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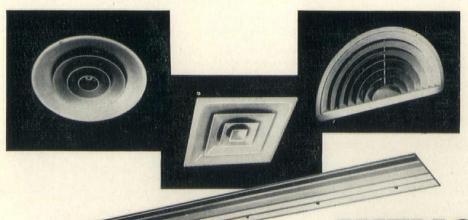
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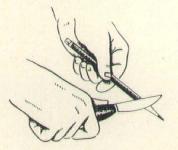
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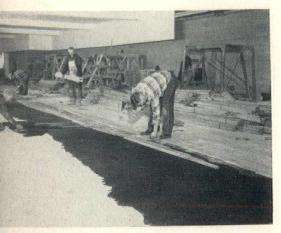
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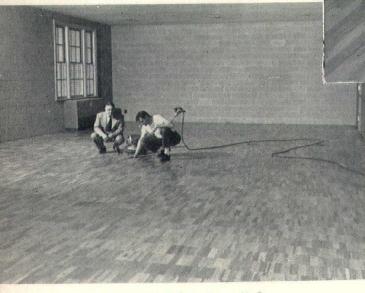
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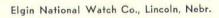
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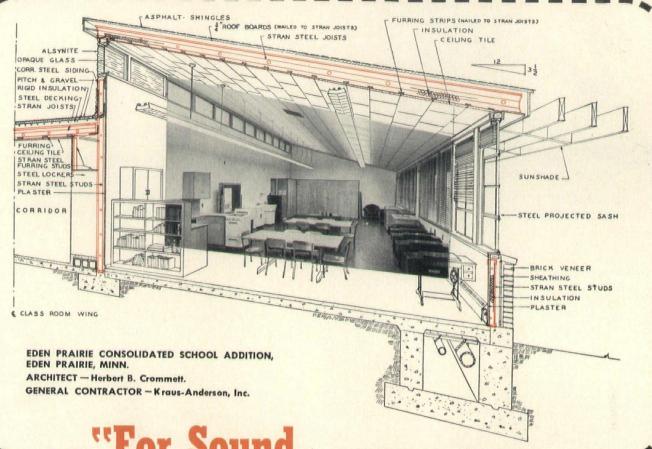


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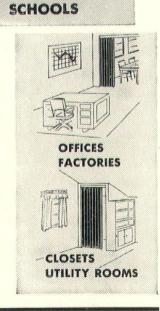
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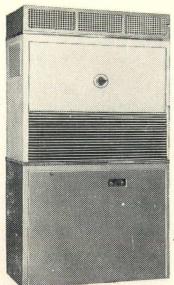
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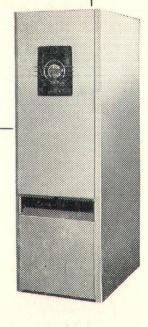
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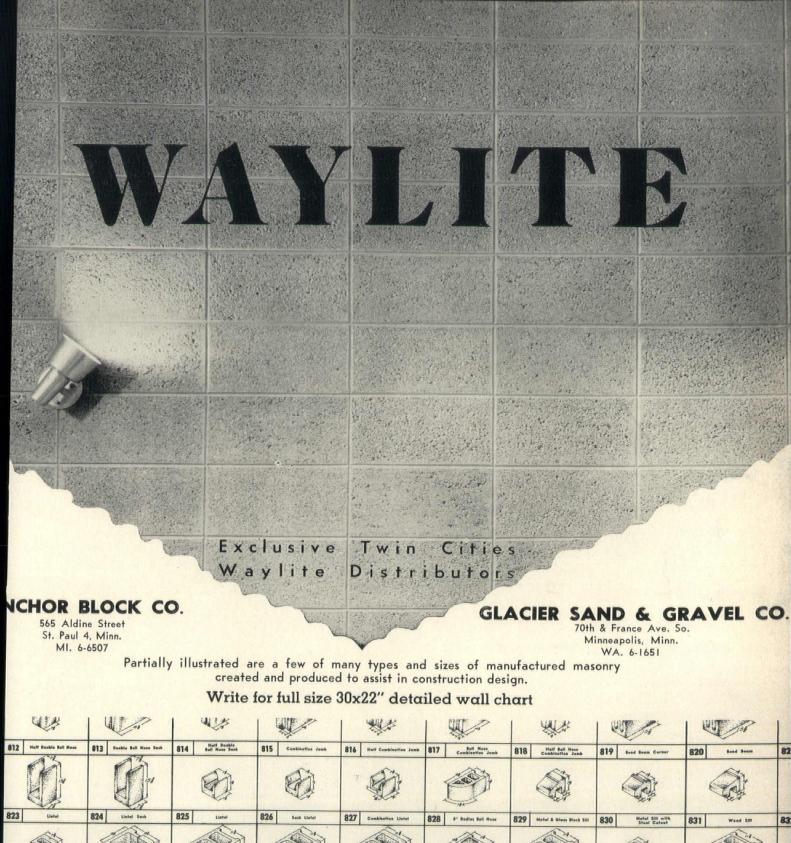


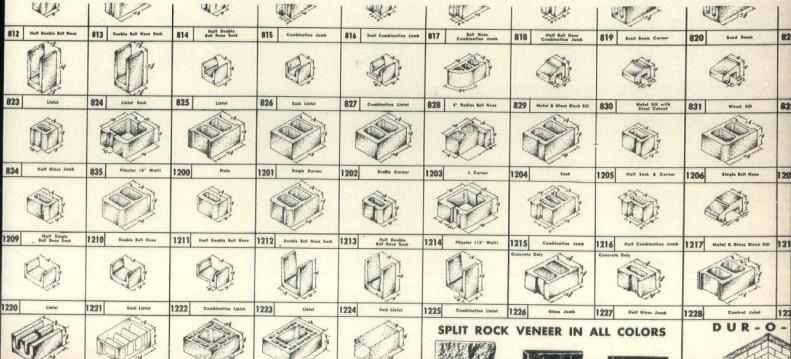
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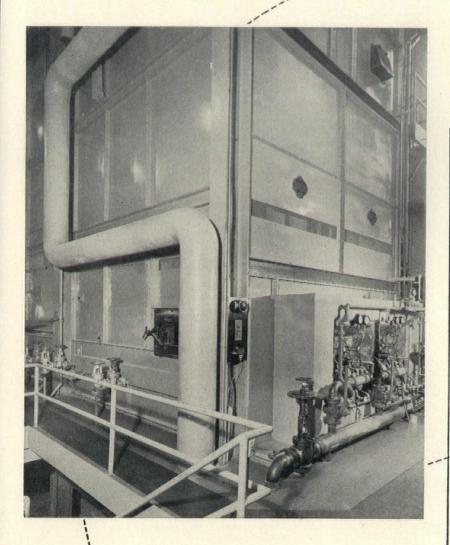
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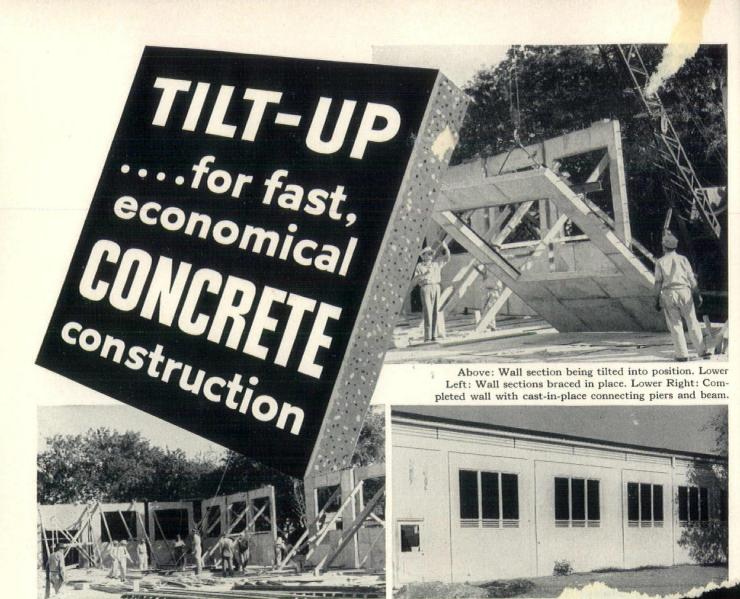
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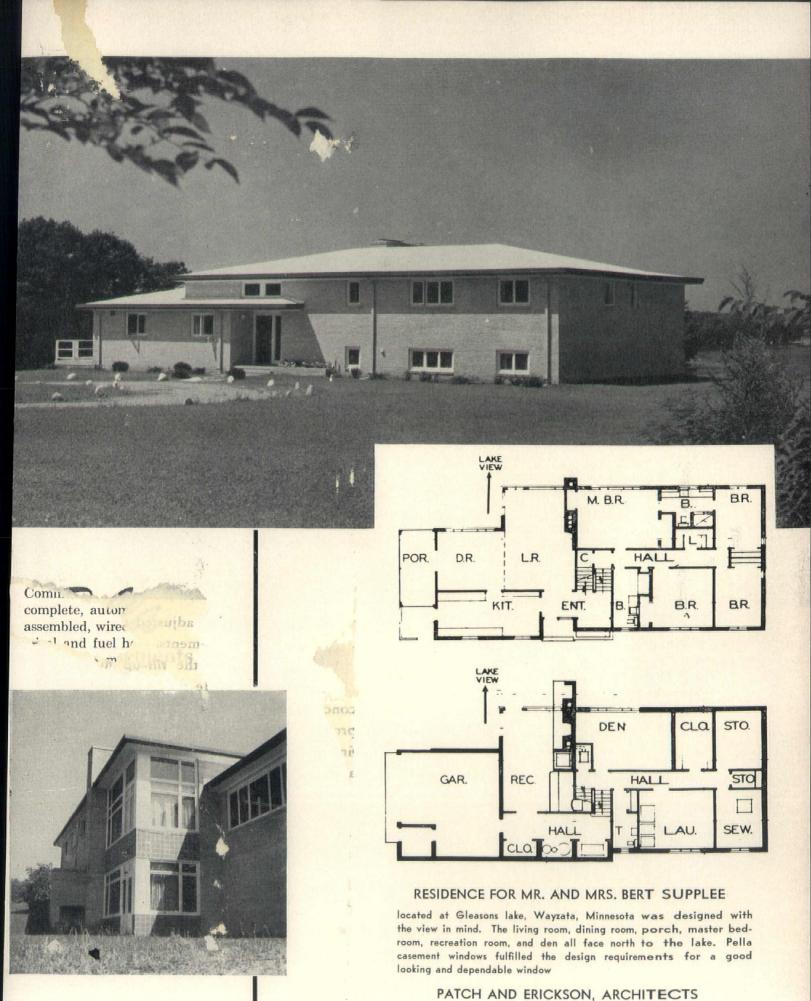
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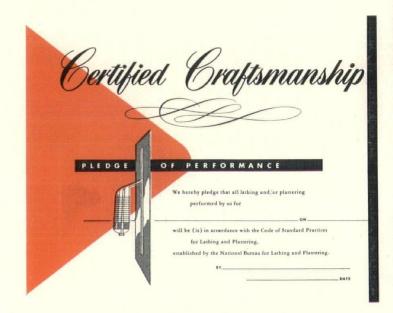


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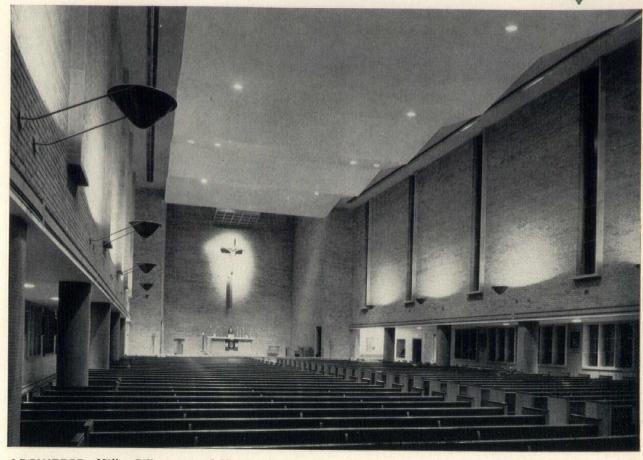
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MINNESOTA CONVENTION

Being Shaped by Committees

Special committees are rapidly shaping up early details for business sessions, speakers, seminars, exhibits, entertainment and other items to go into the 1955 annual convention of the Minnesota Society of Architects in St. Paul, October 21 and 22, with President George C. Darrell to preside over the two-day affair.

This year the convention will be handled by an incorporated group on the suggestion of the executive director. This legal move puts the convention activities on a sounder financial footing. The convention



Current society officers are (1-r) George C. Darrell, president, C. Herbert Smith, vice president, Arthur C. Lucas, treasurer, and Glynn Shifflet, secretary.

corporation is headed by Robert E. Howe as president, with Milton Bergstedt, vice-president, Ralph Keyes, secretary, Burt Fasth, treasurer, and Burton Flick, Warren Mossman and W. Brooks Cavin, directors.

Plans for this year's convention are aimed at producing an equal to or a superior convention compared with the all-time topper in Rochester last year, it was indicated. So much has been done in the past year to push architecture and the building industry ever upward that there is a great deal of grist for the convention mill. Then, too, the AIA convention in Minneapolis this summer has sparked interest in things architectural which should help put the October gatherings on all architects' "must list."

At the first business meeting of the forming convention corporation, presided over by Mr. Howe, the committees were named to handle the various aspects of the convention. President Darrell will of course preside at the business sessions, first one to be held Friday morning, October 21, continuing to Saturday morning, October 22.

Other committees and their jurisdiction are—seminars, Brooks Cavin, chairman, Robert Jackels and Everett Holes—registration, Burton Flick, chairman, Kenneth Mahal and William Shannon—exhibits, Milton Bergstedt, chairman, Ralph Shirmer and Ralph Keyes—entertainment, Warren Mossman, chairman, and Robert Kerr. Their work will be integrated with planning being done by the newly set up central office of the society under Ralph Keyes, executive secretary.

Officers of the society who will be on hand to handle the business of the two days are, in addition to President Darrell, Vice-president C. Herbert Smith of Duluth, Secretary Glynn Shifflet of Minneapolis and Treasurer Arthur C. Lucas, Jr., of Duluth.

Business sessions of the convention, following the fast-stepping patterns of previous conventions, will consider many vital problems concerning the immediate and future governing of the group's policies. These sessions have always brought out many phases of thought about the society and the arguments and final decisions have resulted in a steady and healthy growth of the state group. Every Minnesota architect interested in his profession will plan to be present during the two days so he can have his say about "where we go from here," officials pointed out.

The seminars have become top features of recent sessions. This year, although the subjects and personnel for the round tables have not been announced, tentative plans call for an even broader and more generally interesting series. Many architects particularly enjoy these sessions because they can get their problems threshed out by experts in a number of fields of related work and take home definite answers to be used in their future or on-the-board works. Seminars will be held one on Friday morning and two Friday afternoon.

Exhibits this year will be of two kinds, the showing of architects' work through drawings, spex, models, etc., and the product exhibits which present for study the latest materials, equipment and methods which suppliers have ready for the use of their customers. Adequate time is planned during the busy two days for architects to visit the exhibits and spend time there in "getting the word."



President Darrell

Luncheons, dinner, dance, skits are all being framed for the entertainment side of the convention. While Rochester had many things to offer last year's gathering, the capital city has its wealth of things architectural and industrial to provide tours and points of interest for the 1955 gathering. In the planning the ladies' activities will once again be given much consideration so the convention wives will not find time idle on their hands.

"Plan now to attend the state convention," committee chairmen said. "Each year presents new and important developments which can best be brought into focus by personal attendance at the convention and the central location of this year's convention city should make it easy for all to attend."

The next issue of Northwest Architect will carry as complete details of the convention as possible, including the tentative program and plans for special events. Meantime, however, those who plan to attend should earmark those days in St. Paul.

Watch Our Next Issue for Details of the Convention

DULUTH HEARS OF STATE PLANS, HAS BOAT TRIP

The Duluth Chapter of AIA held a luncheon meeting on July 11 in the Duluth Athletic Club with A. Reinhold Melander, president of the chapter, presiding. The speaker at the meeting was Ralph T. Keyes, executive director of the Minnesota Society of Architects. He spoke on the functions of the society's office and the proposed plans for its operations.

He stressed in his talk that the establishment of the office was a great step forward for the profession in this area, answering a long felt need, and that it marked the beginning of increased activity by institute architects in advancing the interests of the profession.

"We must intensify our efforts in public service, making the public cognizant of the value of our services. This can best be done by an affirmative approach based upon showing what the architect contributes,"

Mr. Keyes stated.

In a discussion period following the talk the matter of incorporation of the chapter was raised and Mr. Keyes was asked to assist the chapter by submitting proposed articles of incorporation which can be studied by the chapter at its next regular meeting.

The Duluth Chapter held its annual summer fun meeting on August 9. Harold A. Hansen, Superior member of the Duluth chapter, was in charge of arrangements and scheduled a boat trip around the Duluth-Superior Harbor.

Skipper Hansen notified members that the party was to cast off from Knudsen's Dock, Superior, and after a cool, refreshing ride about the harbor with suitable refreshments was to disembark for dinner in the Superior Elks Club. Several caravans from points as distant as Hibbing and Virginia made their way to Duluth to enjoy the cool Head of the Lakes weather and the companionship of their fellows.

A Dramatic Place of Worship

Mount Zion Temple



In September of 1953 Eric Mendelsohn, architect, died, an architect who influenced 20th century architecture more than most. Born in Germany in 1887 and educated at the technical universities of Berlin and Munich, he began his architectural practice in 1912. At once he took a leading role in the movement to combine beauty with utility, a pioneer in the movement toward expressing structures, one of the few to revolt against the then-applied classic styles, eventually to become one of Europe's most positive modern stylists.

Mendelsohn practiced in Germany, Holland, England and Palestine before coming to the U. S. in 1942. He never outgrew the "trademark" of the impassionate sketches of fantastic shell-like structures of glass and steel buildings he made while a German soldier in the trenches of World War I. In his own words, he states that, "As a student in Munich in 1907, I rebeled against the then prevalent teaching of applied styles

Sanctuary interior has Ten Commandments mounted on vertical wood strips. Twelve steps rising to the Ark symbolize the 12 tribes of Israel.

because I recognized that the elastic qualities of the new structural materials, steel and reinforced concrete, must by necessity produce an architecture entirely different from anything known or done before."

Eric Mendelsohn's buildings show an individual style and aggressiveness which can describe his personality, that of simplicity, arrogance and sometimes impatience, a man who lived and died as an explorer in modern architecture. His executed buildings show that a successful conclusion of the architect's will can be attained through the interpretation of sketches, though the architect's own severe guidance be absent. For in Mendelsohn's own words, "Look at my sketch; there is everything in it." Thus, in Mendelsohn's greatest works all the final complexity of detail and form is

Photos courtesy of Architectural Forum and Photography, Inc., Mpls.

Data:

Mount Zion Temple: St. Paul, Minnesota

Architect: Eric Mendelsohn, San Francisco (Deceased)
Associate Architect: Michael Gallis, San Francisco
Architects for Completion: Bergstedt and Hirsch, St.

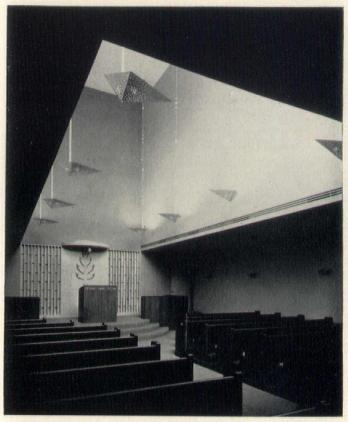
Paul

Mechanical Consultant: Clyde E. Bentley, San Francisco Structural Consultant: Isadore Thompson, San Francisco Interior Design Consultant: Morris Pleason, St. Paul General Contractor: Naugle-Leck, Inc., Minneapolis Bronze and Aluminum for Altar: Crown Iron Works, Minneapolis, fabricators

Structural Steel: St. Paul Structural Steel, St. Paul implied in the original sketch for only by reduction to a sublime simplicity can there be found a mastery.

Showing off is just about the main objective of architecture-some show off like lovers, some like philosophers, some like men of affairs. Few show off by not showing off, like great gentlemen or saints. Thus one might describe one of Eric Mendelsohn's great works recently completed in St. Paul, Minnesota. Mendelsohn never had the pleasure of seeing Mount Zion complete, for he died within a year after construction contracts were let. His original sketches were the criteria for interior developments and color schemes not included in the working drawings and carried out by the local architects. One of the architect's most imposing temples, Mount Zion is an excellent example in the ingenuity of space utilization. He combined the Temple. foyer and assembly spaces separated by a folding wall to provide for the ever-growing need for expansion on the high holidays. It is a symbolic work easily noted from the exterior. Rising high above the service wing, the Sanctuary and Chapel are adorned by 10 ribboned sections noting the Ten Commandments.

The temple of Mount Zion manifests a stately, tall and serene character, achieved through the masterful use and exploitation of steel and reinforced concrete. The structure of the Sanctuary and Chapel projections



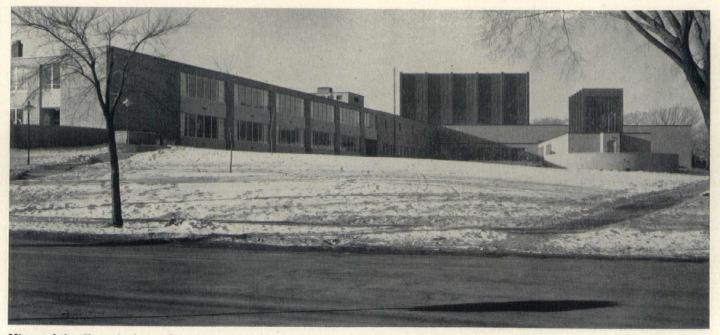
Rich chapel interior is a simpler counterpart of the sanctuary (Temple).

is steel bents, eliminating the need for columns among the pews.

Here is a concept, a credit to the congregation, the architects and the landscape. Four features set this building apart and commend its concept to others:

1. The Building is a studied composition of salmon colored brick, glass copper and a green landscape.

(Continued on Page 62)



View of the Temple from the east.

A Mass Communications Center for the University of Minnesota

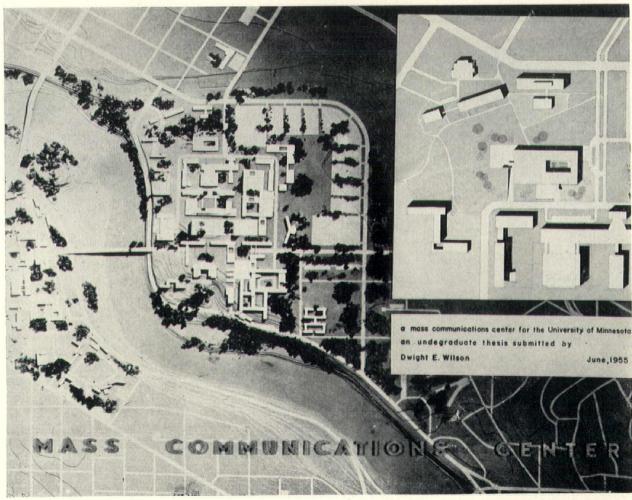
INTRODUCTION

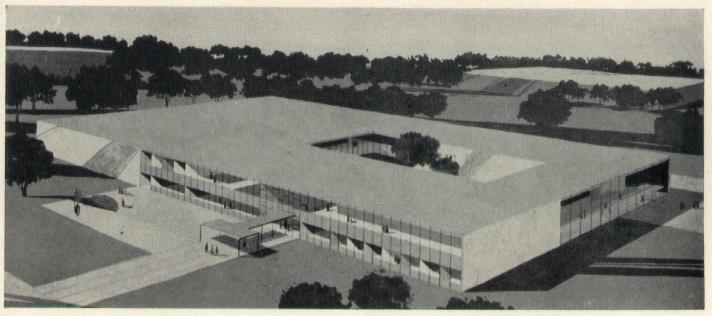
A mass communications building has long been needed on the campus of the University of Minnesota. Many groups and many individuals have undertaken a study of the needs of such a project. Each of these studies has produced a different solution to the problem. This has come about because of the ever changing scope of the TV and Audio-Visual Aid programs. I have tried to take into consideration this need for change and flexibility in these comparatively new fields of mass communication. I have tried also to give adequate room for the requirements of the other functions housed in this building.

HISTORY AND FUNCTION OF BUILDING

The University of Minnesota has long been an active participant in the field of mass communications. Radio station WLB, and later, the present station KUOM, have daily broadcast a variety of programs to the listeners of Minnesota and surrounding areas. The programs have been selected to satisfy the cultural and intellectual needs of all age and social groups. Pro-

A program for an undergraduate thesis, University of Minnesota, submitted by Dwight E. Wilson, June, 1955.





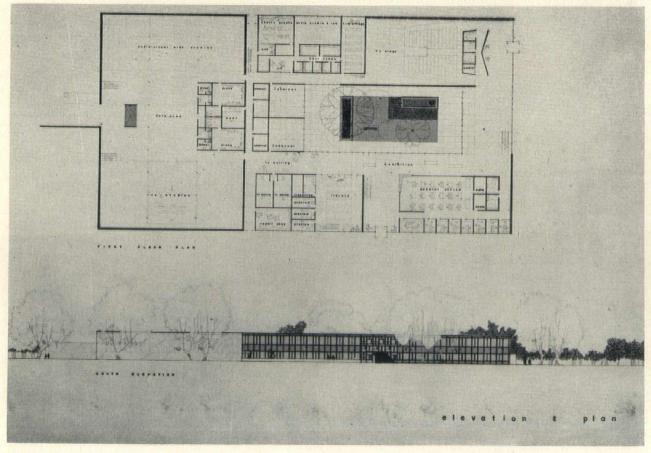
The center in perspective.

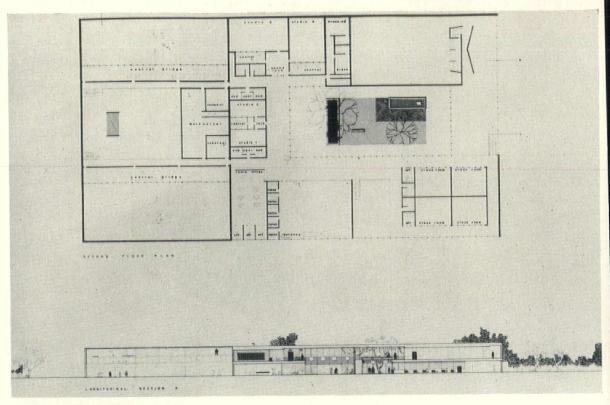
grams for the farmer about the care and feeding of livestock, the young people's symphony programs, direct broadcast from the lecture hall and children's programs for the very young are but a few of the multi-numbered programs and activities sponsored by the University of Minnesota. These endeavors have been rewarded not only by a growing interest in the programs themselves but in a number of awards given by groups interested in the promotion and production of mass electronic communications.

Now, with the advent of television broadcasting,

KUOM TV is engaged in experimental telecasting of programs directly to the school classroom. In order to facilitate these programs, KUOM TV has called upon the help of another highly important and fast growing field of mass communication, the audio-visual aid department of the University of Minnesota. The audio-visual department has only started to hit its stride in the past few years; however, with the new teaching methods being employed and developed in

First floor plan and south elevation.





Second floor plan and longitudinal section.

the schools around the state and surrounding territory, it has already become another very important teaching method.

At the present time the facilities for the Radio, Television and Audio-Visual Aid departments of the University of Minnesota are sadly lacking in size, operational facilities and co-ordination, due primarily to the lack of proper building requirements. I have proposed to house these three departments in one building so that ease of inter-communication, repair of equipment and general overall co-ordination of all departments will produce a far better mass communications program for the betterment of the university, the state and the nation.

SITE

Because the University of Minnesota is the cultural center of the state and because of the ease of access for all the needed materials and equipment for the erection and maintenance of the building, a site on the campus of the University of Minnesota, as proposed by a 40-year campus redevelopment plan, has been selected.

The site should have accessibility to service roads and facilities, should have a close relationship with the other media of teaching and should be able to expand its physical plant requirements with ease.

In the 40-year campus redevelopment plan it is noted that a site exists just north of the Theater Arts group of buildings that adjoins the Northrup Memorial Auditorium. It is closely related to the elementary and high school groups that will play a large part in experimental programming of the center. Additional land for expansion of the building is readily available. Service roads exist and parking is nearby, to be used to advantage when TV broadcasts attract large

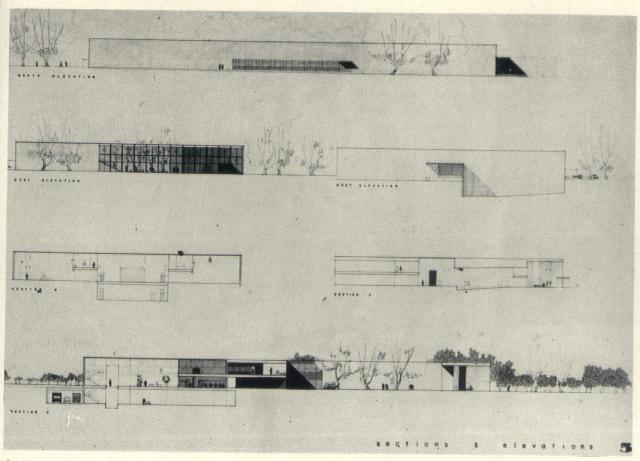
audiences which must park their cars.

REQUIREMENTS

Poom Poquirements for TV
Room Requirements for TV
A. Operational Areas
1. Control Rooms for Studios
2. Projection Rooms 800
B. Production Areas
1. Studios5,500
2. Dressing Rooms
3. Rehearsal Rooms1,500
4. Audition Rooms 900
C. Administration
1. Reception Area and Waiting Area 400
Room Requirements for Radio
A. Operational Areas
1. Control Rooms 600
2. Storage 100
3. Recording and Playback Rooms 400
B. Production Areas
1. Studios3,000
2. Announcing Booths 200
C. Administration Area
1. General Office
2. Private Offices for Assistants
3. Reception Area
Room Requirements for Audio-Visual Aids
A. Operational Areas 1. Control Rooms
2. Photo Lab
3. Film Storage
i. Grapiis and Charts resourt in
5. Listening Rooms
6. Preview Rooms

1.	General Studios5,500	TV new CBS TV studio Arch Record	48
1.	Iministration Private Offices for Assistants	Radio and TV buildings Arch Record	49
1. 2. 3. 4. 5.	Al Room Requirements for Combined Services General Office	TV Navy uses TV for teaching Arch Record	49
7. 8.	Library 2,000 Dark Rooms 1,000 Rehearsal Rooms (general) 2,000	Arts and Arch J Arch Record Ag	52
9.	Class Rooms (general)	Arch Record Je Interiors Je Arch d'Aujourd 'hui Ag	51
12.	General Storage and Set Design	Arch RecordMy Roy Arch Inst Can JJe	52 51
14.	Shipping and Receiving	Arch Forum	52
	BIBLIOGRAPHY	Arch Review	54 53
	new means of art education, HDM Grier	Arch ForumD	53
	College Art	Color TV	
	oadcasting studio Arts and ArchMy 44	Arch and EngrS	54
	w design and planning problems	TV	
	Arch ForumAp 45	Broadcast News	
	padcasting studio	$egin{array}{c} \mathbf{J} & \mathbf{J} \\ \mathbf{M} & \mathbf{J} \end{array}$	
	Arch RecordN 45	My S	

Sections and elevations.



Community Design Gets Thorough Study at

AIA'S MINNEAPOLIS MEETINGS



Architecture at the community level was given searching consideration during the recent convention of the American Institute of Architects in Minneapolis as medal winners, special speakers and round-table groups discussed the many ramifications of "Designing for the Community," convention theme.

The members assembled for the convention elected George B. Cummings of Binghamton, N. Y., to be president of the institute, re-elected Earl T. Heitschmidt of Los Angeles first vice-president, picked former regional director John N. Richards of Toledo, Ohio, as second vice-president, former director Edward L. Wilson of Ft. Worth, Texas, as secretary and re-elected Leon Chatelain, Jr., of Washington, D. C., as secretary. North central states regional director, newly elected, is Bryant E. Haldey of Springfield, Ill.



The New Top Echelon:

Front row—Regional Directors Mather, Wright, Secretary Wilson, Second Vice President Richards, President Cummings, First Vice President Heitschmidt, Treasurer Chatelain, Regional Directors Kirby and Del Gaudio; back row—Regional Directors Millkey, Kidder, Hadley, Golemon, McNett, Christenson and Kastendieck. Regional Director Pearson was not present for the picture.

The forecast of the probable attendance at the convention was correct as more than 1,600 architects and their guests were in the city for the event, which was given good coverage by local newspapers.

"G. Clair Armstrong of Minneapolis and his committee did a terriffic job!" the AIA Washington round-up story said. "In addition to arranging outstanding social events, entertainment and a variety of fine tours, they somehow came through with absolutely perfect weather for us during the entire convention period. The gracious hospitality extended by our hosts and hostesses was thoroughly enjoyed and appreciated."

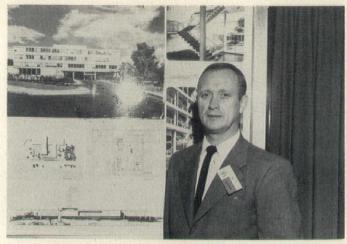
Oscar T. Lang, prominent Minneapolis architect, was among the 42 new members of the AIA College of Fellows invested during the annual banquet of the convention. Fellowships are awarded by a committee for "distinguished service performance in design, education, science of construction, public service or service to the institute." Mr. Lang's fellowship was awarded for design.

Oscar Lange, Minneapolis, receives his credentials as a fellow from Alexander C. Robinson III, Chancellor of the College of Fellows.

Many actions were taken during the four business sessions of the convention. One on which an extended discussion was had was the AIA board of directors' advertising resolution, which provides:

"Resolved, that the use of the portrait of an architect in connection with advertising material published by factors of the building industry will be permitted, provided the manner of its use is dignified, neither exaggerated nor misleading, and will be of benefit to the profession or the institute and that it is not accompanied by any statement by the architect which could be construed as an endorsement of a product or use and provided the proposed use has been submitted to the Public Relations Committee and has been approved by it prior to use."

Approval was given to an expanded three-year public relations program, a resolution providing for a study of the group's dues setup, initiation of professional disciplinary action by a regional judiciary committee



Ralph Rapson, head of the school of architecture at the University of Minnesota and a top honor winner at the convention, is shown above with his exhibit of the winning project.



Our montage here shows some of the important officials who were present for the big convention—upper left, 1954-55 President Clair W. Ditchy of Detroit, James W. Follin, commissioner of Housing and Home Financing, Washington, D. C., and George B. Cummings, 1954-55 Secretary of AIA—upper right, President William Gillett of the Producers' Council, Washington, D. C., T. I. Coe, AIA technical secretary, Washington, D. C., and Edgar H. Bernes, North Central States Regional AIA director, Green Bay,

Wis.—insert, President George Darrell of the Minnesota Society of Architects and AIT President Ditchy.

—Lower left, President R. V. McCann of the Minneapolis AIA chapter, Eugene Hickey, St. Paul, and President Frank Clark of the St. Paul chapter—G. Clair Armstrong, host chapters' convention chairman, Minneapolis, Edmund R. Purvis, AIA executive director, Washington, D. C., and T. Lincoln O'Gara, St. Paul.







Here are some of the award winners at the AIA convention. Our top picture shows product literature winners, Al Fischer for the Overly Mfg. Co., John McFarlane for the Building Stone Institute, C. J. Fitzpatrick for Kentile, Inc., John Hustad for the Sanymetal Products Co., and George Melcher for the Flour City Ornamental Iron Co.

In the center picture George Melcher of the Flour City Ornamental Iron Company receives his honorary AIA membership from President Clair Ditchy.

Mary Mykolyk (bottom picture), former Minneapolitan, receives the certificate of award for Custis and Davis, New Orleans architects, by whom she is now employed, for their Sako Clinic for Children, an Oriental-inspiration structure on the lower reaches of the Mississippi delta. rather than the chapter and many other items listed at length in post-convention materials sent out by the institute.

Several speeches delivered at the convention aroused considerable comment. Willem Dudok's address on receiving the institute's Gold Medal is printed elsewhere in this issue in its entirety because it was received with such wide interest we felt our readers who were unable to attend the convention would find it valuable.

Community deterioration, accented by keynoter Albert Mayer of New York, got the top newspaper attention during the convention. Pointing out that "the basic defect is that all of our shiny new tools—telecommunications, automobiles, airplanes, electric power, highway engineering—make us in a sense too free and permit an unprecedented indiscipline in development," Mr. Mayer said. City planners must work diligently toward an orderly rearrangement of populations in the light of today's and tomorrow's engineering and economic developments.

He warned that a spectacular single solution was impossible, like some proposed super-traffic systems, and that planning must be on a regional level. He pointed out that cities will continue in the doldrums if there is not "a stirring quality in the detailed development and in the visible texture of our cities" and reported the architect is in a position to propose and prove out elements and functions that the client does not visualize.

Mr. Mayer suggested a public land-use acquisition policy that will permit open, green, breathing spaces separating one built-up area from others; more than minimal control on private developers who now build just anywhere they please, adding to the community confusion; more definite civil and social responsibility by industrialists to decentralize operations in localities; planning bodies of regional character with authority to plan boldly and to exercise real control.

He told architects to put their support behind those organizations actively interested in development of their communities.

Architects can help improve the living conditions of millions of Americans by taking part in the wholesale urban renewal program, James W. Follin, commissioner of the urban renewal administration, told the convention.

"There is a crying need for development of new and effective procedures for rebuilding the old sections of our communities, for rehabilitating and conserving whole neighborhoods and for checking the spread of slums and blight," he said. "But our experience has indicated that slums will never be completely eliminated if they are not prevented from now on. That is why we are placing emphasis on rehabilitation. But while there is considerable experience in the United States in rehabilitating individual structures, there is practically no experience in area-wide rehabilitation.

"The fact that voluntary rehabilitation—restoring sub-standard housing units for continued use in stabilized neighborhoods—has to be accomplished on a neighborhood basis compounds the difficulties. Yet we must solve this problem or lose the value in 10,-

Representation at the convention was strong from states in the northwest part of the country and the pictures at the right show some of the architects from that region, in each case l-r, top picture on down: Carroll Martell and Harry Weller, Spokane chapter-S. W. Little, Robert Wilmsen and Fred Hanaford, southern Oregon chapter—Past President Glenn Stanton, FAIA, Mary Alice Hutchinson and Donald Stewart, Oregon chapter—Anton E. Dropping and Thomas Leake, Idaho chapter-Nelson Morrison and Lyle Swedberg of southwest Washington chapter-R. H. Cushing, A. F. Bordeleau, S. L. Berg, Knute Hangsjaa, J. D. DeHaase, J. E. Touhey and G. C. Page, Montana chapter-Waldo Christenseon, William Trimble, Arthur Hermann, Frank Stanton, Lester Holmes, Lloyd Lovgren and Robert Burham, Washington state chapter.

000,000 substandard dwelling units in this country and be forced to pay the excessive cost of demolishing them and clearing the land for new construction."

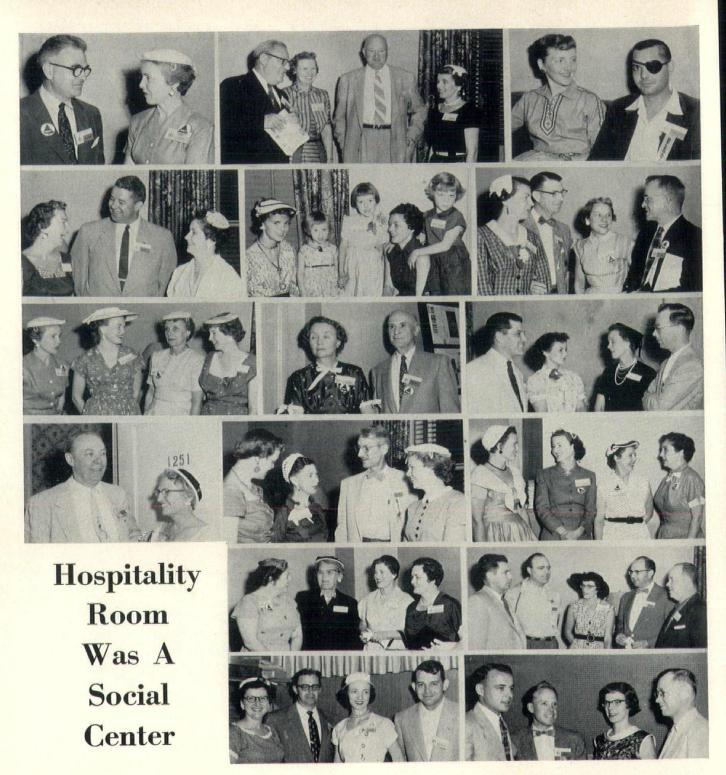
Development of the theme of the convention brought forth many cogent observations by speakers. Victor Gruen, introducing his subject of community expansion, said:

"Architecture's most urgent mission is to convert chaos into order and convert mechanization from a tyrant into a slave, thus making place for beauty where there is vulgarity and ugliness. Architecture today can no longer concern itself only with that particular set of structures which happen to stand upright and be hollow—buildings in the conventional sense. It must concern itself with all man-made elements which form our environment, with outdoor spaces as created by structures, with roads and highways, with signs and posters, with cityscape and landscape . . ."

"The design objectives in planning cities are simply to conserve and improve urban life in all its aspects, and then to make that life worth living," Robert E. Alexander, Los Angeles, said. "Judging from the most prevalent current planning activities, however, one would think that the amassing of statistics, the illumination of beautiful two-dimensioned maps and the drafting of ever more complex and restrictive laws were objectives in themselves. The average planning conscious mayor, city manager, councilman or planning commissioner has been sold on a planning package panacea, a pousse-cafe of many bright lawyers-land use studies, origin and destination surveys, master plans of this and that, symptoms of blight, population projections, subdivision ordinances and zoning laws . . .

Marcia J. Rogers of Pittsburgh's Regional Planning Association warned that "We are perhaps too accustomed to this hodge-podge of building and the progressive decline of neighborhoods in America, where space to spread has been no problem. With the eagerness of youth we wanted to build fast, settle rapidly and rush forward to new industry and bigger business. When our streets began to change character, those in the higher or middle income groups found it easier to move to a new house on the edge of the city or town. I think we are almost all guilty of donning mental blindfolds and bewailing the disrepair and downhill slide of many a formerly fashionable district, feeling unable to alter the apparent trend . . ."





The hospitality room was the center of many activities during the convention and some of those who availed themselves of the facilities are shown on the opposite page. Our identifications are from left to right in each picture, row by row, and show:

Mr. and Mrs. Clair Armstrong of Minneapolis—Charles T. Penn and J. W. Follin of Washington, D. C., with Mrs. A. B. Anderson and Mrs. Kenneth Howe, Grand Forks, N. D.—Mr. and Mrs. George Allan, Phoenix, Ariz.

Lee Dittenhoefer, Leo Shields, Minneapolis, and Mrs. Paul Kilp, Green Bay, Wis.—Mrs. Gerald Halseth and Mrs. Kenneth Backstrom, Minneapolis, with Donna Hollis, Overland, Kansas, and Kittie and Marilyn Kloske, Flint, Mich.—Mrs. D. Stewart Kerr, Pasadena, Cal., W. G. Balch, president of the Southern California AIA chapter, and Mrs. and S. D. Leach, Minneapolis.

Mrs. Clair Armstrong, Edward Healey, Cedar Rapids, Ia., and James A. Brunet and Bernard Powers, Minneapolis.—Mr. and Mrs. Claude Smith, Duluth, Minn.—Mr. and Mrs. Paul E. Crosier, Mrs. R. E. Olsen, Minneapolis, B. P. Elliott, Potomac Valley, Md.

Mr. and Mrs. E. W. Molander, Spokane, Wash.— Mrs. Cecil Tammen, Minneapolis, Mrs. and Yandell Johnson, Little Rock, Ark., and Mrs. Carl Fogelberg, St. Paul—Mrs. James A. Coulter, Victor C. Gilbertson, Austin H. Lange and R. J. Henderschott, Minneapolis. "Our program today suggests that the architect is not ipso facto a city planner," said G. Holmes Perkins, dean of the College of Architecture, University of Pennsylvania. "This becoming professional modesty is by no means universal for in large portions of the world the architect and planner are one. Yet in the United States we are now in broad agreement that this difficult, time oriented and frustrating task of urban redevelopment is one for a team whose members are aware of the goal and the general means of reaching it and can each contribute some special skill to that end. The polite deference which we as a profession have shown the specialists has obscured the vital contribution which the architect is uniquely capable of making. Our modesty should have its limits..."

"The elimination of slum and blight and the rebuilding of our cities is a cause," pointed out Carl Feiss. "Since the Industrial Revolution our slothfulness and indifference to the decay of the center of our cities, the haphazard and hideous growth of cities and the tragic urban problems to be handed on to our children shame our heritage and the objectives of our practical yet idealistic forefathers. It is our duty now to apply all of our knowledge and design skills, our techniques and ingenuity in the common objective of a creative renewal of American cities.

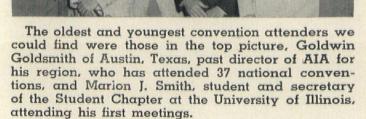
"Somehow a way must be hacked through the forest of your indifference, through your self-interest and the diversionary pulls of your minor hobbies so that you can see for yourselves the clear path of action before you. Your skills as architects, designers and potential city builders are now needed in a new kind of national defense. The Congress itself in the Housing Act of 1949 . . . clearly stated that slum clearance and the rebuilding of our communities was necessary for the security of our nation. From the standpoint of power—military and economic—we are today the potent nation in world affairs and yet we have not proved that we are the most livable. We build big but not well. We criticize others but not ourselves. We are not beautiful. We are as yet not safe from ideological attack . . ."

The general application of city planning ideas was brought out in the speech by Arch R. Winter, Mobile, when he said, "Solutions to the planning and development problems of smaller communities may result from different factors than those in the larger metropolis. Because, while its problems may be similar to those of the larger community, there is an essential difference in emphasis, the first thing for the small community is to put aside its habit of following the way of the older, larger community. This is easy for the new town

Mrs. John Magney, Vern Larson, Minneapolis, Mrs. Benjamin, Silver Springs, Mo., and Bernard Knobla, Washington, D. C.—Robert Olsen, president of Minnesota-Dakotas Chapter of the Producers' Council, Charles Betts, Indianapolis, Ind., Mrs. and Donald C. F. Miller, Barberton, Ohio, G. R. Bridge, Producers' Council exhibits manager, Washington, D. C.

Mr. and Mrs. Harold Jenkinson, Moorhead, Minn., and Mr. and Mrs. Walter T. Johnson, Fargo, N. D.— Don Powell, Fargo, N. D., Knute Hanasjaa, Great Falls, Mont., Mrs. James Griffin and Herman Skaret, Fargo, N. D. —Greenbelt and Oak Ridge have nothing in common with larger cities, they have inherited no problems. But the typical small community is not a new town. It frequently is an old one. It has, on a smaller scale, most of the problems found in the large city, a fact that makes it natural and easy to follow the big city's lead in attacking its urban problems. . . ."





Middle picture shows R. A. Lissle, Cleveland, Harry Weese, Chicago, Ralph Rapson, head of the School of Architecture, University of Minnesota, Leonard Currie, Bogotá, Colombia, S. A., and Hugh Stubbins, Boston.

The bottom picture shows a group from the N. D. State College's School of Architecture—Magnus Geston, Ed Meyer, Prof. Knute Henning and Jim Griffin.

Manufactured Light

versus Daylight

for Schoolrooms

By Hammel and Green

St. Paul

In this paper an architect and an illuminating engineer propose that schoolrooms be lighted with manufactured light independent of daylight and that windows be used to provide a view rather than to admit light to the room.

The conclusions reached are that by neglecting daylight as an illumination factor in the schoolroom, school buildings can be greatly simplified in design, rooms can be more flexible in size, shape and orientation, have adequate levels of illumination with comfortable visual environments and simplified control of daylight with basic economies in construction and annual costs comparable or better than or types using daylight as a primary light source.

The locale of studies is the Upper Mississippi Valley area. The conclusions drawn should apply to other areas with similar weather conditions and may apply to areas with dissimilar conditions.

The paper is divided into two parts. In Part I the illuminating engineer presents some cost studies and observations on lighting and brightness conditions. In Part II the architect discusses his concepts of the apparent confusion concerning the use of manufactured light and daylight in the school building field and presents information indicating that a greater reliance upon manufactured light may result in simpler, less expensive and more useful school buildings.

Part I

A. In General

Several basic types of construction are prevalent in this area. The variations are based primarily on the designers' concept of how to best utilize daylight and/ or how much visual association students should have with the outdoor scene.

Clear glass to the ceiling, while under certain conditions providing a very stimulating and interesting view, may have some serious limitations. Such a school-room requires shielding to reduce glare and in some

cases thermal buildup. Manipulation of blinds to adjust to varying daylight conditions becomes such a chore that they are normally left in the lowered position providing only a 27" vision strip. Where no provisions were made for daylight control paper has been tacked to the window to provide some shielding. In addition to a bad glare condition from direct sun, the solar heat gain was such a problem that wax models melted in one display—so something had to be done. Hence these improvised shades. The glass to the ceiling in these cases certainly does not serve the purpose the designers intended.

In another room with clear glass to the ceiling a large overhang was used outside. Again the advantage of being able to view the underside of the overhang is questioned. Increased construction costs and high heat loss are unfavorable factors in this design.

Clerestories have been used in some cases to help lighting levels in inner portions of the room. These areas must be generous in size to make a significant contribution to lighting, however. Construction costs are high and shading devices to allow for audio-visual projection material in the room are difficult to control or in most cases non-existent. They contribute nothing to a view. In some cases, drifting snow makes a maintenance problem also. Heat loss is against it. It is our opinion that these devices have been somewhat less than successful in application.

Glass block walls with a vision strip, have been widely used in this area. Studies¹ indicate effective illumination values in the room can not be expected to a depth more than twice the fenestration height. As will be pointed out in Part II, this limits room proportions; also, a 12′ ceiling would be required in a 24′ deep classroom. Brightness of the block with incident sunlight becomes a problem and shading devices for use of projected audio-visual material are required. Visual association with the outdoors which is confined to a strip something

under 3' in height seems limited and not completely satisfying.

Plastic ceiling domes have been used in a few cases and with good sky conditions do a good job of supplementing inside footcandles. Incident sunlight on sides of light well or on lower diffusing plastics present a glare problem—2,000 to 3,000 footlamberts—heat loss comes into the picture to a certain extent and maintenance to keep the units weathertight must be considered. The appearance of prevalent shielding devices used to control incident sun or to darken the room for audio-visual work leave something to be desired.

The type of classroom design in line with those advocated in this paper is shown in our pictures. The room is 25' along the window side and 34' deep, has a 10' ceiling, uses a 4' vision strip with 4' overhang. Lighting is planned entirely from a manufactured source—in this case a baffle lighting system of some 60 to 75 footcandles. Where outside brightness conditions become too bright or darkening a room is required for audio-visual projection, shades are drawn up from below. The overhang provides shielding for sun altitudes down to 45°. This room type is interesting to be in, simple in construction, low in cost, variable in size and



Manufactured light (above) provides adequate levels of light in this room and four-foot windows allow good visual association with outdoors. . . . Four-foot overhang (right) provides sun shielding for sun altitudes down to 45°. Shades draw up for further darkening.

requiring a minimum of manipulation of shading devices to compensate for daylight variations. The question arose in this case whether the cost of operating lights continually during class hours was a major problem. We have endeavored to answer this with some cost figures.

B. Cost Analysis

Four classrooms similar to those already discussed were compared on a basis of amortized construction cost, heating and lighting costs.² Equipment common to all types was not included in the comparison. All rooms were 24 x 32³ in size with a 10' ceiling except Type B where a 12' ceiling was used to utilize light from glass block wall. Types A and B have long side of

room to the weather; Types C and D the short side, effecting a noticeable saving in construction cost and heat loss. Venetian blinds were used for daylight shielding.

B-1. Building Costs

(See Appendix A for construction outline) Assumptions:

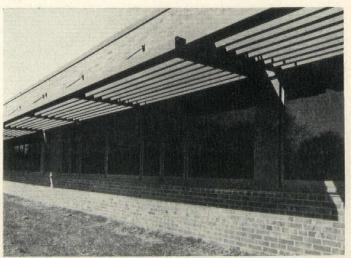
Building amortization—50 years at 3% interest or \$38.87 per \$1,000 per year.

Plastic ceiling domes—20 years at 3% interest or \$67.21 per \$1,000 per year.

Blinds—10 year amortization at 3% interest or \$117.23 per \$1,000 per year.

		Initial Cost*	Yearly Cost
Type A	Base Cost* Shielding	\$8,608.00 168.00	\$335.00 20.00
	Total	\$8,776.00	\$355.00
Type B	Base Cost Shielding	\$8,524.00 216.00	\$331.30 25.00
	Total	\$8,740.00	\$356.30
Type C	Base Cost Shielding Plastic Domes	\$7,880.00 190.00 480.00	\$307.00 22.00 32.00
	Total	\$8,550.00	\$361.00
Type D	Base Cost Shielding	\$8,038.00 54.00	\$312.00 6.00
	Total	\$8,092.00	\$318.00

*Does not include construction or equipment common to all types.



B-2. Heating Costs: Assumptions:

ions: 7,8

7,870 degree days per year (September-May) 90° design temperature

Fuel cost—\$1.00 per million BTU delivered to room

Coefficient of Cost Per Square Foot
Transmission—U Per Year

 Masonry
 .32
 \$.0565

 Glass Block
 .56
 .10

 Window Glass & Plastic
 1.13
 .20





































Andersen Windowalls

CRANE CO.





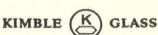
OVERLY MANUFACTURING















sparta tile



STANLEY





Fenestra

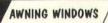
Frank Adam Electric Co.







Gate City





































CLAY PRODUCTS INSTITUTE









Heat	ing	Costs	Per	Year

	ments and a series		
Type A	Wall Window	32 x 3 x .0565 32 x 7 x .20	\$ 5.42 44.80
			\$ 50.22
Type B	Wall Window Glass Block	32 x 3 x .0565 32 x 3 x .20 32 x 6 x .10	\$ 5.42 19.20 19.20
			\$ 43.82
Type C	Wall Window Plastic domes	24 x 3 x .0565 24 x 7 x .20 3 x 10 sq. ft. x .20	\$ 4.07 33.60 6.00
			\$ 43.67
Type D	Wall Window	24 x 6 x .0565 24 x 4 x .20	\$ 8.15 19.20
			\$ 27.35

B-3. Lighting:

Assumptions: 21 fixtures—2 lamp, 40 watt direct-

indirect fluorescent 100 watts per fixture

Lamps—\$1.00 each installed, 7500

hours life

Energy Rate-\$.03 per kwh

Lighting Cost Calculations: *

Туре А, В, С	200 hours per year—operation lamps 400 Ditto	\$14.00 28.00 42.00
Type D	21 fixtures, 1,000 hours operation at \$.03 per kwh.	\$63.00
	Lamp cost—42 lamps x $\frac{1000}{7500}$ x \$1.00	5.60
	Total lighting and lamps per year (assume	\$68.60 \$70.00)

SUMMARY OF ANNUAL COSTS (To nearest dollar)

Туре	A	Building** \$355.00	Heating \$50.00	Lighting and Lamps @ 200 hrs.—\$14.00 @ 400 hrs.— 28.00 @ 600 hrs.— 42.00	Heating Lighting \$419.00 433.00 447.00
Туре	В	\$356.00	\$44.00	@ 200 hrs.—\$14.00 @ 400 hrs.— 28.00 @ 600 hrs.— 42.00	\$414.00 428.00 442.00
Туре	С	\$361.00	\$44.00	@ 200 hrs.—\$14.00 @ 400 hrs.— 28.00 @ 600 hrs.— 42.00	\$419.00 433.00 447.00
Type	D	\$318.00	\$27.00	1,000 hrs.—\$70.00	\$415.00

*Operating hours for Type D were based on 1,000 hours per year. (180 days @ 5 hours per day + 100 hours). Operating hours for Types A, B, C are shown for 200, 400 and 600 hours since no data is available on actual burning hours when daylight contributes to the illumination. It was observed, however, that the determining factor in whether or not lights were operated was not necessarily the illumination level alone but also depended on brightness distribution in the room. Very few teachers, to say nothing of trained illuminating engineers, would be able to estimate the footcandle range in a classroom so they would be able to use the lights only when the increased level was needed, whatever that level might be. However, they could determine whether the brightness pattern was comfortable or interesting and if the room looked better with the lights on they would be used even though a meter might indicate adequate levels without it.

**Does not include total building cost.

It is realized that construction, heating and lighting costs are not a large factor in the overall cost of education, but they do receive serious consideration. These comparisons are presented here, however, primarily to indicate that operating cost need not be a deterrant to considering the designs relying exclusively on manufactured light for lighting levels.

C. Footcandle Readings:

The variation in outside brightness conditions and adjustment in shielding devices made comparisons of lighting levels difficult or not too meaningful. However, under actual conditions we found the following variations in daylight footcandles during class hours on the outside, center and inside rows of seats: On a clear day, Type A—310-130-55, (blinds down and adjusted); Type B—220-170-100 with incident sunlight, 70-36-19 with no incident sunlight; Type C—1000-270-180 (with incident sunlight, blinds up). On a cloudy day, Type A—50-30-14 (blinds down and open); Type B—23-9-5; Type C—50-30-7 (4 ft. from centerline of plastic dome). In Type D with 60 footcandles of manufactured light we had the following levels: On a clear day, 200-88-70; cloudy day, 80-65-60.

Again no definite conclusions are drawn except to indicate the variation that can be expected under varying daylight conditions and that satisfactory levels of light with considerable uniformity can be had using manufactured light.

D. Visual Comfort:

Several things prevented our making a detailed analysis of visual comfort comparisons in the several types of rooms. Varying conditions of daylight brightness, external plantings, buildings, etc. made comparisons non-uniform. Also the application of visual comfort factors to visual fields with a large unbalance in flux distribution between the right and left portions of the field has not been proved.

We did calculate the visual comfort responses (VCF)⁴ for actual conditions from positions at the inside wall looking out, however. When outside brightnesses were relatively low—around 300 footlamberts— or even when control devices were used to keep these brightnesses down, the calculated responses were good for all types, ranging from 70 to 80%. When outside brightnesses were relatively high, 750 to 1200 footlamberts, and no control devices were used on window or glass block, all comfort responses calculations were low—below 10%. Studies under controlled conditions might make comparisons possible.

With the trend towards random orientation of seats in all grades, it becomes imperative that brightness patterns from all viewing positions receive additional consideration. It is possible to have comfortable conditions on bright days from all angles of view but control devices must be planned for shielding windows, glass block and other luminous surfaces.

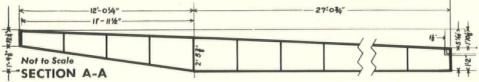
*H. L. Logan states that visual comfort factors (VCF) of the Logan-Lange Method have proved out only when the unbalance is no greater than about 2 to 1 (65%—35%). In all cases we exceeded this for a rear center viewing position.

A considerable point has been made about control of daylight for the use of audio-visual teaching aids which are becoming so popular in some teaching programs. Special projection rooms apparently do not meet the needs of A-V programs. To be used effectively, authorities agree that A-V work should be carried on in the individual classrooms. Daylight screens have not proved satisfactory for competing with room brightnesses so it appears that all rooms should have blackout facilities. Almost without exception classrooms in our area relying on daylight have had no provisions for darkening the rooms. The controlled window areas of Type D classroom makes darkening a simple procedure.

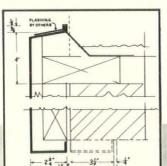
New perspectives in school design gain practical utility with modern Pavidson architectural porcelain

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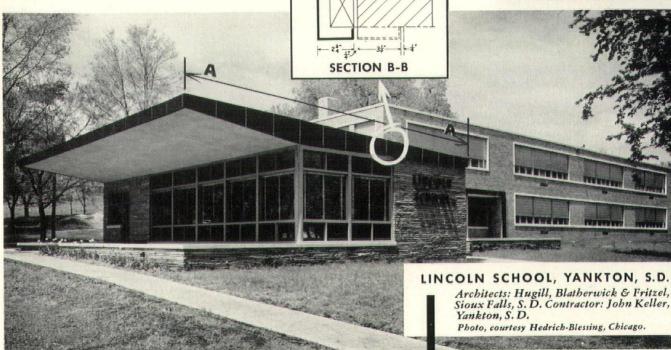
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Part II

A. Economy in the Use of Manufactured Light

We have in the first part of this paper explored the economics of classroom constructions in which various lighting techniques are used. These studies indicate that classrooms in which manufactured light is properly utilized are less expensive than "daylighted" rooms. We have noted that these rooms have more uniform lighting, a somewhat smaller annual cost, good comfort conditions, and are more adaptable to modern teaching techniques.

There are also substantial economies and functional advantages possible in the design of the school-building itself by the proper utilization of manufactured light. These economies are substantial and involve both first cost and owning cost. The functional advantages are a more compact and flexible school building.

B. Light and Delight

Before we examine further these economies and functional advantages, it will be necessary that we consider two uses of light in school buildings. The primary use is for lighting for seeing, the secondary use is for lighting for effect or delight. The two are, of course, closely related but they are not necessarily the same thing.

Lighting for seeing is that light required to see the book, the chalkboard, the teacher, the basketball, the crayon. It is functional lighting, using a narrowly pragmatic definition for "functional." For this purpose we want a reliable, controllable, glareless and efficient light source.

Lighting for delight in the school building, as in any successful piece of architecture, is the element of change, of surprise. The student may gain this by changing classrooms, as he does every hour in the high school, or by beginning a new activity in the same room. He may gain it by walking through a brightly lighted corridor on the way to the cafeteria with the sunlight streaming unsuppressed through the corridor walls. In successful buildings the student retains a kinship with and awareness of the out-of-doors and contact during at least part of the day with the primary creator of visual environment, the sun. This "delight" is not necessarily sunlight or daylight, it may be from other sources, but it should be considered separately from lighting for seeing.

For many years now we have not always, in school house construction, made this distinction. Although school houses are not the only major construction type in which the distinction between light and delight has not been made, it is the only one in which daylighting has been emphasized to a great extent.

That this distinction has not been a concern until relatively recently is probably because electric lighting has not been an efficient instrument in the school-house for much more than a decade. No one should expect that its growing usefulness would have been fully explored. The fact is it has been almost ignored.

C. Daylighting as a Criteria

One of the unfortunate results is a confusion of criteria in the judgment of school buildings. Even after

the advent of reliable manufactured lighting, the most important single criteria for judging the success of a classroom or a school building seems to be the degree to which it is daylighted. People think a daylighted school is a "good" school. Daylight schools include schools that are toplighted with skylights or plastic domes, clerestories, by borrowed light, by glass blocks whether in the wall or the roof, or by some other similar device. Another unfortunate result of daylighting as a criteria is that in the typical school house electric lighting enters the planning picture only after most of the budget (and the budget is usually very tight) has been spent for daylighting devices. It is not uncommon to install a clerestory in a classroom at a cost of \$700.00 to \$1,000.00, and then be faced with the necessity of omitting part of the lighting installation or reducing its quality to save \$100.00. The fact that these daylighting devices only work in the daylight and, therefore, not at night time or on dark days (and in our own area of good clear weather, we have about 38% of the days during the school year when it is too dark to permit daylighting devices to function properly even in the daytime) and that their effectiveness depends on such items as the brightness of the sun, its angle with respect to the device, degree of overcast, cleanness of the glass block or other device, time of the day, season of the year, does not seem to deter the designer in their use. Nor does it seem that careful thought is given to the fact that daylighting devices currently being used, as a rule, cannot deliver light for seeing at as low a cost as manufactured light considering all costs involved. It seems, as stated before, that the school builders use daylight first and then install manufactured light as an unwanted auxiliary and to the degree of what is left in the budget.

D. No Other Building Type Uses "Daylighting" as Criterion.

No other building type, besides the school-building, is really judged by its daylighting techniques.

Our factory designers, or probably more truly, their clients, have largely forgotten about daylight devices such as the sawtooth roof, monitor, the glass-walled factory in the interests of economy, easier maintenance and better lighting for seeing.

Office buildings are seldom lighted with glass blocks above vision strips, with clerestories or other daylight devices. Nevertheless, today's modern office building has received careful attention by both the architect and the client to make it a more pleasant and efficient place to work. Daylighting is not considered sufficiently important to consider as light for seeing in the office building today. Even such buildings as Lever House and the United Nations Building in New York, with their walls of glass, are not presented as better buildings to see in because of their glass walls for the windows are closed off with drapes and venetian blinds. Here glass is for architectonics but not for lighting for seeing.

Hospitals and allied structures such as clinics are becoming less involved with daylight and are seeking through the use of manufactured light ever better means of lighting increasingly difficult tasks. The operating room is now windowless; so are the labs. The patients'

(Continued on Page 66)

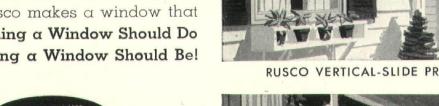
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The statement of Bertrand Russell contained in the last issue of Northwest Architect was a particularly opportune feature as it immediately preceded the vital joint statement of the eight world-famed scientists headed by Russell and Albert Einstein on the dangers we face in controlling our atomic age.

On July 9 the scientists' statement was released and we feel that it is a companion piece to the Russell feature in the convention issue so will reprint it here. It is signed by Russell, Einstein, Prof. P. W. Bridgeman of Harvard, Prof. L. Infield of the University of Warsaw, Prof. H. J. Muller of the University of Indiana, Prof. C. F. Powell of Bristol University, Prof. J. Rotblatt of London University and Prof. Hideki Yukawa of Kyoto University. Jean Frederic Joliet-Curie sent his approval but too late for inclusion in the signers' list.

Russell issued the statement, which Einstein had signed just a week before his death in April, at the same time saying copies had been sent to all governmental chiefs of the United States, Russia, France, England and Canada.

The atomic age is of particular importance to architects for on them depends thinking toward construction which will alleviate the evil potentialities of the forces set up and on them, too, as a group, depends important policy shaping.

The text of the scientists' statement:

"In the tragic situation which confronts humanity we feel that scientists should assemble in conference to appraise the perils that have arisen as a result of the development of weapons of mass destruction, and to discuss a resolution in the spirit of the appended draft.

"We are speaking on this occasion, not as members of this or that nation, continent or creed, but as human beings, members of the species man, whose continued existence is in doubt. The world is full of conflicts, and over-shadowing all minor conflicts, the titanic struggle between communism and anti-communism.

"Almost everybody who is politically conscious has strong feelings about one or more of these issues. But we want you, if you can, to set aside such feelings and consider yourselves only as members of a biological species which has had a remarkable history, and whose disappearance none of us can desire.

"We shall try to say no single word which should appeal to one group rather than to another. All, equally, are in peril, and if the peril is understood, there is hope that they may collectively avert it.

"We have to learn to think in a new way. We have to learn to ask ourselves not what steps can be taken to give military victory to whatever group we prefer, for there no longer are such steps; the question we have to ask ourselves is: What steps can be taken to prevent a military contest of which the issue must be disastrous to all parties?

"The general public, and even many men in position of authority, have not realized what would be involved in a war with nuclear bombs. The general public still thinks in terms of the obliteration of cities. WIN . .

Northwest Architect First Again in Issuing Russell Statement

It is understood that the new bombs are more powerful than the old and that, while one A-bomb could obliterate Hiroshima, one H-bomb could obliterate the largest cities, such as London, New York and Moscow.

"No doubt in an H-bomb war great cities would be obliterated. But this is one of the minor disasters that would have to be faced. If everybody in London, New York and Moscow were exterminated the world might, in the course of a few centuries, recover from the blow. But we now know, especially since the Bikini test, that nuclear bombs can gradually spread destruction over a very much wider area than had been supposed.

"It is stated on very good authority that a bomb can now be manufactured which will be 2,500 times as powerful as that which destroyed Hiroshima.

"Such a bomb, if exploded near the ground or under water, sends radioactive particles into the upper air. They sink gradually and reach the surface of the earth in the form of a deadly dust of rain. It was this dust which infected the Japanese fishermen and their catch of fish.

"No one knows how widely such lethal radioactive particles might be diffused, but the best authorities are unanimous in saying that war with H-bombs might quite possibly put an end to the human race.

"It is feared that if many H-bombs are used there would be universal death-sudden only for a minority, but for the majority a slow torture of disease and disintegration.

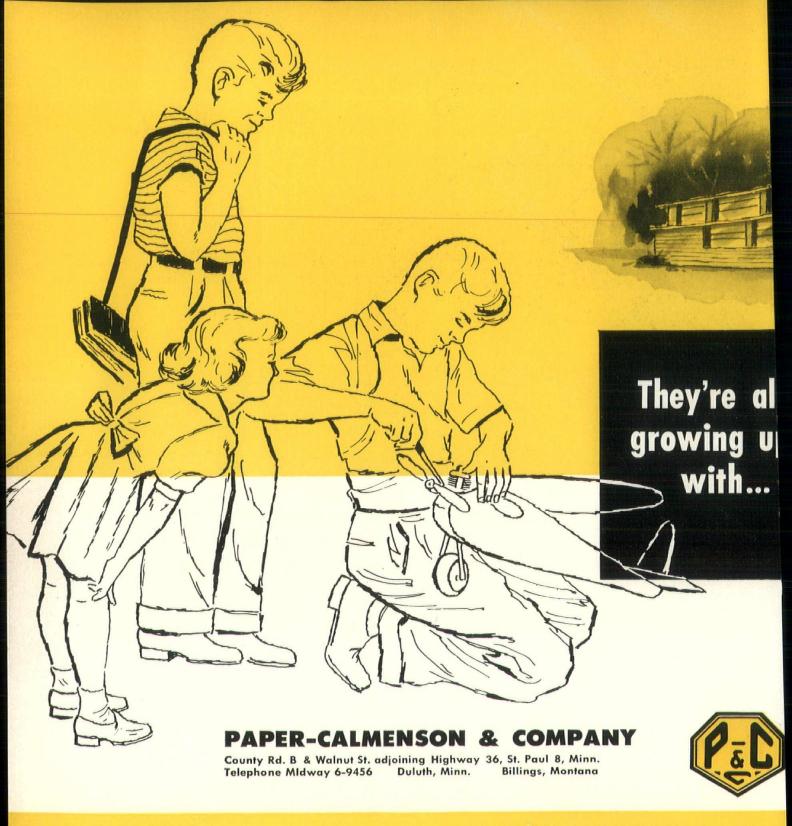
"Many warnings have been uttered by eminent men of science and by authorities in military strategy. None of them will say that the worst results are certain. What they do say is that these results are possible, and no one can be sure that they will not be realized.

"We have not yet found that the views of experts on this question depend in any degree upon their politics or prejudices. They depend only, so far as our researches have revealed, upon the extent of the particular expert's knowledge. We have found that the men who know most are the most gloomy.

"Here then is the problem which we present to you, stark and dreadful and inescapable: Shall we put an end to the human race: or shall mankind renounce war? People will not face this alternative because it is so difficult to abolish war.

"The abolition of war will demand distasteful limitations of national sovereignty. But what perhaps im-

(Continued on Page 45)



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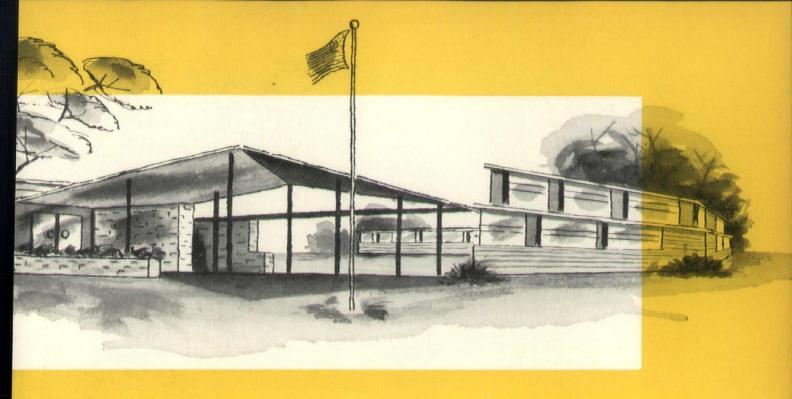
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pedes understanding of the situation more than anything else is that the term "mankind" feels vague and abstract.

"People scarcely realize in imagination that the danger is to themselves and their children and their grandchildren and not only to a dimly apprehended humanity. They can scarcely bring themselves to grasp that they, individually, and those whom they love, are in imminent danger of perishing agonizingly. And so they hope that perhaps war may be allowed to continue, provided modern weapons are prohibited.

"This hope is illusory. Whatever agreements not to use H-bombs had been reached in time of peace, they would no longer be considered binding in time of war, and both sides would set to work to manufacture H-bombs as soon as war broke out, for if one side manufactured the bombs and the other side did not, the side that manufactured them would inevitably be victorious.

"Although an agreement to renounce nuclear weapons as part of a general reduction of armaments would not afford an ultimate solution, it would serve certain important purposes.

"First: Any agreement between east and west is to the good in so far as it tends to diminish tension.

"Second: The abolition of thermonuclear weapons, if each side believed that the other had carried it out sincerely, would lessen the fear of a sudden attack in the style of Pearl Harbor, which at present keeps both sides in a state of nervous apprehension.

"We should therefore welcome such an agreement, though only as a first step.

"Most of us are not neutral in feeling, but, as human beings, we have to remember that, if the issues between east and west are to be decided in any manner that can give any possible satisfaction to anybody, whether Communist or anti-Communist, whether Asian or European or American, whether white or black, then these issues must not be decided by war. We should wish this to be understood, both in the east and in the west.

"There lies before us, if we choose, continual progress in happiness, knowledge and wisdom. Shall we, instead, choose death because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new paradise; if you cannot, there lies before you the risk of universal death.

"Resolution: We invite this congress, and through it, the scientists of the world and the general public, to subscribe to the following resolution:

"In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the governments of the world to realize and to acknowledge publicly, that their purpose cannot be furthered by a world war, and we urge them, consequently to find peaceful means for the settlement of all matters of dispute between them."

MORE APPRENTICES SOUGHT AS BUILDING BOOM EXTENDS

A nationwide program to increase the number of apprentices coming into the construction industry each year is being readied according to the Associated General Contractors.

Based on government figures, there is an anticipated tremendous expansion in the nation's population and living standards during the years ahead. These estimates show that by 1970 this country's population will approximate 200,000,000 persons and building construction can be expected to increase nearly one third.

In order to supply the skilled workers essential to carry out such an expanded construction volume, the National AGC has enlarged its national apprenticeship committee and established sub-committees on the district level.

Preston Haglin, C. F. Haglin & Sons, has been appointed a sub-committee chairman for district 6, covering Iowa, Minnesota, North Dakota and South Dakota.

Alvah Libbey of Libbey and Libbey Co., Minneapolis, a member of the Minnesota Apprenticeship Council and the National Joint Carpentry Apprenticeship Committee, reported that in connection with the national association's program, work with high school vocational counselor's, radio, TV and civic groups will be stepped upon the local level. All publicity and promotion will be pointed at the young men of today in an attempt to inform them of the advantages of a career in construction.

At the present time, there are approximately 5,400

indentured apprentices in the program in Minnesota. That figure must be greatly increased if we are to meet the anticipated construction volume in the coming year, reported Mr. Libbey.

FULBRIGHT AWARDS IN ARCHITECTURE

Young American architects have a chance to study abroad during 1956-57 under the U. S. Government international educational exchange program. Candidates in the field of architecture may enter the general competition for Fulbright scholarships. Closing date for application is October 31, 1955. Application blanks and a brochure describing the Fulbright program are available at the Institute of International Education, 1 East 67th Street, New York City.

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Harvey S. Hoshour, a former St. Paul resident now living in Albuquerque, N. M., has been awarded the Rotch architectural prize at Massachusetts Institute of Technology and a Fulbright scholarship to study architecture in Italy for a year.

A graduate of St. Paul academy, Mr. Hoshour received a degree in architecture from MIT this month.

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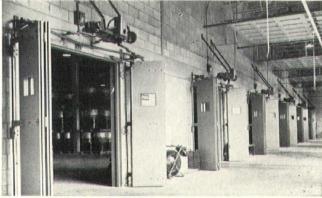
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It is certainly difficult for me to put into words my sincere gratitude for the exceptional honor bestowed on me by your presenting me with the Gold Medal of the Institute, as well as for the most kind words of your President.

When I think of the great architectural achievements in your country, I hardly consider myself worthy of this honor. This is no false modesty, I assure you. If the Institute should offer its Medal to all those members who are at least as worthy of it as I am, I am afraid it would be a rather expensive affair. But that is your business. I must confess that I feel somewhat embarrassed about it. Not so embarrassed, however, that I should shrink from accepting your invitation to speak about the important topic of the Congress: "Designing for the Community."

Not yet two years ago I paid a visit to your interesting country. On this tour which has made an indelible impression upon me I saw much which up to then I had only known from pictures and illustrations. In the neighborhood of middle-sized cities, in picturesque scenery I saw extensive centers with beautiful country-seats with logical planning and glass-walls to the garden, in fine relation with the surroundings and with an excellent use of materials. Sometimes the influence of your "Grand Old Man" was perceptible in all this. I saw a house of an architect-couple, husband and wife who built it with their own hands, with the help of a carpenter-that was all-a nice house, not at all of subtle workmanship but so good, so human that one hardly thinks of art. In this rural architecture I noticed the same healthy qualities as

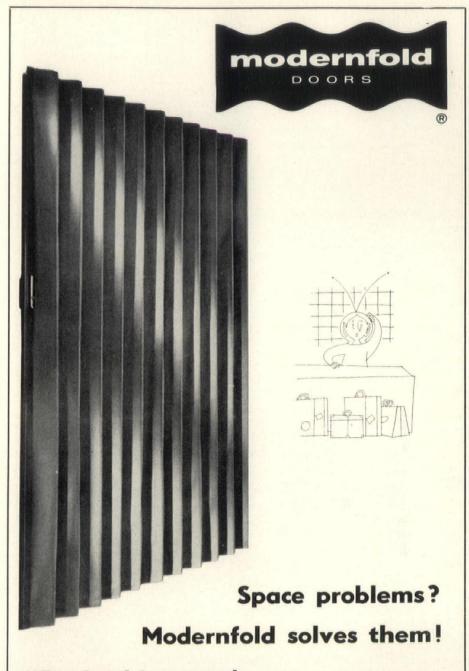
Speaks at AIA Banquet

in your popular magazines and in the houses themselves I found something of the American life such as I had imagined.

I also had the privilege of being for some days the guest of your Grand Old Man in his poetical "Taliesin West," in the still virgin land of Arizona. As an artist he is an individualist, fascinating and poetical in his best work, the man as original and surprising as the artist. A great man of the magnitude of Frank Lloyd Wright is not only American, although in his work and in his way of living one can only imagine him in this vast country with its unlimited possibilities.

But in your big cities I also saw much work of an entirely different nature, work which nevertheless fascinated me too. I am not going to mention names for I am sure I should forget important representatives, besides, this is not the point. Essential is the important results which here and there have been reached. What I mean is the architecture which is practically nothing else but a spatial ordering within extremely simple enclosures: planes as of boxes, and owing to this, very distinct in mass-working. I saw typical examples of this kind of architecture scattered all over your country, ambitious work, sharp, without hesitation, through unlimited material means impeccable of execution, a delight to the eve, especially to the eye of an architect who has always been obliged to work with limited means and yet had a keen desire to realize his dreams.

As experts you will surely know what architecture I mean: architecture with very much glass. This always more or less cerebral work I should like to call "spatial engineering." Of course this spatial aspect is an extremely important side of architecture. I wonder if this appreciation of space is really every-



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thing, especially if human life finds sufficient expression in these essentially hard, razor-sharp buildings. I wonder if in this architecture sufficient expressive value comes to the fore and I somewhat doubt if talented younger architects will be contented with this art in the long run and—as a modern architect I dare hardly say this—if they will not be more open to the romantic element.

which after all is eternally human.

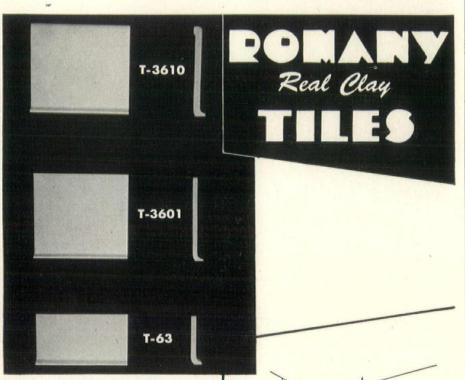
However this may be, there are in your country fascinating examples of this architecture and I was sometimes deeply impressed by them. And yet, when I was standing before these in their kind perfect buildings—you know them better than I—there suddenly came an undefined feeling over me, a feeling of discord with what had been

reached: a craving for a continuation, for results on a quite different level and on a quite different scale. I asked myself how can such a sound and sharp architecture, so typical of our time, an art which manifests itself so clearly in the separate building, develop further?

Here then lies the whole gist of the matter. For what do we reach, what do you reach, with this architecture—an architecture to which I also adhere, although I am perhaps somewhat more individualistic and just a bit more romantic. What, after all, do we reach, architecturally speaking, in the joint building of our cities? The strong side of this art, the functional organization of space, is suddenly relinquished, has nothing to say any more, is no longer an element in the construction of our cities and neither of yours, nay, your cities are in general even more arbitrary, even more chaotic than the European. Now I do not in the first place speak of the impressive metropolis which is called New York, nor of some others of your world cities, which no doubt impress us by their huge buildings. When with that constructive force effects reached, these effects are in general too haphazard to be of a truly architectural nature.

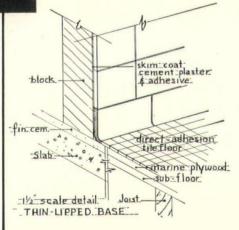
I want to draw your attention to the beauty element in city planning. The word of Brinckmann is still of great significance when he said in his typically German, voluminous standard work, "City-planning, that means create space with the house material." Of course it is only through teamwork that the many facets of modern city planning get what they need. This makes us sometimes forget that the city as a whole after all forms an architectural form problem. And precisely because the efficient and beautiful form is of such great and lasting importance I am convinced that the skillful architect is naturally and obviously the man who must create the harmonious synthesis of the various facets. In other words the architect is the obvious city-planner because only he can solve the problem of form.

In an excellent Dutch treatise on city-planning, the first published in Holland, the author, Dr. Fockema Andreae, somewhere says, "A city-



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planner should make his town as beautiful as possible, not only because the future inhabitants should benefit by this but also because he owes this to the town. Its beauty will enhance its importance, it will be the pride of its citizens and will increase their attachment and their spirit of sacrifice in all that concerns their city. But who cares for a town that is devoid of beauty? However many advantages a town may possess in other respects, perfect sewerage, excellent drinkwater, efficient housing, good roads of communication. even low rates and taxes, if the city is ugly, it lacks the essential." Thus spoke this distinguished scholar, this man of high culture, and now I ask myself, "is beauty still the essential thing for us?"

If I am going to answer this question in the affirmative we must understand one another well. I am not a mere aesthete. I am a functional architect. I perfectly understand that we can only succeed in creating a good and beautiful town if we fulfill all the requirements of housing, industry, traffic and recreation. I take this for granted. And I shall not enlarge now upon the normal city planning problems: the distribution of the residential areas interlaced with recreation belts, the traffic solutions on the precinct-principle, the industrial areas set in green. Generally speaking we are all agreed on this. I do not speak about these undoubtedly important aspects because I cannot discuss the entire city planning in some minutes. Besides, being among colleagues, I will confine myself to that which we architects should have most at heart: the ultimate form of our cities. It is not only surprising but also distressing that in our time this huge problem is hardly considered as such. In former lectures in your country 1 saw architecture and city planning first of all as the harmonious organization of the spaces, necessary to mankind and to society. Well, we practically never get to the spatial organization of the city, at least not as regards the third dimension; from the building point of view we leave the city to mere chance. And this is the more to be regretted because of all that our society creates, nothing is so lasting and difficult to change as a city-plan that has once been realized. There is no other human effort which influences posterity

more permanently than a city. Although our society has organized planning services and has set up committees, the results, that is the chaotic city-districts of our time, show that the art of building cities is in a state of deplorable decay, a decay against which far too few architects rebel.

I believe in the existence of eternal values in art, values, it is true, which express themselves in different ways in different culture periods but which essentially remain the same. If I did not believe in this, I should never have become an architect and city planner but rather a fashion artist or a designer of ladies' hats. We architects practice an art which, as I feel it, is of a nobler nature. And when we glance at the past and analyse the beautiful city aspects in the great periods and realize how it is that such cities make us feel happy, then we come to the conclusion that this is, and will always be so, owing to the eternal values in our beautiful art: repetition and variation, enlarging and narrowing, heightening and lowering in the

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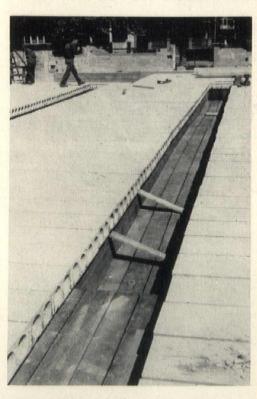
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right place, in short, obeying the eternal laws of spatial proportion.

The beauty of a city is not accidental. Surely, in a mountainous country picturesque effects may arise through arbitrary buildings but the architectural beauty of cities, especially in plain countries, is never the result of unbridled liberty but of a firm form-will. These classical city aspects remind me of the word of Wagner, who, in reply to the question which instrument he considered the most beautiful, promptly answered, "The most

beautiful instrument is of course the orchestra." Exactly. Such a city aspect is orchestral and the people who built such a city—Amsterdam or Versailles, Nancy or Venice, especially the beautiful cities from the baroque—made of the city the most splendid building that can be imagined in that period. And when a moment ago I posed the question how—can—our modern architecture, which in the separate building expresses itself so self-consciously, develop, then I think the answer must be that this is only possible when we

see the problem large and apply it to the city-as-a-whole, realizing that we have to co-operate in the proper serving spirit.

I said especially the cities from the baroque, perhaps the culminating-point in city planning-how strong was the social position of the artist, how greatly appreciated was his word, what importance was attached to his judgment! This enviable position is clearly illustrated by the anecdote which is told about Lewis the Fourteenth and Jules Hardouin Mansart, the designer of Versailles. Mansart could never do enough for the king and was allowed to enter the sleeping apartment of His Majesty even before the "grande levee." This did not please the French marquises who had to antechamber and were kept waiting while the architect, who was only a petty bourgeois, enjoyed such a rare privilege. When the king heard about this displeasure he stepped out of his bed, flung open the doors and called out to his courtiers: "Gentlemen, it evidently does not please you that Mr. Mansart may enter freely. I just tell you something: if you like you may all go . . . and here H. M. used a non-princely word . . . you may all go to hell. If I like I can create a hundred new marquises tomorrow but I cannot create one new Mansart.'

We do not know if this is all true. Historians have the habit of letting their famous men express their thoughts in fine epigrams perhaps their heroes have never spoken like that. But a fact it is that in former times great artists and especially great city planners occupied an important and beneficial position in cultural life.

Please, understand me well. I don't want to go back to those times for we know but too well that the products of art and not in the last place the beautiful city fragments were then created to the glorification of princes at the expense of blood and tears of the people. But these palaces and gardens, these city-fragments form all the same the spiritual wealth of the old world and that after so many centuries.

Perhaps you will say that is quite so but that is the inheritance of the cultural heights of human society? Dear colleagues, what do we see

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now? It is always difficult to gauge the spiritual value of one's own time. But I can tell you that I consider our time so interesting that I would say after the great humanist Ulrich von Hutten, "The spirits are astir, it is a joy to live" and I regret that my life will be too short to witness the development. It is certain that after Newton no greater sciencegenius has lived than our Einstein. It is certain that in his field discoveries have been made as never before. Life has been enriched with beneficient inventions. Thus we can enjoy in our sitting-room the longplaying records, so perfect that the music loses nothing in beauty—a spiritual enrichment indeed. in your country the cinerama gave me a thrilling experience. Such wonderful things are achieved nowadays that we are in great danger of losing the faculty of being surprised about anything. But not only from a technical standpoint our time is important, our society has also made great progress from a moral and humane standpoint. It was about a hundred years ago that an English poet wrote the tragical "The song of the shirt," an indictment against social conditions and the cruel fate of the working classes. How greatly has democracy promoted human dignity and social justice. Let us hope that our politicians will succeed in steering the benefactions of modern creative power into the channels which will lead to international co-operation. If I am not mistaken there are certain indications that point to this. Do not these few remarks suffice to prove that we are living in a great time?

I refuse to believe that the cities such as we are building now are a reflection of this great time. I won't accept that the chaotic aspect of our cities is the expression of our culture. I know that there are colleagues who accept this chaotic form arisen in liberty as a characteristic of our democracy. How can an architect speak like this whose entire endeavor is bent on beneficient order? It is no characteristic variety that our cities show but a characterless chaos and I am too good a democrat to accept this as an expression of our beneficial form of government, a form of government which in so many fields has proved to understand that there is no liberty without reasonable restriction and no culture without order. In the meantime I am fully aware that the planning problem is nowadays more difficult than in former times. Life has become more complicated and more differentiated and consequently requires a much greater variety of structure. On the other hand the technical possibilities to give form to it are practically unlimited. And now you would like to know, I think, how I imagine our city-planning task ought to be in order to obtain a representative city-aspect. I must

be brief and shall sum up my ideas in a few items.

It is up to you to make your liberty loving people more planning minded. Just as this people understands that in traffic it has to submit to liberty restriction, so it must learn to understand that life in city-relation must restrict spatially the liberty of the use of the ground and the liberty of building, a restriction for the benefit of all. It is desirable that the authorities dispose of the property of the grounds necessary for the

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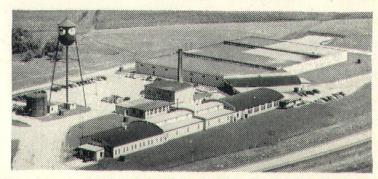
extension of the city, by preference by a timely acquisition or else by expropriation. This ownership gives the city the greatest liberty for alteration and adaptation.

The city planner must not confine himself to the ground plan only; he is more than a draughtsman of maps. In his functional planning he must moreover arouse the suggestion of a good spatial proportion: city planning needs three dimensions. I don't mean, of course, that one should work out a city in detail, only for the districts to be built first detailed plans should be made and even as regards these I don't mean at all that the city planner should work them out minutely. However, it is definitely his task to express his intentions spatially and to give such parts as will be built first a spatial beauty typical of our time. In our modern cities where the normal dwelling houses and shops, the office and dwelling-flats, etc., lead to the splendid expedient of repetition, there is a great need of interesting variation. Fortunately life demands so many diverse types of buildings that in a well-built city all kinds of

natural architectural varieties will develop as a matter of course. Here a good survey offers valuable data and it is the task of the city planner to work this out in harmonious effects by locating the special building in the special site which will guarantee its fitting emphasis in its surroundings.

And so it is possible in our new cities to combine in a natural way the classical character of repetition peculiar to housing on a large scale with the romantic element of variety attained by the characteristic situation of special buildings like government buildings, churches, schools, theatres, hotels, department stores etc. However, the claims of the spatial composition of a city plan must not be so stringent as to leave no breathing space to the co-operating architects to solve their problems in a sound way. There must be confidence and good will on both sides: the city planner must have faith in his co-operators that they will undertake their task, resolved to adapt themselves to the desired form, clearly expressed in his city plan which overarches the details. The

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architects on the other hand may expect that this overarching does not prevent them from solving their building problems in such a manner that they can take the creative responsibility upon them and this all the more readily because they know that they are co-operating in a well-considered whole. In this way it is possible to serve architecture in its most essential character, viz. as the art of space.

Some of these desiderata have been more or less fulfilled in some European countries, also in mine. Certainly there have been achievements to be proud of, nevertheless I am not satisfied in all respects. Sometimes there are spatially too complicated city plans which lead to indistinct and far from convincing city aspects, especially when the cooperating architects lack creative discipline, architects who, with desperate tenacity, try to build differently from others while they are not endowed with the talents to do so. You Americans can achieve more.

This lecture is a challenge.

You are perhaps the only people that can create a new and really great city planning art. As I already said in the beginning I have respect for your architectural ability: such a great respect that I really don't know where I get the courage from to orate so long just to tell you what I think of it. I don't know if you realize yourselves how able and accomplished you are. Maybe you are too modest for this. But I do know that your cities do not give sufficient evidence of your talents. And this is also of economical importance.

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Neoprene setting blocks and spacer strips, which simplify the glazing of Thermopane insulating glass, have been developed by the company, Mr. Ives also reported.

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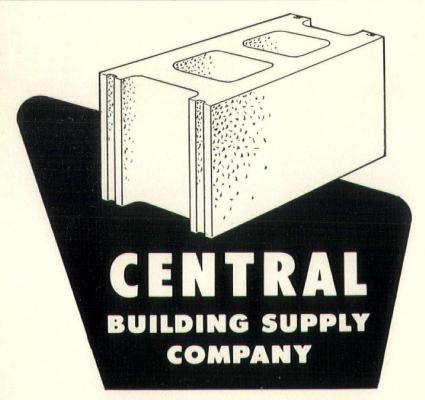
he said, and the Thermopane unit is better protected by being allowed to "float" in its bed of glazing compound.

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MINNESOTA AGC CREATES CIVIL ENGINEERING SCHOLARSHIPS

Five University of Minnesota civil engineering students will receive scholarship assistance next year under the terms of the new scholarship fund sponsored by the Associated General Contractors of Minnesota. The University and AGC said this program is designed to help meet the increased demand for professionally trained civil engineers in connection with record construction volumes anticipated in the coming years in all fields of highway and heavy building, projects.

The grants, in the amount of \$300 per year, will be available to students who are residents of the state prior to entering the university,



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have completed two or more years of engineering training on the college level or its equivalent and who are pursuing or intend to pursue advanced training in department of engineering, Institute of Technology. The students must also indicate academic aptitude, vocational promise, character, leadership, and financial need.

The students selected will participate in various association functions throughout the school year, will be employed by contractors during the summer months if they desire and will receive the association's publications. Additional activities are being planned under the direction of an association subcommittee in an effort to encourage

young men to pursue various opportunities in construction.

MINNESOTA PERLITE TO PRODUCE "ALL WEATHER CRETE"

A fill type insulation composed of thermoplastic bound volcanic glass will soon be placed on this area's market by Minnesota Perlite Corporation, which has been licensed by the Silbrico Corporation of Chicago to produce the new All Weather Crete.

"This can be applied to any rigid base by spreading and rolling," the announcement said. "The K-factor is .44 at 18 pounds per cubic foot density. This new product can be installed in any kind of weather as it is not affected by rain or freezing conditions. Slopes, cants and saddles can be done in one operation . . ."

Minnesota Perlite, this year observing its fifth anniversary, also reported it would install the new material as well as poured-in-place Perlite concrete roof decks and Precast Perlite Concrete Insulating Roof Tile as a service to contractors.

Although the firm started as an aggregate producer it soon added to its volume by making the roof tile in a new plant capable of some 4,000 square feet per day. The 3-inch tiles give the roof deck a "U" value of .18, the 2-5/8-inch tile a value of .24.



Following are classifications coming under the heading of CAST STONE.

ARTSTONE:

is made in all colors and textures with exposed aggregate selected for size, color and durability—in acid etched, honed or polished surface finish. (TYPE I or II)

CAST STONE:

is made in all colors—having the surface finish left as imparted by the mould—very similar to sawed, rubbed or tooled quarried stone finish. (TYPE I or II)

PRECAST CONCRETE: is made of regular Portland Cement concrete—either left as imparted by the mould, rubbed or tooled surface finishes. (TYPE I) There are also products known under the trade name of MO-SAI and GRANUX—both having exposed aggregate surface finishes and are made of cement concrete.

ALL CONFORM TO FEDERAL SPECIFICATIONS SS-S-721 for STONE., ARCHITECTURAL, CAST.

Look ever our big display in order to give proper consideration for specifying and using some of our proven and time tested products for practicability permanence, low upkeep and lasting beauty for some of your work. It also gives study of relation between facing and backing composition as applying to exposure.

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Our official test on ARTSTONE for compressive strength is 12,210 Lbs. per S.I.

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More of the AIA Convention As Seen by Our Cameras . . .





Above:

When Mr. and Mrs. Don Muntz of Los Angeles registered, they found (top picture) Mrs. W. H. Tusler, Frances Stone, Ralph Keyes, executive director of the Minnesota Society, and Mrs. H. C. Wagenhals ready to help them.

Our middle picture shows more helpers for registrants—Frances Stone, Delores Sigel, Carole Chase and Dave Grisvold, all of Minneapolis.

Lower picture shows a group of D. J. Leck, Minneapolis contractor, Tom Sandberg of Associated General Contractors, Mary Mykolyk of New Orleans, R. J. Henderschott, Minnesota Associated General Contractors' manager, and Al Larson, Minneapolis.

Left:

Our cameraman picked up those shown here, identified 1-r, top-down—John Magney, Minneapolis, with W. B. Harvard, St. Petersburg, Fla.—M. V. Bergstedt, St. Paul, W. D. Miller, Terre Haute, Ind., A. B. Holmes, AIA convention manager, Washington, D. C., and R. S. Kastendieck, Gary, Ind.—John Deardorf and S. W. Hamill, San Diego, Cal., W. B. Berget, Minneapolis—John Lynch, Harrisburg, Pa., F. A. Gabbert, Minneapolis, and John Huchthausen, Ossining, N. Y.—Kim Anderson, Jim Hoefener, Gene Brockelman, Prof. George Beal, Jack Bloom and Warren Bates, Jr., all from the University of Kansas.

Here



Here and there at the AIA meeting we saw (1-r, row by row)-Bob Deegan, H. H. Robertson Co., John Lindstrom, Minneapolis, George Townsend and Ed Lundie, St. Paul, and Six Benson, U. S. Plywood -Kerm Johnson, Crown Iron, R. H. Kerr and L. E. Hovik, St. Paul, Art Lucas, Jr., Duluth-G. W. Shifflet, Minneapolis, A. C. Fledal, Metal Lath Ass'n., Cleveland, A. J. Brenner, Phoenix, Ariz., B. H. Knobla, Washington, D. C.-Goldwin Goldsmith,

Austin, Tex., and Grayson Gill, Dallas, Tex.—Orrin Field, Minneapolis, Lyle Swedberg, Tacoma, W. J. Witherspoon, St. Paul, Cec Tammen, Minneapolis-Gordon McComb, St. Paul, C. S. Heltne, Jenn-Aire Products, Bob Howe, St. Paul, G. V. Patterson, Jenn-Aire sales manager—W. H. Blake, Wellington, Del., and R. E. Howe, St. Paul—C. E. Thorsen, Robert Sandberg, Harold Hanson, Art Lucas, Jr., all of Duluth.

HAMMERSTROM ELECTED PRESIDENT OF MINN.-DAKOTA PRODUCERS' COUNCIL

A. D. Hammerstrom was elected new president of the Minnesota-Dakota Chapter of the Producers' Council at the group's recent election. Other officers named were John B. Bissell as vice-president, John W. Davies as treasurer and John Hustad, Jr., as secretary.

Mr. Hammerstrom is manager of the Minneapolis



PC's new President Hammerstrom



Other officers for '56—Messrs. Davies, Bissell and Hustad.

branch of the Crane Company. He started with Crane in 1925 as a salesman in the Duluth branch and has served his employer in that capacity in many parts of the state. He was named branch manager in 1953. Married and the father of two daughters, he is active in many civic works, including a directorship of the



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Minneapolis Builders Exchange, directorship of the Minneapolis Breakfast Club, principal of his church school and a deacon of Gloria Dei Lutheran Church in St. Paul. He is a past director of the Duluth Jaycees and that city's chapter of the Red Cross.

Mr. Bissell served the PC as last year's secretary. He represents The Overly Mfg. Co., in the Upper Midwest. Mr. Davies, who represents Truscon Steel Division of Republic Steel Corporation, was renamed as treasurer. Mr. Hustad, newcomer to the executive group, is a representative of the Sanymetal Products Co.

>>>>

Pictures on the opposite page, taken in exhibitors booths, show, row by row, left to right—Earl Bartholome of Insulation Sales Co., Minneapolis, and Prof. Knute Henning of North Dakota State College, Fargo, N. D.—C. W. Farnham, Minneapolis, and Larry Ward of Hough Shade Co.

Vern Stehl, Don Rossiter and Bill Butcher, all of Inland Steel Products Co.—John Magney, Minneapolis, and Vern Larson of Kimble Glass Co.

E. G. Hart of H. H. Robertson Co., and N. J. Smith of Chicago—Ed Baker, Minneapolis, and W. C. Kadow of Burgess-Manning.

Bob Magney, Minneapolis, and Jim Buege of Andersen Corporation—C. A. Haviland, Charleston, W. Va., and E. J. Bolduc of Kawneer Products—John Barr of American Standard and Alfred Nelson, St. Cloud, Minn.

JENN-AIR

FULL BALL BEARING DRIVE and motor mounted out of air stream.

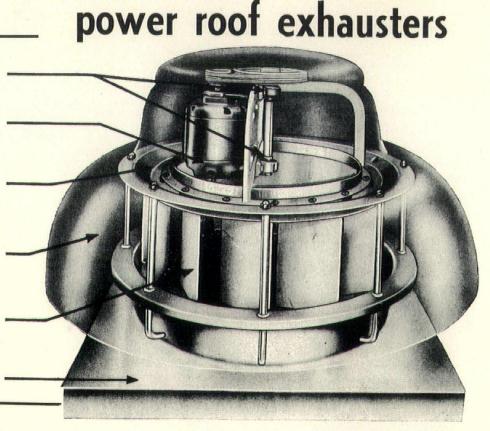
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RUGGED CONSTRUCTION—Fabricated of heavy gauge, rust-proof aluminum, which if necessary, can be quickly and easily disassembled for re-assembly on the roof.

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More exhibitors' booths show—Wolfgang Gerson, Winnipeg, and S. R. Benson of U. S. Plywood Corporation-A. R. McMannis and Rollin Child of U. S. Ceramic Tile, Paul Liebelt and Charles Magney, Minneapolis.

Eugene G. Flynn, St. Paul, city consulting architect, and James A. Coulter of Granco Steel Products Co.—Al Fischer shows Thermo-Sash window model to North Dakotans W. J. Seifert and L. F. Ross, with Don Alexander of Kasko Products at right.

David Paulson, Minneapolis, and Harry Waggoner of Cupples Products Corp.—Vern Stelmark, Minneapolis, and C. L. Ammerman of C. L. Ammerman Co.

K. W. Jones of Minnesota Mining & Mfg. Co. and J. J. Weiler, Madison, Wis.—Don Haarstick, St. Paul, and Curt Johnson of Pella Products Co.
C. N. Sonnesyn of Thermal Co., and John Kearney

of Anemostat Corpn., B. C. Walters and C. E. Firestone, Ohio AIA's.—W. E. Kelly of Mosaic Tile Co., Norman Knutson, Gilbert Sommers, Robert Hench and Don Knutson and Gilbert Green, Eau Clair, Wis.

NATIONAL HOME WEEK SCHEDULED FOR SEPTEMBER 11-18

Major Upper Midwest cities' builders' groups are finishing up the buildings which will be opened to the public for study during the September 11-18 National Home Week. Varying in size from small two-bedroom homes to ostentatious ramblers in exclusive areas, the homes will feature such things as built-in kitchens with refrigerator-freezer units, ovens and cooking tops built right into the designed fixture areas.

Thermo-Sash

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Insulating core between inner and outer members voids frost . . . annoyance of moisture streaks on walls, damage to carpeting, draperies.

Used with insulating glass window is completely insulated.

Thermo-Sash selected extensively for larger glass openings . . . designed to withstand wind-load pressures.

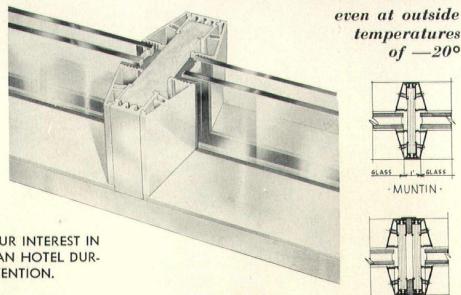
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Mt. Zion

(Continued from Page 23)

- 2. One marvels at the very warm and rich interior in sharp contrast to austere and spartan exteriors.
- 3. In a number of ways, the architect has instilled in the composition of the exterior and interior a symbolism of Jewish history and art that evokes a certain richness.
- 4. The sweep of the contours and moving masses as the eye moves with the everchanging view not once fails in exhibiting a continuum of excitement and anxiety.





The chapel and sanctuary are shown above; at left is the gallery overlooking terrace and chapel.

Deremer of Grand Forks add TWO PARTNERS

S. T. DeRemer, architect in Grand Forks, has announced that W. E. Harrie and R. L. Kennedy have become associated with him in a partnership for the

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general practice of architecture. Mr. DeRemer has been a single firm operator since the death of his fatherpartner in 1945.

Mr. DeRemer started in practice with his father, J. B. DeRemer, in 1920. Mr. Harrie was in the DeRemer office since 1949 as chief draftsman, following receipt of his bachelor's degree in architecture from N. D. State College. Mr. Kennedy has been with the DeRemer group since 1953, going there from the Minneapolis firm of Winston and Elizabeth Close. He is a graduate of Minnesota's School of Architecture.

PC HELPS SEND DEMONSTRATION HOME TO EUROPE

A model home to help demonstrate to Europeans how we live in the United States is en route to its first showing at the Barcelona Trade Fair. Among sponsors of the project, undertaken at the suggestion of the department of commerce, is The Producers' Council.

Full scale, the house and furnishings are supposed to be typical of "Main Street, U.S.A." Later it will be shown at the fair in Bari, Italy, and there may be other exhibit points as yet unannounced.

GARDNER GETS HUFCOR DISTRIBUTORSHIP

Appointment of Gardner Hardware Company, Minneapolis, as distributors for the new Hufcor Laminated Folding Door, was recently announced by John J. Healy, vice-president This new door is manufactured by the Hough Shade Corporation of Janesville, Wis.

The company was awarded a citation at the recent A.I.A. convention for effective presentation on its Hufcor display. Complete stocks of doors will be carried at Gardner's and installation service is available.

FLYNN NAMED CONSULTING ARCHITECT FOR ST. PAUL SCHOOLS

Eugene G. Flynn has been named new consulting architect to the St. Paul school board, following resignation recently of James Voigt, who had held the post for the past two years.

A University of Minnesota graduate in architecture, Mr. Flynn had worked for the past four years for the firm of Max and Gerald Buetow. A World War II navy yeteran, he is married and resides in St. Paul.

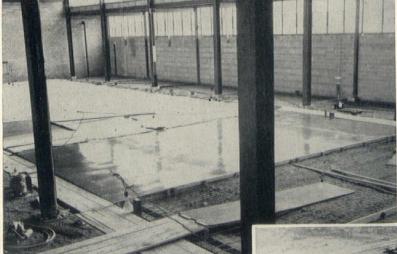
Mr. Flynn is a member of the St. Paul AIA chapter. Mr. Voigt's resignation was to allow him to go into private practice.

ZURN TO PUSH PLUMBING, OTHER PRODUCTS

The Zurn System of plumbing, which supports fixtures off the floor for better sanitation, as well as other products and systems of the J. A. Zurn Mfg. Co., will be given an augmented push during the remainder of this year and well into 1956.

Advertising and sales promotions planned represent a 40 per cent increase in what has been done previously. Industrial, marine and flexible coupling divisions will share with plumbing in the expanded program.

MASTERPLATE



Masterplate "Iron Clad" concrete floor completed in the new Minnesota Plastic Corporation warehouse, St. Paul, Minnesota, in 1954.

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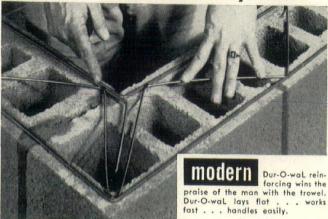
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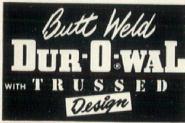
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FRIESEN DISCUSSES LOWER HOSPITAL COSTS

Reduction of hospital operating costs can be accomplished through design and procedures based on organization, centralization and standardization was the main thought of a program of hospital planning presented by Gordon A. Friesen, nationally known hospital consultant, meeting with more than 50 Minneapolis, out-state Minnesota and Wisconsin hospital officials recently in Minneapolis. Magney, Tusler and Setter, architects and engineers, was the sponsors of Friesen's Minneapolis appearance.

Revised thinking on organization, he said, must be a natural follow-up to today's changing emphasis from curative to preventive treatment. A thorough study of what the hospital's operational procedures are expected to accomplish, he pointed out, should precede and be the core for the ultimate design and construction.

In other words, rather than build the hospital first and attempt to develop cost-reducing organizational methods around it, such methods-conceived after full research and study-should determine the design which will best fit and serve it.

Centralization of supplies and distribution—for which his work with a group of ten hospitals in the mining region of West Virginia and the Kitchener Hospital, Toronto, Canada, brought him national recognition-has proved to be the key to organizational methods aimed at reducing costs.

Under his plan all supplies would be funneled to one incoming supply room for distribution throughout the hospital. Here requistions would be filled to serve the individual nursing stations. These requistioned supplies would utilize the specially designed "shelves on wheels" idea developed by Mr. Friesen. All the linen needs, for example, of a particular nursing station, being predetermined, would be stacked on a cart. Rather than draw supplies piecemeal, the cart would be left in the nursing unit where it would be readily available. Similar practices would apply to medications, sterile supplies and so on.

Highly important in the cost-reduction picture is standardization and, hand in hand, mechanization. A prime example of the former, in Friesen's plan, would be the pre-packing of sterile supplies. All such supplies needed for use in any one nursing station would be assembled in advance and be ready for instant use.

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Here again the need for piecemeal requisitioning would be eliminated. All supplies which would logically fall into the pre-packing plan would be treated in a similar manner.

Carrying standardization a step further is the use of counter shelves or drawers on wheels for transporting supplies, such as mentioned above, throughout the hospital. These carts can be moved from under the counter as the needs change; where a shelf-type cart formerly fit the demands, it might be found a cart with drawers best serves the purpose.

In the immediate supply areas "high carts" with greater storage space than the "shelves on wheels" would further promote step-saving and efficiency.

Demonstrating Friesen's labor-saving techniques to the Nth degree is the use of all-purpose, preventive maintenance carts.

All the supplies and tools needed for jobs from the repair of a leaky faucet to the easing of a balky door would be handled on the carts. Looking somewhat like a Rube Goldberg invention because of the great array of tool and repair devices, they would be ready for instant use in the maintenance men's periodic checkup of all the hospital's facilities as well as the condition of the building itself. The substantial saving which the carts would effect can readily be seen.

Efficiency, Mr. Friesen said, can be narrowed down to a much finer degree than is commonly being practiced. Reduction of costs from the \$15,000 to \$16,000 per bed at present can be brought about by the adoption of a sound system of labor saving techniques. The ultimate result, he emphasizes, will also mean better patient care.

TWO NORTHWEST FIRMS ON WOOD FABRIC BOARD

Two Northwest firms—the Hough Shade Corporation of Janesville, Wis., and Warren Shade Co., Minneapolis—are represented on the first board of directors of the newly created American Wood Fabric Institute, with headquarters in Washington, D. C.

Formed by leading companies making woven wooden fabrics, folding doors, blinds, etc., the AWFI plans to work toward creation of commercial standards, quality certification and other improvements for the industry.

Hough Shade is represented on the AWFI board by its John Hough and Ralph Warren represents Warren Shade.

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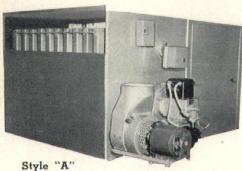
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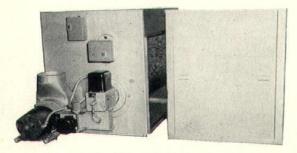
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Manufactured versus Daylight

(Continued from Page 39)

rooms, the day rooms, the lounges, areas where delight as well as light for seeing must be provided have windows but the planners do not assume that the patient must be bathed in sunlight from windows reaching to a 12' ceiling but only that a view and pleasantness be achieved.

Churches of all building types, as designed by some of our more sensitive architects, probably illustrate most clearly the distinction between light and delight. Here the designer is faced with the problem of achieving a mood of worship and reverence and with the functional problem of providing the illumination necessary to witness all the activities involved in church ceremonies, whether it be the bridal procession or the sacraments at the altar. For most of the activities manufactured light does the best job; in fact, no other source is generally even considered. But the designer will use daylight or sunlight crossing the nave and to highlight the altar, or illuminate a cross. This illumination may also be from a manufactured light source but, in any case, it is not lighting that is required for seeing but lighting that assists in the development of the spatial qualities of the church or that accents important items in the room. This is the light that delights.

Likewise in the school building for seeing the book, the chalkboard, and the teacher, electricity provides the only source of light which can be relied upon to furnish controlled quantities and qualities of illumination. In the school, as in the church, we must furnish delight. In the church it is a worshipful surround; in the school the student should be aware of the changing pace and moods of nature, of his kinship to the world outside. The sun must enter spaces in the building. But let us make the distinction between what the sunlight and what the electric light does. We must assign to each the job it does best. Reliance on daylighting instead of manufactured light in providing lighting for seeing has made impossible many basic economics in school house planning for the "daylighter" can never be very far from a window, as a result of which our schools are long, drawn out affairs with long corridors and correspond-

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ingly great amounts of exterior wall surfaces.

E. Lighting for Use

We suggest that a more proper criterion for use in the judgment of school buildings must be proposed, one that is not ambiguous. We suggest that this criterion might be—How well is the space lighted for the use for which it is intended. This is the idea of "lighting for use" which has been found a powerful tool in the hands of the architect and the illuminating engineer.

By lighting for use we mean providing that type and quality of lighting necessary for use of the room occupants, considering their physiological and psychological needs. This definition requires that all of us involved in lighting seek further into what these needs are.

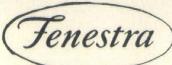
This proposal frees the architect of the restrictions in the school building plan which have been placed upon him by reliance upon daylighting. It makes possible shorter, more compact and therefore less expensive buildings to construct. It makes possible comfortable, more flexible and useful classrooms. It makes possible savings in the owner's operating costs through significant reductions in the maintenance problems frequently associated with daylighting techniques and reductions in heating costs.

F. Classroom Shapes Should Be Dictated by Classrom Function

Classrooms today are becoming differentiated to a great degree; they are also larger. There are classrooms for kindergarten pupils, home economics students, the study of wood-working techniques, physical education, and such activities as watching the senior class present its one-act play, to mention a few. Few of the rooms (we really believe that none of the rooms) designed for these activities fit well into the traditional 22 foot or 24 foot deep classroom dictated by most daylighting techniques. All of these room types and uses are adaptable to existing techniques in the use of manufactured light; its use makes it possible to proportion the room to the activity taking place in the room independent of the relationship between window wall and room depth. With the use of manufactured light it is possible to make the kindergarten exactly that shape which its function as determined by the educators requires. The home economics department need not be a ribbon of a

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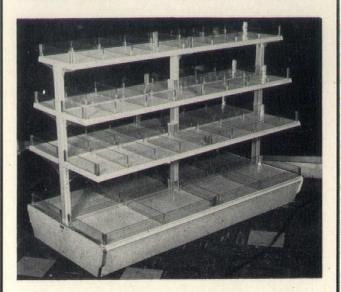
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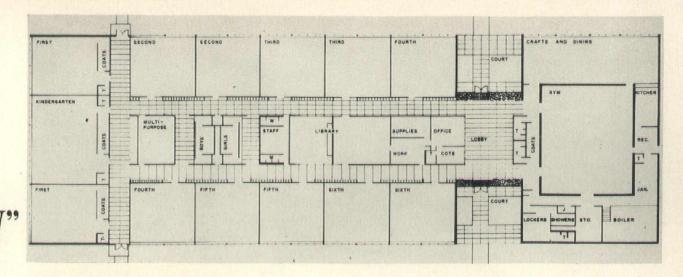
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room 24 feet deep and 60 feet in length, but can be an easily supervised and functional space perhaps 35 feet deep and 40 feet in length. The same planning approach is possible in all of the various rooms in the school providing manufactured light is used as lighting for seeing.

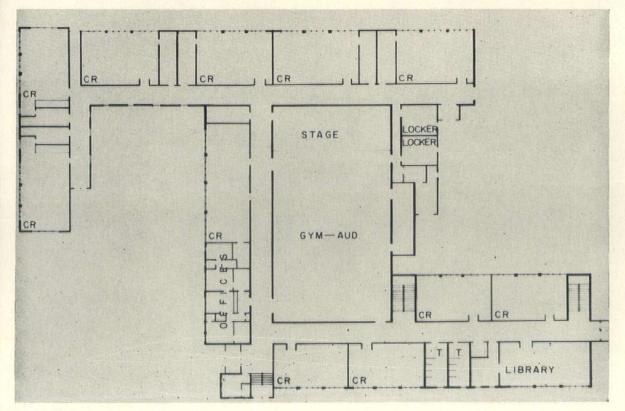
One thought should be entered here about the importance of rooms other than the so-called "classroom" in today's school buildings. In the typical elementary school only about 40% of the total building area is "classroom" area. In the high school the proportion is even more surprising; less than 20% of the total building area is in "academic" classrooms. The other spaces are gymnasiums, shops, music rehearsal rooms, auditoriums, cafeterias, kitchens, corridors and so forth. The adaptation of daylighting techniques to these areas would require such contortions in building plan and structure that daylight has not been seriously considered in these areas.

G. Overall Building Design Should Be Dictated By Function.

The designer who utilizes the idea of lighting for use with manufactured light as his primary tool need not confine his imagination to the "in-line" arrangement of rooms in the planning of a school building as has been dictated in the past by the limitations of daylighting devices. He may create far different plan types than the spread-out "finger" plans or snake-like plans now common. The use of manufactured light as the source of light for seeing makes possible a more functional school building as well as a more functional classroom.

H. Two Elementary School Plans Compared

In order that this freedom in planning be made more clear, we submit the plans of two elementary schools from the upper midwestern area, one of which is designed around the theory of lighting for use and the other around the use of "daylighting." The buildings



66 X ?!

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Consulting Engineer Leland W. Cook

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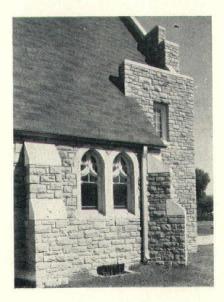
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1101 North Snelling Ave. St. Paul, Minn. Mldway 6-8601 are very similar as to space requirements, and are in similar geographic locations. School "W" has a vision strip and ignores daylight as useful light for seeing, but not for its other qualities. School "X," which is designed around the familiar vision strip with directional glass block above, makes every attempt to make daylight do the entire lighting job. (As in so many cases, the designer knew he could not make daylight really do this job, so his installed wattages per square foot are almost identical with those in the other school which frankly states that it is lighted by electric light.)

In both schools the classrooms are the same size, 960 square feet. In school "W" they are 32' wide by 30' 8" deep, a shape dictated by room function. In school "X" they are 24' wide and 40' long, a shape dictated by the daylighting device, glass block. The first has ceilings nine feet high with a total interior cubage of 8,640 cubic feet. The daylighted room in school "X" has a ceiling 12 feet high with a total interior cubage of 11,520 cubic feet or 133% of the cubage in a room of "W." The first has an exterior wall area (figuring the face of the interior elevation) of 288 square feet, the second an exterior wall area of 480 square feet or 167% of the first. It cannot be argued that the first with its lower cubage is not cheaper to build or that with its substantially smaller exterior wall surface that it is not cheaper to heat and to maintain. Other persons will have to apply their measuring devices to obtain a complete answer to this matter but our experience indicates that the residential character possible with the clear glass vision strip four or five feet high, shielded with an eyebrow, is immediately recognized by the teacher and students using the room. We, ourselves, are convinced that such fenestration is the most practical, functional and pleasant window treatment we can now achieve in school

In addition to the variation in their classrooms, school "W" and school "X" exhibit wide differences in their plan arrangement. School "W" is very compact, rooms not requiring daylight, such as toilets, gymnasiums, library, storage rooms, teacher work rooms, etc. are for the most part placed where they are functionally most satisfactory. In school "X" every room received daylight and an attempt is made to use this light as the primary light source for seeing; the plan is accordingly attenuated with many desirable plan relationships sacrificed in order that the rooms be near windows.

Statistically the two schools are somewhat comparable as follows:

	School "W"	School "X" (the daylighter)
Classrooms	13	17
Capacity (at 30/room)	390	510 (ratio of 1:1.31)
Gym	1 (40 x 60) 936 lineal feet	1 (64 x 119) 1889 lineal feet
Exterior Perimeter	(times 1.31 = 1225)	
Exterior Wall Surface	12096 square feet (times 1.31 = 15875	24,600 square feet

*Figured from 6" below first floor line to top of roof insulation.

The above comparison is not completely accurate, of course. In favor of school "X" is its larger gym which

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The pages of Northwest Architect are the meeting place — the town square — of the architectural profession. They are always open for the presentation of your designs and your ideas on today's building problems. When you have an article and drawings and photographs you feel are good, for our use, send us a note about them . . .

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naturally results in greater exterior perimeter and exterior wall surface. However, school "W," the school utilizing the idea of lighting for use, could be increased in capacity to 540 students very easily by adding six classrooms (three to each side) which would increase its actual perimeter to 1128 lineal feet (as opposed to the 1225 feet given above using the ratio 1:1.31) and its exterior wall surface to 15638 (as opposed to the 15875 given above using the ratio of 1:1.31 again). In spite of the differences in the two plans still unreconciled, it is fair to state, we believe, that the plan of school "W" demonstrates substantial savings in initial cost and, because of its smaller exterior perimeter and exterior area, in owning cost.

The advantages that plan "W" has over plan "X" may in part be due to a more skillful arrangement but the primary factor is that in school "W" the designer exploited the advantages inherent in the use of manufactured light in providing lighting for seeing.

I. Conclusions

The use of manufactured light for the schoolroom, independent of daylight and the proper adaptation of the idea of "lighting for use" makes possible more compact and less expensive school buildings that are pleasant, functional, and adaptable to future change. Construction Outline

The standard construction details for the four types of classrooms are as follows: (1) 20-year bond pitch and gravel roof; (2) 11/2" rigid insulation; (3) galvanized 22-gauge metal deck; (4) steel joists on steel frame; (5) 11/2" acoustic tile ceiling on gypsum lath (contact ceilings); (6) asphalt tile floors, 1/8", C grade, with rubber base; (7) 4" concrete slab on grade; (8) 6" gravel fill below slabs; (9) exterior pipe tunnel (4' x 4'); (10) reinforced concrete (3000#) foundation walls (12") and footings; (11) concrete block tunnel walls (8"); (12) gypsum tile partitions, 4" plastered; (13) exterior walls constructed of 4" face brick (\$60.00 per M) with 8" clay tile back-up, plastered;

Crescent Sam had the drop on him—briefly



"T'M a she-wolf from Bitter Creek and it's my night to how!!"

Crescent Sam stepped into the kerosene glow of the biggest saloon in Perry, Oklahoma, and fired a six-gun into the air.

Suddenly, he spotted the stern-faced peace officer you see here. He aimed and pulled.

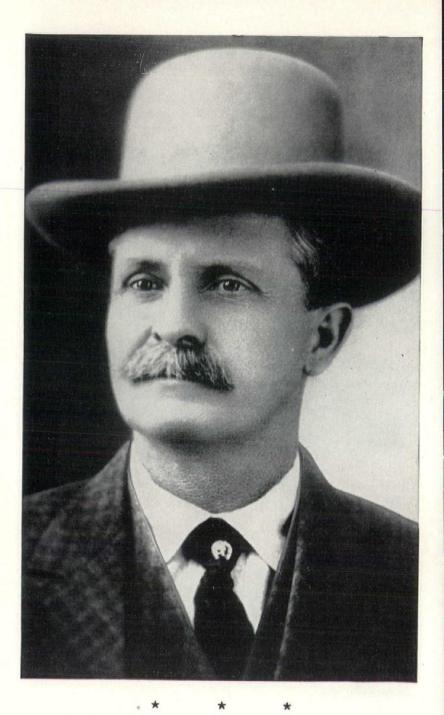
And in a gun flash, he lay dead.

Crescent Sam, thief and killer, had made the fatal mistake of trying to outshoot Bill Tilghman. Tilghman who could hole the ace of spades at 30 feet. Tilghman who in later years said, "I never shot at a man in my life and missed him."

Bill Tilghman was no legendary gun fighter. He was the genuine article, a fearless, honest frontier marshal described by the San Francisco Examiner as "the best peace officer the West ever knew."

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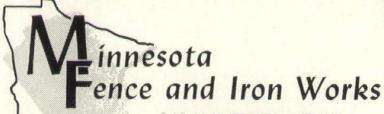




The new Veterans' Service Building

located in the State Capitol approach is modern, functional and truly an architectural asset to the City of St. Paul. Mr. Brooks Cavin is the architect!

Interior bronze and aluminum stair railings, exterior mesh railings were fabricated and installed by the Minnesota Fence and Iron Works, Inc., specialists in *new approaches* to ornamental metal work for many years! Minnesota Fence also executed the aluminum screed on the colonnade and the stainless steel and bronze panels in the phone booths.



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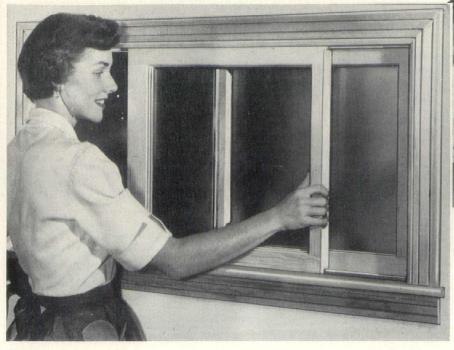
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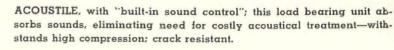
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You will meet the leaders of the profession in St. Paul for the convention of the Minnesota Society of Architects, get answers to a lot of your problems, learn of the latest in materials, equipment and service and get a chance to "have your say" so plan to be there on

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(14) aluminum windows, window sills, and roof edge; (15) slate stools; (16) corridor wall, clear-glazed structural tile, corridor 12'-0" wide; (17) glass block, 8" x "", directional; (18) windows, clear glass, double strength, "A" grade; (19) classrooms assumed built on level site no grading included.

References

Dr. R. A. Boyd: "The Attainment of Quality Daylighting in a School Classroom." A paper presented at the National Technical Conference of the Illuminating Engineering Society, September 8-12, 1952, Chicago, Illinois.
 See also studies by architects Kenneth C. Welch and H. G. Daverman, Architectural Forum, October, 1953.
 Although 24 x 36 or 24 x 40 might be more nearly typical of elementary classrooms.
 H. L. Logan, A. W. Lange: "The Evaluation of Visual Comfort Data." Illuminating Engineering, Vol. XLVII, No. 4. April. 1952.

No. 4, April, 1952.

FOLDOR AND FOLBAK HANDLED IN AREA BY ELECTRIC POWER DOOR

The fabric-covered, accordion-type Foldor and Folbak doors are being distributed in the Upper Midwest by Electric Power Door Co., Minneapolis. Foldor, made by Holcomb & Hoke, is reported by its makers



The Foldor canopy is at star

as "the smartest thing," features an exclusive cornice which conceals the overhead track. Use of the doors "adds beauty, flexibility and utility to new and older structures," the makers report, and Folbak is the "new folding door everyone can afford."

MEDUSA SPEX GIVE DETAILS OF CONCRETE WATER-REPELLENTS

Valuable tips for architects and others in the building industry on the use of water-repellents in concrete are contained in a new 8-page booklet available from the Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland 15, Ohio. The booklet, well illustrated and with detailed instructions, tells how to make water repellent such units as foundation walls and basement floors, bonded concrete floor finish, Portland cement stucco and existing concrete structures.

Interesting feature in the booklet is a large crosssectional drawing of a basement unit showing by numbers where care must be exercised to assure a dry basement.

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Airline Serves Area and Business

In this fiercely competitive era when all sorts of lures are offered firms to open branches or move outright to other locations, one large company that pioneered in the Twin Cities has decided to tie its future with this area.

This is Northwest Orient Airlines.

The headquarters and system overhaul base of this international airline will remain here. This doesn't mean that Minneapolis-St. Paul will merely be holding their own for there is an ambitious expansion program ahead which will involve heavy construction, equip-

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North and 25th Aves. Melrose Park, Ill. ESterbrook 9-3100 ment expansion, more aircraft and a definite anchoring of the airline to the Upper Midwest, from which its transcontinental and overseas operations are conducted.

For rural community and urban merchants, manufacturers and jobbers this means ready access to facilities for outgoing and incoming air shipments. It is expected, in the years ahead, to be a definite aid to those businesses which rely more and more on air cargo.

Tentative plans call for the expenditure of \$15,000,000 for Northwest's overhaul base and operations headquarters. This will be part of a \$24,000,000 airport development program at Wold-Chamberlain Field.

Other airlines serving this area will base operations there. Western will double the size of facilities it originally planned. Other carriers are North Central, Braniff and Capital.

Decision of Northwest to stay—key to the issue of major airport development—was arrived at only after long study and deliberation. Committees were set up by the company to make detailed analyses of the many cost and efficiency factors involved. As soon as word got around that Northwest considered moving its overhaul base from Holman Field, St. Paul (because officials feared that a damaging flood in the spring of 1952 might be repeated), various cities laid claim to the project. These included Milwaukee, Chicago and Seattle, among larger cities, as well as several smaller communities.

Special attention was given by the airline to the advantages and disadvantages of Seattle, terminal of its Alaska, Orient and Hawaii operations, where many of its flight crews and other personnel are based.

Meanwhile, authority of the Minneapolis-St. Paul Metropolitan Airports Commission to acquire federal land and to allocate funds for the contemplated developments at Wold-Chamberlain were special problems confronting the commission. These were worked out with the government and the Minnesota state legislature.

Northwest's decision to stay in the Twin Cities, where it began operations on October 1, 1926, was made known in a joint announcement on June 6 by Donald W. Nyrop, president of the airline, and Lawrence Hall,

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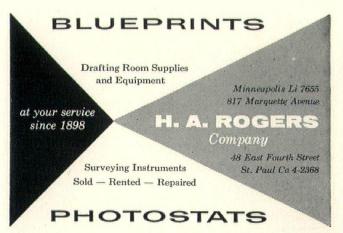
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chairman of the Metropolitan Airports Commission. It was pointed out at that time that definite agreement as to details would have to be satisfactory to both company and commission and would have to be approved by Northwest's board of directors and the MAC.

The preliminary working draft contains provisions for construction of the overhaul facilities and airline's general offices. The structure will be located on a site of 76 acres in an area adjoining Fort Snelling.

Northwest has approximately 1,000 persons working at its overhaul base, with an annual payroll of more than \$5,500,000. Altogether it has 2,600 employes with an annual payroll of more than \$15,000,000 in the Twin Cities area.

THREE FACTORS OF BUSINESS SUCCESS SHOWN IN 3-M BOOK

The story behind the development of colored roofing granules and other materials today's architects use in their designs is told in a new book, "Brand of the Tartan," the history of Minnesota Mining and Manufacturing Co., written by Virginia Huck.

The continuous flow of new products from the company stem from three qualities-imaginative research, venturesome capital and progressive management—that have made the company a classic example of free enterprise in action, the books says. These characteristics are the key to its evolution from a small mining concern to a large, diversified manufacturing enterprise.

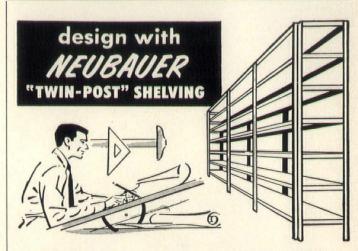
UNIT STRUCTURES APPOINTS WITT PRODUCTION CONTROLLER

Howard W. Witt has been appointed production controller of Unit Structures, Inc., Peshtigo, Wis., according to announcement made by Max Hanisch, Jr., president of the company. Mr. Witt will be in charge of co-ordinating production of the company's plants in Peshtigo and Magnolia Arkansas. In addition to scheduling the processing of orders through the engineering and fabricating departments, he will devote some time to industrial and public relations. Prior to his connection with Unit Structures, Inc., he was associated with Scott Paper Company, Chester, Pa., from 1940 to 1954, in sales, personnel administration, public relations and production supervision.

HAMILTON MADE CHAMBERLIN COMPANY BRANCH MANAGER

New branch manager in this area for the Chamberlin Company is Willard C. Hamilton, who attended the School of Architecture at the University of Minnesota and is a member of Alpha Rho Chi. He will headquarter in Minneapolis, handling the company's activities in Minnesota, North Dakota, South Dakota, Wyoming, Montana and western Wisconsin.

A lifelong resident of St. Louis Park, Mr. Hamilton for a time prior to World War II was a hardware merchant in that Minneapolis suburb. He has been with



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106 South 9th St., Minneapolis, Minnesota Chamberlin since 1946 as branch sales manager and estimator on under-construction projects. He is a veteran, is married and has one child.

CRESTLINE INTRODUCES STACKING AWNING UNIT

Newest addition to Crestline Millwork's expanding line is the Stacking Awning Unit, designed to stack one upon the other or side by side. The new units can form any combination of fixed and ventilating sash required. Group arrangements form block-shape and irregular glass wall areas. Operating sash are available in six different sizes, fixed sash in three sizes.

Operating sash are crank-operated and open to a full 90°. Cranks will show no appreciable wear after 15,000 operations! Operating units are fully weatherstripped on all sides with bronze compression weatherstrip. Aluminum screens are permanently installed in every operating unit and included in the price. The screens are easily removed for cleaning windows but never have to be removed for opening windows.

All gear-operated hardware is completely hidden when the window is closed. A snugger latch locks the window tightly, prevents sticking, and serves to break any ice or paint seal. A beautifying feature of the Crestline Stacking Awning Unit is the narrow mullion, only 1 5/16" wide! The company claims theirs to be the narrowest wood mullion made.

Crestline Millwork is manufactured by The Silcrest Company, Wausau, Wisconsin, makers of a complete line of millwork.

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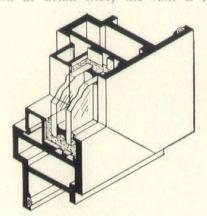
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electrical welds, has vinyl weatherstripping and complete "snapon" bead for inside or outside glazing. It accommodates glass ranging from 1/8-inch to 1-inch in thickness, takes Thermopane and Twindow insulating glass.

The sash can be used in eight different series of ribbon windows, projected windows, curtain walls, casements and ventilators.

BIRTH OF THE ARCHITECT

The architect of today must know a great deal about a myriad of things which affect the structures he designs and supervises. He must to a certain extent be a craftsman as well as an artist interested basically in design. With this in mind it is interesting to read the words of Hendrik Van Loon in "The Arts:

"I know that already quite often I have used this word 'architect' but I did so merely for the convenience of the reader who is accustomed to the idea that all architecture must necessarily be the result of the labors of an architect. The Middle Ages, however, had not known the architect in the modern sense of the word. Neither had the Greeks, although the word itself is of Greek origin. Their Architektors were merely master builders, a class of superior foremen whose practical skill was combined with a natural gift for bossing a

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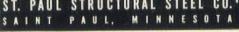


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gang of laboring men and who knew enough mathematics to keep their accounts straight.

"When such a superior foreman happened to be better than his colleagues, he was gradually promoted until he became the general superintendent in charge of a new cathedral. He would then receive more pay than the others but his social status remained about the same as that of the stone carvers and slaters and plumbers (there was a terrific amount of delicate leadwork connected with the complicated roofing of these Gothic churches) and glass burners and carpenters and painters who were also busy on the same project. He therefore continued to live with them and among them and if they obeyed his orders, they did so because they knew that if it came to laying bricks, he could outlay the fastest of all the other bricklayers; that if a dangerous part of the roof had to be painted, he would know how to make the safest sort of scaffolding and would try it out himself before he allowed one of his men to go up; and that there was not a detail connected with the actual business of building which he did not know better than his subordinates.

"During the Renaissance there was an end to this arrangement. The architect became an artist rather than a builder. Henceforth his only direct physical contribution to the work upon which he was engaged would consist of the muscular energy with which he sharpened his pencils. Such a change may not strike you as very important. Yet it had a far-reaching influence upon the further development of all architecture.

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UNION NO. 2 OF MINNESOTA "The art of the Middle Ages had had a childlike quality—an air of the unconscious and a complete absence of the self-conscious. After the Renaissance this was no longer true. The builder ceased to think in terms of Almighty God to whose greater glory he was erecting a new house of worship. He was much more occupied with 'the rules and regulations for the perfect classical style.' These had been laid down in the ten books on architecture written by the great Vitruvias, who had been superintendent of all Roman civil and military edifices under the Emperor Augustus and who, after an absence of almost fifteen centuries, had been brought back to life through the discovery of his writing in the ancient Swiss monastery of St. Gall.

"As a nation we are not very fond of intermediary colors. We like to see things in either black or white. Grays are not popular and what I have said so far about the art of the Renaissance may well make you ask, 'That is all very interesting but what do you really think? Was it good or was it bad?'

"The answer is the same as that which I would have to give about every other style of architecture, music or painting. It all depends upon the way you look at them. In the hands of truly great men . . . the Renaissance style achieves certain effects which are eminently fitting and pleasing. But even these buildings suffer to some extent from the fact that they were not homespun but a foreign import. . . ."

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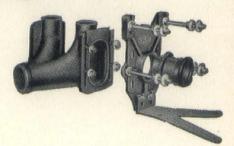
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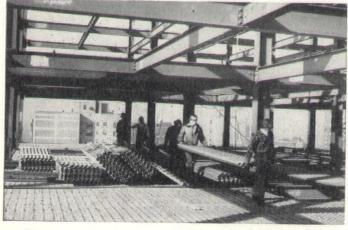
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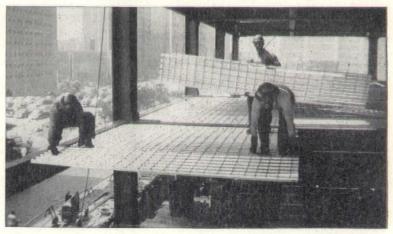
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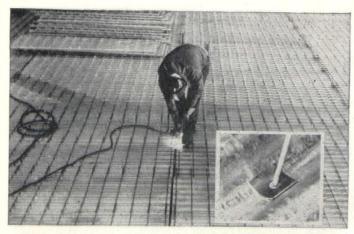
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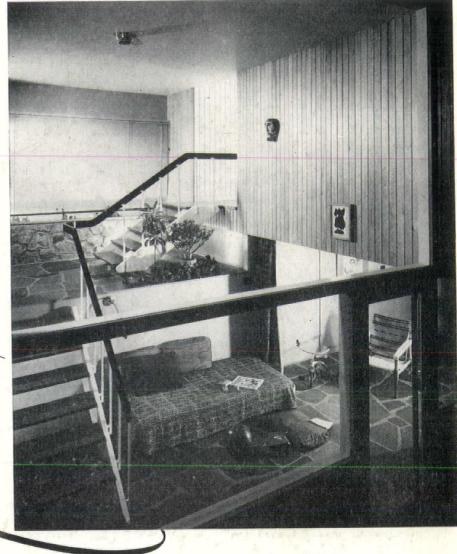
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