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LOUIS H. SULLIVAN, ARCHITECT, 1890-91

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NORTHWEST ARCHITECT

SEPTEMBER-OCTOBER 1951

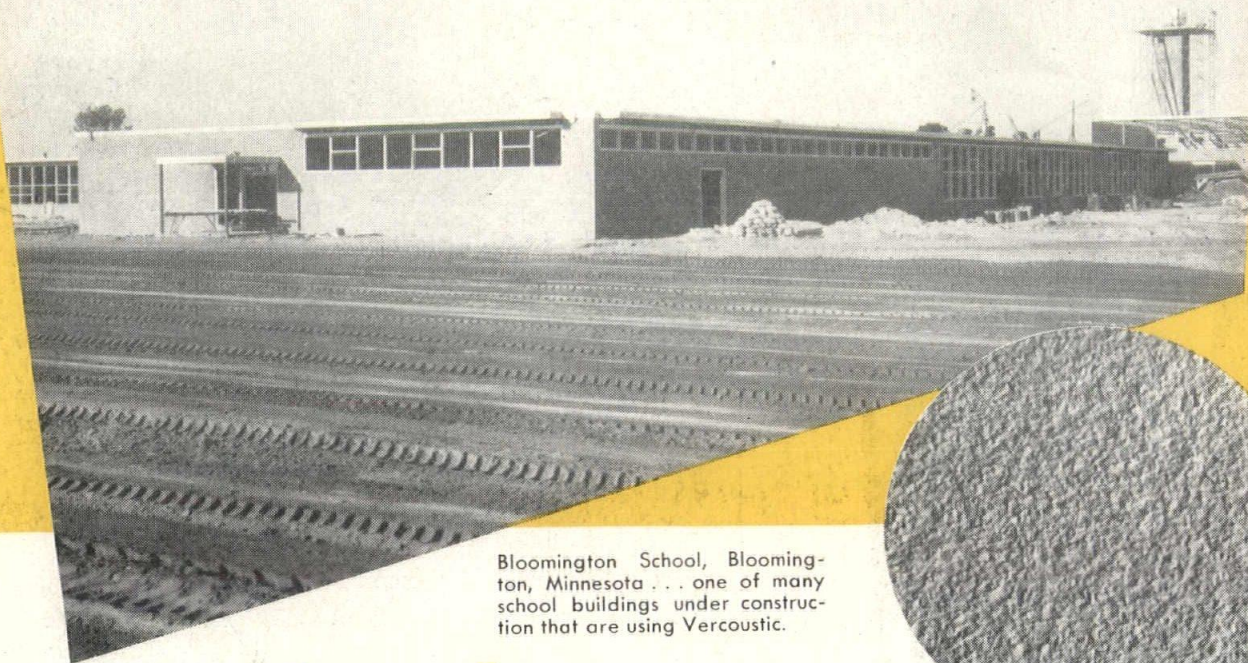
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VOLUME XV

NUMBER FIVE

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Official Publication
Minnesota Society of Architects
E. RICHARD CONE, ST. PAUL, President

Louis H. Sullivan and his Democracy

LAST JUNE a politician in Chicago attacked, of all people, Louis Sullivan; said that he was an integrated liar and the father of decadent Marxism in America. This curious tract would have passed unnoticed but for the fact that it was given both prestige and authority by publication, of all places, in the Journal of the American Institute of Architects.

IN THIS NUMBER OF Northwest Architect we will review the contributions of Sullivan to basic philosophy and world architecture and will show how his works and his ideas have been used by both his friends and his enemies to prove whatever suited their personal ends.

THESE INVERSIONS and ensuing verbal raids began in 1890 and have never ceased. All disregard Sullivan's cogent thinking and specification-clear writing. But these selfish pleaders don't want to know what Sullivan really thought and said. For this reason and especially at this time we would like to encourage citizens of our American Democratic Continuity which is the property of no political party, to read Sullivan. His writings are mental food for the honest hearted.

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NUMBER 5



SULLIVAN AS A YOUNG MAN.
AGE SIXTEEN 1872

LOUIS H. SULLIVAN

Poet, Prophet and Man of Action

IN THE short space of forty years he brought the old academic architecture to a full stop. The social prestige and momentum of bozart was tremendous, but it was decadent. He destroyed it. For young men he held open the doors to our free day. Few individuals have ever made so great a change in the world scene.

LOUIS SULLIVAN read a paper to the Western Society of Architects which he titled "The Young Man in Architecture." That was in 1889. He was thirty-five years old. It was a hot coal tossed into a pile of dry leaves. It took an interval to come ablaze because only a few present knew what he meant, none foresaw its early results.

But the international clique who then ruled architecture sensed a threat, even if coming as poetry. They were afraid of this young man because they found it impossible to find rebuttal for what they soon discovered him to be saying. Both those who had not read him as well as those who understood too well what Mr. Sullivan had really said, found it convenient to invent what he might or should have said. On this basis they joined one side or the other — friends frequently as ill informed as his opponents. This confusion has been going on ever since.

❖ Just What Did Sullivan Do? ❖

SULLIVAN'S WORK for the world, was to take up the song of Democracy where Whitman left off and to implement in architecture and in literature this grand thousand-year vision. His major contributions are a masterly life record called "The Autobiography of an Idea" and an "organon" in philosophy called "Democracy — A Man Search." This organon, or thought-production and idea-integrating instrumentality, is a work of three hundred pages which few people will read in our day. It is the fourth in a world series of such philosophical works, Aristotle, Bacon, Ouspensky, and Sullivan. It has just been published in a "Microcard edition" by the University of Louisville — a set of only eight 3" x 5" cards, recording the full 300 pages — a modern miracle!

But the theme, which was the key to his life and work, Sullivan set forth in many writings. The most famous is "Kindergarden Chats," a critique of contemporary architecture. This book has been read by a few architects and by many general readers. The title is unfortunately not definitive. Nearly all architects quickly admit that they are familiar with Sullivan's writings. When they speak or write about these world moving documents as applied to their field of work, there is little evidence that they have got further than the familiar label "Form and Function," now known to all.

❖ From Plato to John Dewey ❖

SULLIVAN'S "Form and Function" theorem is widely discussed and written about in all its connotations. Those who do not think of themselves as citizens of age-old and world-wide Organic Democracy cannot face a functional philosophy which proceeds to make more cogent and all pervading every new doorway opened by the continuing development of man.

It should be unnecessary to note that I am not discussing the contingent "democracy" of political action, nor the opportunist ersatz Democracy of current nationalistic ideologies. But neither do I rule out by omission new developments of genuine democratic origin and sincere practice.

Sullivan's concept is broad and simple, "our demonstration will admit of no exceptions." His enemies in 1890, and today, must misrepresent him in order to secure a case easy to argue. Further, they try to implement their streamlined and hence superficial logic with alleged examples in both buildings and in argument. These instances are invariably unrelated to

the organic thinking tool which Sullivan, first of all men, made fully available to all who hated intellectual aristocracy and really loved the Great Charter, that Western Star, which had created our United States of America.

❖ Twentieth Century History ❖

BY THE YEAR 1894, Sullivan's "Transportation Building" of the Columbian Exposition of 1893 in Chicago, had become known in Europe from the Balkans to Finland. A young man of 19, José Plečnik — still living in 1951 and now State Architect of Yugoslavia — left Liubliana in Carniola and entered the architectural office of the now famous Otto Wagner in Vienna. Out of designing some bridges for the Department of Streets, and some display backgrounds sets for agricultural machinery in the Vienna Jubilee Exposition 1898, was born the first freedom for Art and Architecture which swept Europe, as "L'art Nouveau," that is to say the "modern" of 1900. "L'art Nouveau" failed in the same way that "modern" is failing with us; indeed has collapsed in the U. N. Secretariat building, because it fails to hold and use essential basic integrity. But in the year 1900 Sullivan's thoroughly practical procedures appealed both to architects-as-artists who despised academecism, and to the imaginative industrial and civic leaders who were to authorize and pay for the resulting buildings.

So it happened that what was genuine in the new movement, by-passed "1900-moderné." Such men as Boberg in Sweden—Nyrup in Denmark—Saarinen in Finland—Behrens in Germany—Lethaby in England, carried on Sullivan's battle against world-wide and centuries-old reaction, while architecture in the United States continued to sleep. Thirty years later the students in American Architectural Schools began to revolt. When these enthusiastic young men of the 1930's had graduated into the city drafting rooms, where actual buildings must be produced, a world of new forms at once appeared. Thus the entrenched members of the old architectural profession in America, with their eyes on a gold-plated "tradition" which never actually existed at all, were forced into their twenty-year squirm over the problem of awarding themselves two gold medals for being unable to see the new day which had long since arrived.

❖ Our Hard Won Heritage ❖

AND HOW are we now making good with this new freedom which Sullivan made available? The practical force of Sullivan's blast is not yet spent by a long ways, but its foundations are being whittled away by many types of chiselers. The true and obvious applications of Sullivan's postulates are diverted, its universal and timeless character misrepresented, its

practical goodness streamlined, commercialized and used as a spark plug for pole-climbing exhibitionism.

"Modern" architecture is not really functional, it is actually "constructivist."

Whatever is to live in contemporary architecture can only grow from some form of Universal Democracy: the democracy of men, of laws, of work, of worship, of science, of joy, of truly equal opportunity, of humanities' moving needs. For the forms of Functional Architecture are not principally concerned with items and operations of mechanical structure. The objective of living architecture is not to satisfy the relations of a building with itself; that is but *one* of its practical procedures. Sullivan says, "The utterance of life is a song—the symphony of Nature." Architecture is one of the greater utterances of Man. It records the furthest advance of Nations. Most of the other arts serve architecture. That is the reason why the principal function of architecture is to implement the relations of Man and Nature. Buildings which do not account for all these multiple functions, with forms that are able to communicate them, are to that extent not living architecture.

❖ Success and Power Drive ❖

LOCAL architects of today, have become preoccupied with the mechanics of architecture which is the province of engineers. Inevitably they continue either as not too good engineers, or the more able move into one of the new specialty professions which enterprise groups of minor engineers for building production, decoration and equipment.

All this while the window dressers, product designers, advertising fraternity, realtors, builders, makers of women's clothes and so on have preempted the poetic and creative fields of the building art.

You may be inclined to question my estimate of the force in architecture of these new classifications of artists. It therefore may be salutary even if embarrassing, to recall the New York World's Fair of 1937 — "perisphere and trilon motive" — remember? This exhibition city of court and hall was laid out on an old bozart plan formula that had worn out fifty years before. It's weary miles of walkways with no transportation were ~~walked~~ in with St. Louis Fair palace confectionary of 1904. The whole enterprise was on its way to a flop when a window dresser and package designer, the distinguished Mr. Norman Bel Geddes, breezed in and put the show back on the line with brilliant salesmanship in pattern, color, good theater—and omissions. As further evidence of this revaluation of the architect's relation to society and consequent loss of prestige, the most important and oldest of "architectural" periodicals changes its name to "BUILDING" and directs half its text and advertising to real estate,

(Continued on Page 36)

ARCHITECTURE

as an expression of

TIME AND LIFE

By Thomas Schmid

Architect—Minneapolis and Zurich

There is no doubt about the fact that life, particularly American life, has never been directed before by so many practical and economic reasons as today. Economic and industrial power are actually the goals of millions of persons in the United States and abroad. The United States leads in this development and therefore has a tremendous influence on Europe. The assembly line was purely an American invention and as soon as it started functioning it revolutionized the structure of the whole continent. It helped to bring into being socialism and unionism and a great capitalistic prosperity began to flourish throughout the world, creating a friction and these things naturally also brought war and depressions.

What was architecture before this enormous revolution? Medieval cathedrals are the expression of religion and faith. Renaissance castles try to show the people how wealthy and well educated the owners are through representation. Classicism leads us back to a system of order after the chaos of the French Revolution and finally the German and Spanish Jugendstil which flourished at the end of the last century was the experiment to introduce an organic element into architecture.

Every century and every style had its own architectural details, elements and forms, thus possessing, in others words, its own "language." Today we don't have the stone masons to do Gothic architecture and if

we do it in spite of that fact we are only able to "copy" instead of "create" as the Gothic architects did.

Let us pause for a moment and point out what the word "create" means. It certainly starts in a child's drawing, where we find the first elements of organization and impression. It is generally the process of expressing and organizing ideas and impressions and as such it is and has to be in close connection with the surroundings in which it comes into being, both as to its "century" and location or—Time and Space. No significant building through all the centuries has been done by Imitation as imitation is always a lack of expression and cannot be something great.

Creation Versus Imitation

Creation and Imitation are the opposite poles of the architectural world. The Gothic cathedral was based on a module which was limited by the span which could be constructed in stone. The medieval castle had one basic purpose—protection—and the romanticism which we read into the building is a product of some romantic painters. Each of these buildings was the creation of the needs of its period and has therefore a tremendous interest for us.

What about creation today, particularly in the United States?

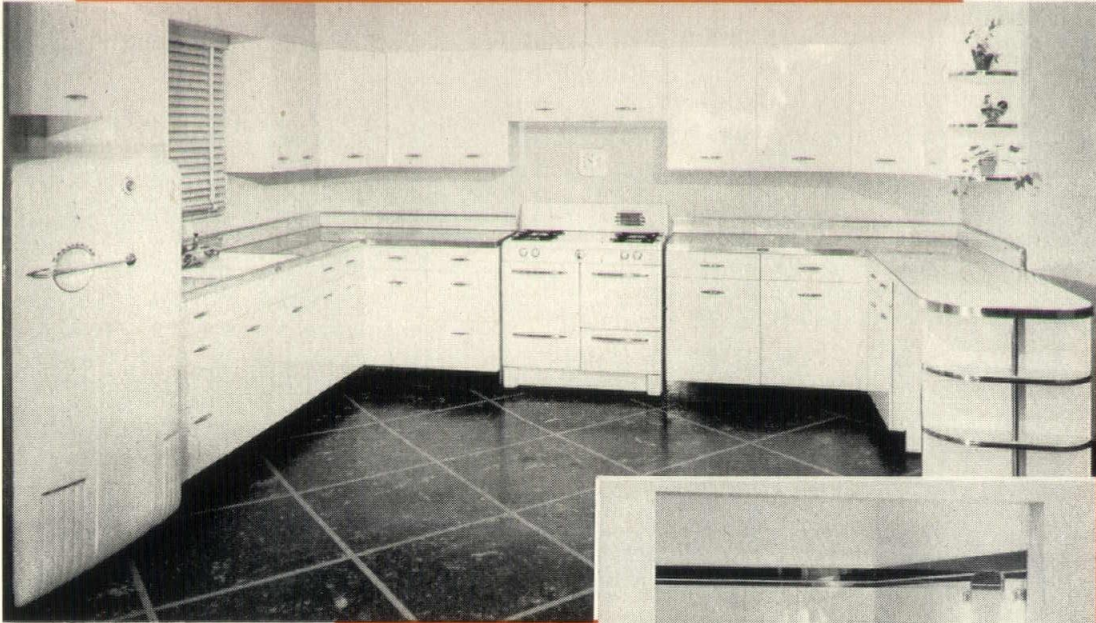
Surely we find Gothic architecture as well as Renaissance here, indeed a lot of examples of them. Very little has been created and very much has been imported and when we stand in front of a structure like the Tower of the University of Pittsburgh we really don't know whether we should like or dislike the building; it's just pure Gothic.

Are we happier standing in front of Studebaker's assembly line in South Bend? Certainly it is a more true expression of our century. It shows us the speed which is typical of our era and gives us the impression of the actual industrialization which seems to be considered our earmark. But it isn't constructive and there-

(Editor's Note: We asked Architect Thomas Schmid, who came to the Northwest as a visiting architect from Zurich, Switzerland, and has been associated with one of the leading firms in Minneapolis as well as appearing at the University of Minnesota as a guest instructor, to tell us something of what he felt about the United States and its architecture, especially that of the Northwest. It is with pleasure we print his comments.)

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fore it isn't creative. Our growing industries threaten the individual from two sides—their speed demands do not give the necessary spare time and their economic power turns away the human values like modesty and spontaneousness.

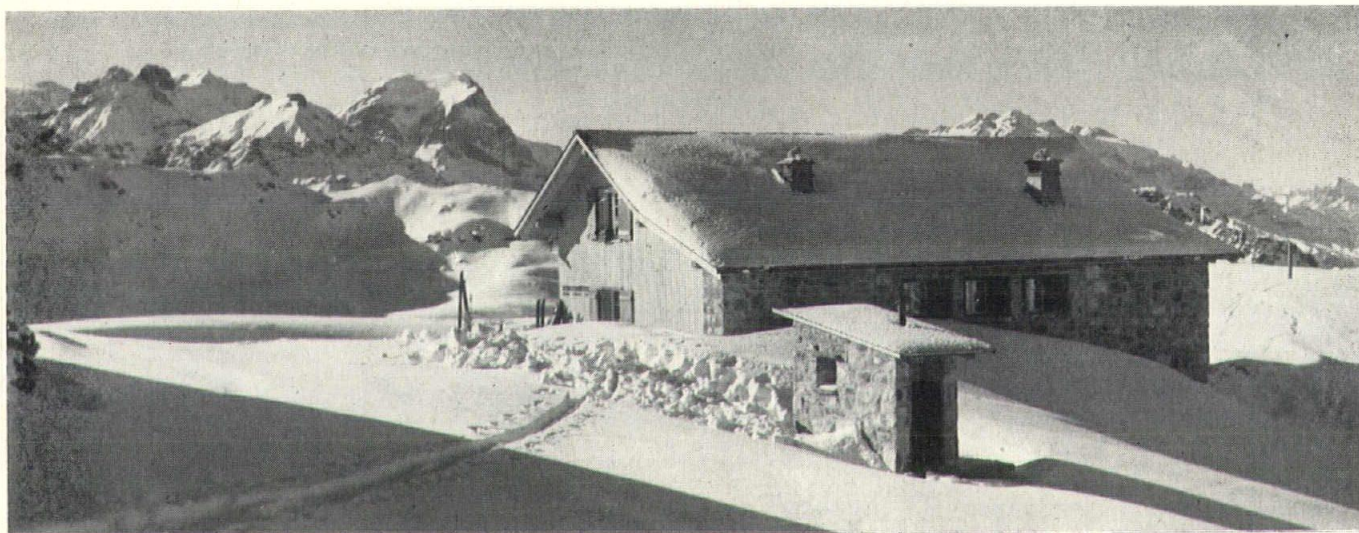
We consider, therefore, all contemporary architecture as creative which goes this positive way and we will find very much of it in the United States, particularly in residential architecture. Richardson, Sullivan and Wright started this kind of architecture in the times when industrialization and the so-called "social progress" were founded. They discovered Space and were among the first to recognize the connection between indoor and outdoor space. Wright especially tried to pull the garden into his living rooms and so to give the owner the feeling of relaxation and informal life.

During World Wars I and II we find in Germany a generation of architects at work who started from almost the same basic principles, inasmuch as theirs is a functional architecture with an appreciation of space. They made wide use of the new and modern materials and with the experience to lower cost brought about a standardization. We all know Gropius, Breuer, Men-

dlsson and Mies van der Rohe and for a certain time it seemed as though Germany would be the field of their experiences. It was also very functional to a certain extent that these architects did their work in Germany because that country was going through a deep-reaching revolution of its social structure at the time.

We all know the events well which followed and we all know the reasons—also as an expression of Time and Life—why these architects came over to the United States. Never in the history of architecture have we had the same opportunity to get a clear comparison of two phases of civilization and their architectures as we do in considering the further developments of the United States and Germany. How important it is to the future which forces influence and propel the leading architects of a country! The United States gave these German architects whatever they needed, and a large freedom in which to carry on their work and to create. In the United States they found time and opportunity to study human beings and their requirements and the result was a human architecture as an expression of our time and our life.

The Time . . . today in switzerland



The Life . . . rugged recreation

Demonstrating the work of Mr. Schmid as well as some of the ideas he brings out in his story here is this example of his work, a skilodge in the Kärpfarea, near Glarus, Switzerland. Built in 1949, the lodge is at an altitude of 7,000 feet.

"This skilodge was erected on the footings of a smaller mountain cabin which has been built on the same place in 1910," Mr. Schmid said. "It had to be remodeled in 1949. The wall on the north side has been done in solid rock as a protection against wind and snow, which reaches a considerable strength at this

altitude. The other three walls are done in the usual frame construction and the roof is covered by transite. A cablecar and a dozen donkeys served for the transportation of the materials. In winter time snow is shoveled on the roof, and melted by the sun; it runs through a removable pipe into the watertank near the kitchen."

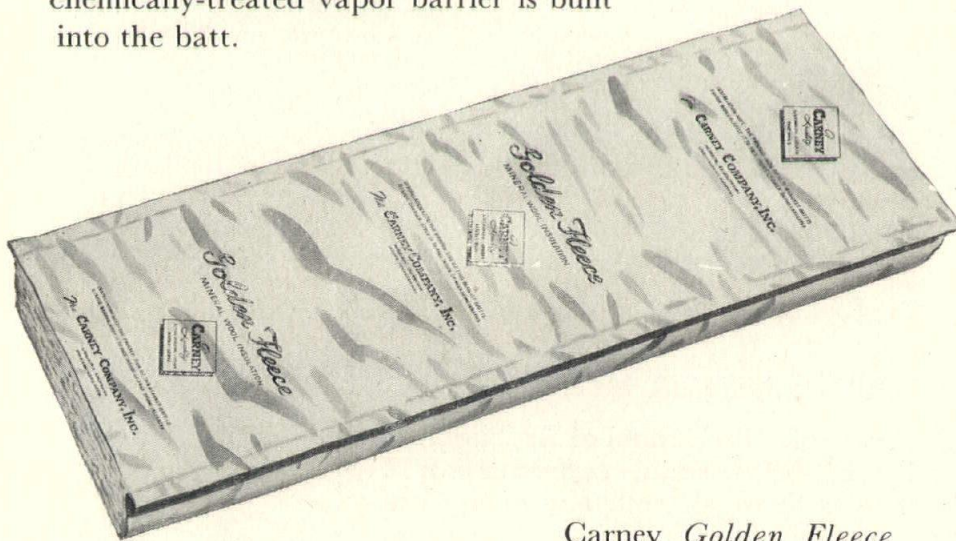
The lodge is located in one of the ski areas of Zürich and is owned by the "Swiss Alpine Club." Contracting and supervision were by Richard Pohle, architect of Ennenda, Switzerland.

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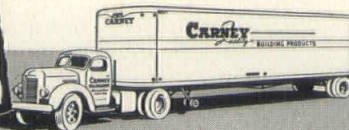
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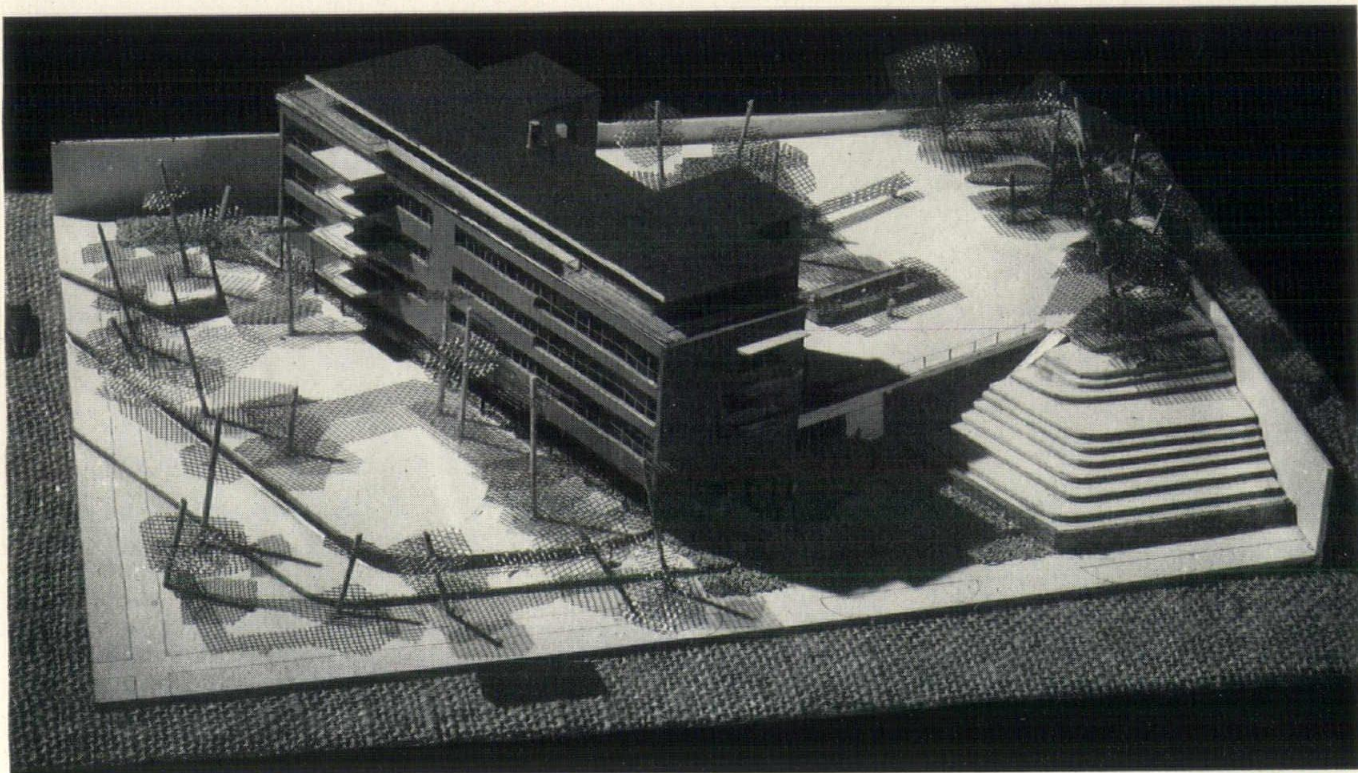


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A Luxury Apartment

BY J. ARTHUR MYERS

A senior thesis in the School of Architecture, University of Minnesota, reproduction of which here is through courtesy of the university.

In recent years there has been a trend among high income families in this area to sell the old homestead, after the children have grown, and move to apartment-hotels, of the type that are available on the fringe of the loop district. Such moves are made primarily to rid themselves of such responsibilities of a large privately owned home as upkeep of the house and grounds, taxes, etc. Of course, they do not expect to escape payment of these items but the idea of taking care of all the responsibilities by simply paying the monthly rent is especially appealing.

At the present time in Minneapolis there is not a building available of the type this program is to propose. The apartment-hotels offer a central location and rid the tenant of tiresome home-owner tasks but they simply lack any concept of space and means of comfortable living to which these people are accustomed.

Mr. Jed Ossanna, a prominent Minneapolis attorney, and a group of associates have decided to invest some idle funds in such a project and have set down the following program:

"The apartment units shall be designed primarily for middle-aged persons of higher incomes. Catering to such clientele necessitates a location in a high class district affording a fine view as well as usage of the

finest materials and equipment available. For example any structure above one floor would automatically indicate the use of an elevator or elevators as the case may be.

"There shall be seven units in the project. Three units will contain living area, dining area for larger dinner parties, kitchen, utility-storage, study, double bedroom suite with dressing space and bath, guest room and bath, while three units will contain the same spaces with an additional bedroom to accommodate any relative, companion or maid living with the couple. The pent-house will include the same spaces but smaller in floor area and will feature an outdoor area on the roof. Provision for washing and storage will be available in the utility-storage area.

"In the case of two or more apartments on the ground floor, it is required that any outdoor areas be restricted to the immediate vicinity of that apartment so as not to infringe on the privacy of the other apartments. Any balcony areas on the upper floors shall not connect between apartments but be placed as far apart as the design will allow.

"Garage service shall be provided for a maximum of two cars per apartment and a small suite of rooms for the caretaker will be included in the design."

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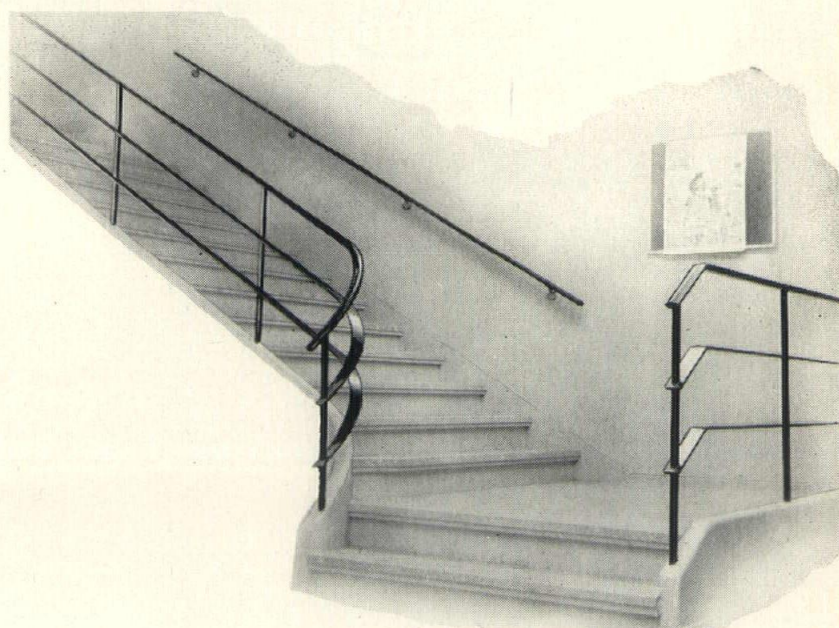
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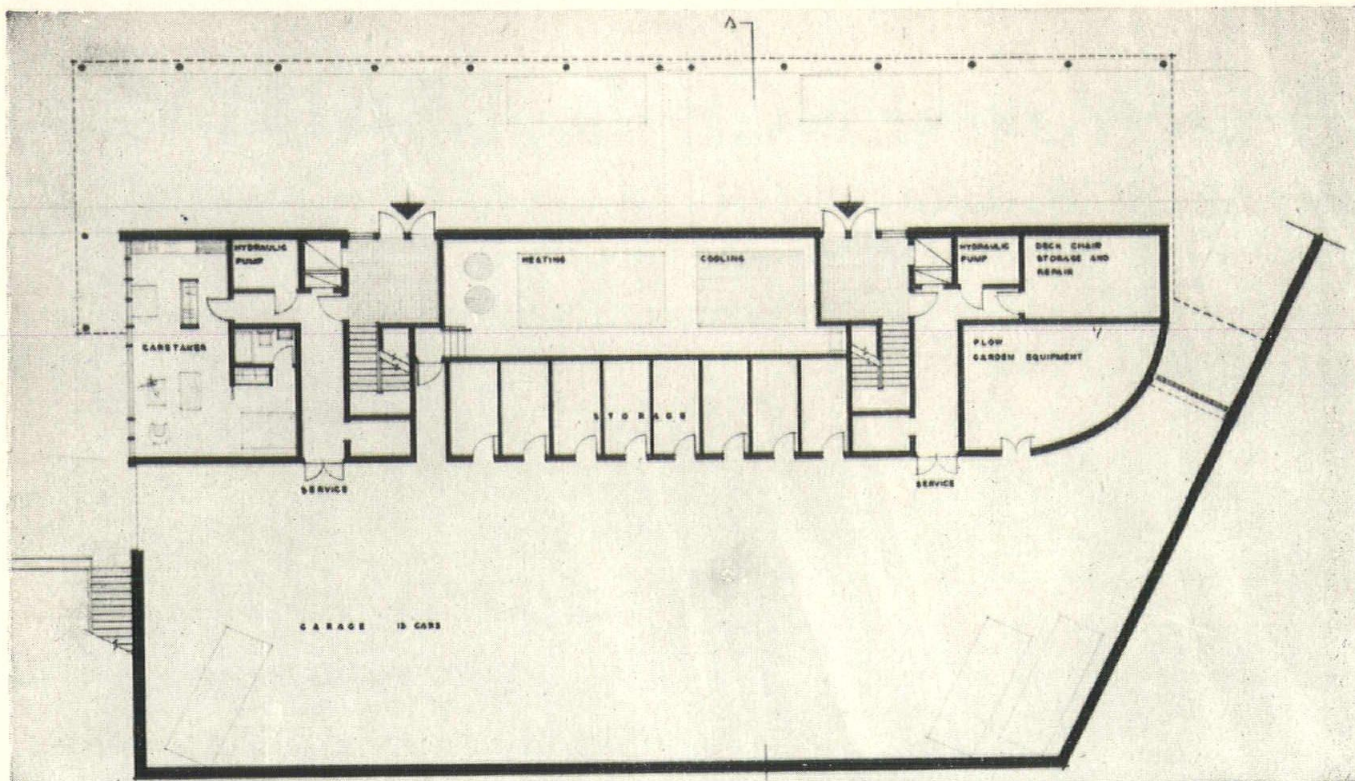


Minnesota fence

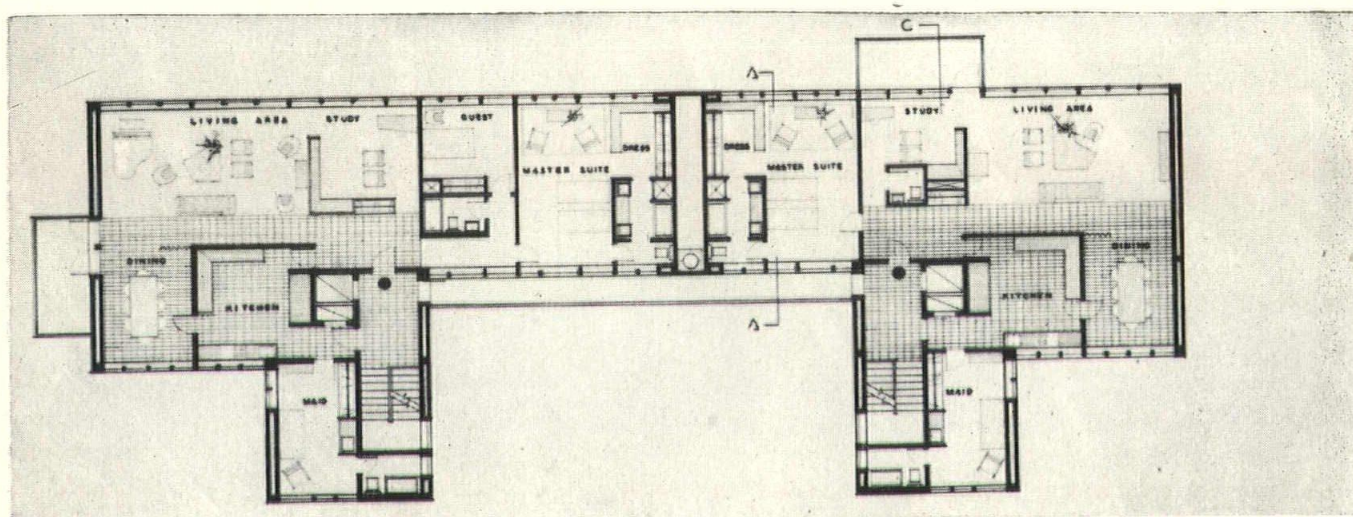
AND IRON WORKS

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ARCHITECT



Plan—First Level



Plan—Second, Third and Fourth Levels

A. Three suites:

1. Living area of 400 square feet.
 2. Dining area of 200 square feet.
 3. Study of 175 square feet.
 4. Kitchen of 120 square feet.
 5. Utility-storage area of 200 square feet.
 6. Two-bedroom suite with dressing room and bath of 500 square feet.
 7. Guest room and bath of 200 square feet.
 8. Bedroom and bath of 200 square feet.
- A total of 1,995 square feet.

B. Three suites:

Same as above with bedroom eliminated for a total of 1,795 square feet.

C. Penthouse:

1. Living area of 300 square feet.

2. Dining area of 140 square feet.

3. Study of 150 square feet.

4. Kitchen of 100 square feet.

5. Utility-storage area of 175 square feet.

6. Two-bedroom suite with dressing room and bath of 450 square feet.

7. Guest room and bath of 190 square feet.

A total of 1,500 square feet.

Outdoor space as indicated by design.

D. Garage space for 14 cars:

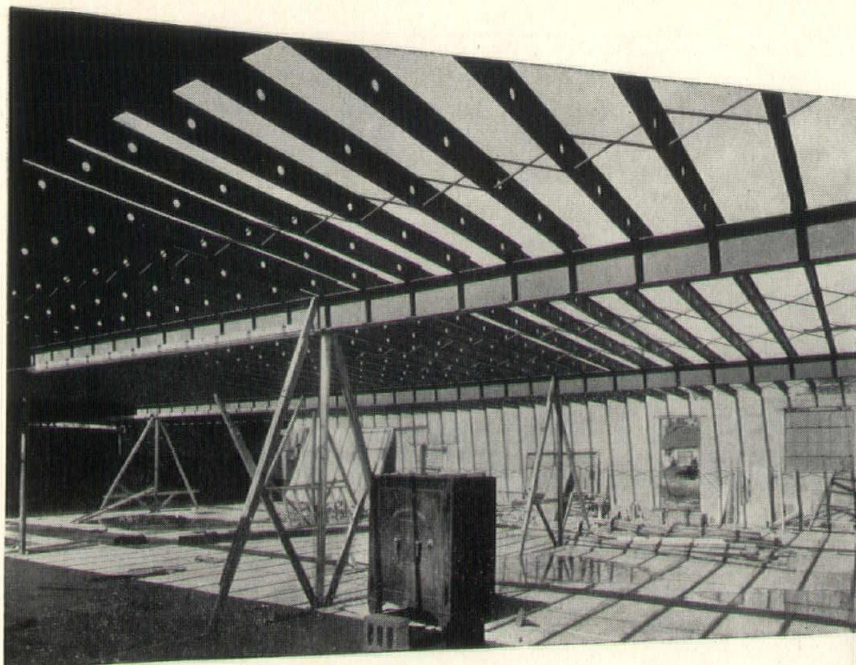
Heat.

Garden tool space.

Small suite for caretaker.

The investors, headed by Mr. Ossanna, have selected a site on lots 4, 5 and 6 on East Lake of the Isles

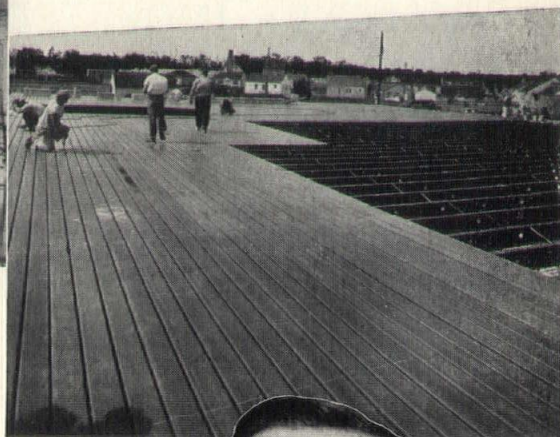
(Continued on Page 34)



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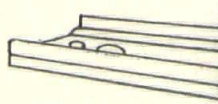
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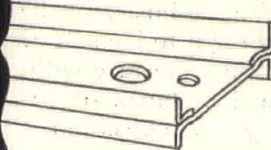
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Mr. Louis Mumford—America's most distinguished architectural critic and author of many well known books, writing in the "*New Yorker*" of September 15th and 22nd, wholeheartedly confirms our recent disapproval of the new UNITED NATIONS BUILDINGS in New York City.

WE ARE INDEBTED to the editors of the "*New Yorker*" for permission to reprint Mr. Mumford's articles. Read next issue of **NORTHWEST ARCHITECT** for final chapter.

The Sky Line

MAGIC WITH MIRRORS

by Louis Mumford

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The dominant building in the United Nations group has been visible in its glassy glory for many months. Though the Secretariat Building is not yet finished or fully equipped, it is occupied and in operation. If any of the staff should break a leg or feel the pangs of childbirth, the well-organized hospital on the third floor could probably set the leg or deliver the baby without the patient's having to leave the premises. Now that there's a cafeteria, a bank, and a post office on the premises, too, the building provides for most of the daily non-official needs of its occupants. As a work of art, though, the Secretariat Building is a teaser. From people's opinions of its architectural significance one can make a fair estimate of their aesthetic sophistication, their human insight, their social values, even their moral standards. A Southern editor, defending an archaic and unfunctional hospital his community is erecting, observed that it was not, thank heaven, as ugly as the United Nations Secretariat. Yet architects as able as Richard Neutra and William Wurster have pronounced the building a great achievement. Since there is no point in hiding one's opinion out of respect for recognizable and presumably living people, I will say that the Secretariat Building seems to me a superficial aesthetic triumph and an architectural failure. A few more triumphs of this nature, and this particular school of modern design might be on the rocks.

In this building, the movement that took shape in the mind of Le Corbusier in the early nineteen-twenties—and that sought to identify the vast and varied contents of modern architecture with its own arid mannerism—has reached a climax of formal purity and functional inadequacy. Whereas modern architecture began with the true precept that form follows function, and that

an organic form must respect every human function, this new office building is based on the theory that even if no symbolic purpose is served, function should be sacrificed to form. This is a new kind of academism, successful largely because its clichés readily lend themselves to imitation and reproduction. In the present instance, it has brought into existence not a work of three-dimensional architecture but a Christmas package wrapped in cellophane. Functionally, this building is an old-fashioned engine covered by a streamlined hood much embellished with chromium. The package has been conceived with what would appear to be not even an industrial stylists's interest in the contents.

From a distance, the Secretariat Building, two hundred and eighty-seven feet long, seventy-two feet wide, and thirty-nine stories high, is a great oblong prism of glass, marble, and aluminum. It connects on its lower levels, with the General Assembly Building, to the north of it, and with the Conference Building, to the east and almost invisible except from the river. But by reason of its bulk and height, this huge slab is visually detached from them and reduces them to insignificance. The smallest buildings in Rockefeller Center are far enough away from the enormous R.C.A. Building and are sufficiently supported by buildings of intermediate height not to seem runty, but there are no such spatial gradations between the midgets and the giant in the United Nations composition; the success of this whole group depends almost solely upon this central building. The exterior of the Secretariat is much less complicated than that of the R.C.A. Building, for there are no recessions or setbacks. At the north and south ends, this prism is a smooth, windowless sheath of mottled white marble; on the east and west faces, it is a smooth wall of green glass framed in aluminum. Even the spandrels and frames of the windows do not break the surface; in fact, the only interruptions in it are four horizontal grilles, each one a story high and running the full width of the façade. These grilles, set at intervals, conceal the several installations of elevator and ventilating machinery. The lattice effect they create is repeated above the roof, to a height of over twenty feet, to conceal the pent-

(Continued on Page 34)

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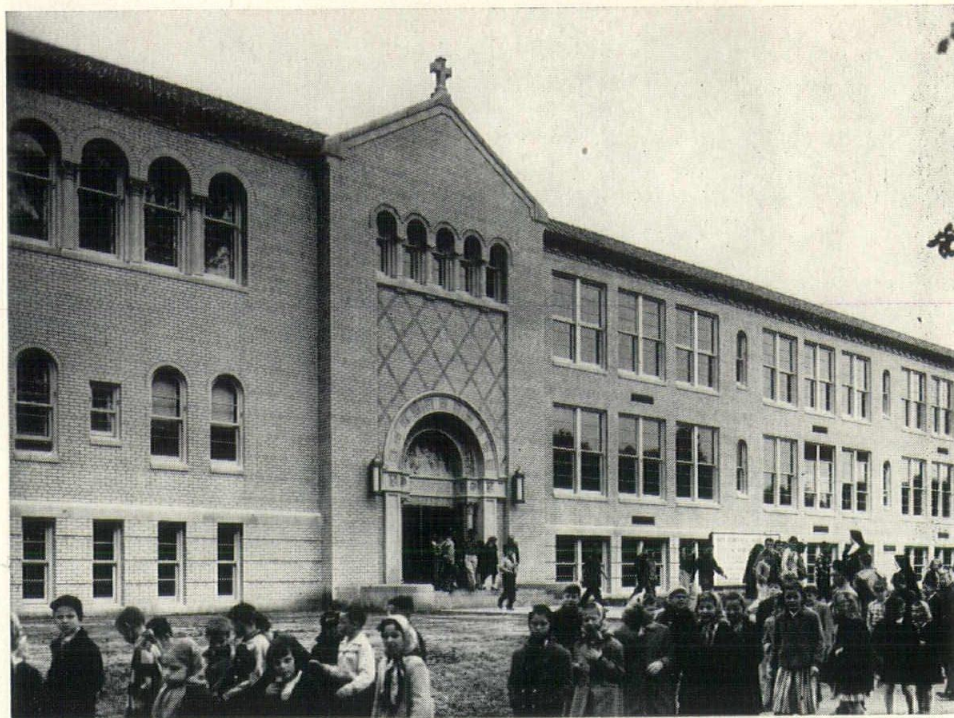
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Designed For Children

Elementary School In St. Paul Has Notable Features Of Planning



Schooling with fun and safety designed in—the St. Luke's front is shown above. Typical of the planning which engineered the building to children's needs is the kindergarten shown in our illustration at the left.

St. Luke's elementary school, which opened in St. Paul in September, is a notable addition to Summit Avenue. The front elevation of the million dollar building extends 240 feet along the historic street just east of Lexington. The compact structure is L-shaped, with a west wing 190 feet long. The main portion of the school is 110 feet wide. Because of the limited amount of available land, it was essential to use every inch of space to advantage in order to provide sufficient facilities for an initial school population of 1,000 children.

It is a two-story building with a basement and a sub-basement. There are 22 classrooms, a kindergarten, library, gymnasium with shower facilities, auditorium and a cafeteria that will seat 600. Administrative offices are on the main floor convenient to the entrance.

The architecture is modified Romanesque. Architects and engineers were Slifer & Cone and Toltz, King & Day, Inc.; general contractor, Hagstrom Construction Co., all of St. Paul.

This is partially a steel frame construction fire-proofed with an inch of vermiculite plaster on metal

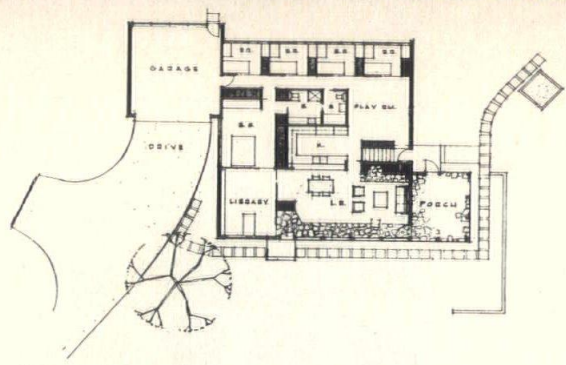
lath to secure a four-hour fire rating. Exterior walls are buff face brick with a back-up wall of eight inch tile. Trim is Indiana limestone with elaborate hand carving around the main entrance. The roof is finished with Spanish tile. Floors are reinforced concrete with asphalt tile covering, except stairways, washrooms and gymnasium dressing rooms, which are terrazzo.

A half-inch thickness of fireproof vermiculite acoustical plastic was used on ceilings for sound control. Even the boiler room was treated, since it is located under the stage and it was desirable to reduce noise transmission into the auditorium. On the first floor the material was applied directly to the masonry ceilings.

Inside walls throughout are finished with sand plaster, except for a five-foot-high wainscoat of structural face tile in corridors, stairways, toilets and gymnasium.

Windows are all double glazed with horizontal aluminum muntins.

Classrooms are 23 by 32 feet but the kindergarten and library have areas equal to two classrooms. Each classroom has its own coatroom. An interesting feature

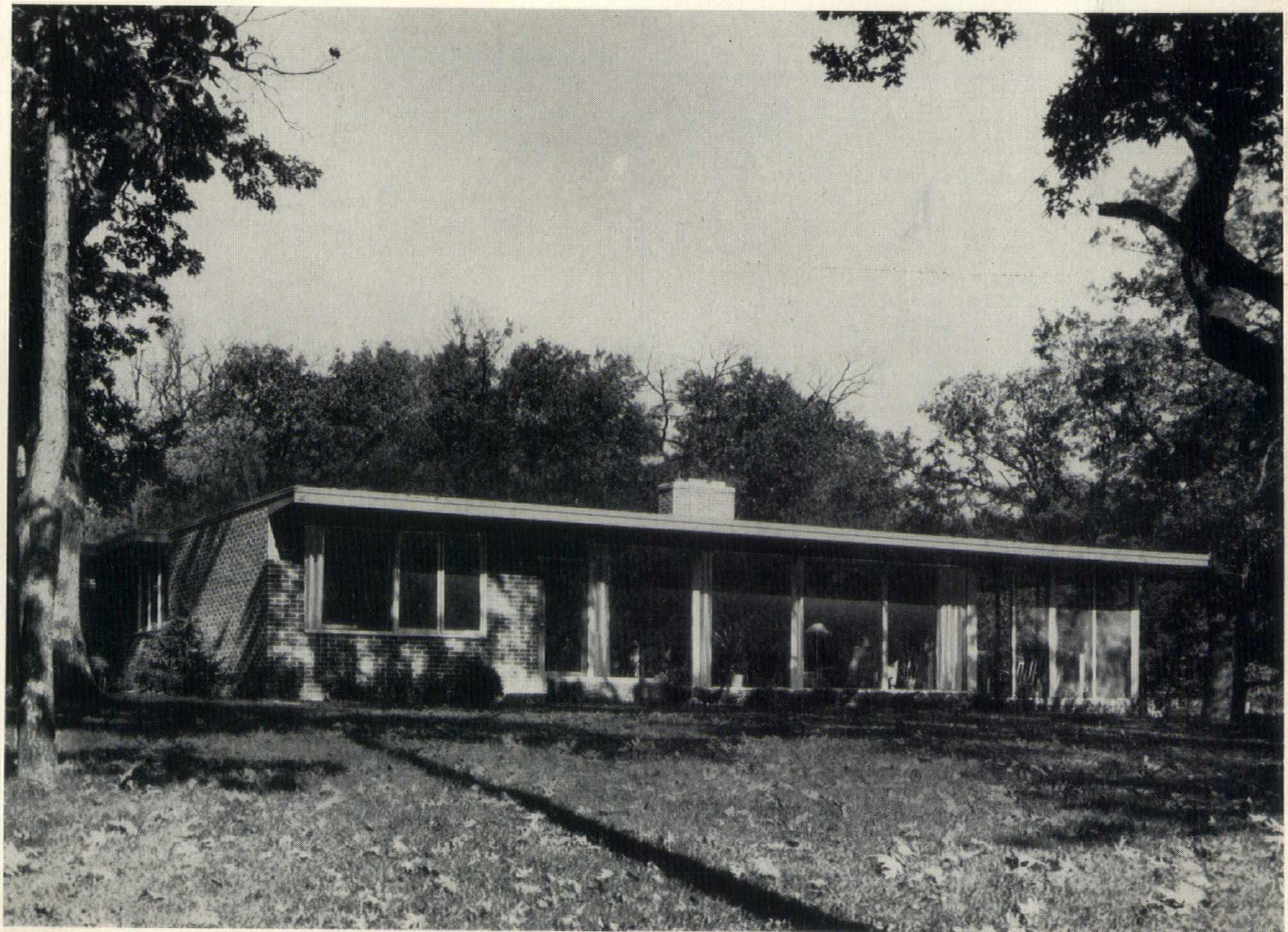


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of these is that they are separated from the main classroom by screen partition, 7 feet high and 13 feet long, of plaster on metal lath. The advantages are lower cost, a larger appearing classroom and better air movement in the coatroom. Additional wall space for a chalkboard on the classroom side is also provided. The partitions are sturdy enough so that coats can be hung on the partition, as well as on the opposite wall. A closet for the teacher's use has been included in each room.

Desk and chairs for the lower grades are scaled to a child's size. The unusually complete kindergarten on the main floor has a fireplace and a built-in play house scaled to five- and six-year-old height. A small workshop is separated from the main room by a glass enclosure so the children can hammer and saw without disturbing the main group and, in addition, the teacher can see what is going on. The kindergarten occupies an L-shaped area at the southeast corner of the building. It is actually two rooms with a large opening between. One part is used as a game room, the other for group activity. Over the coatroom is a small balcony for children who want to watch the others at play. The kindergarten has its own entrance leading to a separate playground at the east end of the building.

The library has a large reading room. Walls are lined with bookcases and there is an alcove at one end for group study. Adjacent are a workroom and a storeroom for records, audio-visual equipment, etc., with cases and drawers set up for records, films, and slides.

Auditorium Seats 800

The auditorium has a seating capacity of 800 and a balcony and well-equipped stage. The ceiling, 27 feet high, is barreled design. This would have presented something of a problem in acoustical treatment with pre-formed material but with vermiculite acoustical plastic the curved contours could be followed easily and with precision. All plastering was done by Wm. Poppenberger & Son of St. Paul.

St. Luke's is the first elementary school in the Twin Cities (and probably in the entire Northwest) to have an elevator. It is used principally for freight and opens on five levels, including the gymnasium and the auditorium stage. The installation was made by R. & O. Elevator Co., of Minneapolis.

The heating system is steam with continuous fin radiation in cabinets under windows. Ventilation is handled through univents in each classroom. In winter, fresh air is brought in through a grill under the windows and heated by the steam coils. In summer, a blower brings in outside air.

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(For Your Information)

JOHNSTON SHARES IN PERLITE TRADE ASSOCIATION AWARD

For "excellent services to the building industry and to the public" the Perlite Institute, of which the Johnston Manufacturing Company of Minneapolis is a part, received the grand award among 1,000 competing members of the American Trade Association Executives.

The award was made September 17 in Chicago. It was based on the fact that in less than two years recognition of Perlite by contractors and government officials as a new and valuable building material was accomplished. Uniformity of production and testing methods and a four-fold increase in business were other factors which led to the award.

Consumers also have benefited, officials pointed out in connection with the award. Perlite, used in place of sand in plaster, saves about four tons in the weight of the plaster in a five-room house. When used in concrete, it makes a concrete which will float in water, can be sawed and nailed.

Perlite by Johnston has recently been used in the General Mills Research Laboratories addition in Minneapolis, D. W. Onan and Sons' University Avenue Plant in Minneapolis, Minneapolis General Hospital addition and the Frederick Martin Hotel, Moorhead, Minn., as well as many private and other commercial structures.

LEWIS BECOMES INSULATION ENGINEERS SALES REPRESENTATIVE

Richard N. Lewis, formerly a lumber yard manager in California, has been named sales engineer in this area by Insulation Engineers, Inc., Minneapolis.

"Mr. Lewis will estimate and sell contract jobs involving all kinds of comfort and low temperature insulation," the company announcement said. "He will cover the entire line, including Corkboard, Palco Wool Insulation, Reynolds Metallation, National Mineral Wool, Butcher Boy Cold Storage Doors and other materials."

WONDERLY CHANGES TO WESLEY TEMPLE BUILDING

The Wonderly Co., Inc., Minneapolis, has announced a new address at 601 Wesley Temple Building. The company makes sign letters in aluminum, plastic and wood and has a new catalog of plastic stock letters now in preparation.

FIRE SEASON SPOTLIGHTS FIRE RESEARCH

A research study to show in which ways structural clay products can be used to further decrease the incidence of fires is being conducted by the Structural Clay Products Institute.

The industry is conducting test observations on a number of all-ceramic houses to find how fire resistant brick and tiles can best be used in construction with an aim at reducing fire risks, according to an announcement from C. Forrest Tefft, institute president.

Use of ceramic materials for interior walls and floors is being fostered and research aimed at developing new clay products to better fit the requirements for interiors is going forward.

U. S. PLYWOOD OPENS NEW ST. PAUL WAREHOUSE

A new warehouse containing 20,000 square feet of floor space has been opened at 764 Vandalia St., St. Paul, Minn., by the United States Plywood Corporation.

Under management of B. W. Thayer, the new location has larger sales, shown shipping and administrative facilities, the visitors' lobby of which is decorated with company products, including Plankweld and Weldtex. The warehouse replaces a smaller unit which has served the area for the past two years.

WESTERN MINERAL ERECTS ORE SILOS

Two huge silos like those on farms, each capable of holding 11 carloads of vermiculite ore, have been erected at the Minneapolis plant of the Western Mineral Products Co.

Additional reinforcing has been used on the silos



No farmers
here—these are
the Western
Mineral ore si-
los.

as the maximum load they will contain will weigh 550 tons. The silos are of vertical stave construction, the interlocking staves being tightly bound by turnbuckled steel bands. No mortar was used in laying up the staves. When finished the silos are given a waterproofing coat inside and out.

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The silos were built shortly after the company processed its 60,000,000th bag of Zonolite Vermiculite and they will enable the plant to run on its storage for 30 days. Former facilities provided only 9 days' production. Erraticities in shipping and the long distance the material must be hauled from the Zonolite mines in Libby, Mont., brought about construction of the added storage space.

STEEL STRUCTURES, INC., NAMES RAMSEY GENERAL MANAGER

Appointment of William H. Ramsey as general manager of Steel Structures, Inc., Minneapolis, has been announced by C. K. D. Minar, president.

Mr. Ramsey formerly was controller of the company and treasurer of the Minar Company. A CPA,



Mr. Ramsey

he is a member of the American Institute of Accountants and will direct operations for the company which distributes Quonset buildings through some 60 dealers in Minnesota and part of Wisconsin and handles associated lines.

Following Mr. Ramsey's appointment, other changes were made by him. Irving J. Dahlstrom became sales manager of the Stran-Steel Division. A registered professional engineer, Mr. Dahlstrom joined the company as chief engineer in 1947.

Philip M. Stutrud has replaced Mr. Dahlstrom as chief engineer. He joined the company in March of this year. Also promoted was Neil Farnham, who now is sales manager for the Quonset Division.

QUONSETS BY THE ACRE

Based on a successful industrial warehouse of Quonset design under whose roof there are five acres of space, the Stran-Steel Division of Great Lakes Steel

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Corporation has announced a new "long span" type of Quonset unit.

The new addition to the Quonset line is framed with Stran-Steel members made from cold-formed strip steel. It is available in a wide range of widths and lengths. Interior columns are 40 feet apart along the building's depth and 35 feet, 6 inches apart across its width. Clearance under trusses and struts may be either 15 or 18 feet; roof arch provides dome height between girders and struts of either 25 or 28 feet.

The building has straight sidewalls and can be ordered with standard doors or equipped with special doors as desired.

The five-acre building had a series of 13 quonset units along its smaller dimension, with an additional three unit row at one end.

SHOPPING CENTERS GIVEN THOROUGH STUDY IN NEW REINHOLD BOOK

As stores move out from the congested loop areas and group themselves into suburban shopping centers the architect is called on more and more frequently to help design shopping areas meeting all the varied demands of stores and their customers. Latest Reinhold Publishing Corporation book, "Shopping Centers, Design and Operation," gives the architect a wealth of valued material to guide him in such planning.

Written by Geoffrey Baker and Bruno Funaro, the book is notable for its many case histories which prove by example how certain problems are met. Backgrounding early chapters with a concise discussion of why shopping centers have come into being, the publication goes on to consider site, market analysis, parking, freight handling, service areas, the stores buildings and customer factors.

While adequately considering the broad aspects of the shopping center in various parts of the country, the authors also go into detail and give the reader a clear picture of today's automatic vending machines, merchandising methods, parking problems, signs and many another item which goes into designing the center.

The publication is priced at \$12.00 and can be ordered from Reinhold at 330 W. 42nd St., New York 18, N. Y., if not obtainable through local book-sellers.

IMPORTANCE OF FLOOR BRICK SETTING STRESSED

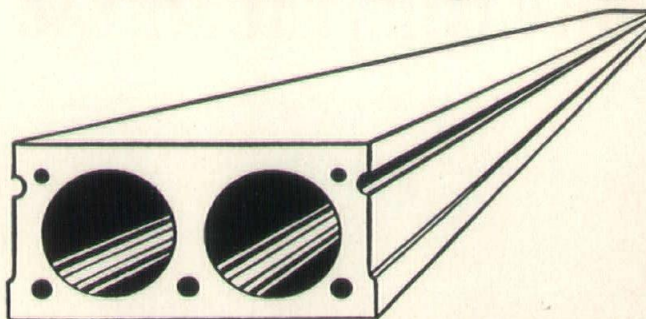
The importance of narrow, tight joints between floor bricks and tiles is emphasized in a new bulletin put out by The Masters Builders Company, which illustrates proper methods for creating long-lived floors where corrosive materials are handled.

Called the "Embeco Method for Setting Floor Brick," the bulletin points out that joints down to 1/8-inch can be produced by using an easily flowing, non-shrink mortar. Production of such a mortar through use of Embeco is outlined.

The tight joints, properly filled with the mortar,

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are most important where corrosive materials are handled but such joints also assure longer wear, minimize maintenance and give a more even work surface.

The bulletin can be obtained from the company at 7016 Euclid Ave., Cleveland 3, Ohio.

LIGHT FOR ALL INDUSTRIAL PLANS PROVIDED BY G. E. BOOK

Much light on the subject of industrial lighting is contained in an excellently conceived publication just released by General Electric's engineering division.

Behind the title page of "Planned Lighting for Industry," GE has gathered the results of a big fund of experience and research to present the solutions to almost any lighting problem which might arise in the industrial field. Equipment used in solving the problems is discussed in detail.

Black light and brightness, concentrated and diffused lights, machine finishes and painted walls, polarized light and protective lighting, service areas and laboratories—all these and many more uses of all-important light are covered in the book.

It is well illustrated and charts and discussions make it a valued "text" for the architect's library. The entire field of light has been so thoroughly covered that even the details of proper maintenance of the system and its individual units received a separate chapter.

HARDWOOD FLOORING CONTINUES ON UPGRADE

Striving to meet demands, the production of northern hardwood floorings has climbed consistently and in the first nine months of this year was 12 per cent above the levels of 1950.

Indications, according to L. M. Clady, secretary-manager of the Maple Flooring Manufacturers Association, are that current levels will be maintained throughout the fourth quarter.

"Stocks for the entire industry now total only 6,390,000 feet," he said, "and unfilled orders amount to 14,524,000 feet."

WEST COASTERS INTRODUCE PLYWOOD WITH HARDBOARD FACING

Aimed at filling a gap in the lines of materials with which architects can design special structural units is a new plywood cored, hardboard surfaced panel, introduced to the trade as Plyron.

Announced by the Douglas Fir Plywood Association of Tacoma, Plyron is reported to have the puncture-proof, strong, rigid and dimensionally stable qualities of its plywood core while offering its users the uniform density, smoothness, wear resistance and easily painted surface of fiber-packed hardboard.

Initial users reported that it serves unusually well for cabinet doors, as concrete form material, for floors and table tops. Bonding is of the same kind

NORTHWEST

and quality as has been used in the better plywoods for the past years.

The product comes in 4x8 panels.

ARCHITECTS PLAN STEELBILT CATALOG

Jammed with architects' sketches showing installations of sliding glass doorwalls and window units is a new Steelbilt, Inc., 8-page catalog.

Showing details in residential, commercial and industrial uses of the sliding glass units, the catalog uses isometric cutaways and similar sketches to demonstrate operation of units. Brief descriptions of important engineering features are keyed to the drawings. Also included are sample specifications, photographs of interesting installations and a current list of dealers.

The folder can be had by writing Steelbilt at 4801 E. Washington Blvd., Los Angeles 22, Cal.

FOMASOL FOLDER GIVES AIR ENTRAINMENT DATA

Use of air entrained concrete for special construction jobs is growing and one of the country's manufacturers who makes materials for this type of concrete mixing, Onyx Oil & Chemical Co., New Jersey, has issued a fact packed folder covering its product "Fomasol" and the general topic of air entrainment.

Charts and tables show the results of tests with air entrained concrete and the folder gives data on where, when and why to use the method.

SUMMER FURNITURE DESIGNED INDOOR USES, TOO

The recently held summer furniture market in Chicago showed that designers now are patterning their creations for use indoors as well as out.

Top designers are being retained to plan the furniture, which reportedly will be in good stock despite curtailments in metals. Plastics, rattans and other materials are very noticeable in the models.

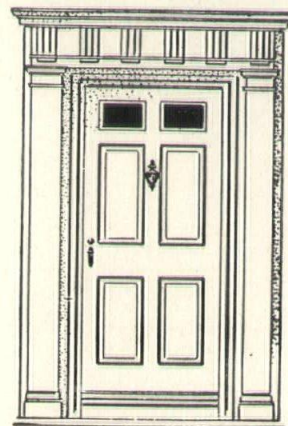
We know it's early—but plan now to attend the 1952 Minnesota Society of Architects convention!

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Improved Building Creates Condensation Problems

(Although this material was based on work in Texas, Northwest architects face the same problems of condensation in even greater degree, and so we present Mr. Callender's report to our readers.)

The condensation problems besetting home owners today are relatively new to building construction, having been brought about by the improved building techniques of the last 20 years, according to John

Hancock Callender, architectural consultant for the Housing Research Foundation of Southwest Research Institute.

These improved techniques could be roughly described as "tight construction." They include improved sheathing papers and more care in installing them, the introduction of wallboard type sheathing, the use of asphalt shingles on solid decking instead of wood shingles on spaced shingle strips, improvements in and increased use of weather stripping and caulking materials and closing of attic louvers in winter.

Two other factors contributing to condensation have been the advent of full insulation and the introduction of "winter air conditioning," including humidification. The marked reduction in the overall size of the house has also resulted in a greater concentration of moisture than in the larger houses of the past, the Housing Research Foundation consultant pointed out.

"The problem of condensation in the home was not recognized as such for some time. Many a sound roof was repaired or replaced because of supposed leaks, which were actually condensation. Many a paint failure was blamed upon poor materials or workmanship when condensation was the real culprit. Many basement walls have been water-proofed to stop non-existent leaks. Extensive research has by now pretty well explained all of the phenomena of condensation and has prescribed cures for them," Mr. Callender said.

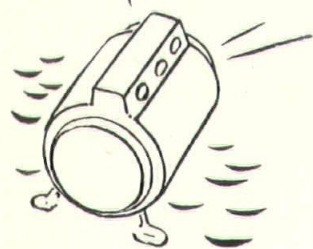
We are so accustomed to unwanted moisture coming into buildings from the outside that the basic fact that condensation originates *within* the house is hard to accept.

The principal sources of moisture within the house are cooking, laundering and drying, floor scrubbing, bathing and showering, unvented gas flames and the breathing of plants, animals and people. New houses undergoing their first heating season may have an extra load of moisture derived from plaster, masonry and other "wet" building materials not entirely dried out.

An exhaust fan in the kitchen will usually eliminate the major source of moisture. If laundry is dried indoors, an exhaust fan should be installed there too. Automatic

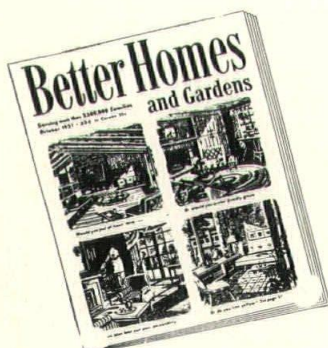


**THE SPOTLIGHT IS ON
CLAY BRICK AND TILE**



3 and a half million families, 350,000 in this area—many of them potential clients—have their attention focused on the 1951 Brick and Tile Five Star Home 2110, as featured in the October Better Homes and Gardens.

These readers are discovering what you already know . . . the versatility and beauty of Clay Brick and Tile . . . and they'll want it in their new or remodeled home. If you need full information on how to adapt clay products to your plans, write us.



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dryers should discharge to the outdoors. Should they discharge directly into the kitchen, as often happens, then the kitchen exhaust fan should be run whenever the dryer is used. Bathrooms should be equipped with a small vent to the outside, since few people are prone to open a window while showering or bathing, the Housing Research Foundation architect recommends.

One of the main sources of moisture in many houses is the humidifier, now a standard part of many forced warm air heating systems. Condensation problems in existing houses can often be solved by simply turning the humidifier off or turning it down.

Another line of attack on condensation is based upon the fact that certain materials such as glass, metal, asphalt and some paints are impervious to vapor. The simplest and cheapest vapor barrier is building paper coated with asphalt. Vapor barriers should be installed as near the interior finished surface as possible; in practice it is usually installed just below the lath or wall board.

Condensation on windows is one of the commonest complaints. Usually this can be corrected by reducing the amount of moisture put into the air. A better way to combat this nuisance is to install storm sash, although under extreme conditions condensation may still occur on the inner face of the outer glass. The only sure cure is sealed double glass.

Summertime condensation may also be a serious problem, especially in areas of high humidity. Cold water pipes and basement walls and floors are common sources of trouble in hot weather. Ventilation is no help in this case as it only brings in more moisture laden air. The only solution is to insulate the cold surfaces.

In basementless houses, condensation sometimes occurs on concrete slab floors covered with asphalt tile. In a properly constructed slab floor with full edge insulation this is extremely rare and if the finished floor is wood block or rubber tile, condensation never will occur.

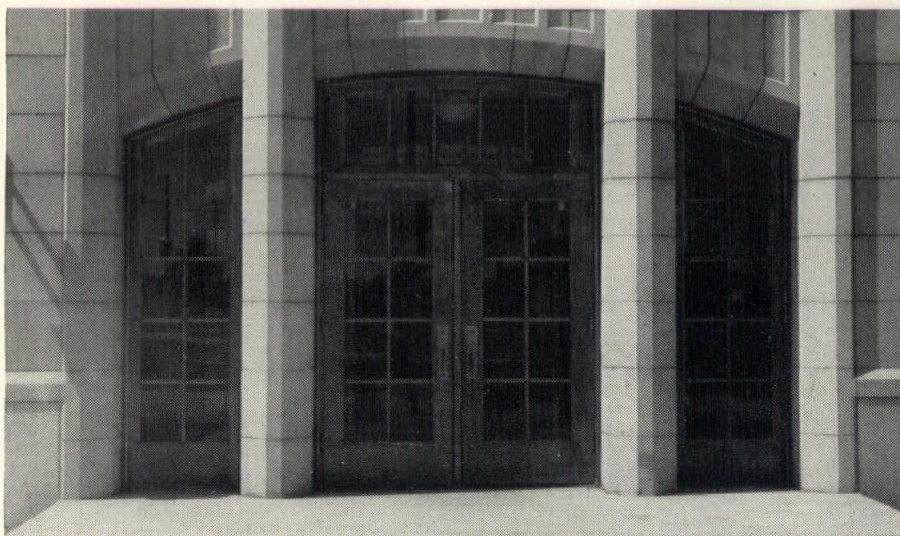
TUSLER ATTENDS REGULATION MEETING IN PORTLAND

Attending a recent meeting of the board of directors of the American Institute of Architects in Portland, Ore., W. H. Tusler took part in discussions of the effects of new government regulations on the building industry.

Mr. Tusler, of the Minneapolis firm of Magney, Tusler and Setter, architects and engineers, is regional

director of the A.I.A. for Minnesota, Wisconsin, Illinois, North Dakota and South Dakota.

The effects of government regulations, especially as they pose difficult new problems for architects, was given a thorough going over during the meeting, which seeks to find the most reasonable methods in complying with the rules. Also up for discussions during the three-day sessions were the roles to be played by architects in the continuing defense efforts.



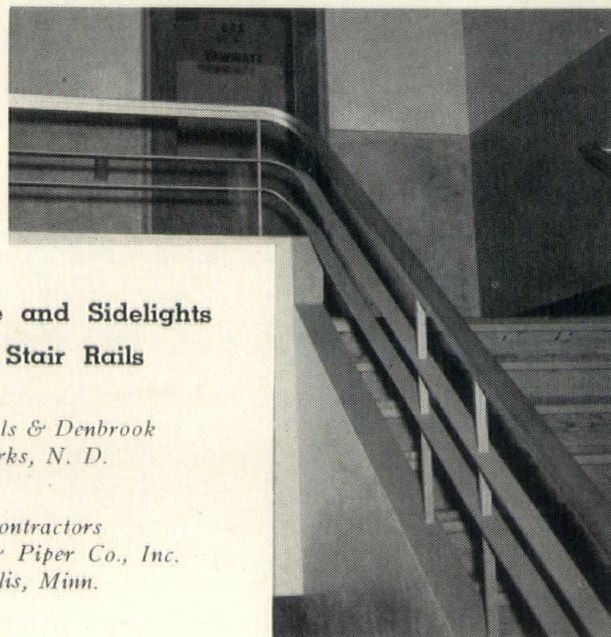
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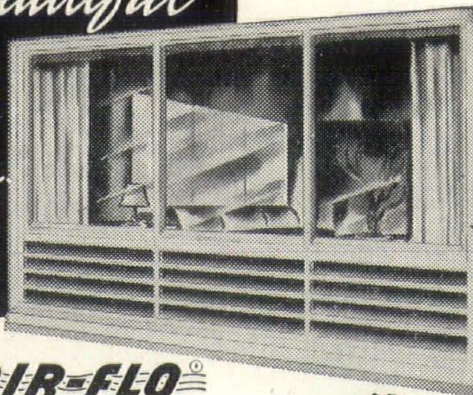
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SNOW MELTING SPREAD RAISES SOME QUESTIONS

As more and more city businesses install snow melting equipment under their walks and driveways, problems connected with this new winter operation crop up. One of the country's leading makers of snow melting equipment has brought out a technical letter on the subject from which we culled these pertinent questions and answers.

Q—At what temperature should circulating water used in a snow melting system be maintained?

A—When the pipe is located in a six-inch concrete slab, a water temperature of approximately 140° F. is usually satisfactory. Where the pipe is not embedded in the concrete slab, but is placed in the fill underneath, a higher temperature is needed—approximately 160° to 170° F.

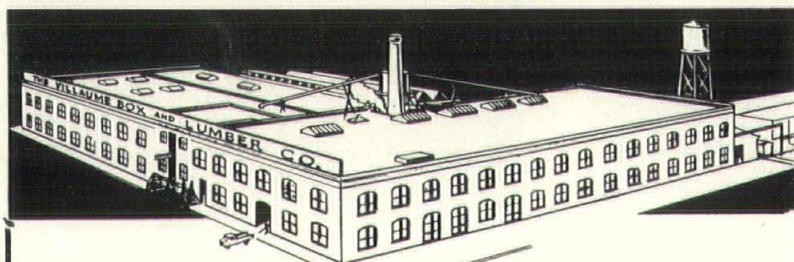
Q—May the pipe be embedded in a bituminous mix, instead of concrete?

A—Yes. The assumption that hot pipes might soften the mix is not warranted, since the slab will undoubtedly undergo even higher temperatures when exposed to the summer sun. It should be noted, however, that a bituminous material does not have as high a heat transmission factor as concrete, so that complete snow clearance calls for spacing of pipes no more than 12 inches apart.

Q—When the pipe is embedded, what is the necessary slab thickness?

A—With a bituminous slab, it is recommended that at least two inches of surfacing be over the pipe. Where heavy loads are anticipated, three inches or more is recommended. Concrete slabs should have at least two and a half inches over the top of the pipe. This will minimize the formation of hairline cracks. It will also result in a more even heat transfer to the surface. It is suggested that a minimum of one inch of material be allowed below the pipes, whether the material is concrete or a bituminous mix.

Q—Is an antifreeze solution necessary?



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A—Some means should be employed to keep the heating medium from freezing when the system is not in operation. A 40 per cent solution of a permanent-type (ethylene glycol base) antifreeze and water is suggested to prevent freezing. There is an increasing use of light oils to replace the water-ethylene glycol solutions but not too much is known about their performance over a long period of time.

Q—How much fill is necessary below the slab and what type is recommended?

A—This varies, but under normal conditions 4-6 inches of fill should be sufficient. Where ground conditions do not permit good drainage, or where there is a high water table, a deeper fill should be used. Fill should be of crushed stone, washed gravel or similar materials. *Cinders and other sulphur-bearing or acid-producing fills should be avoided.*

Q—For what melting rate are most snow melting systems designed?

A—Under almost all conditions, a melting capacity of one inch of snow per hour is adequate.

COLOR EXPERT JOHNS HOPKINS DIES ON FISHING TRIP

Well known as a color expert, Johns Hopkins, Minneapolis, died this fall while on a fishing trip near Port Arthur, Canada.

Noted for his bold and original theories of color use, Mr. Hopkins had done work for the University of Minnesota, where he was color consultant, the Chicago Board of Trade, Statler Hotel in Washington and similar structures.

Born in Whitehall, Wis., he was a descendant of the earlier Johns Hopkins who gave his name and fortune to the university of the same name in Baltimore. Mr. Hopkins frequently was amused by being twisted up with "another institution."

He believed color was a twin sister of architecture. He was modern in his thinking and was a partner in the Chicago firm of Hol-

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bird and Root. During World War II he worked with camouflage for the army and served overseas with the Red Cross.

EXAMPLE OF SOCIALISTIC HOME CONSTRUCTION PLANNING


A team of U. S. builders, touring England recently, found home building conditions under the socialistic British regime left much to be de-

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sired when compared with homes being rushed to completion in this country under our free enterprise system, even with the government curtailments we have.

Typically sited was the case of Croydon, a city of 300,000 persons. There were 9,000 applications from persons needing homes but only 750 units were issued permits for construction during 1951. Under British law private builders can erect a maximum of one private home for every four of government housing but even this small proportion had not been filled.

ILLINOIS PUBLISHES HOME HEATING PAMPHLET

Slab floor heating and the attendant problems of perimeter heating are new items covered in the latest University of Illinois Small Homes Council pamphlet on "Heating the Home."

The bulletin points out that in home heating as in larger installations "the efficiency of a heating system depends on correct installation and operation of properly chosen equipment . . . the real cost is not just that of the original equipment but is equal to the initial cost plus maintenance and fuel costs . . . a 'cheap' heating system will cost more in the end than one properly designed and correctly installed."

Among the newer systems discussed are forced warm air and forced hot water systems, warm air perimeter heating and use of base-board units and panel heating.

HOTEL ROOMS DESIGNED "LIKE HOME"

The best is none too good when it comes to the "homelike atmosphere" of most hotels and two designers have done something about it.

George Farkas and Walter Baermann transformed a suite of the Hotel Warwick, New York, into what truly could be a pattern for better hotel accommodations. Working strictly within confines of the existing architecture without remodeling, they finished and fur-

nished the suite into a delightfully homelike layout.

Use of color provided harmony and contrast. Basic was the soft pearl gray used but each room has a different contrasting color—charcoal gray in the living room, terracotta in the bedroom, citron yellow in the foyer. Lighting and furnishings carried out the same subtle theme.

CHAMBER OF COMMERCE GIVES AID IN BUILDING CODE WORK

Another ally in the battle to have up-to-date and competent building codes adopted throughout the country has come out with more definite action by the Chamber of Commerce of the United States, based on a report of a chamber committee of building experts.

There is even more need for competent codes today, because of the rearmament needs of our defense program and obsolete codes with hampering requirements actually waste vital materials. Although

codes are not the chief cost factor in construction, it was pointed out that modernization of codes could cut down the cost of buildings.

Recommended was the adoption of model state codes, patterned on the several models advanced by building organizations, which could then form the basis for revision of local codes.

The chamber's report has been printed and can be had for 50 cents from its office, Washington 6, D. C.

HOME BUILDERS SAY "GUNS AND HOMES TOO"

The government aim of 850,000 home units, a reduction of 39 per cent from the number completed in 1950, would mean only a difference of 0.3 per cent of the nation's total production of steel, 1 per cent of copper and 0.2 per cent of aluminum, the National Association of Home Builders pointed out in a survey of the "Housing and the Emergency."

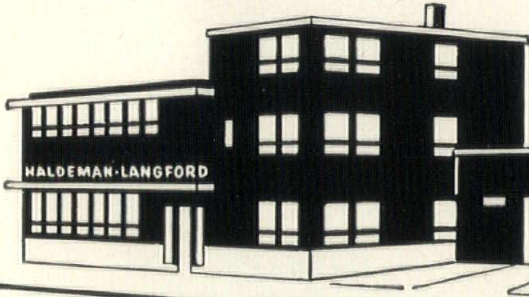
Conducted by L. G. Haeger, for-

mer assistant research director of HHFA and now of the NAHB staff, the survey said it was possible to have a full armament program and an adequate home construction program too.

Construction of a million new homes in 1952, the report said, would take only 2 per cent of the steel production 7 per cent of the copper and 1.5 per cent of aluminum. Housing and the "vast employment it provides is absolutely essential to the nation's welfare and economy."

Mr. Haeger's study reported that the material requirements of the present defense effort were far less than those successfully met in World War II and "our present productive capacity is much greater than in that war and hence we will be able to meet the lower requirements more easily."

The study found that the entire construction industry, of which housing is only a part, will use only 11 per cent of the nation's copper while the automotive industry uses 18 per cent.

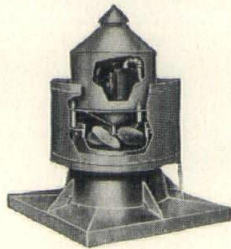


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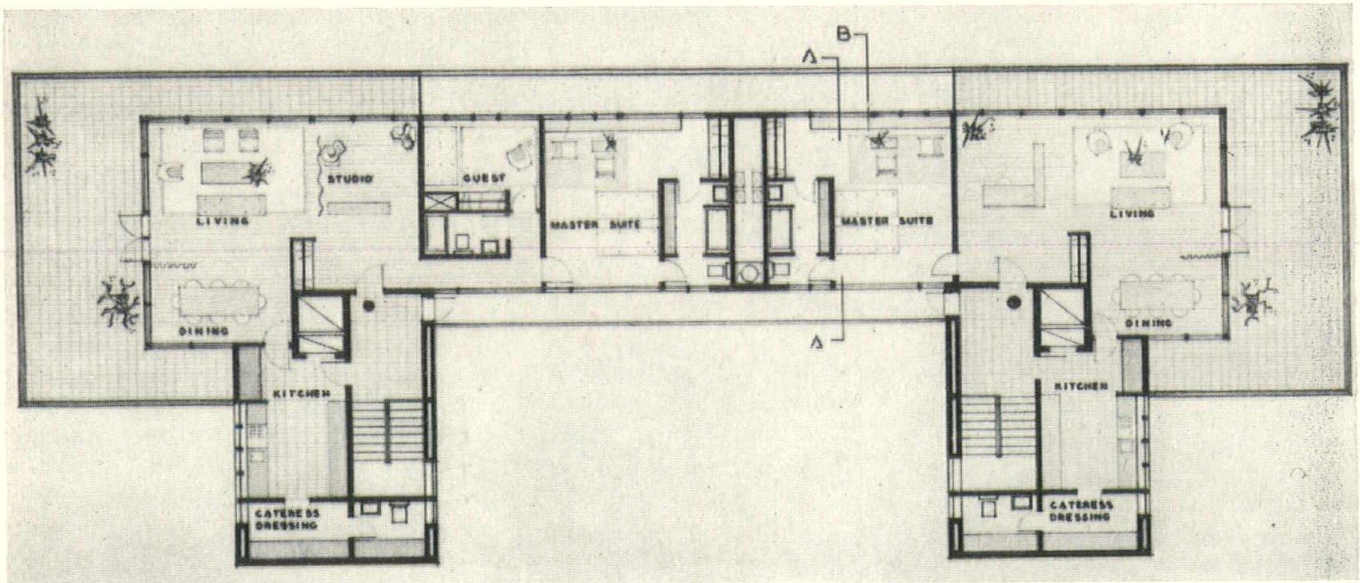
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Plan—Penthouse

Boulevard. The lots are bounded on the north by 25th Street and on the south by 26th Street, the property being the former location of the Gates mansion. The lots contain 58,700 square feet and at the present time are valued at \$19,500.

In order to reduce rents and not take out a large mortgage on the project, it has been decided that the investors will contribute \$100,000 and the seven tenants \$22,357 each, to bring the total to \$256,500, the project's cost. The investors will receive an 8 per cent profit on their investment, while the tenants will receive

a $2\frac{2}{3}$ per cent return. The project will be amortized at 4 per cent for 25 years.

FINANCING OF APARTMENT PROJECT:

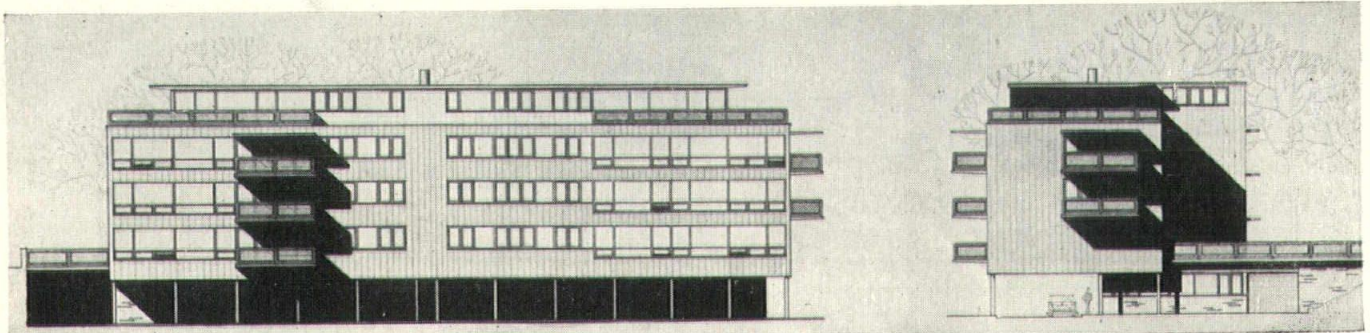
A. Project cost

1. Land	\$ 19,500.00
2. Site improvements	4,000.00
3. Building	220,000.00
4. Fees	13,000.00

Total Investment.....\$256,500.00

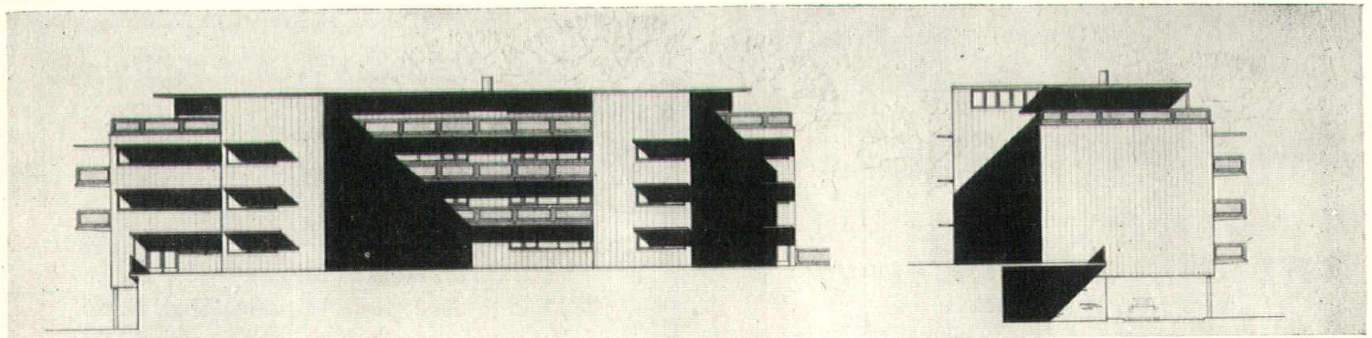
B. Resources

Elevations



North

West



South

East

NORTHWEST

1. Investors	\$100,000.00
2. Tenants (@ \$22,357 ea.)	156,500.00
Total	\$256,500.00
C. Income	
1. Three suites @ \$425.00	
Three suites @ \$475.00	
Penthouse @ \$575.00	
Total	\$ 39,300.00
2. Operating costs and maintenance	5,500.00
Subtotal	\$ 33,800.00
3. Taxes	16,000.00
Subtotal	\$ 17,800.00
4. Amortization (4%-25 years)	6,260.00

Profit per year \$ 11,540.00

This represents \$8,000.00 per year for investors, an 8 per cent return on their investment, and \$506.00 per year for each tenant, a 2⅓ per cent return on his investment.

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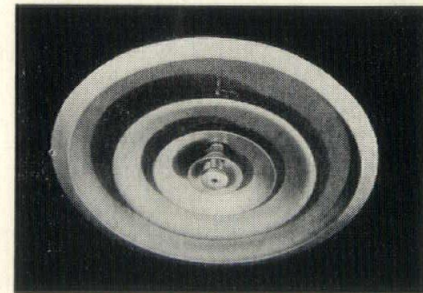
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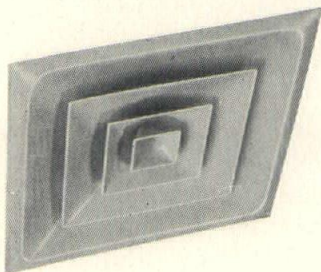


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- **CHURCH**—St. Paul's Evangelical & Reformed Church, St. Paul—Pews and chancel furniture—M. V. Bergstedt, architect.
- **HOSPITAL**—St. John's Hospital—Springfield, Mo.—Architectural wood-work and paneling—Maguolo & Quick, architects—McGough Bros. contractors.
- **RESTAURANT**—Michael's Restaurant, Rochester, Minn.—complete interior fixtures, furnishings and kitchen equipment—John Wies, contractor.
- **JEWELRY STORE**—Diamond Shop, Minneapolis—Show cases and display cases—Saul C. Smiley, architect.

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LOUIS H. SULLIVAN

(Continued from Page 7)

builder business and commercial finance interests. And this is as it should be.

But what about this great mass of "creative" building of clever, dramatic, novel, ingenious, efficient, sanitary, profitable and entertaining buildings, and the able and imaginative young men who are producing them no matter under what working titles? The young men are very good indeed, better have not been seen, and the buildings represent all those delightful words.

What then is wrong?

❖ **Procedure vs Objective** ❖

THE PRIMARY PROCEDURE of architects, architectural schools, and all the special professional businesses I have listed above is properly enough to solve specialty problems. They need solutions. They are difficult of solution. Engineering specialists have all the answers readily available. But the primary executive IMPULSE of every one of them has been to produce solutions that will show up as printed publicity and win prizes. The principal business and personal importance factors pressing upon the production of such architectural sales instruments, aim to pile up, for all concerned, a larger margin of "incentive," rather than to supply basic needs, national and personal. Both impulse and procedure in the design of everything connected with buildings are playing for a new communication channel—the color photograph. The results are superb as graphic art and as professional "advertising" using the word in its best and most complete sense.

❖ **Constructive Factors** ❖

IF ALL THIS VAST ACTIVITY, considered as architecture, is seen as laboratory preparation for the Great Enterprise, all this is good, very good. But everyone now looks upon these current excitements as architecture's goal. We have mistaken the means for the ends. We need to realize the character and quality of the American Continuity. If we lose our integrity to Commercial Advertising, if we believe that the right word can substitute for the practical act, we are indeed lost. We are surely doing exactly this, with words printed, words spoken and voted on world scale. Internationally negotiated words come too late, and all too often as substitutes for deeds. Our big-business-conditioned world-advertising of democracy fails George Ade's grass roots advice "In uplifting get underneath."

❖ **Architect as Prophet** ❖

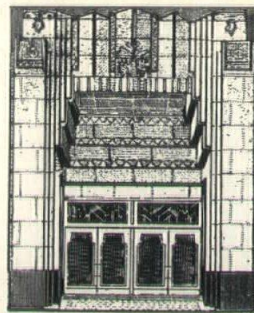
THAT WAS what Sullivan said in his "Democracy—A man search": that our health, our homes, our

morale, our judgment, our humanity, our standards, our laws, tend to be "sold" out from under us with fancy language and bright color. The wire and ribbon tunes and pictures: the fan filled studio and stadium: two to three hundred page weekly and monthly "magazine" rafts for phoney advertising, hypnotically presented with beguiling words and pictures which are unrelated to the facts: the Korean "police action" reported as a sports event — all this is in our architecture. Our architecture is a reflection of ourselves. "If only we can keep on making enough radios, washing machines and automobiles the nation will survive!" If we can only keep on increasing the numbers of things we can make — and the numbers we can coax an already wickedly wasteful people to replace with the latest model — "our American way of life will be safe." Surely, a frantic "piece-work" economy, always being driven to top its own record, offers only a nightmare of slavery to relentless machinery.

❖ **Not Peace but the Sower** ❖

Louis Sullivan's life work is the vision of organic, inclusive democracy and the good life for all living things. His "function" concept is as broad as humanity, as high as ambition: his "form" no thing-in-hand. He offers a satisfying growing "process," working through capable organizations, controlled by self-reliant citizens. He seeks men to build *all* of the world, and A WORLD FOR ALL.

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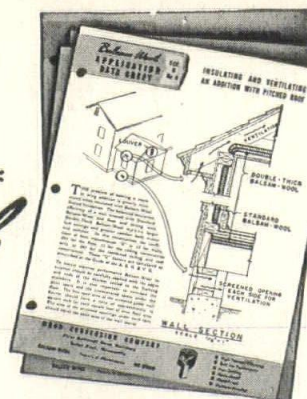
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MECHANICAL ENGINEERS HOLD NATIONAL MEETING IN MINNEAPOLIS

Many technical papers bringing up to date the information at the fingertips of the nation's leading mechanical engineers were presented late in September when the fall meeting of the American Society of Mechanical Engineers was held in Minneapolis.

Many special features were presented to the engineers, including a discussion of North Dakota's lignite research, so much tied up in the news with taconite reduction. A round-table discussion on engineering education was held in co-operation with the Minnesota Society for Professional Engineers. Participating in the discussion were Hibbert Hill, chief engineer for the Northern States Power Co., Charles E. Doell, Minneapolis superintendent of parks, and Julius M. Nolte, dean of university extension, University of Minnesota.

Included among the papers read to the 23 sessions during the meeting were those on management, power, production engineering, industrial instruments and regulators, heat transfer, fields, education, safety, process engineering, petroleum, machine design, materials handling, rocketry, metals engineering, gas turbine power and hydraulics.

The American Rocket Society, an ASME affiliate, held a special session during the meeting.

THE SKY LINE

(Continued from Page 16)

house, which also contains machinery. This manner of visually dividing the building was the object of adverse criticism in a recent architectural symposium. But on the whole the change of form seems to me a happy way of externally acknowledging a change of interior function, and even the latticework at the top, though costly, is a justifiable liberty in a rigidly restricted design.

In one sense, the Secretariat is the fulfillment of a long-cherished dream. Ever since Sir Joseph Paxton built the Crystal Palace in London, precisely a hundred years ago, the idea of continuing that development in steel and glass has haunted people's minds. When, in 1898, Sir Ebenezer Howard outlined his garden city, he thought that its whole shopping district might be an extended Crystal Palace, forgetting the tropical temperatures that even an English summer generates in a glass hothouse. In 1921, Mies van der Rohe developed plans for a skyscraper conceived in all innocence in steel and glass, with glass walls from floor to ceiling, without (as far as could be seen) pipes or utility ducts or any protection against damage by fire to the steel beams and columns, without any spandrels to conceal these utilitarian elements or any device to lessen the complete feeling of insecurity as one approached the outer walls.

Unfortunately, glass and steel are not wholly satisfactory building materials. If steel is not insulated from heat, it expands and contracts in a fashion that presents serious problems, particularly in a tall building placed where other buildings or trees do not modify the climate. Glass transmits not only light but heat, and unless windows are completely sealed, they admit air in a high wind. And, as last November's hurricane once more demonstrated, particularly in the case of the Secretariat Building, large sheets of glass are perilously breakable. Therefore, the development of the skyscraper became possible only when architects learned to give as much attention to heat-and-fire-resistant materials as to the revealing qualities of glass and the structural possibilities of steel.

Glass and metal do not burn, but they crack and buckle in the heat of a fire; the Crystal Palace was demolished by flames in the nineteen-thirties. But the massive masonry of the ancient stone-and-glass cathedrals of Europe stood up under both fire and bomb blast during World War II while the buildings around them were reduced to cinders and rubble. Glass not only admits a great deal of heat on sunny days, even when the windows are closed; it likewise radiates heat to the outer air on cold days. In his own design for the Secretariat, Le Corbusier proposed to overcome these defects with two special devices. One was the permanent sun screen, or *brise-soleil*, which was used on the sunny sides of the Ministry of Education and Health Building in Rio de Janeiro in 1937—a building on which Le Corbusier served as consultant. The other was a double glass wall, inside which he intended to circulate cool air in the summer and hot air in the winter. When these elements in his design were thrown out, he wrote an indignant letter to Ambassador Warren Austin, head of the United Nations building committee, declaring that the steel-and-glass building that has now been erected would be uninhabitable. There was good reason to avoid the *brise-soleil* in New York's climate, since menacing icicles might form on it, and there is also reason to avoid a double glass wall anywhere, since the cost of cleaning what would amount to a continuous double window would be enormous. But there was an even better reason for turning down this wall. Glass should give one a clear view of the outside world, and in the form of the window—that admirable invention—it provides direct contact with fresh air and sunlight. A solid glass wall sacrifices one of these advantages, and a double glass wall sacrifices both.

But even without Le Corbusier's devices the Secretariat Building is quite different from the all-glass structure, unashamedly revealing its interior, that Baxton's Crystal Palace was and van der Rohe's skyscraper hoped to be. Because the glass is green (the color is supposed to lessen the transmission of heat), the east and the west sides of the structure, viewed from the street, look dark and opaque, not light and transparent. So, aesthetically speaking, the main function of these great glass walls is to serve as a mirror in which the buildings of the city are reflected, in which the western sky sometimes plays in delicate counterpoint to the eastern sky. No building in the city is more responsive to the constant play of light and shadow in the world beyond it; none varies more subtly with the time of day and the way the light strikes, now emphasizing the vertical metal window bars, now emphasizing the dark green of the spandrels and underlining the horizontality of the composition. No one had ever conceived of building a mirror on this scale before, and perhaps no one guessed what an endless series of pictures that mirror would reveal. The aesthetic effects is incomparable, but, unfortunately, when the building is most effective as a looking glass it is least notable as a work of architecture.

The architects, probably not realizing that their building would become a mirror, clung tenaciously to the two-dimensional quality of the exterior. Except for the grilles, there is no hint of a third dimension in those sheer, unvarying walls. Yet when the day is dark or when the night falls, the building

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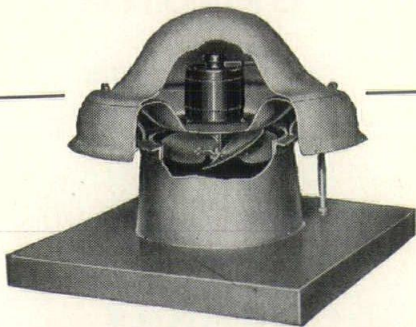
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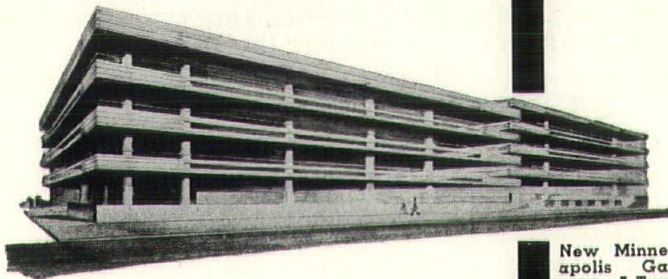
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gets the better of the designers' intentions, for the stabs of light on the ceilings of the offices add an unexpected liveliness to the west façade, making it almost the equivalent of a starry sky. That same liveliness might have been at least suggested by day if the architects had used white Venetian blinds to introduce a minor variation in the pattern of the façade. Instead, they chose gray blinds, which are considerably less efficient at repelling heat, and when the blinds are lowered, the wall of glass retains its impenetrable two-dimensional quality.

Here, then, is the Secretariat Building from the outside; two thin white vertical marble slabs, connected by two vast glass mirrors that are broken only by horizontal white aluminum grilles; a building chaste, startling, fairylike in its cold austerity, a Snow Queen's palace, exhaling by night a green moonlight splendor. Paraded as pure engineering and applied geometry, this new skyscraper proves really to be a triumph of irrelevant romanticism. If anything deserves to be called picture-book architecture, this is it, for all the fundamental qualities of architecture seem to have been sacrificed to the external picture, or rather to the more ephemeral passing image reflected on its surface. Should one look behind this magician's mirror, one should not be surprised to find, if not a complete void, something less than good working quarters for a great world organization.

In planning the Secretariat, the architects were not, like most designers, confined to the constricted space of the conventional Manhattan lot, or even block, and they could thus have designed a freestanding building, or a series of freestanding buildings. There are not many freestanding buildings in America, and most of them are tall and highly uneconomic towers, despite the excellent precedent set long ago by the oblong Monadnock Building, in Chicago, that last masterpiece of masonry by Burnham & Root. The architects of the slab-sided Secretariat have ignored this precedent by putting a thirty-nine-story skyscraper on their ample plot, in the manner of a real-estate speculator trying to get the maximum possible amount of rentable space. A freestanding building can have light on all four sides, but the architects of the Secretariat have blanked out two sides of it with solid walls of marble.

A while ago, Mr. Wallace Harrison, who was the chairman of the United Nations' Board of Design Consultants, explained the decision to build a single tall skyscraper in an address to his brother architects at the Royal Institute of British Architects. "We have found by experience," he told them, "that with conditions similar to those on Manhattan Island a building twenty-five to forty-five stories high is the most efficient and economical." Obviously, the conditions he referred to are the conditions of corporate financing and realty speculation, the conditions that make possible a handsome profit. The United Nations is a non-profit institution. Mr. Harrison then gave the show away by remarking that when one considers only mechanical requirements, "every skyscraper must be built in units not more than fifteen stories high. . . . Thus at approximately every fifteenth floor you have a 'basement' for water tanks, elevator and air-conditioning machinery, and fire protection." In other words, the most efficient and economical height for an office building is not twenty-five to forty-five stories but fifteen. Mr. Harrison and his colleagues have proved the point by inserting those grillwork "basements" only eight stories apart in the Secretariat Building. As for efficiency and economy, he has forgotten that the taller a building is, the greater the space that must be wasted in elevator shafts bypassing the lower floors. Had the several units that are now stacked one upon another to produce the Secretariat been separate buildings, they not merely would have achieved the economy of which Mr. Harrison made so much but would have scaled the Secretariat unit down sufficiently to give visual emphasis to the General Assembly Building (which is to be finished in 1952) and to arrive at a more unified design for the buildings and open spaces. Such a system of related low buildings would also have provided an orderly means of future expansion for the Secretariat, which a single oversize building does not.

Apparently, though, the Board of Design Consultants were hypnotized by Le Corbusier, and Le Corbusier has long been

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AMERICANISM, in short, means a return to what Henry Clay so well called the "American system," of primary interest in the American worker, American farmer and American industrialist; for those who live here, pay taxes and who built up this country through individual labor and investment, and upon whom rests the obligation to protect this country in time of war, as well as to support it in time of peace. It means abandonment of a fiscal policy which robs the American treasury and throws heavier burdens on the American taxpayer in order that alien, rather than domestic interests, may be fostered.

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hypnotized by the notion that the skyscraper is a symbol of the modern age. But the fact is that both the skyscraper and Le Corbusier are outmoded. Skyscrapers conceived without respect for human scale or insight into human requirements and values are indeed symbolic, but they are symbols of the way specious considerations of fashion, profit, prestige, abstract aesthetic form—in a word, "the package" of commerce—have taken precedence over the need of human beings for good working and living quarters.

What we have, then, is not a building expressive of the purposes of the United Nations but an extremely fragile aesthetic achievement, whose main lines conform to the ideals of a boom period of shaky finance and large-scale speculation. This sort of modernism goes only skin deep. As a conscious symbol, the Secretariat adds up to zero; as an unconscious one, it is a negative quantity, since it symbolizes the worst practices of New York, but not the best hopes of the United Nations. So much for the outside of the building—impeccable

but irrelevant. The inside of this package does not even live up to the elegant wrappings. On that matter, I shall presently have more to say.

—LEWIS MUMFORD

(To Be Continued In Next Issue)

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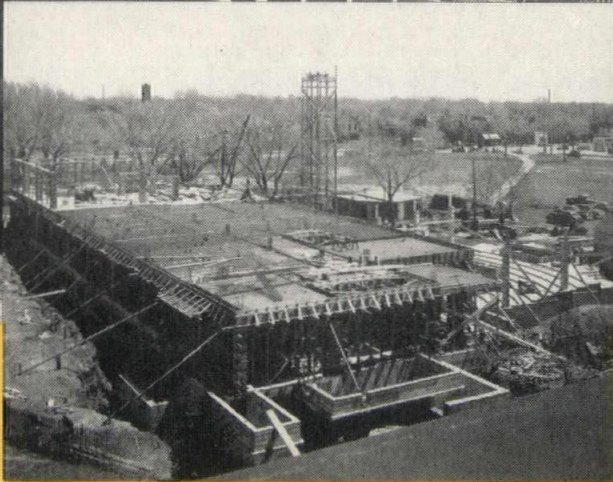
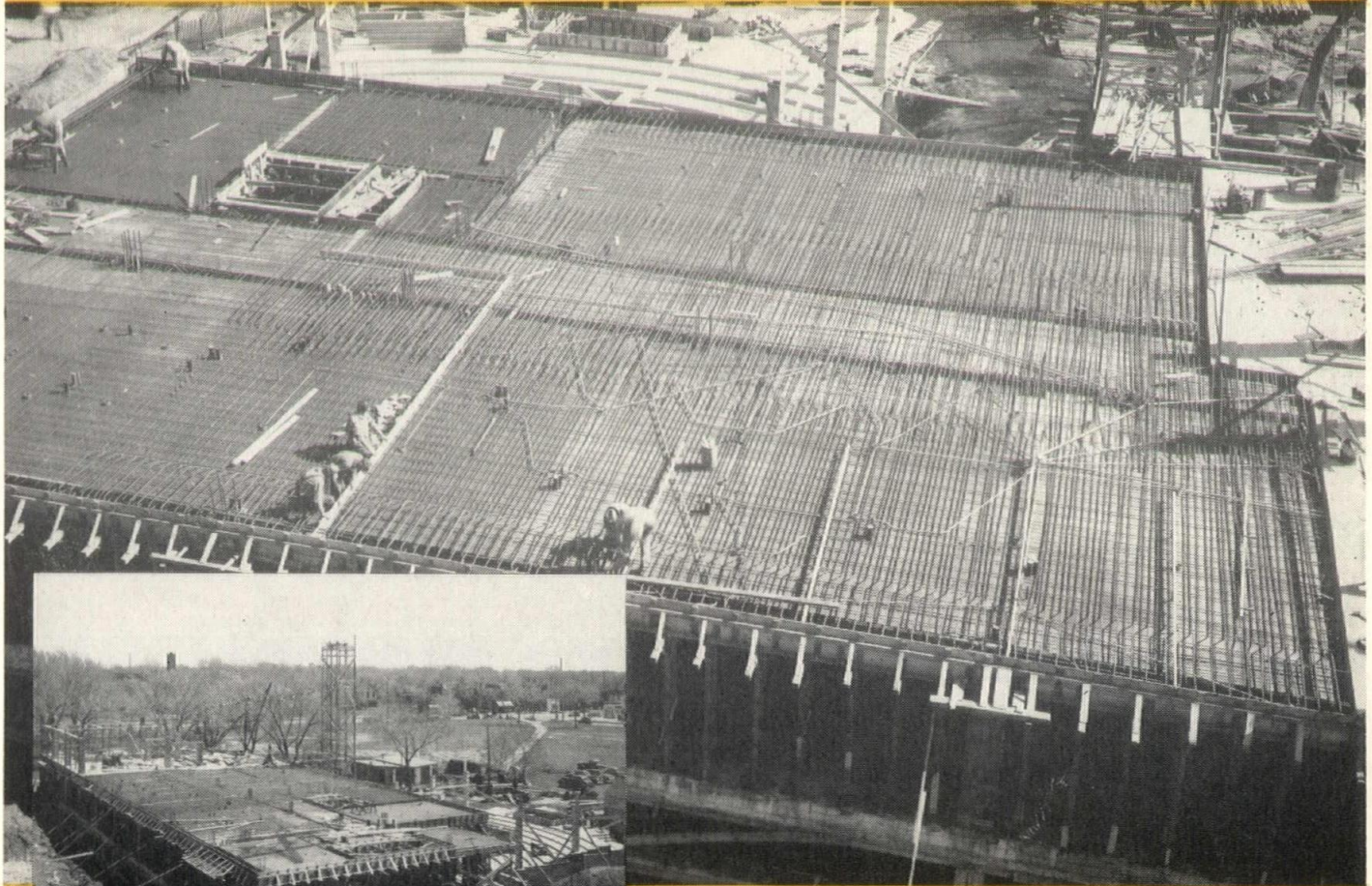
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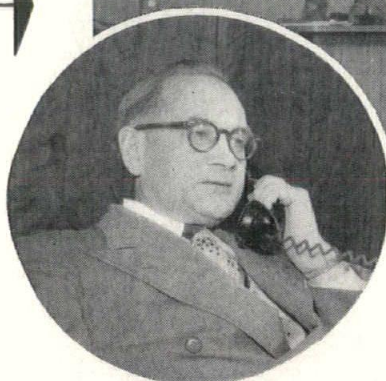
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