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OFFICIAL PUBLICATION MINNESOTA SOCIETY OF ARCHITECTS



*The City Moves . . . see page four*

# NORTHWEST ARCHITECT

JANUARY-FEBRUARY, 1954

## IN THIS ISSUE:

WHAT IS A LIBRARY?	PAGE FOUR
MT. ZION WINS PRIZE	PAGE TEN
JEFFERSON OFFICE BUILDING	PAGE FOURTEEN
CORBETTA'S \$5.85 SQ. FT..	PAGE EIGHTEEN
NORTHWEST'S OIL	PAGE TWENTY

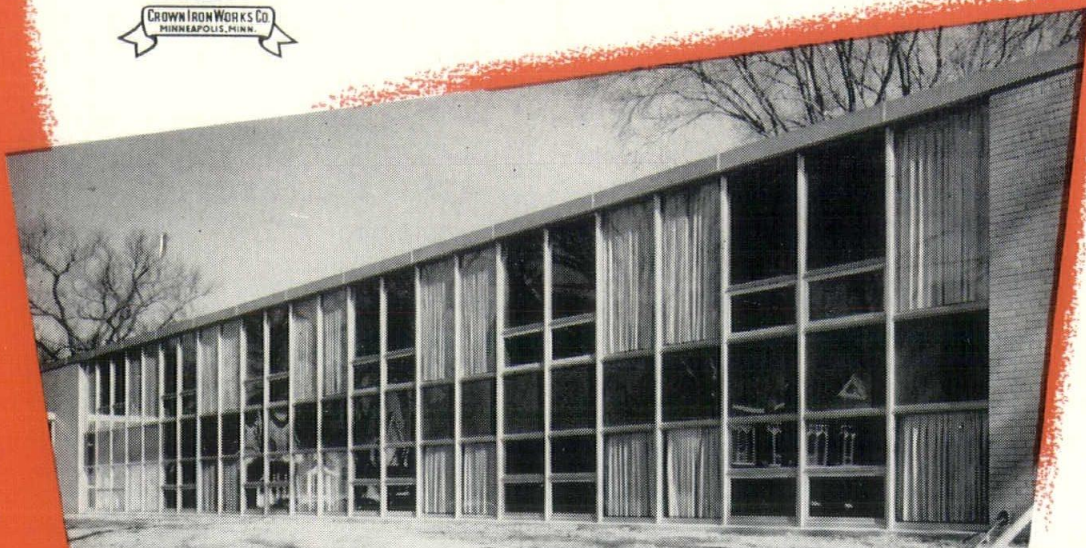
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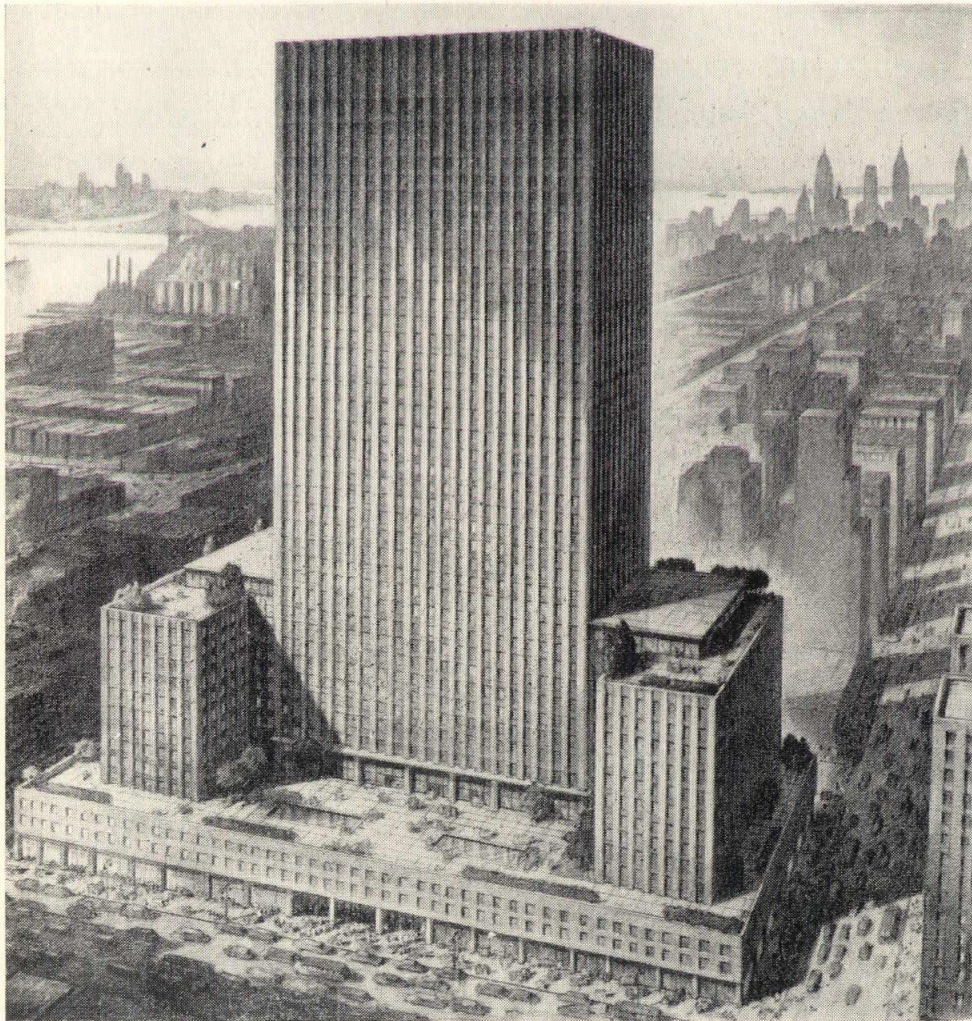
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*(see also page 46)*

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ARCHITECT

VOLUME XVIII  
NUMBER 1 **1954**



# WHAT IS A LIBRARY?

## Some Building in a Civic Center?

*Peter Cooper, Fulbright Exchange Scholar from England to Colorado, spent Christmas with us. Said he; "Oh! 'Libraries', would you say that the design control was book 'storage'?" Said I; "My piece is going to assume that the key problem is distribution". "Yes — I see . . . granted; buildings to get the books to the people." "The tough problem is to get readers for the books".*

By William Gray Purcell, A.I.A.

MISS GRACIA COUNTRYMAN, who became librarian of the Minneapolis Public Library in 1904, was the first to declare that every book on circulating library shelves was a black mark against the business of libraries. Said she, "The library is the books in the hands of the readers." This article applies the proposition that a LIBRARY SYSTEM is the total operation of all equipment for accomplishing such an end.

One of Miss Countryman's first moves was to cancel the old rule of "one fiction book and two others" at a time. She encouraged members with cards to come with suitcases if they wished, take all the books they could carry away. This method soon prevailed throughout the country. The changed view had good effects on every department of library service with consequent increase in readers. Now, fifty years later, our public library service, like the American public school system, faces a battle for its life.

THE SCHOOL because a politically minded half of the population are afraid that mature people might continue to think and that young people may learn to think.

THE LIBRARY because it must deal with a world of lookers, few of whom ever "read" anything.

THE POLITICAL BOSSES connive to maintain control of empty minds by keeping them empty and of emotional minds by whipping up diversionary excitements.

TEACHERS ARE AFRAID that some child will start an argument or that someone who dislikes her, or wants her job, will denounce her to one of the many new constitution whittling courts, "boards" or "committees," which can in a few minutes accuse, try and inflict the most cruel of all punishments, destruction of one's ability to earn his living; "cruel and unusual" punishments are expressly prohibited in our charter of freedom.

LIBRARIANS ARE AFRAID they will be denounced for handling books, by some vote-collector who finds that denouncing intelligence will secure him approval by those whose reading is the daily newspaper headlines and advertising. Librarians are even more afraid that

the total number of people who might read, or who could be "sold" the habit of becoming customers for their books, will continue to grow less and consequently library service users may soon be so few that cities and counties will no longer appropriate funds to provide free books. In many places that situation has already been reached.

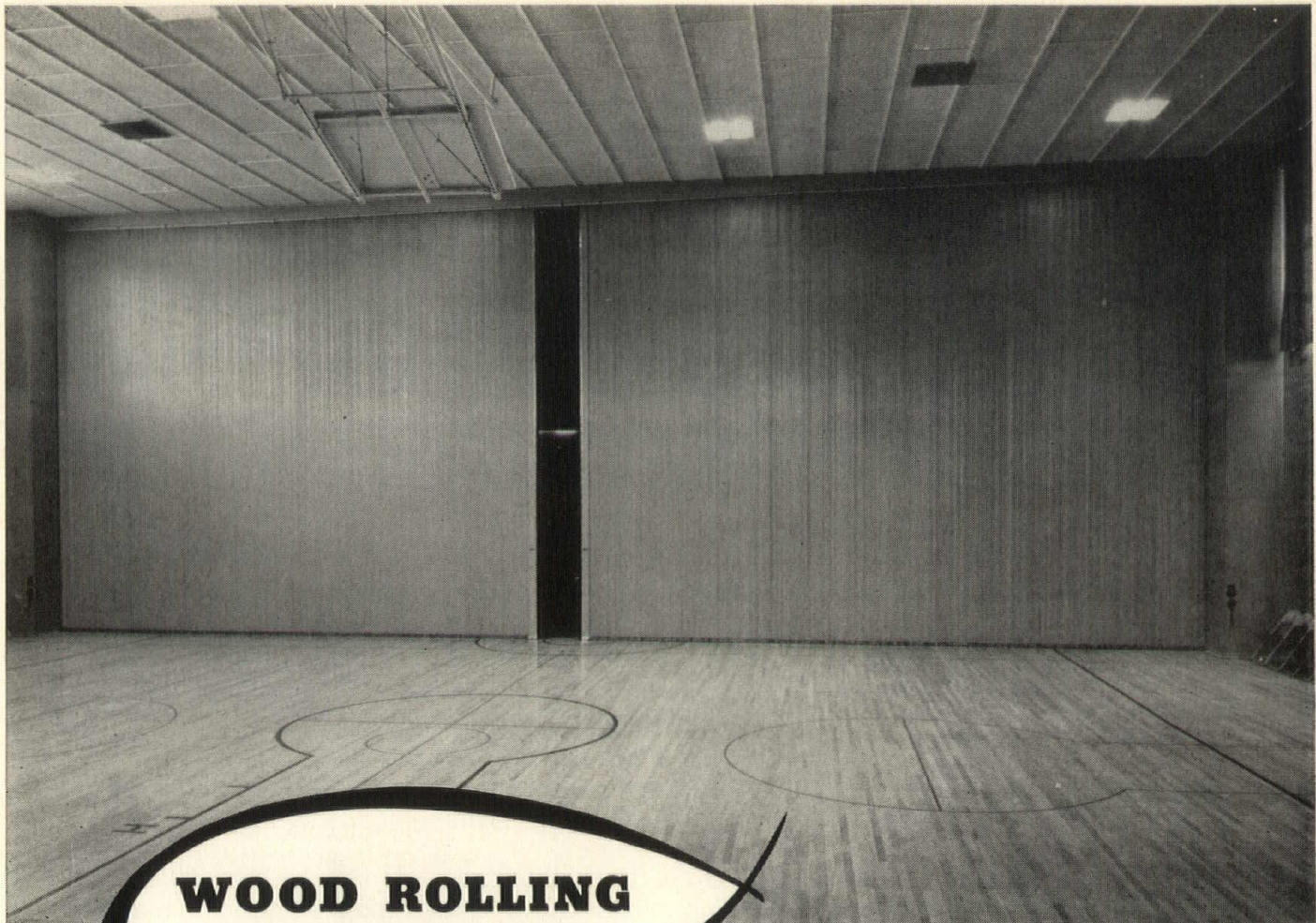
There stands the problem facing any community which plans to build "a public library." What has this to do with a "civic center" and with city planning? Well, not what has been too easily assumed, for the 1900 A.D. "Monumental Building" type of library is now a "horse and buggy" era curiosity, no matter what style of architecture, "modern bozart" or "1900."

DURING THE PAST YEAR there has been a great deal of discussion in Minneapolis about a suitable site for a "MAIN PUBLIC LIBRARY." Plans have been made showing different locations, their supposed advantages noted. The plan which accompanies this review shows one location for the library as a part of a proposed so-called "CIVIC CENTER." If we wish to avoid burdening the city of our children with even more disastrous buildings than those we are now obliged to replace — those gloomy stone bins, that failed to serve their purpose, and will not now serve our new purposes, nor could even be remodeled to serve any purpose — it certainly becomes somebody's business to ask a few questions of a practical nature.

What is a library and what is a civic center? We begin to see that the library has too easily been assumed to be its key building? All that anybody can say about libraries in Minneapolis must start off with a correct answer to this question.

WE HAVE REVIEWED some of the hard blows now cracking old city tools and methods. How can we proceed to secure practical municipal equipment at low cost in





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order to do a better job? We might mention here John D. Rockefeller's rule, "Well—we never fooled ourselves," and add that business nostalgia would never have come up with Dayton's Southdale.

Any research that deals with the words "Civic Center" and "Library" and fails to grasp the real "center" of the problem, and the "process factor" in the library idea, is just a waste of time and money. So first let's try to think about realities, about action and procedures. Let's get in behind the word-masks, unload clever words of their freight of meaning, if any, pry off the lids, put the contents to work. Tradition in business and government and art is never in "the book," always in the hand of the experienced man going someplace, the able man, not looking back, looking ahead, working with what he brought along *from* where he was, *to* where he is, or where he wants to be.

CIVIC CENTER and LIBRARY are both geographical words and when one says "library" in the civic sense you cannot avoid — no one can avoid — thinking of a building located *some-where* to which people are expected to go. The 1949 Minneapolis City Planning Commission report on "LOCATION for a NEW MAIN LIBRARY" is unwittingly concerned wholly with this directional movement of people. The report in its texts, graphs, exposition and conclusions concentrates on this idea of "people proceeding to library."

But the need to be met is exactly the reverse — i.e., "books in motion toward people." We can ignore for the moment the comparatively small number of people who have leisure, energy and extra income to make, say, 52 trips per year to a main library downtown. And we can ignore the conventional facilities for exhibits, lectures and other items of adult education and entertainment. These and many other salons, classrooms, theaters, galleries and foyers are always thought up and included by architects in monumental public library buildings in order to make it worthwhile building it. The relation of all these facilities to all the people as library customers is forgotten in the conspicuous waste incident to producing important architecture. Such facilities, and many not yet thought of, related to the world of the book should all be assigned to the several public Art Museums, to the neighborhood "branch libraries" or made a part of satellite shopping centers, schools, churches or any community center that would co-operate to build the bridge between those who should know books and the books they should know. And I don't mean funnies, westerns and who-done-its. I mean READ — what you are prepared to bring to a book, not what you think you may get out of it. A very intelligent person can even read the dictionary.

**Y**ou say: "what is wrong with a geographical word and why shouldn't we proceed to the library?"—"we" being all the people of school age in the city and "you" being the reader of my story, if you've stayed with me up to here.

**Y**OU ARE SHOPPING in the Book Department of Dayton's. Your yearly budget gives you the daily paper plus \$30 worth of books and magazines. But you have a library card. "Guess I will go to the new Main Library

in the Civic Center for a book." To do this tiny errand you will have to struggle across four traffic streets. "To save time," you decide to pay your taxes "while in the vicinity." You find it a vast "vicinity" by time and energy gauges. You face five more occasions to risk your life crossing through traffic, with the traffic losing time and money trying to keep from running over collective you — swarms of equally frustrated you's.

To pick up that book, which the Post Office would have brought you for 12c, you have walked four dangerous miles, wasted two hours, had no fun. You should have been able to get your free library book right there in Dayton's book store and have it delivered free with the purchases you made.

What?! Dayton's setting up competition to their own book department? They want to sell their books! But by this co-operative service they have lost no sale even to those with limited cash for books. Dayton's will have encouraged a reading impulse, made a grateful friend, formed a habit of coming to their book counters even if at times only to look and they will get more than a share of your next year's \$30 reading budget. Dayton's gives you a free parking ticket with your sales slip, why not free library service with your lunch slip? And too, you should be able to return your book, in library supplied mailers, by handing it to any department store delivery man or other service truck calling at your home.

You can now begin to see how all these subtle services and operational functions press upon the library system and are a very different and more complex set of relations to interpret than the assembly and enclosure inter-relations commonly referred to as "functional" and which as a matter of fact are better defined as "constructivist." Even those of you who are not architects or engineers can very plainly see that correct provisions for all these multiple factors, which together constitute the library-at-work-in-the-community, must find their material form in the entire system and all its buildings, automobiles and housing. If they do not, the "buildings" of the "library" will be obsolete to just that extent.

**W**hen you say "Great Northern Railway System" you don't think of the railroad as geography. You almost don't think of it as a ribbon of steel weaving across the face of surface of geography. To meet airplane competition the railroad company tries to divert the public from thinking about rails. Their natural sales pitch leads with the idea that you are now in one place and you wish to be someplace else. So please ask yourself what will take you there with the greatest speed, the least amount of danger, discomfort and expense and plenty of personal importance build-up.

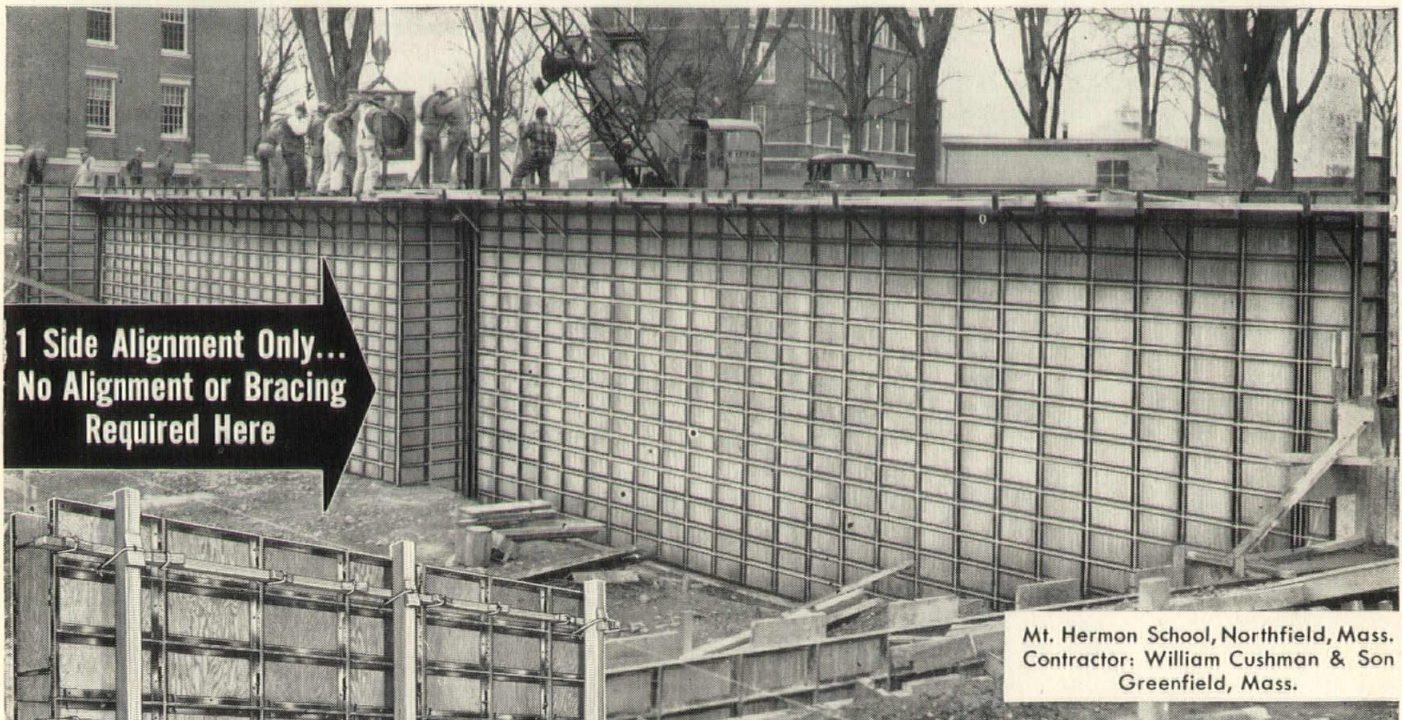
**I**T IS NOT DIFFICULT for you to follow advertising and think about railroads in some way as that but it's really hard to put together the working of the railroad stations, the railroad tracks, the railroad cars and the power plants that pull them, the people who operate them and the laws which control and facilitate them so that you can think "railroad system" the way its management does. There are so many operations served, by so many things, that a railroad is really a very complex and in-

(Continued on Page 54)



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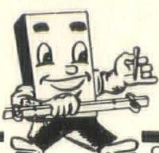
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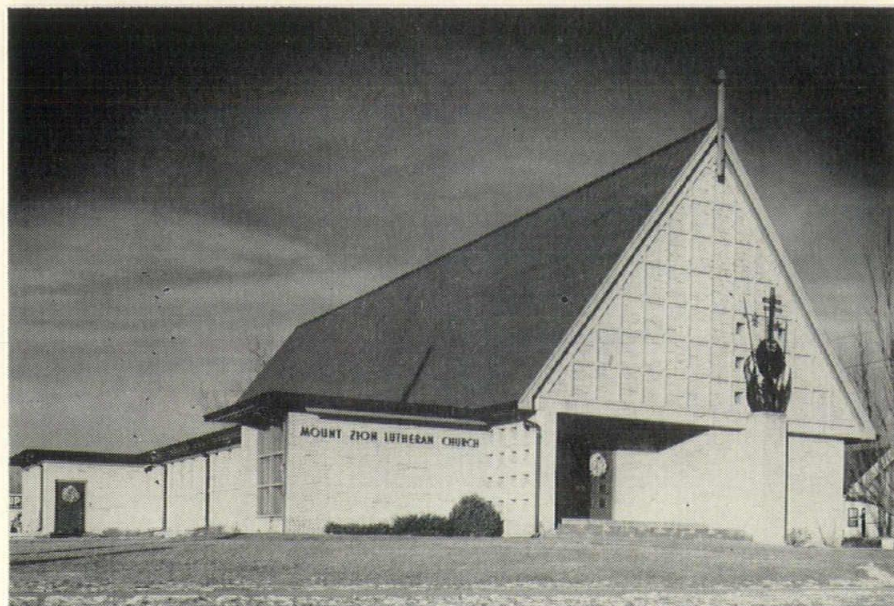
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# PRIZE

## **MOUNT ZION CHURCH HONORED BY ARCHITECTURAL CHURCH GUILD OF AMERICA**

Today's architectural trend away from 100 per cent traditional design is evident in the recently announced results of the annual church design competition sponsored by the Architectural Church Guild of America. Not one completely orthodox church structure was chosen by the guild for an award!



The gracious lift of the interior design of the church is felt as one stands in the center aisle facing the altar (above). The beaming, laminated wood columns and other features can easily be identified. At right is a view of the unusually wide side aisle discussed in our text.

The Northwest placed first in the Class No. 1 (300 parishioners and more) of completed buildings competition with an entry designed by Armstrong and Schlichting, members of the Minneapolis chapter of the American Institute of Architects—the Mount Zion Lutheran Church project, which was **NORTHWEST ARCHITECTS'** cover feature for its January-February, 1952, issue.

According to the architectural firm, the Mount Zion Lutheran Church design was primarily functional. It was designed for a purpose. Problems presented by the desire for a contemporary structure while preserving the



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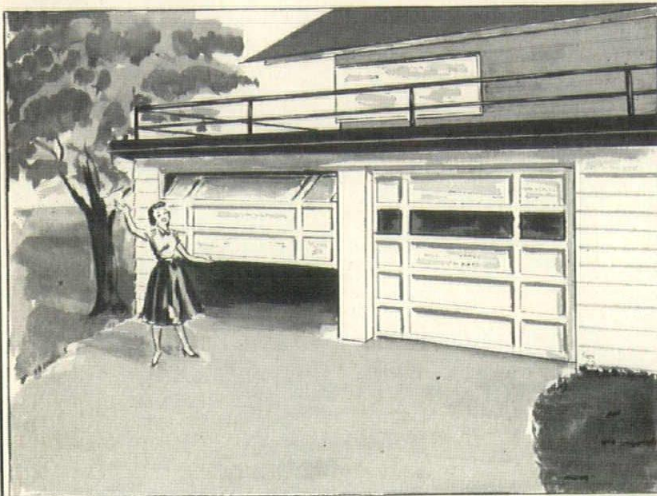
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Hardware shall include safety torsion springs on a continuous shaft across full width of door, rustproofed aircraft type cable (chain not permitted), rollers having a minimum of ten (10) ball bearings  $\frac{1}{4}$ " diameter with both inner and outer races of hardened steel (use of roller shaft as inner race will not be permitted), bottom corner brackets mortised under bottom of door and of sufficient height to be secured across both rail and stile. Doors over 12'6" wide shall be additionally reinforced with suitable horizontal trusses to prevent sagging when open. Doors over 16'0" wide shall have suitable support to prevent sagging when closed.

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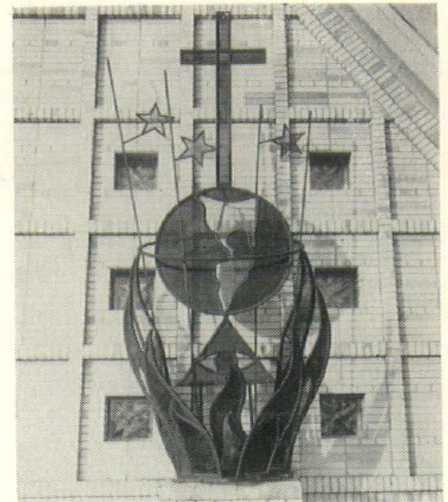
GA 4807

orthodox traditions of the church were resolved and incorporated into the finished building.

"Although it is of contemporary design," Gordon Schlichting, firm partner, said, "the church retains the liturgical tradition of early church religion which is characteristic of most orthodox churches of today."

Combination of functionalism and originality could well be a reason for the project's selection, Mr. Schlicht-

Symbolism is used in this bit of frontal decor which is intended as an accent piece.



ing stated. The church was not designed primarily to win a prize; it was designed to be a place of worship. Its contemporary lines, although qualifying the structure for high honors in its division, were the result of careful study of the needs and desires of Mount Zion's congregation.

Perhaps the most original interior feature of the Mount Zion church project is the church's wide side aisle. The church nave seats 375 and the aisle was planned for both overflow seating (capacity of 100) and a "social" area where the pastor could greet members of his congregation after the service. Previously, the pastor was required to greet the group in a crowded area near the door, and the doors had to be kept open even in the coldest weather to permit a relatively uncongested exit.

The organ loft was built in such a fashion that it could accommodate either a pipe or electric organ, with the latter being installed at the present time. The loft, in the rear of the building, also contains space for 40 choir members.

Costing approximately \$110,000 to build, the church was begun in May of 1950 and completed in April of 1951. The structure is of masonry construction, Roman brick faced, with concrete slabs on long span steel joists. Laminated wood trusses and purlins from the base for a wooden roof.

Mount Zion's approximate 10,000 square feet of space is divided between its full basement and the church proper. The basement houses a large assembly room, five classrooms, a kitchen and washroom facilities, while church offices are on the ground floor.

Another area winner was the proposed First Congregational Church in Spencer, Iowa, designed by Harold Spitznagel and Associates, members of the North Dakota chapter of the American Institute of Architects.

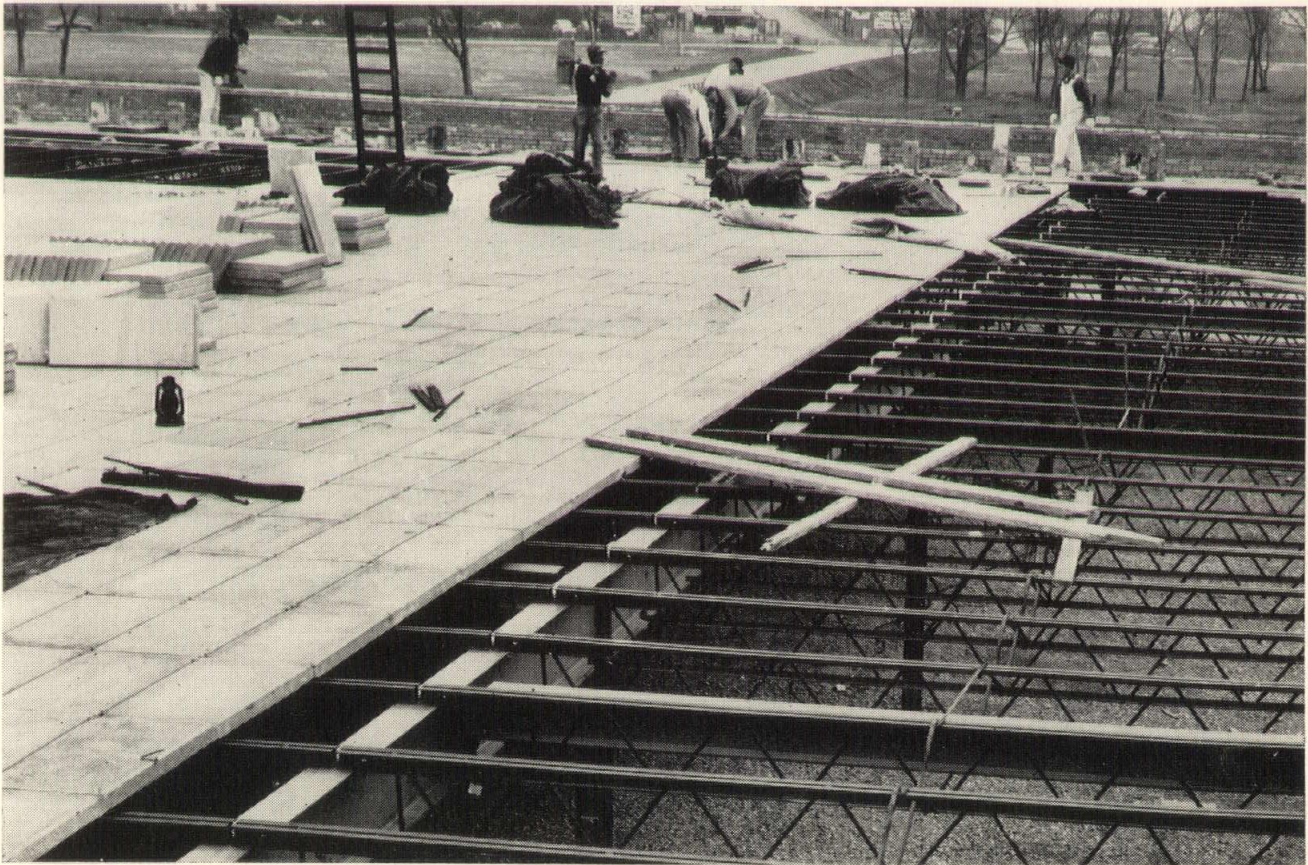
Mount Zion Lutheran Church is located at 57th St. and Chicago Ave. So.

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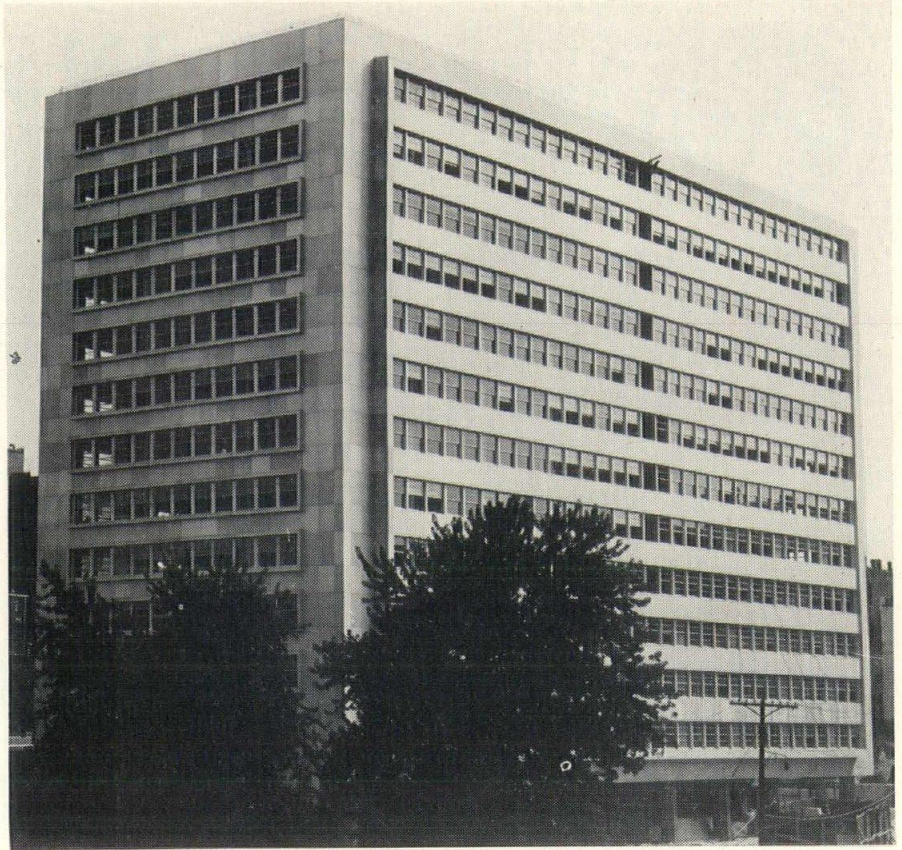
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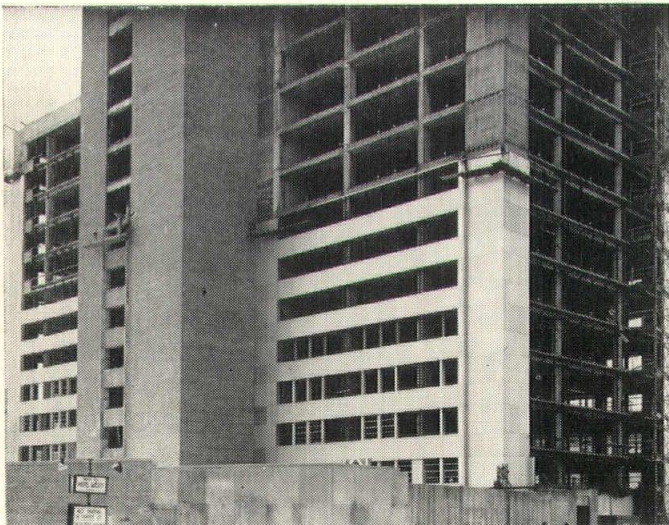
The office building is striking in its well framed design, adds a definite landmark quality to its site, is of a functional design, businesslike and interesting.

## Metal Faced Insulated Skin Wall for



# JEFFERSON STATE OFFICE BUILDING

A distinguished addition to the roster of metal faced, insulated skin wall construction was recently completed in Jefferson City, Mo., in the new \$5,500,000 Jefferson State Office Building designed by Marcel Boulicault, AIA of St. Louis and Jefferson City.



Fourteen stories high, the silvery white shaft introduces a new type of lightweight exterior spandrel wall combining structural adequacy, insulation and fire resistance in relatively small prefabricated units. These are precast panels of vermiculite concrete about 4 by 5 feet in size and 3 inches thick. The panels weigh less than 200 pounds each, or about 10 pounds per square foot. The exposed facing consists of extended aluminum shapes and sheets.

One of the advantages of this wall construction is the enormous dead load reduction on the structural frame. The finished wall weighs only 14 pounds per square foot, compared to about 150 pounds per square foot for conventional masonry. The total weight reduction made on this building was 3,400,000 pounds, or 1,700 tons.

Interior floor space was also increased. The total wall thickness is only 5 inches, which added 455 square feet of usable floor area.

Speedy erection is also possible. A panel covering 20

This rear view gives an idea of the scale of the structure (see figure on scaffolding) with the brick elevator and service core in center.

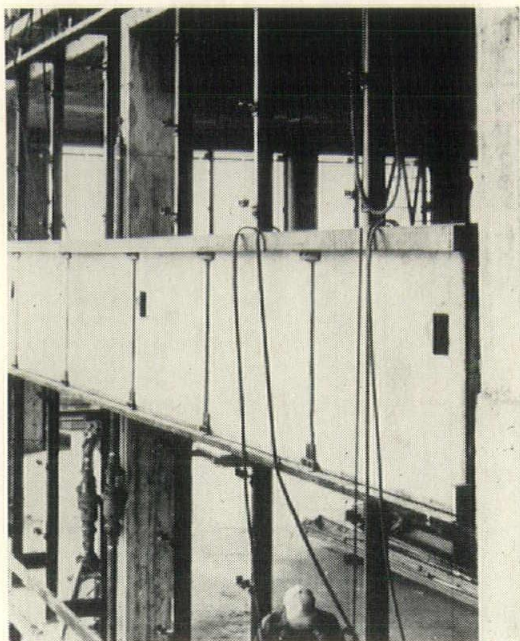




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square feet in area was placed by two men in a matter of 20 minutes. There are 851 panels in this building, totaling about 25,000 square feet. All erection was done from the floor levels at which the panels occur. The aluminum facing was erected from ordinary painters' scaffolds dropped from the floor above. These fac-



**Spandrel wall of precast panels bolted into place on light steel framing. On this floor the aluminum facing was applied after the panels were in position.**

tors resulted in large savings of field labor and time and eliminated the costly erection of full-height scaffolding.

A flexible erection schedule was also possible, extremely important to the general contractor in cost as well as time. The panels and facing could be installed simultaneously, or just one or the other, at any time and on any floor, depending on the availability of materials.

In the Jefferson State Office Building the panels are of 1:6 mix (1 part Portland cement and 6 parts vermiculite) which has a "K" factor of .76 and weighs 25 pounds per cubic foot. These panels were cast in permanent U-shaped frames of 12 gauges sheet steel and were reinforced with 6x6x10:10 wire mesh embedded midway in the concrete. At the top of the frame, a half-inch nut was welded for ease of lifting and erection. Cast in St. Louis at the rate of 1,000 square feet per day, the panels cured 28 days before being trucked to the job.

A network of light structural steel framing consisting of channels and angles provided support for the panels and facing. This framing was attached to the structural frame on the face of a slightly cantilevered slab, which afforded ease and speed of erection with maximum freedom. The panels were dropped in place with a small chain hoist attached to the slab above the floor on which such work was being done and were bolted in place with 2x2x3/16" iron angles at each corner. A modular system of panels was used to fit the sizes of windows and mullions.

Floor heights from the second to the thirteenth floor are 9 feet clear. The first floor is 16 feet high, the fourteenth floor, 12 feet 6 inches. The wall was designed to take a 30 p.s.f. wind load.

Excluding the masonry core required by code, the entire exterior face of the Jefferson City building is covered with 5/32 inch thick satin finish aluminum sheets prefabricated in varying sizes and shapes. The exterior aluminum spandrels between heads and sills of windows at each floor are fluted. The corners, frames and all other walls are plain sheets of aluminum prefabricated to special joints and sizes brought down to a tolerance of only 1/8-inch to assure precision fitting.

The sheets are fastened individually by clips to the network of structural steel framing and runners. Expansion and contraction were controlled by the use of a specially designed sliding joint developed by the architect and fabricator, which also serves at a weather-proof joint. This permits expansion and contraction of as much as 3 1/2 inches in 193 feet without the use of caulking. The control of condensation, always a problem in metal faced buildings, is eliminated by a special type of design that provides for air circulation.

Fenestration on the main elevation from the second to thirteenth floors is a continuous line of double hung aluminum windows with fixed top sash. The lower opening is secured with a key lock to prevent indiscriminate opening and closing. On the east and west ends each row of windows is contained in separate panels. The rear elevation is like the ends, except for the brick elevator and service core.

The interior face of all exterior walls is faced with aluminum, including that portion from the window sill to the floor, which is formed into a covering for combination air conditioning heating units and under-window shelving. Marble and glazed tile were used in lobbies and washrooms.

The typical floor plan was designed on a 5-foot, 2-inch module, center to center of windows, permitting the entire floor area to be divided into offices exactly 10 feet wide around the entire perimeter of the building, each with its own individually controlled heating and air conditioning unit.

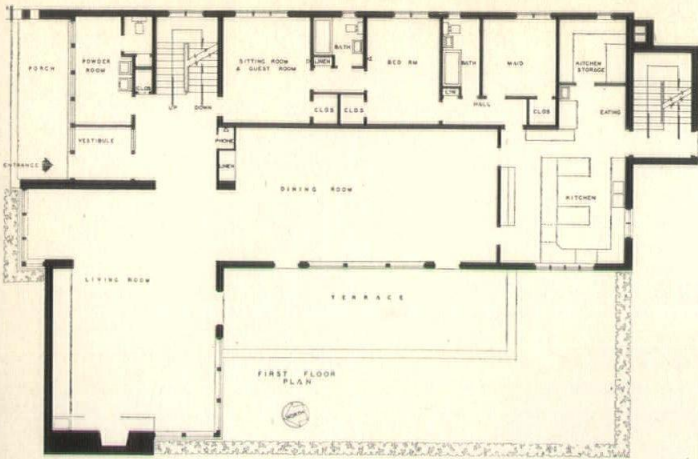
Ceilings are acoustical material applied directly to the concrete. Floor covering is primarily asphalt tile, except in a few areas where terrazzo is used. Electric lighting is fluorescent, designed for 50-foot candle power at desk level. The main floor lobby and banking room have over-all luminous ceilings.

Building services are concentrated in a single service core at the rear center of the building. Six high speed elevators, stairwells, fire tower, toilets, utility shafts, etc., are all located here. Fixed partitions in the core are of lightweight concrete block.

The treatment of the air conditioning and heating system is a unique feature. The entire building is heated and cooled by combination heating and air cooling units

*(Continued on Page 58)*

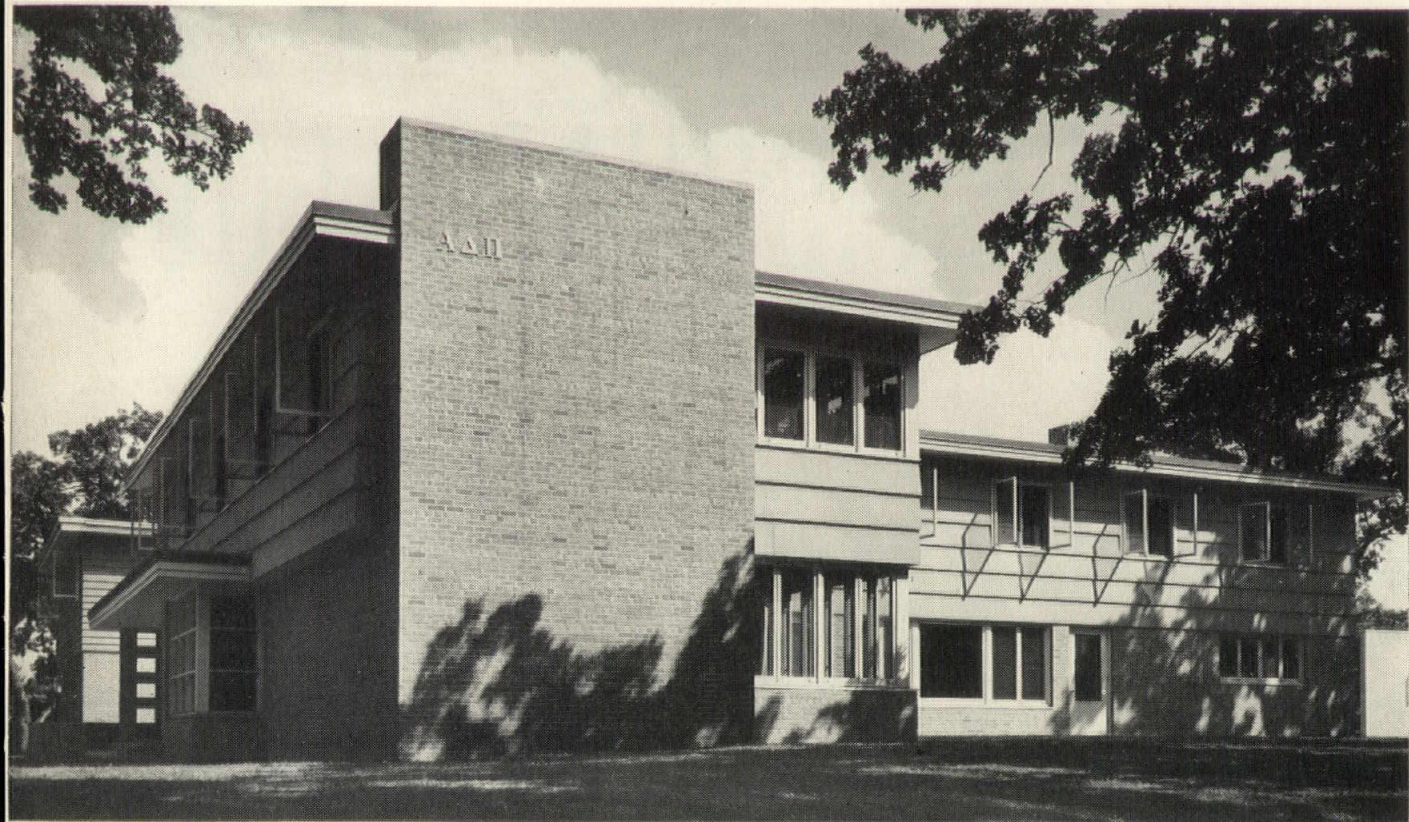




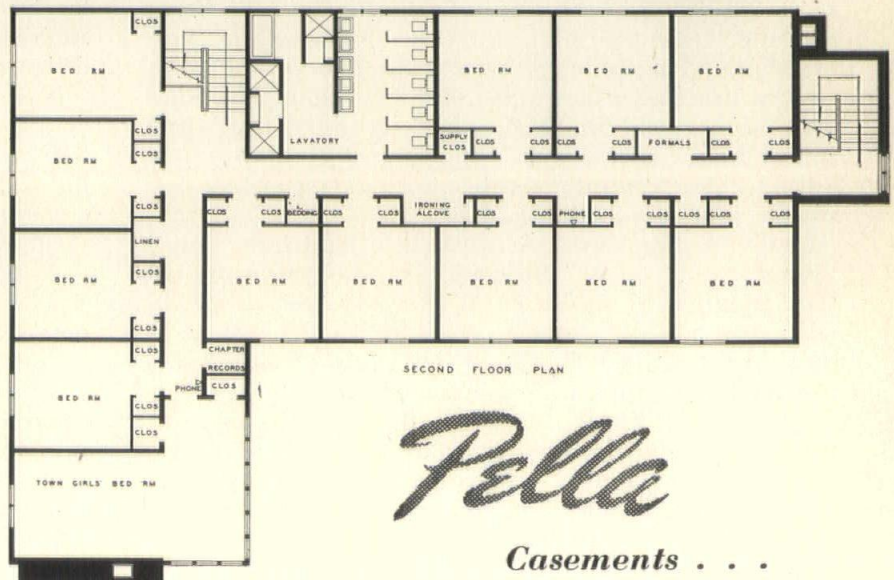
# New Chapter House Alpha Delta Pi Sorority University of Minnesota

Planned for study and social life on the  
University campus.

McEnary & Krafft, Architects  
Minneapolis, Minnesota



Photos by Photography, Inc.



*Pella*

Casements . . .



# CORBETTA

**Gives Background On Great  
Lakes Naval Warehouse Which  
Aroused Wide Interest For  
Methods Which Built It For**

# \$5.85 PER SQUARE FOOT

*When Louis P. Corbetta spoke at the concrete conference at the University of Minnesota (see our last issue) his discussion of the construction of three precast concrete warehouses at the Great Lakes Naval Station near Chicago for a cost of \$5.85 per square foot aroused a great deal of interest. We are pleased, therefore, to print here his discussion notes for this talk so those who were unable to attend the conference can see what has been done and what the precast concrete companies hope for the future. Motion pictures of the job preceded Mr. Corbetta's talk.*

You have just seen a good movie of three warehouses built for the Navy at Great Lakes by Corbetta Construction Company this year (1953) between May and October. The buildings were built under two lump sum contracts at a cost to the Navy, including all trades and mechanicals complete, at plus or minus \$5.85 per square foot.

In the first contract of two warehouses, the Navy designed solid poured-in-place rigid frames with ribbed panel roof slabs versus precast hollow rigid frames and the same roof panels. We grossly overrated our competition and thereby succeeded in leaving almost \$300,000 on the table as the amount we bid under the next man on about a \$2,700,000 job; we were the only bid on the precast hollow rigid frames in a nine-bidder deal.

Then to top things off, when the Navy decided six months later to advertise for bids on the third warehouse someone figured out that since the concrete boys around Chicago didn't seem to be so hungry for concrete, then maybe a little competition from the steel companies might be good for the soul—I mean Corbetta's soul.

And who does the designing of the steel building for the Navy? None other than my good friend, Arsham Amirikian, one of the pillars of modern precast concrete design thinking.

Now most designers of a steel truss roof on 22'-6" x 68' centers would be happy if the system came in at 8.0 lbs. per square foot. But not Amirikian, oh no, his steel roof was going to come in light (he wanted to test the precast concrete fraternity's muscles) so his roof weighed only 6.25 lbs. per square foot.

So Bethlehem is elected by the steel fraternity to carry the flag and they came in with 16½ cents per pound or \$1.03 per square foot, this, together with 30 cents for metal deck pans and 20 cents for painting, brought the steel roof in at \$1.53 per square foot. Well, we can't honestly beat that price in a concrete roof structure but in this case, it being a third warehouse, we could do so because we had already charged off our cost for yard plant facilities, etc., in the first two warehouses. So we squeaked through and were low bidder again for concrete. *(Continued beyond insert)*



## Corbetta's Warehouse (Cont'd)

To me it seemed a little silly to think that the Navy made no distinction between the steel warehouse and the concrete warehouse as to relative acceptability. They gave the concrete warehouse no extra value for fire resistivity nor even for relative costs of maintenance in painting through the years. I am happy to tell you, however, that since the warehouses have actually been built, and particularly since the spectacular General Motors fire in Lavonia, the general feeling around the Navy has changed considerably. I think concrete is now definitely preferred and it will probably be specified from here in.

Before going any further may I also tell you that despite the competition, etc., we now can count our shekels and we have made a good honest 12% profit on the sum of both contracts and that is as it should be.

We built almost identical warehouses for the Navy in Mechanicsburg, Pa., in precast Amirikian design back in 1946—seven years ago when structural precast construction was kind of young. We had a lot of fun building them at that time and made a very small profit to boot. But in 1953 there would be little point in repeating the deal if the system could not yield a fair and legitimate profit.

Now, what about costs? I am going to quote our actual costs before profit but including full job supervisory overhead costs of all types and of course including all fixed plant and equipment rental costs. One word about costs—I, personally, have been estimating and analyzing costs all my life. That is 31 years now and the longer I live the more humble I become on the subject. I still am capable of muffing certain items by as much as 25% so I hate to pontificate on the subject BUT, if you will remember that the costs we quote here apply only to the specific Great Lakes warehouses built in 1953 that you just saw in the movies, then maybe we can make sense.

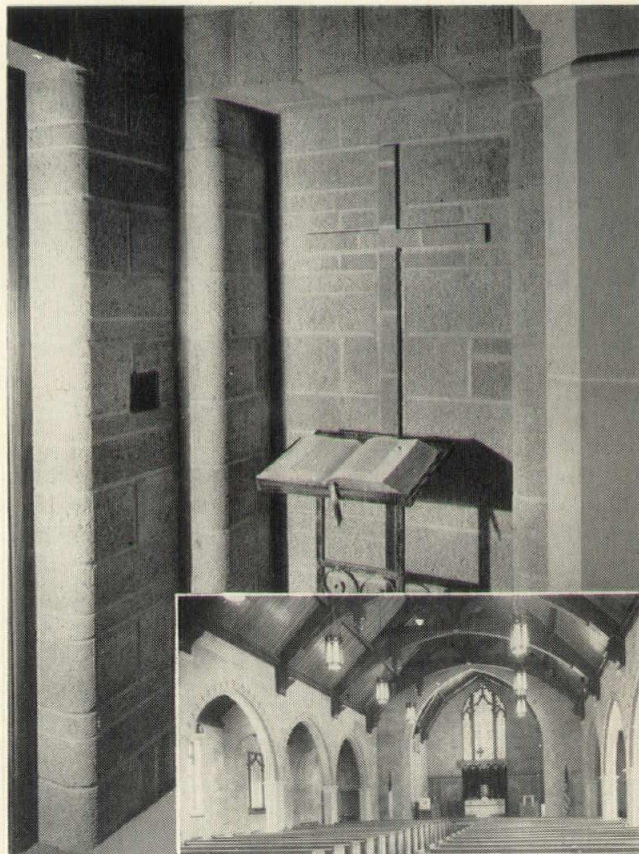
First—the roof slabs, which weigh 31# per square foot and use 1.9# per reinforcing. These cost us to make and deliver on average 1/2-mile haul .....	.602 per sq. ft.
and they cost us to erect and weld in place .....	.060 per sq. ft.
for a total of .....	.662 per sq. ft.
or	\$41.90 per Ton.

Second—the rigid frames, which also weigh 31# per square foot of warehouse and use 18# per square foot reinforcing. These cost us to make and deliver .....	.622 per sq. ft.
and they cost us to erect and weld in place .....	.232 per sq. ft.
for a total of, per square foot of warehouse .....	.854 per sq. ft.
or	\$55.00 per Ton.

(Continued on Page 60)

# WAYLITE

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## ***Three Basic Changes In Progress***

# **Oil from the Dakotas, Montana and Wyoming Adds New Wealth to America's No. 1 Agricultural Market**

### **Oil and Gas**

#### **Basic Development No. 2**

In the Williston Oil Basin of northwestern North Dakota, northeastern Montana, southwestern Manitoba, and southern Saskatchewan, oil men are having new and astonishing experiences. The best posted of them say that never in their experience or knowledge has a new oil area had the success and rapidity of development now taking place there.

The Williston Basin, as now outlined by geologists, comprises 118,000 square miles of territory. As late as January, 1951, this huge geological basin did not even boast one oil well. But within six months, three widely scattered and significant oil discoveries had electrified the oil world. Also, they had impressed oil-development experts that in the Williston Basin another major oil-producing area was being made.

So convincing were these discoveries that soon some of the foremost oil companies had leased more than two-thirds of the Basin acreage, and exploratory work and well drilling in the U. S. portion were under way.

One of the most outstanding facts about the Williston Basin is the high rate of successes in drilling. No other oil-development area has had such a high percentage of producing wells.

#### **Start Toward Big Production**

The discovery well was the only one completed in 1951 and put into production. It yielded 26,196 barrels of superior quality oil. Of the 113 wells drilled in 1952, eighty-nine were completed, and they have constantly produced. The output in 1952 was 1,601,498 barrels. During

the first six months of 1953, ninety new wells were completed and produced in that half year 2,697,671 barrels.

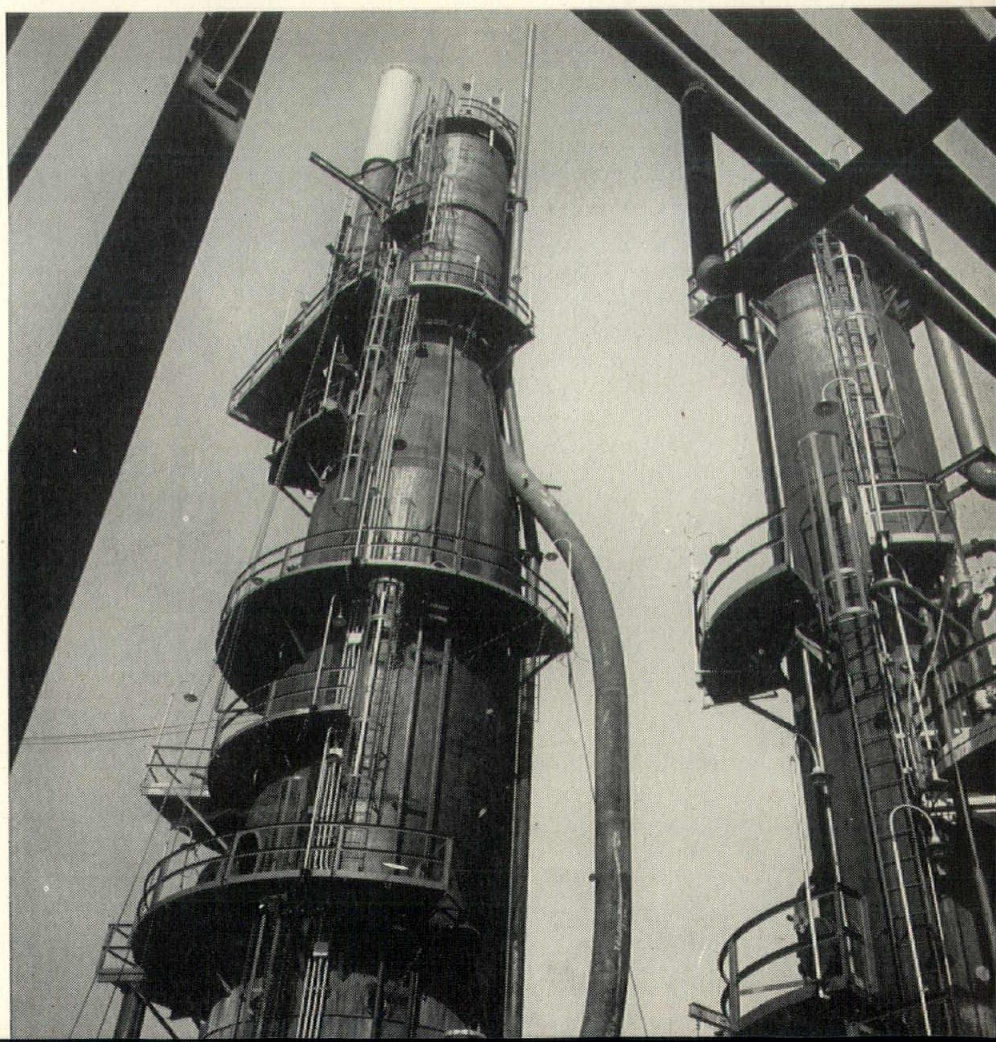
So, the North Dakota part of the Basin has produced a total in that brief period of 4,325,365 barrels of quality oil, and practically all of this in the 18 months of 1952 and the first half of 1953.

In mid-1953, L. H. Hines, vice president of the Northern Pacific Railway Company, in charge of the N. P.'s oil development operations,

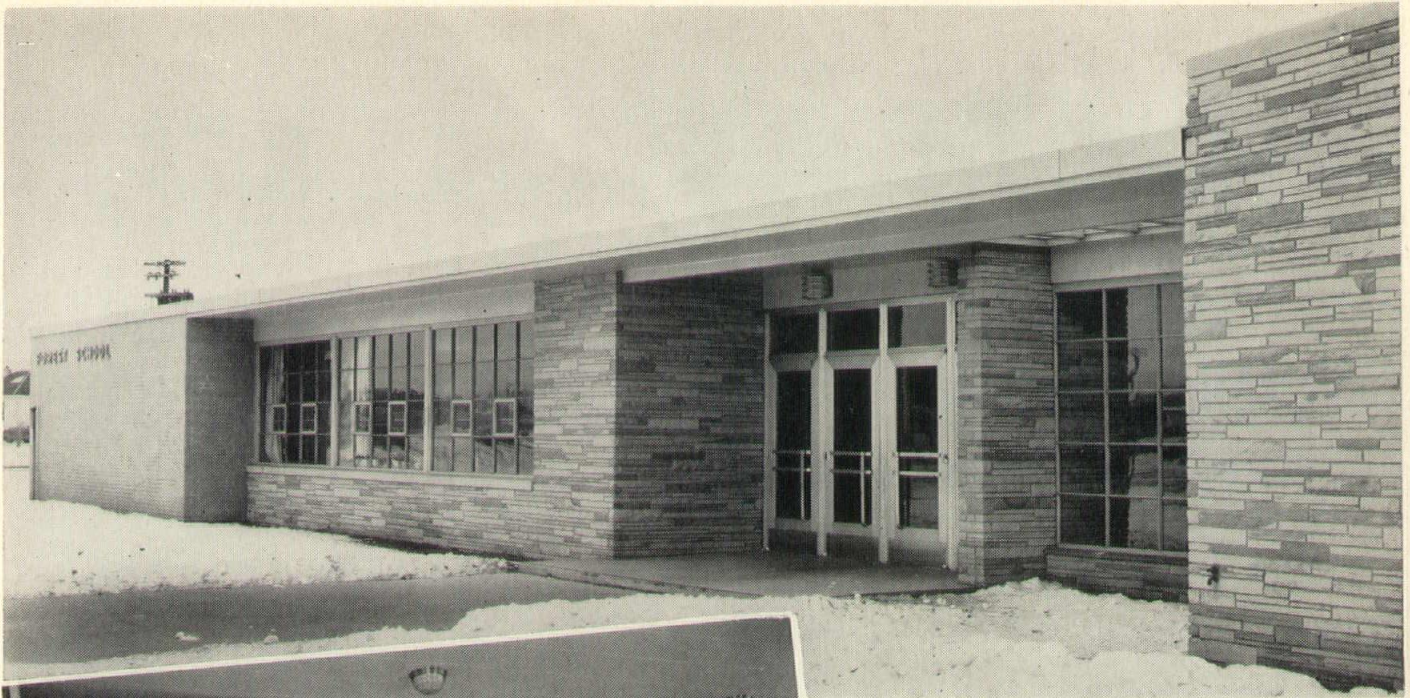
fixed the number of producing wells in Montana at 67, producing 7,300 barrels daily. These, he said, are in 12 different fields. He credited North Dakota with 181 producing wells, in 5 different fields, with a daily output of 15,000 barrels, and limited to that amount by the lack of refining and marketing facilities.

Also, about mid-year, 1953, the Gas & Oil Journal, Tulsa, Okla., announced that 160 more oil wells would be drilled in North Dakota during the latter half of this year.

One of the most modern catalytic cracking units in the country is this at Northwestern Refining Company.







# SOUND SCHOOL PLANNING

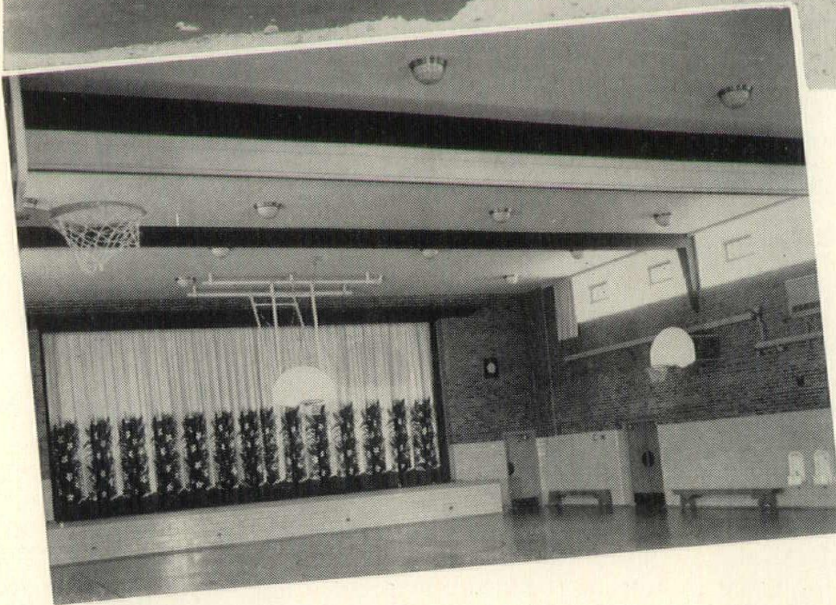
Forest School, Robbinsdale

**Bissel & Belair**

*Minneapolis Architects*

**Peterson Construction Co.**

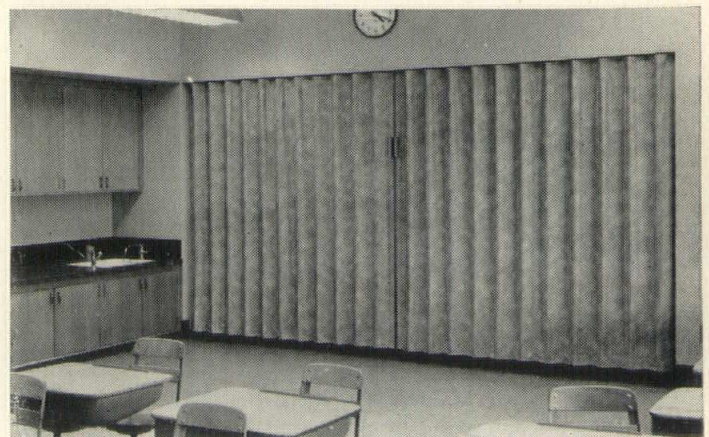
*Minneapolis, Contractors*



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**Insulation Sales Co.**

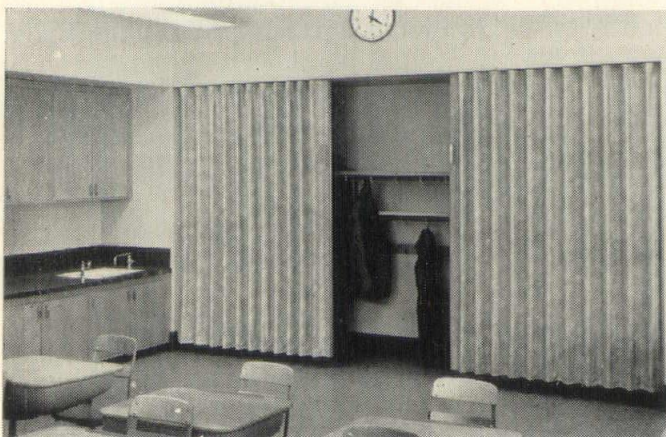
**Acoustical Contractors**



**MODERN FOLD DOORS**

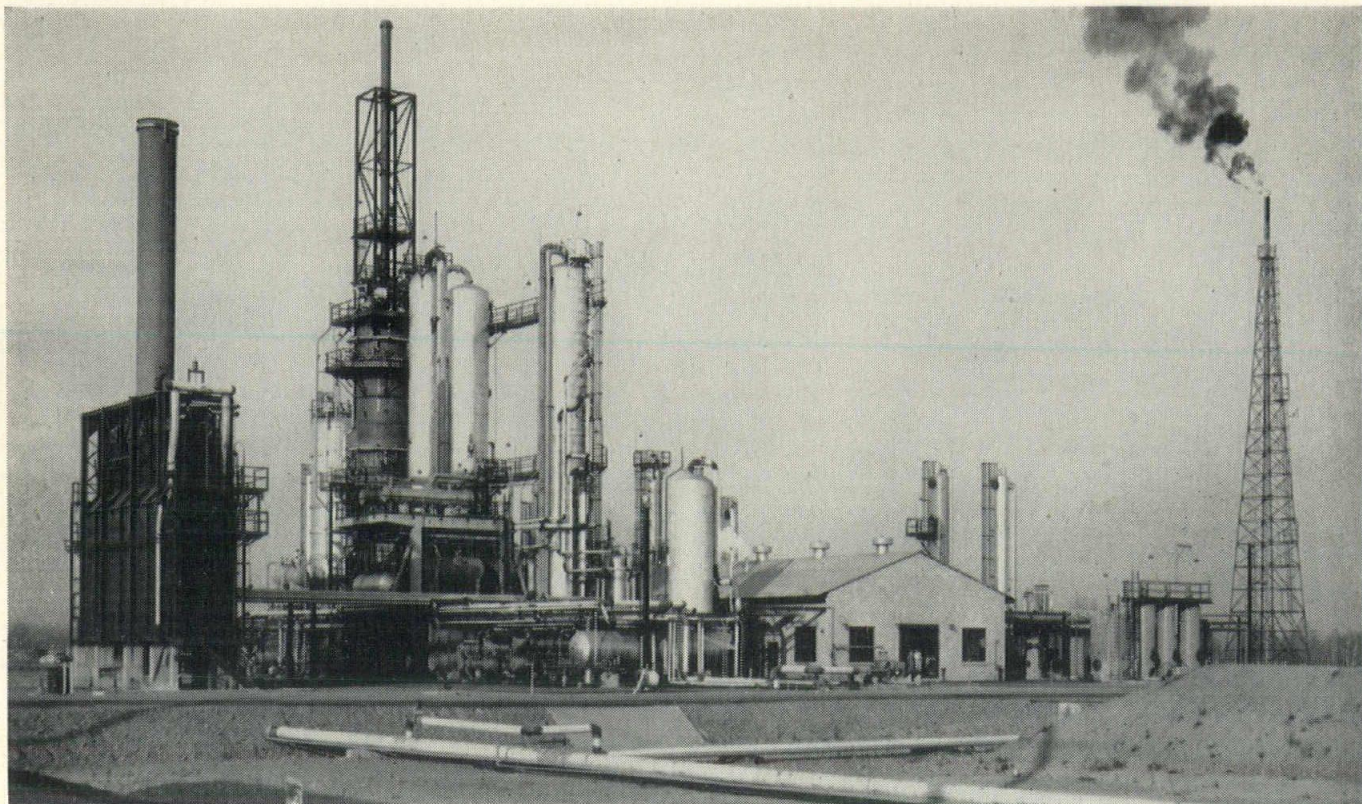
**INSULATION SALES COMPANY**

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Minneapolis 5, Minnesota



ARCHITECT





This is the plant of International Refineries, Inc., at Wrenshall, Minn., just south of Duluth.

While up to now most of the oil production in this area is that of wells brought in by what is termed "independent companies," some of the biggest oil companies and organizations in the country, which have large holdings of leased acreage in North Dakota and Montana, are expected to soon start extensive drilling.

There is much to invite their best efforts, for it is estimated that 2½ billion barrels of oil may ultimately be recovered from the Williston Basin. This estimate is based on yields in other areas of similar character.

#### Marketing Problems Limit Output

Because of inadequate marketing facilities, actual production in new oil areas usually is temporarily restricted, and severely so, by marketing problems. Much of the oil produced in this new area now goes to refineries, by rail and truck, located in such widely separated points as Los Angeles and St. Paul. Building of refineries, converting plants, and pipelines in the upper midwest is now getting under way.

The first pipeline to convey North Dakota's petroleum products to other states was recently completed. It extends from the Mandan (N. D.) refinery of Standard Oil of Indiana

(now being built) to Moorhead, Minn., just across the state line from Fargo. At Moorhead, it connects with the terminal of the Standard Oil's pipeline from Whiting, Indiana. Within the big oil basin a pipeline 205 miles long is being built to bring the crude oil from the Tioga and Beaver Lodge fields to the 30,000-barrel-a-day refinery of the Standard Oil Company of Indiana in Mandan, N. D., which Standard expects to have ready in the fall of next year.

The building of refineries and of new oil transportation by pipe line is just as important in the development of this new oil area as are the new wells which add to the output. For, the long distances from refineries and inability to dispose of the oil are, for the present, limiting production and slowing down drilling.

Increase in the oil refining capacity of that part of the upper midwest close to the oil producing areas is getting under way. In addition to the new refinery of Standard Oil Company of Indiana at Mandan, N. D., across the Missouri River from Bismarck, the new refinery of the Williston Basin Refinery Corporation, at Williston, N. D., is scheduled to be in operation early in 1954.

The 2,000-barrel-a-day refinery of the Queen City Oil and Refining Company in Dickinson, N. D., is under construction.

Also, expected to be operating at about that time is the new gas refinery of the Signal Oil & Gas Company at Tioga, N. D., near which is the big-producing and famous Tioga oil well. Over 130 miles of pipe line have been laid in the Beaver Lodge and Tioga pools of the Williston Oil Basin to bring wet gas for processing to this refinery.

Extensive additions are being built to electric power plants and facilities in the Missouri River Basin area to service the oil and gas enterprises. Giant power lines will distribute the electric current for industrial use over wide areas. Natural gas distribution facilities from the Montana-Dakota gas fields are being increased. Natural gas piped from the Dakota-Montana oil fields may, within a few years, be supplying the fuel needs of the vast taconite iron ore development on Minnesota iron ranges.

Oil refineries in other parts of the upper midwest, located at central points, are scheduled to service the output of the wells of the Williston Oil Basin and other Dakota and Montana fields. A second refinery



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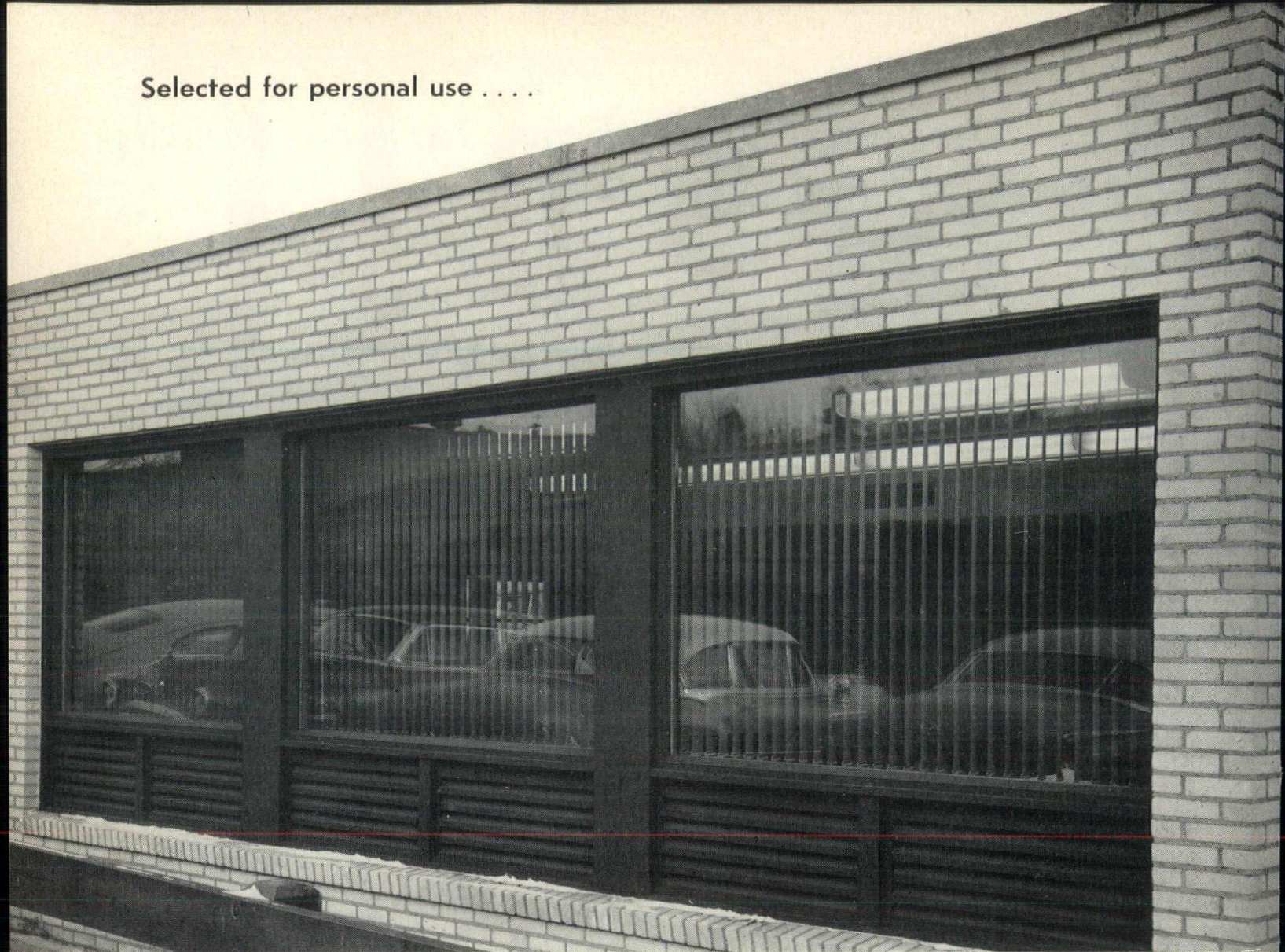
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in the Duluth-Superior area, at the head of the Great Lakes, will be ready early in 1954. One of the established oil refineries, near St. Paul, Minn., is making a large increase in its capacity.

#### Great Activity In 1954

Well drilling, widening of marketing facilities for oil, and increase in refinery capacity are expected to be vigorously active in 1954. New wells, here and there, drilled inside and outside the Williston Basin in Montana and the Dakotas, by foremost oil companies, are now being reported. So far, the locating of the Beaver Lodge and Tioga pools in what is termed the Nesson Anticline to the north and east of Williston, N. D., is the area's richest find. One of the factors favoring increased activity in all branches of oil field and oil-marketing work in 1954 is that steel needed in large quantities for such development promises to be in much freer supply and at more favorable prices.

There is no feverish oil boom on in the Williston Basin country or other parts of the oil producing region. But there is a steady and solid growth of the character which expresses the firm confidence of experienced men that this young giant is about to prove that it is a major oil producing area.

All the characteristics of a new oil country certain that it is finally on its way are present. Cities and towns have swelled in population in the past two, or three years. The city of Williston, the center of the producing part of the Basin, has gone ahead in population and in business and municipal activities in this short period. The same is true of other smaller towns and cities in the region.

All of the outward signs of substantial growth seen in other parts of the country when oil came in a big way are in the Williston Basin. There is a shortage of housing while new buildings are being erected and new real estate additions are being made to cities and towns. More hotel rooms are needed. Transportation facilities are crowded. Parking space is so scarce that car owners are urged, in many instances, to leave their cars at home and travel by bus, train, or air line.

There is nothing of mushroom character about this growth. Everyone in the region talks, thinks, and

acts from the feeling that it has solid legs under it. The impression of this is much the same as one gets at Edmonton, Alberta, Canada, near some of the successful oil development of that province. No one is wildly excited about it, but there is a solid confidence expressed that this is the

start of bigger things. Already, evidence is appearing that the expansion now getting under way will spread through other parts of the upper midwest, and that the new oil region will contribute a big part in shaping the new industrial era in the upper midwest.



This is the oil boom town of Williston, N. D., as seen from the air—a direct beneficiary of the oil finds.

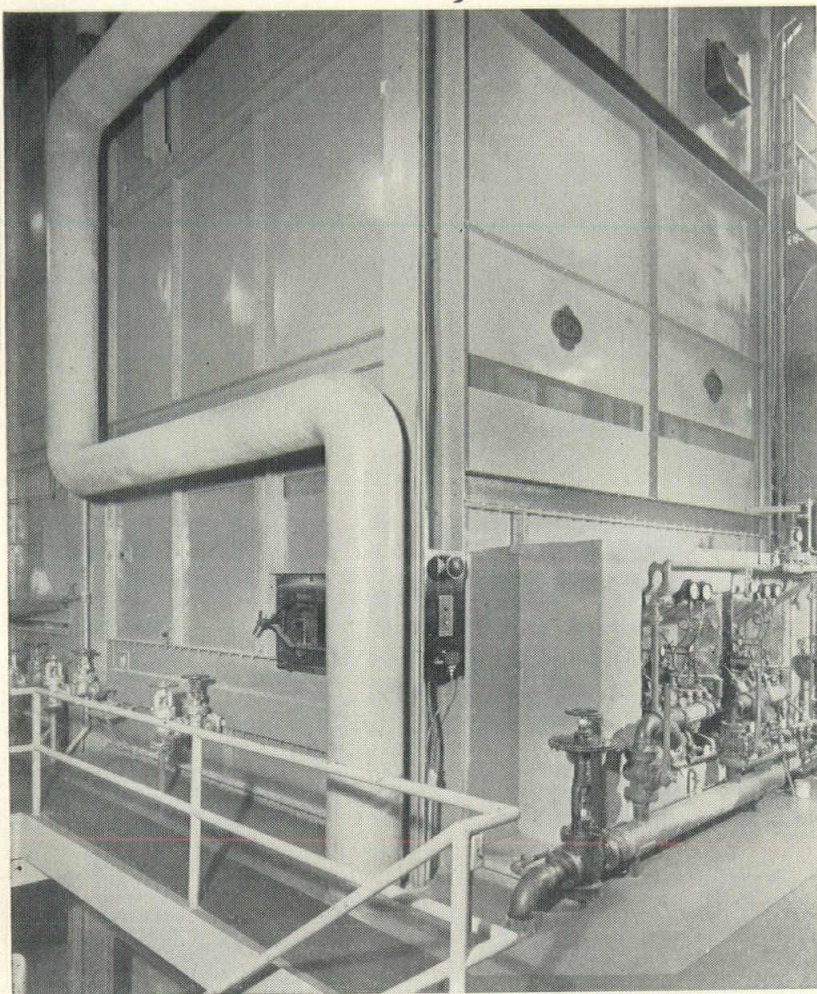


"Oil Capitol of North Dakota" is what they call Tioga. Note the string of oil cars ready to carry out the "black gold."



Northwestern Refining Company at St. Paul Park, Minn., where plans call for processing of 30,000 barrels of crude per day.





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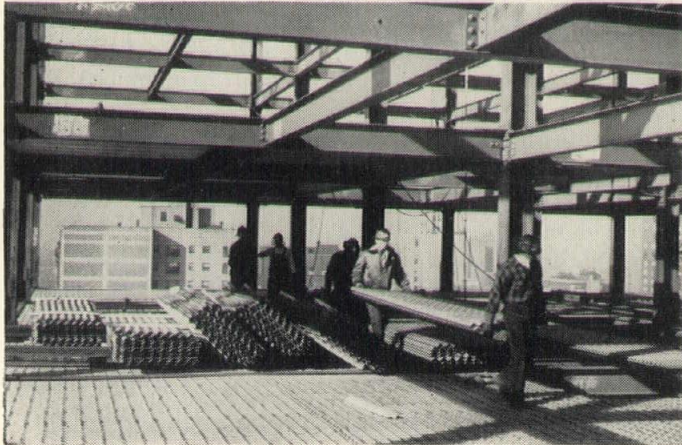
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3. Cofar sheets are welded to the structural framing members. Construction advances quickly, easily. There are no forms to build and tear down and incombustible Cofar eliminates construction fire hazards. Tough, high-strength steel permits Cofar to absorb extreme construction abuse without damage.



4. Placing concrete is a fast operation. The main positive reinforcement is provided by the deep corrugated steel. T-wires welded across the corrugations furnish the necessary temperature reinforcing and mechanical anchorage between concrete and corrugated steel. Result: A safe, high-strength concrete floor.

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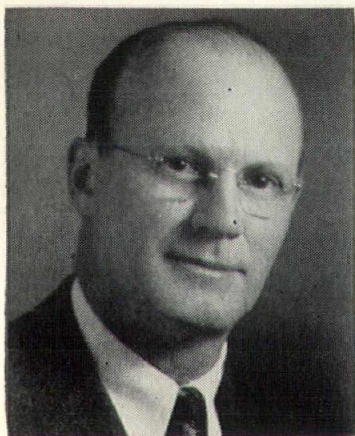
# HERE & THERE

## ZIEGLER CHANGES EXECUTIVE SETUP

A new administrative alignment has been made within Wm. H. Ziegler Co., Inc., which sees W. H. Ziegler, president of the company since its founding, becoming



Mr. Ziegler



Mr. Strand

chairman of the board and former Vice President Orrin H. Strand being named president.

"We are now on the threshold of another era in the construction industry," Mr. Ziegler said when the changes were announced. "It will be an era of intense competition, of great building programs, of endless problems and an era requiring alert men to meet the demands of service to the industry and to the fulfillment of its needs. Because the directors of this organization recognize this, they have appointed new officers to the executive family."

Other changes in the Ziegler administration put William J. Benjamin in as vice president in charge of the construction machinery division, continued Otto C.

Johnston as executive vice president, elevated John M. Abbey, manager of the road machinery division, to a vice presidency, made Merrill E. Olson sales manager of the construction machinery division, brought in Leonard Hoeft as comptroller, a newly established position, and added the duties of secretary to those of Treasurer Astor A. Anderson.

During the company's long and successful career its keynote has been to keep up with the changes of the times. In this it has recently expanded plant facilities and personnel in Duluth, Hibbing, Crookston and Mankato.

## BETTENBURG HEADS VIKING DIVISION

Major General Philip C. Bettenburg, St. Paul AIA and secretary of the Minnesota Society of Architects, has assumed command of the 47th Infantry (Viking) Division of the National Guard.

Gen. Bettenburg, who started his military career as a private in the guard, relieved Maj. Gen. Norman E. Hendrickson, who resigned after 38 years of service as enlisted man and officer in the unit. The change of command was the occasion of a full dress event for Minneapolis and St. Paul units of the division.

Gen. Hendrickson was awarded a gold star in lieu of a second medal of merit in recognition of his years of outstanding service.

## ELECTRIC DOOR DETAILS COVERED BY NEW BULLETIN

Technical and design data on all types of electrically operated doors are compiled in the new Catalog 1000 of the Electric Power Door Co., Minneapolis. Well illustrated with photographs, the eight-page catalog shows doors for warehouses, automatic opening, garages and many special types for particular "problem" installations.

Blueprints, erection diagrams, selection tables and construction features are shown for folding, swinging, sliding, overhead and craneway doors. Necessary hardware and control systems are discussed and the company's engineering service is described.

Copies can be had free of charge by writing the company at 2127 E. Lake St., Minneapolis 7, Minn.

## 1953 SET DOLLAR-VOLUME RECORD IN CONSTRUCTION CONTRACT AWARDS

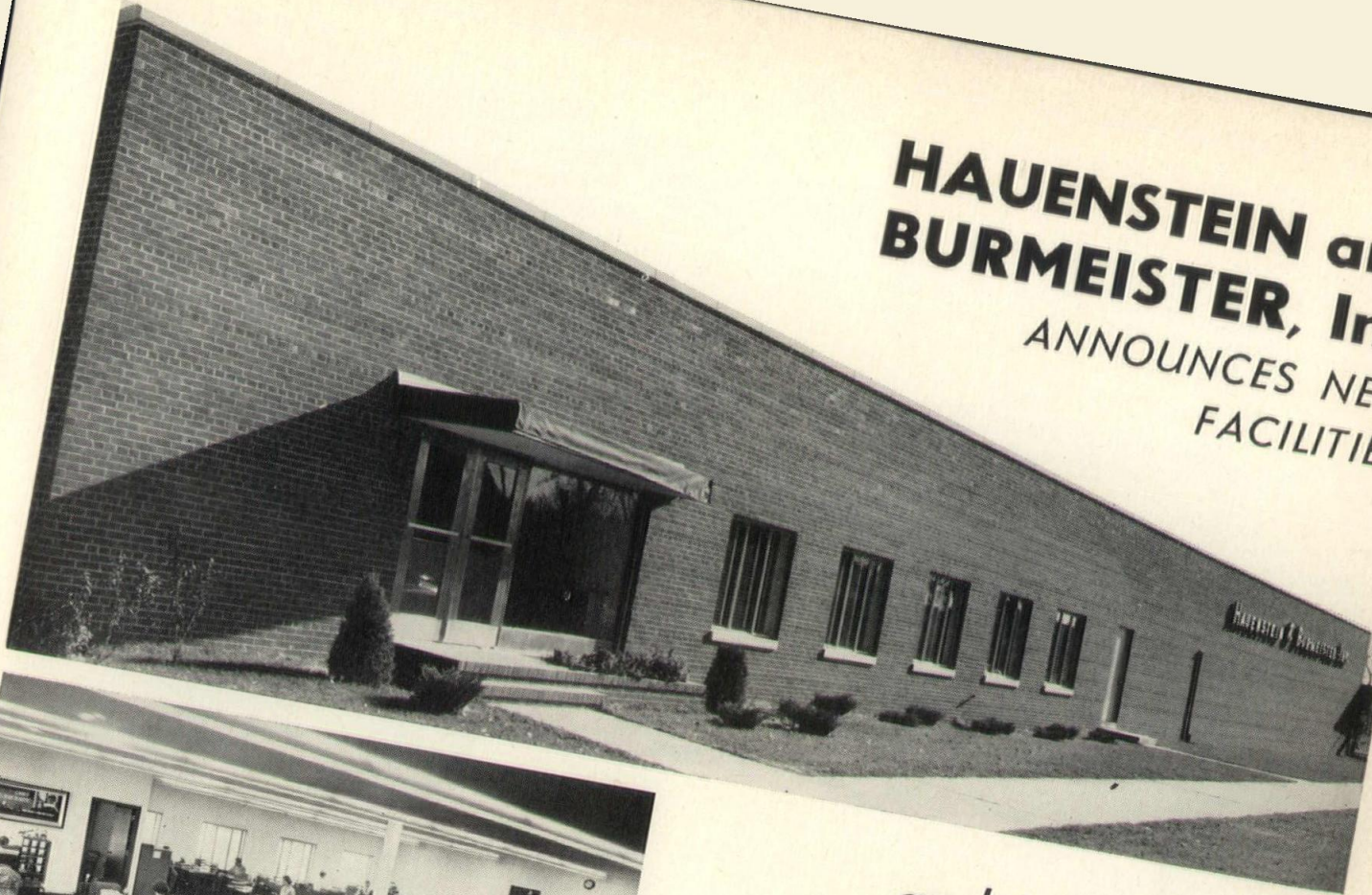
The year just finished set an all-time record for contract awards as its total rose 4 per cent above 1952, previous record year, according to a year's end summary by the F. W. Dodge Corporation. The 1953 total of awards was \$17,443,463,000 for the 37 states east of the Rockies.

The report said that "the large volume of contracts let in the second half of last year indicates that the amounts of current construction activity and work to be put in place during the coming months are very high indeed."

One of the categories showing highest gain was heavy engineering, with a 17 per cent gain over the preceding



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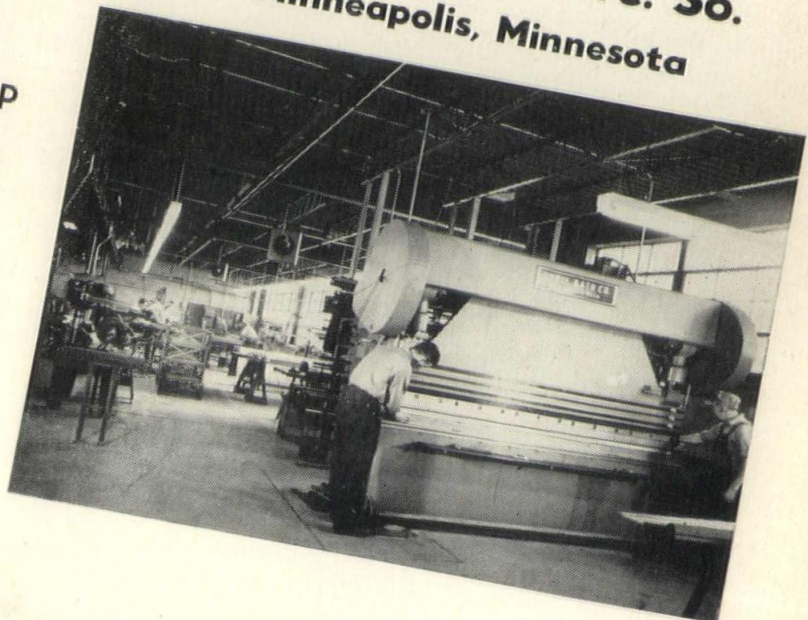
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year. Non-residential work was up 4 per cent and residential was down a moderate 3 per cent.

There is a "near-certain assurance that the first several months of 1954, at least, will continue the record breaking job and sales activity of 1953," the report said, for "the projects now reported will be in process of construction for months to come, well into 1954."

### FLOOR AND WALL TILES NOW MADE OF PIGSKIN

New and with a rich design potential is a floor and wall tile made from pigskin, being marketed under the trade name of Pigs-kin Genuine Leather Tiles, according to Douglas Dunsheath of Insulation Sales, distributor for the new product in this area.

The tiles actually are made of pigskin "from the toughest portion of the animal" and they entered the market in 1953. They are manufactured by Kiefer Tanning of Grand Rapids, Mich., which has been in business for 65 years. The tiles are being distributed nationally and in foreign markets.

The tiles are in two sizes, 4½ inches square and 4½ by 9 inches, in the natural color only as makers believe this rich shade blends with any color arrangement and the skins mellow well with age. Reportedly highly resistant to wear and scuffing, readily cleaned and cared for with a minimum amount of effort, the tiles are laid in an adhesive as are other tiles. The adhesive is a special one supplied with the tiles. The leather tiles can be used on any floor except where there is radiant heating or a high temperature. In case of damage, each tile can be lifted and a new one placed in.

They will not shrink or stretch and can be laid below grade.

The tiles are recommended for both home and commercial installations. Further details can be obtained from Insulation Sales or from the tanner at 240 Front Ave. S.W., Grand Rapids.

### U. S. PLYWOOD CATALOGS SIX NEW ITEMS

Six new plywood products are catalogued for the first time in the 1954 Weldwood Catalog, a 48-page guide to the plywood and allied products produced and distributed by United States Plywood Corporation.

The fully illustrated catalog is being sent to 40,000 lumber dealers, fabricators, woodworking shops and industries. A special additional mailing is being made to all architects.

The six newly catalogued products are Surfwood, a decorative panel with the texture of weathered driftwood; Checkerboard, hardwood veneers laminated in checkerboard effect on a plywood base; Novoply-core panels, veneered hardwood panels with solid cores of the warp-free material; Armoply Chalkboard, a metal-on-plywood material with a writing surface for chalk; and Honduras Mahogany Plankweld, the latest addition to the line of pre-finished "do-it-yourself" wall paneling.

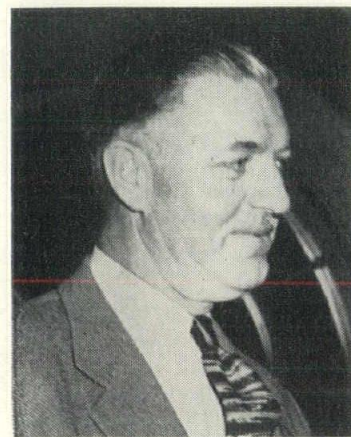
In addition to descriptions, sizes and approximate retail prices for every product in the Weldwood line, the new catalog suggests recommended applications for the many products listed.

### R.I.B.A. GREETINGS RECEIVED BY MINNESOTA SOCIETY

An attractive greeting for the just past holiday season was received by the Minnesota Society of Architects from the Royal Institute of British Architects, being sent to the secretary. The card brought the best wishes of the president and council of R.I.B.A. Its cover was a reproduction of a painting of Sir John Soane, F.R.S., R.A., F.S.A., done by Sir Thomas Lawrence, P.R.A. It indicated again the fraternity of interest which exists among the architects of the two nations

### JOHN McFARLANE, MINNEAPOLIS ELECTED STONE COUNCIL PRESIDENT

John McFarlane of Rich-McFarlane Company, Minneapolis, was elected president of the Stone Council of the International Cut Stone Contractors' and Quarrymen's Association during its recent convention in Wash-



Mr. McFarlane

ington. He succeeded Robert Cradock. Also named to the official list from this area was Thomas Rowatt of Des Moines, re-elected a director.

The threat to stone of the use of metal-skin construction was accented by both the new and old presidents in their talks.

"The prosperous days of 30 years ago when cut stone was the prime acceptable material for major construction are not with us any longer," Mr. Cradock said, "but they can come again if we realize the importance of acquainting architects, engineers and building authorities with the value of building stone."

In line with this, the association approved extensive plans for advertising and promotional work during the next three years. It also announced committees to determine and establish new methods of producing and fabricating stone in an effort to reduce its final cost and new methods of setting and applying stone to reflect current tendencies in architectural design.

Mr. McFarlane is also current vice president of the Minneapolis Builders Exchange of which Lloyd Engelsma is president and S. M. Olson of C. W. Olson Mfg. Co., is second vice-president.



# Lighting for Seeing



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*Information compiled by Lighting Service Section*

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## School Board Conventioneers See Multi-Purpose Room Equipment

Equipment expressly designed for the multi-purpose room in school and similar buildings was studied during the Minnesota School Board Association convention in Minneapolis, February 2-4, when schoolmen visited the new Haldeman-Langford, Inc., factory showrooms in Midway-St. Paul.

Of special interest to them was the new choral riser, whose design allows the mobile and portable unit to be set up or taken down in 15 seconds. It requires little storage space and, when put away, leaves the room ready for other uses. The units are used for standing or seated choral groups and for standing bands.

Also shown were the wall-attached Fold-A-Way table, which converts any space into a banquet area but later folds away to let it be used for other purposes, and the Erickson portable table without benches for rooms which do double duty as lunchrooms, auditoria, etc. This last unit is now distributed internationally, the company officers reported.

In our pictures are (upper left)



Newell Risdall (left) of Haldeman-Langford showing Marshall Thornton of the Nashwauk school board how the table operates; (upper right) Jerry Workman of H-L, Louis Sella, board chairman, and Matt Bergan, clerk, both of Nash-

wauk with the choral riser; (lower left) Morris Weinberger, Nashwauk superintendent of schools, Mr. Bergan, Mr. Sella, Mr. Thornton and Ron Ellsworth of H-L; (lower right) Mr. Ellsworth and Mr. Weinberger inspecting a table's details.

### KNOWING PAINT VITAL TO DESIGNERS AND BUILDERS

The onetime fairly simple problem of paint and painting has been ramified time and again through recent developments of new and different kinds of surfacing materials by the paint industry. A guide which helps the architect and the builder to know what is what today is found in the newly published "What You Should Know About Paint," by E. M. Fisher, who is technical editor of the *National Painters' Magazine*.

The 186-page book, of a size which can even be carried in your pocket, covers the field from outside house paints to the interior moisture and condensation problem. It goes into fine detail about the many factors which affect the use of paint and its dedication should confirm its validity for it is dedicated "to all my fellow chemists . . . who work in paint laboratories." They are the men who should know!

A résumé of the chapter headings gives the prospective user of the book an insight into its contents—outside house paints; color, hiding and pigment properties; white and extender pigments; colored pigments; varnishes; other synthetic resins; latex and water thinned paints; interior surface treatments and primers; enamels, metal protection and lacquers; miscellaneous finishes and mildew protection; the moisture problem.

Copies can be obtained from *National Painters' Mag-*

*azine*, 30 Church St., New York 7, N. Y., for \$2.50. It was published December 15, 1953.

### HEATING AND CONDITIONING FACES GROWING CHALLENGE

As the annual home construction level remains about 1,000,000 units, the heating and air conditioning manufacturers and installers of this country face a growing challenge, according to E. J. Gossett, president of Bell & Gossett Co., Morton Grove, Ill.

Development of baseboard radiation and radiant heating in modern homes has opened up new markets, he said. Development of other new and improvement of existing types of heating and cooling will be made as the industry keeps step with building requirements. Mr. Gossett pointed out his company, like so many others, depends heavily on research and product development to keep it expanding and addition of new products means more domestic and export possibilities.

Bell & Gossett also handle irrigation and oil equipment and are active in the electronics field.

Don't you agree that men who try to do something and fail are worth more than those who try to do nothing and succeed?



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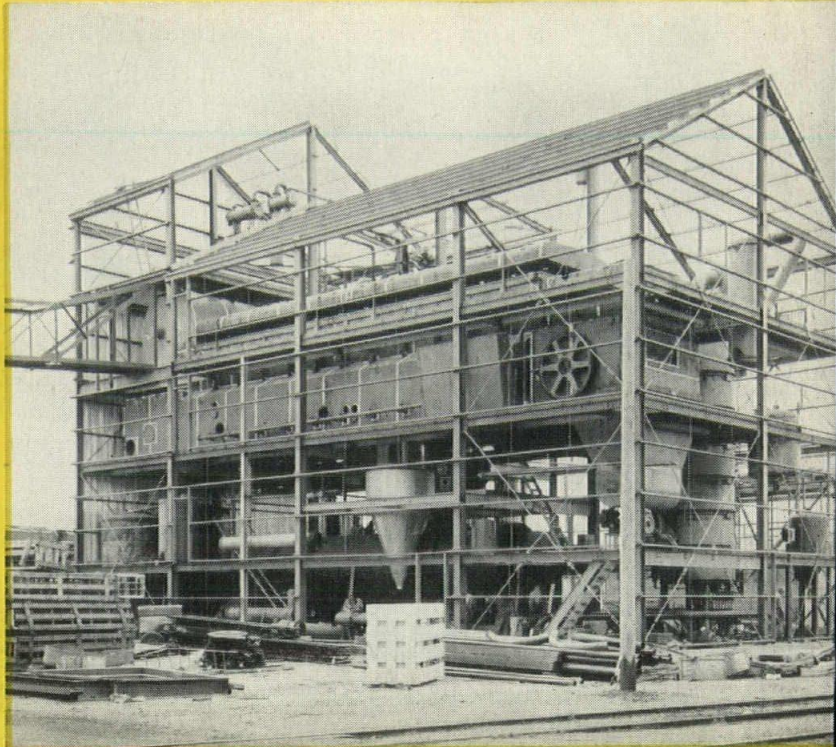
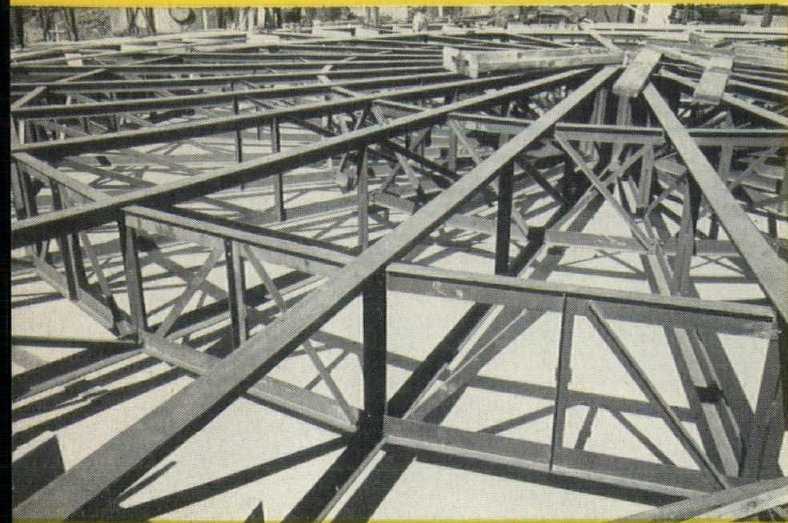
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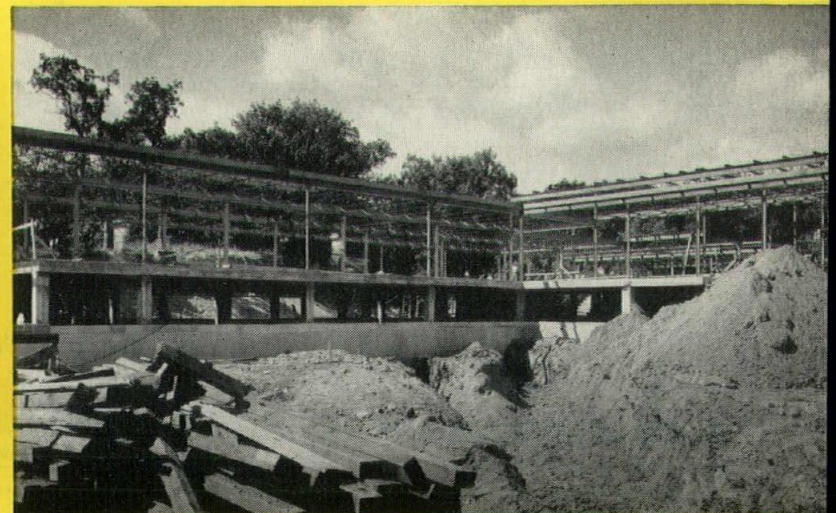
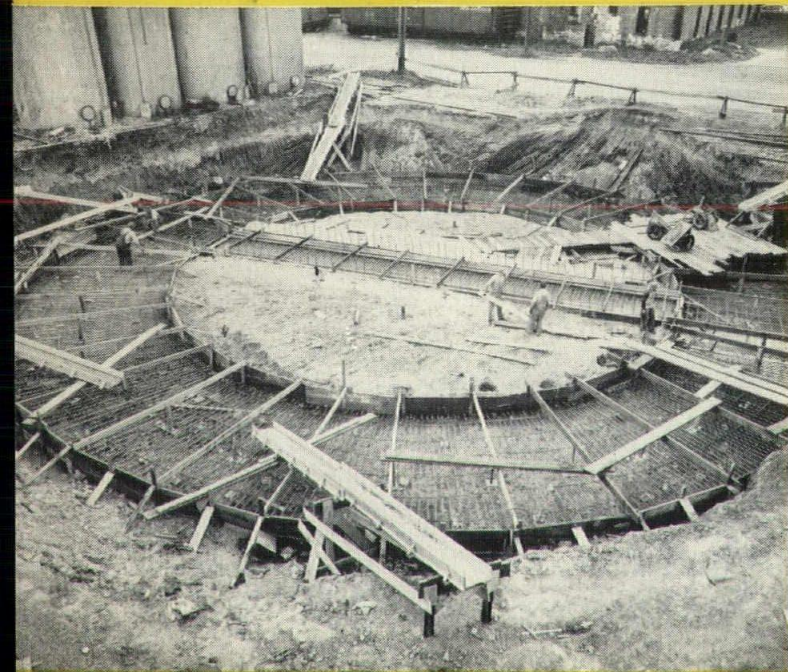
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# *They're all going up*



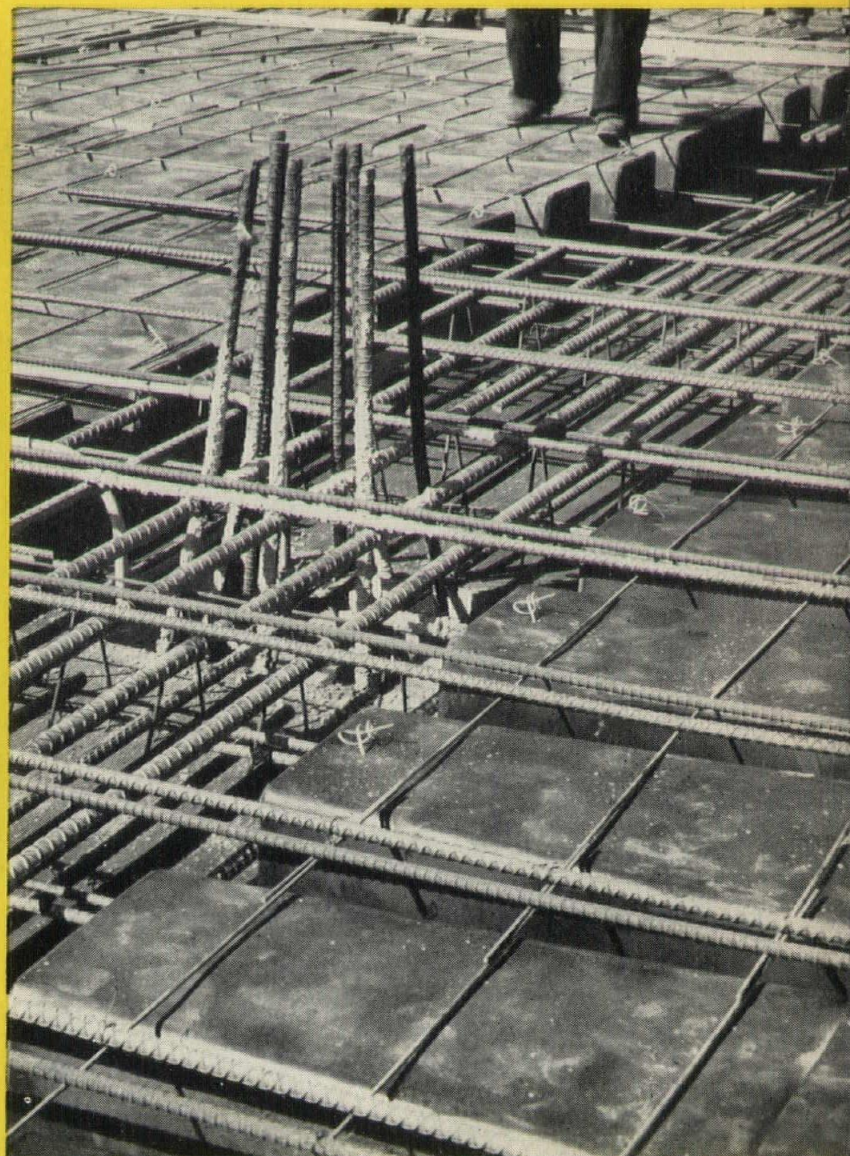
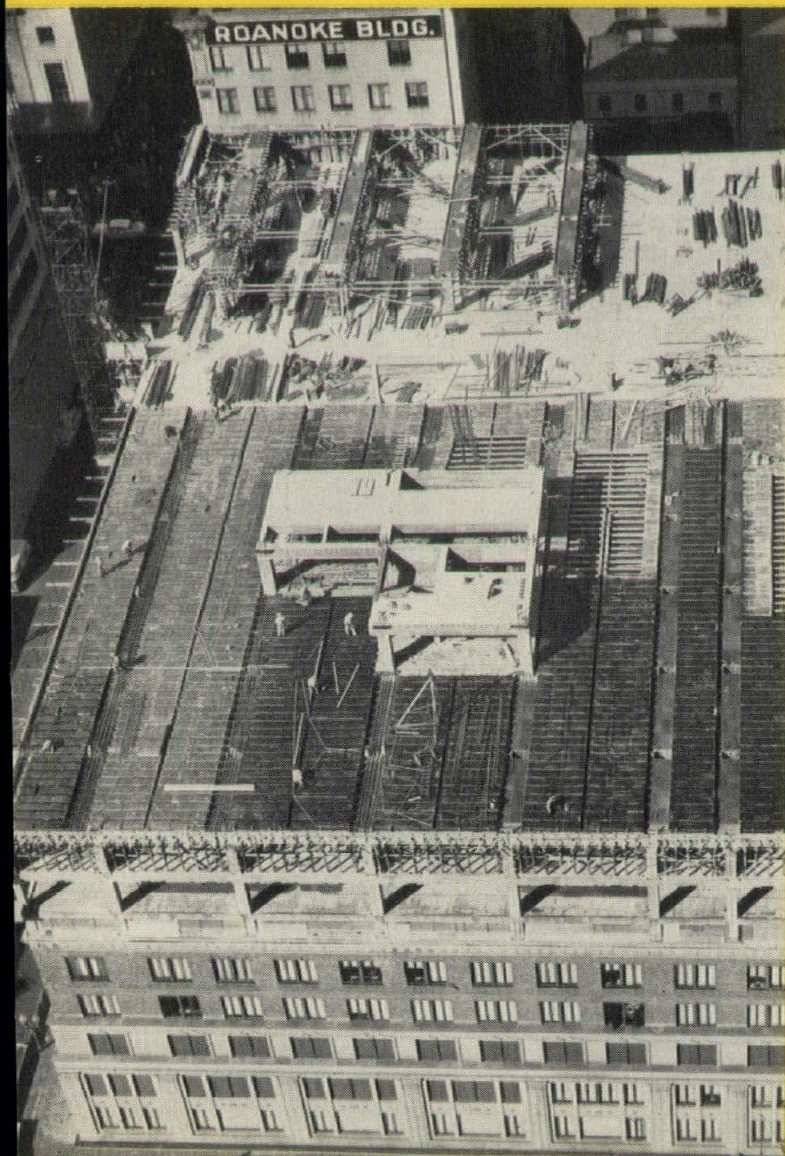
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# ARCHITECTS and ENGINEERS

By DALE R. McENARY, F.A.I.A.

McEnary & Krafft, Minneapolis

*(The following remarks were made at a meeting of the Minnesota Association of Consulting Engineers as an introduction to the evening's discussion of "Fair Practice Proposals Concerning Architects and Engineers.")*

The art and science of building is as old as man. Though there may have been no necessity for Adam to have done any building in the Garden of Eden, it is certain that when he was cast from Paradise he and his family soon had to build some kind



Mr. McEnary

of shelter not only for their comfort but for their protection as well.

In those days out of memory certainly no one gave a thought, when erecting what structures they had, as to whether he was an architect or engineer—he was just a simple builder. As time went on, however, civilization became more complex. A cluster of families became a village, villages grew into cities and within such areas there arose a demand for larger buildings, some to house certain individuals more commodiously, others to serve as meeting places for large groups of people, theaters for their pleasure and amusement and temples for expressing their religious aspirations. The responsibilities in connection with these larger buildings called for specialists. They were the master builders of their time, the architect and the engineer both—and without differentiation.

Egyptian hieroglyphics inscribed about 3500 B.C. tell us that a man named "Thy" was "the royal builder and manager of pyramids for the 5th Dynasty." About 3000 years later the Greeks had their word for a master builder. Literally translated it means "chief workman." In English we pronounce it "architect." At this point history speaks of Ictinus and Kallicrates as the architects of the world famous Parthenon in Athens, built about 450 B.C.

The names of the master builders of the Roman Empire seem to have been suppressed in favor of the names of the Emperors who caused the buildings to be erected for history does not record the names of the great builders of that age. You hear of the Baths of Caracalla and those

**SPECIFICATIONS**

ARCHITECT

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
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2	8' x 12'			
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of Diocletian, the Arch of Constantine, etc., but no mention of their "chief-workman" or "architect." Later, however, in the Italian Renaissance, the individual "architect-engineer" seems to come into his own. But such a designation does not appear until nearly the 14th century. It apparently was not until then that the architect in his specialized field of endeavor raised himself to such stature in the eyes of society that he became a definite person of recognized skill, imagination and artistry.

We know that Brunelleschi was architect for the great Duomo of Florence in 1420, that Bramante and Michelangelo were among the architects for St. Peter's in Rome. Sansovino and others of the 15th and 16th centuries were referred to at times as "military-engineers" as well as architects. From this we judge that the design of battering-rams, catapults and fortifications was somewhat of a specialized field for a few, even though the same men also designed many fine buildings for the more pleasurable pursuits of life.

These architects of the Renaissance in Italy and elsewhere in Europe were among the really great men of their day. Many of them would be recorded in history for their paintings, frescoes and sculptures alone even without their architectural and engineering accomplishments.

#### We Approach Today

Coming a little closer to the present we read of Dr. Thornton, Hallet and Latrobe as architects of our National Capitol, of Bulfinch, famous for his Boston State House, and of Thomas Jefferson as architect of the University of Virginia, all in the early years of the 19th century.

From this we see that the architect-engineer as a master builder has come down to us through the ages as a single individual until nearly the middle of the 19th century. In other words, it is only two or three generations ago, or fewer than 100 years, that engineering as we recognize it today became a profession practiced independently of architecture. The architect-engineer as a team is a rather recent development.

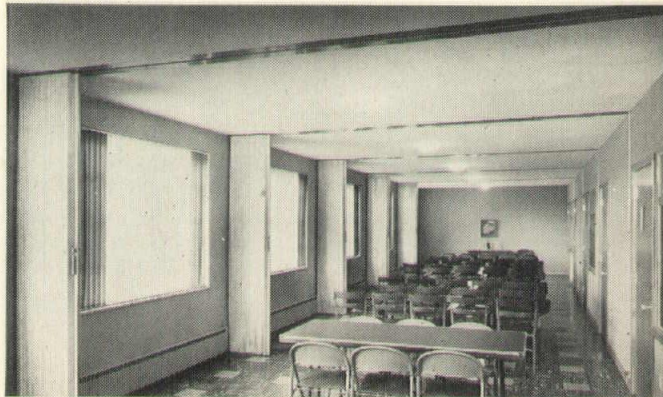
The reason for this is not complex. It is simply the result of the

ARCHITECT

# 1 Problem

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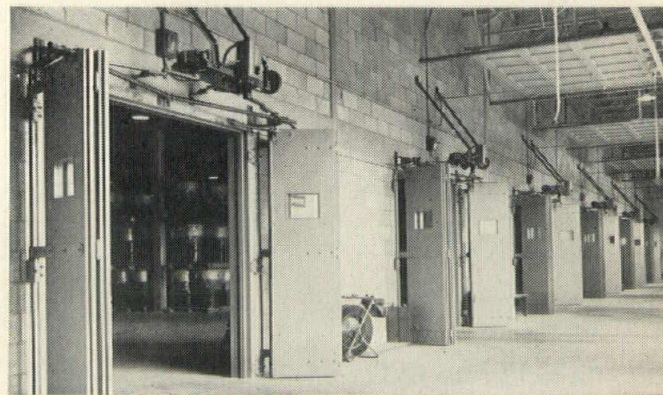
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tremendous technological progress the world, and particularly this country, has made during these relatively few years in the development of materials and methods of handling them.

A single individual, as an independent practitioner, either in architecture or engineering, cannot possibly have within himself all the knowledge and the tremendous amount of information necessary to give an owner the kind of a structure he should be given by our professions today and I do not care

what kind of a structure it is be it church, courthouse, school or a simple warehouse.

This now brings us up to date and to our real subject, "Architects and Engineers." Architecture today is a profession, a business, an art but an art which should appreciate the sciences. Engineering today is a profession, a business and a science but a science which should appreciate the arts. This being so, the architectural and engineering professions are really very close together and it takes both the professions working side by side

to produce a well planned, designed, equipped and a properly functional modern building.

The earlier references to engineering were mainly intended to imply structural engineering and despite the ingenious methods of the Romans for supplying and heating water for their great baths there was little or no mechanical engineering then as we know it today so of course "structural know-how" was by necessity a fundamental part of the knowledge of the early master builders. Now, however, the heating, plumbing, ventilating, air-conditioning, electrical engineers and others are becoming more and more important and are as necessary as other construction specialists to all good modern building projects.

#### Mechanical Work Big Item

The American Society of Mechanical Engineers compiled some figures a few years ago which at that time showed that 28.65% of the cost of a \$250,000 school house, 23.82% of a court house, 18.76% of a warehouse, 22.9% of a 200-bed hospital and 20.91% of the cost of a home for the aged was for mechanical work alone and you know that these figures usually run much higher today.

From this it is evident that the mechanical engineering design is a very important percentage of the cost of any modern building. The architect must therefore select with the greatest care the man or organization that is to design so much mechanical equipment and supervise its installation.

Some clients, particularly the government, stress the importance of a single responsibility in contracts with the designing professions. This may be due to past experiences where engineers and architects under separate contracts tried to take advantage of one another or the client but, where there is mutual confidence and understanding among the architect, engineer and client it should make but little difference in practice how the contract is written as long as the architect and engineer both realize that their sole duty and obligation is to their mutual client.

There are both architects and engineers, sad to say, who are not willing to meet their co-designers on an equal basis. Such persons are usually so impressed by their own ability that

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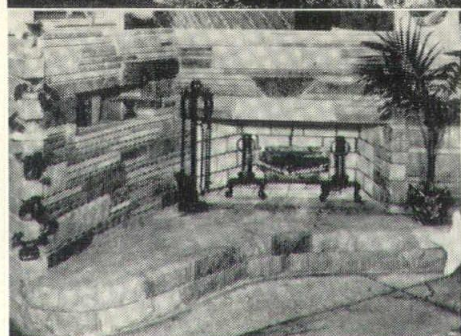
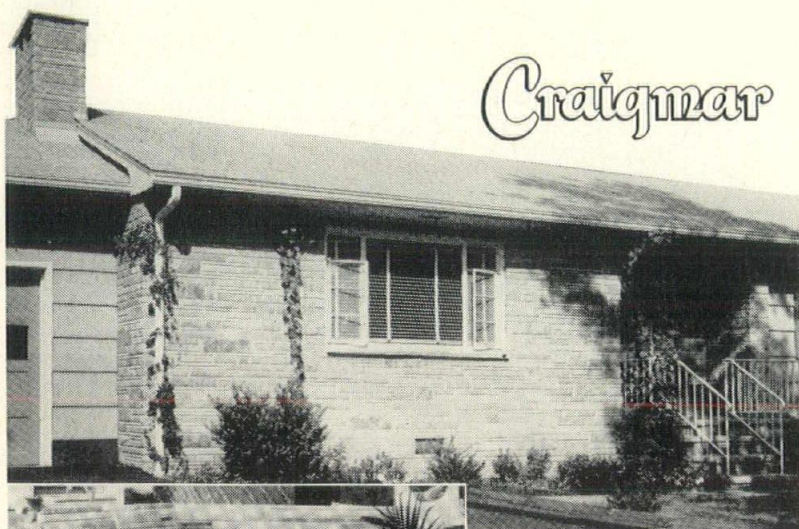
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they are a menace to their respective professions as well as to their clients. About all that can be done with such people is to avoid them once you have found them out.

In these times architects and engineers are definitely co-designers. The abilities of each are required for the success of the other and for the success of the job, no matter how simple. Modern times have produced few men, if any at all, who can truthfully lay claim to being an outstanding architect and engineer at the same time.

Without dimming in any way the accolade I would give the engineering professions, it is my belief that architecture is the only profession today in which education and practice combine to equip its members for wide *generalized* thinking and planning in the arts, in the science, in financing and in purely utilitarian matters as well. Therefore, if the architects are to maintain the position for which their training has fitted them, they must not slip back into the groove of specialists in archeology which has so little direct application to the living and working requirements of today.

To build for today the architect needs the engineer and the engineer needs the architect. Neither should try to perform the functions of the other.

Perhaps now we should mention our very good friend—the client. He is the real boss and the man for whom both the architect and engineer should give their best. It is the client who retains us to spend his money almost as though it was our own and because of this we should be just as careful as if it really was ours. The trust and responsibilities given us must be carefully guarded and carefully preserved.

It is in relation to the client's problems that the architect-engineer team must work most closely together. There are projects, such as power houses, heavy industrial plants and the like, where engineering and purely utilitarian features must and should take precedence over esthetic considerations. On the other hand, in buildings of the more monumental types such as government buildings, court houses, libraries, churches and the like, esthetics must be given every

ARCHITECT



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proper consideration to insure the expected pleasing result but by this I do not mean that all utilitarian features must always be concealed. In case of conflict, compromise is the usual way out but this is always possible with reasonable men who have the proper mutual confidence and respect for the other's work and the interest of the project at heart.

We both—the architect and the engineer—in rendering professional service, are retained to approach our client's problems on the basis of experience and research. Each problem should be considered a new one and should be solved as a separate challenge and not as one similar to another we have just done. This

is the difference between professional service and the mere merchandising of standard details and empirical formulae.

From all these generalities, what may we conclude? Perhaps these four simple facts:

1. It takes both the architect and the engineer today to erect a satisfactory modern building, no matter how simple.
2. If the architect has the prime contract, he should employ the proper engineering services.
3. If the engineer has the prime contract, he should employ the proper architectural services.
4. Both the architect and engineer should work together for the

common good of the project at hand in the sole interest of the client.

It is as simple as that! The question is, however, "What are we doing about it?"

### DECIMAL EQUIVALENTS AT YOUR FINGER TIPS

South Bend Lathe is offering a new red and black decimal equivalent card which is a handy reference unit. The chart, measuring  $3\frac{3}{8}'' \times 5\frac{1}{2}''$ , lists decimal equivalents of fractional parts of an inch to six places. It will be mailed free on request from the South Bend Lathe Works, South Bend 22, Indiana. Just ask for decimal equivalent card.

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**MAKES MORE INTERIOR  
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INSULATION ENGINEERS, INC.**

Exclusive Distributor  
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### ACOUSTICAL TILE OFFERS STRIATED VARIETY

A new, non-combustible Stria Acoustical Tile has been announced by Owens-Corning Fiberglass Corporation. Low in cost, with exceptionally high acoustical values, the new tile face presents multiple striations or grooves, permitting great variety in ceiling patterns. The surface of the tile has a pleasing, soft-appearance which blends tastefully with modern or traditional interiors. It reflects more than 75 per cent of light striking it and affords installation in numerous decorative patterns.

Available in 12 x 12-inch and 12 x 24-inch sizes, Stria has a noise reduction coefficient up to 80 per cent. The tile is composed of fine fibers of glass compressed into boards which contain countless tiny air cells. Sound waves are trapped in the highly porous surface. The tile may be spray painted as many as eight times with a non-bridging water-base paint without affecting its noise reduction efficiency.

Stria, like other Fiberglass sound control products, is dimensionally stable, fire-safe, will not rot, absorb or give off odors.

NORTHWEST



## GEORGE SCHNURR IS NEW SCPI PRESIDENT

George Schnurr, Kalo Brick & Tile Company, of Fort Dodge, Iowa, was elected president of Structural Clay Products Institute's Region 6 at the annual meeting in December in Des Moines. He succeeded A. C. Frisk of Mason City.

Walter M. Ochs of the A. C. Ochs Brick & Tile Co., Springfield, Minn., was re-elected vice president and C. A. McKay of Ottumwa Brick & Tile Co., Ottumwa, Iowa, was elected secretary-treasurer.

## MACARTHUR COMPANY TO DISTRIBUTE REYNOLDS ARCHITECTURAL ALUMINUM

Appointment of MacArthur Co., St. Paul, as a distributor of Reynolds architectural aluminum has been announced by Reynolds Metals Company.

MacArthur will warehouse standard extruded architectural aluminum products such as thresholds, hand-rails, window sills, copings, gravel stops, standard extruded angles, channels, rectangles, tubing and pipe. In addition, the firm will carry plain flat sheet products as well as sheets in some of the various embossed patterns.

MacArthur Company is equipped to provide prompt service and technical assistance on these products, the announcement said.

## PORCELAIN ENAMEL PANELS SHOWN IN BOOKLET

Actual installation jobs and details of porcelain enamel panels' use in architectural design are covered thoroughly in a new booklet released by the Davidson Enamel Products, Inc., and can be had from the firm's Department F-53 in Lima, Ohio.

Available without cost, the booklet features a story of a 10-year study by a national chain store which proves the value of a planned modernization of facilities. Photographs are used throughout to illustrate points discussed.

Those who keep on sawing wood in all kinds of weather are the ones who have the largest woodpiles at the end of the season.

ARCHITECT

## FROM WATER SHORTAGE TO OVER 720,000 GALLONS PER DAY

Worthington, Minn., long plagued by a serious water shortage, is now boasting an ample supply of more than 720,000 gallons per day. For years, residents of Worthington suffered the effects of water shortage, particularly during the summer months. In addition, the water available was extremely hard.

After several attempts to secure an additional supply had failed, the Layne-Minnesota Company of Min-

neapolis was called on to conduct an exploratory survey. After a study of underground conditions and test borings, Layne engineers selected a site about one mile southeast of the town where the first Layne Gravel Wall Well was installed. The desired water was not only found in ample supply but was much softer and of a better quality. Two additional wells were immediately installed in the same general area, which have resulted in a total supply of over 720,000 gallons per day.

Each of the wells has a 16-inch



J. E. Neville  
Regional Director  
Ames, Iowa, Office



Donald Ness  
Field Engineer  
Ames, Iowa



Allen D. Hauge  
Office Engineer  
Ames, Iowa

## EVER FEEL LIKE CALLING FOR HELP?

The next time, do it! Call on SCPI. The leading clay products manufacturers in this region maintain in SCPI a trained staff of competent engineers to help you do a better job in selling brick and tile and clay drain tile. SCPI also makes available sales and technical literature, free dealer ad mats, radio copy, and numerous dealer helps. In addition more than 7,000 new prospects are turned up each year by SCPI's consumer advertising and relayed to interested dealers. Service to dealers is SCPI's job.

### Just glance at this list of SCPI dealer services:

- Field Engineering
- Plan Service
- Ad Mats
- Advertising
- Clay Products Dealer
- Sales Literature
- Technical Literature
- Displays

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Region 6

Ames, Iowa

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Chillicothe, Missouri



diameter, stainless steel screen, five feet long, and the casing of each well is completely cemented-in against all undesirable infiltration. Five thousand, four hundred feet of pipe-line were laid connecting the wells to city mains.

The great gift of conversation lies less in displaying it ourselves than in drawing it out of others. He who leaves your company pleased with himself and his own cleverness is perfectly well pleased with you.

—Jean de LaBruyere

## ***Yours Is the Burden of Proof In Tax Reports***

*The following article originally appeared in the New Orleans Chapter A.I.A. bulletin under the byline of Leonard Glade, CPA. Its importance at this time of year to architects goes without saying and our reprinting is with many thanks to the original author and publishers.*

All types of businesses and professions are required, by the Internal

Revenue Code, to keep permanent records of their business transactions. By books and records, the code does not mean informal notations, receipts, invoices and check stubs. It requires a systematic set of records, whereby income and expenditures are properly recorded so as to accurately state the taxpayer's net income. The pitfalls of faulty records are many.

If inadequate records are kept by a taxpayer, the Commissioner of Internal Revenue may determine the net income from whatever records are available. This may be done by computing the increase in net worth and adding thereto all non-deductible expenses such as federal income taxes paid, personal expenditures, living expenses and gifts. Or as an alternative, the commissioner may add all the deposits made in the taxpayer's bank account and claim this as the income.

In any event, without adequate records, the determination of net income made by the Internal Revenue Service will, in all likelihood, exceed the actual net income by a considerable amount. The commissioner does not have to prove that his determination is right, in that under the law there is a presumption that the government is correct. The burden of proof is upon the taxpayer to prove that the commissioner's determination is incorrect. In most instances, this can best be done by maintaining adequate books and records.

The records to be kept need not be elaborate or complex. For most architects, proper record-keeping can be accomplished by use of a receipts journal, to record all receipts and their sources, and a disbursement journal, to record and classify all disbursements. In addition to the journals, there should be retained all invoices, cancelled checks and contracts to support the entries made. Records should be kept up to date on a daily or weekly basis, for which all concerned will be thankful come March 15.

When a firm of architects has a number of jobs in progress at one time, it is imperative that adequate



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convenient  
economical**

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### **WOOD FOLDING DOORS**

With ordinary swinging doors, closet corners are hard to reach. Pella Wood Folding Doors give access to all available closet space. Instead of sliding or swinging out, Pella Doors fold back compactly. Ideal for closets, between kitchen and dining room, in bedrooms, between living and dining area. 3 standard paint colors, natural wood finish or unfinished. A complete packaged unit. Anyone can install. Economical... compare with prices on other doors.

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detailed records be maintained. By detailed records we mean cost records for each job, including an allocation of overhead expenses. This cost data is invaluable in that it will reveal which jobs are profitable and which are not. In addition, if these records are kept on a current basis they will serve as a timely warning to investigate jobs on which costs appear excessive and perhaps forestall a loss. Our experience has shown that architects, with this information, can save considerable sums of money.

It is important that the cost records be reconciled with the expenditures as entered in the general books. If this isn't done, errors made in recording the costs by jobs are not discovered, which can result in a completely false feeling of security on jobs which are actually losing money.

As architects depend on their personal contacts and reputations to obtain clients, they spend substantial amounts on travel and entertainment. These expenditures are usually of such a nature that it is difficult to obtain receipts to substanti-

ate the deductions as a business expense. In this connection, accounting records are invaluable. The architect can be reimbursed for these expenses by preparing an expense voucher which should state who was entertained, when and where. If the expense was for travel, the date and itinerary should be shown.

In recent months the United States Internal Revenue Service has adopted a very strict attitude on deductions for travel and entertainment. They are requiring positive proof of the deductions and they have had the complete support of the United States tax courts.

As many architects work over a long period of time before they receive any recompense, there has been provided, in the Internal Revenue Code, a relief provision so as to ameliorate the income tax hardships of receiving a large single fee in one year. The progressive surtax rates make the total income tax on a large fee received in one year for services rendered over a period of years heavier than the total of the income taxes that would have been paid if the fee

had been received proratably over the years the work had been performed.

The Internal Revenue Code provides that if the work was for (1) personal services, (2) was spread over a period of more than thirty-six months and (3) at least eighty per cent of the total compensation was received in one taxable year, then the individual can compute the tax on this income as if it had been received proratably over the term of the work. It is important to note that all three of these requirements must be satisfied.

To obtain the benefit of this section of the law, it is essential that the date the work began be incontrovertibly established. This can be done by contracts, correspondence and testimony of people familiar with the job. The tax courts will recognize that work can begin prior to a formal agreement.

It is also important that the termination date of the contracted work be established. Receipt of payment does not in and of itself prove that the work was finished at that time; an advance payment may have been

Another  
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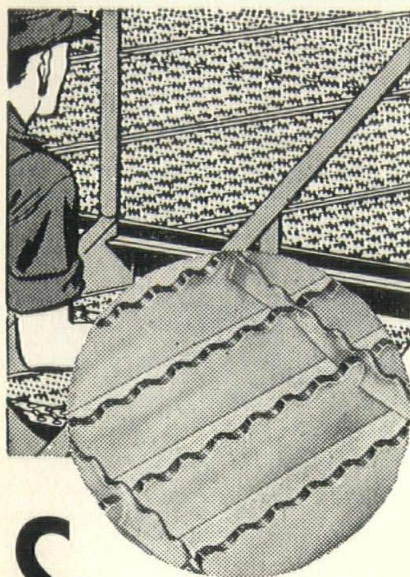


**DRAKE MARBLE COMPANY**  
Saint Paul — Minneapolis



received. Even though payment may be received in one year and the work may be finished in some future year, the fee may still be prorated under section 107 of the Internal Revenue Code. The income for the future period is considered to be deferred income and is included in the subsequent year's income tax return.

It is vital that at least eighty per



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cent of the total fee for the work be received in one taxable year to obtain the relief benefit of section 107. In this connection, the eighty per cent is computed on the total fee received even though a portion of it may be received in a future year.

### CALCULATOR FIGURES AREAS AND VOLUMES

Introduced as a unique time-saver is the new "Morton's Area and Volume Calculator," which, operating like a slide rule but reading like a table, gives areas or volumes to the nearest square foot. As a result, the user can obtain instantly and accurately the areas of walls, ceilings, floors and windows. In addition, the device reduces to a fraction the time required in determining the cubic footage (volume) of a room.

By setting one dimension in the window and referring to the figure under the other known dimension, the user of the calculator reads directly the area figure.

Window areas—either by opening size or glass size—are found in a similar manner with the aid of a sliding sleeve on the device. This

**Morton's Area and Volume Calculator**  
FOR FINDING AREAS OF WALLS, WINDOWS, CEILINGS, FLOORS AND VOLUMES TO THE NEAREST SQUARE FOOT

FOR AREAS OF WALLS, CEILINGS OR FLOORS

1 SET LENGTH OF WALL UNDER ARROW  
2 READ AREA IN SQ. FT. UNDER WIDTH OR HEIGHT

HEIGHT OF WALL OR CEILING HEIGHT IN FEET AND INCHES

WINDOW AREAS

DOUBLE HUNG TWO LIGHT WINDOWS

FOR AREAS OF DOUBLE HUNG TWO LIGHT WINDOWS OR OPENING SIZE OF ANY STYLE WINDOW

1 SET HEIGHT OF OPENING IN FEET AND INCHES UNDER ARROW  
2 READ TOTAL AREA UNDER WIDTH OF OPENING

WIDTH OF OPENING IN FEET AND INCHES

BY GLASS SIZE

1 SET HEIGHT OF GLASS IN INCHES UNDER ARROW  
2 READ TOTAL AREA UNDER WIDTH OF GLASS

WIDTH OF GLASS IN INCHES

FOR AREAS OF MULTIPLE LIGHT WINDOWS

1 SET GLASS-WIDTH x HEIGHT-UNDER ARROW  
2 READ TOTAL AREA UNDER TYPE SASH AND NUMBER OF LIGHTS

DOUBLE HUNG CASEMENT

1 SET GLASS-WIDTH x HEIGHT-UNDER ARROW  
2 READ TOTAL AREA UNDER TYPE SASH AND NUMBER OF LIGHTS

external runner is also used in finding volumes. The floor area is set under an arrow on the back of the calculator, and then the user reads directly on the same line the volume in cubic feet under a choice of ceiling heights.

Five different scales appearing along the edges make the calculator additionally useful. It measures 3-3/4 by 9 inches in size and is of lifetime vinyl plastic.

"Morton's Area and Volume Cal-

*Finest in face brick & tile*

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culator" is available from Paul S. Morton Engineering Service, 609 Bangor Road, Lawrence, Michigan, at a price of \$4.75 postpaid, which includes a plain leatherette case.

#### FOGELBERG AND TAYLOR NAMED MacARTHUR REPRESENTATIVES

Appointments of Carl W. Fogelberg and Phil A. Taylor to represent The MacArthur Company, St. Paul, for Reynolds architectural aluminum and for industrial insulation, respectively, have been announced by J. G. Ordway, Jr., vice-president.

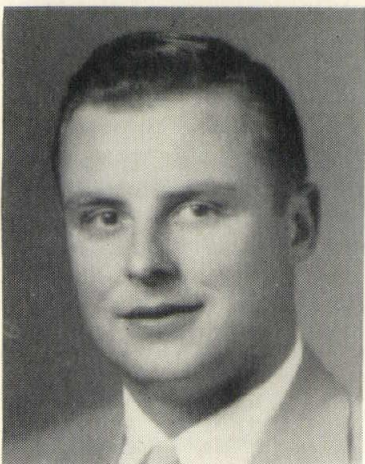
Mr. Fogelberg, a lifelong resident of St. Paul, will handle the aluminum



Mr. Fogelberg

and industrial building products. He attended Macalester College and formerly was district manager for Reynolds Metals in Minneapolis. He also is a member of the executive committee of the Minnesota-Dakotas Chapter of the Producers' Council.

Mr. Taylor, formerly with the Owen-Corning Fiberglas Corpora-



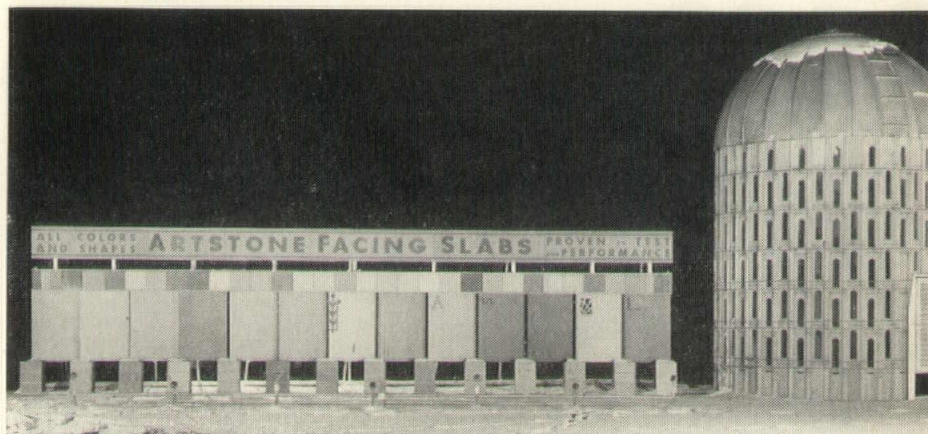
Mr. Taylor

tion, is a graduate of Cornell University in mechanical engineering. He will be a general representative of the company in the industrial insulation division. A resident of Minneapolis, he is a former vice-presi-

dent and secretary of the Producers Council chapter.

Between two evils, choose neither; between two goods, choose both."

—Tyron Edwards.



See this display of 61 different Artstone colors at roadside in New Ulm.

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their pleasing appearance forever, with minimum maintenance.

**Natural slate is functional:** It does the best job for the job intended—as a classroom visual tool!



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30 years experience . . . chalkboard specialists.



# EDITORIAL PAGE COMMENT

## THE NEW ERA IN NEW YORK

**T**HE FIRST pedestrian "high street" of the two-level city of the future is plainly shown in this office building now under construction. The architects are Harrison and Abramovitz, who produced the U. N. buildings. Some such project was inevitable. The clogging of big city streets bumper to bumper, curb to curb, with crawling motor traffic, while pedestrians try to cross through the asphyxiating stream, must be solved by architects and engineers or by social explosion, or both.

In the last two numbers of *NORTHWEST ARCHITECT*, "No Wonder No Architecture," "Wintergreen," and again in this issue, we have described two methods by which the public and business are already escaping from the dying cities; one by the flight of business to the suburbs, now proceeding apace in both the Twin Cities and in New York; the other by creating a new high-walk level of specialized communication thirty or forty feet above the obsolete street and sidewalk tradition which is now being rapidly taken over by wheeled traffic. Incidentally, both auto drivers and riders are not too happy about their new monopoly of the public thoroughfares. With pedestrians now on the run, auto and truck drivers find themselves pushing one another. You will say, "Why, I crossed 7th Street on the way to work this morning and no great job. Why all this fuss?" This week's *Los Angeles Times* carried this double column banner in 48 pt. boldface:

### CITY COUNCIL CONSIDERING BAN ON ALL STREET PARKING

Minneapolis' one-way traffic streets are no permanent solution. The very effective new parking lofts are but a success of the moment for the loft owner. They partly ease the troubles of the few for a short term but make a worse tangle for the many on the long term—for everybody after that. And too, they very definitely freeze the volume of business at a given location. New

customers are shut off from established businesses and personal buying and selling enterprise pushed to the city's perimeter.

However encouraging this New York project, we will no doubt have to wait some time for more bridges to let people move across streets above the moil of traffic. For the present these new tall buildings make congestion worse. This 45-story vertical file will bring to this city block three times as many tenant cars added to an equal traffic and parking increase by those who must come in cars to do business here. Mr. Harrison has made provision for only seventy-five cars in the basement. How will the 2,500 tenants reach their offices? How will the 4,000 customers per day get here to do their business? Tenants won't rent, clients and customers won't come if there is an easier way. It would appear that Harrison and Abramovitz just left the parking problems of 1964 to Uncle George Knickerbocker.

In planning this highwalk terrace across the main façade along 42nd Street and around the corner on both Lexington and Third Avenues at the 40-foot level, if they were aware of the next inevitable step it would seem that here was the occasion to dramatize it. You will note the ample enlargement of this terrace in the form of a sort of new level public square at its center. An effect of street level shops faces this high walk plaza across the entire width of the main structure. So here we will soon realize a unit of our "Wintergreen" project. I hardly expected to see it so soon.

Enclosing these high streets will come later but you can see that when the terraces around this building are connected by pedestrian bridges over Lexington and Third Avenues with the present third floors of the buildings across these streets, and also across the corners of 42nd Street (together with another delicate transparent pedestrian bridge in the center across 42nd Street to the south) we will have almost at once a good beginning toward the new city level talked about for years and shown in a working model inside the perisphere at the New York World's Fair of 1933—now twenty-one years ago!

All this, at very small capital investment, would immediately add greatly to the business of the eight city blocks which adjoin this fine new building. Such a new high-walk system would at once unsnarl both foot and wheel traffic in the streets below serving the twelve city blocks immediately affected. The east-west motor traffic lanes could be increased from six to eight by re-assigning ten feet of the present 20-foot sidewalk to the street, thus widening the now 60-foot 42nd Street to 80 feet. The ten-foot sidewalk remaining would still be ample for the thus much reduced foot travel. The new free high-level inter-business movement would increase the rental value.

### POLITICAL MANAGEMENT

The city manager plan is successful, except in cases where some politician manages to manage the city manager.



### GARGOYLE CLUB CHOOSES GMEINDER

The Gargoyle Club of Saint Paul elected 1954 officers at its annual meeting on February 9, with Reverdy Gmeinder being chosen president, Carl Buetow, vice president; Tilford Moore, secretary-treasurer; Arthur Bryce, chairman of entertainment; Ben Anderson, chairman of education; Magnus Jemne, chairman of the house, and Lawrence Hovik, member of the finance committee.

The club, established in 1913, is an organization of architectural draftsmen and architects and is unique to the city of Saint Paul.

### TECHNICAL SERIES FOR ARCHITECTS ON WOODWORK TO BE PUBLISHED

A bi-monthly series of bulletins on architectural woodwork will be published for a selected list of architects, according to the Architectural Woodwork Institute of America. This continuing series will be written expressly for architects and information will be prepared by an architect relations committee. It will be mailed to architects listed by members of the institute.

The bulletins will deal with problems in custom made doors, windows, moldings and trim, cabinets, casework, fixtures, paneling, etc. Address of the institute is 332 S.

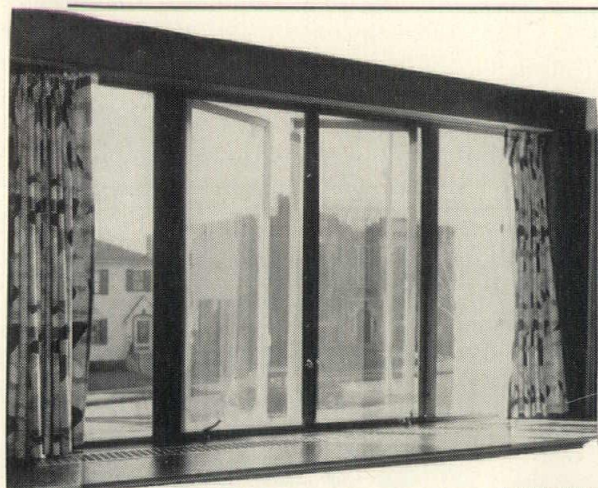
Michigan Ave., Chicago 4.

Northwest fabricators are well represented on the official listing of the institute with Elmer Root, Appleton, Wis., its treasurer and C. Albert Carlson, Minneapolis, and F. P. Delany, Dubuque, Iowa, directors.

### NEW ALL-WEATHER DOOR HAS DECORATOR STYLE

The Wabash Screen Door Company, 310 S. Michigan, Chicago, is currently introducing the "Stylist," a combination weather door that offers a new range of opportunity for imaginative exterior color treatment and design. The "Stylist" consists of a sturdy Ponderosa Pine frame and three "picture frame" panels (screen or storm) which are easily and quickly installed and changed and which require minimum storage space.

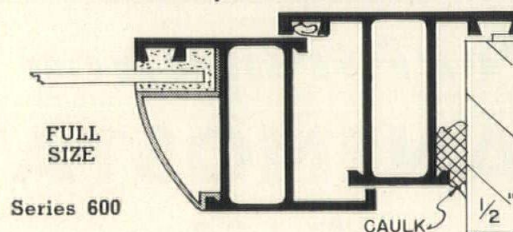
Not only does the unique three-panel design help achieve the popular low "horizontal line" effect, it gives the "Stylist" new versatility. For example, in mild winter weather the top storm panel can be replaced by a screen panel for desired ventilation. Further adding to the decorative features of the "Stylist" are three types of grids in "Circle," "Square" and "Diamond" styles.



## Sunlight Aluminum Windows

*Specified and Used by*

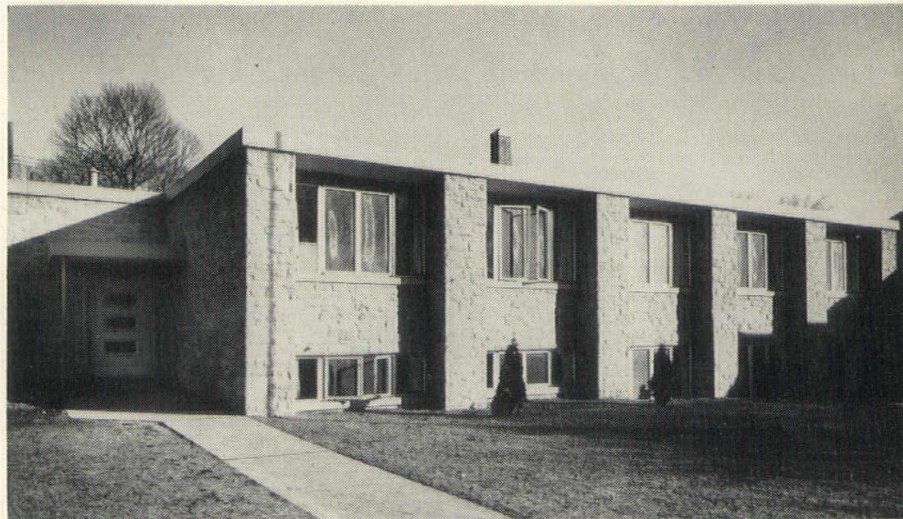
**ARMSTRONG & SCHLICHTING**  
Minneapolis Architects



*Pilgrim Lutheran Church, Minneapolis*

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- Available for inside or outside glazing—using glazing bead.
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# MILLWORK—

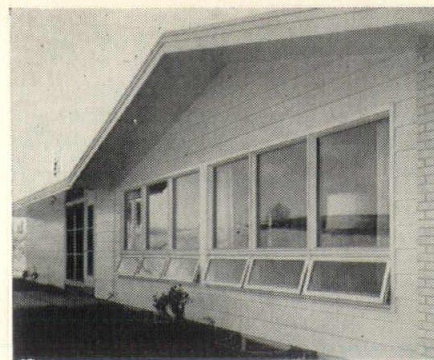
## Is It Behind the Times?

By EDMUND W. F. RYDELL  
A. T. Rydell, Inc., Minneapolis

*In its September, 1953, issue, House and Home magazine presented a plea for "better and cheaper" millwork. The bulk of the article pertained to windows, with emphasis on the striking similarities among many architects' details in their custom-built windows. Writer of the article contended that a standard set could be evolved from the various details and window and other units made from these be handled by lumberyards, with consequent saving of architects' detailing time and cost to clients. In line with Northwest Architect's desire to present both sides of such controversial subjects, we present here the*

*thoughts on the subject of a leading member of the millwork industry in our area so our readers can have all the facts on which to make up their own minds as to the future of this single phase of the construction industry.*

The millwork industry has been the target for increasing criticism in various publications within and without the industry and in the expressed thinking of many architects. The unspoken feeling finds expression in a trend away from millwork toward substitute materials. Such inroads by products whose superiority is op-



A Rydell Installation

en to question certainly is evidence of some unfavorable condition in the field of millwork. What is the underlying cause of this trend? Why does this dissatisfaction with millwork exist?

The critics point to many factors. Price comparisons are frequently alluded to, as well as maintainance, appearance and other considerations. Were these criticisms completely valid, wood would have been completely abandoned long ago as being utterly obsolete. The beauty and utility of wood as well as its low thermal conductivity (1/2000th that of aluminum), are certainly the

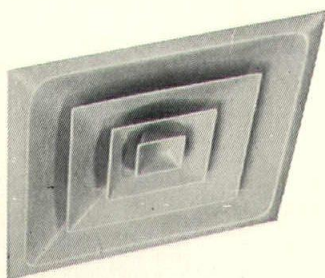
## ***Performance Is What Counts!***

# **ANEMOSTAT**

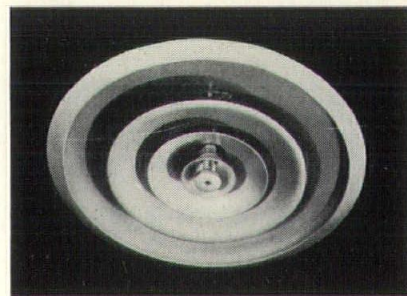
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TYPE "E"



TYPE C-1

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equal of the advantages of competing materials.

But there must be some real shortcoming in the industry which foments these accusations; much of it does not originate from competitive strivings. What then is the factual basis for criticism of the millwork industry?

Some insight into the subject can be gained by studying the inherent characteristics of the several materials as they influenced the development of their respective industries. The free-machining characteristics of wood have led naturally to the complexity and infinite diversity of work which is encountered in custom millwork while the high cost of extrusion dies and fabricating equipment in the metal working industry have led naturally to a restriction of the designs offered and a standardization of the products produced therewith. These products can be quickly appraised and selected by the architect; hence such a product can compete more effectively for the architect's limited time and at the same time offer unvarying quality, price and performance. Millwork is often not as easy for the architect to use and specify; the products are not well standardized, they often require special work, shop detailing by the mill, approval of details and delay of manufacturing.

This is the true and valid criticism against the millwork industry—it has not standardized its products to the extent accomplished by competing industries. Whether the critics realize it or not, this is the underlying factor from which their criticisms spring.

In the long range planning of the writer's company the traditional productive capacity for fine custom millwork will be retained. It will always be through this channel that the optimum expression of an architect's creativity can be realized. But the new principle of standardization of products through research is coming into prominent position in the company's future policy making. It is in this field that any firm can be of greatest service to the architectural profession and to the building industry. It is time that the shortage of quality standardized wood products be overcome, and it is to

ARCHITECT

this task that the long range future planning of a millwork company should be dedicated.

The guiding principle of such a policy is to offer the architects a restricted but adequate choice in well designed, standardized products, easily specified and versatile in use, so that millwork can compete for the architect's valuable time as well as offering advantages not found with any other material. The archi-

itects' desires must be cardinal; if the products to be developed are worthwhile, they must be what the architects *want*. Therefore the whole development program is based on architects' requirements. The company has solicited the suggestions and recommendations of architects and the first tangible result of this program of standardization, and one which embodies the specific requirements of many archi-



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tests, is the creation of its new product, the Versa-Lite window system.

It was refreshing to read a criticism which, at least, clearly saw the industry's shortcoming in true perspective. "House and Home's" blast was aimed primarily at millwork as it applies to modern fenestration practice. In gathering data for the report, the writers consulted

a large number of architects who have been doing contemporary work and designing their own millwork sections for windows. They did not indicate having contacted any millwork people.

The main constructive value of the report was in revealing the vast amount of duplication of effort expended in architectural offices all over the country, independently designing millwork sections which are practically identical. "House and Home" saw this effort as an economic waste, which indeed it is, and recommended that standardization of these details would result in better and cheaper millwork and a greater margin of profit for the architect through savings in detailing time.

In pointing out these facts and revealing the similarity of millwork sections as designed by different architectural firms, the editors rendered a valuable service. "House and Home" then further recommended that mutually acceptable standard sections be officially adopted by the architectural profession and the millwork industry and these sections run in huge quantities and carried in stock in lumberyards so that any architect could build up any desired window system by using stock lumberyard material.

Here it seems that "House and Home" has lost sight of the over-all objective of its study. One objection to the proposal, that no single set of window parts could fulfill all conditions, is certainly valid. So is the consideration that the proposition is not a particularly interesting one to a prospective manufacturer with the requisite high speed ma-

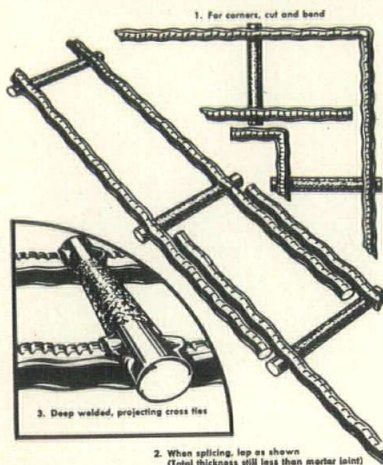
chinery and venture capital. He is interested in manufacturing a *differentiated* product with features and advantages he can advertise, with characteristics which make for repeat sales of his product.

But there is a far more serious objection than these. In attempting to lower the cost and improve the quality of windows, "House and Home" has missed the biggest area for improvement, namely, that expensive on-the-job fabrication, installation of sash, screen, hardware, weatherstripping and glazing could be completely eliminated. All of this costly hand labor would have to be performed on the job under "House and Home's" recommendations. Certainly there is a great deal more to be achieved than merely the savings inherent in standardization of the millwork profiles. Fabrication, installation of components and glazing can all be done much more economically and accurately with modern equipment under ideal factory conditions. "House and Home" did not carry the study to its logical conclusion—that the development of the complete window system should be left in the hands of the manufacturer, who, *working in close cooperation with the architects*, should devote the necessary research toward developing the final product.

The product designers of A. T. Rydell, Inc., in creating the Versa-Lite window, followed these principles. Starting with a survey conducted among the architects of this area, the type of windows most needed was determined.

Large areas of glass with some method of ventilation was the incontrovertible need. The lack of

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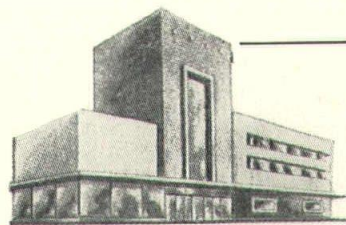
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any window on the market which would fulfill this and still span floor-to-ceiling or floor-to-door height was immediately apparent. Universal use in every type of structure and purpose of building was required. The use of Thermopane throughout was mandatory. Co-ordination of small sizes of Thermopane for ventilation with large standard sizes was a very desired feature, and posed one of the most difficult design problems.

The architects of this area have been of invaluable help in creating this product. With few exceptions, all responded by furnishing valuable information for the survey, some going out of their way to contribute additional information and ideas. The architectural profession is to be congratulated on the high percentage of its membership who subscribe as a matter of personal ethics to the standard of accepting millwork or any other building components solely on the basis of the merits of the product, without regard for other considerations or influencing factors.

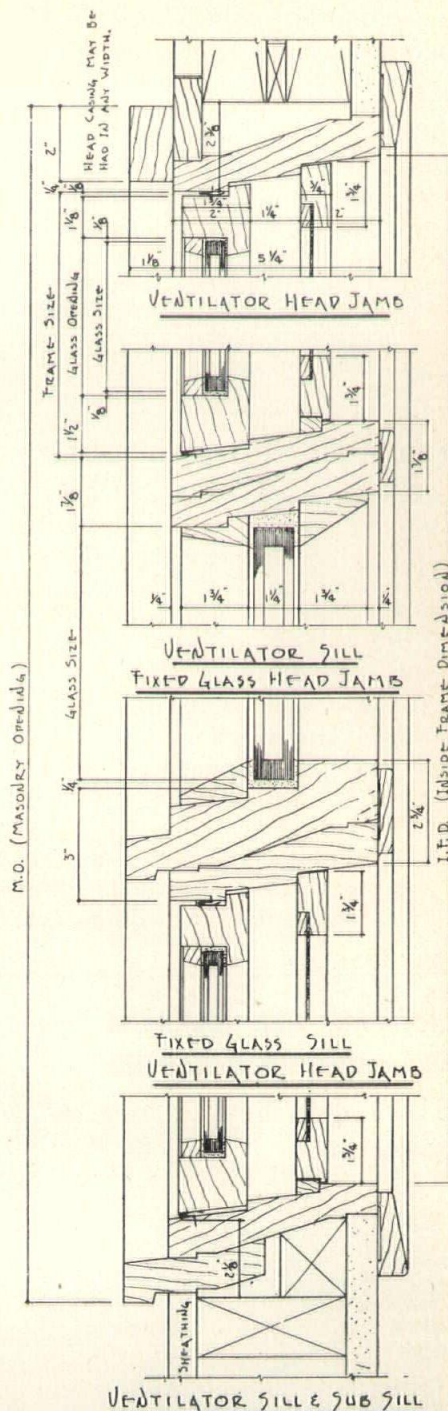
There was a great diverse amount of opinion among the architects as to the proper location of ventilator portions of windows with respect to the fixed glass. This was as it should be; it allows for freedom of design and expression and provides latitude to design for various ventilating problems. But it led unavoidably to a staggering array of window types and sizes. Any possibility of standardization was impossible until the concept of separate components was incorporated, whereby each component of the system, a complete window in itself and capable of being used as such, is co-ordinated with and can be used with any other

component of the system. The four basic components yield over 300 possible combinations, and indeed the versatility of the system is limited only by the ingenuity of the user in developing window treatment.

We learned that the window system should be complete in every respect. This included hardware and involved developing and patenting positive and trouble-free methods for operating outswinging and inswinging windows. The inswinging window, which is the most subject to wear because of the friction components, and therefore the most suspect, has been automatically opened and closed in a testing laboratory over 30,000 times with no appreciable wear, loosening of screws, or reduction of friction. This is equivalent to operating the window once a day for about 100 years.

As can be seen from the typical section drawing, all unnecessary gingerbread was abolished and the product simplified to the point where every corner and groove of the final profiles have functional meaning. Further simplification led inevitably to some impairment of the product. Oversimplification can result, for example, in requiring metal flashing where proper subsill design would have eliminated it or in allowing air infiltration to occur around the back of the frame where proper blind stop application could have prevented it.

Many of the architects whom "House and Home" contacted have already progressed much farther than "House and Home's" suggestion of lumberyards' stocking standard sections. These architects are having the mills which ran the sections also complete the fabrication of the



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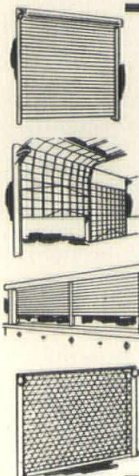
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frames and in some cases install the various components. To the extent that mass production methods can be employed, these architects are realizing savings over cumbersome on-the-job methods but the cost of development and the hazards of successful operation should logically be borne by the millwork firm in developing a completely engineered product, rather than by the architects on each different job and this is now being done.

### GROWTH OF THE MODULE

Growth of interest in and use of modular co-ordination constantly brings up new developments, some of which are of major importance and others of lesser importance but all of which help keep progress unfolding in this architectural realignment.

Recently several definite things have been introduced in the module's field—sizing of kitchen equipment in terms of modules and a new modular mason's rule.

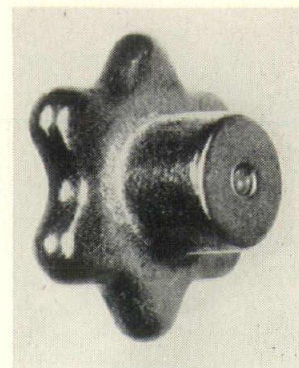
A committee of the American Standards Association recommended a series of modular dimensions for

household equipment. The committee's chairman, John C. Thornton, A.I.A. of Detroit, reported that "our studies showed that the 4-inch modules should result in fewer unit sizes and simplification in combinations of cabinets. It was agreed that it would be wise for the manufacturer of kitchen and laundry equipment to standardize on sizes where dimensions varied by the accepted 4-inch module, although it was realized that any change in the practice for this industry would necessarily be a long range program and that manufacturers would not make the changes until new models were produced. . ."

Lufkin is maker of the new mason's rule, which is a 6-foot folding rule with standard marking on one face, subdivided to sixteenths. The other side is marked to give correct vertical spacing for the course heights of all common sizes of modular masonry. Another feature is that the first section has been made shorter than is customary so that, if it alone is unfolded, an accurate 4-inch measurement can be made with the folded portion acting as a butt.

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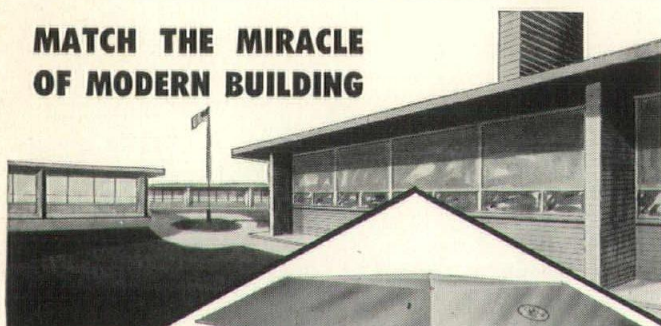


**Bub Knob**

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Typical of the materials available through this company is the item shown here. The catalog details each unit so designers can find what they need to fit their specific plans. The catalog is available from the company.

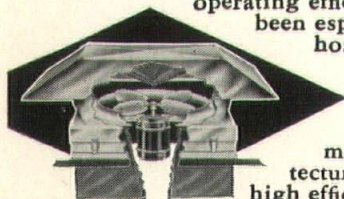
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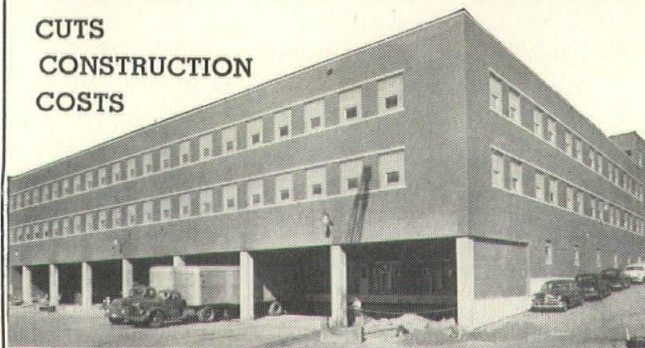
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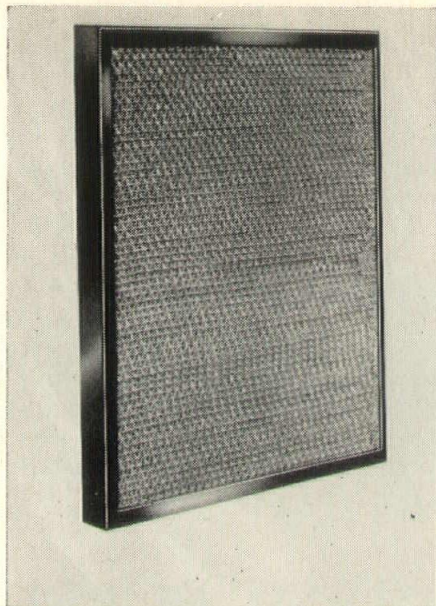
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The filter, shown here, operates efficiently between 800 and 1200 CFM per 20x20-inch panel. It is available in practically any size and fits filter bank installations designed for one-inch thick units.

Full details and literature can be obtained from the company at P. O. Box 10187, Airport Station, Los Angeles 45, Cal.

#### PLACE 30 ACRES OF ACOUSTICAL PLASTIC BY MACHINE

In what was reported as the world's largest machine-placed acoustical plastic job, some 30 acres of material were placed to sound-treat ceilings of the Army Finance Center, a 14½-acre three-story structure nearing completion at Fort Benjamin Harrison, Ind. The building is the Army's second in size only to the Pentagon.

A labor force of 30 plasterers and 47 helpers sprayed more than 48,000 bags of the plastic at a rate of 2,100 to 2,250 square yards a day in this huge operation. One bag of the plastic covered four square yards ½-inch thick when mixed with ten gallons of water.

Scratch and brown coats were blown directly to the undersides of concrete ceilings, with darbies used only to even up the brown coat, and troweled the day after application. The surfaces were then painted with one coat of water soluble paint in pastel shades of green, yellow, blue, pink and cream.

The finished texture was obtained by going over the entire surface with a fine spray of acoustical material applied at higher pressure than used with the scratch and brown coat.

Approximately 90 per cent of the ceiling, which provided the largest surface for the acoustical plastic, is concrete. The remainder is suspended metal lath covered with a scratch coat of gypsum-sand plaster, over which the acoustical material was applied.

Water pipes were covered with brown paper during the plastic spraying, which was removed when the plastic was set.

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# What Is A Library? *(Continued from Page 6)*

tangible business fabric which one can't easily think about as all of one package.

Now if what Miss Gracia Countryman said about books is true, then how are you even going to secure any "site" for a library because it begins to appear that a library is books that are in one place and it is desired to have them someplace else, quickly and economically, and that, as in the instance of the railroad—

the PLACES where the books are sorted, dispatched, and later retrieved,

the TRANSPORT system that carries the books,

the COMMUNICATIONS system by which a desire to read books and produce new readers is maintained,

the OFFICES for those who direct the enterprise,

the REPAIR and SERVICE of all kinds required in the process — all these things taken together, which are very much like the railroad system, are as a matter of use merely factors in a complex intellectual and material tool to accomplish a given purpose.

**I**f I have validated my analysis for you it must be more than clear that the library of a city cannot possibly be a civic palace of aristocratic architecture located on a site, today accessible to a few people existing as statistics in a report and tomorrow accessible to no one. Where no living need exists, plausible needs cannot be invented and assembled. So no such thing as a "main library" exists and, if attempted in however grand and expensive a form, it will die like the ancient ark at Tenth and Hennepin.

**A**LL PUBLIC DISCUSSIONS for a proposed new Main Minneapolis Library have begun at the wrong end of the examination. To find a solution for any project you have to "see" all the requirements. It is essential to accurately define the functions — all the functions — not merely construction and economy. Then too you should build your progressively clarifying view, of the library as a wide-spread service organization, to include its management operations just as it is seen in an experienced executive librarian's mind. Only then can such an intimate understanding of everything related to libraries be allowed to become many buildings and many other things built, bought, leased and donated under the guidance of an experienced architect who is not an esthetic person. He can easily hire esthetic counsel and keep control of it.

The moment this new concept of form-as-a-process hits our architectural thinking or, better, at that critical moment just before we materialize it, we must again discipline our old habits so that this library form does not crystallize under the pressures of old habit, of mental laziness and of the myriad pressures of the public mind as a mass of "building" sitting on a lot. We must stay firm with the living flexible idea that a library is not a beautiful box on a selective site. The Northern Pacific Railway is not the Union Station (as seen by travelers

and designers) nor the Missouri Bridge at Bismarck (as it appears to the locomotive engineers and bridge builders) nor the North Coast fast freight on slick rails rushing past the farm boy as he sits on the fence every day and waves his big straw hat at the swaying brakeman leaning against the wind.

We have now seen how the library discussion in Minneapolis has all been a debate about a certain kind of mass of building and some site or plot. Actually a Library is a House of Many Mansions and we may not escape the living library, however feebly it speaks the Voice of Intelligence nor however obscured by obsolete buildings and even more obsolete proposals for more buildings. Since a library is bound to be numerous "buildings," one of the most important of which being dozens of motor service vehicles which move from place to place to place, we now face a wholly different relation between what is important and what less important. Instead of a great mass of building filled with book stacks, the books disappear into the hands of readers into hundreds, thousands of little strategic study and distribution centers and **THE GARAGE BECOMES THE "MAIN" LIBRARY!** The telephone exchange and the registry desks, thousands of them, must now be planned — for in a location determined by standards more practical than counting the number of people who used to go to inconvenient libraries, back in the good old days before McKinley was shot. In our service era the accessibility factor disappears, except as a widely scattered intra-neighborhood relation. The only people who need to go to the "main library," which is now a sort of factory in an operationally determined location, are the truck drivers, mechanics and telephone girls, with their dispatchers and co-ordinating executives.

True enough, books command executive offices, storage rooms, studios, public conference rooms, archives, desks for choice and information, advertisement galleries, laboratories, work shops, service delivery motorcycles, light book-shelf cars, book shelf trucks, work trucks, parking facilities, garages, tool houses. There they are. Any one even reading their names would at least have some idea in what scattered sites such buildings must inevitably be located.

And as for the value of permanence, so much stressed by the practical "build it once and construct it good" kibitzers, the permanence of a library is probably in inverse proportion to the durability of its buildings. Institutions must be ready to meet rapid changes and new demands by a people of changing temper and interests. If the many and varied shelters and enclosures of a Library's daily service be flexible enough to meet new needs, so that they can be quickly exchanged for new work quarters with no great loss, then the library will retain its youth and usefulness. The quickest way to kill an institution is to cage it in a permanent structure too costly to get rid of, too fixed to permit alterations.

And so in this necessarily brief examination we find that in all the plans, and talk, and newspaper reports no



expert or architect has even hinted at these basic housings. **THESE ARE THE LIBRARY SYSTEM.** These tools and services and many more intangible but very real things are the building material which are "material" to any library project. Implementing them with people, processes and the daily tides of correct experienced thinking is the problem faced by the city as a whole and without which a public library can never even exist, much less endure.—W.G.P.

#### RESEARCH AIMED AT BETTER, FASTER MASONRY LAYING

New masonry techniques designed to lower the cost and expedite the construction of masonry walls, while reducing mason fatigue, will get intensive trials in the field and in the laboratory in the coming year, according to Robert B. Taylor, director of research, Structural Clay Products Research Foundation.

"Field trials of a new masonry construction process will be conducted on various types of building work using all types of brick and tile products," Mr. Taylor disclosed. "We are striving to utilize the things we have learned in four years of research toward accomplishing the basic purpose of our research program—to lower the cost and improve the quality of structures built of brick and tile."

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Mr. Homme joined Haldeman-Langford in 1947 as a sales representative. "Through his initiative and his ability, he soon rose to direct Haldeman-Langford's activities in the architectural field and has also been in the main responsible for the production of ERICKSON products," the announcement said. Mr. Homme was made a member of the firm of Haldeman-Langford in 1951.

He put in six years with the Marine Corps, starting in 1941 and saw much action in the South Pacific.

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# LET'S SAY IT! . . . BY W. G. PURCELL

## A FRIENDLY LETTER

Which originated three pieces in NORTHWEST ARCHITECT Centergreen, Wintergreen, what is a Library and for next issue "No Point in a Center"

Early the other morning at the first smirk of smog, I was startled to hear my name mentioned over the air. I had missed half the story but it appeared that Iowa Editors and Politicians had become incensed over my letter to George Shane of the *Des Moines Register Leader*, in which I had proposed a new setting for the old Iowa state Capitol. Although this ancient creak is not the worst capitol building in U. S. A., some korn-huskies, for a variety of reasons, would like to build a new capitol. So they often encourage people who express dislike for the building.

I'd say that there are not four architects now living in U. S. A. capable of designing such a public building. Iowa citizens would do better to wait another hundred years, throw up some temporary barracks for vote trading, by which time few Iowans out of office and east of Los Angeles would be willing to part with the dear old thing. Meantime they could enclose and protect it, as I proposed in general to Mr. Shane, with a plastic dome like an 1870 mantelpiece bell-jar eased down over a bouquet of white leaves with portrait of Lincoln. This old capitol building cleaned up, dolled up, brightly painted and gilded could then be nested in surrounding gardens of palms and flowers all winter long. Demoinesi-ans retiring "after-the-age-of thirty-five" would no longer find it necessary to pay their state income taxes in Long Beach.

Mr. George Shane sent me the *Register Leader* pages with all the unpleasant remarks made about me by the vote collecting industry. It seems a pity that all the good humor embedded in these news pieces, which also went out over the air from the Ames Agricultural College, should be frozen up tighter'n the old iron pump and,

coming as it did at 7 a.m., never reach the evening "beanies" just suffering from synthetic jokes.

For our part we have a serious purpose here which can wait no further korn. Back in the "normalcy" days, when the boys were enterprising all over the place, without "that man" to let or hinder, Los Angeles used to think that 30,000 was some Iowa picnic but now even little old New York State and Illinois, and yes, Minnesota too, can get out a little passel of 30,000 picknickers. So now when the original Iowa State Picnic in Southern California can pull 110,000 nostalgic old-homers through the smog to Long Beach, we begin to wonder who's left back there to read the papers or to swap in or sweep out in the legislative halls.

Iowa bankers and businessmen who were so incensed about my proposal to build a Wintergarden in Des Moines could well do a little figuring on how much working capital and cash buying the 1,500,000 Iowans who now live in California have taken out of their home stae. Not many want to go home despite the tears shed here once a year over Keokuk and Oscaloosa, Appanoose County, Tama and Ida Grove.

Iowa bankers and businessmen who were so incensed about my proposal to build a Wintergarden in Des Moines could well do a little figuring on how much working capital and cash buying the 1,500,000 Iowans who now live in California have taken out of their home state. Not many want to go home despite the tears shed here once a year over Keokuk and Oscaloosa, Appanoose County, Tama and Ida Grove.

As to my proposed plastic tent over the ten-acre capitol square—capitol and all—which caused so much bucolic hilarity in the Iowa press, may I refer you to the new livestock show pavilion in Raleigh, North Carolina, which accommodates 10,000 under a wire-rope-supported awning, well illustrating the architecture of the future. Better wake up, Iowa. Heretofore, you know, North Carolina hasn't stood too high with you in either livestock or architecture. Uncle Remus' turtle seems to have been moving down there.

That was how it was this series of articles on Minneapolis City Planning, Wintergreen gardens and Library Systems really got started from a page and a silly

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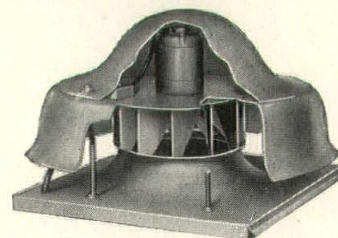
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See Sweet's File

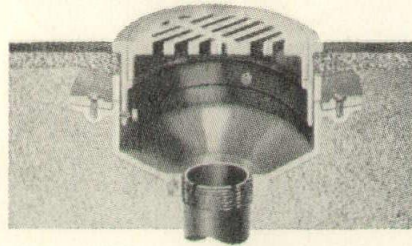


sketch in this casual letter of mine to Mr. Shane. Just thought I'd suggest to him one way to preserve the shabby old kettle of a capitol building because their new state office building is really little improvement in looks or convenience. But I was apparently too modest in following Architect Daniel Burnham's motto—"Make no little plans"—for the money loss to Iowa through emigration could, if spent at home, have tourists running to Iowa to see "the world's most beautiful capitol building, in a glass case"—"the Taj Mahal of the rose scented prairies." Merchants all over the middle west could build Wintergreen sales gardens even more tropical than Dayton's Southdale pretty patio and hold style shows under real orange trees growing real oranges, while American Indian maple-sugar maidens draw golden juice from the orange tree trunks. The whole business would pay its own way.

Well—there you have the really practical idea. Some one who can move enlightened self interest to the point of action should say to the best people in MINNESOTA, WISCONSIN, IOWA, NORTH DAKOTA AND SOUTH DAKOTA, "You can have some fun, make some money and slow down the emigration to the Land of the Lemon and the Home of the Nut. All you have to do is to change bookkeepers and set up a tax system that takes account of the facts instead of the factotums."

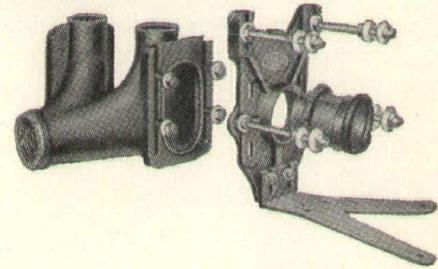
Hoping without planning is about as futile as waiting for a ship to come in that never sailed.

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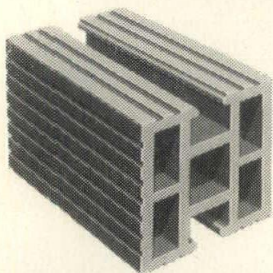
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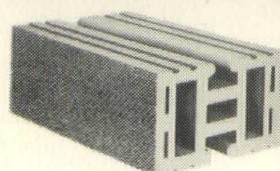
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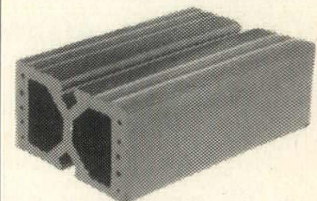
DES MOINES, IOWA

### OSKALOOSA BRICK AND TILE COMPANY

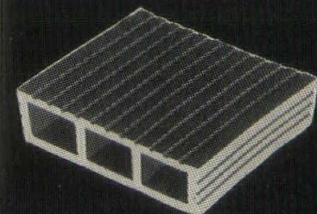
OSKALOOSA, IOWA

### OTTUMWA BRICK AND TILE COMPANY

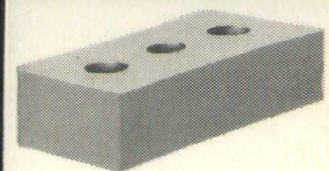
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## **ON THE BACK OF ENVELOPES**

*Notes for Study*

WHILE READING BOOKS, listening to people talk over the air, reading letters people write me, I reach for a pencil. Try it yourself; make note-taking a habit. The precious flashes of wit and wisdom are gone in a moment, never to return. From such paper scraps in a trash box on my desk I rescued the following. Each one holds material for an issue of NORTHWEST ARCHITECT—

**"Thoreau was not insisting that others do as he did."**

**"He was a specialist in doing."**

*World needs more and better self-starters under hand, fewer under foot.*

**"Well, how do you make a ham sandwich?"**

*From a conversation about ersatz eat stuffs.*

**"I do not say he was a liar; what I do say is he was very imaginative and dramatic."**

*Always try to find out what both the "words and music" taken together are actually meaning to say over and above the alleged facts.*

**"Threatened men live long"—Old Roman Proverb.**

*Coming Americans might, with continued help from the Fifth Amendment.*

And so to bed; listen to the world troubles through the ten o'clock news and then think quietly about all these things. Tomorrow they will "look different."

## **DAILY MAIL**

More and more letters about the NORTHWEST ARCHITECT come from half the states and a dozen foreign countries. To us, who have been around in printing and publishing all our lives, there is a remarkable line common to practically all of them—some variant of "... we hand our copies to a young architect" ... "we always mail ours to" ... "our neighbor is glad to get our copy" ... etc.

It seems that the issues about Le Duc, Ruskin, Stella Wood and the Crystal Palace have been especially warmly received.

It is not possible to answer personally the large number of readers who have written me. When I write, I think about the nearly 1,500 of you that I have come to know through the years and many pen friends I've never seen. I try to make what I say be like a letter. I tell what I think you'd like to know and set it out so you can understand it.

Many thanks—W. G. P.

## **Jefferson Office Building**

*(Continued from Page 16)*

concealed in the outside walls. All pipe work to these units is run on the outside face of the building immediately in back of the insulating panels. The heating element is steam derived from the capitol power plant, which is converted to hot water in the basement and circulated through the units. In summer the system is reversed to chilled water. The cooling tower is in

NORTHWEST



the basement to avoid disfiguring the building.

The site is a corner lot at the intersection of two streets directly east of the state capitol. Both streets have steep grades rising 20 feet in a distance of approximately 200 feet from the corner of one street and 15 feet from the corner of the other. The lot is approximately 200 feet square. The problem was how to place the building on the site to avoid an unattractive entrance from a steep sidewalk and to obtain maximum light and air that could not be encroached upon by surrounding buildings.

These objectives were secured and the importance of the building emphasized by designing it in the form of a rectangular shaft 71 feet wide and 193 feet long, placing the shaft at an angle over the first floor and back from the property line. The basement is square with the streets.

The first floor, show place of the building, is virtually all glass above a course of dark granite 3 feet high. Black granite columns support the cantilevered shaft. In addition to a handsome public lobby, the first floor houses a banking room for the revenue department, a small museum to exhibit resources and developments of the state and other public areas.

Outside at the first floor level is a terrace with a granite lined reflecting pool. Opposite the main entrance at the sidewalk line is an impressive bear seven feet high, sculptured in limestone. This is the emblem of the state. Sidewalks are equipped with a radiant heat snow melter.

The basement has 35,000 square feet of storage space for records and archives. With a height of 19 feet, it

can be converted into two stories by installing movable floors and metal decking.

Exclusive of the basement, the building contains 219,000 square feet of usable office space. A wing of equal area can be erected on present foundations as the need arises.

The fourteenth floor has a bean-shaped façade of glass and aluminum. This is recessed from the face of the building and opens on a paved promenade commanding a superb view of the capitol mall, Jefferson City and the Missouri River. Two general public meeting rooms are housed on this floor.

Collaborating with the office of Marcel Boulicault were Ralf Toensfeldt, mechanical engineer, and Wm. C. E. Becker, structural engineer. The general contractor was MacDonald Construction Co. All are of St. Louis.

Fire brick were first made in the United States in Baltimore in 1827. Until then, brick for the construction of furnaces had been imported from England.

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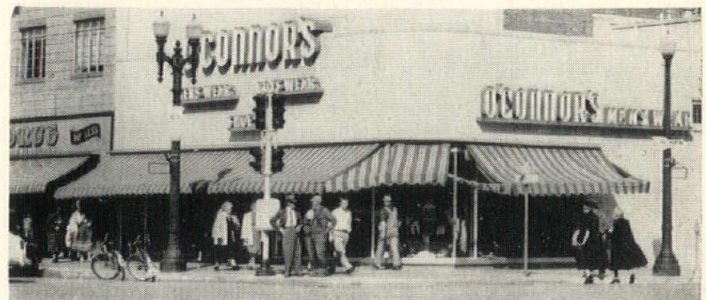
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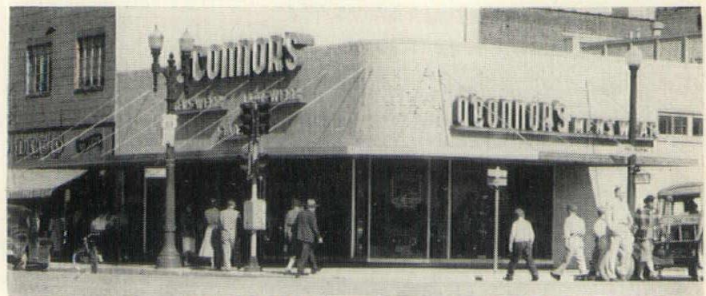
KEenwood 5002

## A MODERN MARQUEE FOR A MODERN FRONT

Here are the before and after pictures of O'Connor's men's store in Rochester, Minnesota. If you are designing a modern front, design a modern marquee to go with it. Don't let old-fashioned awnings spoil the appearance. Permanent Shadelite protects both winter and summer, rain or snow. It lasts and lasts, and will cost less in the long run. We assemble and erect with union workmen. Write us for more information.



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**Corbetta's Warehouse**

(Continued from Page 19)

Third—The walls, made up of panels like the roof panels with 6" true tiltup sections at the door openings and with 1" of blown on insulation included, came in as follows:

The Concrete Averaged out at 53# per square foot made and delivered ..... .930 per sq. ft. wall  
 and they cost us to erect, weld, grout and caulk ..... .366 per sq. ft.  
 for a total of per square foot

of wall .....\$ 1.296 per sq. ft.  
 or \$48.80 per Ton.  
 or per square foot of warehouse .388 per sq. ft.

This makes the total cost of the warehouse roof structure of 364,500 square feet .....\$ 1.52 per sq. ft.  
 and with walls incasement including insulation ..... 1.90 per sq. ft.  
 or the average cost per ton of concrete .....\$46.50 per Ton

Now these costs were achieved with labor averaging per manhour at \$2.90 and with ready mix concrete, using 8.0 sacks cement, costing \$13.50 per cubic yard delivered. Reinforcing steel averaged .067 per pound and reinforcing mesh averaged .06 per square foot.

For a percentage expression of cost where  
 all costs .....=100%  
 Direct field labor .....= 29%  
 Incorporated materials .....= 40%  
 Expense for yard, molds, equipment, etc.,= 17%  
 Overhead supervision, insurance, etc., .....= 14%

It might interest you to know that the Great Lakes warehouses came in at a cost of only 15% greater in dollars than Mechanicsburg in 1946 despite an increase in cost index of about 70%.

The largest part of the savings here was brought about through two radical changes in methods . . .

(1) In Mechanicsburg the designer had achieved

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light box girders by cutting the box vertically in two, thus making it possible to precast the rigid frame elements in terms of channels which were subsequently rejoined into a box by bolting the two channels together.

(1-a) In Great Lakes the contractor induced the designer to let us achieve hollowness in the girder by using the Sonotube method. This had the effect of simplifying the casting procedure and it also meant we actually handled half as many pieces of rigid frame.

(2) The second big improvement was through the elimination of two cranes, one in the yard for stripping and loading trucks and the other in the field to receive and store the castings, together with a truck and three trailers and substituting therefor two Ross Straddle Carriers which stripped and transported everything with a *laborer truckdriver crew* instead of the usual iron-worker crew necessary to have when handling heavy lifts with cranes.

At this point I would like to say that the future of precast structural construction looks bright. At last there are enough contractors interested in the "art" to enable architectural engineers in many parts of the country to get out plans which will be bid in under truly competitive conditions.

This represents a far different condition from that we faced back in 1947 after we completed the Machanicsburg job. Then we tried many times to get architects to design in precast thin shell but in vain because the architect could argue correctly that he could not get enough bids to prove anything and, of course, when we argued that he could save money against other kinds of structural design, we were inevitably asked if we would pay for the alternate set of drawings if we were wrong. Well, that was too rich for our blood so we have just had to wait.

Now all that seems to be changing; in fact, some time next week (mid-December, 1953) we hope to have the opportunity of changing a few minds among those architects up in Detroit who design industrial buildings for the automobile industry. That famous fire in Lavonia has opened a few eyes to the fact that maybe there is another way to build a building besides using structural steel and metal deck and masonry walls.

If we concrete constructors can crack that nut—there'll be plenty of work for all of us.

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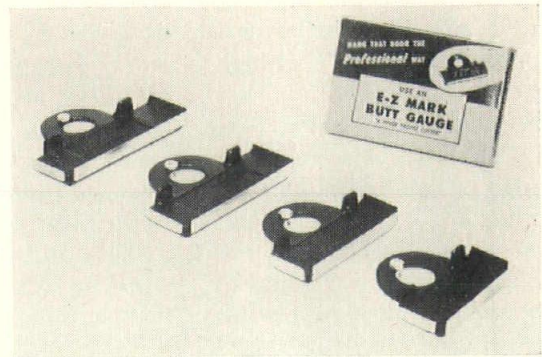
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## BUTT GAUGES TO 4½ INCHES IN E-Z MARK LINE

Addition of a new 4½-inch butt gauge to the E-Z Mark Tool line has made available to builders strike



tools in 3, 3½, 4 and 4½-inch sizes for various sizes of hinges. The gauges make a clean cut for the hinges with a sharp blow of a hammer and the chips need only be removed with a chisel for installation of the hinge.

The tools can be obtained from local suppliers or information can be obtained from the company at Box 7-8377, Los Angeles 16, Cal.

## STRUCTURAL PIPE SPEEDS EXPANSION

Using your own materials to speed expansion of your own facilities seemed a logical move for the L. B. Foster Company, maker of pipe facilities, so when demand required enlargement of its plant it used pipe in various dimensions to erect framework of the new building.

Standard 1½ to 9-inch pipe was used for the various members of the framework, being fitted as columns, trusses, joists and bracing. No special fittings were needed as a similar method of construction is used in the company's Foster Portable Pier. Field erection bolts made the joints and this allows for future disassembly if necessary to move or enlarge the structure.

Structural steel was used for the girt framing, eave struts and crane beams. The crane in the structure is a 5-ton unit. The building is 160 feet long and 38 feet wide. It has a crane clearance of 11 feet. Walls were of corrugated metal sheets and the roof was made with prefabricated steel roof decking. A 6-inch concrete slab forms the floor.

The frame went up in three weeks and the roof and wall siding took another week, demonstrating the speed of erection.

## NEW INDUSTRIAL FLOORING WITHSTANDS HEAT UP TO 2000° F.

A heat-resistant flooring that withstands thermal shock and does not deteriorate under extremely high temperatures has been developed by Flash-Stone Company, Inc., Philadelphia. Designed to be used where temperatures range up to 2000 degrees F., this new industrial flooring disperses heat rapidly through aluminum rods embedded about one inch below the surface. Because of their high thermal conductivity, these rods carry the heat from the contact area and spread it over a wide section of the floor.



Its high resistance to heat as well as all wearing forces makes this industrial flooring ideally suited for metal rolling mills, foundries, glass factories or in any location where extreme heat can cause damage to floors.

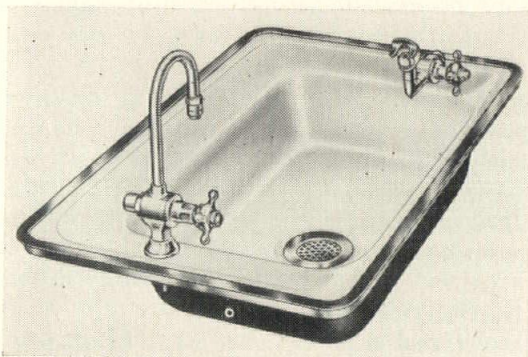
This newest of the industrial flooring developed by Flash-Stone utilizes the basic Dynapakt Concrete. It consists of the hardest specially selected and graded rock and sand combined with cements in a low water ratio. The long life of Dynapakt is due to proved installation methods which include compacting with heavy power driven equipment. Power compacting produces a density in the concrete far greater than can be obtained with manual operations. Floor is ready for use 24 hours after installation. The heat-resistant Dynapakt floor is designed to withstand the heaviest industrial traffic without deterioration.

Further information about this new flooring can be obtained from Flash-Stone Company, Inc., Philadelphia, Pa.

### SCHOOL DESIGNERS LIKE DECK TYPE DRINKING FOUNTAIN

A versatile drinking fountain much liked by school designers, according to its maker, is shown here in the new Haws Series 2000 Deck Type Drinking Fountain.

The unit consists of a sturdy cast iron receptor and any of a series of fixtures for school, lunchroom, pantry or



other installations. The receptor is made in white or matching color, acid resisting enamel finishes. It is drilled for two fixtures and has vandal-proof socket flanges and lugs that prevent turning of the fixtures. The unit is also recommended for use in school laboratories where drinking facilities may be desired along with a receptor for routine experiments.

Where precautionary eye-rinse safety measures are desired, the receptor can be equipped with Haw's Emergency Eye-Wash Fountain. The unit is 20 x 30 inches.

### NEW CONDUIT AND ELECTRICAL METALLIC TUBING BOOKLET

As objective as a text-book and far more interestingly presented is the newly published "Rigid Steel Conduit and Electrical Metallic Tubing for Electric Wiring Systems." The 24-page book deals in simple, straightforward terminology with an increasingly important subject—how to plan rigid conduit wiring installations for maximum comfort, service and expansion.

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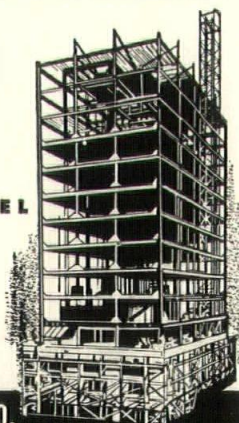
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farms of electrical household appliances, manufacturing or commercial equipment that often create power loads exceeding present wiring capacity, this booklet provides food for thought. It tells how—with low maintenance expense—dependability of service, continued safety, and adaptability to changes in power loads can be assured with a well planned initial electric wiring installation and how present systems can be expanded economically to take care of increased power loads not previously anticipated.

The booklet is a good background item for architects and builders interested in or connected with electrical wiring. It is the first educational piece to be produced by the newly formed Rigid Steel Conduit and Electrical Metallic Tubing Section of the National Electrical Manufacturers Association. A copy will be sent free if request is made on the architect's own letterhead to NEMA, 155 East 44th Street, New York 17, New York.

### PREFORMED COPPER GRIDS MADE FOR RADIANT PANELS

Manufacture of pre-formed grids of copper tube for radiant panel ceiling heating installations has been announced by The American Brass Company, which said it is the first copper tube manufacturing company to produce pre-formed, compactly packaged panel grids for the building industry. The majority of panel heating systems in service today use soft copper tubes which are "strung-out" from coils to form the sinuous loops or grids of the heating panels.

American Brass's new product, PG's, are made of  $\frac{3}{8}$ " Type L copper water tube. Each panel grid contains approximately 50 linear feet. At normal 6" spacing along the centerline, the PG is rated at 1800 Btu and at this spacing measures about 56" wide by 60" long—serving a ceiling area of 30 square feet. One end of the unit is expanded so that the grids are easily solder-connected in series without the need of fittings.

The panel grid is so designed that by merely contracting or extending a PG by hand, it can be installed in a way that the tube spacing will meet all design requirements. Over windows, doors and along outside walls where heat loss is greatest, the grid is easily contracted, if desired, to  $4\frac{1}{2}$ " tube spacing. Conversely, as the grids are installed towards the center of the room, and less heat output per square foot of ceiling is required, the PG can be expanded up to a tube spacing of 12". This flexibility in tube spacing means that a single PG can serve ceiling areas ranging from  $22\frac{1}{2}$  square feet to 60 square feet.

Though much of ancient Rome was built of brick, there was great variety in the size of the unit. The brick ranged from the smallest, which measured somewhat less than the modern standard unit in length and width, to the giant *bipedale* which was two feet square. However, all these brick were uniformly thin, never exceeding three inches, and often only one inch thick. Roman brick therefore gave the long horizontal effect and the name has been retained for this popular shape unit ever since.

NORTHWEST



## QUICKIES

*being footnotes on some news  
developments in the industry*

**LARGEST VENETIAN BLIND** in the world—measuring 88' 3" across, with a drop of 18 feet—raised recently for the first time in RCA Exhibit Hall's window in New York. Made by Levolor Lorentzen, Inc., the giant blind was especially designed to cover the hall's window so that weather conditions for television could be controlled. The blind will also be used as part of the actual show. Built to cover the upper two-thirds of the window, the blind will enable the many "in-person" viewers of the show to look through the bottom portion of the window while the blind is tilted, raised or lowered to control light. Close to five months in the making, the blind was begun in California where special aluminum slats were designed and rolled, brought to Chicago for linen finishing, taken to Hoboken where the bottom bar, a continuous 88 foot bar of specially formed and painted metal, was attached and then brought to the NBC studio in Brooklyn where final assembling and testing took place. Operated by three electric motors, which have their controls in the television control room, the tremendous blind is lowered or tilted by remote control.

**MORE THAN 5,000,000** American children attend schools that are "fire traps," R. S. Edwards, president of the Edwards Company, Inc., Norwalk, Conn., told a fire chiefs' convention in Los Angeles, saying that a fire breaks out during each school hour. Mr. Edwards addressed a joint meeting of National Fire Prevention Week officials and members of the International Association of Fire Chiefs. In his speech, he said, "We are building schools so they won't fall down but NOT so that they won't burn down. . . . In present day America more than 5,000,000 children go to schools that are specifically classified as 'non-fire-safe.'" Aside from the life safety factor, Edwards said, schools are probably the biggest property investment in most communities. He said that in many cities and towns school budgets total 50 per cent of the community's public expenditures and "These are the investments taxpayers are seeing destroyed by needless fires."

**A METHOD OF LAMINATING** vinyl plastic and sheet steel or aluminum which will make these metals colorful, decorative and permanently rust and corrosion proof has been developed by the Naugatuck chemical division of United States Rubber Co. The process combines the structural strength of metal with the bright colors and exceptional corrosion resistance of vinyl plastic. It promises to be one of the most significant advances for the metals and plastics industries in the last decade, the company believes. Some of the products which can be made from the plastic-metal laminate are decorative and weatherproof building siding, interior

ARCHITECT

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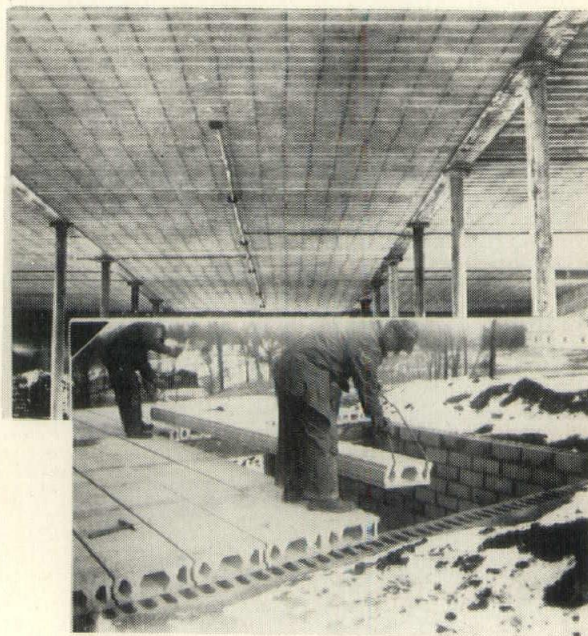
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paneling, colorful lawn furniture, office and industrial machine housings, inexpensive corrosion resistant containers for chemicals, chemical piping and ducts, truck and trailer body panels, counter tops, shelving and lockers and office furniture. Cost of the laminate is higher than galvanized iron, but only about one-third the cost of comparable gauge stainless steel. Tests on the finished laminate indicate an adhesion in excess of 40 pounds per square inch of width. This high adhesion permits the laminate to be fabricated with all types of regular metal-forming equipment without damage to the coating. The laminate can be sheared, drilled or punched without chipping. Crimp rolls 90 degree crimp bends, 180 degree bends and deep draws can all be made without damaging the coating. There are no special techniques required and the only limitation in fabrication is that soldering, welding or brazing cannot be used without removing the coating for a short distance on either side of the seam.

COMFORT in the giant new Los Angeles Statler

Center hotel and office building leaves nothing to chance for the structure's huge air conditioning system is doing its job under the overall control of eight electrical "solar seeing-eye dogs" standing guard on the roof. But instead of seeing things visible to people, these "watch-dogs" see the heat of the sun's rays and translate what they see into immediate action. The eight robot watch-dogs specially designed by Carrier Corporation for this installation are set on a sixteenth floor penthouse with the single sensitive eye of each of them staring in a different direction, engineers explained. As the angle and intensity of the sun's rays change throughout the day, the eight instruments automatically vary the cooling capacities of the air conditioning throughout the building. The direction faced by each of the "watch-dogs" of the solar compensator corresponds to one of the major exposures of the building's five wings.

Happiness comes out of consciousness of good performance, up to the limit of one's ability.

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Bartley Sales Co. ....	47	Mitchell Products Co., J. M. ....	47
Bros Boiler Co. ....	26	Morse Co., F. J. ....	62
Bruce Publishing Co. ....	33	Neal Slate Co., M. E. ....	45
Canton Lumber Sales .....	Back Cover	North Central Supply Co. ....	50
Central Building Supply Co. ....	8	Northern States Power Co. ....	31
Child, Rollin B. ....	49	Ochs Brick Co., A. C. ....	60
Crown Iron Works .....	Cover II	Olson Mfg. Co., C. W. ....	61
Dakota Plate Glass Co. ....	47	Overhead Door of Minnesota .....	61
Dox Blocks .....	65	Paper-Calmenson Co. ....	34, 35
Drake Marble Co. ....	43	Paulle-Midway, L. ....	36
Electric Power Door .....	37	Pella Products .....	17, 39, 42
Fuel Economy Engineering Co. ....	64	Producers' Council .....	15
Gardner Hardware Co. ....	58	Raymer Hardware Co. ....	12
Gerrard Co., W. A. ....	9	Rich McFarlane Cut Stone .....	62
Glacier Sand & Gravel .....	19	Roberts-Hamilton Co. ....	23
Gopher Stone .....	38	Rogers, H. A., & Electric Blue Print .....	44
Gorgen Co., The .....	52	Roofings, Inc. ....	61
Haldeman-Langford Mfg. Co. ....	5	Rydell, A. T. ....	24
Hall Co., W. L. ....	58	St. Charles Kitchens .....	39
Hauenstein & Burmeister .....	29	St. Paul Structural Steel Co. ....	64
Haven-Busch Co. ....	11	Schultz, A. C. ....	57
Hebron Brick Co. ....	44	Smooth Ceilings System .....	52
Heltne Ventilating Co. ....	63	Stanton, R. E. ....	64
Insulation Engineers .....	40	Steel Structures .....	27
Insulation Sales Co. ....	21	Stremel Bros. ....	62
Joel Jackson .....	50, 51	Structural Clay Products Co. ....	41
Keeler Steel Co. ....	44, Cover III	Sunlight Aluminum Window Co. ....	47
Klampe Co. ....	59	Thermal Co., Inc. ....	48
Layne-Minnesota .....	58	Truax-Traer Coal Co. ....	53
Lewis, Geo. R. ....	59	Twin City Brick Co. ....	63
Mankato Stone Co. ....	60	Twin City Testing & Engineering .....	51
Mason City Brick & Tile Co. ....	57	Twin City Tile & Marble .....	65
		Ziegler, W. H. ....	7



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architects  
say .....

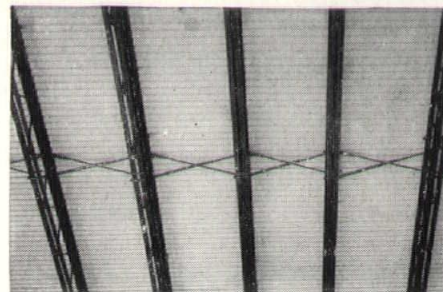
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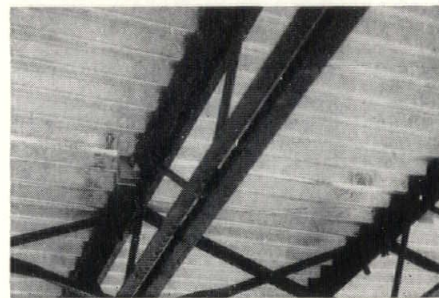
Note in the photograph at the right what a handsome appearance Corruform makes.



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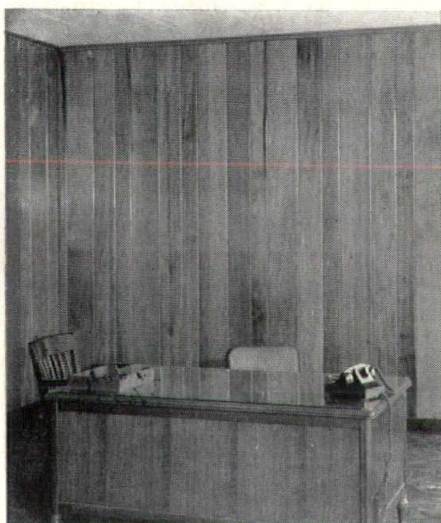
Another record year for *Palco Redwood* sales in this area. Partly due to increased use of *Redwood* as a species, partly because more users of *Redwood* realized the importance of specifying *Palco* Brand "from Canton" when ordering *Redwood*

***PALCO REDWOOD MEANS QUALITY REDWOOD***

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Selected for texture. Air dried one year.

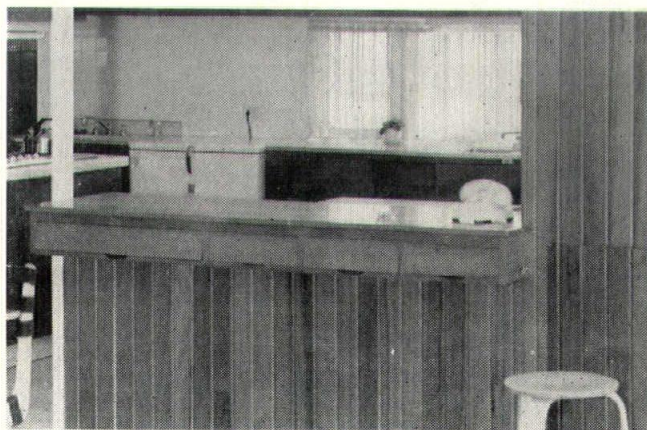
Then kiln dried and perfectly milled.



The above picture of a remodeled Minneapolis office shows 1x6, 1x8 and 1x10 *Palco Redwood* V-Joint applied alternately.

Illustrated to the right, built-in drawers and cupboards were included in the counter and wall of *Redwood* 1x4 V-Joint. Counter separated the kitchen from the dining area of this new Fargo, North Dakota home.

Pictured above top is an air view of our wholesale distribution yard. The bulk of *Palco Redwood* consumed in this area is shipped to Retail Lumber Dealers in carload lots. Our distribution yard, with a million feet of *Palco Redwood* items, supplements dealer inventories.



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