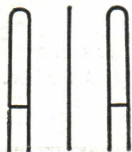


SOUTHERN ARCHITECT

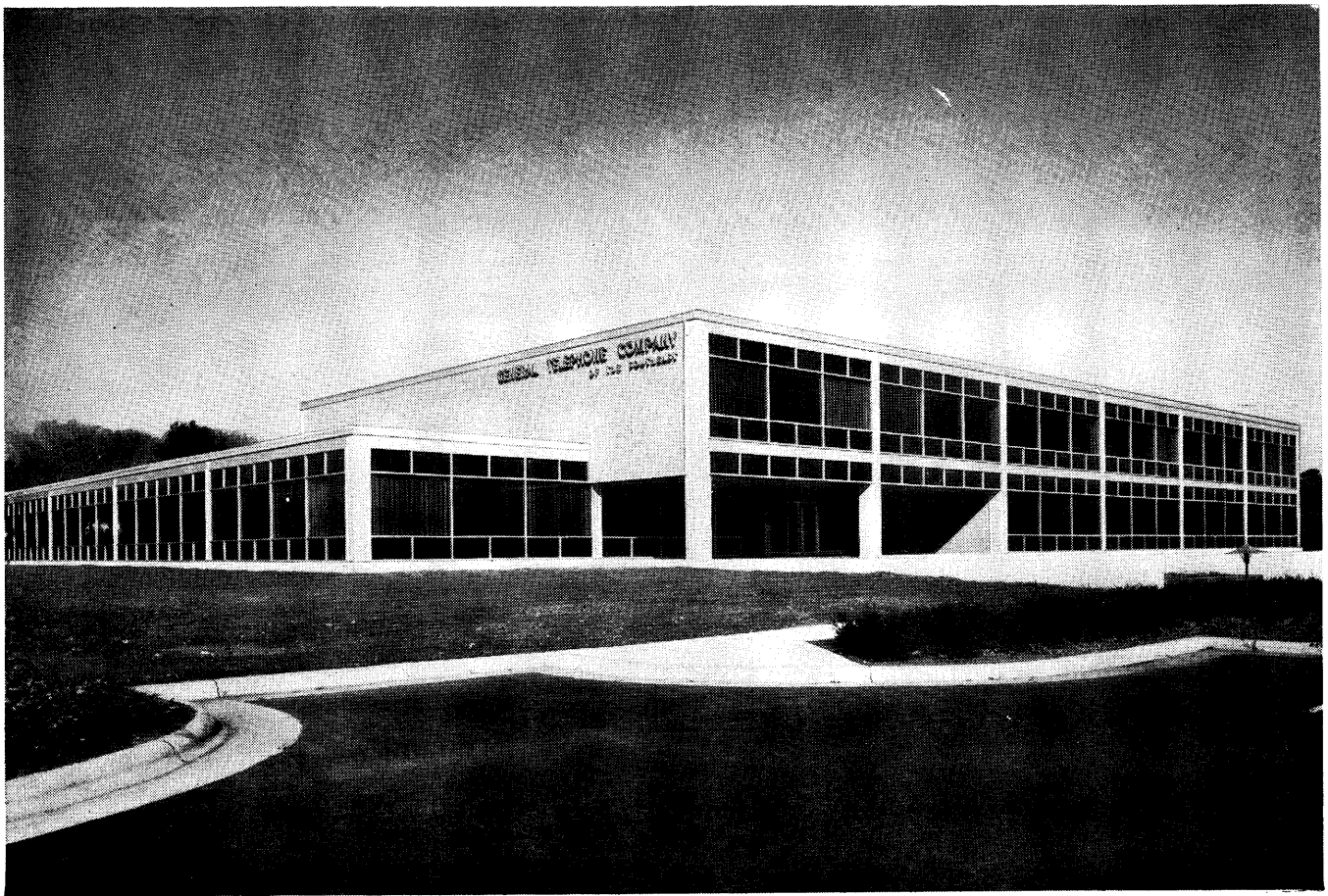
JANUARY 1960

**WINTER MEETING
PROGRAM**

Official Publication
North Carolina Chapter



American Institute
of Architects



*General Telephone Company building, Durham, N. C.
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CLEMMER

PRESIDENT'S MESSAGE

PRESIDENT'S MESSAGE

At the close of this another Chapter year we feel compelled to express humble gratitude and recognition to many people for their indispensable services and support of the work of the Chapter during the year. There are many rewarding experiences which serve to temper the responsibilities of this office. One of the greatest of these is the discovery of the willingness of the majority of our membership to accept and carry out assignments. Our thanks are extended to all who have assisted in any way.

A special word of appreciation goes to each of the other officers and members of the Executive Committee who have provided the wisdom, the guidance and the cooperation so essential to harmonious and continuing progress.

Time and space do not permit individual recognition here of all who have rendered faithful and valuable service. We do feel, however, that the work of several standing and special committees is deserving of special commendation.

The committee on Construction Industry Relations under Chairman Walter Toy, after two years of persistent and hard work, has practically completed the development of a Standard Specification Outline for the North Carolina area, working in collaboration with a corresponding AGC Committee. The result of this joint effort is a significant achievement which will be of far-reaching benefit to the profession, the building industry and the public.

Ed Loewenstein and his Committee on Education have been active in making studies and recommendations on matters which will be reported at a later date.

Our Committee on School Buildings under the able leadership of Leslie Boney, Chairman, rendered an outstanding service, working jointly with the School Superintendents and the Division of School Planning, in the organizing and production of the 1960 state-wide School Planning Conference just ended a few days ago. A word of appreciation should go also to all other Chapter members who assisted or participated in any way. Leslie is to be further commended for his writings and speeches which have been carried in the public press.

Jimmy Malcolm and his committee on Urban Redevelopment have made a good beginning on a mighty big, new and vitally important committee assignment. They have attended study-group meetings in several cities. They are keeping posted on the development of trends and procedures in this rapidly expanding and popular movement in our cities. They are studying ways and means whereby the Architect can fulfill his role of practical service in this movement.

The work of Dave Mackintosh and his Committee on Research in compiling a list of "Do's and Don't's in Construction" is continuing and when completed as anticipated will be of tremendous value toward improved practice techniques. The success of this project requires much time and the cooperation of all the membership.

Archie Davis has done his usual fine job of steering our conventions coupled with splendid planning and implementation by our hosts, the local Councils.

Alvis George has again successfully managed the difficult task of conducting our annual Honor Awards Program.

The Legal Affairs Committee under Chairman Al Haskins and Attorney Albright remained diligent and alert to our interests during the recent session of State Legislature and are continuing their consideration of certain legal matters which concern us all.

Chairman Jim Brandt and the individual members of the Chapter Publications Committee have done a most commendable job with our magazine this year. This Committee has perhaps the toughest assignment of all. It has worked hard, it is well organized and it has achieved the result of an improved magazine. They deserve an expression of appreciation from all of us.

Our Office Practice Committee under Luther Lashmit has done another fine job. Outstanding was their formulation of a much needed policy statement on "Advertising by Architects" which each member has now received and which will be entered in our Chapter Manual.

Cyrill Pfohl of the Chapter Manual Committee is continuing the never-ending job of keeping the Manual current and deserves much credit for producing this essential document.

The Chapter is extremely fortunate to have so capable a man as Bob Arey as General Chairman for the South Atlantic District Conference to be held in Winston-Salem in May 1960. Bob and his large Committee have made considerable progress and this important work is continuing at a satisfactory pace.

Also deserving of recognition for meritorious service are Archivist Louise Hall, Chairman Tony Lord and his Fellowship Committee, and Al Cameron, Chairman of our Producers Council Relations Committee. Out of respect to other Committees not mentioned, it is to be remembered that the very nature of the duties of some do not require constant activity and aggression and others to only a minor degree. In order that no one be intentionally omitted, may we simply express our sincere thanks to the entire membership for a year of pleasant associations.

Robert L. Clemmer, President
N. C. Chapter, A.I.A.

M E E T T H E S P E A K E R S

The theme of the Winter Meeting of the North Carolina Chapter of the American Institute of Architects is "Design and Engineering Relationship." Four distinguished speakers will discuss various aspects of the subject. Albert Bush-Brown will speak for Architecture; Charles S. Leopold, for Mechanical Engineering; Charles H. Kahn, for Structural Engineering; and Joseph Hudnut, for Architecture and give a Summation of the Conference. This annual program issue features an article by each of them. Obviously, the articles do not duplicate the speeches which will be given at the conference but they do introduce the man who will speak and show the drift of his ideas. All of our readers and particularly the architects and engineers are invited to attend the lectures. See the Official Program at the center-fold for the time and place. In the meantime, on the following pages, meet the speakers!



THE HONEST ARROGANCE OF FRANK LLOYD WRIGHT

By ALBERT BUSH-BROWN



A graduate of Princeton, where he earned his master and his doctor degrees, Albert Bush-Brown taught at Western Reserve University before he joined the faculty of the Massachusetts Institute of Technology, where he is presently associate professor of architecture.

Mull it over as you will, the American penchant for fouling the land has no acceptable counterbalance save the hope that lies in education. As long as we refuse to arrange space so it sustains the good life, we force our best architects to become crusaders — willing, even anxious, to affront society. In his assaults upon taste, Frank Lloyd Wright, the man of the magnificently delayed entrance, the blackthorn cane, the riverboat hat, the white suit, the black cape closed by a gold chain, was an arresting public accusation. He was an imperious showman whose words came gently from a desert face puckered and creased like an apple left on a February branch. His were seldom gentle words; they were cutting images of Welsh forensic. And only his hands — with the ceaselessly interweaving fingers, pushing tips, hooking and pulling and bending, the knuckles flexing to form roofs and columns and walls — told of the passion that shifted malice and hurt into architectural wisdom. For men inured to committees, afraid to risk an autocratic decision, Frank Lloyd Wright's display of jaunty arrogance, of beguiling self-certainty, of cavalier disrespect, of unshakable determination was

the top showmanship of an idea in an age when publicity agents manufacture stars overnight. If an architect is to be measured as a persuasive entrepreneur, then in his final hour Wright had no peer.

Inevitably the measure of his talent became snarled in his stature as a man. Faced with requests to alter a design for reasons of economy, he treated compromise as an insult and stormed off the job broadcasting accolades to an artist's integrity while forgetting that a client too has his right. Such legitimate criticisms of his reliability and adaptability soon gathered illicit accomplices in a picture of unbridled sin, including a stormy knife fight, marital and extramarital escapades, berserk servants, financial insolvencies, legal battles, indentured apprentices, and other overly rehearsed biographical irrelevancies.

It became easy to dismiss Wright as a notorious eccentric, to regale any group with the latest mischievous episode or biting retort, to regard him as a paragon of Bohemian license. The *non sequitur*

came in believing that a culprit could create nothing save an immoral architecture, as though a bandit might not also be a great poet. The irrelevancy stood precisely in the fact that architectural beauty owes nothing to economy, truth, and goodness. The Parthenon drained the Athenian treasury and did so in a time of war; Hagia Sophia deified a barbarian turned lawyer and the crafty actress he married; Gizeh immortalized a deplorable Egyptian morality — yet they are nonetheless esteemed as art. That was the measure Wright wanted, not the naive approbations of those who allay their suspicions of beauty by grasping spurious economic and moral justifications for their taste or a public which makes pilgrimages to a vapid Statue of Liberty shining her vacuous benignity at the gateway to social convention.

Nor, dismissing personal biography, shall we find an adequate measure of Wright's talent in his relations with his profession. Refusing to the last to join the American Institute of Architects, he attacked their integrity, antagonized their officers, and defied their right to set fees, write codes of ethics, and influence the centers of finance, government, and education. Perhaps one does not expect the finest judge or the finest surgeon to lead his professional association, but the many-sided aspects of architecture have meant almost inevitably that the architect who is a businessman and promoter, not an artist and certainly never a pioneer artist, would dominate the professional society and, unable to set a standard for quality, would aim the society at becoming a lobby for conservatism. As long as classicists were entrenched, Wright attacked such banalities as the rotunda on the Potomac which John Russell Pope erected as an "arrogant insult" to the memory of Thomas Jefferson; and his attacks were met blow for blow by those who heaped a final indignity upon him in 1957 when they withheld from Wright the Centennial Medal he alone deserved. Perhaps no one in America had done more for architecture, but his contribution was a personal one, an art that could not be wrenched from his personality, and in the balance the gentlemen of the AIA failed to see that the art was more important.

There was, of course, an always incipient abuse of power. His long-standing fury against the glass-boxed steel cages of Mies van der Rohe led him to cut even a modern architect of uncommon elegance, as Philip Johnson learned when his house at New Canaan was said to have been built "by a monkey for a monkey." Johnson might chip a piece from the Matterhorn by omitting Wright from a long list of great modern architects, only to drag him in parenthetically as the "greatest architect of the nineteenth century"; but the bitterest sting remained for Wright to deliver when, meeting Johnson after he and Mies had completed New York's Seagram Building, Wright asked whether he was "still putting up little buildings and leaving them out in the rain?" In the public eye, all this gossip kept architects obviously disunited, fractious, and unequal to a reliable stand on public issues

involving art. Thus when Wright appeared as the star witness before a Congress worried about the Miesian Air Force Academy, he attacked the whole project, offered his own services, and flagrantly misused his power.

There are no great rewards to be had from Frank Lloyd Wright's writing, where the pages contain mawkish paeans to democracy and the "organic" life, an occasional sensitive tribute to the Arizona desert or the Badlands of the Dakotas, and many ranting and frequently undeserved attacks upon people, institutions, and history, in a patent rewrite intended to bolster his autobiographical position. No student can learn about architectural design from Wright's pages, for he never spoke of it, though he claimed to talk of nothing else.

His themes are nineteenth-century themes. First there is the hero, of Wagnerian dimensions, capable of great public service, as Plutarch would have him, but a Carlylean hero forced to breast the wave of ignorance around him. This hero, a Messiah in the lineage of Christ, a philosopher like Lao-tse, owes his strength to nature; his parables come from the field; his metaphor is the root and flower, never the machine. He is first and foremost an individual, total in his grasp of life, and his pulse, too easily stilled by the academy, must be quickened by creative work beginning in Froebel's kindergarten. He is an architect, the master builder of Ibsen and Ruskin, alert to structure, as Viollet-le-Duc taught, and able to command all the arts and crafts to realize William Morris' social aims. With Whitman he sings of the dignity of man, of democracy, of American destiny; with Emerson he praises self-reliance; and over all are written the Darwinian theory of adaptation and the Spencerian formula for survival.

Here were all the myths of the American mind: that the city is iniquity, the yeoman farmer pure, the village a strength; that the epitome of civilization will arrive on American soil — in the Mid-west, far from Europe, far from the East coast, in universities, churches, and cities, that the American destiny is to create an original form of natural life in which the individual stands supreme, more primitive than urbane, more democratic than bureaucratic, with the artist in control of the machine, no longer its slave; and that, once surrounded with proper environment, human nature will invariably aspire toward the best.

The myth cut Wright off from most of the deepest currents of twentieth-century culture. An optimist, as all architects must be, he drew a curtain between himself and the geometric retreats of Mondriaan, the witty caricatures of human frailty proposed by Miro, the ghastly inhumanities of *Guernica*, the dark world of Faulkner. In spite of all his apostrophes to "organic architecture," an architecture derived from twentieth-century necessities, he failed to drink from the wells of contemporary science and remained content with a

(Continued on page 25)



A consulting engineer since 1923 on such large projects as the Pentagon, New York Stock Exchange and Madison Square Garden, Charles S. Leopold is probably best known for his design of panel cooling systems, one of which is described in this article.

PANEL COOLING APPLICATION FOR THE AIR CONDITIONING

Charles S. Leopold

THE PANEL COOLING SYSTEM as applied in the Manufacturers Life was developed in 1946 for a then proposed 40-story office building for Time, Inc., in New York City. The problem consisted of finding a method which would have less effect on steel design, utilize less floor space, and require less distance floor to floor than other applicable methods.

More heat can be conveyed in a given size of conductor by water than by air. It was considered that if the air could be reduced to that required for the control of humidity, control of odors, and ventilation, the additional function of carrying a major part of the cooling effect could be assumed by a water circuit.

Panel cooling for this latter function had been considered in the past and been substantially rejected because the part played by high temperature radiation was not appreciated, and conventional calculation indicated that the coolant would have to be maintained too close to the room dewpoint for safety in avoiding condensation.

Theoretical consideration, corroborated by test, indicated that even when cooling a fraction of a ceiling the panel and coolant temperatures could be maintained at a temperature which avoided the possibility of sweating.

Three rooms with a south exposure and one adjacent room in the interior on the thirty-second floor in Time's present quarters were equipped with a test installation of panel cooling, which was a prototype of the method used in Manufacturers Life. The system had operated approximately three years at the time the method was recommended for the new Manufacturers Life building. Note is made of the courage of the architects, Marani & Morris, and the owners, Manufacturer's Life Insurance Company, in agreeing to this first large-scale application of a new method.

The selection of this system was in part dictated by the desire to integrate the air conditioning of the old and new office buildings. On this basis, panel cooling, when considered in conjunction with the structural provisions, provided some saving in initial cost over systems which offered comparable comfort.

In a wide office building, the local effect of outdoor temperature and insulation can be compensated at or close to the skin. The remainder of the interior space presents substantially the same cooling problem summer and winter as there are no heat losses and the heat gain from people, luminaires, and business machinery is not dependent on the outside temperature. There is no need for heating in the interior of a large building. The design follows from this analysis.

FOR SUN, WIND, and OUTDOOR TEMPERATURE EFFECTS

Beneath the window there is an aluminum panel, Fig. 1, of sufficient heating capacity to prevent the formation of down-drafts at the window in cold weather,

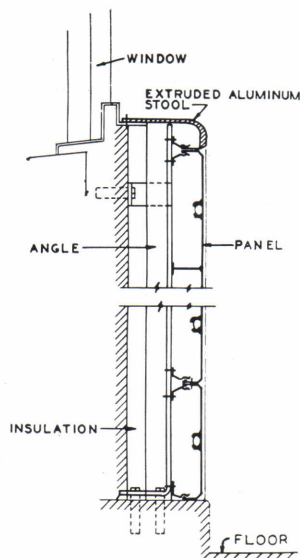


Fig. 1

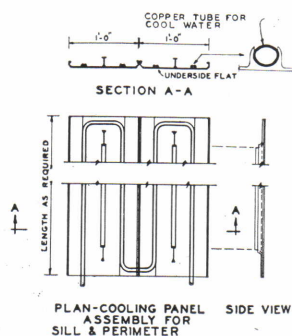


Fig. 2

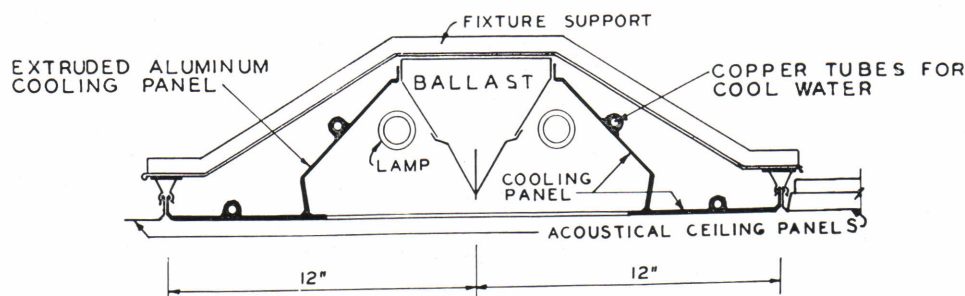


Fig. 3

SECTION OF EXTRUDED ALUMINUM LIGHT PANEL

and to compensate for radiation from the occupant direct to a cold window at such times as there is not direct sunlight and only limited sky shine. This panel is installed primarily for heating but it is of additional use for cooling in hot weather. The temperature of these panels is controlled by a thermocouple attached to the inside of the window glass. The thermocouple is shielded from the direct rays of the sun by a small metal disc on the outside of the pane, directly in front of the thermocouple.

This portion of the installation compensates for all outside effects other than for that portion of the solar radiation which penetrates the glass and enters the room. In the ceiling adjacent to the outside wall there is a continuous band of cooling panels, Fig. 2, approximately 3 ft. wide. The temperature of the water to these perimeter panels is controlled by photoelectric means which lowers the water temperature as sunlight gets brighter. This control is used in warm weather and in cold weather until the outside temperature approaches zero. At some selected outside temperature, these panels can be used for supplemental heating in order to avoid raising the temperature of the sill panels to a level which may not be comfortable for those sitting quite close. During the past winter, which was relatively mild, the ceiling panels were not used for heating.

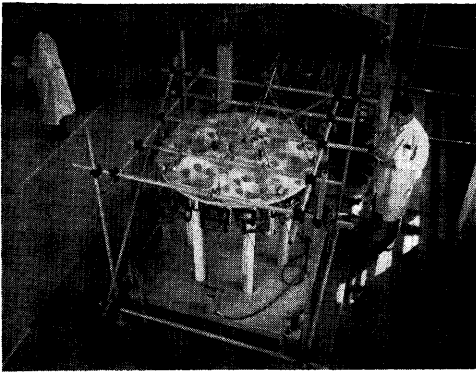
FOR THE INTERIOR HEAT GAINS AND VENTILATION

The entire interior of the building, starting approximately 3 ft. in from the skin, as previously noted is a cooling problem and is handled in part by the ventilating air, approximately 40% of that required if there were no panels, and in part by ceiling panels which form the reflector of a luminaire. In the test installation for Time, previously mentioned, flat panels — similar to those used for the perimeter — were placed in the ceiling in a formal pattern occupying about 35% of the ceiling area. When Manufacturers Life decided to adopt a uniform recessed fluorescent lighting system, it became logical to make the ceiling panel in part the reflector of the luminaire, as shown in Fig. 3. This design has the engineering advantage of trapping more of the energy for lighting at the source, and the aesthetic advantage of reducing the number of types of elements which form the ceiling.

The air for ventilation is delivered throughout the year at constant temperature, in the low 60's, except for a brief period in the morning prior to occupancy. The light panels are controlled at a substantially constant temperature, summer and winter, in the middle 60's. There is a control connected to a representative electric feeder which takes care of the morning start-up period, lowering the water temperature as the lighting load increases.

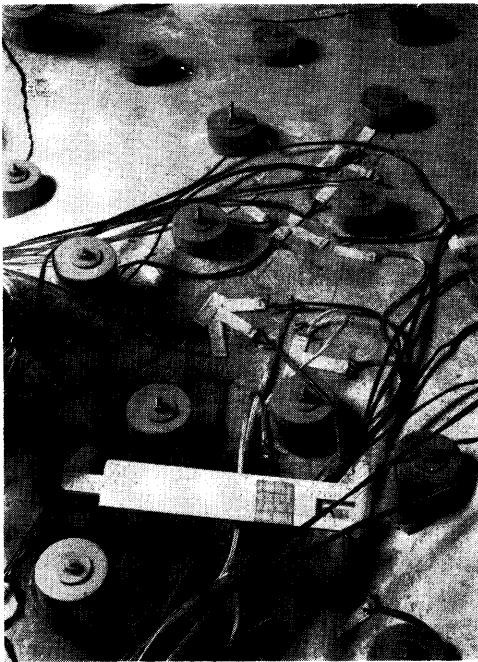
This system does not operate as a panel heating system or radiant heating system, as the terms are customarily used, as no means of heating is utilized other than the under-sill panels and, in extreme cold weather, the perimeter 3 ft. of ceiling.

(Continued on page 31)



THE PROSPECTS FOR MODEL TESTING AS AN ANALYSIS PROCEDURE

By CHARLES HOWARD KAHN



The present movement of contemporary architecture to find expression in structural form has raised very basic problems for the structural engineer and for the architect himself. As the forms become more complex, both the requisite knowledge for the structural solution to the problem and the time required for the application of this theoretical knowledge to practical design increase enormously. In an economy where design time is more expensive than excess material, we are faced with the dilemma of inefficient structures or design expenses possibly beyond the economic limit of the project.

One of the results of this situation is that a decreasing number of members of each of the design professions has the ability to cope with the new forms, both on the technical and the economic level. I do not mean to belabor at this time the question of the functional behavior of the forms we see in many contemporary buildings. It is fairly obvious, however, that within the context of the new technology an economic solution to the problem is being sought.

What has become a matter of concern is the establishment of some rational procedure for the design of structures whose expression in mathematical terms is either extremely complex or impossible to formulate.

The paths open to the structural designer faced with a project expressed within the context of advanced structural form are not numerous. The two major methods of solution for architectural structures, mathematical analysis and model testing, are known in some degree to all. There is, however, a great deal of confusion about the relative merits of each solution method.

Those of us in the design profession have dealt with the standard mathematical design problem based on elastic assumptions long enough to become quite familiar with the principles. The danger lies in the fact that this procedure is so familiar to us that we tend to forget the basic assumptions and approximations which were made in order to make the mathematical analysis less involved. It is in the light of this



Trained and registered as both an engineer and an architect, Charles H. Kahn spent 1957-58 in Italy on a Fulbright Scholarship and is now Associate Professor of Architecture at N. C. State College.

attitude toward elastic theory that I would like to make several brief comments about the field of model testing as an instrument of design in the architectural field.

One of the basic misconceptions of model testing as an analysis and design method is that, by itself, it represents a replacement for the conventional methods. This is, of course, quite far from actual fact. Model analysis, by its basic definition, means the comparison of a model structure to a prototype. This comparison must be on the basis of a rigidly controlled relationship between the constants of the model and those of the prototype. These principles of similitude are not exceptionally difficult to formulate. What is essential to recognize is that to begin the investigation of a model a design, however approximate, must have already been formulated by other design means. Of course, the more nearly correct the original approximation, the closer to prototype behavior will be the measured results from the model experiment.

The recognition of this fact brings up another common misconception about model analysis work. Presumably, with only the roughest of preliminary designs, a series of successive model tests, each based on the results of the preceding one, could be made until a final design is achieved. But model testing is not that inexpensive, especially in this country. The care necessary in the construction of each model and the expense required in loading and measuring devices certainly make it no method to be wasted on blind guesses.

This does not mean that model testing cannot compete favorably with the mathematical methods of analysis, but it must compete in areas where its advantages are exploited. The big field of application of model testing is, of course, in the realm of reinforced concrete structures. Here, because of the plastic nature of the material, the complex curvature forms can be duplicated as easily in the model as they can be built in the prototype and the principles of similitude easily formulated. In addition to this, the assumptions made on the basis of the theory of elasticity, which are less

true in concrete than they are in the metals, are completely eliminated, and the behavior of the system can be measured as it actually occurs. In cases such as this, model testing as a design expedient becomes a formidable tool for the engineer. When used in conjunction with approximate methods of preliminary design sensitively applied, it can result in both monetary and material savings.

It is a pity that no large center devoted exclusively to the testing of model structures exists in this country other than the college laboratories. This is not the case in Western Europe where model analysis work is far in advance of what we do in this country. In each of the nations of Western Europe there exist well-equipped and competently-staffed centers of testing financed by building material manufacturers, contractors, electric companies (mainly for testing work on dam models) and the like.

One of the better known of these laboratories is the ISMES facility in Bergamo, Italy, directed by Prof. Guido Oberti. Some indication of the work possible at such a center is shown in the two illustrations accompanying this article.

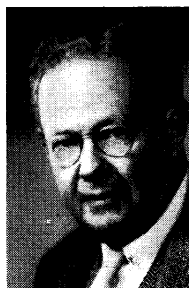
These photographs illustrate the test carried out by ISMES on a model of a thin-shell structure designed by Prof. Horatio Caminos of the faculty of the School of Design at North Carolina State College in Raleigh.

What is disturbing about these photographs is the fact that the test illustrated had to be conducted in Italy since no opportunity for work of this type at a reasonable cost existed in this country.

It is to be hoped that we will, in the near future, be able to persuade the people in the design and materials fields to aid in the establishment and support of a center for model analysis work in this country. The prospects for the architect and the engineer, working in collaboration with a center of this type, are enormous.

A NEW ELOQUENCE FOR ARCHITECTURE

Although retired as Dean of the Graduate School of Design at Harvard where he instituted the first curriculum in the nation which recognized the value and importance of modern architecture, Joseph Hudnut continues busy as a Lecturer at MIT and with his writing on architectural subjects.



By JOSEPH HUDNUT

HISTORY HAS BEEN DEFINED as the art of remodeling the past into a harmony with our desires. Because we read history, not to make us wise but to fortify our preconceptions, we ask our historians to re-appraise past events and their causal relationships in order that we may see our own opinion and passion reflected in their pages.

Historians of architecture afford no exception to this practice. In response to our own urgencies we have witnessed in the realm of architecture many re-shufflings of time, space and prejudice by those who announce themselves as historians. I am not so young that I cannot remember the vogue of Richardson Romanesque, the rehabilitation of Imperial Rome by the Pennsylvania Railroad, the return of colonial architecture to a respectable popularity. I can remember also the disgrace and sad end of all of these styles before the importunities of a race of men who had grown indifferent to all style. And each of these revolutions had its apologist and its historian.

We expect our historians not only to approve each in his turn our changing tastes but also to illumine and defend their congenial narratives — and our tastes — with philosophies of taste. We encumber them willy-nilly with the responsibility of reconciling our preferences with rational truth. To Victorian England, already persuaded of a morality in art, John Ruskin

explained Gothic architecture as the architecture of virtuous men. To a more sophisticated — and presumably less virtuous — audience Geoffrey Scott defined Renaissance architecture as an art of superior sensibilities. And to the democratic passion of the American Revolution Thomas Jefferson unblushingly presented the Roman Revival as the architecture of popular sovereignty.

We should not think it strange then if our present historians, finding themselves at home in a bright and delightfully revolving machine, should describe the stream of past architectures as a stately procession towards that ideal of perfect mechanization which, we are told, possesses the mind of our day or should season their admiration for the architecture of a mechanized world with a philosophy of mechanized form.

"Throughout history," writes a popular historian, "the appearances of buildings and their styles have been determined by the practical techniques of construction — that is to say, by the materials available and the tools with which materials were worked. Greek architecture, for example, was elementary in form because the Greek builder knew only the lintel and the column upon which the lintel rested. Roman architecture was grandiose because the Roman engineer had developed the grandiose resources of concrete vaulting. Gothic architecture, ethereal and daring, rose, as

inevitably as the night follows the day, from the pointed arch and the flying buttress." And the author, although careful to assure his readers that beauty in buildings is not wholly a consequence of structural efficiencies — aesthetic experiences, taste and fashion being also elements of beauty — nevertheless leaves them with the impression that aesthetic sensation, taste and fashion are after all redundancies: pleasing appliques which do not modify essentially the character of architectures. The column, the vault and the flying buttresses are thus made the prime movers in the evolution of architectural species and the fundamental sources of expression throughout the ages. And in our time this prime mover — this architect-laureate of our time — is the steel I-beam.

What is needed, it seems to me, is another history. We should ask our historians to examine more curiously this concept which, ever since Choisy wrote his *L'Art de Bâtir*, has haunted their minds: this concept of structure as secret architect of temple, thermae, cathedral and skyscraper. Their minds quickened by the perils which now confront architecture they might then re-invigorate our art with a newer and less devastating doctrine.

I shall offer such a history — not my own but one which is in need of a novel pronouncement. It shall be brief and it shall occupy only one paragraph.

The Greeks, who lived in the sunlight, celebrated in their temples the quietude and sweetness of the natural world in which their religion was born. To that end they employed in their temples only the simplest of structural forms: the rectangular lintel and its supporting column. The Romans, to whom power was a virtue and magnificence a delight, achieved power and magnificence in their buildings by the use of the great concrete vaults invented for that purpose. The peoples of the Middle Ages, having built a spiritual universe around their life on earth, had need of a symbol, ethereal and soaring, and for that purpose developed the pointed arch and the flying buttress. In no one of these instances was the idea to be expressed inherent in the structural device through which it was made explicit and visible. In no instance did the idea derive its origin from such a device. In no instance was the eloquence of the architecture a consequence of a perfection in technological resources.

This precedence of idea over technique is most clearly illustrated in the history of the Gothic cathedrals. No one, of course, will deny that the precision and elegance of Gothic vaulting witnesses a builder's delight in

his craft and it would be strange indeed if that delight had not been shared by those who employed him; and I think it probable that the intellectual control which is evident in Gothic plan and structure — the fusion of so many diverse energies into an organic pattern — afforded to the medieval mind satisfactions not less trenchant than those which they afford the receptive mind of our day. Nevertheless these satisfactions could not have been conceived as the central intention of Gothic architecture. Clearly they are parallel or contributory enjoyments and are by no means essential to the idea and feeling of the cathedral. Idea and feeling had their genesis, not in the experiments of engineers, but in the meditations of the cloister. The influence that dissolved in light the dark vaults of the Romanesque abbeys was the monastic vision of the Celestial City. The history of the cathedral is the history of a progressive translation of that vision into glass and stone.

No one, happily, told the Gothic architect that he must imprison the Celestial City within the reasonable laws of masonry construction. To raise the Romanesque vaults into the sky, to give resiliency and grace to the supporting arcades, and to surround the sanctuary with vista and light the architect contrived a nice order and balance of pointed forms. These transfigured the Romanesque pattern without, at first, any violence to the traditions of masonry; but that rationalism sufficed for only a moment. Order and balance had to give way almost immediately before the urgencies of the spiritual idea. Already in the choir of Saint-Denis, the birthplace of Gothic architecture, the pointed ribs are designed, not with reference to the true nature of stone, but actually in defiance of that nature: the stones, inflexible and crystalline, bend and become fluid, the inert masses are changed into lines of action and energy, and it is as line and action that they embrace the Celestial City.

From that time forth the architect of the cathedral progressively ignores the lithic basis of his pattern. He diminishes the weight of his arcades, attenuates as he lengthens the shafts which support his vaults, ever more fragile, and around the perimeter of his building march the rhythms, ever more ethereal, of that most questionable of engineering expedients, the flying buttress. Neither the architect's experience nor his common sense, neither his science nor the intuitions of his practical mind, prevail against the imperatives of the Christian aspiration; his vaults must be ever higher, their supports more slender, until all lithic character and lithic energy are erased. There remains only a linear frame. Light, pouring in splendor from all sides, obliterates even that frame. We stand no longer in a building

of stone. The arch is no longer present, being represented by a line; the pressures of the vaults and buttresses are abstractions and must be known, if at all, by analysis. Nor will the spirit of the cathedral rest until the unsubstantial fabric has been drawn out to a still greater tenuity; until piers and arches, tracteries and the ribs of vaults, reach the point of collapse; until, at Beauvais, they do collapse.

I do not pretend that there is in our day a passion so deep and pervasive as thus to direct and illumine the art of architecture. I am of course illustrating a principle. Expression in architecture springs from idea and feeling. Structural expedients come into being as the means by which idea and feelings attain a visual language. And to these premises we may now add an inescapable deduction: structural virtuosity and structural candour are secondary virtues in architecture.

I must admit that such a judgment is subjective in nature; but I shall maintain that it is not less subjective than the theory of those who discover in the column, the vault and the I-beam the source of meanings in architecture. These are indeed objects set solidly in space but that which they signify must be constructed of materials less frangible. I do not find it fantastic to believe that the significances of buildings precede a material realization.

I think that all mechanical ingenuities are (like paintings and poems) the children of popular desire and contrivance. The first printing press, for example, was not invented by Gutenberg but by the hunger of a people for the hidden truths of the Scriptures. The first airplane was lifted from the sands of Kitty Hawk, not by Orville and Wilbur Wright, but by a nation's longing to command the thoroughfares of the sky. And those who think that the force which condemned Edison to his life-time of labor and experiment was his need for money and fame little know the ways in which a nation's will can possess, torture and exalt the noblest of her sons.

Scholars have spent no end of research to discover the inventor of the skyscraper without perceiving that the skyscraper was created by a people's need for an avenue of expression. It was not merely because we wanted to escape the crabbed streets of Chicago that we evolved this most typical of all modern building types; it was also because we wanted to exhibit in visible form the confidence and pride of our new republic. We had need of a symbol. The skyscrapers which at the turn of

the century rose suddenly from the soil of our great cities, like sunflowers at the advent of Spring, were driven upward not by the dull science of engineers but by a romantic necessity.

It is true that this necessity became confused in the neighborhood of Wall Street with a necessity, scarcely less urgent, for splinters of Paris and Rome — a necessity that led to some scenic excesses. We may assume, remembering these excesses, that the romantic impulse may make itself felt in skyscrapers in more than one way. The life that is the theme of architecture is not a specially selected phase of life but the whole of it, mean or exalted, ugly or beautiful; and a skyscraper, however prosaic in purpose, is nevertheless an object through which many kinds of thoughts and imaginings may function. No doubt these thoughts and feelings are sometimes less profound in a skyscraper than are those which, quite apart from its architecture, must inform a cathedral; nevertheless they may exist and make themselves felt. And whatever may be said of "slavish imitation" in the skyscrapers of lower Manhattan — and surely they belong to a page of architectural history somewhat less than sublime — the fact remains that they were charged with meanings by those who built them. Meanings, at any rate, for those for whom they were built. The Woolworth Building, when I first saw it, was peopled not with brokers and commission men but with promises and enchantments. I knew that it was an advertisement — like the newest skyscrapers on Park Avenue — but it was not chained to the ground by a theory of constructivism; and beneath its quaint medievalism the Woolworth Building satisfied for the moment my need for that reassurance for which height had suddenly become a national symbol.

The command over our imaginations which height had assumed is eloquently expressed in a passage written by Louis Sullivan and separated by less than a paragraph from his famous pleas for logical analysis in the design of skyscrapers:

" . . . We must now heed the imperative voice of emotion. It demands of us: What is the chief characteristic of the tall office building: And we answer at once: it is lofty. This loftiness is to the artist-nature its thrilling aspect. It is the very organ-tone of its appeal. It must in turn be the dominant chord in expression. The skyscraper must be tall, every inch of it. It must be every inch a proud and soaring thing. . . . "

The true excitement of the imagination then was not the steel structure and the necessity of confessing its presence but the loftiness; the loftiness which to the artist-nature was the thrilling aspect of the skyscraper, the organ-tone of its appeal. The architect puts aside his theory and turns to the messages of his heart, finding a source of expression not in that which he has been taught but in that which he has felt. He turns from understood relations, accessible to the intelligence, to those relations which are accessible only to the imagination. It was at that moment that the skyscraper ceased to be a work of engineering and became a work of architecture.

I am sure that Louis Sullivan did not in his glowing paragraph conceive height, an objective characteristic of the skyscraper, as a subjective characteristic. Height was the thrilling aspect of the skyscraper because he had discovered in it a force and power, a glory and pride; and that force and power, that glory and pride, were essences drawn from the civilization that lay around it. This proud and soaring thing was a similitude of this land.

A collaboration of head and heart is a distinctive characteristic of the art of Louis Sullivan and, in my opinion, a distinctive characteristic of American culture. We are travestied by those naked buildings which proclaim a grim realism in the land they pretend to represent. Are they not, after all, an importation? They represent, not America, but America as seen from across the sea. Louis Sullivan was less hesitant to show ourselves as we are.

I have heard it said — and with a solemnity of speech that might have become the Pythia above the afflatus of Delphi — that we are living in a mechanized world. Mechanization has taken command. Overwhelmed by our inventions we have become conditioned here in America to life in a precise and ever-moving machine. Our ambition is to enrich the world with machines ever more efficient. Mechanization therefore will inevitably take command of our architecture.

We ought to reject such appraisal with a greater warmth of resentment. If we have accepted with gratitude the gifts of the machine we did so in order to use these in the making of a better way of life — not for ourselves merely but for the world — and that which we gave the world was well worth having. Our engines are in truth the implements of an impulse which lies

deep in the culture of this land. In spite of their intimacy to our daily lives our machines remain surface aspects of life which have never impaired the idealism which they overlie. We should not be ashamed of that idealism — not even in our architecture.

It is not the function of art to set forth the material circumstances of a civilization. The ways in which buildings are adapted to new uses and to new techniques are of course of the greatest practical importance but they have little to do with the substance of architecture. To be factual and logical is to be as superficial in architecture as it is in life. The arts have only one important function: to define and make eloquent the experiences of the heart. Except as a means to that end ingenuity and contrivance are no concern of the arts. The art of poetry is not exalted by the invention of new words — no, not even by the invention of the typewriter. The art of painting gains no new dignity from new colors spread upon the palette of the painter — no, nor by the substitution of the palette-knife for the brush. These are new media, useful to widen the range of techniques, but they have in themselves no new meanings. Nor is the art of music made more magical in the intricacies of the Philharmonic than in the slender orchestra of Mozart; and Beethoven, after all the thunder of his nine symphonies, wrote his most sublime music for a quartet of strings. The notion that the arts progress with the evolution of techniques is the most dangerous fallacy in the architectural thought of our day. How could the arts progress when at all times they are voicing, not event and circumstance, but the experiences of man's inward life, unchanged over a thousand centuries?

The art in architecture consists, as it does in all avenues of expression, of ideas and imaginings — and in that indefinable quality which Freud calls the *feeling-tones* of ideas and imaginings. The art in architecture is poetry, a poetry that functions, not in words, but in constructed fabrics. Such a fabric becomes architecture when it is filled with a poetic content.

Our architecture, like our poetry, is strangely silent with respect to the most salient characteristics of American culture. Among these — if I may pretend to such knowledge — is our faith in a philosophy that sanctions freedom and personality, enterprise and tolerance. We should not, I think, bewail the fact that we pay for these with some surface vulgarities. We have also a religion of love, not superficial but active, which ought

to compensate us for a spirituality somewhat less fervent than that which raised the great cathedrals; and there is also, even in small towns and villages, a desire to be hospitable to ideas, to seek beauty, and through idea and beauty to give our daily lives dignity and purpose. These are transcendent qualities which will survive the corrosions of the great wars and the unwanted responsibilities which these wars have placed upon us. Surely they will some day find their way into our architecture. It would not surprise me to learn that steel construction was invented for that purpose.

One thing is certain: we shall not build these qualities into our buildings by the exercise of that outmoded instrument, the intelligence. Heaven forbid that I should ask architects to be unintelligent; and yet I shall venture to remind them that there is a frontier in their practice where the intelligence becomes an impertinence. If we start — and of course we must — from rational, or at least practical, premises it must be with the object of arriving at some unsophisticated conclusions. The time comes in the development of every work of art when we must be less concerned with what we know and more concerned with what we have felt. At that point we must be less solicitous of our technologies, less conscious of them. Surely we are now sufficiently practiced in steel construction to use it intuitively, to accept automatically its authority in that kingdom where it is rightfully sovereign and, having acknowledged that sovereignty, let us be free to command steel to our poetic purpose. I do not mean that we should be merely free to give aesthetic trimmings to works of engineering. I mean that we should be free to give structural shapes our own direction and disposition: to emphasize or suppress them, to aggravate or attenuate them, to veil or distort them, and, wherever that is necessary to our purpose, deny their existence.

I know quite well that the noblest qualities of American culture cannot be exhibited in a skyscraper — perhaps not in any building. I have talked about skyscrapers because they seem to me to have sprung uniquely from American thought and feeling and because that was what Louis Sullivan thought about them. Sullivan found in skyscrapers a quality of aspiration, of a rising out of the dull business of getting and spend-

ing, and that aspiration he thought — in the teeth of all philosophers of the time — was an American quality. I am not so confident of skyscrapers and yet I agree that there is in them a quality not unworthy of celebration in architecture.

There is also in skyscrapers a romance of a different kind: I mean that visual romance with which they endow our cities. I seldom approach one of our cities from the air without feeling a delight in the upward surge of the tall buildings at its center. These create a new kind of beauty. LeCorbusier has shown us how these brambles at the hearts of cities might submit to the control of an artist and by so doing attain a new grandeur, speaking to us less of a competitive rage and more of that just proportion and peace which is the less published trait of our national spirit. In the beautiful *Ville Radieuse* the skyscrapers consent to live together and to be citizens. They consent to a harmony of proportion and to a consistency of technique; to a majestic rhythm of silhouette; to a poetic artifice; and they consent to live in a garden.

Was the splendor and beauty of LeCorbusier's design created by steel? Did this assurance of faith in man's dignity and worthiness arise from the inward sources of the I-beam? Of course not. Nor did this great romanticist arrive at his design in deference to some abstract theory of design — not even in deference to his own theory.

But we must not expect Utopias; and it may well be doubted that there could be happiness in a world where all conflict is stilled, all accidents anticipated. Whether we like it or not discord and confusion will remain for a long time to come the normal conditions of human life.

Nevertheless it is important — important to our civilization — that we should hold before us such idealisms as that of the *Ville Radieuse*. That is one of the noblest functions of architecture: to exhibit in dramatic form the spirit of our epoch, to renew our faith that great things can still be accomplished.

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Architectural Record, July 1957.

O F F I C I A L
P R O G R A M

JANUARY 28, 29, 30.

WINTER
1960

HOTEL SIR WALTER
RALEIGH

FORTY-SIXTH ANNUAL MEETING
NORTH CAROLINA CHAPTER
AMERICAN INSTITUTE OF ARCHITECTS

THURSDAY

—8

—9

—10

10:30 Executive Committee Meeting Hayes Barton Room

—11

—12

—1

1:30 Registration Begins Mezzanine

—2

2:30 Opening Business Session Hayes Barton Room

—3 Pres. Robert L. Clemmer, AIA, Presiding

Invocation

Welcome

Approval of Minutes Previously Circulated

—4 Committee Reports

Other Business and Announcements

—5

Elizabeth Room — Social Hour 5:30

—6

On your own — Dinner 6:30 Dinner Chapter and Councils Officers Hayes Barton Room

—7 Dinner Meeting of Architects on Bishop's Committee on Rural Church Architecture of the Methodist Church Manteo Room

—8 Committee Meetings

—9

—10

FRIDAY

	—8	Registration Continues	Mezzanine
	—9	Business Session	Elizabeth Room
	9:30	ALBERT BUSH-BROWN — For Architecture:	
	—10	"design and engineering relationship"	Elizabeth Room
Coffee Break	10:30	Intermission	
"Understanding Modern Painting" — Hayes Barton Room	—11	CHARLES HOWARD KAHN — For Structural Engineering:	
		"design and engineering relationship"	Elizabeth Room
	—12		
Carolina Country Club — Ladies Fashion Show	12:30	Announcements	
Carolina Country Club — Ladies Golf	—1	Lunch on your own	
	1:30	Registration Continues	Mezzanine
	—2		
Elizabeth Room — Awards Jury Meets	2:30	Business Session	Ballroom
	—3	Institute Film: "Report of AIA Committee on Structure"	
		Report of Nominating Committee and Election of Officers	
Coffee Break	3:30	Intermission	
	—4	Business Session	Ballroom
		Committee Reports	
Visit Awards Exhibit	4:30		
	—5		
Buses to Shrine Club	—6		
"Way Out" Party Social Hour	6:30		
	—7		
Buffet Dinner	7:30		
	—8		
Dance	—9		
	—10		

S A T U R D A Y

Hayes Barton Room — Chapter Breakfast —8

Registration Continues

Mezzanine

—9

CHARLES LEOPOLD — For Mechanical Engineering
"design and engineering relationship"

Elizabeth Room

Coffee Break —10

Intermission

10:30

JOSEPH HUDNUT — For the Critic
"design and engineering relationship"

—11

Elizabeth Room

11:30

Business Session
Induction of New Members

Elizabeth Room

—12

12:30

President's Luncheon

—1

Address by **JOHN NOBLE RICHARDS, FAIA**,
President, American Institute of Architects
Ladies Invited

—2

2:30

Closing Business Session
Committee Reports

Elizabeth Room

—3

Report of Time and Place Committee: **Archie R. Davis, AIA**

3:30

Report from N. C. Board of Architecture:
John Erwin Ramsey, AIA

—4

N. C. Museum of Art — Tour Conducted by
James B. Byrnes

N. C. Museum of Art — Coffee Hour

4:30

Adjournment

—5

Elizabeth Room — Social Hour —6

—7

Ballroom — Banquet 7:30

—8

Announcement of Award Winners
Presentation of Honorary Membership to **Randolph E. Dumont**
Speech by **DAVE MORRAH**, Humorist

Dance —9

—10

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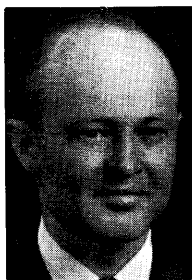
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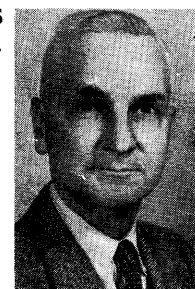
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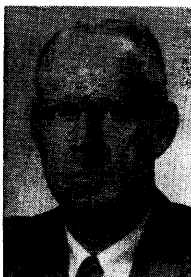
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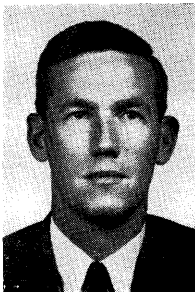
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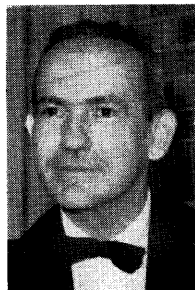
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SPOT-LIGHTING THE COUNCILS

During 1959 the architect councils throughout the state have worked in a fine manner in carrying out the objectives and projects of the Institute and Chapter, as well as offering various services locally. In that the elections are held at varying times throughout the year *Southern Architect* is listing both the 1959 and 1960 officers. We salute those who have completed their successful terms and charge those just beginning to serve in the fine manner of their predecessors.

In addition to the six councils there was created last year the Architectural Guild of High Point. Officers are Robert G. Parks, President, A.I.A.; David B. Oden, Jr., Vice President, A.I.A.; and W. Clayton Mays, Jr., Secretary - Treasurer, A.I.A. And this year the Salisbury Council of Architects was formed, but it is an informal group with no officers.

DIRECTORY of SALESMEN'S PRODUCTS

This is the first issue of Southern Architect's "Directory of Salesmen's Products" as announced in our November issue. Additional listings received too late to be included will be added next month.

A

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I

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See our ad page 35

N

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R

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vitalistic interpretation of heredity and adaptation long after experimental biologists had turned from Bergson to seek physicochemical explanations of life. Thus he regarded a building as a plant sprung from its space-seed, exfoliating in conformity to the laws of growth and environment but forced by an impelling inner urgency to flower in an unexpected brilliance that transcended the soil where it grew. Meanwhile, crystallography, astronomy, nuclear physics, and biochemistry passed him by.

Nor will you find Wright in the vanguard of liberal social reformers in any of the great movements of recent history, whether associated with labor, world government, or education. He believed his social mission was to build beautifully, and when the centers of power failed to seek him, they became in his mind the strongholds of reaction. He clung to an idea of primitive democracy at a time when decisions were more commonly made by officials appointed to dole out patronage and organize graft and when state legislators were as often as not also real-estate speculators whose investments determined where the new highway or public building would go and who would build it. He established no seminal designs for labor buildings, government buildings, public schools, factories, recreation facilities, or public housing. When he condemned even the sincere attempts at providing such buildings, he seemed an ember glowing brightest just before it joins the pile of dead ashes.

You cannot ask too much of his buildings, either. You cannot be satisfied if you require that they be perfect in detail and full of wonderful joinery and refinement; for he was the strongest devotee of the cult of originality that has driven the post-Renaissance artist into frenzied innovation at the loss of perfection. You cannot expect to find satisfaction either in his innovations, for the inventions, whether split-level living rooms, the corner picture window, the carport, radiant heating, all-steel office furniture, or air conditioning, were technical answers to demands for a mechanically controlled environment and gained no aesthetic quality by being first. You cannot delight in finding an isolated form so powerfully distinctive that it remains an emblem for the institution it houses, for Wright, like all artists in the twentieth century, found it impossible to reserve the strong structural forms made available by modern technology, because society continuously robs the architect of his best language, using it for tawdry gas stations, hamburger stands, and motels, so that he can no longer speak the speech he should make for the important centers of culture. In all this, society piped the tune, and if it was satisfied with the crude, the gadget, the blatant, the misappropriated, even the strongest artist might not survive the dance.

It is, of course, important that architecture meet the measure of utility, and few of Wright's buildings would satisfy the physical demands an efficiency engineer would propose. A long list of leaky roofs, parting

seams, cracking walls, and tortuous corridors could be compiled by anyone who has knocked his head against Wright's low doors and trellises. Some of the failures in his houses were due to half a century of negligent occupancy; some, like the inconvenient second-story kitchens, dining rooms, and living rooms, were wistful reminders of earlier times and plentiful servants; still others revealed that penchant of all aging architects to press a tyrannical formalism regardless of performance — the hexagon, for instance, that Wright imposed throughout a house until the clients rebelled at having a bathtub to match, and Wright characteristically warned that if they wanted to start compromising now he was through.

At what point should an intimidated client rebel? Early, Frederick C. Robie had found no reason to break his happy relations with the forty-year-old architect who designed the roof-sheltered and rhythmically mullioned spaces of his beautiful house in Chicago. Even the Wisconsin engineers who doubted Wright's faith were reassured by the graceful dendriform columns that today still sustain the glorious space in the Johnson Wax Administration Building. Tokyo saw his Imperial Hotel withstand both a leveling earthquake and the later taunts of engineers who suggested that the Imperial had caused the quake. Not even the obvious unsuitability of the Guggenheim Museum's low-ceiled helix, cramped offices, echoing auditorium, and inadequate work spaces deterred the headlong pursuit of sculptural form; if the pictures were too tall, cut them in half, Wright said, brandishing his cane.

But once you have picked all the cracked calking from the leaky joints between the glass tubes around the Johnson Wax Building, once you have stood by silently as the Robie House, Coonley House, and other great heirlooms die a slow death on the altar of functionalism or meet the cleaner stroke of the wrecker's ball and bulldozer's blade, joining the rubble made of the Larkin Building and Midway Gardens and soon to be made by the hotel owner in Tokyo, there is still a greater, deeper sense of function to be remembered — the one that has kept the scaffold-borne masons and glaziers repairing the Gothic cathedrals and Byzantine basilicas for centuries in spite of their manifest inefficiencies and physical shortcomings.

For Wright's buildings accept the snow on their rock ledges, shine in the desert sun, are freshened by rain and fog, have a serenity that gathers children to them, and receive the vine and flower when crassly functional buildings refuse. His best spaces have a peace that surpasses functional understanding. You may expect and you may receive from many architects a reliable, practical performance, even a brilliance and finish that the sensitive poet will not often achieve; but you will sometimes obtain from a poet that elusive and spirited art which makes wood and stone and concrete spring palpably to life. Wright's best buildings retained the thrill of a man inspired by an idea and also the sense of a man who could make mistakes,

(Continued on page 26)

(Continued from page 25)

sometimes horrible ones like the Community Church in Kansas City, where clients, deciding to go their own way with a meretricious design, produced one of the ugliest buildings in America. Work-weary and dulled by such environment, we seek Wright's best or leaf through his drawings, astonished and revived by the fountainhead of sheer genius with space.

Wright worked best when the landscape suggested a definite theme, a declivity to be accented by a tower, a boulder beside a lake to be echoed by a quirk in a long roof, a cactus-dotted, rock-strewn knoll to be translated into ship-lapped balconies and Maya-battered walls, a pond and low-hanging willows to reflect and filter a geometrically patterned concrete wall, a waterfall set among striated rock and Pennsylvania woodlands, a hill for roofs to hover around, nestling gardens and pools and living spaces. His work often retained much primitive, rugged, earthy vitality, even peasant crudeness, and his geometry boldly sprang long continuous horizontal masses, penetrated them with rhythmic sequences of interrupted verticals, phrased the statements with bracketing chimneys and punctuating towers, took a deep breath at the void of a door, then ended the statement with a flourish of roof planes floated in air. In the city, Wright never was struck with any desire except to close a wall against frenetic tempos and banal surroundings, and, turning his buildings inward, he attempted to shout his neighbors through gargantuan scale and powerful forms. Then his power could be felt, as in the great prow of the Guggenheim, only in relation to the dull staccato of the dreary passage along our city streets. Even Florida Southern College, where Wright designed the entire campus, did not escape one of the pitfalls of modern architecture, the restless assemblage of overwrought, grossly scaled bombasts and nervous sophistications that drive us to seek a private corner away from an architecture that is too much in evidence and so all-demanding that neither painting nor sculpture, let alone people, can live easily with it.

The devotee of Wright did not often see past the superficial signs of his style, and indeed the view was difficult, since subjective axioms were promoted as dogmas. Thus many young architects were led astray by the fetish of hexagons or, more basically, developed a cult of self-conscious expression of the nature of materials, sites, structural systems, functions, and interior spaces, forgetting that great buildings, including the Parthenon and Taj Mahal, made no overt expression of those particular beliefs. Then there arrived the new architecture of weather-worn peasant rusticity, ebullient but raw materials, structural exhibitionism, and pathetic patches of skylit gardens in living rooms. Wright's style was too personal and also too peripheral to his genius to be followed, and those who emulated his details could never evolve the next stage in the development of architecture.

What was truly essential in Wright's work was his capacity to capture space within eccentrically disposed masses; to describe planes that come forward and planes in recession, projections and hollowed places; to balance these as no previous architect had; to make them become rhythmic patterns revealed by light and shade. From the exterior we anticipate his interiors, but once inside we find consonant, rich developments of his themes, as space is trapped at an entrance, drawn out thin under a porte-cochere, revolved through a door, released to pirouette in the cylindrical recesses of a Johnson Wax lobby, then set free to soar over the

bridge or glide beneath it into the main secretarial room, where the space eddies around ballerinas poised delicately on tiptoe as only Degas might have recorded.

You will find architects now working in Detroit, in Chicago, in New Haven — a Yamasaki, a Netsch, a Rudolph — for whom that marvelous development of spatial theme taught the lesson that a building's only memorable function is to be a satisfying work of art. Wright showed that such art might arrive on American soil. Could a lesser arrogance or a dishonesty have taught as much?

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HONOR AWARDS JURY

The North Carolina Chapter of the American Institute of Architects has completed plans for the presentation of its Sixth Annual Honor Awards Program at the annual winter meeting of the Chapter at the Hotel Sir Walter in Raleigh January 28-30, Alvis O. George, Jr., AIA, Chairman of the Committee on Exhibitions and Awards, announced recently.

Three outstanding leaders in the field of architecture have been chosen to serve as judges for the honor awards program, including Albert Bush-Brown, Associate Professor of Architecture at Massachusetts Institute of Technology in Cambridge, Mass.; Harlan E. McClure, AIA, Head of the Department of Architecture of Clemson College, Clemson, S. C.; and James R. Wilkinson, AIA, of Atlanta, Ga., practicing architect.

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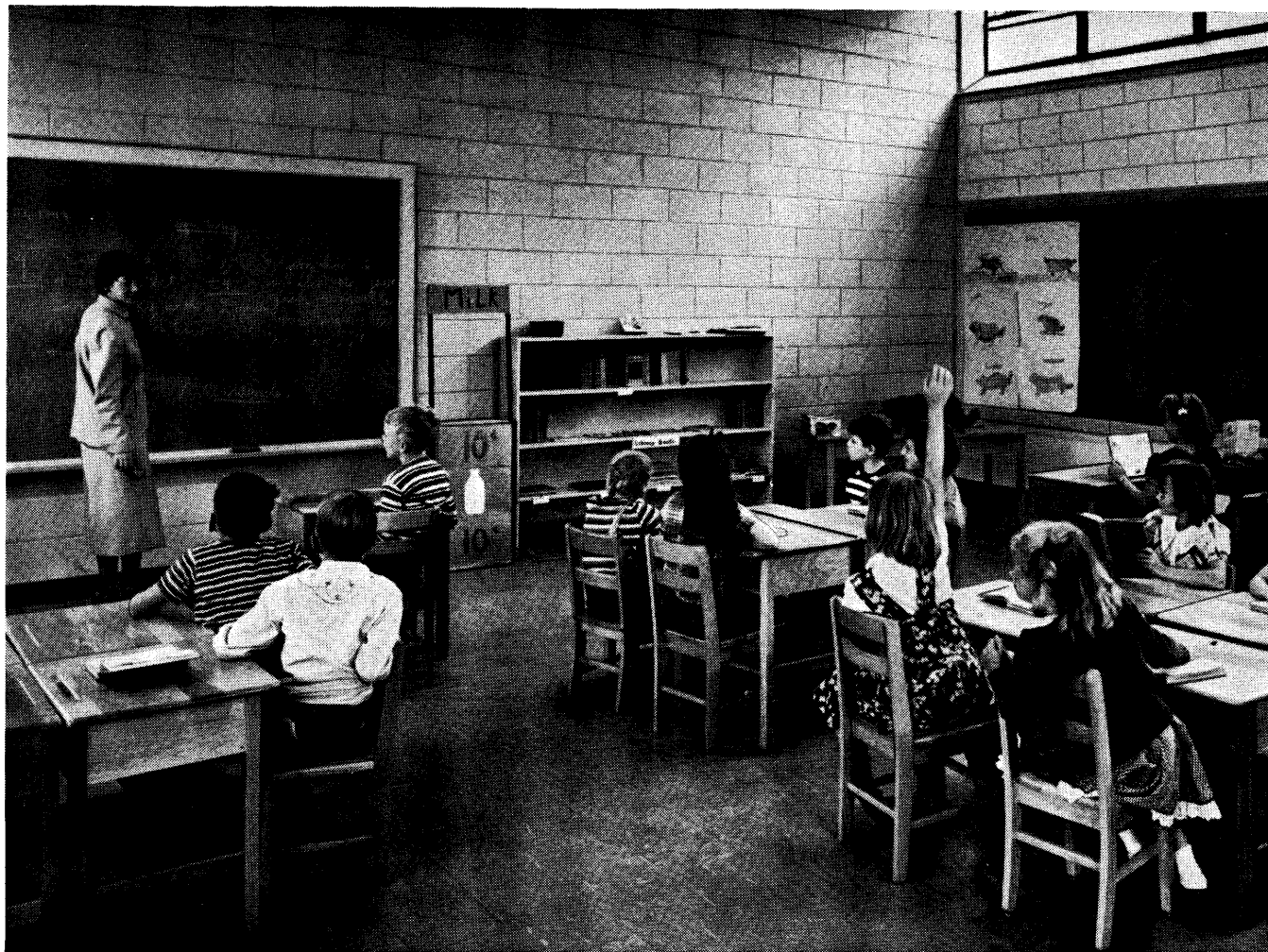
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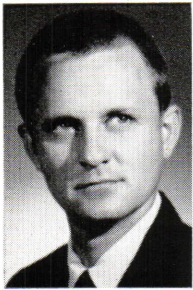
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1951 (Bachelor of Architecture)

Professional Training:

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William J. J. Chase, Atlanta, Ga.
Harold Woodward & Assoc., Spartanburg, S. C.
D. Carroll Abree, Hickory, N. C.

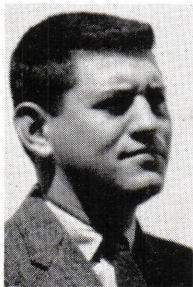


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North Carolina State College, Raleigh, N. C.
1953

Professional Training:

N. C. Dept. Conservation & Development, Division of State Parks, Raleigh, N. C.
Holloway-Reeves, Raleigh, N. C.
Leslie N. Boney, Wilmington, N. C.
Walter E. Blue, Jr., Architect, Greensboro, N. C.



PAUL BRASWELL

Charlotte, North Carolina
Born: August 18, 1933, Smithfield, N. C.
Education: Rosewood High School, Goldsboro, N. C.
N. C. State College, Raleigh, N. C.
1956 (Bachelor of Arch.)
Graduate School of Design, Cambridge, Mass.
1957 (Master of Arch.)

Professional Training:

Billy Griffin, AIA, Goldsboro, N. C.
Jose Luis Sert, Architect, Cambridge, Mass.
A. G. Odell, Jr. & Associates, Charlotte, N. C.
Paul Braswell, Architect, Charlotte, N. C.



LEON ANTHONY SCHUTE

High Point, North Carolina
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Bowling Green State University, Bowling Green, Ohio
Ohio State University, Columbus, Ohio

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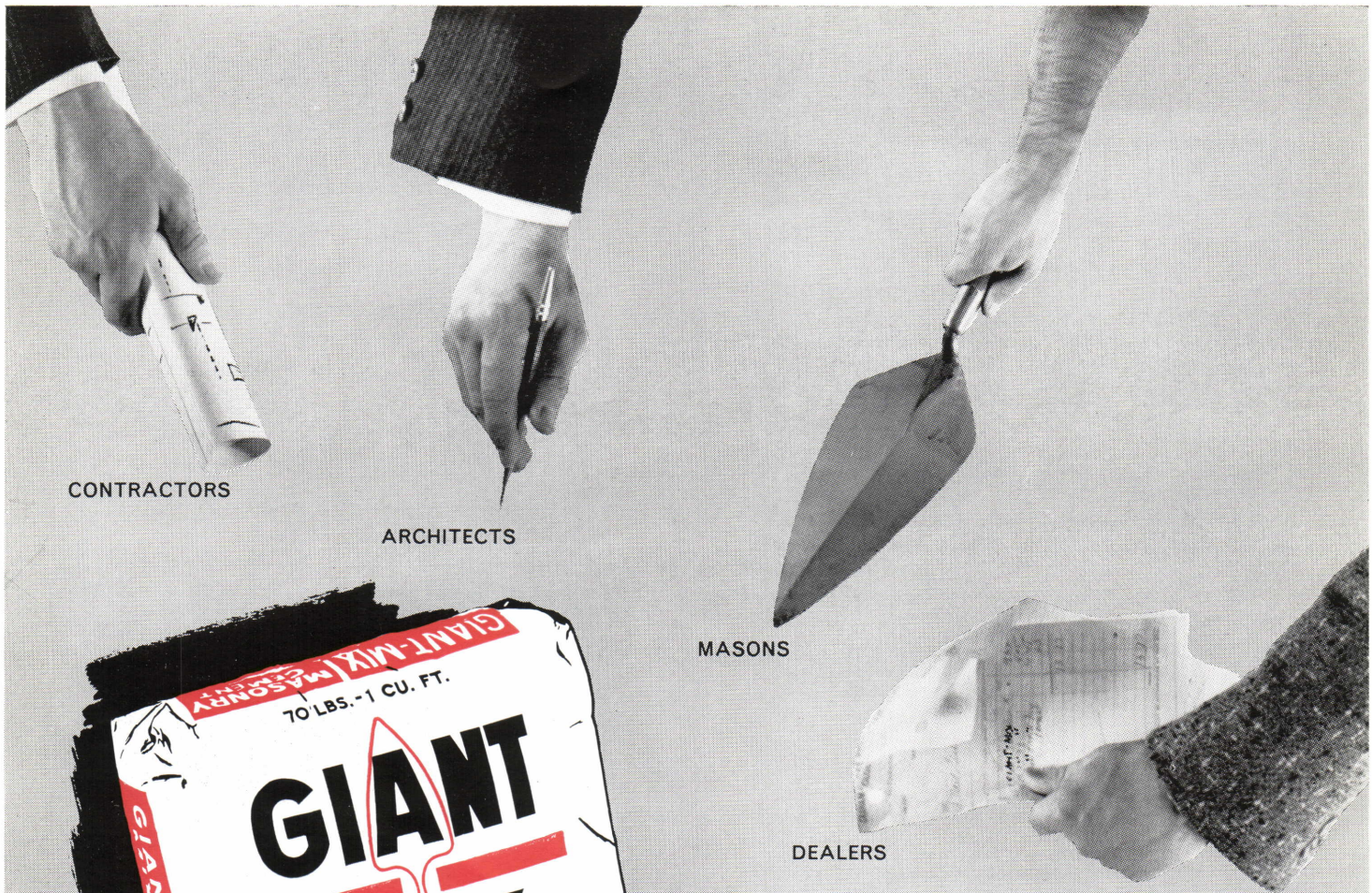


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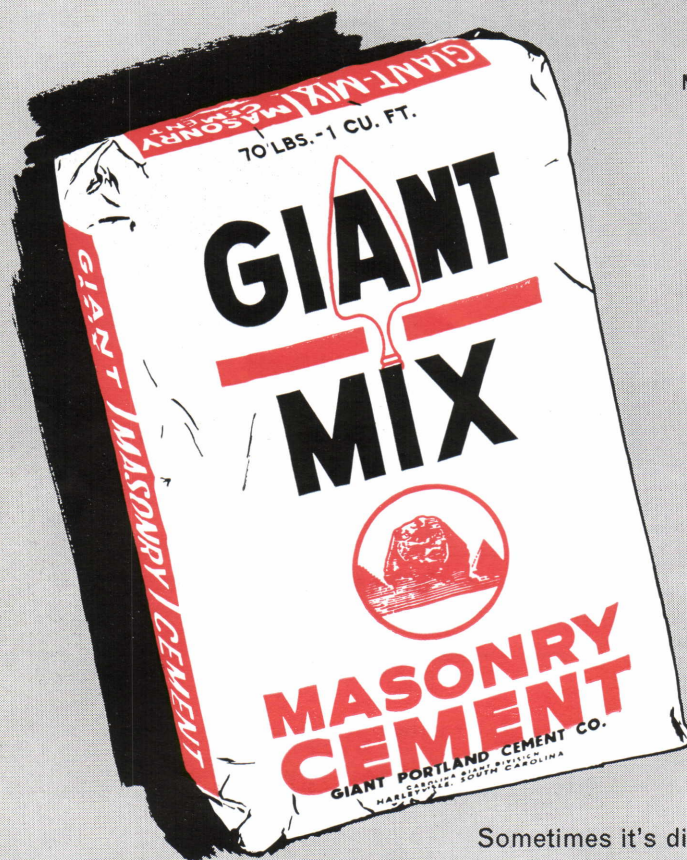


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(Continued from page 9)

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Refrigeration is provided by an 800 ton centrifugal refrigerating plant with cooling tower. The coolant is water circulated through chilled water lines from the boiler-refrigeration plant to and through the office building.

TEMPERATURE CONTROL

The controls thus far described do not employ room thermostats. They are responsive to outside conditions and to the amount of power used for illumination. The advantage of such control is that it anticipates the needs before they are actually evident in their effect on room temperature. In the more conventional control there would be a room thermostat for each zone. Neither a room thermostat nor the anticipating controls described can meet the requirements of minor variations in the use of light or the occupancy in a small area. The room thermostat control has the disadvantage of failing to call for a change before the change is noted in the room air temperature.

The foregoing description covers the problems of the general office areas where it is necessary to maintain a constant optimum temperature. Offices of single occupancy present a different problem in that it is permissible that the occupant select the temperature he desires, even though it may not be the temperature which would be most acceptable to a group.

The air conditioning solution for the private offices on the tenth floor is generally the same as that used throughout the building, with the exception that a booster heater has been added in the air supply duct in order to provide individual thermostatic control. The cafeteria and some other points of assemblage are provided with supplemental controls of the conventional type.

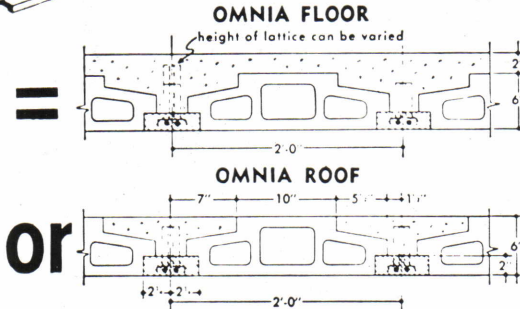
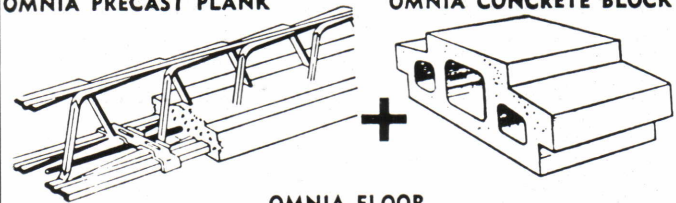
Both in the Time, Inc. test installation and in the Manufacturers Life project there has been a definite impression that there was an increased tolerance for lower temperatures than would be acceptable with an all air system. The mean radiant temperature of this building is lower than it would be in a conventional system. This observation is in apparent conflict with the findings for panel heating namely, that the air temperature may be lowered with increased mean radiant temperature. The contradiction may in part, be explained by the observation that the air temperature is uniform from the floor to within a few inches of the ceiling, that there is no appreciable air motion or draft, and that the sill panels provide symmetry of radiation. The importance of these observations may overshadow the minor effect of the slightly lower mean radiant temperature or, as is claimed by some observers, a ceiling cooler than the other room surfaces is to be desired.

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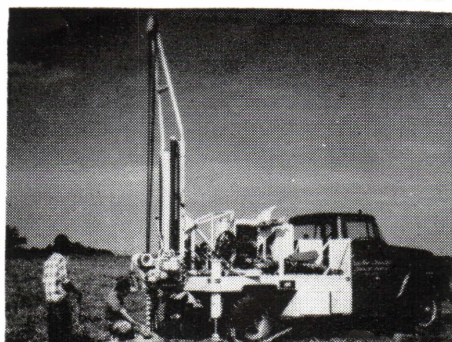
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Entries must have been published between January 1, 1959 and December 31, 1959. Two prizes, of \$500 for first and \$250 for second best, will be awarded in each of two categories — newspaper and magazine. Entries must be postmarked not later than January 30, 1960, mailed to Architectural Journalism Awards, The American Institute of Architects, 1735 New York Ave., N.W., Washington 6, D. C. Each entry should be accompanied by a letter giving the name and address of the author; the name and address of the newspaper or magazine in which the story was published; and a notation as to whether the entry is submitted in the newspaper or magazine class.

DEITRICK ELECTED DESIGN FOUNDATION HEAD

Newly-elected officers of the North Carolina Design Foundation chat with retiring president Marion Ham, AIA of Durham (right). New vice-president J. Norman Pease, Jr., AIA of Charlotte (left) and president W. H. Deitrick, FAIA of Raleigh (center) will head the work of the foundation during the next year. The Foundation's annual meeting was held December 11 in the College Union Building on the N. C. State College campus.

New directors elected include Edward Loewenstein, AIA and Leon McMinn, AIA, both of Greensboro, Henry A. Foscue of High Point, Robert L. Clemmer, AIA of Hickory, and Fred W. Butner, Jr., AIA of Winston-Salem.

Named to the executive committee were Arthur C. Jenkins, Jr., AIA of Fayetteville, Pease and Loewenstein.

The Design Foundation, which supports a wide range of activities in the State College School of Design, has had an income of \$62,366.27 since incorporation in 1949, including an income of \$7,912.86 during the fiscal year ended Aug. 31, 1959.

Among speakers addressing the annual session were college chancellor John T. Caldwell; W. D. Carmichael, Jr., vice president and finance officer of the Consolidated University; and M. A. Arnold, Sr., of Greensboro.



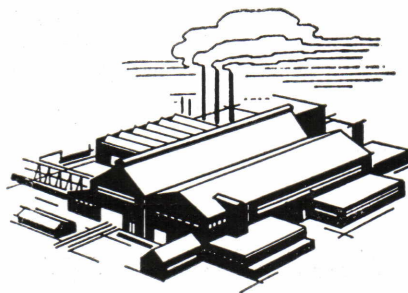
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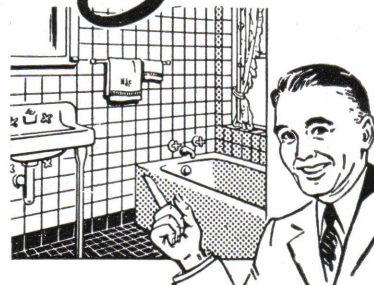
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ARCHITECTURAL CALENDAR

JANUARY 25: Deadline for submissions in NCAIA 1960 Honor Awards Program.

JANUARY 28-30: N. C. Chapter American Institute of Architects Annual Meeting, Hotel Sir Walter, Raleigh.

JANUARY 31-FEBRUARY 3: N. C. Board of Architecture Meeting, Raleigh.

FEBRUARY 1: Deadline for material for issue after next of this publication.

FEBRUARY 2: Durham Council of Architects, Harvey's.

FEBRUARY 3: Charlotte Council of Architects, Chez Montet, Charlotte.

FEBRUARY 3, 10, 17, 24: Architects Guild of High Point, K & W Restaurant.

FEBRUARY 4, 18: Raleigh Council of Architects, S & W Cafeteria.

FEBRUARY 16: Winston-Salem Council of Architects, Y. W. C. A.

FEBRUARY 16: Producers Council Seminar on Roofing, Charlotte.

MARCH 1: Deadline for entries in 1959 Better School Design Competition.

MARCH 8-10: Carolina Lumber & Building Supply Ass'n. Convention & Exhibit, Asheville.

MARCH 15-16: Exhibit of Church Designs, Nashville, Tenn.

APRIL 19-20: AIA Annual Meeting, San Francisco, California.

MAY 3-5: Conference on Church Architecture, Minneapolis, Minn.

MAY 12-14: South Atlantic District AIA Conference, Winston-Salem.

MAY 28-JUNE 3: World Planning and Housing Congress, Puerto Rico.

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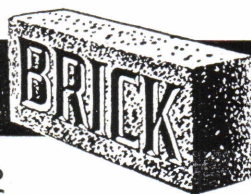
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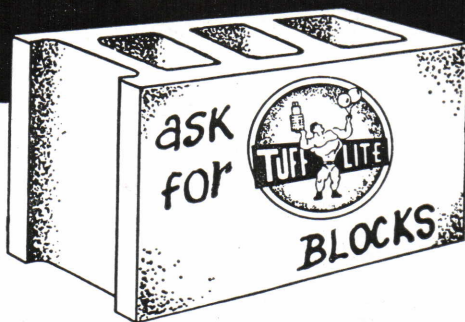
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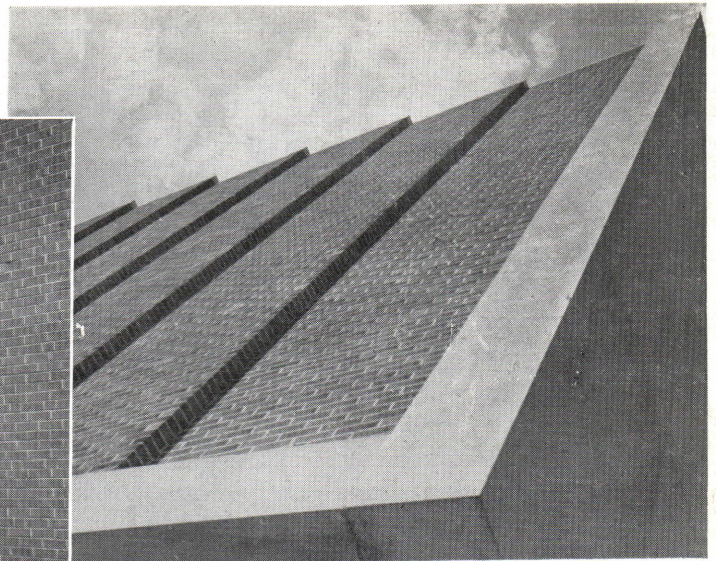
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*(excerpt from address to North Carolina Chapter AIA, Charlotte, N. C., Jan. 24, 1959)

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