival of interest in things classic—Roman and Greek. Incidentally, the definition of contrived with a derogatory overtone is in no sense intended here.

These two examples from France illustrate the kinds of free-standing houses that the American colonists knew about in Europe before they came to the new world. For British illustrations which are perhaps more appropriate for the American colonies, there is the half-timber house, which fits the general type called vernacular; its character is much like that of the rustic house in France. Many of the same materials and forms appear in this kind of construction which we view as peculiarly British because it is a structural system which has developed as being effective in the British economy and climate. Another kind of British antecedent to American houses is the Georgian house which is the British adaptation of Renaissance ideas. Again, as the name implies, Georgian is associated with its English origin.

Early examples of the kinds of houses that the colonists built when they came to America show evidence of influence of European prototypes. Of the essentially two kinds of early American houses, the first chronologically is a variety of the colonial house for which there is no particular name—the term “early American” is used here for purposes of identification. Examples are numerous still in New England. Fortunately, a number are in good repair and are preserved by historical societies. Here are the same characteristics observed in the rustic French and British examples: Similar forms, the most prominent of which is the gable, the roof being a major visual element in the design. The gable, which developed for climatic reasons, has come down to us as a symbol of shelter. Many Americans still cannot really accept the flat roof solely for esthetic—or perhaps it is more accurate to say symbolic—reasons. There are, of course, detailed differences in the New World example. Here a structural system made entirely of wood developed because wood was plentiful—indeed, it had to be removed to clear the site—and because it proved successful in rigorous climates.

The second illustration is the house-type which is usually associated with the term “colonial



house." Here are similarities to the Renaissance example in France: Geometry, balance, symmetry, precision, and incidentally in some versions, a flat roof. This house stands within a stone's throw of the previous example and within a very short span of years in time. This example (which in turn developed into the Federal Style) along with its southerly counterpart in Williamsburg and elsewhere, is an American adaptation of Georgian ideas. As in France and in England, two different approaches or points of view—perhaps we could call them sub-images—were held by the American settlers.

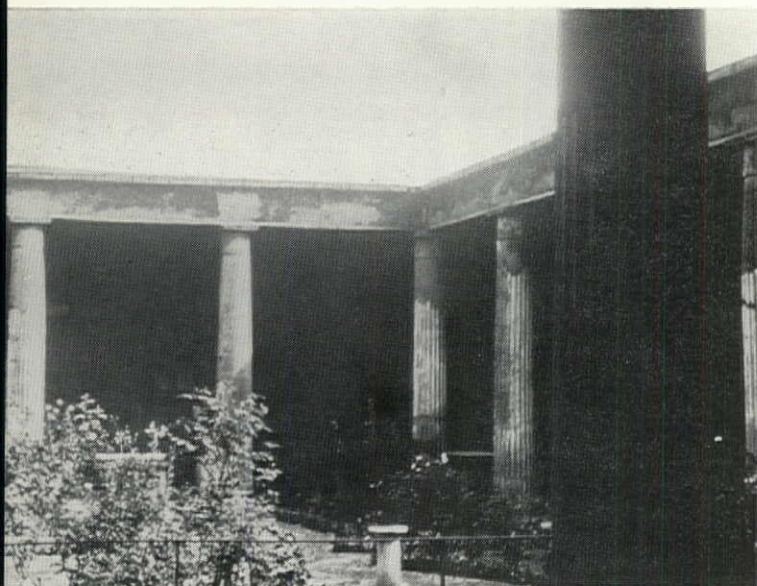
In summary then, it is clear that early American houses were influenced by their northern European prototypes. It can also be said that the image of home in early America was virtually unanimously that of the free-standing single family house surrounded by generous space.

### The Contemporary House

If we now make a sweeping generalization and leap three hundred years from then to now to look at two admired contemporary American examples, a parallel with the colonial situation becomes apparent. The first is a house near Los Angeles that was designed by Harwell Hamilton Harris. It is a contemporary counterpart to the vernacular or rustic or informal tradition in Europe and in early America. (This is not to deny the oriental influence which has been noted in Harris' work.) The symbol of the gable as protection, as shelter, is prominently used as a design element. Materials and finishes are natural, forms are assymetric and seem to grow out of the landscape in an organic way.

The second (Gropius' house in Massachusetts), according to the statement of its architect, is a descendant of the more formal colonial house in New England. It has the geometric precision, the sense of order, the black and white quality of its colonial ancestors. Indeed it is a deliberate attempt to apply the lessons of colonial architecture to contemporary design, to produce a building which belongs in a physical location as an element in time, mindful of its place in an architectural tradition. In passing, one can't help remarking that in the eastern part of America in recent years architectural thought has tended toward the more formal, more classic characteristics which we describe as aspects of the international style. There is little of the rustic, naturalistic kind of thing which was illustrated by the Los Angeles example and which stems from strong traditions in the Bay Area and in the





Northwest. Speculation about the cultural configurations which are responsible for such differences is a separate but challenging subject.

But regional variations do not invalidate the general point that the image of the free-standing house of our fathers is still very much with us, a powerful image in shaping our ideas as to what a house ought to be. It is being reinterpreted, suitably for economic and technical and social conditions today.

As a kind of culmination to this series of examples, let us consider the image of home in the broader context of the image of residential community. The supreme illustration comes, appropriately, from the man who has contributed most to the American tradition, Frank Lloyd Wright. His plan for Broadacre City, a hypothetical community devised in the mid-thirties, was an idealization of possible solutions to counter the problems of slums and suburbia. It stemmed from his philosophic theories of organicism, which he expressed directly in his buildings. He took the position that we need decentralization, new communities, communities which are designed in terms of the spiritual health of the people. He believed that direct contact with nature is a source of spiritual stimulation and refreshment of which man has a continuing need. He believed, therefore, strongly in the free-standing individual house with spaciousness inside and spaciousness around it. And so Wright was unquestionably the most eloquent spokesman for the tradition that we have been discussing.

Broadacre City was designed essentially around large plots of ground. It had individual houses with the provision of all of the amenities which

are necessary to a stimulating community: Schools, museums, concert halls, recreation facilities—all of the cultural elements which make the difference between a place to exist and a place to dwell. Wright had in his scheme some multi-story buildings, but these were secondary to his purpose and were developed to house not the family in its usual context but unmarried people, married people without children, old people whose children have moved away, and widows. The central essential residential aspect of the plan, and the basis for the whole plan, is the free-standing individual house in a spacious community context—an eloquent summary of the essentially American image of home—and more broadly of community.

To recapitulate the philosophic sources of this attitude toward houses, there is the existence of the European prototypes, there is also in Europe only a few generations before the settlement of the new world, the development of the Renaissance tradition which thought of buildings as free-standing pieces of sculpture in space to be viewed from the outside from all orientations. This ideal of architecture, and therefore ideal of home, is essentially an esthetic ideal, not a functional one. To these considerations must be added the obvious fact that the new world was full of space. Land was free for the settlement, and there was no economic question of availability or of cost. Finally, as America developed, perhaps as much as anything else, the ubiquitous image of the pioneer house, the frontier house in the clearing, has reinforced the impact of the image of the house surrounded by space on the American consciousness.

#### **A Different House-Type**

To turn back for a moment to the remarks about the Renaissance tradition with its sources in classic Rome and classic Greece, the real prototype of the notion of architecture as sculpture in space is, of course, the Greek temple—the unequalled image of the Greek temple which is still the most eloquent, the most moving, the most influential architectural image that Western man has produced. But as it is often said (in a geographic context) that all roads lead to Rome, so in an ideological context, all roads, indeed, lead backward one step to Athens. For while Athens produced the great notion of the building as sculpture in space, it also produced an entirely opposing attitude toward urban housing. The temple was surrounded by space, but the house was a building which itself surrounded space. Here, by way of contrast, we have a second, alternative image toward home which has never been popular or

prevalent in the United States, but of which there are some examples. There is, however, some indication that its popularity may be increasing in contemporary America.

Consider a Greek house. The existing illustrations are Roman ones, thanks to Vesuvius, but we know from archaeological evidence that they are much like Greek prototypes. Its essential aspect is an element of open space in the center surrounded by enclosed space. The whole focus of the house is inward toward privacy, the provision of a separate world. A glance at the exterior is sufficient evidence of the fact that the house turns its back on the outside world. This is an image which might well have been an alternative to its counterpart which developed in northern Europe and in America. Perhaps we can perceive here the powerful influence of climate, since this kind of house which provides for, insists on, a clear-cut relationship to the out-of-doors, developed in Mediterranean climates, flourished in Mediterranean climates, and in the new world has been confined to Latin American areas where the weather is relatively warm.

We do have a few historic examples in the United States, notably in New Orleans, and there are some contemporary houses which have been designed in this way. But there is a powerful deterrent to development of this kind of house in the American urban scene. In the rural scene perhaps it doesn't make very much sense because space is no problem; neither is privacy. In the

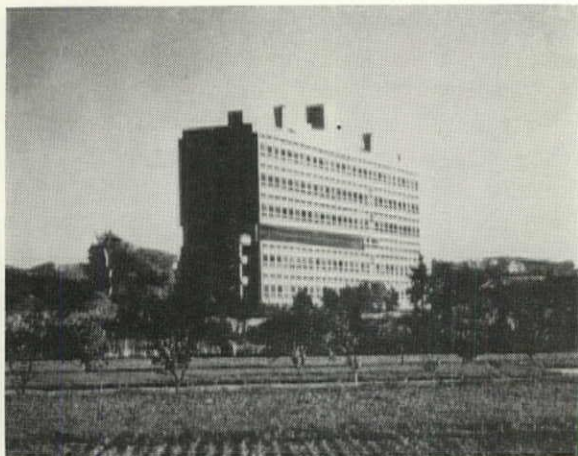
urban scene, the zoning legislation in existence in most cities and most suburbs, which after all are the locus of new single-family residential developments, forbids the development of residential areas with this kind of character. By law we require setbacks of the building from the front, from the rear, and from the side property lines. We have legislated the American image of home, have used the political power of the community to perpetuate it and to forbid the development of another.

### The Row House

The third image is a kind of housing which is prevalent in urban Europe and has been for centuries. It developed in the United States in the nineteenth century, principally in the large Eastern and Midwestern cities. It is the row house. Historically, it reached the peak of its elegance in England where it became urbane and sophisticated and indeed a particularly human kind of dwelling. It contributes enormously to the character of British cities. In the United States it was imposed on the gridiron plan which became universal in the nineteenth century, and did develop in scattered parts of some cities some of the urbanity which is apparent in the better British examples. Nonetheless, the acre by acre or square mile by square mile of unimaginative, unrelieved, unvaried row housing which yesterday became the hallmark of the industrial city, has in our day become identified with civic deterioration. We ex-



perience a reaction against the whole concept of row housing because of this association. There are some well-conceived, well-designed examples in what we have recently termed garden apartments which are essentially row houses arrayed through informally landscaped spaces rather than along streets. But this is the form which much of public housing has taken in this country, and because of the stigma attached to public housing, a stigma which is partly political, partly social, partly economic, the antagonism toward row housing as a type has been aggravated. First, the



memory of the slum; second, the association with "disreputable" public housing. So, even though we do have examples of well-designed public housing illustrating an effective use of the row house, still the association distorts the judgment of most observers and so it can hardly be expected that the row house, despite the fact that there are millions of Americans housed therein, can constitute an image of home in the American scene. By and large it is viewed as a somewhat undesirable economic necessity for the lower classes.

### The Multi-story House

A fourth image, another kind of multiple housing, is the multi-story European urban house which had its origin in the towns of the Middle Ages. Today we have adopted the term high rise apartment to describe counterparts to this sort of building. The earliest and most interesting contemporary example of the development of urban apartments took place in Sweden. The example of Markelius' collective house which contributes powerfully to the image of the multi-story apartment dwelling has particularly interesting economic and social facets. Developed cooperatively

under the Swedish system of cooperatives, it also served as an experiment designed to halt the declining birthrate that Sweden experienced in the mid-thirties. It is an apartment building typically Swedish because of the balconies which, incidentally, are useful, lived in, and overlook a lake which is not far away. In addition to apartment units, it also includes on the ground floor a restaurant with provisions for delivery of prepared food to individual apartments and houses a nursery school operated by professionally trained people and available for occasional or for regular care of small children. The tendency in Sweden in the mid-thirties for both husbands and wives to work for economic reasons resulted in the postponement of families and a generally declining birth rate. Here is architecture for the first time, I think, consciously setting forth to solve a particular economic and social problem.

Interestingly enough, the collective house is a contemporary of Frank Lloyd Wright's Broadacre City. The two could hardly be farther apart in philosophical concept. Wright's project, which emphasizes man's individuality, his independence, his self-reliance, his contact with the earth, his ownership of ground, insists on these things as a necessity to the development and continuation of an adequate individualistic, typically American democratic way of life.

In Sweden there is the opposite view. People have no permanent home; they live temporarily in a building which they share with many other people. They do not wish to be self-sufficient, but need special services in order to make it possible for them to live in the emphatically social manner to which they have become accustomed and on which, presumably, they insist. Here is architecture as a reflection of what people are, while Broadacre City envisions architecture as a powerful statement of what people ought to be, indeed, according to Wright, what people must be if our way of life is to survive.

Certainly the most exciting recent example of a building in the tall apartment tradition that falls within the definition of our fourth image, is Le Corbusier's Marseilles Block which was developed in answer to France's rebuilding problem, in answer to the really desperate need for housing in bombed-out, post-war France. It is by design, by pronounced intent, a prototype. Le Corbusier here was searching for a solution for all of France, indeed for all of the twentieth century, crowded world. The project was preceded by five arduous years of study, of experiment, of penetrating thought, in a typically French, thorough, idealistic,



intellectual in the specific sense of word, solution to man's whole dwelling problem. It is a community in one building. In addition to apartments, it has an array of recreational facilities and a selection of shops. In short, it is intended to provide for the daily necessities of a community with the exception of schools, and with the intentional exception of places to work. It is conceived as specifically residential and is designed to function in surroundings of natural beauty. The prototype is on the French coast, near Marseilles, overlooks the Mediterranean, surrounded by greenery, by trees, by park-like development. This, says Le Corbusier, is the only way in the crowded world in which man can come in contact with nature. It is a specific outcry against suburban sprawl, against the continual spreading out across the countryside, of sub-standard, cramped, dismal, unimaginative, repetitive houses.

The building contains apartments of different sizes, but by and large they are family apartments with three bedrooms, compartmented baths, living-dining areas, and separate kitchens, although the kitchens are relatively open. Nearly all the apartments are two stories in height so that the living room has a balcony within it and also opens out to an exterior balcony. The whole effect is spacious and light and airy despite the fact that the apartments are relatively long and narrow slices of space contained within the large building.

The Marseilles Block was designed before the current population explosion had focused attention on the problem of the utilization of space in the landscape which we are just now beginning to face in a really serious way. And so it happens, partly by circumstance, that Le Corbusier's ideas seem particularly pregnant to us today. Even America is viewing the rapid development of examples of crowding by virtue of concentrations of people in metropolitan areas. Two notable population trends have been amply demonstrated: The very rapid increase in total population, and its concentration in certain geographic areas, specifically in certain metropolitan areas.

To summarize, the first four images of home have been described (a fifth will come later): The free-standing house, the courtyard house, the row house, and the multi-story apartment. American examples of the first three and the application of these images in our cities today have been discussed. Let us now look at number four, the multi-story apartment as it is manifest here. We have only to think of its misuses in New York, Chicago and others of our larger cities to realize how completely the vision of Le Corbusier has

been perverted. All of the notions of the need for light and space, of sunshine and greenery, which interestingly enough are at the root of both Le Corbusier's and Wright's positions (although there the resemblance ceases)—all of these qualities are gone. The only thing that is left is the fact of the multi-story building. Most apartments themselves are not as well designed from the standpoint of liveability, and the whole result is the production of an environment which, I think, it is fair to say is something less than human.

### The Tract

Let us in contrast look at the other kind of large scale housing development which has become the hallmark of the American metropolitan area: The tract. Here stands just as complete a perversion of Wright's vision at Broadacre City. These developments take place in the name of economy; they have happened over and over again: The bulldozed hilltop, the slaughter of trees (one builder reported that it was necessary to cut down one thousand full-grown oak trees), the desperate attempts at individuality by painting the shutters different colors (shutters which are inoperable in the first place), the inordinate amount of space devoted to the automobile and to the possibilities for automotive travel.

But if we look at the economic question, even a cursory glance at the New York apartments and at the San Francisco tract viewed in comparison with eighteenth and nineteenth century houses in





New England and in the towns of the Middle West with elm-lined streets and broad vistas suggests that in terms of housing alone, our standard of living in America has declined.

### The Planned Community

If our own use of multi-story apartment buildings and of individual houses in suburban tracts is inadequate, where can we look for an admirable solution? One answer can be found in Sweden, in the recently completed suburb of Stockholm known as Wallingby, admired by architects and planners in many places. It is designed specifically for commuters. It does not have industry where its residents may find employment. It is conceived as permanently residential. High speed non-stop trains transfer people to and from Stockholm in a handful of minutes. They are deposited centrally in Wallingby at a distance from their houses or apartments which is conveniently short.

The plan reveals a generous degree of spaciousness and abundant sunlight, air and view. A large park-like, green area is the focus. The nearby lake is not only unspoiled but actually constitutes the genesis of the plan. There are all the necessary shopping facilities in Wallingby and

there are several different housing types—apartments in the Swedish tradition, row houses and single family houses.

This is in conception a balanced community: A community which can accommodate people of all ages; people of a variety of economic circumstance: Young people, old people, people with children and people without children. The conception of the balanced community has been admired because it is felt intuitively, if it cannot be objectively demonstrated, that there ought to be communities in which young people can be married and live for a while together without children, can have children, raise families, the children can leave home, come back occasionally for visits, and eventually, perhaps, bring grandchildren with them for visits. Eventually one of the couple becomes widowed and lives alone for the rest of his life. The Swedish view and the view to which many American planners subscribe is that it is desirable to have balanced communities where there are suitable accommodations for inhabitants throughout the life cycle. The aim is to avoid distant moves and the consequent disruption of personal and social relationships.

There are no examples in America equal to Wallingby. There are fortunately a few cases, in the planning stages, of large corporations, operating under federal redevelopment legislation in an attempt to demolish and rebuild old parts of existing cities. So far the best hope for an American solution seems to lie in this kind of development by large corporations which can handle the entire job, and therefore exercise design control over the community development. Here we must put our faith in corporative enlightenment and in the faint prospect that the consumer will begin to demand quality in his physical world. Short of this we have not been able to achieve within the framework of the American modus operandi a method of exercising control for the benefit of all in the design, in the development of a new community. Perhaps we are moving in this direction. In a Supreme Court decision in 1954 (*Berman vs. Parker*, 348, U. S. 26) Justice Douglas stated in the majority opinion that the community has the right to control its appearance and prevent disfigurement. It is a relatively new concept in our midst, has yet to be tried conclusively in the courts, and has yet to be implemented successfully in practice.

John Kouwenhoven and his remarks about the accidental esthetics of the New York skyline notwithstanding, it is a serious philosophic question whether we should continue to leave the develop-

ment of the physical environment to the chance combination of an almost unlimited number of unrelated individual decisions if the inevitable result is the consignment of much of our lives to stultification in visual slums. Visions of garden cities present enticing alternatives.

### Today's Mobility

But perhaps the balanced community is an idle dream, at least in America, for it is necessary to remark upon another trend which has exercised a powerful influence in the shaping of the American way. That trend is mobility. Since the Mayflower, Americans have been in some sense mobile, but the building of New England suggests that the early settlers were reluctantly mobile. When they developed the settlements which became the New England towns, they developed them in ways which are the very essence of stability. On the other hand, the frontier provided an impetus for movement for large numbers of the American people. We developed, apparently, the attitude that a neighbor within view constitutes overcrowding. We can't afford the luxury of this view any longer but there may still be a few among us who hold it.

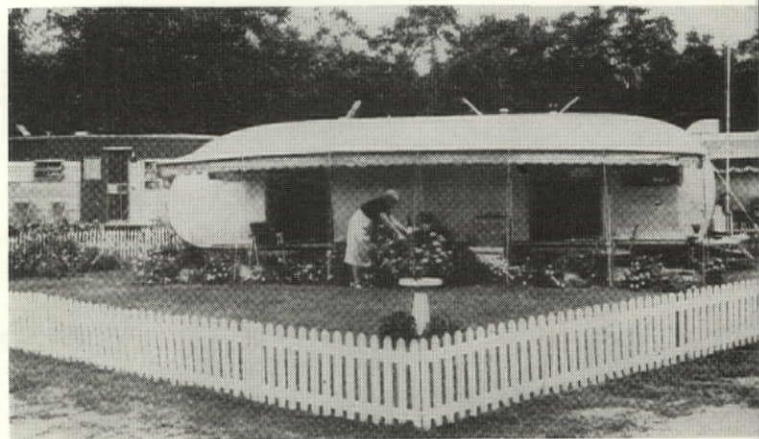
Of course the development of the automobile contributed enormously to the mobility of the American people. It produced a mobility consciousness in overcoming reluctance to changes in place of abode. It presented opportunities to see other places and to think of other possibilities for a place to live. We know full well how climatic advantages in Florida and California have been magnetic in their attraction of the mobile population.

Another contributing factor has been the advent of the large corporation. The segment of the working population employed thereby is subject to frequent transfer from one corporation site to another. The principal of an Oakland elementary school indicated that those of us who were visiting two years ago that his school is in a part of the city which has large numbers of apartment houses. In recent years the average pupil turnover has been fifty per cent in any one year. To put it in another way, the average length of time a pupil stays in the school is two years. This is as much mobility as one could ask for—certainly a good deal more than a lot of people like to contemplate, but it is a characteristic of our society and probably will continue. And so, recent years have witnessed increases proportionately in the construction of multiple housing as opposed to individual houses, as one way of

compensating for mobility, or of providing for mobility.

But American ingenuity is not easily satisfied. To avoid the prospect of changing houses when one moves, we have witnessed the invention of a house which moves along with the family—the trailer. But note that it is never labelled trailer, but rather mobile home. This is the fifth image, and to me a disheartening one. We now have not only trailers, but trailer camps, and trailer camps have tended to become in the last few years subdivisions rather than camps. The average length of time that a trailer has remained in one location has gradually lengthened until now it is about two years—no more turnover than apartments in Oakland. So there is a serious question about the extent of mobility or the frequency of mobility. Actually, the trailer is being used as a house. But it is still potentially, if not actually, movable.

There are both social and economic reasons for trailers. The social reason is the fact of mobility, and the economic reason is that here is a way of circumventing a great deal of building legislation. It is now possible to have a minimum house at less cost than one would encounter if one built the same quantity and kind of space in a permanent location. Currently ten per cent of all



new dwelling units constructed in the United States are in fact trailers.

It may be that we as human beings, or at least as Americans, have given up any sense of attachment to some particular place in our native land. It may be that the concept of "home town" is a nostalgic remnant which is unrealistic. Perhaps rootedness is a thing of the past, and it is probably inevitable, because it seems now that even before the coming of the twenty-first century some among us will feel called upon to give up any sense of belonging to Mother Earth herself. ◀



## CLEVELAND'S THIRD **Downtown Reawakening**

*A valiant effort bogs down for want of a client and a program*

*Above: Downtown Cleveland today. The old Public Square is in the center, from which Euclid Avenue runs east (up), left center. Below: Downtown Cleveland tomorrow? A view of the model from approximately the same point as the aerial view.*



**BY ROBERT P. MADISON, AIA**

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► The year 1959 was a year of great expectancy for the citizens of Greater Cleveland. This was the year in which the city, through its downtown re-awakening, would again compete successfully with its neighbors, such as Detroit, Chicago and Pittsburgh, in having a downtown of great vitality and importance. However as the year came to an end, much of the enthusiasm had slowly ebbed away, and we asked ourselves: Why?

Two reasons seemed to be foremost:

- 1 The client body was never carefully and thoughtfully delineated.
- 2 The design program was not developed with the client.

In May of last year, the Planning Director of the City of Cleveland presented his report to the City Planning Commission, the Mayor and the citizens of Cleveland. The report was made in the form of drawings, graphs, maps, a written report and a large scale model showing all of the downtown study area.

Four salient areas of concern to the success of the report were:

- 1 The downtown subway.
- 2 Downtown convention facilities and hotels.
- 3 The total re-evaluation and expansion of the core area.
- 4 The introduction of residential units into the downtown area.

In November and December of 1959 the following action was taken:

- 1 The City Planning Commission adopted the report.
- 2 The County Commissioners defeated the subway, thereby rejecting one of the important areas for the success of the study.
- 3 The voters of Cleveland voted down the hotel on the Mall.
- 4 The downtown interests have debated the issue of residential units in the core area to such an extent that there is grave doubt as to its success.

As of January 1, 1960, the report is available to be read, the model is exciting to view, public hearings have been completed, and as far as the people

of Cleveland are concerned, the status of the third reawakening is rather dubious.

This was not true of the earlier awakenings, and a brief examination of the first two may give us some insight as to why we have reached the present impasse.

The year 1901 is probably the key date for the first awakening, when Tom Johnson was elected mayor of Cleveland. Early in his administration he established an official board known as the Group Plan Commission, composed of Daniel H. Burnham, Chicago site planner, John M. Carrère, architect of the Buffalo Pan-American Exposition of 1901, and others. This Commission, specifically assigned to study a group of public buildings, reported its plan to the mayor two years later, and the plan was adopted by City Government. This bold and imaginative plan was to clear forty acres of blighted area in order to create a beautiful eighteen-acre park reaching from the Public Square to the bluff overlooking the lake, and to surround the park, called the Mall, with new and imposing public buildings. By 1931 the Mall was lined with the Federal Building, County Court House, City Hall, Public Auditorium, Public Library and the Board of Education Building with the Cleveland Stadium on filled land below the bluff.

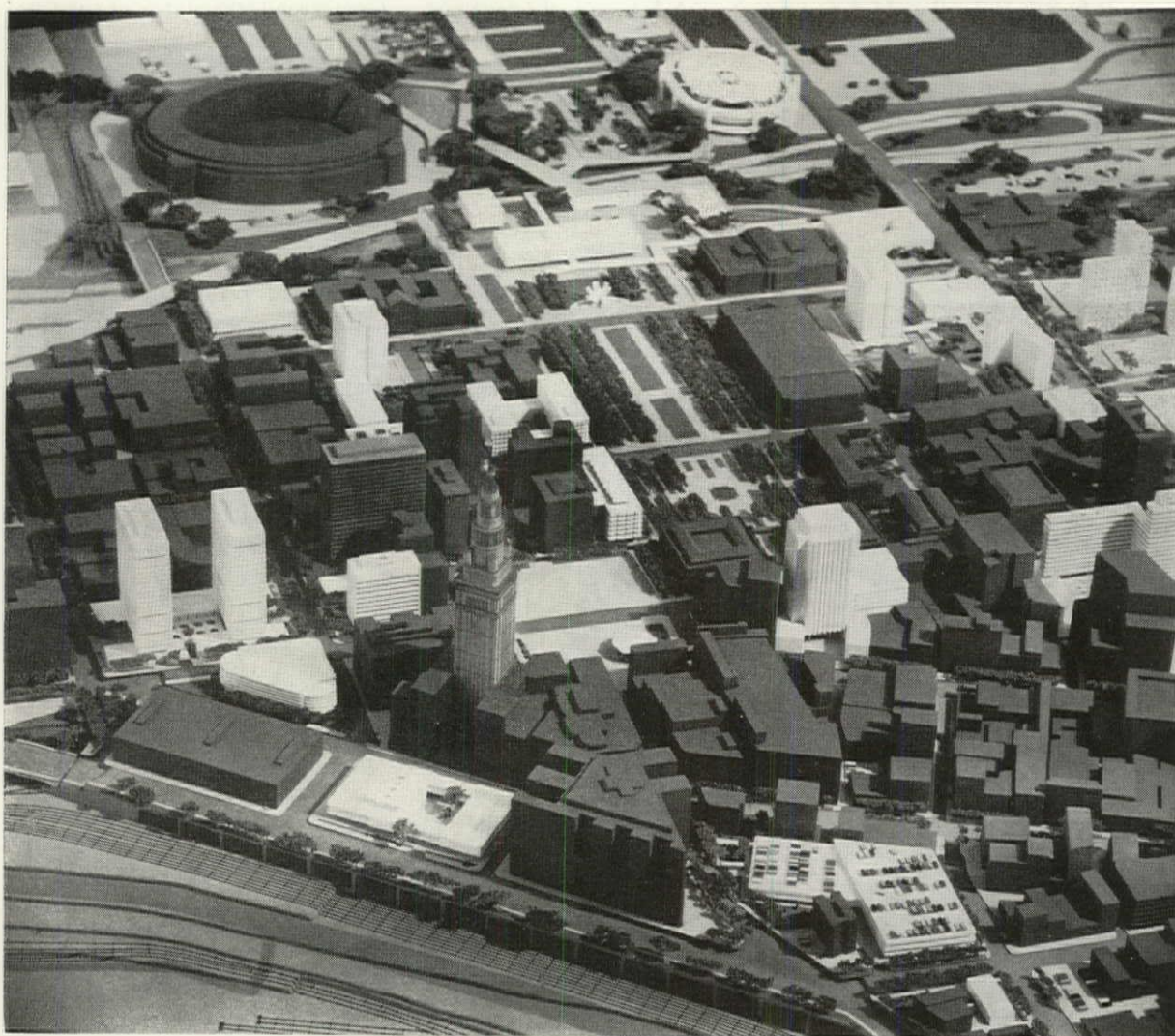
The first awakening succeeded in creating the concept of the Mall, although Union Station at the north end was not erected. This omission became a central argument in the third reawakening.

During this period of civic center development, upper Euclid Avenue from East 9th Street to East 18th Street was firmly established through the construction of Halle Brothers Department Store, the Union Commerce Building at East 9th Street, and the Hanna Building at East 14th Street. Immediately there developed a rivalry between interests at Public Square and upper Euclid Avenue.

There were three important reasons for the success of this initial awakening of downtown Cleveland:

- 1 Able, intelligent government leadership spearheaded the movement.
- 2 The government leadership followed the recommendation presented by the Plan Commission, and there was mutual respect and confidence in their respective roles.
- 3 The awakening was largely civic in its scope and was not involved with suburban areas or in competition with business interests.

The first awakening evolved out of a civic desire to erect outstanding public facilities for the City of Cleveland. Plans to achieve this were prepared, and they were followed.



*Model showing the awkward relationship of the Terminal Tower, the old Public Square and the Burnham Mall*

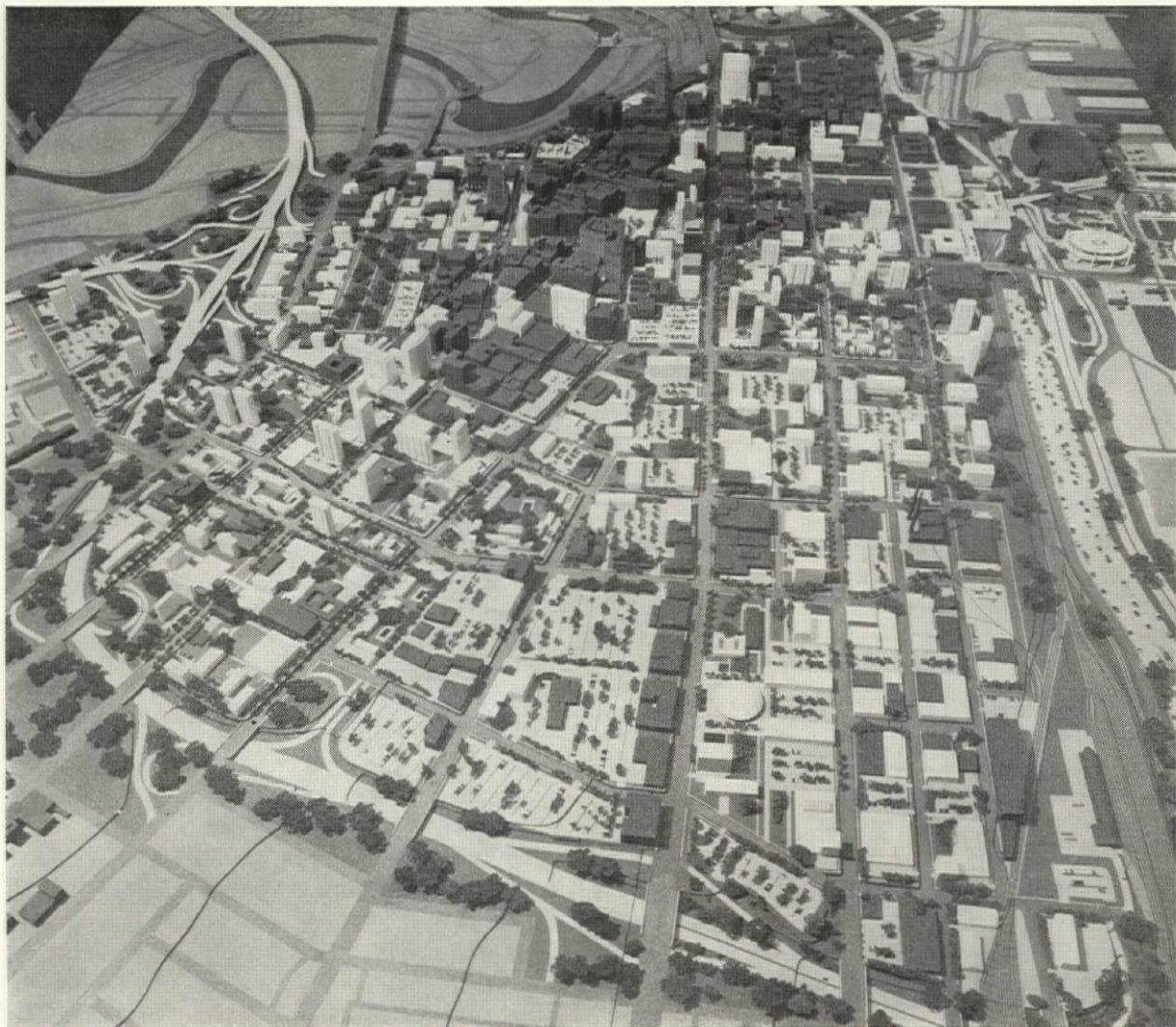
### Second Reawakening

The second reawakening of downtown Cleveland was accomplished through two ambitious and energetic brothers, O. P. and M. J. Van Sweringen. (What was accomplished here may be reflected in the difficulties of the third reawakening: Suburbia.) The brothers acquired farm land in a nearby township; and in 1916 they opened for sale the very large allotment of Shaker Heights, which was the first totally pre-planned upper income community in the country. The successful relationship of this community to the downtown area of Cleveland depended heavily on rapid transportation to and from the suburb. Therefore, the Van Sweringens planned a rapid transit line, bought control of the Nickel Plate Railroad in order to make use of its right of way, and cleared three and one-half acres in the heart of the city for Cleveland's largest private downtown development. By

1930 they had erected the Union Terminal for their rapid transit and other railroads at the southwest corner of Public Square, the main post office behind it, a 52-story office building above it (the tallest in the world outside of New York City) and three 18-story office buildings. The Public Square developed a renewed importance, and the financial power struggle between the Square and upper Euclid Avenue was greatly intensified.

The salient features of this reawakening were:

- 1 Private enterprise led the development.
- 2 The development of a pre-planned suburb as a place to live with the city as a place to work began to attract the residential population from Cleveland to the ideal suburb.
- 3 Inclusion of Highbee's Department Store in the Terminal complex brought into more uniform balance the economic power of two sections of the business district.



*Model, looking west, with the lake shore development on the right*

The second reawakening evolved out of the desire of private enterprise to develop a suburban residential community and to link it to the city. Plans to achieve it were prepared, and they were successfully followed.

However, the success of this reawakening brought about the creation of other suburban areas. This spread of suburbia (and its requirements of the automobile and conveniently-located stores), the economic strength of these suburbs and the resultant decay of the central city are precisely what created the problems which brought about the need for the third reawakening.

### **The Third Reawakening**

The third reawakening started in 1957 when the general public showed great concern about the doubtful economic health of our downtown area, evidenced by the lack of major investment in build-

ing since 1930, and in the relative decline in retail sales compared with the suburbs.

Also in 1957, downtown Cleveland was brought into sharp focus by two major proposals that aroused wide public interest and debate. The first was the proposed downtown subway for rapid transit use included in the General Plan of 1949. The voters of Cuyahoga County, in November, 1953, had overwhelmingly approved a bond issue of \$35,000,000 to construct the proposed subway. In April, 1955, the Ohio Supreme Court approved the bond issue; but in March, 1957, the County Engineer submitted a negative report on the subway to the Board of County Commissioners, and the Commissioners *took no action on the project*. A furious public argument took place, and central to the debate was the real role of downtown Cleveland.

The second proposal was also doomed.

The second major proposal was the Mall Center. The fact here is that there were not one, but two proposals for such an exhibition hall center, each different in scope and location. Again public argument ensued over the Mall Center. A bond issue of \$15,000,000 for the city's share in a Mall Center proposal was placed on the November, 1957, ballots and the voters of the City of Cleveland defeated it.

The action—or lack of it—by the County Commissioners on the subway issue and the negative action by voters on the Mall Center brought into clear focus the fact that a comprehensive plan of the total downtown area, relating the Mall Center, the subway, and other elements, was nonexistent.

### The Downtown Study

A downtown study began in 1957 and was completed in May, 1959. At the very outset a very serious error was made because two important factors were not given sufficient consideration. *First, for whom was the report and plan being prepared? Second, who was participating in writing the program?*

The third downtown reawakening differed from the first two in that it was supposed to be a full, active alliance of public planning with private enterprise (represented by the Cleveland Development Foundation). Eighty-six Cleveland business and industrial corporations had joined together as early as 1954 to form this Foundation and set up a revolving fund of \$2,000,000 as seed money for redevelopment. This Foundation was supposed to represent all of the interests of Cleveland, but in fact, it could not.

The body for whom the report was being prepared is far more complex than that represented by the Development Foundation—or the administration of the City of Cleveland.

Who is the client?

It includes the smallest entity, the Cleveland voter who defeated the Mall Center and the Mall hotel. The Cleveland voter, like all others, has a great interest and a great stake in downtown Cleveland. However, the planning emphasized what was going to be done *for* the voter, not *with* him. Education was attempted, but not at a level that made the downtown plan much more than a map with an inner belt around it.

Included in the client body are the voters in the suburban communities, unable to cast one single vote in connection with issues involving the City of Cleveland. However, the city as a cultural, industrial and economic giant is the heart of the metropolitan area and important to them. One sig-

nificant step in the planning was the introduction of high-rise residential units in the core area for relocation of those who wished to leave the suburbs. (The reverse of the second reawakening.)

The third element in this composite client is the County of Cuyahoga, represented by the County Commissioners. They defeated the subway issue and therefore rejected one of the big features of the Downtown Planning Study.

To complicate even further the question of the client, the Mayor's office, the City Council leadership, the Cleveland Planning Commission and the Cleveland Development Foundation presented proposals at varying times which showed little or no respect for the findings of the Planning Director.

The Mayor and the Development Foundation proposed their site and scope for the Mall Center, which differed from that of the Council leadership. Later the hotel on the Mall was another issue supported by the Mayor and the Development Foundation, and was approved by the Planning Commission even before the Downtown Plan was released by the Planning Director. (The Director's report did not include a hotel on the Mall.)

Press coverage of these differences was enormous; the electorate became alarmed and defeated both issues.

Typical of the reaction were the remarks made to the Cleveland Convention and Visitors' Bureau by the Mayor: "We're tired of coming out with plans and having them knocked down. If you want convention facilities you can have them, but let's get serious about it. You figure out what kind of facilities you want and we'll cooperate."

This reaction is understandable. The complexity of these inter-related interests and their resultant conflicts make it extremely difficult to evolve a plan that would intelligently present an acceptable solution to downtown Cleveland's problems. It requires collaborative and joint action of the administration as well as the electorate plus business and industry, acting together as a single client with a single objective—the reawakening of downtown Cleveland.

The problems confronting the planning officials may be enumerated as follows:

- 1 A galaxy of conflicting overlapping authorities.
- 2 The dominance of economic mentality.
- 3 The elected officials making decisions based on the strongest pressure interests rather than on technical or professional judgment.
- 4 The basic lack of cultural framework and education for urban design by the voters.
- 5 The lack of traditional and professional in-





*Detail of the area northeast of Ninth and Euclid—Ninth Street at the right*

volvement in urban design. (The AIA and the AIP did not come forward to take a strong stand on these issues as professional groups. The stature of the AIA certainly was not enhanced by its *wait-and-see* attitude when professional involvement was precisely what the city needed.)

6 The lack of mechanics for coordinating and relating the total client body from the single voter of Cleveland to the total population of Cuyahoga County—into a single direct client.

Jose Luis Sert, speaking to the Urban Design Conference at Harvard University in 1956, stated the point very crisply: "When we ask how our cities should be designed, I think it important to bear in mind that we are not designing for the Mayor or for the Planning Commission or for the traffic expert, but only for the people and with the people. Without them we shall never get ahead. If the people one day want good cities, and if they start seeing cities that are better than others, they will make their demands known to the Mayor."

We can build complex and beautiful communities only to the extent that the desire to do so becomes a compelling motive for the whole community, for our citizens, our developers and our public officials acting as a complex but single client.

#### **Why the Plan Failed**

*Who were the participants in writing the program?*

The Planning Director states in his report to the 1958 National Planning Conference of the American Society of Planning Officials: "We have retained a panel of planning consultants, nationally known in their respective fields, to assist us in this program. Thus, we believe that the program will be developed under competent professional guidance, *undisturbed by the influence of various political or other vested interests*. The counsel of this consultant panel should carry a great deal of weight when the plan is ultimately presented to

the people of Cleveland about six to eight months from now."

The panel of consultants were John T. Howard, head of the Department of City Planning at M.I.T. and member of the consulting firm of Adams, Howard, Greeley of Cambridge, Mass., Cleveland City Planning Director during the development of the General Plan adopted in 1949; Walter S. Blucher, former Executive Director of ASPO and now a planning consultant from Chicago; Edmund N. Bacon, Executive Director of the Philadelphia Planning Commission; Simpson & Curtis, transportation engineers from Philadelphia; and the Real Estate Research Corporation of Chicago. The credentials of these consultants are accepted without debate. "Other specialists, such as local architects,<sup>1</sup> site planners and engineers were brought in as the need arose." Conspicuously absent were persons who would be responsible for the effectuation of this plan, and their involvement from the very outset.

No doubt an excellent inventory has been conducted of the existing facilities, and sound objective proposals have been made for the future of downtown Cleveland; however, this is not enough.

It is true that a program has to be written, after a careful, analytical study of the conditions of the community. This program has to be written, not only by the people who have done the analysis, but *with the help* of those who are going to do the synthesis. Like other elements of municipal policy, the design plan and program should be developed in such a way as to enlist the participation of interested citizens and experts at each step in the process. There should be opportunities for public review and criticism. Thus will the *special outlook*, feelings and preferences of the community be *impressed* on the plan and program. Thus, also, will the taste and sensitivity of the community be raised in quality by the very process of helping to create a purposeful plan.

Unfortunately, the programing and design activity were carried out in great secrecy. Not even the head of City Government was aware of what was taking place (so he stated) until the dramatic unveiling of a year's work took place at an impressive ceremony in the Public Auditorium. Members of the lay public attending the ceremony were counting story heights and looking at street changes on the scale-model. This, to them, was the final Plan, and there was an air of acceptance or rejection in their reactions because they were not participants in the programing process, nor were they educated through all of the media of communication as to what the plan really meant.

One other most discouraging event was the postponement of public hearings on the Planning Director's Report for a period of six months until after the municipal election (there may have been a connection). However, the great momentum was lost, enthusiasm had slackened. There is great fear that the third awakening has returned to its sleep of several years ago.

The first awakening was characterized first by a compelling need to build civic buildings, served by a single client, the City of Cleveland, with a single objective. The client and the program were quite simple.

The second awakening was characterized by the development of a pre-planned community with rapid transportation as a link to the central City. This was private enterprise in total with a single objective.

However, in the third awakening the problem was far more complex than either of the first two. The question of the client body and the writing of the program is always present in such undertakings as city planning and downtown proposals.

Scale is the key and simplification the overwhelming requirement. From the past we know that the community was small in scale, people could comprehend its design and relate themselves to it. A respect for community, a community sense of responsibility and identification of family with place all combined to provide a pervading unity of purpose and feeling which was manifested in whatever was built in the community.

These values of scale and simplification never change, and the responsibility of those who plan and design our cities should be to reduce the client and the program to the human scale by using effectively all of the media of communication available.

On the credit side, planning of large cities under the democratic system does not occur overnight or in a period of two years. The pressures being brought, with competition—*not from suburbia*—but from other great cities of our country, will compel Cleveland to reawaken and to become the great city it is capable of becoming. The St. Lawrence Seaway, the Lakefront Airport, the Freeway system, and the new decade will all contribute to a greater Cleveland.

The Mayor of the City, the City Council, the City Planning Commission, the Cleveland Development Foundation, the electorate of the city, the suburbs and the County will eventually share in the glory of what will be Cleveland, 1975 — because, despite some errors in the development of the Downtown Plan, *it must proceed.* ◀

<sup>1</sup> Architects who composed the design team included J. Byers Hays, FAIA, Wallace G. Teare, Robert C. Gaede, and the firm of Gould, Chaty & Droppers.

# Materials for Construction

**BY FRANK FRYBERGH, PH.D**

*participating Associate of Skidmore, Owings & Merrill, New York City. This address was delivered to the 1960 ACSA-AIA Summer Seminar on the Teaching of Architecture at Sagamore Lake, New York, on June 15th*

► Concern is frequently expressed about the "materials explosion." The ever-increasing influx of new technological materials for the building industry, new treatments given to old materials, and the increasing use of shop-built assemblies are all affecting architecture and are changing the appearance of our buildings.

In order to fulfill our calling we all have to take a more responsible and more active part in this new era of building construction and assist each other to find the proper balance between the adequate use of these new materials and methods and their visual form.

The architect's ability to find improved solutions to constantly changing problems requires the development of the habit of experiment and invention. A meaningful sense of form can grow only out of an intense awareness of the latent opportunities discoverable in today's technical processes and materials.

The architect is called upon to solve new problems and to grasp the significance of new methods

of fabrication which can save materials and reduce labor costs.

Gone are the days when the architect was forced to use building materials without being able to exert his influence on their design and quality. Now the architect not only invents new uses for familiar products but also influences the design and quality of new materials.

Leading manufacturers would not embark on the production of a new material without canvassing the opinion of architects as to its merits.

Manufacturers, and I am glad to say also contractors, understand more and more what we have preached for a long time: That in order to make architecture successful, each group which takes a creative or productive part in it must make its fullest contribution.

The architect needs, in addition to his own en-

thusiasm and devotion to his work, the devoted support of all participants.

Just as an illustration I might mention the influence the architect has exerted on the use of sealants. As late as ten years ago polysulfide base or Thiokol sealants were used for the sealing of jet fuel tanks only. Architects have seen the great potential of this material and have advocated and pioneered its use for building construction. Now it is difficult to imagine a metal and glass curtain wall without the use of this or some other synthetic sealing material.

### **The Selection of Materials**

The responsibility for the selection of materials rests solely with the architect, and a thorough knowledge of the required physical characteristics, their compatibility with adjoining materials or materials in contact, their workability, the proposed methods of fabrication and installation, their ease of maintenance are all essential. If you add problems of acoustics, the mechanical plant, and above all the need to maintain the over-all architectural concept, the task seems superhuman.

The applied study of chemistry and physics, with emphasis on materials and methods of construction, is of enormous help and provides a basic knowledge of materials in general, enables one to objectively evaluate the properties of materials and, what is most essential, provides the necessary training for precision and thoroughness without which material selection and interpretation of tests is very difficult.

The location of the structure and its intended use will naturally play a role and influence the selection of materials.

The earliest need for coordination and close cooperation between design and material selection cannot be emphasized enough and has proven itself most beneficial in our office.

This constant exchange of ideas enables the designer to see the structure as a whole, to be constantly aware of the limitations of the proposed materials and methods, and to know at each phase if the given budget considerations can be met.

It also prevents unwanted and often second-rate substitutions after award of contract. The designer, for example, may want to use a particular kind of marble veneer for a thirty-story building. An early investigation may reveal that this marble is not suitable for exterior use and may decompose when subjected to repeated freezing and thawing; or, that it may lose its hone finish because of the high acid content in the atmosphere prevalent in its location; or, that the quantity of marble needed for such a large structure is not available.

This example highlights the need to consider availability as well as the property of material.

The source of supply, particularly as regards new materials, is of great importance, with emphasis on the background of the manufacturer and his experience with building materials, the thoroughness of his research, the tests the material was subjected to and his ability to provide competent technical assistance to the architect and later to the installer.

Ever so often a manufacturer may by-pass research or modify a basic raw material with nothing but profit in mind. He then tries to convince an architect, and if possible a prominent architect, to use his material and thus the actual installation becomes the research project of the manufacturer. If the material is a success the manufacturer heralds it in full-page advertisements. But if it fails, the "credit" is passed on to the architect and the production of this "miracle material" is discontinued.

Great care has to be taken not to overspecify and therefore overprice a material where many variations of the same product are available. Let us consider neoprene gaskets as an example. For exterior use a neoprene may be required that resists ozone and ultraviolet rays, that will not get hard and brittle at high temperatures, that will maintain its elasticity and compressibility at low temperature and will be stainproof when in contact with window-washing detergents. To specify the same qualities for interior use where compressibility and good memory may be the only requirements would add unnecessarily to the costs of the material. Or, another example, to specify structural aluminum Alloy 6061 when the less expensive Alloy 6063 is sufficient.

### **Development of Studies**

The development of studies for new materials begins after outline specifications have been prepared. Data and performance specifications of the material have to be assembled from manufacturers' literature in order to establish its proper use and its limitations. Where possible, samples are prepared, preferably simulating actual use.

In this connection a visit to the plant of the manufacturer can be very stimulating and of great help in familiarizing oneself with the material in question and will also convey the thoroughness and control exercised in its manufacture and may reveal the research facilities available to the manufacturer.

An inspection of an actual installation will also contribute greatly to the knowledge of the material.

But the problem becomes very difficult if the material is so new that no adequate literature is available, specifications and standards are missing and the competent technical assistance of the manufacturer is limited to his sales staff. A case in point are the elastomeric sealants. It took a great deal of doing to force manufacturers out of their almost planned lethargy. We were forced to wade through a mass of information describing the use of polysulfide base materials for aircraft, for marine work or for industry until we found the characteristics needed for its use in building construction. We have tried, and have succeeded in many instances, to encourage manufacturers' literature which confines itself to architectural usage.

We have also insisted, and have made it an important part of our specifications, that competent technical assistance be obtained not only during material studies but also during its application because it is of the highest interest of the manufacturer to see his materials used properly and to their greatest advantage.

It is physically impossible, particularly on large construction projects, for the architect to inspect, as in the case of the polysulfides, the mixing and storage, to determine the desirable pot-life of the mixed compound, to be present during the preparation of surfaces, to prescribe where priming is mandatory, to insure the protection of adjacent surfaces against soiling, to prescribe the proper pressure equipment and size of nozzle and, finally, the proper application temperature. The education of the applicator in the handling of new materials must be the full responsibility of the manufacturer.

All this gives a very good idea of the problems facing the architect in the selection of new materials and the need for coordination of all concerned.

Where possible, mockups are of great benefit to demonstrate application techniques and allow for changes prior to the beginning of erection at the site. Corrections after erection may turn out to be very costly if you consider the inaccessibility of sealants in the completed wall.

Many tests performed on new materials under laboratory conditions or the stated range of their efficiency are very impressive. But only too often severe cycling in actual use or where such a material is used in combination with other materials will cause it to fail.

When all studies of new materials are completed final specifications are prepared. In this connection it is perhaps worthwhile to mention

that we have found it of extreme value to specify complete performance requirements rather than to limit ourselves to mention the type and brand name of the manufacturer only.

In today's competitive world only too often substitutions are proposed, and usually at the last minute when the material is vitally needed for job progress. It becomes extremely difficult to make a fast decision as to the merits of the proposed substitution. Complete performance requirements in the specifications shift the burden of proof of compliance to the contractor and he has to furnish test data or other proof that the proposed substitution is equal to or better than the specified material.

### Tests

Tests on materials and assemblies of materials and their interpretation are important facets of material selection.

Tests on individual materials are usually less of a problem, but even here it may require the initiative and imagination of the architect to establish the type and the severity of tests. Even when it concerns such a venerable old material as marble the proper tests are sometimes hard to find. We were called upon to determine the most suitable type from a selection of five marbles contemplated for use as veneer on a structure of great importance, where good weathering qualities for a hundred years or more were required.

After reading up on all the available literature and a study of the applicable publications of the National Bureau of Standards and of the Marble Institute of America it became apparent that most tests were performed on marbles as a structural material with emphasis on tensile strength, modulus of rupture, etc.

We finally decided to base our test on marbles for this particular structure on average compression strength readings obtained on six two-inch cubes of unaged specimen and to subject another six cubes of the same dimension to a gruelling cycling test which consists of immersion in water, air drying, a bombardment with fly ash, an acid and salt dip, and finally freezing at minus 10 degrees F. After thirty cycles of one day each the cubes are tested again for compression and the difference average readings between the unaged and aged specimens is evaluated. It is evident that a marble of low initial compression strength which shows a very small compression loss after cycling will weather better than a marble showing a very high initial strength but a very high compression loss after cycling.

Cycling tests on preassembled components, such as laminated spandrel panels, as well as on completed curtain wall assemblies have proven themselves to be of great value.

In the past we have relied almost exclusively on dynamic methods for the testing of curtain wall sections, whereby a wind generating device, usually an airplane engine of 1200 horsepower with a ten-foot propeller, is placed approximately twenty feet away from the face of the wall. At 2500 RPM a wind velocity of 100 MPH can be obtained, and this combined with a spray of four inches of water per hour for approximately ten to twelve minutes, is a very severe test indeed.

But realizing that this test is valid only for a given set of conditions, namely temperature and humidity conditions prevailing at the time of the test, we have, together with Professor Queer and Professor McLoughlin of Pennsylvania State University, developed a workable static pressure and temperature differential thirty-day cycling test.

This method makes it possible not only to measure the deflection of framing members but also to observe the behavior of sealants and gaskets, of flashing, the effectiveness of thermal breaks and even the formation of ice within mullions during prolonged freezing on the face of the test wall.

A short outline of this test will be enough to demonstrate its severity: During nine hours a temperature of minus 20 degrees F. is maintained on the weather side, and a temperature of plus 75 degrees F. on the warm side of the test panel. Heat lamps mounted on the exterior raise the temperature slowly and during five hours to plus 150 degrees F. A water spray is then directed against the hot exterior test wall lowering the temperature to plus 75 degrees F. within approximately fifteen minutes. This heating with lamps and cooling with water is repeated three times until a full twenty-four hour cycle is completed.

The final spraying leaves the test section wet before being subjected again to the nine-hour freezing phase.

At the beginning of each fifth cycle the test wall is subjected to an air pressure differential during the wet spray phase of the test until a maximum of six inches is obtained, which is equal to a wind pressure of approximately 110 MPH.

During the cold phase of the cycle the indoor humidity is maintained at 35% to 40% and condensation observations are made which may indicate areas of poor thermal insulation.

Under such a treatment gasketing and sealing materials may be forced out of poorly designed joints and the high temperature may reveal a

plastic flow, or sagging, in caulking or glazing materials which renders them useless for the intended purpose.

Temperature cycling of laminated or sandwich panels for curtain walls will indicate the resistance of adhesives to delamination.

After a test wall has passed thirty cycles of the outlined test successfully we may be reasonably sure that it will stand up well under actual use.

But not completely satisfied with the above cycling test on sandwich panels and in order to provide the necessary production control we have initiated on one of our large curtain wall installations an ultra-sonic test method to determine if delaminations exist in the installed panels.

From the above you will readily see that inventiveness and imagination are prerequisites for the successful testing of materials and assemblies and that much more work will have to be done in this respect.

### Responsibility of Schools

In a fast moving technology many set values are being constantly changed.

Architectural schools could, if I may be free to make a suggestion, obtain drawings and specifications of a recently completed structure and discuss the merits of the materials that have been used and round out their discussion with actual samples of the materials and complete sample assemblies where possible.

This would contribute greatly to the understanding of the problems of material selection.

By suggesting new test methods and by studying a new test problem fully—for example the use of epoxy base flooring material which is now being considered for many installations and has no history of successful installation—schools could not only assist the architect and manufacturer but convey in a more realistic manner the considerations that have to be given to a practical problem.

As I have stated before, the study of applied chemistry and physics is an important preparation for the evaluation of the properties of materials of construction.

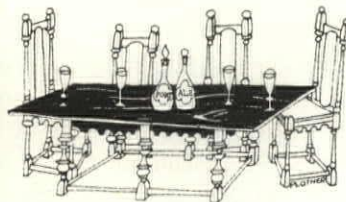
This, coupled with an endless curiosity, an objective and open mind, the perpetual desire to add to acquired knowledge, the constant exchange of views with others in the same field, and the experience of actual practice, will contribute to the success of material selection.

If you can inspire the future architect to live up to those standards and when he, at the height of his professional activity, still envies the college student—then you have taught him well. ◀

► It may be felt by some of the more bumptious of the button-down junior executives who contemplate us from behind double martinis as we congregate for our Thursday luncheons at the habitual octagonal table, that it is an esoteric language we use to treat of an esoteric subject. Now to be sure we have a professional vocabulary all our own; witness the confusion if not chagrin of a general purpose typist-by-the-hour rushed into battle against a deadline on 200 pages of institutional specifications; but at our weekly sessions around the oaken board there are no recognized bounds beyond which our far-ranging conversation may not wander.

It is now some months past, to be sure, but at the session remembered the quiz-show scandals were on the tip of every tongue. Indeed, if memory serves, it was I who, contrary to wont, set the subject up for firing practice; it had been festering within me increasingly for many days. Allowing for inevitable differences in degree, we had all to allow ourselves to be counted on the side, if not of the angels, at least of the eggheads; if this venality and, worse yet, moral insensitivity to the point of atrophy, were what the world had to expect from our post-war literates, things were indeed in a pretty pass. For myself, despite my quintessential propensity for the spectator role, I drew a firm line excluding television from my field of view, and accordingly inclined to heap the whole blame on the coruscating influence of that sinister combine of channels, tapes and admen known as TV. But the very Saturday night before, after I had been with what I thought was considerable finesse marshalling three or four fellow dinner guests into a well-integrated assault on a hapless CBS vice-president, he had lashed back alone, outmaneuvered and outgunned, with a desperate allusion to the beams and motes in various people's eyes, and gone on to cast doubt not only on the uniformly high moral level of, for instance, my profession of architecture, but even on the sincerity of our abjuration of such lackeys of commercialism as press agents and paid advertising. Apparently the next day the interchange still rankled, for an envelope gave forth a day or two later a clipping from the latest *Sunday Times* Book Section, from the "Selected Writings of John Stuart Mill" to the following effect:

"There has been much complaint of late years of growth, both in the world of trade and in that of intellect, of quackery, and especially of puffing: But nobody seems to have remarked that these are the inevitable fruits of immense competition; of a state of society, where any



## TRACINGS

*from an*

# Oaken Table

NO. 4

*by Neoscopos*

voice, not pitched in an exaggerated key, is lost in the hubbub. Success, in so crowded a field, depends not upon what a person is, but upon what he seems: Mere marketable qualities become the object instead of substantial ones, and a man's labor and capital are expended less in doing anything than in persuading other people that he has done it."

The luncheon interchange following this provocative gambit of mine was brief but vicious.

Once again, Fred made the initial sally. A felicitous promoter himself, he could bring forth at an instant a series of wide-spreading, handsome, well-documented brochures calculated to catch a college or corporate board of trustees'/ directors' collective eye; but he had to doff his hat, he said, to one of our most flamboyantly successful transcontinental colleagues—shall we call him A? Like so many, including our own Burt, it seems A held a depression diploma; only after more than fifteen years of open and hidden persuading, including tenure of a high executive post, did he set about organizing an architectural office and practice for himself, complete with public relations expert. First expert advice, duly and punctiliously followed, was to secure architectural reg-

istration in all forty-eight states. The effect was electric; what building committee could resist the lure of an architectural organization so vast it was doing work in every state of the Union?

Out of the general laughter rose Tom's voice to question. Very clever and very fortunate was A; but did we know about the time A had really outrun his luck? Man shall not live by luck alone, we knew; and so A had lost his grasp on New York's premier building project of the 1950's simply by a fluke of fate—or, more accurately, by a fillip of fortune, cashed in by a wily hand.

Tom was not finished, however: He had his own nominee for obloquy. In bygone years we had all been rather fond of B; after all he was, though not one of the great Men, one of the more colorful, iconoclastic, even boisterous stormy petrels of the early days of our kind of architecture. But now, when we might have looked to him as the crowning *vousoir* of a dynamic new creed, B seemed to prefer being the headstone at the interment of the Modern Movement. Not that his publicity had not been of the shrewdest; on the contrary, it was consummate. The years had been long, the time was ripe, the laurel could not but fall soon from the noble yet aging brow of the Sage of Taliesin. No mere eight-page spreads in the *Forum* and *Record*, but a cover article in *Time*, no less, conferred the succession on B; the accolade was repeated in the hardly less conspicuous and far more *soigné* medium of a *New Yorker* profile replete with reported frequent and current testaments by Mr Wright to his young friend B in whom he was well pleased. Nor was B loth to play his part: gone was his familiar, friendly monosyllabic first-name terminology; all releases now identified him by three complete full names only. The supreme gesture remained sadly unknown outside exiguous geographic limits; when Mr Wright's knell was tolled at last in Arizona, ten days before he had undertaken to speak in Connecticut, B leapt unhesitatingly to fill the breach, within twelve hours volunteering to the Silvermine Guild his talents as substitute speechmaker for the great Old Man. Be it added, the Guild accepted with alacrity. Only Tom Creighton admitted to having his appetite spoiled by it all. Writing shortly after in *P/A*, he remarked that to judge from the three-dimensional exemplars B was scattering all about him, B's architectural predilection, so far from being Wrightian, was not even for a return to Renaissance or Baroque, but simply to spearhead a rollback to the Beaux Arts somewhere between 1893 and 1925.

There remained only Burt, who spoke up

slowly from the lull, slowly and almost sadly. These others were peccadilloes, their falls and failings were human and could be forgiven; but about C he felt it was impossible to be neutral. His architecture, to be sure, could be referred only to critical opinion, and thereafter *chacun à son goût*; but public relations were another matter. C's smoothly integrated research and clerical department was legendary, his clipping service and personal contact system; meanwhile the imbalance between time spent at the drafting board and time spent concocting quasi-mystical effusions in late nineteenth century Teutonic philosopho-pedantic style to drape between photographs of his lushly garlanded building projects, was staggering. But the lingering wound for Burt was a story vouched for at first hand: A girl he had known a dozen years earlier had been majoring in art history with emphasis on contemporary architecture. For her thesis she had been attracted to C's career, especially his early years after arrival in America; and, having got the general story down, she had done much patient research at all the offices which had been C's way-stations. Hoping for final corroboration, and confident of C's interest, she had dispatched him a copy of her final draft for his notes and comments. To her delight, not to mention relief, a return package arrived from C a very few weeks later; except, to her shock, it was not her typescript at all. A completely new and different monograph, it had it seemed only the dates and general outline to agree with hers; the emphasis was entirely reversed. Of her original document there was not a sign; but an accompanying letter informed her with complete seriousness that her monograph contained so many errors it had been impossible to correct it, only to rewrite it; and further, in unveiled language, that if she made any effort to submit or publish her earlier version instead of this corrected one, she might expect legal action to prevent her from such a course of action.

We broke up minutes thereafter: There was not much appetite left in us. For myself, too mordantly, other memories of a dozen years ago, of a chilling fantasy which had meanwhile run a full third of its course to 1984. The key words tumbled disorganized through my mind, but the effect was cumulative, "vaporization," "unpersons," "memory hole," all the paraphernalia of "Operation Rewrite." And most pervasive of all, the melody that echoed from every street corner, no matter which way we turned:

"Under the spreading chestnut tree  
"I sold you and you sold me—" ◀





## *The Fine Art of Architectural Deception* PART III

BY HARLEY J. MC KEE, AIA

► The propensities of an architect to kid himself would take volumes to cover, but for the sake of brevity I will mention only a few most obvious ones. He considers himself an *artist*. Ever since Dinocrates loftily ignored the need for food and water-supply for the city he had planned (on paper), the architect-artist has considered himself superior to budgets, floor loads, waterproofing and such trivia. He is *creative*, and shows it by throwing in triangular rooms, helical masses, interior patios or sculpture made of chewing gum on wire (designed in the office, naturally). The brassiest operator of a plan-factory is at heart a frustrated artist, and takes more pride in detailing a refined entrance canopy than in paying a high income tax. After all, if he is lucky the building will stand up, and who knows what purpose it will be serving in ten or a hundred years? Why worry about function, then? The entrance canopy will always be there; it is the "eternal verity" of the building, the "sufficient cause" on which his reputation will rest.

It is interesting to realize that this attitude is contagious; the peddler (salesman) of materials who touches base at architectural offices also feels the urge to create. He makes mobiles or stabiles out of samples, does driftwood arrangements and may even join an evening class in ceramics. To get back to the architect, however, he feels the need to *express* something—himself, mankind, comfort, discomfort, or almost anything which is inexpressible or uncomprehensible, and which has not been expressed more than a million times before. He wishes to explore the sufferings of mankind; he can cover the floor with broken glass, leave out stair risers, make spaces reverberant, orient rooms toward the west or louse up the cir-

culcation in general. This can be understood by the layman, and the building will become a monument to the architect. (This is, after all, the primary reason for building.) He can express structural systems without even learning to calculate them—witness the rash of ribs, barrels, domes, arcades, inverted arcades, cantilevers and exterior frames. He can express materials by making stainless steel look like aluminum, aluminum like stainless steel, wood like bronze and bronze like wood, complete with imitation grain, knots and joints. (What is the cost of knotty bronze, installed? Or, how do you prefer your liquor, gentlemen, aged in the bronze or aged in the wood?) If the architect is very subtle, however, he will express *nothing*, in such a way that nobody will recognize it. Nothing is something; more is less; large is small—here is the real philosophy underlying expression.

Architecture progresses. The architect is inventive; many are able to invent the same things their contemporaries do! (If not, how can one account for the similarities?) He can also re-invent the things his grandfather used and discarded. So again we have reflecting pools (with DDT now), sliding doors, tracery screens, flying buttresses, post and lintel, modular plans, exposed structure (or exposed pseudo-structure), single-element facades, geometrical masses and tents. What will come next, the cave or the tree?

Buildings shelter the activities of people, and the architect who designs one should know all about what people do and like. Ask him. Of course he knows— doesn't he look in the mirror every morning? Isn't that humanity he sees there? Like the proud father who thinks his child is handsome because he looks like the old man, the architect thinks his own actions and preferences reflect those of the human race, or at least those people who are not too pig-headed to realize what is

good for them. Any right-minded person will agree with his pet theories, will like his large rooms with low ceilings, will thrill to his spaces and textures. Someone gets lost in the plan—what kind of a stupe is that? He shouldn't be allowed inside. The meeting-rail falls at eye level—who wants to look out of the window anyway? The steps are too high—why can't people learn to lift their feet? And so it goes—the architect knows best. He vibrates in harmony with mankind.

Providing the environment for man is a big job; it takes all kinds of skills and crafts, from the interior decorator up to the bricklayer and plumber. Directing them all is the architect, or so he thinks! He is like a little boy alongside the highway waving his arms, who fancies that the traffic is moving because of his signals. Centuries ago Aesop told about the ass who was harnessed to an emperor's chariot, to draw it in a trium-

#### HIDDEN PERSUASION

Sculpture, bric-a-brac and potted plants are appropriate for the firms which cater to well to do clients.—*From a pamphlet on law-office layout and design, distributed by the American Bar Association.*

With sculpture, bric-a-brac, and potted plants  
I always strive my practice to enhance;  
In these I safely place my main reliance  
When catering to my more substantial clients.  
If aspidistras I display, well potted,  
They always sign upon the line well dotted.  
A touch of Nike or of Aphrodite  
Is valuable for use *pendente lite*.  
The loveliest aspirants for a divorce

Like Rodin's "Thinker" to approve their course,  
And corporate executives I please  
With works of Phidias or Praxiteles.  
Spode, Sèvres, Limoges, and philodendra  
Have stopped my fees from getting slenderer,  
And, mingling Horticulture and the Arts  
With Law, in practically equal parts,  
I line my pockets and delight my clients,  
Who love me for the glamour of my faïence.

ROBERT HALE

ED. NOTE: The pamphlet referred to is a reprint of "Planning the Law Office," by Clinton H. Cowgill, FAIA, which appeared in the July '59 *Journal*.

phal procession. Being all decorated with colored ribbons and tinkling bells, and hearing the applause of the populace as he paraded down the avenue, this ass fancied that the cheers were directed toward him, and reciprocated by bowing right and left, wagging his fanny in harmony.

This is the architect today—he grandly leads the building procession but nobody else seems to recognize the fact. He can't even get his name in the newspaper without payola. Only infrequently does he figure in the news, when bids come in too high, when a floor collapses or when a husband catches up with him with a shotgun.

All things considered, however, it's a wonderful profession, one that we follow for enjoyment, not money. And we ride along enjoying our reputation either because we esteem ourselves so highly, or because the public cannot tell the difference between a phony and the real thing. ◀

#### COMPROMISE

When I was young, I knew my name  
Would someday grace the Hall of Fame.  
I spurned the dreams of Pericles,  
I said he only built to please.  
The works of Phidias  
I thought hideous.

I spoke with firm finality  
And said originality  
Was the virtue most desired,  
And constantly aspired  
To do  
Something new.

And often in anticipation  
I waited for a grateful nation  
To publicize my fame  
By calling eras by my name.  
However clever,  
Somehow they never.

At last in angry desperation  
I spurned the plaudits of the nation  
And sought applause from any one  
Who chanced to say to me, "Well done,"  
And gained reliance  
From my clients.

Somehow this seemed to be a  
Very welcome panacea.  
It soothed my wounded vanity,  
I felt I helped humanity;  
And such sorceries  
Buy groceries.

HUBERTUS JUNIUS, FAIA  
(Submitted by Mr Crane before his death)

FOR INSTANCE—*What Constitutes a Change in the Contract?*

BY WILLIAM STANLEY PARKER, FAIA,

Consultant to the Institute of Contract Procedures

► Several Articles of the General Conditions bear upon this question of Changes in the Contract and they involve, sometimes in a subtle way, the function of the Architect as supervisor of the construction process. For instance, Art. 3 provides that additional instructions by means of drawings or otherwise necessary for the proper execution of the work shall be "consistent with the Contract Documents, true developments thereof and reasonably inferable therefrom." Clearly the Architect is told that he cannot change the intent of the contract in developing his full-size details or other explanatory drawings after the contract has been signed.

Art. 15, "Changes in the Work," makes clear the right of the Owner to order extra work and make changes by altering, adding to, or deducting from the work. It also makes clear that the Architect's right is strictly limited to the making of "minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the building." It makes an exception in "an emergency endangering life or property" but otherwise "no extra work or change" shall be made except by a written order duly signed or authorized by the Owner. Here are rather vague phrases controlling his actions that need to be carefully considered. What is a "minor change," that is "not consistent with the purposes of the building?" Approval of the Owner in advance is desirable where there could be a doubt.

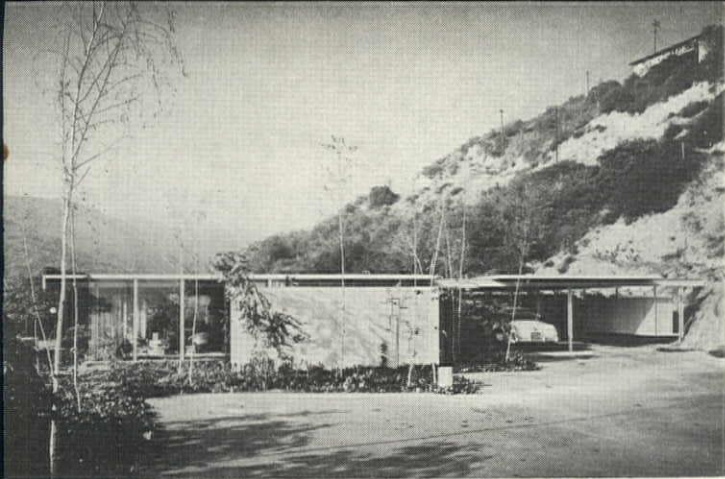
Art. 17, "Deductions for Uncorrected Work," makes the Owner's agreement necessary where its correction appears to be inexpedient, which presumably would result from the Architect's inspection and advance. But the Architect's decision requires the Owner's approval.

This general question is involved when it may be desirable to use an alternate material. Can the Architect approve such a change if he accepts the alternate material as the equivalent of the material specified? A few years ago a case of this sort occurred in which the alternate material for a roof deck was approved by the Architect and delivered at the building and then was rejected by the Owner because 20-gauge metal was used instead of 18-gauge as originally specified. The words "or equal" were used in the specification. The Architect apparently accepted his Engineer's approval as to equivalent structural value. But the contract provided for a written order signed by the Owner, like the provision in Article 15. The material was worth some \$40,000.

Here the Contractor accepted the Architect's approval without getting any written order from the Owner as required by the contract. Subsequent inquiry as to the result disclosed the fact that the Contractor was able to dispose of the rejected material with a loss of some \$6,000. The Contractor reported that the question was not taken to arbitration because the Owner was not only a personal friend but also a customer for many years. Also he did not wish to involve the Architect for various reasons. The Contractor summed it up as follows:

"The experience was expensive but in view of the other factors we did not think it was worth a battle."

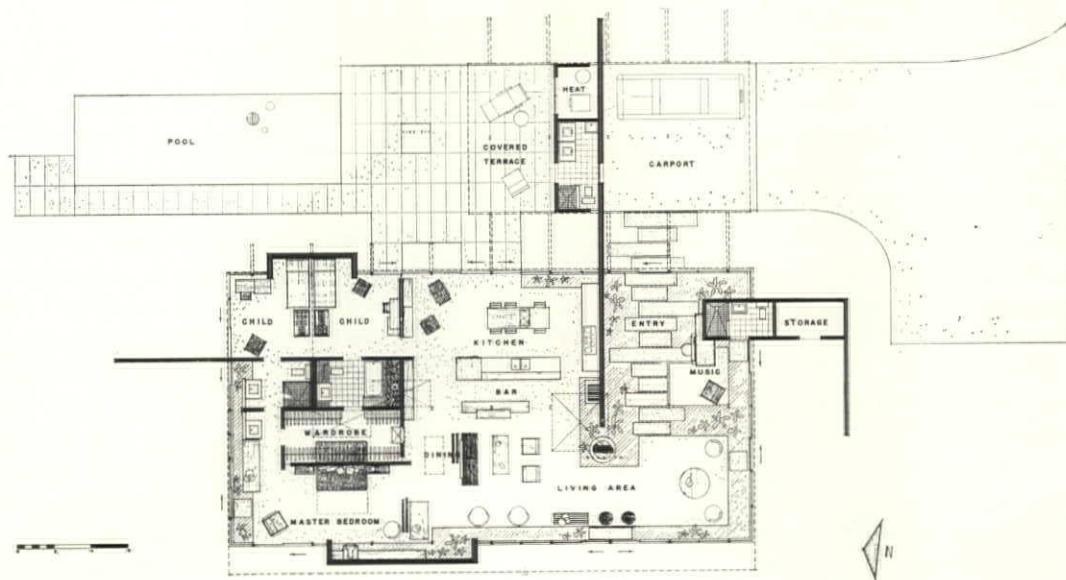
This case illustrates the underlying problem and wisdom of keeping contract procedures in mind and conforming to them. As in this case they may involve substantial sums of money. The case also indicates the reasons of policy that often control the actions of Contractors in such matters. ◀



Julius Shulman

# *Favorite Features of Recently Elected Fellows*

JONES RESIDENCE, BRENTWOOD, CALIFORNIA



Julius Shulman

**A. QUINCY JONES, JR, FAIA**  
of A. Quincy Jones & Frederick E. Emmons  
& Associates, Los Angeles, California



Julius Shulman

# The World Planning and Housing Conference

Puerto Rico

MAY 28 TO JUNE 3, 1960

by **John R. Fugard, FAIA**

*Chairman of the AIA Committee on International Relations*

► Two themes were selected for the 25th Congress of the International Federation for Housing and Planning, and the 5th Assembly of the Inter-American Planning Society: "The Contribution of Physical Planning to Economic and Social Development," and "The Place of Self-Help and Mutual Aid in the Total Housing Program."

About forty countries were represented by the delegates, who were technicians, consultants on planning and housing, economists and officials of governments. Among the 500 delegates, apparently only a few were architects, and of those, only a half-dozen represented the Institute. Delegations of housing experts came from far-away lands—Russia, Poland, Formosa, Denmark, Pakistan, Switzerland, Yugoslavia, Germany, England, France and the South American countries.

In Theme I, papers were presented giving experience of the various countries towards social and economic development through physical planning. Israel, Mexico, Pakistan, Peru, Thailand, France, Japan, Poland and Yugoslavia were a few of the countries which made contributions to this subject. The consensus of thought was that physical planning should be the function of government, and must influence the expenditure of public funds and be a guide to the private investor. Economists and social scientists should work at the national level in the planning process and act as advisors to the physical planners. It would appear from the discussions that physical planners can make no progress without a thorough knowledge of the social and economic objectives involved, and this can be gained only through the economist and the social planner.

The subjects of self-help and mutual aid in housing were thoroughly discussed under Theme II. "Self-help" was described as not a plan of "do it yourself," but a collaboration by groups of people in a project in which each group learned a

particular trade or skill, so that a degree of proficiency replaced a muddling-through process. This system of self-help and mutual aid is practiced in the more underdeveloped countries of the world, and we have seen examples of it in the rural areas of Puerto Rico and in Colombia.

Norman Mason, Administrator of the Public Housing Administration, gave a stirring address at the opening ceremony of the Congress. Credit for the US exhibit should be given to Mr Mason and his organization of the Housing and Home Finance Agency.

A tour was organized to visit housing projects in the suburbs of San Juan, being constructed by the IBEC Housing Corporation, a Rockefeller enterprise, which has completed more than 5,000 low- and medium-priced homes in Puerto Rico. This corporation has perfected a system for mass production of homes, making possible the completion of four to six homes a day. The attractive houses, designed by Wallace K. Harrison, FAIA, are fireproof construction, have four and five rooms, a terrace porch and a carport. They sell for approximately \$7,000 to \$9,000 including the land and planting, with a small down payment and mortgage insured by FHA on long term at low interest. The Congress delegates expressed intense interest in the houses under construction and those occupied.

After attending many Congresses of the International Union of Architects and the International Federation of Housing and Planning in Central and South America and in Europe I have found that it is indeed a rewarding experience to meet our friends, the architects from other lands, where friendship is heartfelt and politics has no place.

The time will come when The American Institute of Architects may invite an International Congress to come to America, and that experience will long be remembered. ◀



### *From the Executive Director's Desk*

► Too often it is assumed by professionals and specialists (pardon the employment of so apt if distasteful a word) that statesmen, tycoons, and others in the limelight are not interested in and have no knowledge of our respective professions. So far as architects are concerned this is especially true.

Along with most professionals, we take an illusory comfort in believing that the non-architect is ignorant of our ways and our abilities and needs to be educated. To enlighten the ignorant is an assignment which we grasp with avidity and sometimes with a mistaken premise of our exclusive omniscience.

Now as far as architecture is concerned, the roster of famous amateurs who possessed more than a simple appreciation of the art and science of architecture is long. Franklin D. Roosevelt openly proclaimed that he had always wanted to be an architect. It is reported that those architects who did serve him were well aware of the fact that he had never quite forgotten his first ambition. The architect for the President's retreat at Hyde Park reported with high good humor that the President had so dictated and re-arranged the plans that the architect recommended to the President that the latter attach his name to the documents. Thus a President of the United States was prevailed upon to violate a law of his native state—a dereliction which caught the eye of an over-zealous member of the AIA, presumably a Republican, who demanded that we have justice done and properly chastise the President. Fortunately, good humor prevailed and the Institute was saved the embarrassment of holding the AIA up to ridicule.

Christian Herter, currently Secretary of State, started out as an architect and probably would have been one today had not world war intervened and led him from the path of architecture into a fascinating governmental life. It is reported on good authority that Khrushchev, some two years ago when the International Union of Archi-

itects was meeting in Moscow, summoned the members of the Executive Committee of the UIA which included one American, Henry Churchill, to meet with him in the Kremlin. For forty minutes he lectured on architecture and planning. For another forty minutes he answered questions—all, including his original dissertation, without a note. Showing a considerable knowledge of architecture, planning and technical terms, he performed a feat which probably could not be duplicated in any other country under similar circumstances by any head of state.

Regardless of political predilections and fundamental connections one cannot as an American citizen think of Khrushchev's performance without a touch of admiration. I do, however, know of one American statesman who measures up to our aspiration.

Four or five years ago when my wife was out of town on some family mission, I was about to sit down to a lonely meal. As the first spoonful of soup was midway between the table and me the telephone rang. It was a good friend and neighbor whose husband at that time was an Assistant Secretary in one of the departments. She asked if I were free for the evening and I replied that I was. She said, "I do not care if you have had dinner or not, slip on your dinner coat, run across the street and help me out. A guest has suddenly been called out of town and I am one man shy."

The evening promised well; I was rescued from the doldrums. I hurried into the prescribed uniform and ran across the street and reached the door to find the wife of the absentee—a General Counsel for a department—standing on the stoop. She greeted me with a pleasant smile and said, "Oh, so you are 'Struve' for the evening, aren't you?" On entering the house, my hostess asked me a delightfully unexpected question. "Would you mind taking Mrs Nixon in to dinner?" As Mrs Nixon was then and still is one of the most favored of dinner companions, the question was a

trifle superfluous. I was honored and pleased. It turned out to be a small dinner—I think there were only ten of us in all. The company consisted, in addition to the Vice President and his wife, of our host, an Assistant Secretary, the General Counsel of a department and the then Assistant Secretary of the Air Force now Assistant Secretary of Defense, and their attractive wives.

When cocktails were served I noticed with momentary bewilderment that the Vice President and Mrs Nixon were sitting in a corner talking to each other. This I could not understand until it dawned on me that even in this lovely Georgetown house protocol had intruded and that none of the people quite dared to make the opening. Well, thought I to myself, I am not in the Government, I'm a Philadelphia boy having a good time away from home, so I dragged a chair across the room and said, "Do you mind if I join you?" They both looked at me with pleasant smiles and said in unison, "Please do." So the three of us sat and talked until dinner was announced.

It was a lovely occasion. Mrs Nixon has, in addition to her very decided good looks, social charm and the comportment that comes with experience. She is a brilliant conversationalist and knows how to keep her companion interested. I detected a sense of relief that she could talk to a simple citizen and not have to guard her words for fear of offending some obscure political concern. So during the course of the evening I picked up many a titillating bit of information, sufficient to project my ego a yard or two in advance of my fellows.

The Vice President, having returned from one of those prodigious trips of his to the other side of the world, held forth in grand style. All in all, what with the beauty of the ladies, fascination of the company, the excellent food and wine, I was thoroughly enjoying the occasion.

After dinner, we five men sat over coffee, brandy and cigars. The conversation was stilted; the men addressing themselves in turn to Mr Nixon saying, "Mr Vice President, what do you think of this or that?"—all Governmental subjects, somewhat obscure to me.

Suddenly Mr Nixon turned on them and said, "Gentlemen, this is all very boring for Mr Purves. He is not in the Government so I propose that we talk about architecture." With that he offered me the gambit of the moment; namely, "What do you think of Mr Frank Lloyd Wright?" Before I had a chance to reply one of the men spoke up and said, "I think he is a Communist." I immediately countered this flatulent charge and told them I

could think of no one who was less of a Communist than Frank Lloyd Wright. He was a product of this country, a thorough American, doing American architecture in an American fashion, with all of which Mr Nixon heartily concurred. So for a half hour we had a thoroughly pleasant conversation on architecture, planning, progress and the future of the American scene. I am afraid the tables were just a little bit reversed because all of what we had to say was evidently very boring to the other three gentlemen.

Finally I turned to Mr Nixon and said, "You amaze me. I do not know anything about your profession, except what I read in the papers and you seem to know a great deal about mine." He said, "Well, the explanation is very simple. As Vice President of the United States I am President of the United States Senate, and as President of the United States Senate I have a great deal of influence. I can get any book I want out of the Library of Congress and I recently took out a book about architecture." I inquired, "What was the book?" He replied, "It would hardly pay to give you the name because it was a philosophical book and doubtless would be way over your head and I really do not have the time to explain it all to you because my job as Vice President and President of the Senate keeps me pretty busy explaining many things to many people." I finally did wheedle the name of the book out of him, and found it was one that I had read and did understand in part.

Subsequently we joined the ladies and again I found the pre-dinner scenario reactivated. Mr and Mrs Nixon and I sat in a corner and talked; not only about architecture but people around the world, children, famine, housing, droughts, monsoons. We talked of many things.

We parted on a happy note, he saying, "If you really get stuck in that book just let me know and I will try to help you out a little bit." A few days afterwards, we had occasion to write to him and I got a note back saying, "Well, we did have a good time at Tom's that night, didn't we?"

I might add, should anyone read a bit of propaganda into this essay, that I was, when permitted to do so in Pennsylvania, registered as a non-partisan. But I think it is only fair to relate a bit of anecdote which illustrates that those in the public eye are more often than not quite conversant with our profession, its problems and its aspirations.

*Edmund D. Purves*





## LIBRARY NOTES

### Hospitals

Since the technical material in this issue of the *Journal* concerns hospitals, it seems appropriate to devote this page to a list of some of the books that the Library has on the subject. As usual, books are available on loan to corporate members at a service fee of fifty cents for the first volume and twenty-five cents for each additional, requested at the same time.

AMERICAN COLLEGE OF RADIOLOGY  
Commission on Public Relations.

Planning guide for radiologic installations. Chicago, Year Book Pub., 1953. 336 p.

AMERICAN HOSPITAL ASSOCIATION  
Manual of hospital maintenance. Chicago, 1952. 116 p.

AMERICAN HOSPITAL ASSOCIATION  
Manual of hospital planning procedures. Chicago, 1959. 72 p.

AIA DEPT. OF EDUCATION AND RESEARCH

The hospital building, comprising the 1947 AIA convention seminar addresses on hospitals and the Building type reference guide no. 2, reprinted from *AIA Bulletin*, May 1947 and Jan. 1948. Comp. and ed. by Walter A. Taylor. Wash., 1948. 71 p.

AMERICAN PSYCHIATRIC ASSOCIATION  
Design for therapy; an investigation into the possibilities of collaboration between psychiatrists and architects in developing basic information for mental hospital design construction and equipment. Washington, 1952 or 53. 80 p.

AMERICAN PSYCHIATRIC ASSOCIATION  
Psychiatric architecture; a review of contemporary developments in the architecture of mental hospitals, schools for the mentally retarded, and related facilities. Edited by Charles E. Goshen, Washington, 1959. 156 p.

AMERICAN TRUDEAU SOCIETY  
Committee on Sanatorium Planning and Construction.

Tuberculosis hospital planning and construction, prepared by J. Bruno Basil . . . N.Y., National Tuberculosis Assn., 1947. 81 p.

ARTHUR, ERIC R., EDITOR

A guide to hospital planning in Ontario, prepared by the Committee on designing, constructing and equipping of public hospitals in Ontario . . . Toronto, University of Toronto Press, 1954. 307 p.

BACHMAN, GEORGE W., AND OTHERS  
Health resources in the United States; personnel, facilities, and services. Washington, Brookings Institution, 1952. 344 p.

BENNETT, ABRAM E. AND OTHERS  
The practice of psychiatry in general hospitals. Berkeley, Univ. of California Press, 1956. 178 p.

BIRCH-LINDGREN, GUSTAF  
Modern hospital planning in Sweden and other countries. Stockholm, Medens, 1951. 109 p.

BUTLER, CHARLES AND A. ERDMAN  
Hospital planning . . . N.Y., F. W. Dodge Corp., 1946. 236 p.

CALIFORNIA. DEPT. OF PUBLIC HEALTH  
Hospitals for California; progress report. San Francisco, 1953, 36 p.

GUEST, PAUL G. AND OTHERS  
Static electricity in hospital operating suites: direct and related hazards and pertinent remedies. Wash., US Govt. Print. Off., 1953. 58 p. (US Bureau of Mines, Bull. 520)

HAUN, PAUL  
Psychiatric sections in general hospitals. N.Y., F. W. Dodge Corp. 1950. 80 p.

INTERNATIONAL HOSPITAL CONGRESS. 8th, London, May 25-30, 1953.

Preventive medicine as a major function of the hospital, and its implications. Proceedings of . . . Congress . . . London, International Hospital Federation, 1953. 362 p.

INTERNATIONAL SEMINARS ON HOSPITAL ARCHITECTURE AND TECHNIQUES. 1st Geneva, 1957.

1E: Basic documents; 2: Report/Compte rendu. np. [1958] 2v

NICHOLSON, EDNA E.

Planning new institutional facilities for long-term care. N.Y., Putnam, 1956. 358 p.

NUFFIELD PROVINCIAL HOSPITALS TRUST

Studies in the functions and designs of hospitals. London, New York, Oxford Univ. Press, 1955. 191 p.

RITTER, HUBERT

Der krankenhausbau der gegenwart im in- und ausland, wirtschaft, organisation und technik, . . . 3 neu bear. aufl. Stuttgart, J. Hoffman [1954] 149 p.

ROSENFELD, ISADORE

Hospitals, integrated design. 2nd ed., completely rev. N.Y., Reinhold, 1951, 398 p.

SMITH, MORELAND G. AND R. J. ADAMS

Bibliography of selected references. Hospitals and health facilities. Montgomery, Ala., Sherlock, Smith & Adams, Inc., 1959. vp

SOUTHERN CONFERENCE ON HOSPITAL PLANNING

Proceedings. [May 19-21, 1949] Sponsored by the state chapters, AIA. Montgomery, 1950. 154 p.

TEXAS. STATE DEPT. OF HEALTH. DIVISION OF MATERNAL AND CHILD HEALTH

Hospital care of maternity patients and their newborn infants; standards recommended. Austin, 1953? 76 p.

US PUBLIC HEALTH SERVICE

Design and construction of general hospitals. N.Y., F.W. Dodge Corp., 1953. 214 p.

VINES, HOWARD W.C.

Background to hospital planning; London, Faber and Faber, 1952. 188 p.



**Recent Italian Architecture.** Agnol-domenico Pica. Edizione del Milione, distributed by W. S. Heinman. 197 pp illus. \$5.50

Since the end of World War II much of Italian architecture has gone its own way. Most Italian architects have refused to go along with what is known as the "international style" and seem to be obsessed with the notion that they must be original at all cost. With the notable exception of the work of architect-engineer Pier Luigi Nervi, that cost seems high in esthetic value and the Italian architectural scene since 1946 is, at best, confusing.

This book attempts to unravel the confusion with all its neo-isms and something called the "neo-liberty" style of architecture, but it isn't very successful. It takes more interest and background knowledge to follow the involved text than most readers will be able to muster. The selection of pictures also appears to be rather indiscriminate.

W. VON E.

**Primer of Lamps and Lighting.** Willard Allphin, FIES, Philadelphia, Chilton Company, 1959. 241 pp illus. 6¼" x 9½". \$10.00

This useful book covers its subject from basic data and terminology, through available equipment, to applications and layout. It is particularly good in its clear treatment of elementary theory and varieties of lamps.

To devote part of only two pages in such a book to lighting *quality*, in the technical sense, seems a bit inadequate. The old familiar "proofs" of the fluorescent-incandescent controversy appear in several places and there is a rather despairing plea for fluorescent for residential use. We rejoice, however, in Allphin's frank statement: ". . . it seems hard to believe that 70 ft-c are required at the kitchen sink for either safety, comfort, or productivity . . ." Could this come

from our years of working together in growing amicability? He's a most able engineer (MIT too) and a good friend but we still think roast beef, vegetables and gals' faces look better under you-know-what. Also, and this is out of school, any dame who touches up her hair better stay out from under fluorescent.

There is a bonus with this book—a lighting slide-rule calculator, in a back-cover pocket, which facilitates illumination design on the coefficient of utilization basis. E.P.

**College and University Facilities Survey.** Part II: Planning for Physical Plant Expansion. W. Robert Bokelmann and John B. Rork. Washington, DC, US Government Printing Office, Circular No. 603, Office of Education, 1960. 112 pp 8" x 10¼". \$0.70

To those suffering from the apparent anemia which congressional fiat has enshrined as public policy this is a dynamic, robust and information-packed study. No one concerned with the massive institutional building programs which the coming decade demands can afford to miss this book.

Beginning with the startling reality of a college enrollment which has more than doubled in twenty years and will redouble in ten more, the report analyzes currently unused space—both residential and instructional—discusses possibly untapped space resources and still comes up with requirement for 1,129,200 new residential spaces and nearly three million new instructional spaces required by 1970. This study—based on data supplied by 1,382 institutions—has tabulated costs/sf of 3,536 proposed structures by function, region and state. Current estimates indicate need for annual expenditure of \$1.2 billion on college buildings, and that nearly 70% of total expenditure will be for reinforced concrete or masonry and steel construction. Full details are pro-

vided as to what types of construction, functions of buildings, etc. are strongest in various regions.

For the busy man or the skeptic, an immediate plunge into chapter 7, "The Task Ahead," is recommended. In the three pages of this chapter sufficient samplings of the important contents of the survey are provided to insure more thorough scrutiny by the most hardened (or chair-softened) resister. In short, here is a comprehensive, concise and reliable guide to one of the quantitatively largest and qualitatively most challenging fields for architectural endeavor in the next decade.

G.H.

**Plumbing.** 3rd ed. Harold E. Babbitt. New York, McGraw-Hill Book Company, 1960. 649 pp illus. 6½" x 9¼". \$13.50

This seems to be the year for third editions of "the standard textbooks"—meaning those which were new when some of us were in school! Babbitt is the same solid work, struggling against the leaden mortmain of a traditional technology in which progress seems almost suspect and dangerous. In 1935 this reviewer, then an architectural school librarian, tried to throw away a plumbing-fitting catalog which seemed a bit obsolete, if that is the word. The instructor had a fit—"my best reference!" Date: 1905.

In 1955, considerable order was brought about by the publication of the "National Plumbing Code," and its helpful "Handbook" companion by Vincent Manas. This edition of Babbitt makes frequent authorized reference to and correlations with NPC. There is also additional material on hotwater supplies, storage tanks and an extensive glossary. A brief new appendix shows incorrect plumbing installations and explains corrections. It is possible that some of the fixture illustrations antedate 1905.

E.P.

**The South Builds.** New Architecture in the Old South. Edward Waugh, AIA, ARIBA and Elizabeth Waugh. Henry L. Kamphoefner, FAIA, advisor. Chapel Hill, The University of North Carolina Press. 170 pp illus. \$12.50

This handsome and profusely illustrated treatise on new architecture in the Old South is an eye-catching and easily read document with good format and orderly separation into general types of structures.

The opening chapter covers background and includes a number of interesting photographs of period buildings not usually seen in architectural historical publications. The other chapters divide the contemporary scene into the House, the School, Community and Institutional Buildings, and Commercial and Industrial Buildings.

Most of the groupings carry a fascinating selection of outstanding and imaginative solutions though some of the photographs obviously do not do justice to the buildings. The only category which fails to stand up to the otherwise high design level might be the residential wherein the Matsumoto house seems the only truly satisfying example. Each of the others seem chosen only because of some novel feature rather than overall excellence.

This observation might be justly attributed in some degree to the whole book in that it follows a popular journalistic approach in

seeking the unique and the striking as a matter of reader interest as contrasted to the more reasoned and considered approach which might be expected in a book. We might think of "The South Builds" as a special issue of a professional monthly without the advertisements and with hard covers.

Having reported on the physical features of this book this reviewer as a native Southerner must register his concern over the disturbing and entirely unnecessary propaganda theme which is insidiously woven throughout the text. The authors, while presenting a face as if objective and even sympathetic to the obviously fine evolution of contemporary architecture in the South, actually limit their real approbation to works generated from North Carolina State College where they teach, plus the buildings of a small coterie of a half-dozen outstanding architects whom they greatly admire. All other sources are damned by light praise or ignored.

The truly disturbing and negative theme however is that these talented teachers, in bringing the new light to the Old South, could only do so by insulting great groupings of peoples including the majority of all practicing architects, "archaic librarians," "unfortunate development of hospital consultants," "lack of understanding by doctors and administrators," "decorator type architects," "businessman architects," "archaic zoning by real estate developers and city officials," "decadent architects," "educators,"

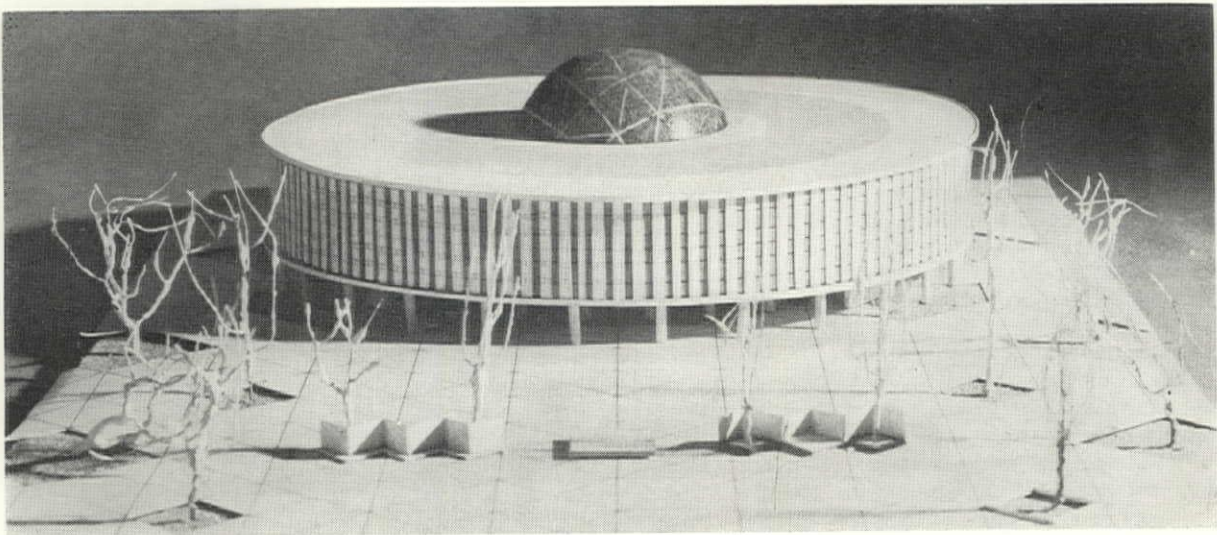
"grudging clients," "school architects," "Virginians," "architects without city planning background," "highway engineers," "layman Boards," "planners who are not architects," and "the architectural profession in the new South." They even take an odd sideswipe at the Roman Catholic church. It would appear that there would be few left as potential purchasers of the book.

It does seem a shame that one cannot promote a cause via a positive approach rather than by castigating all and sundry who have not had the advantage of "sitting at the feet." As a profession it would appear that we have enough to do without this divisive influence.

The authors' real message is that each of us should be a "socio-architect" and strive to emulate the spirit of the TVA method of operation as a utopian pattern of life. The key punch line is, "... it is a pity that the architectural profession in the new South has not organized itself so as to be able to work within the framework of such an enterprise."

Great as such an uplift might be this reviewer considers that the illustrations in the book give ample evidence of good evolutionary progress via thoughtful, energetic and creative private effort. It is hoped that the time may soon be at hand when authors may tire of the "Tobacco Road" theme and join the forces of constructive and harmonious seekers after the better life. MARCELLUS WRIGHT, JR, FAIA

*Model, round classroom building, North Carolina State College, Raleigh. From "The South Builds"*



Every once in a while some architect asks me, "Why doesn't the *Journal* print more pictures of buildings?" or "Why don't you run picture stories on all these new buildings like the other magazines?"

Good questions, I suppose; but I think I have some good answers. The first and most obvious answer is that there's no need for it. There are three excellent architectural magazines with national circulation—to say nothing of the several beautiful publications from Europe and Canada—which are primarily picture books. They have the resources to do a good job of architectural reporting, and they are doing it well. In addition, there are a host of local and regional architectural and building magazines covering the work of architects in nearly every part of the country—for the large part, architects who might never get published in the "big time" magazines. Why should the *Journal* try to elbow its way into this picture? It's crowded already. Furthermore, there's more important work to be done.

I find that I have unconsciously echoed the words of my predecessor, Henry H. Saylor, FAIA. At this point I was moved to take off my shelf Volume One, Number One, of the *AIA Journal*, January 1944, and turn to the first page. There is Editor Saylor's apology for his new magazine. With his permission, I shall quote him, for what he said in 1944 still holds good in 1960:

"Our profession in America is abundantly served by magazines devoted more or less fully to the exposition of new techniques, new materials; to the presentation of such contemporary work as appeals to the various editors' tastes; to case histories of broad problems of design. The *Journal* has no desire whatever to attempt to elbow its way into these paths of professional service, even if its modest size and equipment did not make such an attempt quixotic.

"What the *Journal* does earnestly hope to do is to pick up, as with a microphone, the Voice of the pro-

fession, and amplify it to audibility. There is evidence that the architect himself would like to hear this Voice, as well as to help give it words. There is also the hope that the public would not turn a deaf ear to the concerted voice of that body of men society has trained to plan and correlate its work of construction."

So basically, the *Journal* stands today exactly where it stood in 1944. The greater part of its editorial matter is written by architects for architects, plus a certain amount written by friends and lovers of architecture for architects. It is a magazine of comment, of criticism, of information, of observation—possibly sometimes, of inspiration. There is a definite need and place for such a magazine—the success and widespread acceptance of the *Journal* has proven that.

As an Institute publication, the *Journal* does show pictures of buildings designed by its members, which have been honored or permeated by a jury of fellow-architects. There is no editorial selection nor influence there—the selections are really made by the readers. Illustrations which appear in the text of articles are, of course, presented as just that, illustrations, selected by the author to supplement his story. The *Journal* has no desire to become a picture book.

There's another reason why the *Journal* doesn't join the rush to display the latest glassy fronts or hyperbolic parallelisms—and here I'm speaking strictly for myself, and with a cheerful grin in the direction of the Editors of the other well-known architectural monthlies, all good guys.

Looking backward for a moment, it seems to me that the worst things that ever happened to architecture were the invention of the camera, and the invention of devices to broadcast the pictures resulting therefrom to everybody who had a few pennies to buy them with. Without photography, the age of eclecticism would have withered before it could have become so firmly rooted. Without photog-

raphy, architects today would have to design their own buildings from the inside out and from the ground up, without knowing what architects in New York and Houston and Rome and Brazilia were doing. Architects would really have to create, which is their business anyway.

(An aside to writers of Letters to the Editor: I know that the reproduction of drawings and engravings, long before the invention of the camera, started this deplorable trend to copyism; and I also know that modern ease of travel would tend to destroy the necessity for independent thinking. Those are quibbles. I'm speaking generally and I stick to my point.)

This is no original observation of mine. We've read and heard it many times in recent years. As a matter of fact, two of the speakers at our recent convention referred to the dangers of relying on the magazines for ideas. Let me quote from Dr Parkinson: "The architect's third temptation . . . is to read and absorb architectural journals . . . The result of their reading journals so much is that all buildings look the same, whether in London, Boston, Bermuda or Seattle. It is not merely the functional idea which, oddly enough, provides us with exactly the same structure for city hall as for a glue factory or state college or public bar—more than that, it is a tendency to use the same design in all parts of the world."

Thus the *Journal*. An architectural magazine without pictures! A paragon of paradoxes! Not to be looked at but to be read. Not to be propped up on the drawing board and used as a crib, but to be taken home and read from time to time and pondered in those off moments when one can snatch a little time for reflection. Maybe that will be a step toward some original thinking, out of which can come original design.



# AIA Committee on Hospitals and Health Meets at Auburn University

BY SAMUEL T. HURST, AIA

*Dean, School of Architecture and the Arts,  
Auburn University*

► The collective experience of an AIA committee of twelve of the nation's leading hospital architects was made available to students, to practicing architects and hospital administrators at Auburn in February. Accepting the invitation of the School of Architecture and the Arts, the committee convened on February 25. On the 26th the committee session was opened to visiting architects. Adjourning its meeting at noon the committee members remained to lead discussion in conference sessions which followed on the 26th and 27th. Thus occurred a notable convergence of interests to the benefit of all concerned as one of the Institute's national standing committees made a valuable contribution to continuing education and perhaps gained some further insight into current practices in architectural education.

Our school is very appreciative of the committee's acceptance of our invitation, and the AIA Board's approval of this special meeting, and for each individual contribution to the program. Attended by some sixty registrants from four states, the conference was regional in scope and its success recommends to the AIA and to the Association of Collegiate Schools of Architecture the consideration of similar arrangements by other committees. Joining in sponsorship and underwriting the conference expense was the Auburn Foundation for Architecture whose members are Alabama architects actively supporting the program of the school. Principal subject of the conference was "Planning the 100-bed General Hospital," and committee members

each discussed a division of the hospital, speaking out of his own experience and special interest. Chairman of the AIA committee, Todd Wheeler, FAIA, of Chicago, AIA Research Secretary, Eric Pawley, AIA\* and State Health Department Hospital Division Director, Clay Dean, discussed "Programming the General Hospital." State Director of Alcoholic Rehabilitation, Nimrod Frazer, discussed Alabama's rehabilitation problems and plans, and together with committee members, criticized student work being done on the current design program—an Alcoholic Center. The final afternoon session was devoted to a presentation by Dr Hugh McGuire of the Atomedics Research Center and to small simultaneous seminars on topics of special interest. Tours of local landmarks were arranged for visiting wives and a full measure of deep South hospitality complemented the program.

Primary objectives of the conference were to involve students and local architects more directly with the principles and practices of hospital planning, and to sharpen the sights of local administrators and agency officials. While these were well realized, our post-mortem evaluation suggests that greater advance preparation is needed to increase the return from such meetings in the future. Six months to a year is needed to arrange the student design-calendar and to avoid conflicting activities. Our hospital-related student design program was scheduled to conclude some ten days after the conference and to take advantage of crits by the visiting committeemen. Ideally such crits should

have come earlier in the program before basic schemes were frozen, and before the design *charette* competes with conference sessions for the student's time. An exhibition of work done by the committee and a greater emphasis on presentation of personal architectural contributions and regional variances in approach would have been most valuable. Finally, and in special reference to hospitals, two topics seem to have evaded discussion — topics which are currently of special concern to architectural students. The thought-provoking topics are:

- to what extent should or must hospital architecture be the province of the specialist?
- how can the rigid functional arrangements so often required by the large hospital be provided in a more expressive building form?

Humor and excitement were not lacking as committeeman (and former Professor) Matt L. Jorgensen, AIA, tossed a red brick (foam rubber, that is) into the audience, and staffer Eric Pawley, AIA, rose to present a "Report on the Aged" following a discussion on alcoholism. Said Pawley, "The import of these statistics is that they show we are getting older faster than we are getting drunker."

It is the feeling of our university staff that this conference has demonstrated one way in which the considerable resources of talent on the Institute committees may be put to use effectively for the cause of education even in a remote university town. It is our hope that other ways may be found and other opportunities explored with equal success. ◀

\* Staff executive assigned to this AIA Committee

Above photo left to right: Sherman Morss, E. Todd Wheeler, Samuel T. Hurst and A. N. Kiff

# Agenda for Auburn Meeting

## AIA COMMITTEE ON HOSPITALS AND HEALTH (CHH)

### CHH Auburn Presentation:

Committee member participation;  
program ideas

### CHH Regional Activities:

California regional CHH report —  
good example for other regions

Texas hospital meeting; Texas Society of Architects & Texas Hospital Association

NY AIA Chapter hospital study group

NY AIA Chapter proposed research program

Other regional reports

### Corresponding Members of CHH:

Each CHH member suggest names

### International Activities:

International Hospital Federation  
US tour — in Washington early  
September 1960

Exhibition problem—AHA convention (Aug. 29-Sept. 2) on west coast—time inadequate for panels to reach Octagon for IHF visit

CHH participation in IHF tour?  
Special hospital issue of *AIA Journal* will be available

British exhibition may be available from Ministry of Health (later)

AIA representation on hospital committee of UIA

### Atomedics:

Birmingham meeting 1959

Washington meeting Jan. 26, 1960

McGuire to present idea at this Auburn meeting

### Liaison Projects:

- Operating room safety:

NFPA committee (Morss represents CHH & AIA)

Possible *AIA Journal* article?

- College of American Pathologists: AIA-CHH cooperation requested in preparing laboratory planning manual
- National plumbing code: Proposed revision to include new section on hospital plumbing
- USPHS: Current legislation. Proposed AIA resolution commending USPHS planning guide material

### CHH Projects & Articles:

- Unit bedroom plans: *AIA Journal* article: CHH subcommittee draft prepared
- Physical therapy: *AIA Journal* article: Britsch draft prepared
- Aging: Proposed *AIA Journal* article: Fickes: medical units for nursing homes

A M A conferences — CHH participated only in west coast meeting

*AIA Journal* articles: Cowgill: Building type reference guide: May & July 1960

- Architectural school design programs: CHH to follow up original two programs they prepared Remind National Institute for Architectural Education of CHH interest
- Leaflet on responsibilities: Morss & Fickes to draft text for new brief document; use AIA

document M-501 as model (schools)

### AHA Activities:

Committee on planning  
Committee on design & construction  
Planning institutes  
Convention seminars & exhibition  
Publications of interest to AIA  
New abstract service

- AHA-AIA collaborative research program (W-59):  
Operations research project; progress report  
Hospital department construction cost analysis, progress report  
Laboratory planning, possible third project?

### Package Dealers:

Encroachments reported in several regions

### CHH Budget:

### AIA Convention

Which CHH members plan to attend?

### Next Meeting:

Washington — fall 1960

### New Business:

Johnson & Johnson film on hospital sepsis (20 minutes)

Proposed *AIA Journal* article: Operating Rooms: CHH compile examples

(Note: Above items are actual outline agenda for this meeting of CHH and are typical of amount of detail that can be and is covered in a two-day meeting of an AIA national committee—13 members plus staff)

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### Current Membership AIA Committee on Hospitals & Health (CHH)

E. Todd Wheeler, FAIA, Chairman  
North Central Region  
Chicago, Illinois  
Will W. DeNeff  
Northwest Region  
Spokane, Washington  
Eugene W. Fickes, Jr  
California Region  
Monrovia, California  
John M. Hewitt  
Central States Region  
Kansas City, Missouri

Matt L. Jorgensen  
South Atlantic Region  
Atlanta, Georgia

Aaron N. Kiff  
New York Region  
New York, N. Y.

Vincent G. Kling  
Middle Atlantic Region  
Philadelphia, Pennsylvania

Roland L. Linder  
Western Mountain Region  
Denver, Colorado

Sherman Morss  
New England Region  
Boston, Massachusetts

William R. O'Connell  
Texas Region  
Austin, Texas

Adolf H. Roessling  
Great Lakes Region  
Detroit, Michigan

Walter B. Schultz  
Florida Region  
Jacksonville, Florida

Zeno L. Yates  
Gulf States Region  
Memphis, Tennessee

Eric Pawley  
Staff Executive  
AIA Committee on Hospital & Health

# A Voluntary Therapeutic Community for Alcoholic Rehabilitation

## DESIGN PROBLEM

AUBURN UNIVERSITY

*Alabama Chapter  
AIA Scholarship Competition*

Major problem—winter quarter  
issued: Feb. 3, 1960  
due: Mar. 6, 1960

The community for alcoholic rehabilitation is a new kind of building complex — a community dedicated to the physiological and psychological rehabilitation of the alcoholic. Treatment for alcoholism has been most successful at the group level, not through individual treatment, consequently this building complex takes a positive direction toward fostering community life.

Basically, the program of treatment is as follows: a two- to seven-day period of intensive treatment (drying out); followed by a five-week program of individual psychotherapy — and additional treatment as an out-patient, normally at an out-patient clinic near his home.

The organization and composition of the physical plant both spatially and functionally, the organization of the staff itself all combine, exposing the patient to the "total push" — the rehabilitation of the patient.

The site is a 200-acre area some six miles due south of Auburn (a topographic diagram was attached for student use).

The following program is in outline form and will serve as a framework defining major areas. Specific areas will be defined by each individual.

### Administration

<i>staff:</i>	<i>office or work space required:</i>
receptionist & PBX	lobby
director (psychiatrist)	office
assistant director (psychiatrist)	office
2 psychiatric social workers	conference room
head nurse (RN)	office
occupational therapist	office
dietitian	office (kitchen area)
secretary	chaplain's room
records clerk	office
male attendants	records room
nurses aides	
cooks	
janitorial & maid service	
maintenance engineer	

### Intensive Treatment

10 private bedrooms	(2 security- isolation)
toilets and bath	
MD internist	office— exam room adjacent
lab technician	laboratory
nurses station	
utility room, storage	

### Ambulatory

*dormitory area:*  
women: 12 beds (3: 4-bed wards)  
men: 28 beds (7: 4-bed wards)  
recreation lounge, male & female  
toilets, bath

*main lounge*  
(recreation plus library plus occupational therapy)

*dining hall, kitchen, commissary*

**Maintenance — Services —  
Garage — Mechanical Equipment**

### **Student Comment**

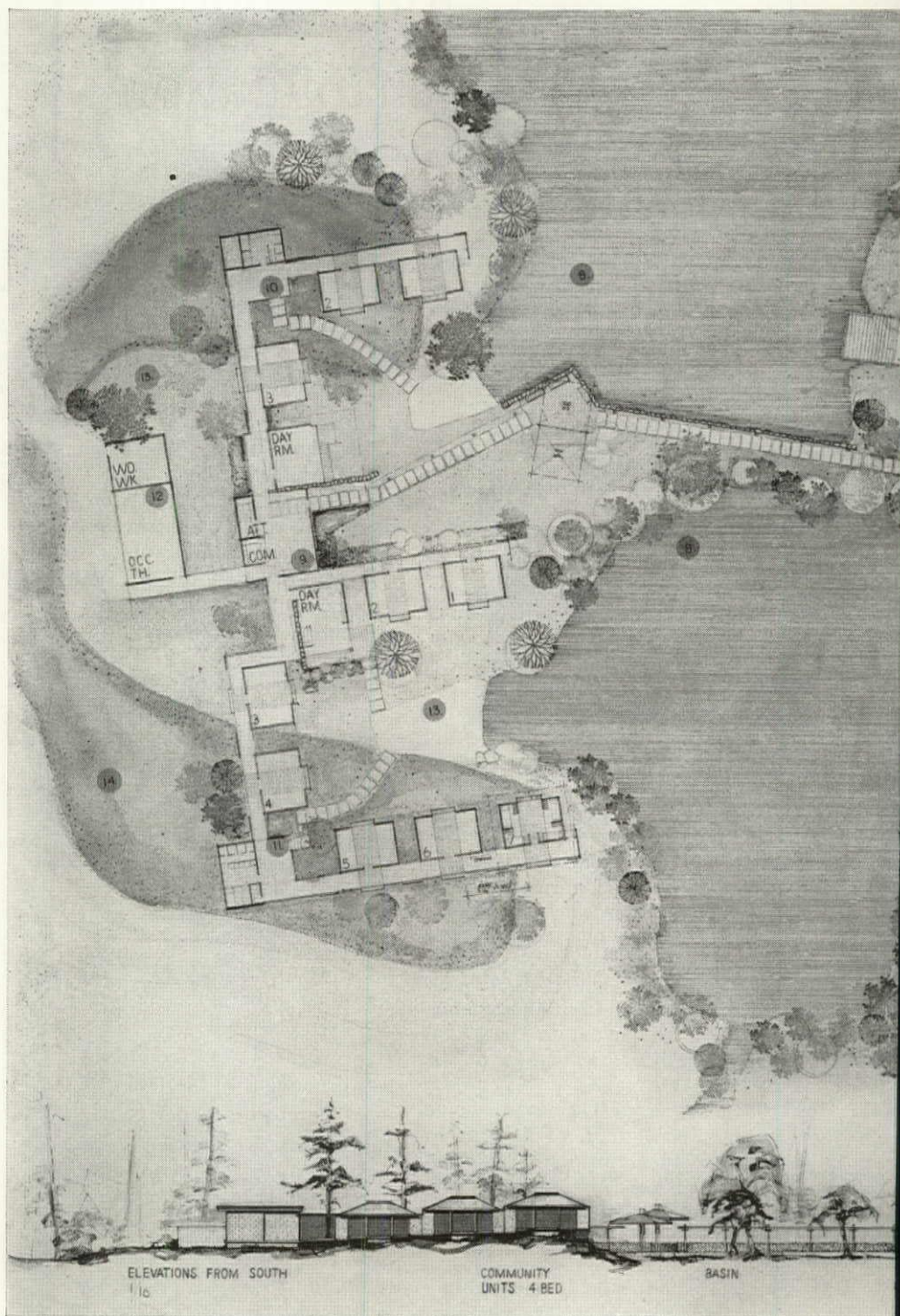
"... the opportunity to meet the members of the national AIA Committee on Hospitals and Health and to have the advantage of discussing our problems during the design stages was an invaluable experience. We *were* rather dismayed at the committee's great concern for detail, new methods, equipment and functional items rather than for the esthetics of our solutions . . ."

FIRST PLACE STUDENT DESIGN

A  
Voluntary  
Therapeutic  
Community  
for  
Alcoholic  
Rehabilitation

CARLISLE  
TOWERY

*Auburn  
University*







# Recent Typical Hospital Bedrooms

## Report by the AIA Committee on Hospitals & Health

► General hospital capacity in the United States has been increased by about 400,000 beds in the past 12 years. Most of the new beds are in single, double or four-bed rooms, which means that at least 150,000 separate rooms have been constructed, in some 6,000 different institutions. There is still said to be a shortage of 850,000 general beds. In consideration of this large building program, the AIA Committee on Hospitals and Health has studied a representative selection recently constructed and has asked a group of hospital administrators to comment on their new rooms from their own experience in living with them. This is a factual record of what has been reported to the committee.

It was not the committee's purpose to include an analysis of the number of beds per nursing unit, or the proportions of single, double and four-bed rooms within given units. These are problems unto themselves. This study is limited to the individual room *per se*, to a re-

view of numerous small but often vital details that make either a good room or an unsatisfactory one. These details are fine points that an administrator or architect should be familiar with before departing to something more original, if that should be his wish.

In general, the many room plans reviewed have basic similarities but many variations in detail. Accompanying plans have been specially drawn to illustrate the majority of features that will be discussed. It must not be construed that these represent ideal or minimum standards.

### Size

First point of interest is the considerable variation in room sizes. Ranges of net clear floor area from corridor door to window stool, not including built-in wardrobes, are:

single rooms: 117 to 172 sf  
(deluxe are larger)  
double rooms: 157 to 210 sf  
four-bed rooms: 308 to 401 sf

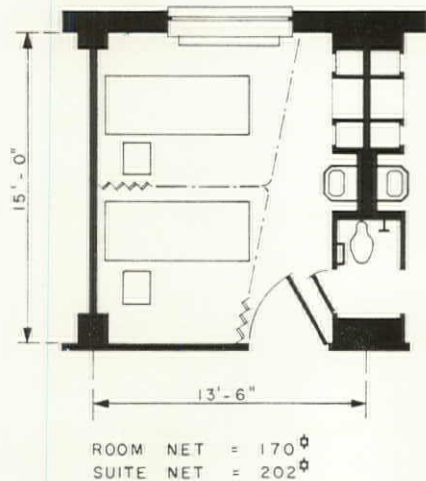
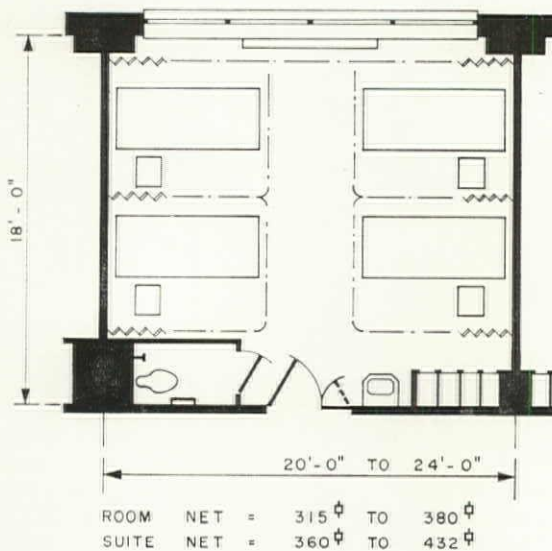
Major differences are found in depth of rooms from inside of ex-

terior wall to room side of corridor partition, all the way from 14'-6" for single rooms or 15'-0" for double and four-bed rooms to 21'-8" for all types. These differences are caused principally by varied space requirements of one or two beds in combination with various plumbing facilities — they reflect the endless search for a common denominator which will have flexibility to accommodate several combinations of room and toilet requirements within a uniform building dimension and fenestration without waste of expensive space.

In the two and four-bed rooms a clear distance of 14'-0" for two beds and two bedside tables is "snug," but it should be noted that the majority of rooms studied measure nearer to 15'-0" clear, which is the USPHS standard. Lavatory, toilet door, or wardrobe door do not encroach into these clear dimensions in the better rooms.

In the other dimension, comments of administrators evoke no complaints about single rooms as narrow as 10'-0" to centers of partitions—rooms up to 12'-0" on

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centers draw comments from "excellent" to "more than ample." Majority of double bedrooms are 12'-0" on centers and are well regarded—smaller ones are criticized for being too tight. Four-bed rooms range from acceptable minimum of 20'-0" on centers to more than 24'-0".

#### Closets

In almost every case individual hanging space is provided for each patient, often in the form of built-in metal wardrobes—sometimes these are in combination with dressers, with mirrors over. One caution was offered that mirrors should not be so placed as to reflect light into patient's eyes.

#### Furniture

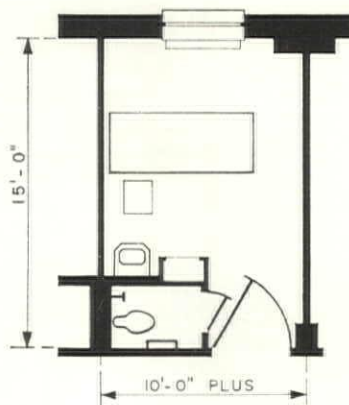
There is uniformity in every plan reviewed in the way beds are set parallel to exterior wall, so that patients can look out window without facing directly into the bright sky. Motor-operated high-low beds are also uniformly popular—it should be noted that they may be a full 7'-3" in overall length.

There is no uniformity in position of bedside table. It may be placed on near side of bed as one enters room, or on far side, or sometimes on patient's right or left, whichever way the bed faces. No preponderant preference can be detected. The typical bedside table measures about 16" x 20".

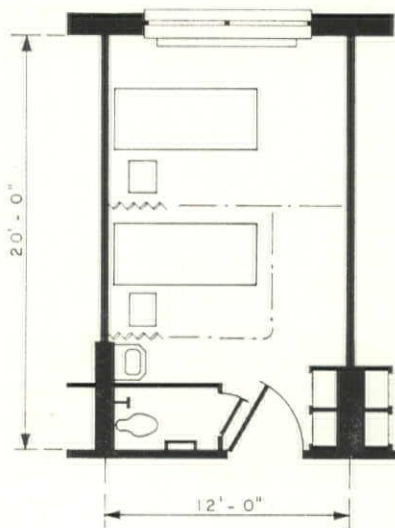
Plans reviewed did not concern themselves with other furniture. In single rooms, especially, the presence of a bureau, side chair, arm chair, ottoman, or television set is partly dependent on economic status of patient being served. These items take space and deserve attention in the planning stage—they may well affect overall room size.

#### Plumbing Fixtures

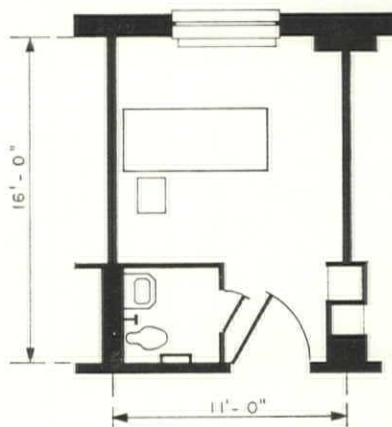
Next to room size the most important architectural problem is disposition of plumbing facilities. Although minimum budget hospitals are still being built without a toilet connecting to every bedroom, a private toilet is now regarded as a basic feature with each bedroom. It is perhaps axiomatic that in almost every case a bedpan cleansing device is incorporated. 2'-10" to 3'-2" by 3'-10" to 4'-10" are the dimensions noted for individual toilet rooms, usually with grab-bars on one or both side walls. Locating



ROOM NET = 120 ⚡ PLUS  
SUITE NET = 150 ⚡ PLUS



ROOM NET = 202 ⚡  
SUITE NET = 240 ⚡



ROOM NET = 136 ⚡  
SUITE NET = 176 ⚡

water closet slightly off-center in the room allows a little more space on wider side for manipulating cleanser—the latter needs only cold water and is usually on the right as you face back wall. Some plans indicate bedpan rack or cabinet within toilet room—otherwise bedpan is stored in bedside table.

Several plans were reviewed which showed shared toilets between two single or double rooms. While this arrangement may save some space and expense, it presents its own problems such as added disturbance to patients, special door hardware, and lack of flexibility in room assignment to patients of opposite sex. It is interesting that the administrators with this type of accommodation offered no comment on these points. The committee infers that the shared toilet is valid only in large hospitals, in which separation of sexes is a lesser problem.

Location of lavatory reveals about an even choice between placing it in bedroom proper, where it invites more frequent use by attending nurses and physicians, or in toilet rooms, where it is less institutional-looking to patient and visitors. It is known that some thoughtful hospitals purposely set lavatories at 3'-0" above floor—in other plans studied, the lower, conventional residential height is observed.

Not many toilet rooms have tubs, which make them complete bathrooms off bedrooms. This choice is undoubtedly a matter of economics of the particular hospital. The fact that almost no shower stalls appear leads the committee to conjecture that most hospitals are content to have shower heads in tubs, relying on suction-cup rubber mats and strong grab bars to avoid injury to patients from slipping.

#### **Doors and Windows**

Standard bedroom door width is 3'-10" or 4'-0". This can be reduced by 2" with offset hinges. A slight majority of doors to single and double rooms is hinged on side toward beds, so that door ajar serves as screen to patient. Toilet room door widths are 2'-0" to 2'-4" swinging out into bedroom, except where surface-bolted or pivoted hinges are used, so that doors can be removed in the event a patient in toilet room faints and falls against door.

The wide variety of window treatment suggests that climate, orientation, esthetics, economics and other considerations do more to govern this architectural feature than any predetermined optimum standard. It is interesting that administrators' comments in this general area say little about psychological or therapeutic values of wide vs narrow or high vs low windows, but do offer practical complaints about windows that are drafty or difficult to clean and wood stools that spot too easily. Preferences are expressed for marble and laminated plastic stools. A definite division of opinion is found between those who prefer nothing but drapes and those who favor only Venetian blinds at windows. The committee notes that low window stools offer patient an opportunity to see out when his motorized bed is in its low position.

#### **Room Finishes**

There is no strong preference for one type of flooring material over another. Inquiries made about oversize sloping bases to keep furniture away from walls reveal that those few who have them seem satisfied, whereas only one administrator without them expressed a wish that he might have had them. Wall behind bed is the only location within a bedroom where a sloping base appears to have merit. Plaster walls are most common. Acoustical ceilings are not considered essential, even in multi-bed rooms—use of a suspended acoustical system is more valuable for access to mechanical work than for its acoustical properties.

#### **Built-in Equipment**

Built-in wardrobe-dresser-recessed-mirror combinations have been discussed above. Some emphasis is also found for separate 9" wide flower shelves bracketed on wall beside or opposite bed, about 4'-6" above floor. There are a variety of cubicle curtain arrangements in multi-bed rooms, from the simplest cross-room tracks to complete enclosures around each bed.

#### **Lighting**

A study of the rooms shows that no single, a few double, and most four-bed rooms have ceiling fixtures for general illumination. In almost all rooms there is a wall fixture over head of bed, mounted

from 5'-2" to 6'-6" above floor. There are numerous fixtures on the market today for this purpose, providing varying combinations of direct and indirect light. The one prevailing comment of a number of administrators is that no wall light gives adequate illumination for examining the patient. Another caution is to control light in multi-bed rooms so that it will not shine in another patient's eyes—this frequently happens across the room in four-bed rooms. Almost all rooms have night-lights, either set in wall at a low elevation or incorporated in over-bed light. The one prevailing comment here recommends switching the night-light out in corridor or near room door, rather than at bedside.

A special wrinkle for single rooms, where private duty nurses may be in attendance, is a ceiling down-light over a chair near door into the room, at which location the nurse can guard patient from unwanted visitors and at same time read comfortably day or night without bothering patient.

#### **Other Electrical Work**

The audio-visual nurse's call is almost universally used and gets a popular rating among administrators who commented—except for use in pediatrics. In some cases the speaker is located in ceiling over bed. In one instance a request is made for the pilot light also in ceiling, as being more easily seen by patient. On walls with two beds the use of one call for two beds or provision of separate calls is about an even choice.

In a small percentage of hospitals several radio channels are piped in at head of bed. In fewer instances the same is true of TV; most TV sets are portable and provided through a rental agency.

#### **Oxygen and Suction**

Oxygen is piped in from a central source in most rooms studied. Outlets are 4'-0" to 5'-6" above floors—5'-0" minimum is the *NFPA Bulletin #565* standard if outlet is not recessed. There is an even division of opinion concerning location of oxygen outlets, either on near side of bed, as one enters room, or on far side. Suction is provided in all rooms in approximately one-third of the hospitals, in some rooms in one-third, and in no rooms in one-

third. Outlets are either grouped in same plate with oxygen or they are separate, beside or below oxygen. Piped compressed air in bedrooms is noted only occasionally.

#### Airconditioning

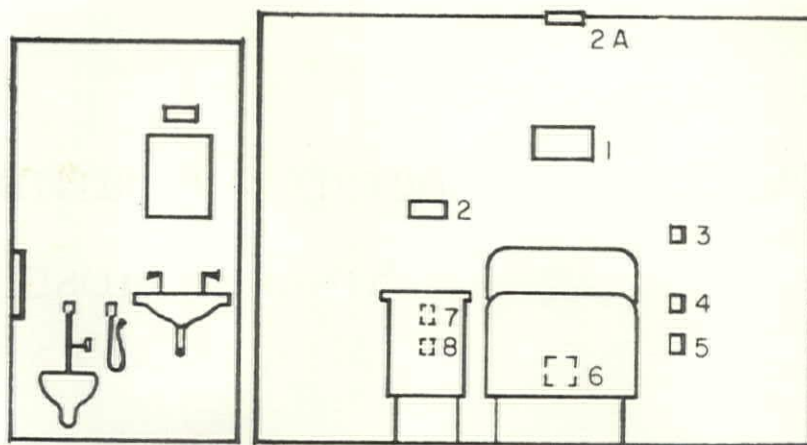
The incidence of airconditioning is still something that depends on climate and economics. Individual room units present no problems of cross-contamination of air from one room to another. Central systems do create problems if recirculation is desired. A check across the country indicates that opinion is divided on extent to which central recirculation should be permitted.

#### Organization of Wall Outlets

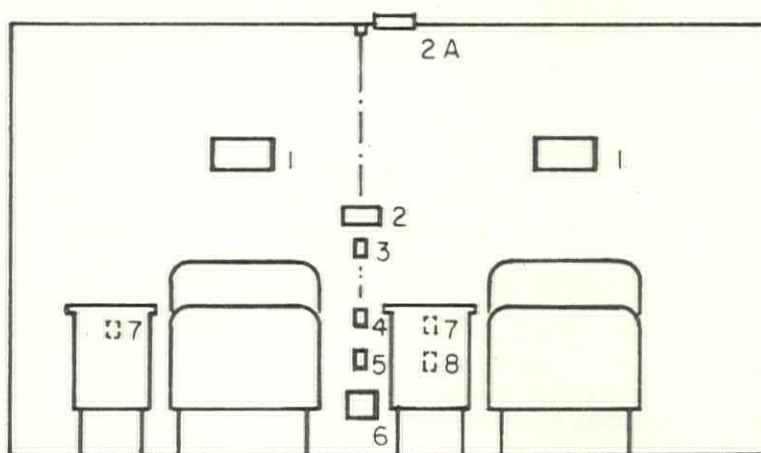
An over-all glance at the numerous room layouts studied by the committee emphasizes the clutter of wall outlets and paraphernalia of many kinds at head of each bed. In general they detract from appearance of room. A check-list for a well-equipped bed in a single room will include some 24 different facilities! In order to minimize the scatter effect at normal eye level, the committee suggests that half of these facilities could be consolidated in a low-wall outlet through a single flexible cable to bedside table, where many items would be within reach of patient. Only two items might then occur on wall at eye-level—oxygen outlet (code requirement) and over-bed light (if used). Following check-list gives an indication of the thinking of some of the committee on this point:

#### Portable Bedside Panel (Patient's Control)

- nurses' call switch, pilot light, monitor light
- general room illumination switch, dimmer control
- reading light switch
- room thermostat remote control
- electric blanket control
- electric clock
- duplex convenience receptacle
- radio station selector (central radio system)
- jack for pillow speaker (ceiling speaker in private rooms)
- provision for TV remote control to be clipped onto panel
- provision for telephone instrument (bracket type)



Single room elevation



Double room elevation

#### Legend

- |                             |  |
|-----------------------------|--|
| 1 overbed light             | 5 suction bottle bracket                 |
| 2 nurses' call              | 6 night light — switch outside room door |
| 2A micro speaker in ceiling | 7 double duplex outlet                   |
| 3 oxygen outlet             | 8 telephone, radio, TV jacks             |
| 4 suction outlet            |  |

#### Integral with bed

- bed control (within patient's reach, but with nurse-controlled cut-off feature)

#### Ceiling

- nurses' call micro-speaker
- radio speaker (private rooms only)

#### High on Wall (60" or higher)

- over-bed light fixture (direct and indirect)
- oxygen outlet

#### Low on Wall (approximately 24")

- receptacle for portable bedside panel
- night light (switched from corridor)
- telephone jack
- double duplex receptacle (bed, oxygen tent, portable X-ray, heating pad, etc)
- remote recording instrument receptacles (temp, pulse, respiratory)
- suction outlet
- bracket for suction bottle ◀

# A Physical Therapy Department for Smaller Hospitals

(100 TO 200 BEDS)

by **Carl C. Britsch, FAIA**

*former member AIA Committee on Hospitals and Health.*

*This article was prepared at the request of the committee*

► In recent years physical therapy has figured so largely in the rehabilitation of disabled persons that need for PT facilities, even in a small hospital, should be seriously considered.\* Often the patient who has suffered certain surgery or changes of health can be restored to an active role in society through therapy. In reestablishing self-confidence, physical therapy may also hasten release from the hospital and shorten convalescence.

Physical therapy is essential in treatment of many cases of major amputations, paralysis resulting from poliomyelitis, cerebral palsy, and other disabling diseases. Prevention of deformities, through therapy, is a recognized medical practice.

The location, size, equipment and staff of such a unit are important factors in its successful service and function. Experience has shown that if these requirements are properly planned, chances of departmental self-support increase.

It is the purpose of this article to offer a practical approach to the design of such a department within a limited area. It is based upon individual architectural study and collaboration with a distinguished physical therapist, Robert Homlar.

## Design and Function

Prior to undertaking even a preliminary design, the following functions must be relatively well determined:

## Basic Data

- number of therapists
- hours & days of operating department
- number of treatments anticipated in several categories, both average & peak load & both in-patients & out-patients
- anticipated expansion needs

Following details in the architectural program are assumed:

- one examination room
- 3 therapy booths with lavatory in one
- exercise area
- office for 2 persons
- waiting for 3 persons
- storage
- Hubbard tank
- 2 portable whirlpools
- equipment for exercise room: ladder, gym mat, portable steps, parallel bars, shoulder wheel, mirrors, other
- patients toilet

## Location

For the usual staff in a small hospital, transportation of patients within the building is a problem—it may therefore be desirable to place the PT department as centrally as possible. However, the in-patient load of a PT unit in a general hospital will usually be about half the outpatient load. Outpatients should have a minimum, and preferably no, steps or ramps to traverse.

If occupational therapy is within the scope of the hospital, then physical therapy should be convenient to it. OT, the equally-needed partner of PT, may be the subject of a future article.

Patients coming to this department may be subject to mental-emotional conditions related to their handicaps. They may at first be apprehensive or have claustrophobic tendencies. Treatment rooms should, therefore, be well situated for good natural lighting. Wall colors should be harmonious and cheerful, floor finishes of rubber, vinyl or other non-skid materials. Every effort to place the patient's mind at ease is important. An experienced therapist makes the comment "avoid booths without windows." This suggests that a PT department should occupy an area with suitable outlook.

The accompanying drawing places greater emphasis upon exercise and hydrotherapy areas and minimizes or omits facilities considered less essential or often duplicated in the normal hospital. The 900 sf overall area, recommended by studies of the American Hospital Association for such a department in a small hospital, is kept in mind.

Necessary non-professional staff assistants, under direct supervision of the physical therapist, can be trained to take charge of many details. Transporting patients, preparing them for treatment, assembling

\* "It is estimated that about 10% of in-patients and 20% of outpatients can benefit from physical therapy . . ."  
*Physical Therapy — Essentials of a Hospital Department AHA 1957*

equipment and supplies, timing treatments, and maintaining supplies are obvious sub-professional functions. The therapist might better concentrate on personal administration of special treatment and observation of progress of various patients. A complete scheduling procedure is one function of the secretary-receptionist.

#### Office and Waiting Room

A 5' counter or desk, built to specified needs of the department may suffice for receptionist as well as for space for making up charts and filing reports. Waiting area can be limited to two or three chairs, if tailored to an accurate system of scheduling. The bulletin or control board on the wall gives the physical therapist a quick visual account of all patients on the floor and their location within the department as they are charted by the attendant and prepared for treatment.

#### Linen Storage

Economic use of space and consideration of daily supplies available centrally, limits requirement

for linen storage to a set of open shelves.

#### Hydrotherapy

Portable whirlpool hydrotherapy units, rather than fixed units, provide greater flexibility in the administration of treatments and conserve floor space. Two tanks of different depths are recommended—one 24" tank for arm treatment, for which the unit is placed beside a seated patient, and one of 36" depth for leg treatment. With the portable tank a good floor drain is, of course, necessary.

The Hubbard type tank, important in the treatment of polio and muscular dystrophy, may be a useful piece of equipment in completing the services of this department. However, the small hospital may not find it possible to include it because of space requirements.

#### Treatment Rooms

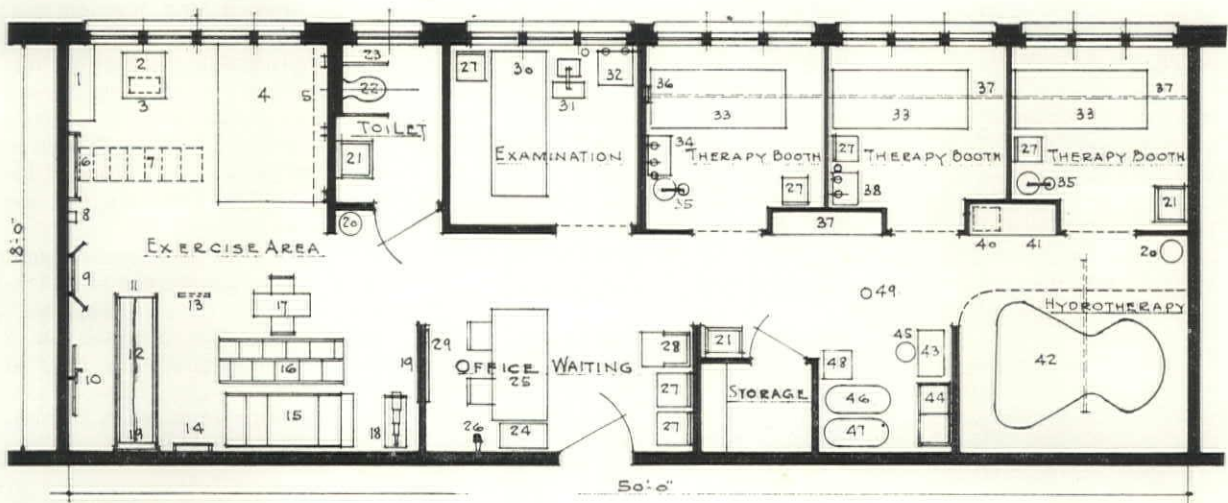
In lieu of the customary cubicle curtains for treatment rooms, the accompanying drawing suggests the use of 2" light wall panel construction, supported by frame or pipe

standards 6" to 8" above the floor and to 7' height to allow for good circulation of air. A cased opening of not less than 3'-6" width should be provided with rod and curtain.

This type of cubicle will first of all give the patient a feeling of greater privacy, which many may appreciate. It will make possible the running of electrical conduit and the placement of service outlets and equipment along these walls. With the rigid support of this partition, an overhead bar or member containing a series of eyelets or small pulleys may be placed. From this, adjustable slings or apparatus may be suspended for arm or leg gear. The placing of electrical outlets in side walls also makes it possible to change position of treatment tables and gives additional latitude for operator. With this type of booth construction, linen supply shelves and utility sink may be built into wall facing corridor.

#### Exercise Area

In addition to typical equipment placed in this area, there are many portable exercise units that may be



Physical therapy area for smaller hospitals

#### Equipment

- 1 three shelves 6"-2'-3" & 4.0" above floor
- 2 table
- 3 foot rest
- 4 gym mat
- 5 shelf 6'-0" above floor
- 6 stall bars
- 7 adjustable inclined ladder over
- 8 shoulder abduction ladder
- 9 posture mirror
- 10 shoulder wheel
- 11 parallel bars
- 12 inversion & eversion ankle exercise boards
- 13 sayre head sling attached to ceiling
- 14 pulley weights
- 15 steps portable
- 16 step rack with rails

- 17 table for hand examination & massage
- 18 tapered hand grip & wheel
- 19 mirror
- 20 laundry hamper
- 21 lavatory
- 22 water closet
- 23 hand rails
- 24 filing cabinet
- 25 desk
- 26 telephone outlet
- 27 chairs
- 28 wheel chair
- 29 bulletin board
- 30 examination table
- 31 ultra violet lamp
- 32 bedside table
- 33 treatment table

- 34 direct current generator
- 35 infrared lamp
- 36 traction equipment
- 37 bar over with spaced screw eyes
- 38 short wave diathermy unit
- 39 linen shelves
- 40 sink with drain board
- 41 cabinet with glass shelves
- 42 hubbard type tank
- 43 paraffin tank
- 44 contrast bath
- 45 adjustable stool
- 46 portable whirlpool bath 24" deep
- 47 portable whirlpool bath 36" deep
- 48 hot pack machine
- 49 floor drain

*Inversion and eversion boards for ankle exercise*



*Boards are reversible for exercise of inside and outside muscles controlling ankle action*



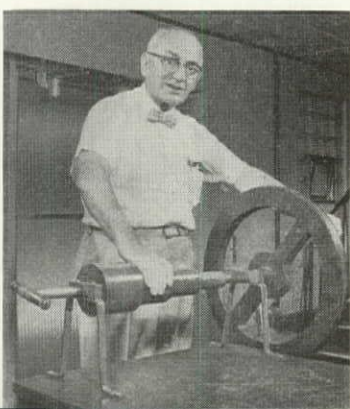
*Shoulder reduction and abduction and back exercise apparatus*



*Pace apparatus*



*Tapered Hand Grip. The four offsets encourage tightening of grip as muscle action is restored. Axle handle also serves to strengthen wrist pivotal action*



constructed by local craftsmen at nominal cost. Various communities may be subject to certain occupational hazards causing disabling conditions. Physical therapists will often devise special pieces of equipment which may prove successful in the treatment of particular cases. We call attention to a few such devices which have been found helpful in exercise therapy.

Inversion and eversion boards for ankle exercise, to be used in connection with low horizontal bars, are reversible for exercise of inside and outside ankle flexing.

For shoulder reduction and back exercise, an inclined ladder above the stall bars is hinged at its outer end to a support dropped from ceiling and adjusted to different heights by hooking the near end to the rung of stall bars which best suits the size of the patient. This provides an up-grading of ladder rungs and when not in use can be pulled up out of the way.

A simply constructed piece of floor apparatus to encourage knee action in lifting the foot, rather than lifting the leg by hip and upper body movement, is the floor rack made of 1" x 4" boards on edge—with a division strip through center and alternating stepping areas. Hand rails should be part of this apparatus to prevent tripping and falling. This exercise should be conducted before a full-length mirror to allow patient to observe his progress and to correct wrong use of muscles.

Another piece of movable equipment is the tapered hand grip. This is a variable friction wheel with tapered axle that operates on a frame elevated above the floor at average hand height. The wood axle is made with four offset sections measuring from 4" down to 1" in diameter.

The set of steps should also be made movable. This piece of equipment may serve a dual purpose by projecting the top landing beyond the railing, thus forming a seat with foot rest a few inches above the gym level. This encourages knee action and upper leg exercise in pulling the foot back in a seated position.

These and many other easily constructed items may supplement normal equipment recommended for gym apparatus in a small physical therapy department. ◀



# The Growth of an Idea

by **Alonzo Clark, AIA**

*Project Manager with Voorhees, Walker, Smith, Smith & Haines;  
former member of the AIA Committee on Hospitals and Health*

► In April of this year the New York Chapter, AIA, was notified by the US Department of Health, Education and Welfare that the application of its Committee on Hospitals and Health for a research grant had been approved. This grant provides for \$34,650 a year for three years to finance research in hospital design. This was but another milestone in the history of one of the most active chapter committees in the Institute.

After World War II, the pressing need for hospital beds, combined with federal assistance provided under the Hill-Burton Act, made hospitals a staple in the planning diets of a good many architects. A few of us in New York who realized the more we learned about hospitals, the more there was to learn, felt the need to exchange information and discuss theoretical problems on a more or less "high-level" of experience in the design of hospitals. These architects ranged from individual practitioners like Addison Erdman to representatives of large offices, such as George Holderness of Eggers and Higgins, and the writer, of Voorhees, Walker, Foley and Smith. In 1953, at my suggestion, we started to meet informally for lunch at the Architectural League and "kick around" ideas on hospital design.

As word of this educational opportunity got around, and more people became interested, the chapter administration decided to add this specialty to the fast-growing Technical Committee, along with Schools, Stores and Shopping Centers, and HVAC Equipment. Early in 1954, in response to a questionnaire sent to all chapter members, twelve persons indicated an interest in roundtable discussions on hospitals.

At the first meeting of the hospital section in October 1954, with five members present, I was appointed chairman to arrange meeting dates, write minutes and sweep up after the sessions. A secretary was to be appointed at the next meeting but I was never able to pin this chore on anyone else. We decided to meet once a month to discuss an assigned subject, or hospital element, and to visit a new hospital, preferably with the architect as a guide.

By 1955 the group had doubled, and hospital inspections were changed to week-ends to allow more people to take advantage of these interesting and informative field trips. Isaiah Ehrlich of Louis Allen Abramson's office took charge of this activity and established a pattern for the meetings. Starting early on a Saturday morning the actual inspection was preceded by brief talks: the administrator or board member describing the planning objectives and the architect expounding his design concept. Questions and answers were exchanged during the "walk-around." We found that both administrators and architects were delighted to display their creations. More detailed discussions were held during luncheon (usually furnished by the hospital as a PR gesture).

As the luncheon meetings became larger, the discussions gave way to talks followed by question-and-answer periods. Mary Worthen, of Kiff, Colean, Voss & Souder, was tagged to arrange these meetings. The excellence of the speakers and panel members she brought to these sessions attracted more and more people, many with very little or no hospital experience. As a result the committee decided to organize these meetings on a sort of in-service training basis, starting with an over-

all approach to hospital design and continuing with consideration of the various departments and components of the hospital. Meetings were changed to 5:15 PM to allow more employees of architects' offices to take advantage of these teaching sessions. Usually thirty-five to fifty persons attended the meetings, but when a low attendance was anticipated Mary rounded up most of the people in her office to provide an audience worthy of the speaker.

As an experiment, a dinner meeting was planned for all chapter members and their guests. In December, 1955, Dr Basil MacLean, then Commissioner of Hospitals for New York City, and Dr E. M. Bluestone, prominent hospital administrator, consultant and writer, gave opposing views on hospital design and planning. The meeting was a success both in attendance and interest.

The committee did not arrange any more chapter-wide meetings until late in 1959, due to its inability to secure speakers who would interest both hospital architects and the "other kind."

These were very successful activities, but did not produce the "high-level" discussions which were originally intended. To meet this need the group initiated a third type of meeting at which committee members and a limited number of invited guests met at dinner for a roundtable discussion (controversial if possible) on the subject of the evening. The first such meeting, held at the Harvard Club in March 1956, was so successful that additional dinner meetings have been planned on almost a monthly basis. Guest speakers include architects who have designed interesting or unusual hospitals, representatives of municipal and state health agencies,

hospital consultants and hospital administrators. Attendance is held to approximately twenty-five to preserve an informal atmosphere for discussions.

We found that innovators in medicine and hospital administration were anxious to participate in these meetings and exchange ideas with us. In recognition of the discussion group's activities, the chapter Executive Committee created the Committee on Hospitals and Health on March 6, 1956. This also complied with the Institute's desire for chapter committees to parallel national committees. The presence of three hospital architects on the Executive Committee helped to accelerate this change to full committee status. Isaiah Ehrlich, appointed chairman for the 1956/57 chapter year, continued the activities of the discussion group and added a few new ones.

One of the most interesting field trips was held in May 1956 at the Long Island Jewish Hospital. Representatives of the architect, Louis Allen Abramson, and members of the board, administration and staff of the hospital met with the committee members and invited guests for a post-planning critique. This was a frank and searching reappraisal of the original program and the resulting building. Since a number of innovations had been tried under the leadership of Dr Eugene Rosenfeld, Executive Director who also acted as consultant, the resulting discussions produced a wealth of valuable information. The transcript of the proceedings, however, was so voluminous it defied the committee's efforts to reduce it to publishable form, and the opportunity for a contribution to hospital design knowledge was lost, except to those present at the meeting.

An important heritage from the Technical Committee was a strong interest in research by architects—fostered by the capable and far-seeing chairman, the late Bruno Funaro. His enthusiasm for research was brought to the new committee by Isaiah Ehrlich who had been very active in the Technical Committee research group. In November, a new research sub-committee, headed by Dan Jensen of the New York office of the US Department of Health, Education and Welfare, sent out a questionnaire to

gather ideas for research activities. Many of the architects, administrators and consultants solicited responded with a great variety of ideas, from which a program was developed. Conferences were held with Dr Louis Block, then Chief of the Research Grants Division of the US Public Health Service to consider ways of implementing the research program.

Jim Taylor of Ferenz and Taylor, became the committee chairman for the 1957/58 chapter year. The research sub-committee, with Isadore Rosenfeld as chairman, continued the efforts to get the research program off the ground. In March 1958 an application for research grant was filed with the US Department of Health, Education and Welfare. The application had to have the AIA Chapter Executive Committee sanction, and be signed by the Chapter President, but again, hospital "aficionados" in high places helped the cause. Bob Cutler of Skidmore, Owings and Merrill was President, Nate Kiff, of Kiff, Colean, Voss & Souder, was treasurer, and several other hospital architects were on the Executive Committee.

The second chapter-wide meeting, held in May 1959, was even more successful than the first. At a dinner meeting, Dr Jack Haldeman, Assistant Surgeon General, USPHS and Dr John J. Bourke, Executive Director, New York State Joint Hospital Survey and Planning Commission, spoke on trends in American hospital construction. By now, our meetings were well known in the field of hospital design and administration, and invitations to speak or attend were welcomed by leaders in the field. The exchange of ideas had moved well beyond the confines of the architectural profession. Dr Bourke's assistant, Armand Burgun, joined the committee, although it meant traveling from Albany to attend meetings.

The news of the failure of our application to win financial assistance only spurred the committee to greater efforts. Re-examination of the program (known as hindsight) brought out its weakness—lack of a focus for the research effort. Under a new committee chairman, Jim Souder, of Kiff, Colean, Voss & Souder, and research sub-committee chairman, Harold Olson, of Skidmore, Owings and Merrill, the

program was strengthened by restricting it to a well-defined area, the operating suite. After careful screening of several candidates interested in research, Robert H. Jacobs, Jr, AIA, was chosen for his accomplishment in the field of hospital design to be the research director. Largely through his efforts a new program was written, based upon "an understanding of just what personnel in the operating suite do—as a means of improving the work of hospital architects"—to quote the program.

In September 1959 a second application for a research grant was sent to Washington. After a very careful investigation by the Public Health Service, which included interviews with principals in New York, the application was approved.

Jim Souder's appointment as Director of the AIA-AHA Program of Collaborative Research in Hospital Planning has created an unusual opportunity for close cooperation between our project and the much larger effort of the national organizations. The results will most certainly be reflected in improved hospitals—a real public service by architects.

The research program, headed by Bob Jacobs, got under way in June. It might appear that with this activity added to the field trips, classes and dinner meetings, the committee would relax and "coast" through the next year. In fact, at a recent meeting, this thought was expressed by a committee member who was promptly "sat upon" by others present. The impetus which has been characteristic of the group could not be lost. A new activity, presentation of case histories of hospital projects for full chapter meetings, is planned with the hope of stimulating something in the nature of the oft-discussed, but elusive architectural criticism.

The threefold program—education of the young practitioner, exploration of new or controversial planning by more experienced practitioners and research—has become a regular and useful part of the chapter's life. The addition of a fourth—open criticism among architects—is another evidence of the kind of growth free professional exchange can stimulate. From the original five "discussees" we have grown to over five hundred in five years! ◀

HOSPITAL DESIGN

# An Educational Opportunity

by **Robert Pelletier**

*Research Assistant, Department of Public Health, Yale University*

► In 1949 a unique fellowship program in architecture was established at Yale through the interest and efforts of Charles Neergaard, Hospital Consultant Emeritus and Yale alumnus, '97. The Magnus T. Hopper Fellowship in Hospital Architecture was awarded annually to the winner of a design competition held in the third year of the Graduate School of Architecture. The competition problem itself was always the design of a hospital facility, and the roster of guest critics, lecturers, and jurors invited specifically for this problem has included eminent architects, hospital consultants, hospital administrators, and physicians. The recipient of the award was given the opportunity to study some aspect of hospital design, either by an additional year of graduate study at Yale, by travel, by working for an architect specializing in the design of hospitals, or by any combination of these alternatives.

Results of this competition have been gratifying in several respects. The quality of solutions submitted has been consistently high. Student reaction to the strong functional discipline imposed by a hospital problem has been good, with a number of solutions achieving real architectural quality in addition to sound workable solutions. Recently, the best projects each year have been exhibited at the American Hospital Association convention and frequently have been published in architectural and other professional journals. Those students who

have received the awards have done excellent work during the additional year of study, much of it having been exhibited and published. More significantly, perhaps, these talented people have shown a tendency to make hospital architecture an important part of their life's work.

Since the inception of the Fellowship program, the necessary funds were made available through the tireless efforts of Charles Neergaard. Unfortunately, Mr Neergaard has been unable to maintain his efforts as in the past and the fellowship program has been allowed to lapse.

The obvious benefits of this program to the architectural profession in general and the field of hospital design in particular has made its discontinuation all the more unfortunate. There is urgent need to attract young architects into the field of hospital design, which often appears less glamorous to them than other fields. Heightened interest in, and a flow of talent to hospital architecture is necessary if a fresh, imaginative, and competent approach is to be maintained in the coming years of great building expansion and accelerated technological change.

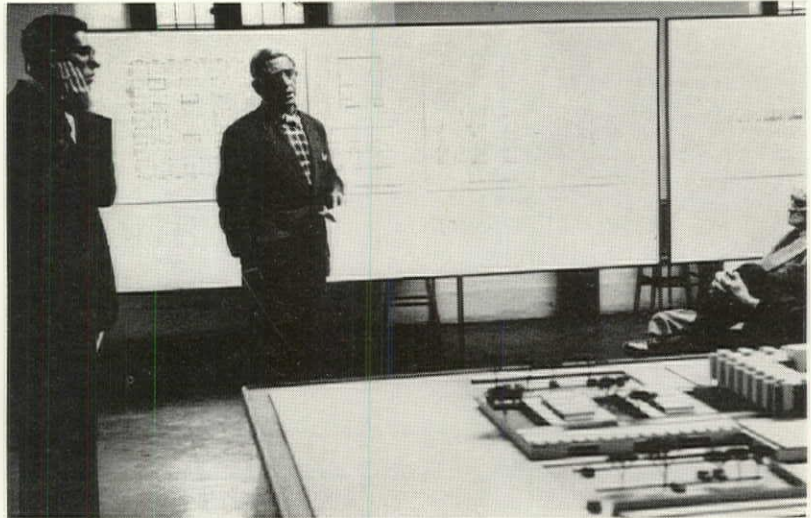
The future of the graduate fellowship program in hospital design revolves about the question of whether or not adequate funds can be raised. The Yale Department of Architecture feels that it is uniquely qualified to maintain such a graduate program. The experience gained during the past twelve years, the

close relationship which exists with the Medical School, the Department of Public Health (which includes a course in hospital administration), and the university teaching hospital with all its department heads and specialists who can be called upon for information, all tend to support this belief. More-

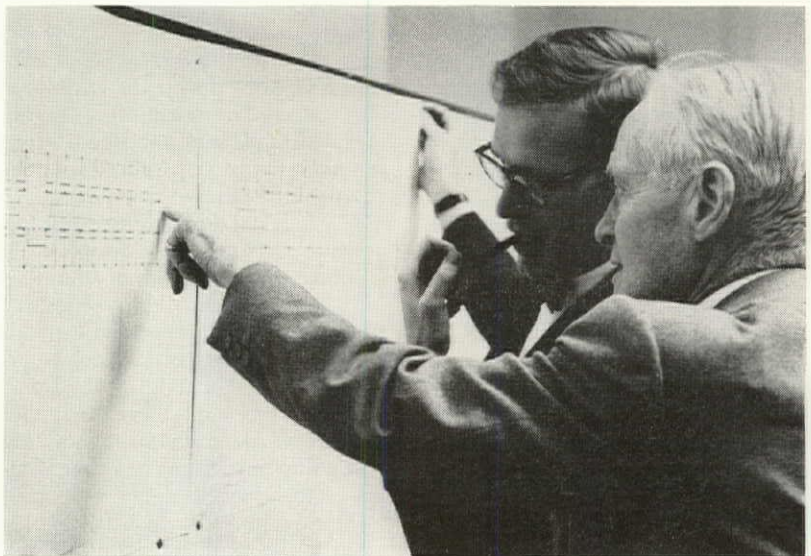
*First photo shows the jury. Left to right: Neergaard, Thompson, Rudolph, Mitarachi and Rado. Photo below is Thomas Holzbog presenting winning design to the jury.*



*Paul Nelson comments on a masters thesis on progressive patient care presented by Marc Goldstein, last year's Hopper Fellow*



*Charles Neergaard questions a plan detail by Thomas Bosworth, the runner-up in the competition*



over, the Department of Public Health has had a sponsored project in Hospital Function and Design since 1957 which has rendered valuable assistance to the Department of Architecture, both in conducting the competition and in supervising the Graduate Fellows, and can continue to insure that the students do work on realistic problems of current interest.

Although an annual major design problem dealing with hospitals and related facilities will continue to be a part of the third year program at Yale, the feeling is that a more widespread base for a fellowship award would improve the program. It is proposed that a competition problem be prepared at Yale

and copies distributed to all approved schools of architecture that wish to have their students compete. The problem might be voluntary or compulsory at each school. A central judging of selected problems would be by a jury of persons eminent in their respective fields (architecture, medicine, administration, consultation), who would award the fellowship.

The cost of such a program would be minimal, consisting only of tuition, maintenance, and travel for a student for one year (\$3500-\$4500, depending upon marital status). Supervision, criticism, and judging of the competition problem would be budgeted by the participating institutions as a part of the

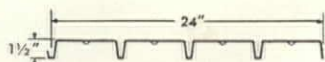
teaching program. Supervision of the graduate fellows and administration of the program would be assumed by Yale. Financing could be on the basis of an annual gift or a lump sum endowment (\$100,000 minimum). Interest in the furtherance of the fellowship program may be transmitted to either:

The School of Art and Architecture  
Yale University, New Haven, Connecticut  
Dean Gibson A. Danes

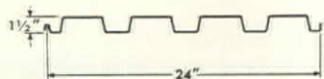
or to:  
AIA-AHA Collaborative Research in Hospital Planning  
230 Park Avenue, New York 17, New York  
James Souder, AIA, Director ◀



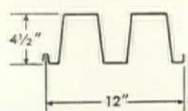
When it comes to roof systems, INLAND covers everything!



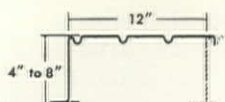
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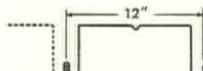
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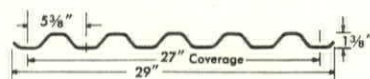
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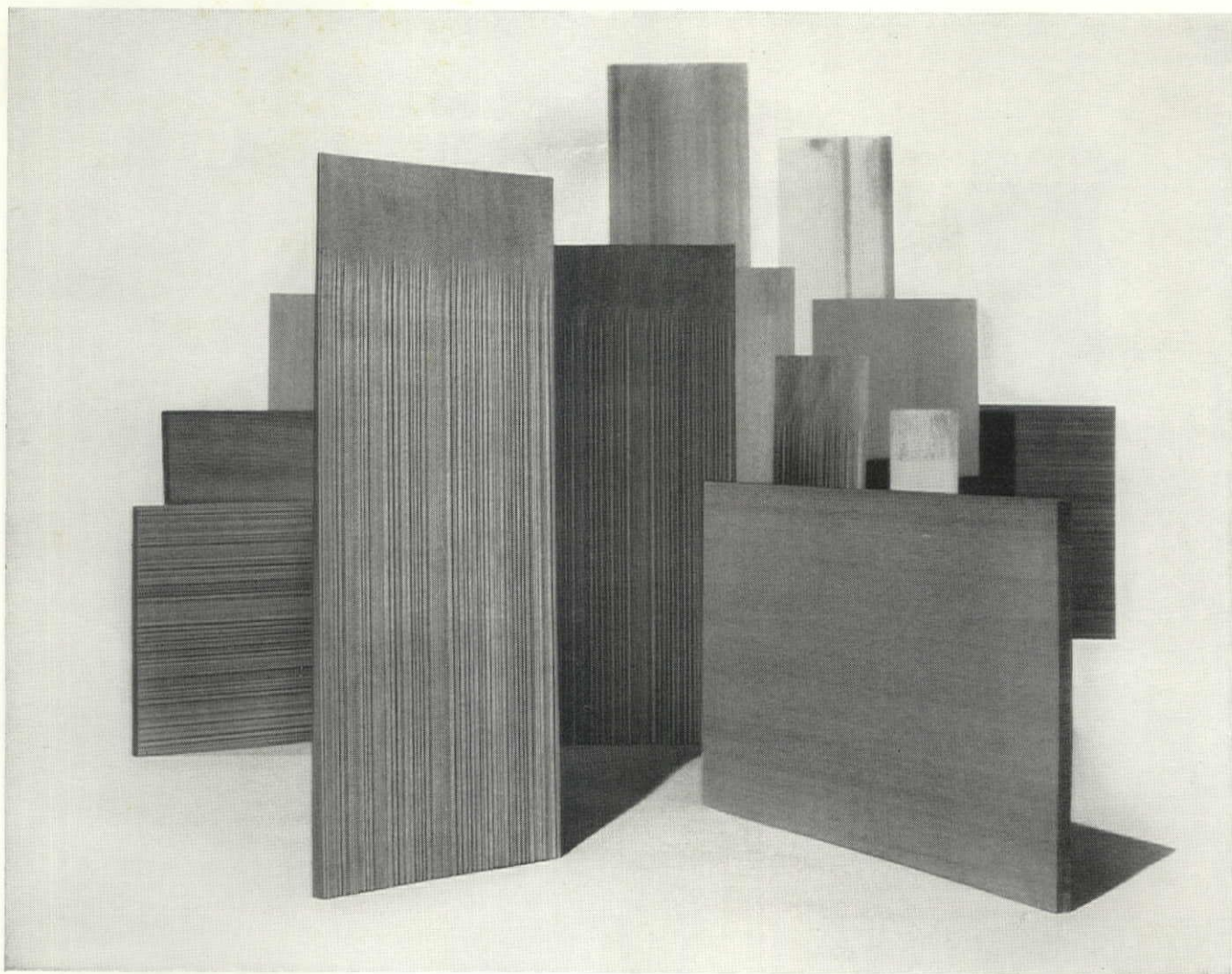
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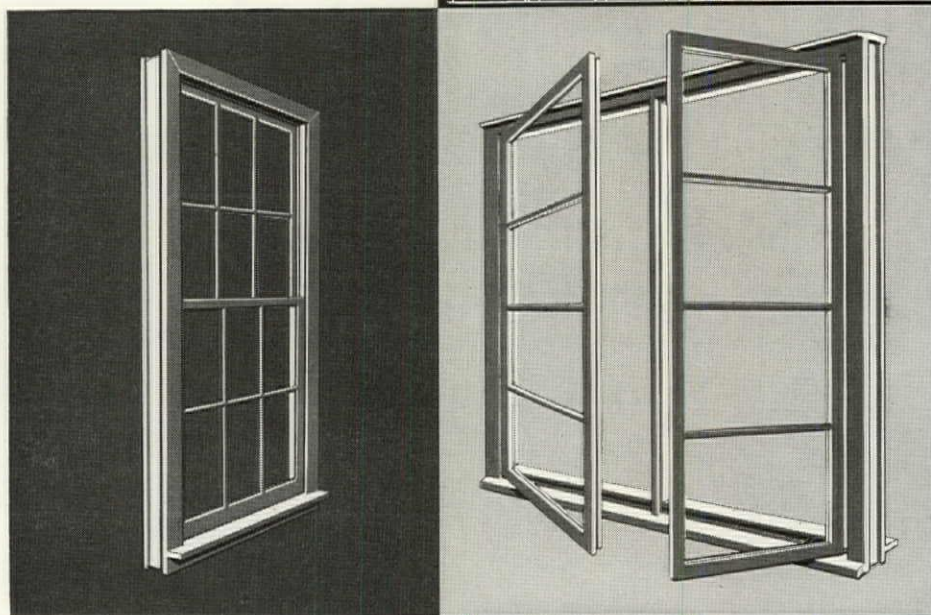
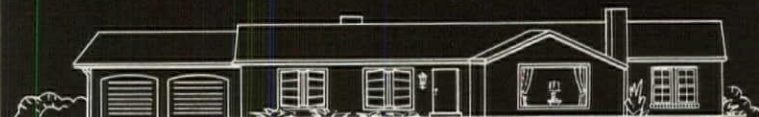


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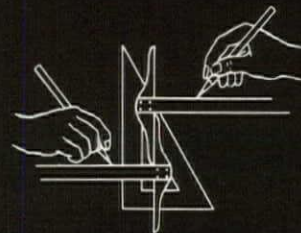


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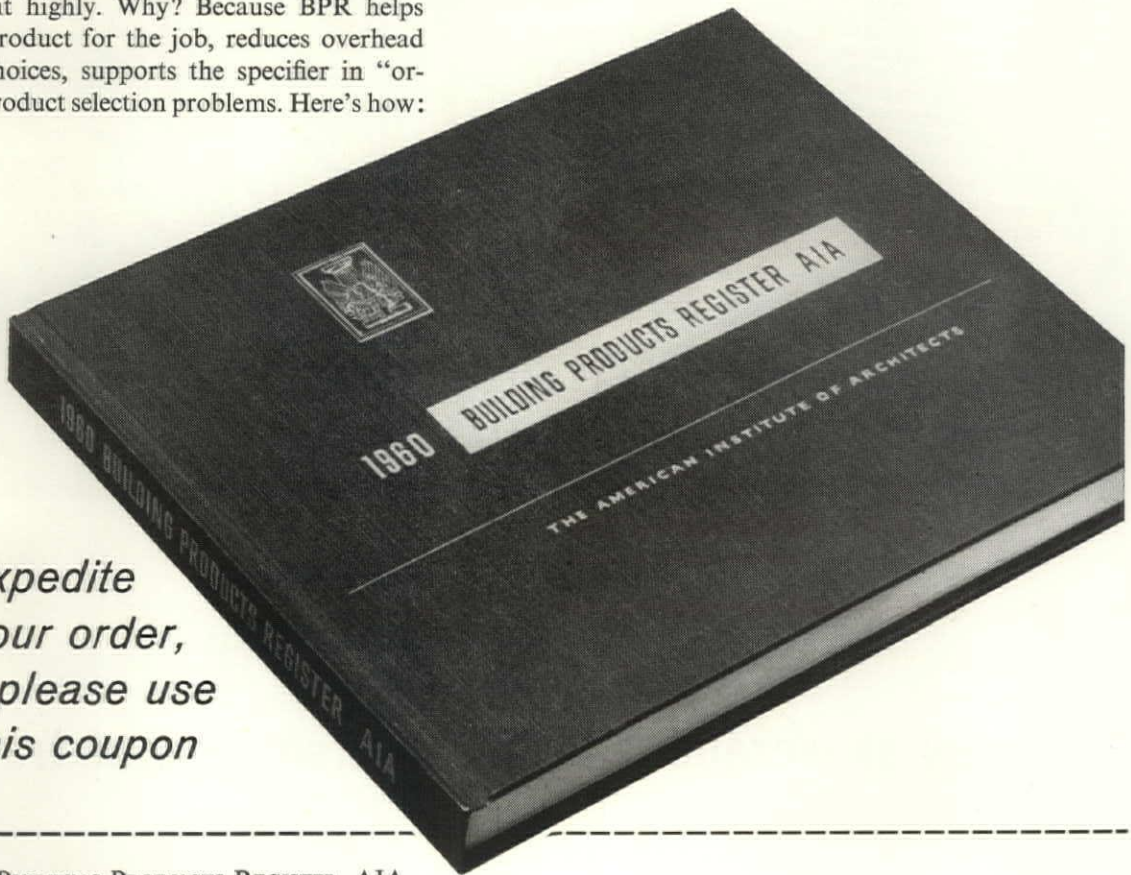
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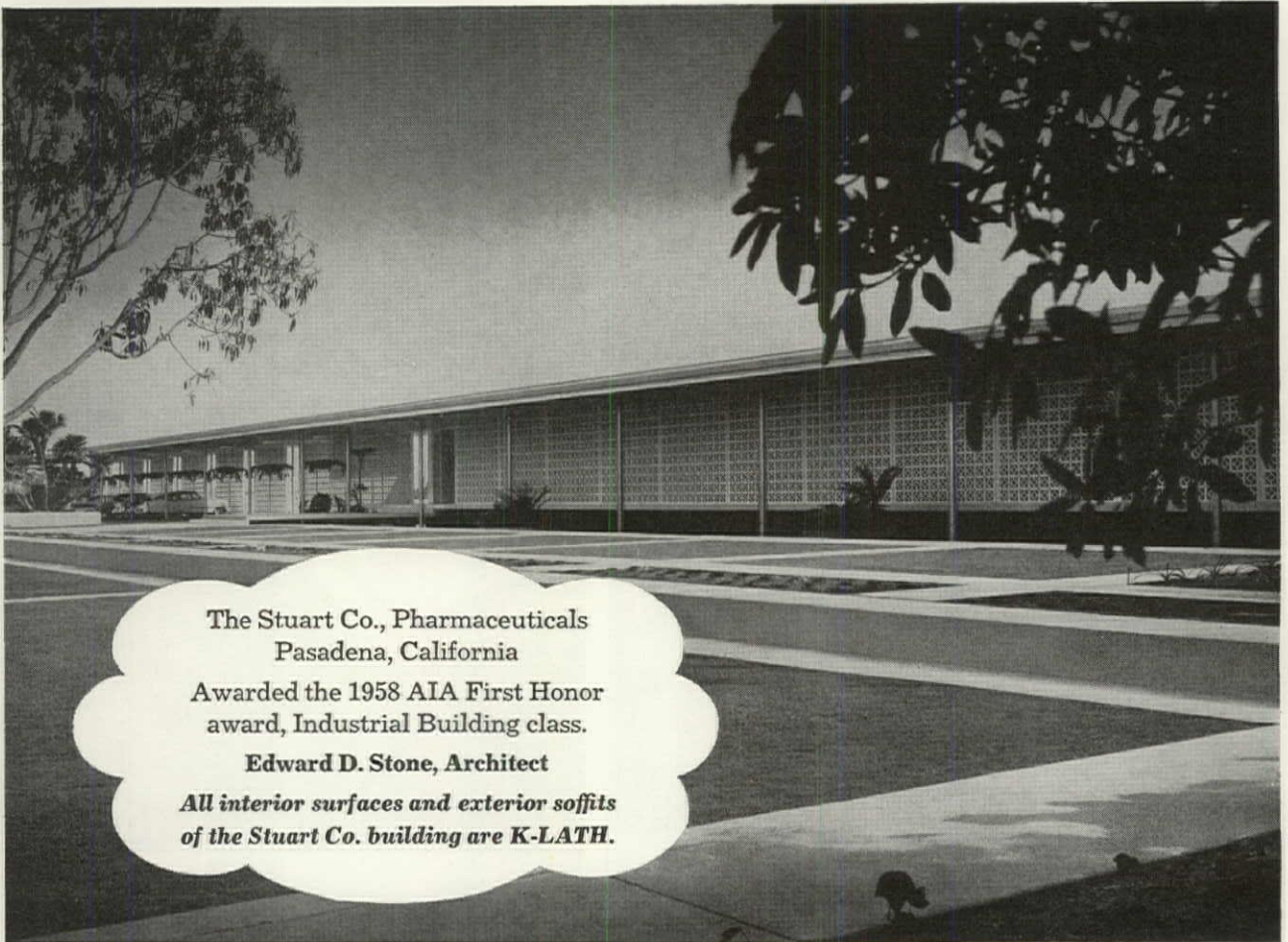
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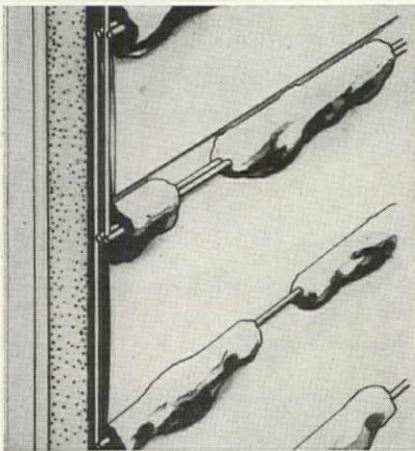
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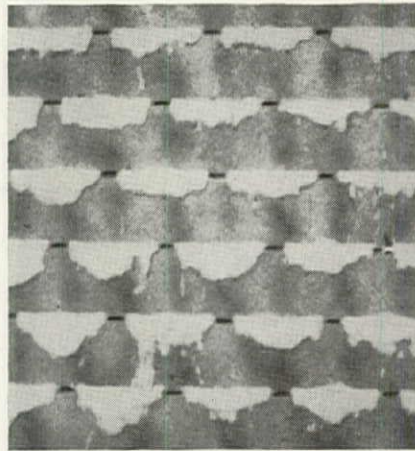
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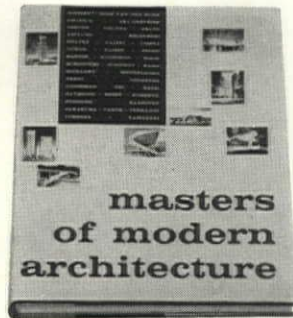
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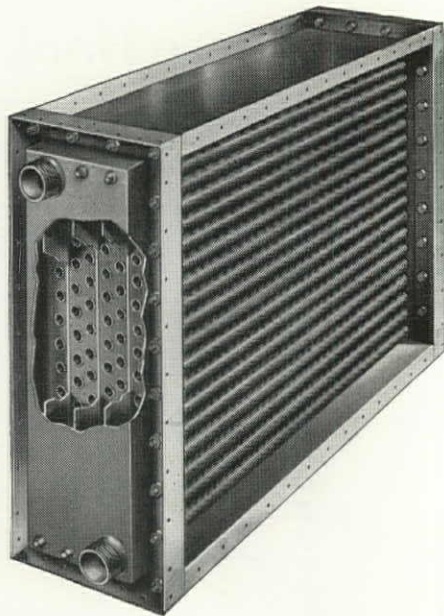
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Hoskins, Gilman Granville  
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St Louis Chapter

Purcell, Gerald A.  
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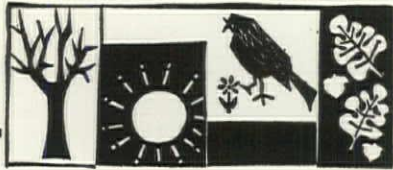
Rupe, William W.  
St Louis Chapter

Thompson, George W.  
New York Chapter

Van Ryn, Edwin Daniel  
Indiana Chapter

Yale, Robert Sattley  
Potomac Valley Chapter

\* Readmission



## C A L E N D A R

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*September 23:* Liaison Committees of the AIA and Producers' Council, Williamsburg Inn, Williamsburg, Va.

*September 26-30:* Board of Directors, AIA, Las Vegas, Nevada.

*September 26-late October:* South American Trek led by Executive Director Edmund Purves.

*September 27-30:* Sixth Annual Convention of The Prestressed Concrete Institute, Statler-Hilton Hotel, New York City.

*October 2-13:* International Seminar on Industrial Architecture, Kazimierz, Poland.

*October 5-7:* Thirty-ninth Annual Meeting, The Producers' Council, Inc, Drake Hotel, Chicago, Illinois.

*October 6:* Sixth Annual Architects' Tour of Japan.

*October 8-16:* Pan American Congress, Buenos Aires, Argentina.

*October 10-11:* Construction and Civil Development Committee, US Chamber of Commerce, The Cloister, Sea Island, Georgia.

*July 3-7, 1961:* Sixth Congress of the International Union of Architects, London. (For full information write Secretary, Royal Institute of British Architects, 66 Portland Place, London W. 1, England)

### **AIA District and Regional Meetings**

*September 15-16:* Minnesota Society of Architects Annual Meeting. Hotel St. Paul, St. Paul, Minn.

*October 1-5:* Northwest Regional Conference, Sun Valley, Idaho.

*October 2-4:* Gulf States Regional Conference, Hot Springs, Arkansas.

*October 12:* New York Region Annual Meeting, White Face Inn, Lake Placid, New York.

*October 12-15:* Annual Convention, New York State Association of Architects, White Face Inn, Lake Placid, New York.

*October 13-16:* New England Regional Meeting, Melvin Village, N. H.

*October 14-16:* New England Regional Meeting, Jefferson, N.H.

*October 19-23:* Annual Convention, California Council, AIA, Yosemite National Park, California.

*October 20-22:* California Regional Conference, Yosemite, California.

*October 26-29:* Western Mountain Region Annual Conference, El Conquistador Hotel, Tucson, Arizona.

*October 28-31:* Western Mountain Regional Conference, Tucson, Arizona.

*November 2-5:* Twenty-first Annual Convention of the Texas Society of Architects, Cortez Hotel, El Paso, Texas.

## NECROLOGY

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According to notices received at the Octagon between June 25, 1960 and July 21, 1960

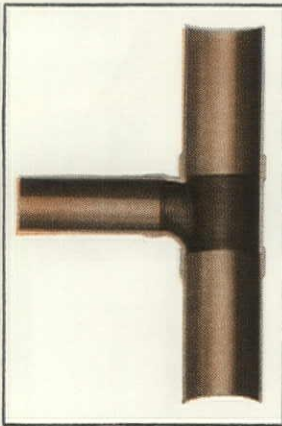
BAUMANN, HERMAN CARL, San Francisco, Calif.  
BRADBURY, EUGENE, Richmond, Va.  
GEORGE, ROBERT B., New York, N. Y.  
HAWKINS, MORTIMER HILL, Arlington Heights, Ill.

HORN, MAX, Far Rockaway, N. Y.  
LEDERER, ROBERT EDSON, Chicago, Ill.  
NUGENT, WALTER M., Rochester, N. Y.  
RYAN, EDMOND J., Plattsburgh, N. Y.  
RYDER, JOHN M., Schenectady, N. Y.  
TAYLOR, JOHN HOWARD, Swarthmore, Pa.  
TEMPLIN, HOWARD M., Dayton, Ohio





Unretouched photo of 3" dia. copper tube removed after 13 years' service in a soil line.



Anaconda drainage fittings are designed to match Anaconda tube for fast, easy solder connections.

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Compare the condition on the inside of this copper tube with what you might expect to find in ordinary piping after 13 years in service. Rust-caused troubles such as reduced flow or stoppages do not occur inside copper drainage lines. That is why many plumbing codes allow the use of 3" diameter copper tube for soil line and vent. Material costs are reduced and, because a 3" copper tube stack with fittings fits inside a standard 4" partition, the need for expensive, space-consuming plumbing walls is eliminated. Save time, effort, and money—install the modern drainage system with Anaconda copper tube and fittings. For information, write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

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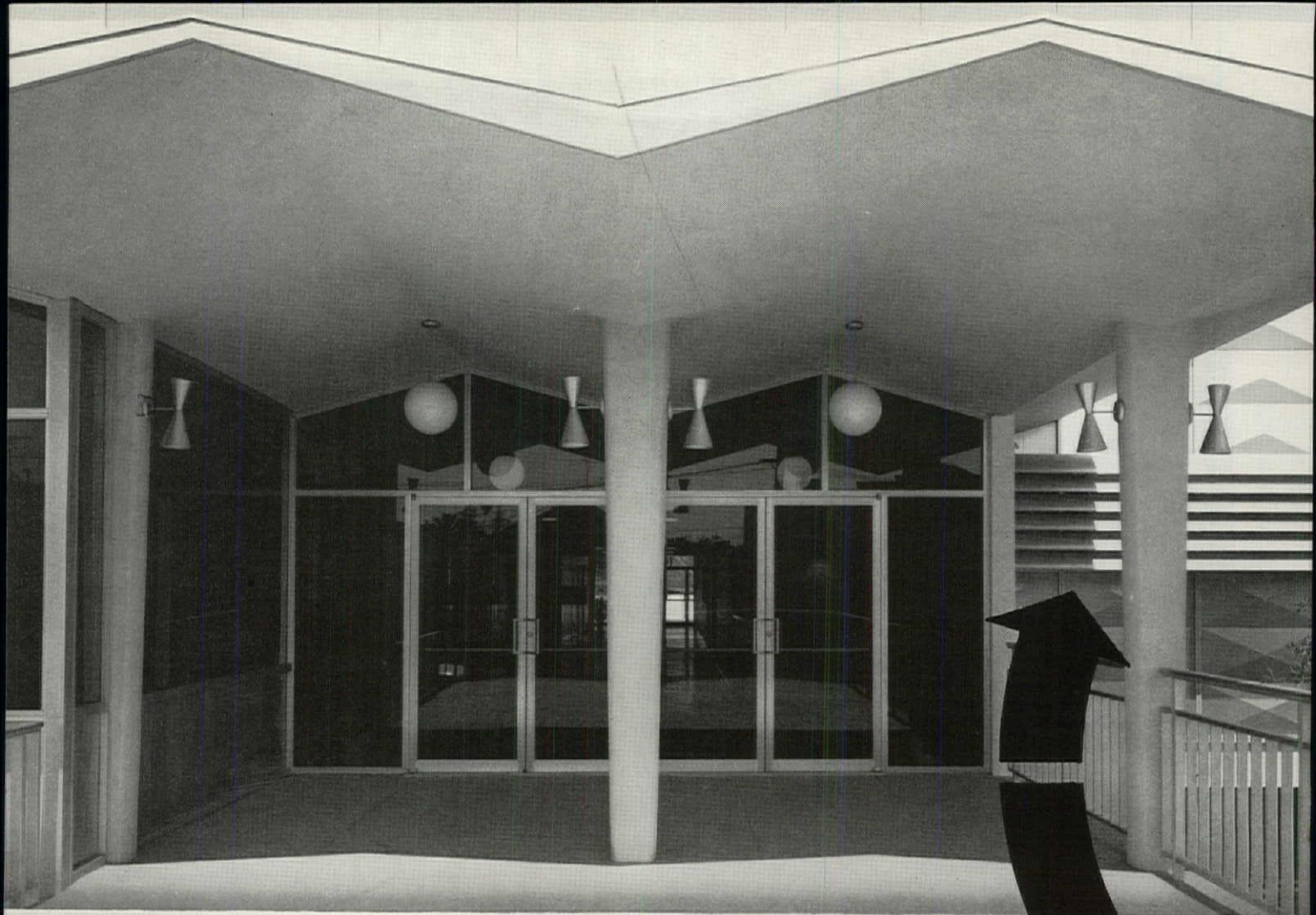


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Compact Connections—Save Space





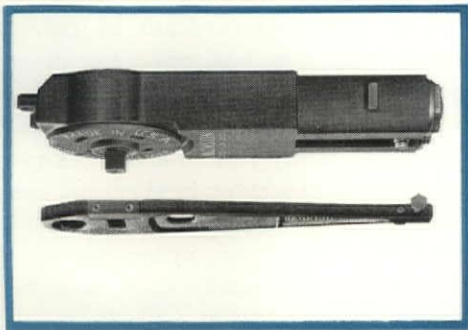
# look alike

Architectural aluminum may all look alike to the untrained eye, but to those who are directly concerned with it the differences make identification easy. These fronts are both Acme, with the slim, deft style of the designs well formulated by the Acme aluminum. Architects must be perfectionists, particularly in their street floor facades. Here is what the world notices every day; here are the entrances which must serve hundreds, perhaps thousands of people daily. In his storefront and entrance designs the architect must require every advantage the manufacturer can offer... and that is why so many specify storefront and entrances by Acme Metal Molding Company. Acme presents a beautiful, carefully buffed finish which gives life to the aluminum, an architect's variety of shapes and dimensions to design with, superior strength proven by test... and a progressive company offering fast, friendly service: these mean Acme.

above: Kaiser Edgemont Hospital, Hollywood **Clarence Mayhew, A.I.A.**  
below: Chrysler Training Center, Santa Ana **Pereira & Luckman, A.I.A.**

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return  
ART  
NOUVEAU!  
AL IS  
FORGIV  
EN?

ALLIED ARTS

BY WOLF VON ECKARDT

Or is it?

Just a few years ago, you and I would have considered the lettering above pretty atrocious. We would have smiled somewhat condescendingly at pictures of Gaudí's Casa Milá in Barcelona. We would have scoffed at Guimard's limpid and wilting cast iron plant design for the Paris Métropolitain subway gate. Art Nouveau was, in Peter Selz's words, "considered little but the extravagant conclusion of a tasteless era."

Today our magazines are filled *ad nauseam* with lettering designed not to be read but to adorn like a piece of wallpaper, floral or otherwise, plastered across the page. A most handsome and informative book on Gaudí is the bestseller in the new series of monographs on Masters of World Architecture. Guimard's subway gate has taken a place of honor among the masters of modern sculpture in the courtyard of the Museum of Modern Art. And that museum has launched a most enlightening and exciting exhibition of Art Nouveau which will soon also be seen in Pittsburgh's Carnegie Institute, the Los Angeles County Museum, and the Baltimore Museum of Art. The Library of Congress has simultaneously exhibited a comprehensive collection of American Art Nouveau posters.

Both these exhibits are fascinating not only because of the tender-loving care with which the purest manifestations of the odd and decadent art and design at the turn of the century have been brought together, but also because they demonstrate to most of us our constantly changing attitude toward style. As I said, just a few years ago most of us would have scoffed at the very idea of taking seriously the strangely flat but sinuous staggitic or floral aberrations of Beardsley and van de Velde, or the twisted noodle and tapeworm ornamentation of Horta or Gaudí. Now we are, to say the least, intrigued. For after a mere half century of often defiant soul-searching for the barest and squarest Truth in design, we are moving in a strikingly and somewhat frighteningly similar direction.

No wonder then that earnest scholars, writing for the Museum of Modern Art, are laboring hard

to vindicate Art Nouveau. We all thought this rather gaudy, excruciatingly sentimental, highly neurotic, and most bizarre lady, who was, to be sure, a passing mistress of most great designers of the last generation, had died ignominiously taking nothing but a tarnished reputation to her lonely grave. But no, we are now told. We've done her an injustice. She was not merely *fin de siècle* decadence incarnate, but, quite likely, a manifestation, as Peter Selz puts it, of "a specific creative force [which] broke with the historicism of the past to prepare the ground for the art of this century." And the fact that we are intrigued, that we can't help but admire the inventiveness and undeniable elan in many of the posters, bric-a-brac, tapestry-like paintings, and, most of all, buildings of this style, attests to the strong possibility that we have been, to say the least, much too harsh in our earlier judgment.

But to say that Art Nouveau merits being put into historical perspective again is a different matter from condoning or even embracing its two inherent errors which account for the fact that it died so young. One of these was, as Nikolaus Pevsner has said, that Art Nouveau was "a style or art for art's sake, unconcerned, as a rule, about planning and unconcerned, also, about the social aspects of architecture." Also, it lent itself too easily to being smothered to death by faddish vulgarizations. Today, as we strive for design which, rejecting the International Style of the thirties, seeks a return to decoration and emotional appeal, and thus, as Henry-Russell Hitchcock puts it a "return of curves in section, in plan, and even in elevation, and the preference for types of expressive structure more organic in appearance, if not in fact, than the reticulated cage," these two mortal dangers are with us again.

Let's face it, the lettering above, typical, for instance, of *McCall's* new typography which has been hailed as "unabashed brilliance," is nothing more than an unabashed fad. So is senseless frillification, barrelvauld topping and other playful baroqueisms on basically uninspired buildings.

There is nothing wrong with admiring the rich and inventive decorations of America's greatest Art Nouveau architect. But let us not forget what he said about form and function. It's still valid.