WAH-SHOOSH-KONS – 1840-1910 – "Little Muskrat"

NORTHWEST ARCHITECT

JULY-AUGUST, 1954

IN THIS ISSUE:
FATHER BARAGA ............ PAGE THREE
WILD LANGUAGE ............ PAGE EIGHT
CONVENTION LADIES' EVENTS .... PAGE TWELVE
WESTERN APARTMENTS ......... PAGE SIXTEEN
A SYNAGOGUE ............ PAGE EIGHTEEN

VOLUME XVIII
NUMBER FOUR
Messiah Lutheran Parish House, Minneapolis, Minnesota
LANG AND RAUGLAND, Architects

ALUMINUM WINDOWS
Crown fabricated aluminum windows are made to fit exact Architects specifications. We are pleased to work with Architects on special window design as well as standard products.

We are pleased to have added these lines to our expanding service

KAWNEER PRODUCTS
WELDWOOD DOORS
STAY-STRATE DOORS
HOLLOW METAL DOORS
HOLLOW METAL FRAMES
METAL WINDOWS
STEEL ROOF DECK
STEEL JOISTS
FREIGHT ELEVATOR DOORS

ORNAMENTAL METAL
The use of Crown fabricated aluminum work and Crown applied Robertson maroon wall panels provide a beautiful combination of materials.

CROWN IRON WORKS COMPANY — 75 years of service to Northwest architects and contractors. Each year has been a year of growth and we are continuing to expand our facilities to be of greatest service to the building industry. We appreciate your continued confidence in our ability to serve you capably in both engineering and fabrication.

CROWN IRON WORKS COMPANY
1229 TYLER STREET N.E., MINNEAPOLIS 13, MINNESOTA
TELEPHONE: GRANVILLE 3556
Seventy-five Years of Experience

--- to serve northwest architects
ONE HUNDRED and ten years ago Baraga's "Dictionary of the Ochipwe Language" was printed in the Slovenian city of Liubliana in what is now Yugoslavia.

In its introduction he writes:

"THIS, I think, is the first and only Ochipwe grammar and dictionary that was ever published in the United States. It was rather a hard work to compose it; I had to break my road all through. Writers of other grammars avail themselves of the labors of their predecessors and, like the bee, collect the honey out of these flowers of literature, leaving the dust behind. I had no such advantage, there was nothing previous to mine. It is the judicious opinion of Mr. Henry R. Schoolcraft, who has done and is still doing much for Indian history, 'that the true history of American Indian tribes and their international relations, must rest, as a basis, upon the light obtained from their languages.' This is true: and to obtain the light from such Indian languages, grammars and dictionaries will supply the best helps. And finally I wish to do a service to the philologist, to whom it affords pleasure and learning to compare the grammatical systems of difficult languages."

H. W. Fridlund, A.I.A., Editor
Fred Miller, Jr., Editorial Production
C. J. Loreitz, Business Manager

For more about Father Baraga please turn to page 40
MIZPAH
Congregational Church
HOPKINS, MINNESOTA

ARCHITECT and ENGINEER:
Lang and Raugland
802 Wesley Temple Bldg. Minneapolis 3, Minn.

DESIGNER:
Jim Bennett

Commercial Electric Cooking Equipment is used in this modern church.

All the cooking equipment in a space of 72"—plus clean, cool and efficient working conditions.

The 36" SupeRange is capable of handling the largest crowds and the 1-deck All-purpose Oven produces the finest baked and roasted foods.

Be Modern...
Go Electric!

Northern States Power Company
ELECTRIC COMMERCIAL COOKING AND HEATING SECTION
Another Outstanding ZONOLITE Job—
"Machine Applied" Acoustical Plastic!

The remodeled Omaha Gospel Tabernacle, Omaha, Nebraska, features a beautiful new Zonolite Acoustical ceiling. This pleasant blend of quietness and "easy on the eyes" texture is another of the many, many recent Zonolite Acoustical ceilings that have been machine applied!

In addition to maximum fire safety and economy, the ceiling has such excellent acoustical properties that radio engineers from WOW, Omaha, have acclaimed the room to be "outstanding" for broadcasting purposes.

Reverend R. R. Brown, who has the record of having the longest continuous weekly religious broadcast in America, is equally well pleased with the acoustics, when addressing a live audience. Leo Daly Company was the architect and Forman Brothers were the plastering contractors.

Investigate the many advantages Zonolite Acoustical can give you in a completely fire safe and attractive texture now! Write for full information today!
For over three decades Johns-Manville Corrugated Transite has proven an ideal material for roofs and for sidewalls of industrial, commercial and institutional buildings. Today, Transite is constantly finding new uses in many diverse fields—such as for interior decoration, store fronts, greenhouse growing benches and for agricultural structures. It would be difficult to find a building material that offers as many advantages as are combined in Corrugated Transite. It is

- fireproof
- weatherproof
- rotproof
- unaffected by temperature changes
- highly resistant to chemical fumes
- maintenance free
- quickly and easily erected
- economical

The attractive lines of Corrugated Transite have stimulated many architects to use this material as decorative interior walls.

Engineering and Erection Service Available

MacArthur Co. MANUFACTURERS DISTRIBUTORS CONTRACTORS
936 Raymond Avenue NEstor 7894 Saint Paul 14, Minnesota
RUSCO FULVUE WINDOWS
OFFER IMPORTANT ADVANTAGES FOR SCHOOL FENESTRATION

- Minimum Maintenance
- Functional Superiority
- Controlled Ventilation
- Flexibility of Design
- Allow Maximum Light
- Easier Shading, Screening
- Low in Cost
- Safer

Complete, fully pre-assembled units

Available in 4-panel and 3-panel-high units in a wide size range. May be joined in multiples with Rusco's simplified non-load-bearing mullions.

RUSCO Hot-Dipped Galvanized Steel
PRIME WINDOWS
FULLY PRE-ASSEMBLED, GLAZED.
FINISH-PAINTED. READY-TO-INSTALL

For further information call or write
The Exclusive Northwest Distributor

INSULATION ENGINEERS, INC.
RUSCO PRIME WINDOW DIVISION
Marvin L. "Fergie" Fergusad, Registered Architect Engineer
6318 Cambridge
P.O. Box 6, Minneapolis 16
St. Louis Park
Mohawk 9-6794

Architect
Honor be to Mudgekeewis!
Henceforth he shall be the Westwind,
And thereafter and forever
Shall he hold supreme dominion
Over all the Winds of Heaven.
Thus was Mudgekeewis chosen
Father of the Winds of Heaven.
Gave he North Wind wild and cruel
To the fierce Kabibonokka.
He it was who sent the snowflakes
Sifting, hissing, through the forest
To the lodge came wild and wailing,
Heaped the snow in drifts about it.
Song of Hiawatha

This piece is to give you some idea of one of the most beautiful and most competent of all the languages of man. No wonder Longfellow wanted to capture its treasure. Lest you think that my views may be colored unduly by the Ojibways I knew and the bright days I spent in their company under the sooting pines, near the silvery birches, on the sky-blue water, I better lay aside the odor of the forest and become a reporter.

Frederick Baraga, a Jesuit Missionary of whom we shall say more, was born in Mala Vas, Yugoslavia, in 1797. He lived most of his working life at La Pointe, Wisconsin, and spoke eight languages. He says that when the philosophic discussions between himself and his clerical brethren of Lake Superior reached a point where it was difficult to express ideas with precision, they did not turn to the academic languages which stem from Jerusalem, Greece, and Rome, but turned to the Ojibway language as the one speech which could render delicate shades of meaning with a point and poetry possible to few others.

This seems all the more surprising when we find that the Sioux, who were their nearest neighbors to the west,
managed to survive for untold ages with a language which was exactly the opposite. For all their contact with the Ojibways, mostly in war, the Sioux never felt the impulse to improve or extend their own vocabulary with words and grammar readily available in Ojibway. There were always bi-lingual interpreters and women captured in war who became wives and mothers within the Siouan tribes. This infiltration must have gone on for thousands of years with no appreciable effect on either language.

For example, the Ojibways have a highly developed grammar, versatile sentence structure and a very large vocabulary with hundreds of words not found in English. It is some kind of comment on the heirs of Shakespeare that as yet we have no need for such words. A large number of Ojibway words are labels for family relations. The Siouan tongue has less than a thousand words, and these must be accompanied by continuous use of hand sign-language and gestures to put the meanings across. Of course most of us make much use of gesture, but this is more in the nature of a running accompaniment than of an added definition or idea transfer.

MOST SCHOOL CHILDREN are familiar with the names and nouns to be found in “Hiawatha” and we shall try to get a few of them out and away from “the book” so you can enjoy them with a forest ear.

The cycle of the seasons produces charm the year around, unending entertainment for the unimportant people that like to enjoy the world by immediate contact. The first snowdrop blossom is welcomed by most people either by chance or by newspaper, and Emerson wrote a poem about the purple Rhodora whose impatient blossoms can’t wait for Spring to provide it with leaves.

But for me the most moving herald of winter’s end is to look out on the lake which only yesterday was a plane of gray ice and see its surface come alive again with dancing waves and sweeps of colored breeze, trails bright and dark, patterning its fresh blue mirror.

One walks to the sandy margin, sees the season’s first little wooly rolls of foam at the water’s edge, hears the tiny swish and slide of wave on wet sand, the little tapping of the wavelets on hollow boat strakes or stranded flotsam.

The Indians loved these things more than we do. We have no name for symphonies on the lee shores of inland lakes, but the Indians do have such words. One such word is Muh’-dway-oush’-ka. It is a sound picture, a four word poem which speaks about the little slappings, and rifflings, and soft scour of those tiniest baby wavelets . . .

On the pleasantest of shores,
Just below the bluejoint grass, In between the plopping of the frogs, The occasional fish splash out yonder. Muh’-dway-oush’-ka, mirroring murmurs.

Let’s turn back the years. There on the other side of life’s Camp Fire sits Mrs. Bosquet, our Chippeway friend who knew and loved Father Baraga in 1840, when she was a little girl on the Apostle Islands. These are scattered off La Pointe in Chaquamegon Bay, opposite the Indian reservation at Bayfield, Wisconsin, on the South Shore of “Gitche Gumme”—“big seawater.” The French Voyageurs renamed it Lake Superior. We will ask her to pronounce for us, Chippeway words known by all American school children.

“Please say Red Squirrel, Mrs. Bosquet.”

The red squirrel?—“A’-ji-da’-mo”—you hear it with your Longfellow, Hiawatha rhythm, ears. But hear her again, it now sounds more like “A-Chit’a-Moh,” staccato, just like the scolding squirrel says it on his branch.

You remember Mishi-moqua, the big black bear? Mrs. Bosquet says it very heavy, ME’-sha-MUH-qwah (soft). This is quite the opposite to the one she says for “red deer,” into which she speaks a bounce and furtiveness—Wal!’-WASH’-kish—a word full of brush and leaves, soft, warm, smooth sides for future moccasins, and flashing white tail, to fool the wolves.

There are so many charming conceits in this beautiful language one hardly knows where to begin. Let’s take “wa” which is always a syllable related to speech, of animal, man and even of inanimate things like the murmur of pines, crack of winter ice, water waves and

CHIPPEWAY GRAVES at Gordon, Wisconsin, established as Gaudin’s Trading Post about 1856.

GIFTS FOR THE SOUL were placed in these little dwellings. The tiny door-ways, usually with porches, made provision for the revisits of the Spirit as a bird. One sees here how the best hopes of all peoples great and small, press upon “building,” to produce “architecture” and “poetry,” to find expression in the first unfolding of ornament.

IN THE BACKGROUND ENCLOSURES may be seen the log fence posts; adzed square they are given tallness pointed and topped with the hand axe, they are shaped in love. Something within presses up to be hand-said beyond the call of duty, a vision is forecast of “things to come.” Courage is offered the sons of men, here and now, and in their “Happy Hunting Grounds” over yonder. Such Algonkian grave houses, of other materials, long ante-date the coming of Christianity.

W.G.P. Photo
flowing brooks. Doubling, "Wa wa" makes the word for wild goose and bursting into laughter as "ha ha" is combined with an outdoor water-word in Minne-ha-ha, for a famous water fall.

As we noted above "Muk'-qwa" is the black bear — "muk" is black "wa" his talk, possibly not his growl but his mystic "talk." The bear was close brother to the Indian, the most nearly human of the animals and he was very wise. What the bear totem said was always important. In Wa-wa(sh)'-kish for the deer, perhaps the "wa" is the buck's snort of alarm which scares the herd and loses the hunter both his dinner and "mocassins" for all the family. Furtive "sh" sounds as in "(wa) sh," and "(ki) sh" for deer are also found in the word for sand hill crane, the "schu-shu'-ga." If you've heard a crane lift on the wing from a reedy pond you know where that name came from — say it slow! But "wa" goes for people-words too. Muk-wa/da/a-cou'-ne-ah means "priest," "black (robed)-talker" in "the church." A-cou'ne-ah means the church service not the building.

Twish-ke-wa is the little northern sand plover, or "tip up." Chippeway makes a sound movie of the bird. His fluttery walk, like no other bird, is "twish" and his unusual plaintive cry "ke"-wa. So from all this "wa" the white man finds Indian talk handy, says, "Don't wa at me!"

When people meet a new language their first wish is to count. In these simple words we have a very interesting view of how the Indian thinks.

**Counting in Chippeway**

- one .................................. ba'-shik
- two .................................. ne(ch)
- three .................................. ne'-swe
- four .................................. ne'-win
- five .................................. nah-nun
- six .................................. go-(t)wa'-swa
- seven .................................. ne-(sh)wa'-swe
- eight .................................. (s) wa'-swe
- nine .................................. shong-(q) wa'-swe
- ten .................................. me-(d) wa'-swe

Let's have a careful look at some of these digits — "fingers!!" — an appropriate word in this instance. First off, "wa" equals talk, "wa-swe" equals "talk-for-counting" — that "(s)" is just a little ornament tucked in to make it sweet in the mouth, as are (t) (q) and (d).

For example take "eight," which is "(s)wa-(s)we." Chippeways feel the sense of this number and are saying . . . "talk about a number! — here you have it, "swa-swe," and all our counting fingers in it; our good old eight!" They honor eight; set it off; "tell" back from it for seven and six, while nine and ten are "told-off" on beyond eight. Of course ten now becomes important for its-self, that is to say, ten, me-(d) wa'-swe, its sign-language token is both fists. On their two fists hang all the "teens." Me-(d) wa'-swa/ah-she/ba'-'shik equals eleven; me-(d) wa'-swe/ah-she/ne' (ch) equals (Continued on Page 44)
ANOTHER
St. Charles
FIRST!

TOTE TRAY UNITS
Other St. Charles equipment for the clothing classroom includes wardrobe units and tote tray units. These may be used separately or, with mirrors on doors, may be grouped to make fitting area as shown below. Grooming area is also available.

New Clothing Construction Unit Organizes Work in the Clothing Classroom

This compact unit adapts, for the clothing classroom, the same basic principles—smooth flow of work and convenient locations of materials and equipment that are found in the St. Charles foods classroom. Focal point is the sewing machine which drops into the counter when not in use. To its right is storage for attachments and a file for reference material. The depression on the surface holds pins and scissors. Drawer at left holds tracing supplies. Tracing board is suspended on slides below drawer. Cupboard at left holds tote trays. There is storage on other side for skirt board and other pressing equipment, including asbestos lined compartment for steam iron and additional tote tray storage. Fold-over leaf, which covers machine when not in use, opens out to provide counter space for pupil doing hand sewing. Three-panel jointed Masonite cutting board fits over top providing cutting surface 43' x 66'.'

Over a year of research has gone into the production of this newest addition to the equipment offered by St. Charles for the homemaking classroom which includes unit kitchens for the foods room and storage units for the laundry. All St. Charles equipment is available in choice of twelve colors, an important aid in making the classroom homelike and appealing.

FREE BOOKLET. Send for your free copy of Education for Living, a recently published study of St. Charles products and their application to the homemaking classroom. Write to

PELLA PRODUCTS • 929 Washington Ave. So., Minneapolis, Minn.

Pella PRODUCTS
ST. CHARLES KITCHENS • CASEMENT WINDOWS • WOOD FOLDING DOORS
Greetings to Auxiliary Members:

Plan now to accompany your architect to Rochester for the A.I.A. State and Regional Convention on October 28, 29 and 30. This will be one you will not want to miss, a wonderful time to greet old friends and meet new ones.

Some delightful activities have been planned to entertain the ladies with the unusual opportunity to see behind the scenes of the famous Mayo Clinic as a special inducement.

One of the main purposes of our organization is the advancement of the profession of architecture by promoting friendship and unity among the members and I feel that attendance at the Rochester convention is a step in that direction.

You are all invited—Auxiliary members, those we would like to include in Auxiliary membership, the wives of Producer Council members and all ladies who are guests of the convention.

I look forward to seeing you there!

Eleanor C. Carter
State President

Mrs. Carter Invites the Ladies

Special Convention Features Developed For the Ladies

The local committee on arrangements was pleased when the general committee decided to try a few different ideas this year—first, starting with a "name" speaker at the Thursday noon luncheon in order to get the convention under way earlier than usual and then shifting the main speaker to Friday noon in place of the annual banquet.

One of the main attractions at this convention will be the tours for ladies and men through the Mayo Clinic buildings. In order better to understand and appreciate this outstanding medical institution we have invited Slade Schuster to speak at the Friday luncheon, which is arranged to include the ladies. Mr. Schuster is the senior member of the administration staff of the Mayo Clinic and also a member of the board of governors of the Clinic and a member of the boards of directors of the Mayo Association, the Kahler Corporation and the Franklin Heating Station. His intimate knowledge and thorough background of the institution, combined with his presentation, provide a highly entertaining and informative discussion which will interest not only the architect and Producer Council member but also all of the wives.

In view of the early start on Thursday, we hope you get here on time but we're afraid of a mad dash, if you are driving down and leaving the Twin Cities about 11 or 11:30, to get here by 12:30 for the first of the luncheons for men. We hardly expect that both members of one family can make the Thursday noon luncheon so we have scheduled the first women's event for a 3:00 o'clock tea in the Art Center. There will be an exhibit there too. If you do come earlier you could find some delightful spots to eat.

Some years ago at the national convention in New York the entire ladies' program just about collapsed and in Milwaukee at the regional there really was no ladies' program at all. We were rather curious about this and we concluded that the ladies would rather be free to do and see what they liked rather than be pushed around too much by a formal program. So, Friday will be just visiting day with perhaps one special ladies' tour through the Rochester Dairy where more milk is processed than in any other milk plant in the entire country. Local stores worth seeing are Massey's, Estess, China Hall (good china and glass), Saidy's (imports), Dayton's new esoteric store and all the Kahler Hotel Arcade shops, all downtown. Out on Miracle Mile Donaldson's and for a beer and sea food snack you must stop at the Pub and on the way back stop at Westphal's Trick Shop and spend some money foolishly to take home some "corny" trick. Just to have Art show you this junk is fun. This, too, may be the last chance for the golfers to play a round of golf on a "foreign" course and Soldiers' Field and the Country Club offer the facilities.

What do you think of having the Friday night "affair" a dinner dance with cocktails but no speaker? Well, we're going to try it.

Saturday morning, while the men are attending to the serious business, you ladies can park the grips and get all set to check out but before you go you will have to finish off your serious and important business of the auxiliary. This luncheon will take place at "Hollands" of Rochester. Really Newt Holland does have the kind of a place you wish you would have ready access to always. His private dining rooms on the second floor are very attractive.

Look—the next day is Hallowe'en and this is Centennial year in Rochester. Maybe the detailed arrange-
St. Francis Hospital
Shakopee, Minn.

Hubert H. Swanson
Architect
Join the Auxiliary,
Wherever You Are!

Won't you join us? You will find a great deal of value, fun and interest in being associated with other wives in the Women's Auxiliary of the Minnesota Chapter of the American Institute of Architects.

Membership dues are $2.00 yearly, payable to the local chapter treasurer.

Where there is no local auxiliary you can become a member-at-large with dues sent directly to the state secretary-treasurer, who is:

Mrs. Ida Leadholm (Mrs. J. M.)
5725 Second Ave. So.,
Minneapolis, Minn.

The Auxiliary Committee

Conventions could include the black cat motif or long beards, long skirts and/or long buggy whips. Anyhow—see you in Rochester, October 28, 29 and 30. . . . Your Local Committee.

Convention Program
In Gel Stages

As the ladies' program shaped up the general program for the Rochester A.I.A. convention was in the gel stage. Speakers had been contacted but exact times and definite subjects were not completely worked out. Committeemen said that the program was developing very well and the theme of the convention, "Role of the Specialist in Architecture," was being well worked into all phases of the program. Complete details of the program in its final stages will (barring accident) be published in the next issue of THE NORTHWEST ARCHITECT.

One definite commitment of importance was that of Ralph Rapson's acceptance of the role of moderator for one of the panels to be held. Mr. Rapson will be more than welcome in this role as he is the new head of the School of Architecture at the University of Minnesota, a story on that being included elsewhere in this issue.

For those who did not see it or who may have misplaced it, we are repeating here the tentative program outline for the convention. Features of this program, naturally, are subject to revision as circumstances dictate but it definitely shows the many attractions which will make it worth each architect's while to attend the meetings. The program—

Thursday—October 28
10:00 to 8:00—registration, Kahler, Windsor Lounge or Mezzanine.

12:00 to 2:00—lunch, You're on your own.
2:00 to 4:30—meetings of boards, committees, seminars in Kahler's Royal, Coach, U-Club Solarium.
3:00 to 4:30—Ladies' tea, Mayo Foundation House. Kahler Solarium or Art Center.
4:30 to 5:30—tours of Medical Science Building.
5:30 to 6:30—tours of Mayo Clinic's New Building.
6:30 to 8:00—cocktails, Kahler's U-Club, individual drinks.
7:00 to 9:00—buffet supper, simple chafing dish, Kahler's U-Club.

Friday—October 29
8:30 to 12:30—registration.
9:00 to 12:00—meetings in Kahler's Solarium, U-Club, Royal and Coach Rooms.
10:00 to 11:30—ladies' tour of Dayton's Store, Art center, Historical Society, etc.
12:00 to 2:00—luncheon, Kahler Royal Coach Room or Elizabethian Room, with main convention speaker, ladies to be included as guests.
1:30 to 3:00—ladies' style show at Rochester G & C Club by Rochester merchant or merchants. (Alternate—Include women in main luncheon).
2:00 to 4:00—meetings in Kahler's Solarium, U-Club, Royal and Coach Rooms.
3:00 to 4:00—bus tour.
4:00 to 5:30—tours, Medical Science Buildings.
5:30 to 6:30—tours, Mayo Clinic's New Building.
7:00 to 8:00—cocktails, Rochester G & C Club.
8:00 to 1:00—dinner dance in Rochester G & C Club, serving from 8:00 to 11:00, dancing from 9:00 to 1:00. Note: no speakers, no magicians, no acrobats . . . on with the dance!

Saturday—October 30
9:00 to 11:00—meetings in Kahler's Solarium, U-Club, Royal and Coach Rooms.
11:00 to 12:00—annual meeting, place to be designated.
12:00 to 1:00—men's luncheon.
1:00 to 2:00—annual meeting (finish).
12:00 to 2:00—ladies' luncheon and annual meeting in Holland's private dining room.
2:00 to —tours, Mayo Clinic.
2:00 to —tours, State Hospital.
2:00 to —tour, Franklin Heating Station & Subways.

NORTHWEST
Sjöström "New Life" Library Furniture is installed in all types of institutions—schools, universities, public libraries, hospitals, and industrial firms—throughout the United States and in Alaska, Hawaii, and Central and South America. Sjöström authorized distributors are experienced and completely familiar with library requirements. They are ready to serve you in any way, at any time. Shown above is the 210 FREELINE Library Table with steel legs in black satin finish.


Sjöström-BUILT

LIBRARY FURNITURE

HALDEMAN-HOMME, INC.

Architectural and Engineering Division

Industrial, Institutional and School Equipment

2580 University Avenue • St. Paul 14, Minnesota

Serving Northwest Architects for 30 years
The handsome Western Apartments building in Billings, Mont., designed by John W. Maloney, A.I.A., of Seattle, Wash., is a local plaster landmark. It is a good-sized job, involving 45,000 yards, it's the first building in town with two-inch solid plaster partitions and it's the first local structure where the plaster was machine-applied.

This six-story and basement building is of reinforced concrete construction. Vermiculite plaster was applied one-half inch thick directly to the concrete on exterior walls and ceilings. The two-inch solid partitions have three-quarters of an inch of vermiculite plaster on each side of long length gypsum lath. The partitions were braced with 2 x 4's until the scratch coat had set. One end of the 2 x 4 was braced against the floor, the other end was placed half-way up the lath.

The finish throughout is sand float except in kitchens and bathrooms, which are lime putty. A large part of the basement was also plastered. The plaster was applied by the crew of Frank Evangelisti, largest plastering contractor in Billings.

Although this was the first machine-applied job the crew had done, they had no trouble and work moved along at a good clip. As much as 3,500 yards of scratch coat was applied to partitions in one day and the entire job was finished in about ten weeks. The building was erected by the Hitz Construction Co. of Billings.

From all indications, machines for applying plaster have become a permanent part of the construction picture. When the first plaster pump was introduced five years ago, its primary purpose was to enable the lathing and plastering industry to compete more effectively on a time-and-cost basis with other interior wall finishes.

Later it became apparent that the pump had other possibilities, for example, machine-applying lightweight (Continued on Page 60)
ANOTHER
SOUND FLOOR
PLAN

Over 66,000 feet of M.F.M.A third grade maple flooring, 33/32" x 21/4" installed, affording more resiliency.

Complete installation by the W. A. Gerard Company using 6d Screw-Tite nails.

The demand for manufactured hardwood maple flooring is increasing everywhere.

From the standpoint of complete and effectual economy architects are constantly specifying more and more lower grades of maple flooring.

For Specifications and Information
CALL GIBSON 2879. OR WRITE

ARCHITECT
CONCLUSION AND SUMMARY

The synagogue has been defined and it is the house of the people. It is where they congregate to pray, to perform the traditional ritual of their holy days, study their religious laws and celebrate some of the rites that mark each individual's way of life—coming of age (13), marriage, and death (yahrtzeit.) The synagogue houses no symbol or image possessing supernatural power. It contains no element for obtaining divine intercession in human affairs. It recognizes no authority vested in a priest or a synod. It is subject to no organization save that established within its own congregation. The voluntary groupings developed in the past century (in order of religious adherence to law) are 1. Orthodox—Union of Orthodox Hebrew Congregation; 2. Conservative—United Synagogue of America; 3. Reform—Union of American Hebrew congregations.

Each synagogue is the reflection of the faith and understanding of its congregation. All over the world the congregations show a diversity of practice and practices, degree of holiness and yet have one common respect for the laws of the Torah, which is the word of God, resting in the sanctity of the Ark. The study of the Torah remains the most important religious commandment.

In the case of the proposed synagogue here, the eventful end is for a well-paid staff, from Rabbi to custodian. To finance such a large undertaking and maintain low operating costs most of the necessary services will be donated by the various members to the best of their ability; for example: teachers, janitorial services and administration. The congregation has the services of the Rabbi and a number of teachers from the old building which will aid a great deal. The idea of a community co-operative spirit promotes interest and a sense of belonging among the congregation which has begun to lag these past few years.

The proposed synagogue, then, will be a contemporary solution to the problem, while modern-day scientific and technological advances in methods and materials seem to ask for a plastic performance for a new architecture, the synagogue must remain unprofaned as a form of a house of God and a sanctuary dedicated to His service.

Thesis—1954
Submitted by Stanley Fishman to the Faculty of the School of Architecture, University of Minnesota
Packaged Boilers by BROS

give your plant low-cost steam!

If you are thinking about a new plant . . . increasing capacity of your present plant . . . or replacing obsolete steam generating equipment, be sure to find out what a new BROS Packaged Boiler can offer you.

You can get this efficient boiler completely factory assembled, ready for your service connections. Or it can be shipped KD, to be erected at the site. It comes with or without burning equipment, oil and/or gas. A heavy structural base permits convenient skidding or crane handling.

Since BROS also designs 2, 3 and 4-drum Watertube Boilers in a full range of sizes and capacities, you can count on efficient, economical operation of the BROS Packaged Boiler, backed by 70 years of BROS experience in meeting highly diversified steam needs.

Capacities from 4,100 lbs. of steam per hour to 30,000 lbs. are available. Send for the BROS Packaged Boiler folder and “no obligation” information on what this low-cost unit can do for you.

POWER DIVISION:
WM. BROS BOILER & MFG. COMPANY
1057 Tenth Avenue Southeast
Minneapolis 14, Minnesota
CONSIDERATIONS AND CONCLUSIONS

SITE

<table>
<thead>
<tr>
<th>Zone CONSIDERATIONS AND CONCLUSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood</td>
</tr>
<tr>
<td>Highland (S. of Randolph-W. of Lexington)</td>
</tr>
<tr>
<td>Midway (Randolph to Univ. W. of Lexington)</td>
</tr>
<tr>
<td>Hill (Dale to Lexington-Univ. to St. Clair)</td>
</tr>
<tr>
<td>Rondo (Rice to Dale-Univ. to Pleasant)</td>
</tr>
<tr>
<td>Lowertown</td>
</tr>
<tr>
<td>West Side</td>
</tr>
<tr>
<td>Other (East side of S. St. Paul, N. of Univ., White Bear)</td>
</tr>
</tbody>
</table>

These statistics show conclusively that the object of Jewish families reside in the Highland Park area of St. Paul. The most significant factor of the above statistics clearly indicate the movement away from the center of the city, the west side area to the Highland Park neighborhood. A heavy percentage of the people in this influx has been made up of younger families rather than older families and future statistics will surely indicate a continuance of this but perhaps at a slower rate.

It is in the Highland Park area with which the proposed synagogue will rest. The statistics show that the Midway area has also received many Jewish families, and reasons for choosing Highland are as follows:

1. There is a large number of young families living in this area presently unaffiliated with a synagogue who, if they joined one, would have to travel at least five miles to the nearest one. This is not even considering the three hundred families who are affiliated with the present synagogue group, who are planning to build. The present group would welcome the addition and the present building would allow for this increase and for the future.

2. The group residing in this neighborhood would welcome a new synagogue since it is mostly young married couples and their families that have little chance of participating in activities due to present long distances they must travel. This fact alone may increase attendance at weekly and Sabbath services which over the past twenty years have diminished to the point that a great amount of energy is being expended in an effort to eliminate this discrepancy. . . . The impact of the automobile is felt there to a great degree for transporting members to and fro is very important as the use of the auto shows that pedestrian transport is not a major factor in determining the location of the synagogue. The attendance is mainly dependent upon private transportation and, to a lesser degree, on public transportation. However, the ease with which private transportation and public transportation are available will definitely have a bearing on weekly and Friday night Sabbath services.

The specific site in Highland Park is bordered by Ford-Parkway on the South, Pinehurst on the North, Howell on the East and Kenneth on the West. The site was chosen because it is accessible to those in the Midway area in St. Paul and in the Minneapolis Minnehaha area as well, plus the important fact that it is in geographic center of the Highland neighborhood.
AMERICA'S BEST AIR CONDITIONING BUY!

Chrysler Airtemp

"PACKAGED" AIR CONDITIONER

More Air Conditioning at Lower Dollar Cost

SIMPLIFIED, LOW COST AIR CONDITIONING

For stores, offices, hospitals, and factories

As a business practice, air conditioning is a wise investment... and the
wise choice for that important job is Chrysler Airtemp "packaged" air
conditioning. Chrysler offers a complete range of sizes including Central
Station Radial equipment with capacity control and unloaded starting.
It is the ideal unit for either new or existing structures.

- ADAPTABILITY
- PERFORMANCE
- EASY TO INSTALL

A design and size for every application, 2 to 15 HP units. Space-saving features make Chrysler Airtemp simple to adapt.
Sealed radial compressor warranted for 5 years. Radial design is quiet and vibration free. Heavy duty construction. Maxi-Fin coils (13 per inch) give greater
capacity in less space and better humidity control.
Exclusive Air-foil grille.
Chrysler Airtemp "packaged" air conditioning costs less to install and less to operate.

FREE CONSULTING SERVICE
The Globe engineering staff will gladly consult with you in regard to any of your air conditioning
or heating installations.

Air Cooled Residential Units
Designed for Every Home

Now... any home can afford the luxury of air conditioning comfort be-
cause Chrysler Airtemp provides mechanical air cooled systems that are
completely adaptable to any existing heating systems. Chrysler Airtemp
offers 3 sizes, 2, 3, and 5 HP units that are capable of handling practically
every residential requirement. These units require a very minimum of
installation labor... no plumbing, no water, and very little space.

FLEXIBILITY OF INSTALLATION
Installation space required is as little as 6 sq. ft. Can be installed in
utility room, basement, attic breezeway, or even outdoors. Only 22" high
...will pass through a 25" door. Radial design compressor with a 5 year
warranty. Direct drive motor, suction gas cooled, sealed crank case.

- NO WATER REQUIRED!
- NO PLUMBING NECESSARY!
- USES NO LIVING AREA FLOOR SPACE!

To be sure... specify Chrysler Airtemp!

Exclusive distributors for
Chrysler Airtemp heating
and air conditioning.

601 No. Washington Ave.
MINNEAPOLIS
GE. 9306

Architect

Branches in Mankato, Minn., and Bismarck, N. D.
If all the members of the congregation left their homes simultaneously to go to the synagogue, even those at the outer extremities could arrive within ten minutes by private auto.

It is also advantageous because all indications of population shifts in the future will be directly around this area, insuring a secure future for the members. The site is also good in that it is located just off a main thoroughfare on three quiet streets.

Across Ford Parkway to the south is a vast plat with one small building, a small branch library, contemporary in design. There is a view to the southwest and, since the site is on high ground, it commands a long beautiful view. The site is easily reached by public transport.

TEMPLE WORSHIP SPACE
(Approximately 4000 sq. ft.)

The fixed seating capacity for regular Sabbath services is 400, with expansion provided for during the high holiday services. With the expansion, seats will number 1,200. The Temple's first function, of course, is its worship. Following this, there are a variety of other, lesser, functions, like weddings, Bar Mitzvahs, lectures and musicals, to name but a few.

The necessary elements which must be included in the temple are Ark, Eternal Light and Bimah (pulpit and reading desk).

ACOUSTICS

The acoustical considerations in a large space create quite a problem, even though the building may be structurally successful. Poor acoustics can be avoided if this problem is considered at an early stage of design. For example, a space with 2,000 fixed seats needs no electro-acoustical system.

The acoustical problem is made more complex by the fact that on the high holidays expansion from 400 to 1,200 seats is necessary (the volume of a space is directly proportional to the reverberation time.) Also significant to note, is that the various types of goings-on require special acoustical considerations, from a speaking voice to musical recitals (reverberation time then varies from .8 to 1.6). If then, acoustics are considered in the design stage, the use of corrective materials largely will be avoided as the sole means of control.

To achieve good hearing in a large space, three things must be accomplished:

1. Shape and size of the space determined, and its effects.

(Continued on Page 47)
"We Saved $5,000 with STRAN-STEEL!"

"We compared several different materials for framing this school. Because of its easier adaptation to the structural problems, Stran-Steel was $5,000 lower in cost than any of the others."

H. B. CROMMETT, Architect
St. Paul, Minn.

FOR MORE INFORMATION WRITE

STEEL STRUCTURES, INC.
821 NINTH AVENUE S. E.
MINNEAPOLIS 14, MINNESOTA
Fillmore 2786

DISTRIBUTION • FABRICATION • ERECTION
Rapson of MIT to Head Minnesota "U"
Architectural School

Ralph E. Rapson, who will become head of the University of Minnesota's School of Architecture this fall, is a well-known architect whose latest work was that of co-designer of the new United States embassy in Copenhagen, Denmark.

Mr. Rapson succeeds Roy C. Jones, who retired after years of service to the school of architecture in 1953. During the interim a faculty committee under the chairmanship of Winston Close of Minneapolis has conducted the work of the school.

The $1,000,000 modernistic embassy in Copenhagen will serve as a central point for U. S. activities in that country. In addition to the embassy it will house the Foreign Operations Administration, press and film sections, a library and auditorium.

The new school head has been on the architectural faculty of the Massachusetts Institute of Technology since 1946. He won the Parker Medal for Distinguished Building Design in 1951 and has won some 10 other architectural competitions. He placed first for the William and Mary College festival theater and fine arts building and was second in the National Association of Home Builders competition.

TUSLER RENAMED CHAIRMAN OF A.I.A.
HEALTH & HOSPITAL COMMITTEE

Minneapolis Architect W. H. Tusler has been reappointed chairman of the American Institute of Architects' health and hospitals committee, according to word received from national A.I.A. headquarters. His term is for one year.

Mr. Tusler is a principal of the firm of Magney, Tusler and Setter, well known for its work in the hospital and related fields of construction. The committee he heads is made up of one representative from each of the 12 regional associations within the A.I.A. setup. Mr. Tusler also is a past regional A.I.A. director for the Northwest area.

A.I.A. NAMES MODULAR SUBSCRIBERS
THANKS THEM FOR AID

The subscribers who have helped make possible the development of the A.I.A. Modular Co-ordination Program were named recently by the institute and thanked for their aid in this now well developing program.

Among those named were the American Institute of Architects, Indiana Limestone Institute, Libby-Owens-Ford Glass Co., Pittsburgh Plate Glass Co., The Producers Council, Inc., and Structural Clay Products Institute.

"Universal adoption of modular measure throughout the U.S. building industry could not be achieved overnight," the committee's report stated. "This is because it impinges on all who have anything whatever to do with dimensioning, such as draftsmen, construction foremen, even material salesmen. So widespread is the scope of this advance in construction practice that its universal adoption can be expedited only by a well-planned and very broad educational program serving all those concerned . . . Certainly, accomplishments achieved thus far by the A.I.A. secretary for modular co-ordination have been outstanding."

A variety of activities are enumerated by the progress report as having made possible impressive achievements in five fields of endeavor. Although greatest stress has been placed upon services to architects and draftsmen, the committee's statement calls attention to other groups with which the secretary for modular coordination has worked — contractors, architectural educators, manufacturers and others.

"(Modular Measure) works to the benefit of every organization connected in any way with the construction industry," the report concluded, "and it is reasonable to expect every such organization to support . . . modular sizes and dimensions . . . Many subscribers . . . have been investing in the program merely as a

(Continued on Page 27)
T-CHORD LONG SPAN STEEL JOISTS

give greater plan freedom

Wherever you must create clear, column-free areas . . . from 25' to 125', or larger multiples . . . you plan better, freer and for lower cost per square foot with T-Chord long span steel joists. Framing is simpler, stronger, faster . . . with lighter columns and footings.

GRAND HAVEN SENIOR HIGH SCHOOL, GRAND HAVEN, MICH. ARCHITECT: WARREN S. HOLMES

Enclosed joist areas permit wide latitude for lighting, ducting, ventilating, insulating or sound-proofing. And when exposed, T-Chords afford a pleasing textural-web perspective. Our extensive engineering service may be of great value to you. Write, wire or phone us for whatever information you may wish.

See Sweet's Architectural, Sweet's Industrial Files No. 2CHA

STRUCTURAL STEEL
MISCELLANEOUS IRON
T-CHORD LONG SPAN JOISTS
ORNAMENTAL IRON

HAVEN - BUSCH COMPANY

501 Front Ave., N.W., Phone 9-4173, Grand Rapids 4, Michigan
New Blacktop is 3 TIMES STRONGER than Highway Specifications

This Wisconsin road — surfaced with "RAMCOAT" — takes a daily beating from 20-ton gross loads at high speeds ... and is improving under the punishment! Reason: "RAMCOAT's" amazingly high stability, up to three times more resistance to displacement than ordinary blacktop surfacing. In one city, for example, a mix made according to city specifications resulted in a Hubbard-Field stability test of 900 lbs. When "RAMCOAT" aggregate was substituted for the local sand, the test amounted to 2793 lbs. — an increase in resistance to displacement of 210%!

"RAMCOAT" is a pavement wearing surface of exceptionally high water repellancy ... resists water breakdown in a test far tougher than any road would get. And "RAMCOAT" is non-skid, self-sealing, non-bleeding.

Easy to apply, by hand or with standard paving equipment, "RAMCOAT" is ideal for construction and maintenance of highways, airports, streets, roads, drives, yards, farms, tennis courts, industry and parks. "RAMCOAT" lasts for years with a minimum of expense.

For further information, call your nearby "RAMCOAT" applicator listed below or write Minnesota Mining and Mfg. Co., Dept. NA-64, St. Paul 6, Minn.

Ask about new "RAMCOAT" with special colored surfaces.

Wisconsin Sheet Asphalt Co.
120 Westen Ave.
Wousou, Wisconsin

Struck & Erwin Fuel Co.
826 Williamson Street
Madison, Wisconsin

Blacktop Inc.
527 S. Von Buren St.
Green Bay, Wis.

Vilas Paving Co.
Boulder Junction
Wisconsin

Morgan Co.
Ironwood
Michigan

Hennepin Blacktopping Co.
2373 Territorial Rd.
St. Paul, Minn.

ARCHITECTS!
add BEAUTY with
Crawford MARVEL-LIFT Doors

now made to
LAST EVEN LONGER

GENERAL SPECIFICATIONS
Upward acting doors shall be Crawford Marvel-Lift Doors, as manufactured by the Crawford Door Company, 401 St. Jean Avenue, Detroit 14, Michigan, and of the size and design as shown on the plans.

WOOD:
Wood sections shall have stiles and rails of vertical grain Douglas Fir, hardwood dowelled and steel pinned, water-proofed glued. Rails to extend full width of door. Panels to be of three (3) ply laminated fir 1/4" exterior plywood manufactured by the hot plate process with phenolic resin glue.

HARDWARE
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 3/4" 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.

GUARANTEE:
Doors shall be guaranteed against faulty or defective material or workmanship under normal operation for a period of one (1) year.

Send for free booklet "Crawford 60 second Door Selector."
This booklet will aid you quickly in selecting and specifying all types of doors.

RAYMERMADWE CO.
180 E. Sixth St. St. Paul, Minnesota CA. 4-4807

sound way of encouraging the building industry to (do) a better job. Each of these subscribing organizations undoubtedly weighed carefully the merits of modular measure before coming to this decision. The (AIA) Modular Co-ordination program is today a proved means of advancing a proven development in construction technology."

U. S. CIVIL SERVICE WANTS
LANDSCAPE ARCHITECT

Landscape architects are eligible to take a current U. S. Civil Service examination for positions paying from $3,410 to $10,800 per year. Those qualifying in the examinations will be eligible for appointment in various federal agencies in the capital and throughout the country; there are also some appointments to be made in the territories and possessions.

Certain educational and experience qualifications are required although there is no written test in the examination. Details and added information can be obtained from the U. S. Civil Service Commission Branch Office, Post Office and Customhouse Bldg., St. Paul 1, Minn. Ask for Announcement No. 409.

MULTI-STORY VENTING of individual apartment space heaters in buildings presented a problem finally solved by special stacks which have risen as high as eight stories. Primary use so far has been in resettlement buildings where the economy of individual gas heaters was important over use of a central heating plant. The Gas Appliance Manufacturers Association conducted research on the problem and obtained the information which was the basis for a manufacturer's designing the first stack. First installation was in a 64-apartment building and the vents operated well. Interesting side on the problem is fact that flue gases resulting from combustion of 1,000 cubic feet of natural gas in heating service weigh approximately 2,400 pounds. Heat energy must raise this through the stack.

REMEMBER . . . Rochester in October.

Rich-McFarlane Cut Stone Co.
Quality Cut Stone For Over 35 Years
LIMESTONES — GRANITE
CUT STONE
FLAGSTONES
RUBBLE
VENEER
2707 28th Ave. So., Minneapolis, Minn.
DUPONT 1256 DUPONT 1870

ARCHITECT
It is the unique task of church architecture to represent spiritual ideas with earthy material, and for that task, architects of all ages have found symbolism in the use of natural stone.

Ernest H. Schmidt, Mankato, Minnesota
—Architect

Bosshart Construction Co., Truman, Minnesota—Contractor

Trinity Lutheran Church, Madelia, Minnesota

THE BABCOCK COMPANY
—ESTABLISHED IN 1852—

QUARRIES and FINISHING PLANT
KASOTA, MINNESOTA

“100 Years Serving the Builders of a Nation”
DUAL INSTALLATIONS SOLVE VENTILATING PROBLEMS AS MINIMUM COST, JENN SAYS

Dual installation of wall and roof air exhausters solves most of today’s ventilating problems at a minimum cost, Louis J. Jenn, air exhauster designer and president of Jenn-Air Products, Indianapolis, recently pointed out.

"By adapting two types of exhausters throughout the structure, wall exhausters where the structural makeup of the building prevents going to the roof and roof exhausters where they can be spotted immediately over the desired areas, savings up to 35 per cent in labor and material can be affected," he said.

Most buildings to be ventilated today were constructed before the time of air exhausting studies, Mr. Jenn said. Consequently the problem is one of fitting the ventilation methods and equipment to the building rather than making the building conform to the ventilation.

Jenn-Air makes both types of exhausters. They are of the low contour, button-type whose design is intended to blend them into the building. The exhausters are made of spun aluminum, are package-complete, require no extra parts for installation, which is simply done, are long lasting and fireproof.

"By adapting two types of exhausters throughout the structure, wall exhausters where the structural makeup of the building prevents going to the roof and roof exhausters where they can be spotted immediately over the desired areas, savings up to 35 per cent in labor and material can be affected," he said.

Most buildings to be ventilated today were constructed before the time of air exhausting studies, Mr. Jenn said. Consequently the problem is one of fitting the ventilation methods and equipment to the building rather than making the building conform to the ventilation.

Jenn-Air makes both types of exhausters. They are of the low contour, button-type whose design is intended to blend them into the building. The exhausters are made of spun aluminum, are package-complete, require no extra parts for installation, which is simply done, are long lasting and fireproof.

BELL & GOSSETT PROMOTES PATTERTON TO V-P

Ralph A. Patterson, general sales manager for Bell & Gossett Co., Morton Grove, Ill., makers of heating and cooling equipment, has been promoted to vice-president. He will be moved to New York to open a new Bell & Gossett office there to serve that area.

BRUNSWICK SCHOOL FURNITURE DESIGNER WINS GOLD MEDAL

The Gold Medal of the Industrial Designers' Institute has been awarded to Dave Chapman of Chicago for his creation of the new Brunswick line of school furniture.

The emphasis in recent years on group participation, visual aids, learning-by-doing and similar educational methods has created a need for a type of classroom furniture
that is highly flexible, the award notation said. Mr. Chapman and Brunswick's own designers met this need with a line of movable units that can be stacked, nested or grouped.

This furniture is distributed in the Northwest by Hauenstein and Burmeister of Minneapolis.

AIR DIFFUSOR DESIGNED FOR USE WITH CELOTEX CEILINGS

The Linear Multi-Vent Panel, shown in our illustration, is being placed on the market by The Pyle-National Company for use in heating and cooling and ventilating in conjunction with Acousti-Line Ceilings made by The Celotex Corporation.

Multi-Vent's flush perforated panel eliminates all protruding air outlets and grilles. Its low velocity air delivery does away with discoloration of adjacent ceiling blocks and reduces maintenance costs. A flexible, compressible tubing connects the vent panel with the air duct and this eliminates costly sheet metal fitting on the job.

Added details on the diffuser can be obtained from the company at 1334 N. Kostner Ave., Chicago 51.

BUILT-IN TV UNITS AVAILABLE

A line of television sets designed to be built in has been put on the market by Hoffman Radio Corporation. The sets have 17 and 21-inch screens and are complete except for the detached speaker, which is a separate unit. Details can be obtained from the company at 3761 S. Hill St., Los Angeles 7.

HALDEMAN-HOMME IS NEW NAME OF HALDEMAN-LANGFORD

Haldeman-Langford, Inc., St. Paul firm which specializes in school and institutional equipment, folding and other types, has changed its name to Haldeman-Homme Mfg. Co.

W. W. Haldeman, president of the firm, at the same time announced that J. E. Homme has been named vice-president and general manager of the company. He succeeds W. R. Langford, who has retired from the firm. Mr. Homme has been with the company since 1946.

NEW USE FOR OLD PENCILS

The architect's old pencils now have a new lease on life and a new

SPACE-SET TILE

4 1/4" x 4 1/4" SIZE ONLY

A noteworthy advance in tile design, with the following exclusive advantages:

POSITIVE SPACING — Each spacer working independently provides for full width of the joint. Automatically allows for proper spacing between trim and flat tile.

FLEXIBILITY — Four spacers on each side permit easier setting of fractional cut tile, etc. The spacers are arranged so that the tiles may be set straight or broken joint.

DESIGN — Spacers are designed to withstand rough treatment, and so that maximum grout can be forced into the joint. Space-Set tiles can be set with a string if a wider joint is desired.

All of Romany's outstanding features have been retained, including: Strong Buff Body, Size and Shade Control, Beautiful Colors, Enduring Glazes, Cushion Edge, Low Absorption, Versatility.

Correspondence Invited

ROMANY IS:
FIRE PROOF
WEAR PROOF
FADE PROOF
SCRATCH PROOF
ACID PROOF

And is available in more than 30 attractive colors.

Rollin B. Child  Northwest Sales Representative
13006 Excelsior Blvd.  • Phone No. 8379  • Hopkins, Minnesota
career in aiding needy children in their schooling. A “Pencil Please” campaign is now under way to collect as many millions of used pencils as possible.

Sponsor of the drive is Save the Children Federation, a 22-year-old group dedicated to aid of children of all groups. In connection with the drive it was pointed out in some areas twigs, coal lumps and dirt are used for printing and writing early children's endeavors.

Pencils should be sent to “Pencils Please”, 1721 Park Ave., New York 35, N. Y.

CONSTRUCTION COMMITMENTS CONTINUE ON NEW RECORD LEVELS, DODGE REPORTS

First-half-1954 totals and commitments for June, latest reported, in building construction contracts continue at all-time record levels, according to the F. W. Dodge Corporation. Total construction awards for the 37 “eastern states” was $9231,149,000, up 17 per cent from the same period of 1953.

Minneapolis-St. Paul and area records were being set at a similar pace with the Minnesota-Dakota northwestern Wisconsin total of $276,890,000 being 44 per cent above the same period in 1953. Minnesota’s total of $198,458,000 was 39 per cent above the six months in 1953.

Certain trends were reported in the construction field by George C. Smith, Dodge economist. He reported:

1—A continued strength in residential construction and a strong leaning toward single-family dwellings as opposed to multiple-family housing.

2—A sharp drop in awards for manufacturing facilities, at least offset by an upswing in commercial construction awards. Result was a net increase in this dual category.

3—Continued growth in school construction as a major building facet.

The economist pointed out that the high level of activity in the construction field meant good conditions in the many allied fields of manufacturing and business.

---

How to solve a wide variety of acoustical problems

This new book is your guide to better working knowledge of Acoustics. Shows you ways for improved sound reproduction, noise control, and audio communication. Explains concepts clearly in terms of electrical-circuit theory.

ACOUSTICS

By LEO L. BERANEK

Acoustics Laboratory, Massachusetts Institute of Technology, Holof, Beranek, and Newman, Inc., Cambridge, Mass.

467 pages, 6x9, 12 illustrations, $9.00

THIS BOOK offers anmodern approach to basic acoustical theory and emphasizes practical application—design of rooms, auditoriums, work places, factories, audio equipment, etc. The treatment gives complete coverage of acoustical techniques in high fidelity reproduction, noise control, and audio communication. It contains valuable data for use in new product development, reduction of room noise for improved output in factories and offices and all applications involving problems of sound propagation. This work is a thorough guide to effective practical practice in acoustical engineering.

With labor and office workers today demanding pleasant acoustical environments to work in, more and more architects are wanting to increase their understanding of acoustics. This book meets the demand for a well-integrated, practical treatment. It covers basic aspects: wave propagation in the air, theory of mechanical and acoustical circuits, radiation of sound into free space, and properties of acoustic components.

Separate chapters deal with microphones, loudspeakers, and horns. The book presents important new data on noise-reduction and psychoacoustic criteria, and many other important aspects of acoustics.

CONTENTS

1. Introduction and Terminology
2. The Wave Equation and Solutions
3. Electromechanical Acoustical Circuits
4. Radiation of Sound
5. Acoustic Components
6. Microphones
7. Direct-Radiation Loudspeakers
8. Loudspeaker Enclosures
9. Horn Loudspeakers
10. Sound in Enclosures
11. Noise Control
12. Acoustic Measurements

Mail order to

NORTHWEST ARCHITECT
2642 University Ave.
Saint Paul 14, Minn.

32

NORTH CENTRAL SUPPLY COMPANY
1000 Raymond Ave., St. Paul 14, Minn.
Prior 2295
Northwest Representative

HEBRON, NORTH DAKOTA

Finest in face brick & tile

by HEBRON BRICK COMPANY
Porcelain Enamel Curtain Walls to Get Expanded Use

A growth in use of porcelain enameled curtain walls for future buildings is seen by E. X. Tuttle, A.I.A., and reported in a recent speech before one of the eastern chapters. He said in his introduction that Alcoa and Reynolds foresee a marked increase in their building products markets during the coming years and the reason is laid to expanded use of metal wall panels.

"I have been asked to talk about porcelain enamel curtain walls," Mr. Tuttle said, "but almost everything that can be said about that subject can be said about metal panel walls in general. Both ferrous and non-ferrous metals can be given a porcelain enamel coating and the only known satisfactory method of applying a permanent color, other than gray, to steel or aluminum is that of porcelain enameling and, in the case of steel, enamel is probably the most satisfactory corrosion preventative.

Porcelain enamel is glass. Glass is manufactured and while in a near molten state is plunged into cold water, where it shatters into fine particles. It is then milled to a powder called frit. This powder is mixed with clay and water to make a paste which is applied to metal by dipping or by spraying and is then placed in a kiln and fired at temperatures ranging from about 1000 to 1900 degrees F. The result is a thin glass surface fused to the metal. This is an exceedingly simplified description of a highly developed chemical and physical process involving the introduction of numerous chemicals and pigments and precisely controlled timing and temperatures.

Many of us recall so-called "granite" pots and pans and kitchen stoves that cracked and crazed and chipped, especially when used as drums. But that kind of material has gone the way of flour paste, "isinglass" and 2000-mile tires.

Today some porcelain enameled metals can be bent around a one inch rod and can withstand shock tests that will cause bricks or concrete to spall. Light gauge metal is being enameled and rolled like newsprint. Porcelain enamel has all the weathering qualities of glass . . .

I want to impress upon you my opinion as to the place of porcelain enamel in curtain wall development. It cannot be used alone; it is the means of giving protection to black iron and color to other metals. If one is satisfied with some shade of grey, and it is often a reasonable color to use, aluminum or stainless steel are both long lived exterior wall materials.

I think most of you will agree with me when I say that metal exterior wall surfaces, along with the automobile and television, are here to stay. The stage of their development, however, is only just past the "California top stage." Though there are numerous exceptions, metal, to an important extent in major buildings, is used somewhat in the manner of paint over standard masonry walls.

Rockefeller Center exhibits cast aluminum spandrels between stone piers backed with standard masonry. Concrete blocks back up the glass between window heads and sills in the United Nations Building and there are a number of buildings around the country that have been sheathed in metal panels.
They’re all going up

Grain Tank and Solvent Extractor Building at Cargill, Inc., Minneapolis
Contractor: Chris Jensen Company
Reinforcing and Structural Steel

New Village Hall for Edina, Minn.
Contractor: C. O. Field Company  Structural Steel, Bar Joists, Reinforcing Steel
Six story addition to Baker Arcade Building, Minneapolis
Contractor: Naugle-Leck Inc.
Reinforcing Steel, Fabricated Structural Steel, Steel Joists.

Write or call Department WF-74

PACAL STEEL SERVICE
Your fastest and most complete!

PAPER-CALMENSON & COMPANY
COUNTY ROAD B AND WALNUT STREET  .  .  .  ADJOINING HIGHWAY 36
ST. PAUL 8, MINNESOTA  
TELEPHONE NESTOR 9456
Geologists have explored the slate region and have found the supply of good natural slate has barely been touched.

There's plenty for hundreds and hundreds of years.

Be sure to specify Pyramid Brand Natural Slate.

W. E. Neal Slate Company
1121 Dartmouth Avenue
MINNEAPOLIS 14, MINNESOTA

A.O. Smith
SERRATED SAFETY GRATING
AT THE PRICE OF ORDINARY GRATING

2-WAY NON-SKID SURFACE
LOCKED-FOR-LIFE

100% non-slip surface is assured when you use A. O. Smith Safety Grating. Both bearing bars and cross bars are serrated. Rigid mechanical locking insures permanent alignment with maximum open area. Uniform spacing simplifies installation, painting and maintenance. Phone or write for complete specifications and prices on full line of serrated and plain grating and stair treads.

Phone AT. 4291
KEELOR STEEL, INC.
909 NINTH ST. S.E.
MINNEAPOLIS 14, MINN.

applied to masonry in much the same manner as tile.

Harrison & Abramovitz and their courageous client have, in Alcoa's Pittsburgh office building, made a contribution which very possibly adumbrates the direction that curtain wall design will take and give some real expression to our present-day skeletal type of building.

Its light weight metal skin, which looks like metal, is wrapped around the frame like a cloak and the light aggregate fireproofing sprayed on the inside of the skin resembles a kapok lining. Since I am supposed to be discussing porcelain enamel, I can say, here, that if Alcoa had wanted to introduce color, it could have enameled all the exterior surface of that building. Interestingly, the designers have installed hundreds of square feet of experimental enameled aluminum panels on walls of the open top floor terrace.

The application of and the need for light weight curtain walls is not confined to any one category of buildings. In some form or other and with varying degrees of success they have been applied to factories, laboratories, schools, stores and other retail facilities, houses and a variety of institutional buildings. They are probably as generally applicable to buildings as plumbing fixtures which, interestingly enough, are usually surfaced with porcelain enamel. To the present time, by far the greatest use of exterior metal walls has been for industrial buildings and particularly one-story buildings.

Mahon, Robertson, Armaco and others are forming steel or aluminum sheets which can be installed with or without insulation and inner lining to provide a light, weather-tight and attractive wall. This same type of wall has been used to a limited extent on schools and commercial buildings.

The ill-fated Luston Corporation developed an ingenious system of porcelain enameled panel construction suited to modern production methods and placed its faith in an extruded plastic caulking strip. These panels are still being manufactured and one of the largest porcelain enameler in the
country, Porcelain Steel Company of Connersville, Indiana, has had the foresight to continue the development work where Lustron left off. Though these panels are being used principally for gas stations now, that use may be the laboratory for the development of a more successful curtain wall system.

I believe we are nibbling at the edges of a curtain wall design problem with an occasional probe at its center. With the exception of the factory nearly all metal panel uses are special cases. We cannot afford to design and build special dies for each school or store we build but the demand for a multi-purpose panel and its attachments is so pressing that I feel sure the building industry will find the means to accelerate its development. I have reason to believe that a co-operative move is afoot to implement this acceleration.

The most important practical consideration in the use of metal exterior wall units, it appears to me, is that of their jointing. Several curtain wall systems are admirably suited to plain surfaces without many openings but introduction of windows and doors and other openings or breaks in the plane presents weathering and conduction problems which have not been satisfactorily solved or, at least, economically solved. The application of architects' and engineers' ingenuity and your cooperation with manufacturers can assist materially in the development of good joint design.

Fire code restrictions, which in some areas require a 4-hour rating for spandrel walls, place an expensive burden upon the use of metal curtain walls. There is an astonishing inconsistency in a code which permits almost unlimited use of glass in a wall but requires a 4-hour rating for a small spandrel wall. Some code improvements have been made and it is to be hoped that these restrictions will not seriously retard the logical development of metal walls.

I would like to outline briefly and broadly a few of the exterior metal wall units that are available, all of which can be enameled if desired and if reasonable quantities are involved.

Cast aluminum spandrels, as used in Rockefeller Center and set in masonry.

Rolled or stamped stainless or black steel spandrel panels set in metal frames, as exemplified in the U. S. Steel Building in Pittsburgh.

Aluminum or steel faced panels having a honey comb paper core set in frames and attached according to your own design, as used on the General Motors Laboratory.

Partially metal glazed sash applied with sash installation techniques, as used at 99 Park Avenue, New York, and to be used on the Statler Hotel in Hartford, Connecticut.

Mall Micata, a concrete backed enameled steel unit, tongued and grooved and clipped to a concrete or steel frame.

The Lustron type unit, having its own attachment and framing method.

Perhaps the best known and certainly the most used is the fluted
type of unit manufactured of asbestos protected or galvanized steel, stainless steel and aluminum in a variety of sections. Attachment methods for these units have about become standardized.

Most of the aluminum and steel companies, and often in conjunction with enamlers, have devised units for particular projects and all are willing to co-operate with you to develop a unit for your particular purposes.

I want to finish with some remarks about the peculiar architectural possibilities of porcelain enamel.

A couple of years ago our well known New York colleague, William Lescaze, was engaged by the Porcelain Enamel Institute to study curtain wall design and I think the results of his studies are a definite contribution to the subject. Perhaps the most intriguing outcome of his study was a pair of water color sketches of a hypothetical building having porcelain enameled exterior surfaces. One indicated the repetitive use of units of the same size and differing only in a very few varieties of abstract color patterns. The other demonstrated the possibility, by use of standard units specially surfaced in colors, of creating a moving or growing type of design over the entire exterior surface of a building.

I do not propose to stimulate an argument regarding the logic of such design but rather to bring to your attention the design possibilities of colored porcelain enameled building units, possibilities limited only by three dimensions, and an infinite variety of colors, patterns and textures.

SPECIAL INSTALLATIONS DEALT WITH IN FIVE LIGHTING FOLDERS

Luminous Ceilings, Inc., has released a set of five new folders dealing with the special lighting problems of drafting rooms, office buildings, stores, ticket offices and banks. The five are available on request to all architects who write for them to the company's home office, 2500 W. North St., Chicago 47.

The folders are well illustrated with pictures of typical installations which parallel those of the practicing architect. They are of file size, easily kept handy for reference.

EIGHT-FOOT FLUORESCENT TUBE ANNOUNCED BY SYLVANIA

Eight feet long with a light production above any previous standard type is a new fluorescent tube just announced by Sylvania Electric Products, Inc. The rapid-start, high-lumen lamp produces light at the high efficiency of 70 lumens per watt, the company's engineers reported.

The lamp is of standard cool white color but other colors are to follow. It's rated life on 3-hour cycle is 7,500 hours. It works best in well-ventilated fixtures, its makers pointed out.

Rochester gives you the Regional and the State Conventions.
LUMINAIRE DESIGNED FOR LOW BRIGHTNESS CONTRAST INTERIOR LIGHTING

A new Arealux luminaire, shown here, has been put on the market by Lighting Products, Inc., Highland Park, Ill., for use where a small, wide-area fluorescent fixture is desired, such as in schoolrooms, libraries, stores and offices.

This LPI Arealux, Series 164, is 333/4 inches wide but only 5 inches deep. It can be surface mounted or suspended, can be mounted singly or in rows or side-by-side. Lengths available are 4, 6 and 8 feet.

Complete spex, etc., can be obtained from the company.

COFAR FIREPROOFING GETS FOUR-HOUR UNDERWRITERS' RATING

Successful passing of the Underwriters' Laboratories' four-hour fire rating test by a new, low cost method of fireproofing Cofar concrete floors has been announced by J. D. Rosebrought, Granco Steel Products Company sales manager.

The method is application of vermiculite acoustical plastic directly to the underside of Cofar sheets, the announcement said. Cofar is a corrugated steel sheet which acts as form and reinforcement for concrete. It was developed and is made by Granco.

"This means," the release said, "that architects can now provide, at low cost, maximum fireproofing as well as acoustical treatment and good appearance in this type of construction." The method also is said to provide additional headroom, the gain estimated to be as much as 12 inches.

The test slab was of 4 1/2 inches of sand-gravel concrete poured on a 24-gauge corrugated sheet of Cofar. Vermiculite acoustical plastic, 1/4-inch thick minimum, was then sprayed on the underside of the Cofar. A supporting beam was also fireproofed with a 2 1/4-inch layer of vermiculite on metal lath. The slab was loaded to 75 pounds per square foot and the test run, at the end of which the slab was being subjected to 2,000 degrees. Then a 45-pound fire hose stream was applied to the assembly for 7 1/2 minutes. The following day the test assembly stood up under a loading of 150 pounds per square foot.

ARCHITECT

POPpy SEEDS AND BARLEYCORNS

You know it as an inch and in the Bureau of Standards they have a very scientifically measured space for the unit. But years ago—oh, go back to the XVI Century—they had a different build-up for the inch. In those days the always constantly sized poppyseed was a small unit (made up of 12 hairbreadths) which in turn when laid four across, make up a barleycorn and when you put three

(Continued on Page 53)

It Pays In Every Way To Specify CLAY TILE PARTITIONS

PLASTERED LOADBEARING And NON-LOADBEARING UNITS

... are available smooth, scored, combed or roughened. Clay Partition Tile provide the best known base for plaster application. Maximum resistance to sound transmission is assured by plastered Clay Tile Partitions. Dimensional stability of Clay Tile alone assures long-lasting crack-free plastered partitions.

EXPOSED PARTITIONS

Textured or smooth faces and varied colors allow greater variety of interior wall design and appearance. Acoustical partition tile makes it possible to have both fireproof and sound-conditioned walls. Salt glazed partition tile, with a glossy, easy-to-clean surface, is ideal where sanitation and ease of maintenance are important. Clay Partition Tile provide an ideal base for painting.

Structural Clay Products Institute
Region 6
Ames, Iowa
To appreciate the beautiful character of Baraga one has to meet him under all the circumstances and activities of his life, in forest and city, seeing hardship, furthering scholarship. He earned the diplomas of many Colleges of Science and the Arts. He never refers to one of his honors. He perfectly mastered five languages in word and script, but went about with the modesty of an illiterate. You should know of his skills:

An editor of calligraphic handwriting, producing, often by campfire or in canoe, manuscripts for twenty-five scientific books, so exact that they excluded all errors by typesetters in distant lands who could expect no proof corrections.

An artist of the compositional vignettes and genres of book design and typography, many of which are preserved and to my opinion would be, in themselves, worthy of an article in Northwest Architect.

A technical craftsman not only able to evaluate the materials going into equipment, tools and buildings in the wilderness, but who, with tools in hand taught his Chippewa apprentices the arts of log building construction. His log church, now over one hundred years old, is still in use at La Pointe, Wisconsin. It's Carniolan character in design represents a Balkan log-building tradition in architecture that is continuous back to pre-Roman times.

The interior of this church has mural paintings by Matthaeus Langus, his artist friend of student days. These he brought back to America from a first revisit to his native city of Liubliana. These treasures of Art and Architecture have now been well preserved, as interesting cultural Americana, by Bishop Thomas Walsh, of Duluth.

Baraga was also an agriculturist who planned the first experimental gardens in Minnesota at Grand Portage, about the year 1835. From this Indian center the art of summer and fall crops spread over the entire northwest. The Owen-Whittlesay expedition (U.S. Geo. Survey 1847-51), could not get any food for their canoe trip in the impoverished Fox Indian camp at Fond-du-lac in Central Wisconsin. To go forward with their exploration of the St. Louis River and that vast area Northwest of Lake Superior which includes Lake Vermilion and the waters of the Arctic Divide, which flow into Hudson Bay, they had to go first to the more advanced Chippeway tribe at La Pointe who had been educated by Baraga. Here the Indians equipped them for the long journey.

Whittlesay says in his report dated August, 1848, that at Grand Portage, on the North Shore, he found Indians raising potatoes at the old Hudson Bay Trading Post which had been abandoned thirty years before.

Baraga was indeed a man far ahead of his time in Minnesota; it takes 100 years to appreciate him. If a Spaniard he would doubtless by this day be at least a candidate for Sainthood. But being from a nation whose borderlands were still too much occupied by the slowly receding eastern "Orthodox Greek" Christian church, which had centered in Constantinople for a thousand years and more, Baraga was persecuted by the Hansenites, now all but forgotten, and so with rare Christian devotion he chose to carry on his life work in peace, 5,000 miles from the theological battles of the century of the Seventeen Hundreds.

Baragas ethnologic studies recording traditions and manners of Ojibwe Indians are literature imperishable. He published them in the Slovenian language, printed by Joseph Blasnik of Liubliana, in 1844. These works were distinguished by his own most beautiful typography and book design. They were shortly reprinted in French and German. This aroused a great interest for the American Indians in Europe and thus Baraga was enabled to raise funds for his further publications on the Ojibwe language. His best known work in English is a jewel of Indian linguistics:


(Continued on Page 42)
TJERNLUND . . . Warm Air Heating Equipment
Featuring INTEGRAL
DRAFT INDUCER OIL BURNER UNITS

Style D Bottom discharge suspended units.

CAPACITIES
141,000 to 1,000,000 BTU Input

ALL UNITS FEATURE DIRECT FIRING INTO
HEAT RESISTANT STAINLESS STEEL COMBUSTION AREA.

HEAVY DUTY WARM AIR EQUIPMENT, 1,000-
000 TO 3,000,000 BTU CAPACITY.

FOR COMPLETE INFORMATION
on our quality line of Oil and Gas Fired Units
WRITE or CALL PRIer 5861

Rugged in Texture

VENEER
FLAGGING
LANDSCAPE
WALL
INTERIOR

Colored by nature in
soft tones of blue, gray
and autumn gold

Quarried & Distributed by
J. L. SHIELY Company
1101 North Snelling Avenue
St. Paul, Minnesota
American Indian linguists who dare to penetrate into etymology of the Indian genius are very rare. There are some 165 dictionaries of Indian tongues. Unfortunately these leave the philosophical background of the language unexplained. And yet their authors, because of lack of scientific approach, never bothered to explain, for example, through what development of age-old human genius rests the analysis of the long Ojibway word "bi'-gwa/kam'-i/gi-bid'-ji-gi-bi'-gan'-i/ke-wi'-ni/wug", but just reported to posterity that it means "peasant." But there were, and are now, peasants or even remotely such a concept in North American cultures. Try to imagine what poetry and natural perception is buried in the compositional flow those of 29 letters; what definitions, experiences, and from what relations to nature and to man, this "word" came into being. Living answers to such questions are what the over-civilized and abstractionated peoples of the near future will need for refreshment of their streamlined spirits.

Baraga, did not care for praise and recognition. He has been dead for 86 years but time will make him shine as the immortal recorder of the American Indian.

Baraga came from Europe as a young man, spent his entire life in America and here he died. He was made a Bishop in 1860 with his Seat at Marquette, Michigan, on the South Shore of Lake Superior. His work in both religion and science has been well known in Europe for a hundred years and yet is almost unknown by those of us to whom he gave so much.

A BIBLIOGRAPHY

THE HISTORICAL and BIOGRAPHICAL literature and records on the CHIPPEWA INDIANS are very extensive, and almost untouched by scholars. The half dozen items available for preparing the several accounts in this issue of NORTHWEST ARCHITECT are listed below.

"LONG'S EXPEDITION," narrative of an expedition to the source of the St. Peter's River in the year 1823 by Stephen H. Long, Major U.S. Territorial, published in Dublin in 1769. 510 pages. Chapter 17 from page 387 to 412, very


"COLLECTIONS OF THE MASSACHUSETTS HISTORICAL SOCIETY," Vol. 10, second period, Boston 1823, reprinted. Little and Brown, Boston, 1843; a chapter on page 135 and following, giving a comparative vocabulary of the various dialects of the Delaware languages together with the Winnebago or Nipagon language. Language study for comparison continued to page 160. California State Library 974.4 M41C20.

"TRAVELS IN NORTH AMERICA BY CARVER," published in Dublin in 1769. 510 pages. Chapter 17 from page 387 to 412, very
full account of the Chippewa and Souan languages. California State Library 917.8 C33.

"TOUR TO THE LAKES," a report on the Chippeway Indians by Thomas L. McKenney containing a vocabulary of the Algonquian or Chippeway language, published by Fielding Lucas in 1827 in Baltimore. Language data is found beginning on page 487 and material will undoubtedly be found in the body of the book. Congessional Library.

"DISCOVERY OF SOURCES OF THE MISSISSIPPI RIVER" by Schoolcraft, published by Lippencott Gramco and Co. in Philadelphia, 1855. First Expedition in 1820; Second Expedition in 1832. 596 pages. Page 430 and following. Chapter 20 concerned with Indian hieroglyphics, picture writing, language and history. California State Library 917.7 S37D.


CREDITS AND RESPONSIBILITY

THE DIVERSE NOTES, made during many years and assembled here in honor of Mr. Jager and his pioneer researches in behalf of the American Indians have been carefully checked.

My necessarily brief account of the Chippewa Language is accurate to the best of my knowledge. However, none of the writings in this issue are offered as a definitive exposition of the material dealt with. Such a treatise would be far beyond the possibilities of this Journal, and impossible under the research procedures available to me.

I am solely responsible for the selection and editing throughout. Corrections will be cordially welcomed. Lists of books, articles in magazines and personal experience records are much desired. Address William Gray Purcell, "Westwinds," 3201 Barhite Street, Pasadena 8, California.

William Gray Purcell.

MORSE’S
"ONE-COAT" LIQUID CONCRETE FLOOR HARDENER

THE WORLD’S MOST EFFICIENT FOR BETTER CONCRETE FLOORS

OUT-PERFORMS ALL OTHERS

F. J. MORSE COMPANY, INC.

"LEADING N.W. HARDENER MFGRS."

127 EAST NINTH STREET

ST. PAUL 1, MINN.

Capi 4-1995

GEORGE R. LEWIS CO.
Figge Wall Gasket Koppers Bonded Roofs
Harza Labyrinth Waterstop
Para-Plastic Joint Sealing Compound
2036 Queen Ave. So., Minneapolis 5, Minn.
KENwood 5002

A phone call—wire, or letter to any of these companies will get prompt action. Whatever your needs... extra quality, beauty, durability, and all the other features of clay products specify one of our time-tested products. Our sales engineers are always at your service.

THE MASON CITY BRICK AND TILE COMPANY

554 BUILDERS EXCHANGE BLDG.
MINNEAPOLIS, MINNESOTA
PH. GE 6-788

THE DES MOINES CLAY COMPANY
DES MOINES, IOWA

THE OTTUMWA BRICK AND TILE COMPANY
OTTUMWA, IOWA

THE OSKALOOSA CLAY PRODUCTS COMPANY
OSKALOOSA, IOWA

THE REDFIELD BRICK AND TILE COMPANY
REDFIELD, IOWA

THE JOHNSTON CLAY WORKS, INC.
FORT DODGE, IOWA

ARCHITECT
Ornaments of Snow
(Continued from Page 10)

twelve. Having run out of hands they leave off "tell" ing and take to arithmetic.

Now look at seven which is ne' (sh)-wa-swe. As we would think it, seven would naturally be one less than eight, just as the Romans had it, IX one less than X, equals nine.

But you will say, should not that "seven" then be "ba-shik" one-less-than-eight, because "ne-ch" is "two" and two-less-than-"swa-swe" would be six not seven. Well, not by Indian logic as we shall see.

When we figure in arithmetic and algebra with the "Arabian" system of numerals our written symbols are visualized as an order, for example, a row from left to right, 1 2 3 4 5 6 7 8.

So we say, \( 8 - 1 = 7 \).

The Chippeway Indians had little need for figuring with the written signs which we call numbers. They were very much concerned with the workings and qualities of the practical objects for which written numerals stand in stead. They made a "tale" of objects related to some practical need. They saw a row of eight men of various sizes and ages, or eight fish of various kinds and sizes. Wishing to discuss the one next to the end they pointed to it, said "that second man or second fish from the eight-end of the row"; plainly "the second" (2 idea) from 8 equals 7, not 6. So that is how they came to name seven as "ne-(sh) wa'-swe, "two below eight, rather than "ba'-shik-(sh) wa'-swe," one below eight. You see "eight is already there as first" in the order of their practical immediate interest.

When we deal with complicated calculations by means of numeral tokens we are necessarily focusing on the written symbols. The Chippeway on the other hand, having little or no need for complicated arithmetic, does
not think of having lost "1," or "2" any "number" of his war party. He has lost Da-in-da, the Bluejay, second man to himself, 8 — "2" = 7!, ne-(sh)wa-swe. We think the same way. We say "That guy was worth any ten on the team."

The Chippeways had a "tale of the years" with a name for every year from 1530 until the 1870s which recorded the most important event of each year. This was all carried in memory with songs, stories and history clustered around the potent year-name.

And so it was with numbering, with the "telling-off" of skins, or fish caught or deer seen. Counting was a kind of "(ba)-mo'-zy," a walking, on the forest path of time, more a quality record of the caravan of days and moons. Sunset and moon-rise were the time clock.

These people were "wild," free, nothing in "the book" everything right in their hands.

THE CHIPPEWE have a word for eyes of animals, birds, for all meaningful small openings. But all words describing any part of the human body begin with syllable "o." Human eyes are "o-ski-sik." This word runs through all the Algonkian languages virtually unchanged from the Blackfoot of Montana, to the tribes of Massachusetts, whom the Pilgrims knew in 1620.

Indian children, with their brown tanned skins and their big brown eyes, were very attractive to the Pilgrim women who had brought along few children, 1 girl and 5 boys to be exact. It was no time at all before the Pricillas picked up the pretty Indian words. Those naughty little Indian eyes; what a word those Indians had for that, "o-ski-sik." how cute. "O you little skeezics" they cooed and thus "skeesiks" like many another Indian word became part of the new American language. Another Algonkian "o" word, common today in American speech comes from the Indian word for nose, "o-josh." This was really a funny word for any tongue; got associated at once with all the ancient sign languages, all the story metaphor and "the short" for the biblical christian name Joshua. From this, today's "don't josh me" got a three way backing of humor, with the Indian's nose still in the act.

In English we naturally think and exchange ideas with sound and sense related to Greek and Latin by a long and still living tradition. In Chippewa we have to move into a totally new relation between the sense content of any intercommunication and the kind of language tool they built to serve their needs.

The really dramatic paradox here is that we have a very highly developed and polished language which, none the less, had never been fixed in writing. And another feature strange to us is that Chippeway is composed to a very large extent of what we might classify as "slang;" while at the same time Chippeway is a speech of deportment and form, a polite language of deference and respectfulness.

What we hear in our American language as "you said it," "At 'a boy," "on the beam," "step on it,"
When you read, as I hope you will soon, the beautiful poetry of "Hiawatha"—now in good favor again even with the critics—you will have to put your spoken language into its hunting clothes, put a lot more wild life into some trial saying-out-loud of the poem and its Chippewa words. Television eyes and radio ears can never unravel for you the "song" which is Hiawatha, without some chance to hear an Indian speak it, to hear him chant his own language. But if you try to say aloud this word-music, that will do something to make it come alive for you. No poetry was ever "written." Poetry was not made to be looked at, but to be heard. Printed poems, like sheet music, are only the musician's "score" by which he can reproduce the beauty of the melody and its sense. So it is with all the magic of sound which is born to flower and fruit from the marriage of sound and meaning in nature and in man.—W.G.P.

Meaning of Word Chippeway

Ojibway or Otchipwe
What does this word mean?

The key syllable "Chip" or "Jib" is the word we meet in Mississ(ippi), even the double "pp" is retained here. "Sibi", "Sippi", "Sebe" means river. "Way" is found as a part of many words, getting into print as wug, wug, weik, walk, wa, wn, and other forms. It means "tribe", "folk", " clan", "herd", flock. "Chipp-e-way" is the pick up and write down of the sound by careless American ears and spelling. They missed the "O", which as a prefix is only partially articulated. This "O" is a starter-sound for all words for parts of the human body, perhaps something like our dative-of-interest—that is, the "as-for-me" speech parts.

So we have "O-jib-way" equals "We-river-people." Which starts a lot of questions? Plainly the "big" (misci) river, is the Missi-sippi. But in 1600-1800 Chippeways were East and North of that area. The Sioux were on its head water. In 1840 (about) in the naval battle of Minnetonka—fought in birch-bark canoes—the Sioux drove Chippeways far to East. Mrs. Bosquet, age 7, saw that battle and in retreat passed our Island Lake in Bayfield Co., Wisconsin. The reader can carry on from this point, or go back and find out what put the Sioux far West, as plains Indians, after about 1850, as they had also been in very ancient times. W.G.P.

October is THE Month—see page 12.
2. Keep in mind the sound absorptive qualities of the material to be used as interior finish.

3. The possible need for an amplifier system should also be considered.

The study of large rooms tends to indicate that shape and volume are the basic criteria in which to achieve excellent acoustic results. These studies show that room proportions are from 1.4 to 1.0 and 2.0 to 1.0 in length and width respectively, and give a good starting point in design. With these proportions, it should be borne in mind constantly that excessively high rooms should be avoided. Too low a ceiling is also bad, since it cramps the sound.

Actually, the ideal acoustical shape of a large space would be as Eero Saarenin once wrote, some kind of a cone where the listener sits at the pointed end of the cone. Oddly enough, the best acoustic shapes are the worst for seating arrangements and circulation. There seems to be no ideal acoustical shape and the acoustical problem should be looked upon as subordinate to the architectural and functional problems. Saarenin went on to say that there are millions of perfect acoustical solutions but only one of them is the best answer to one particular problem.

The volume of space we are concerned with here amounts to approximately 120 to 130 cubic feet per seat or, in the temple area, a total of 48,000 cubic feet see chart in Arch Forum, Sept., '49, which shows the reverberation time to be from .9 to 1.5; to bring it in the range from organ music to speech optimum reverberation time would then be 1.2.

The reverberation time is directly proportional to the volume of the room and to the loudness of the originating sound. The height of the room increases the volume, thereby increasing reverberation time and causing direct reflections from the ceiling which can be damaging. Concave or curved surfaces are bad acoustically for they tend to focus the sound energy in definite regions, thus producing echoes or sound images.

Curved walls have the same effect. The radius of ceiling curvature should always be considerably less than the height or greater than twice the height; anywhere between these conditions exist. The forms which seem to be most pleasing to the eye are the worst acoustically.

In a large space where there is to be no electro-amplification, the best speaking place is the altar, and the worst is along the axis at a distance from a wall, as, for example, from the chancel steps. Wide auditory are difficult for speaking, since they create sound shadows. In this case, electro-acoustical distribution should be used.

General acoustic information, rules of thumb:
1. The enclosure must not permit more than a 50
feet of travel distance between direct and reflected waves.

2. Sound waves will not reflect in precise relation to the angle of incidence unless the reflecting surface is at least twice as wide as the wave.

3. Since the volume decreases with the progress of the sound wave, it is a good idea to reduce the vertical cross section toward the rear in very large areas.

From this, then, it is seen that an organic form is perhaps the most logical architectural expression of good acoustical engineering. To achieve uniform audibility throughout the space, these things must be done: Diffuse all sound waves emanating from the source. Do this by the use of surface contours in walls and ceiling (convex forms are excellent). If the length of the wave is less than two feet, the surface contours must vary in size and depth. If they are more than two feet, apex of contour elements should not be more than 10 feet apart.

Should sound be directed to the listener by the shortest distance? Parallel lines here aid in avoiding interferences. High frequency should clarify speech and give music its brilliance.

Low frequency waves are essential for volume and body in both speech and music. They are less offensive as interference. Waves of similar phase combine to produce amplification. Resonance produced by materials vibrating at same frequency as sound waves in manner of percussion instrument—a. hard rigid materials resonate to the low frequency tones; b. wood vibrates to widest range.

This resonance, for example, is essential to good musical tones.

Materials: Draped porous fabrics tend to absorb the high frequencies. Resilient materials, such as carpeting or upholstery, absorb middle frequencies. Stretched membranes absorb the lower frequencies.

Lighting: From the viewpoint of the congregational function of the plan and design, the lighting must be clear, bright, white and general, for the chief object of wareness is the sense of the whole congregation by each member of it. All lighting considerations should involve mood and visibility. There should be adequate...
natural light supplemented by artificial light for daytime services and adequate artificial light for nighttime services. Special cases of lighting involve the eternal light over the Ark to emphasize it. Special activities such as weddings may require special lighting considerations. Lights within the Ark show its interior to the congregation, to achieve and effective focal point.

Direct and indirect lighting fixtures may be used in conjunction with natural light to obtain the desired atmosphere. The direct fixtures may be low brightness sources for reading purposes: indirect fixtures add enough light (5 to 10 ft.-candles) to the general area, with rheostat control for these lights for various purposes.

These lights give just the light for the congregations access and egress. Natural light should be brought in in such a way as not to be in a 45-degree angle to the line of sight toward the Ark, since the Ark areas are much dimmer. This is difficult to handle, since the light required to read by should aid rather than detract from the Ark area.

Design considerations include that 1. all illumination beyond 30 foot-candles requires fluorescent luminaries; 2. installation of fluorescents costs from three to five times as much as incandescents; 3. only indirect fluorescent lighting compares favorably with indirect incandescent lighting from the standpoint of effectiveness; 4. direct fluorescent is cheaper to operate than indirect incandescent. There is little difference in indirect fluorescent and incandescent.

As each member enters the worship space he wants to be able to see the ushers, steps, aisle, row, seats, exits, wife’s glove on the floor and, most important, the prayer book in his hand. To design an auditorium is to determine seating area within the limitations and to establish a position (not shape, as opposed to acoustical considerations) of walls and shape of floor therefrom.

The limitations are as follows: 1. the horizontal angle polychromatic vision (no movement of the eye) is CA 40. degrees; 2. the horizontal angle to the center line at which objects at podium cease to bear relationship to other objects on the podium and background is approximately 60. degrees; 3. the vertical angle beyond which ability to recognize standard shapes falls off rapidly is approximately 30. degrees; 4. especially in a synagogue, where group action is of the essence, occupants of all seats are usually related to the going-on when seats are orientated properly. This may necessitate curving the rows of seats. Center line of curvature is located on the center line of the auditorium approximately the depth of the house behind the stage; 5. no one person should sit directly behind another, unless more than one row apart; vary the widths in either row (non-parallel walls are an aid); 6. aisles, large center aisle necessary for weddings etc., radial aisles best for seating.

Depth of space factors: 1. visual acuity, details of people more than 50 feet away are not recognizable;

---

**A MODERN MARQUEE FOR A MODERN FRONT**

Here’s a modern marquee to fit any front. It is particularly adaptable to shopping centers or multiple units. Lightweight and strong, it rejects heat, filters sunlight, sheds rain and snow and allows radiated heat to escape. Can be fitted to round or square corners in varying lengths and widths.

Above is a California development using Shadelite. To the left, cross-section shows construction of the series of parallel leaves with lower edges troughed to drain rain and snow water into the supporting channels. In turn, water can be emptied into facing for run-off, or back to building, as desired.

Exclusive in This Area

Manufacturing Distributors

THE KLAMPE CO.

SHADELITE

1816-20 2ND ST., S.W. ROCHESTER, MINNESOTA

ARCHITECT
ARCHITECTURAL WOODWORK

For Quality Workmanship
From Established Craftsmen
NORTHWESTERN SASH & DOOR CO.
Fergus Falls, Minnesota

TWIN CITY TESTING and ENGINEERING LABORATORY
Constructional Materials: Piling and Lumber; Foundation Soil Investigations Including Diamond Core Drilling; Metallurgical and Mechanical Engineering; X-ray and Radiography; Welder Qualification; Analytical Chemistry (coal, metal, petroleum, water), Process and Product Development.
ST. PAUL, MINNESOTA
2440 Franklin Ave. NEstor 4074
216 S. Bell, Bismarck, N. D.
Tel. 147
Lakehead Testing Laboratory
128 So. 46th Ave., W. Duluth 7, Minn.
Tel. 4-0866

Minneapolis Blue Printing Co.
Agents for Keuffel & Esser Co. of New York

Architects and Engineers Supplies
Blue Prints and Photostats

Main 5444
523 Second Ave. South Minneapolis 2

2. capacity, last rows within 50 feet of Bimah and Ark; 75 feet may be allowed but it is bad, especially in a synagogue although details of facial expression and gestures are, perhaps, not as important to see as, for example, in a theater.

Summary thus far: Visibility limits and capacity determines depth. Capacity is a function of depth and width, increasing the width increases the capacity.

Lighting: The three major functions involved in synagogue lighting are visibility, decoration and mood. Light for visibility in the worship space must be adequate for the member to find his seat and read his prayer book. It should be distributed with a minimum of shadows and preferably from concealed or low brightness sources installed in the ceiling, light passing through small holes in a curved ceiling. An even distribution at a relatively low level of intensity (3 to 5 foot-candles) is desirable. White light is best. Under this light, area may seem dim.

Decorative lighting is part of the decorative scheme in itself, and by means of that which it illuminates, it establishes the character of the house by: 1. illumination of walls and ceiling, balanced background lighting, intensity less than audience area, color chosen to give desired quality to walls and ceiling color; 2. highlighting of focal points in the decorative scheme like objects of art, wall hangings, etc.; 3. decorative lights (chandeliers, etc.) may be concealed direct sources or indirect cove lights.

Down lights are for visibility.

Natural Light — Summary: Natural light sources, as well as artificial light sources, should not be within a 45-degree angle in the line of sight or the eyes will adapt themselves to the brighter areas in contrast to the dimmer. Desired focal point is the Ark. An indirect source should thus be used. This problem also exists in classroom lighting, since in the case of a synagogue the congregation is constantly reading from the prayer books. The best light for the hall is the sun. At night the light sources should be concealed so as to provide a calm, even lighting, bright enough for comfortable reading.

SEATING

In a hall of worship the focus of attention and awe is directed toward the Ark. The elevation of the Ark and Bimah should be such that all the congregation, even those at the extreme rear, can observe the ritual performed. The occupants of all seats in the Temple are oriented visually toward the Ark, a central Bimah allowing the grouping of seats around it for the congregational service. This creates the problem of grouping about the Bimah, at the same time allowing all seats a visual line to the Ark.

Staggering the seats in the hall does improve the visibility of each congregant, though only for individual seats and not pews. Individual seats are made in stock sizes with interchangeable backs and slots to allow adjustments for staggering. Pew seating gives more seating within the space since it can allow only 18 inches per person.
To allow good sight lines to the objects the floor can be made to assume the shape of a dish. This does not allow much flexibility, though, for expansion. The other alternatives are to raise the Ark and Bimah high enough for all members to see adequately (at least 30 inches).

Many problems in the floor design occur in planning a synagogue: 1. during high holiday services, expansion to the rear is necessary and the sight line situation becomes quite a problem; 2. any thought, then, of continuing the dish shape to the expansion space, which then would solve the sight line problems, would be impossible. The expansion space is unusable for any other function, such as dances, banquets and similar events. 3. a dish shape could be used with a balcony for expansion but is this economical for use only twice a year?

A conclusion, then, from the above points can be drawn in that “flat” floor seating must be used, with the Bimah raised at least 30 inches off the floor (including the Ark and platform). The most distant seat should not exceed 75 feet from the Ark for purposes of observing details and facial expressions.

The United Synagogues of America recommend 32 inches between rows of seats and 20 inches for each person’s seat. Side aisles should be at least 3 feet wide and a large center aisle of at least 5 feet in width provided. In continental seating distance from seat to seat is 45 inches and minimum number of seats is 24. In American seating, the distance from seat to seat is 30 inches, minimum. The code requires not more than 13 seats between 2 aisles and not more than 7 seats between aisles and walls. Code also states that each person is to have a minimum of 18 inches in pew type arrangement.

**LARGE ASSEMBLY AREA**
(4500 sq. ft.)

The large assembly area for all intents and purposes is an all-purpose room. It is a space where almost any type activity will be performed. Some of them are meetings, banquets, card parties, carnivals, weddings, Bar Mitzvahs, movies, plays, raffles and fund raising campaigns. Lighting and acoustical considerations should be as well planned here as in the worship space.

In this space a stage will be provided for Sunday school performances, operas, variety shows, etc. The stage will be 35 x 20 with a curtain and lights adequate for various performances. Storage for folding chairs and tables will be under the stage.

**TWO DRESSING ROOMS**
(Approximately 160 sq. ft.)

The dressing rooms will be equipped also with individual toilets and lavatories. This space allows performers and others to assemble and make ready for their stage entrances.

**KITCHEN**
(Approximately 605 sq. ft.)

This kitchen has direct access to the assembly for serving banquets, refreshments after meetings, parties...
and especially wedding dinners. This kitchen can be used by private caterers for wedding receptions, dinners and Bar Mitzvahs, etc. In some cases, a buffet serving operation may be used when the other methods are not needed. The kitchen should be completely insulated and ventilated so no offensive odors permeate the building and so that when dishes and such are being washed no noise or other disturbances will detract from services or other functions going on at the same time.

Kitchen facilities:
1. Cook's table 7 feet long, 3 feet wide and 3 feet high; a work table and butcher's block 8 feet long, 3 feet high and 3 feet wide; a serving table and salad table 15 feet long, 3 feet high and 3 feet wide with a serving shelf and tray slide.
2. A double sink (pre-rinse) compartment with counter 4 feet, 6 inches long, 2 feet wide, 3 feet high, and dishwasher unit. Shelving over counter and sink.
3. A three-range unit stove with 10 burners and ventilation hood over it.
4. A refrigerator unit, 2 feet long, 2 feet 6 inches wide, 6 feet high with 5 compartments.
5. One water cooler, 2 feet, 6 inches by 2 feet by 3 feet high.
6. Three large coffee urns with cup warmer below.
7. A counter 12 feet long, 3 feet high and 2 feet wide with drawers and cabinets below and shelves above.
8. Two pot sinks, dessert table and ice cream box.

Kashrus is the custom of not combining foods of milk products and foods of meat products in meals and of using separate dishes, pots and pans for these food-stuffs. This synagogue will, of course, observe this custom in the kitchen, which effects only the amount of cupboard space. This would double the normal amount of the kitchen to 640 square feet.

There will be cupboard space for dishes, pots and pans and tray space. Within the kitchen there will be a linen closet, storage room (150 square feet) for produce and canned foods, etc., and a cart storage alcove for storing tray carts.

Service Area: a service area is to be provided for the delivery of food, fuel, and supplies for the entire synagogue. In conjunction with this area, a refuse area is to be provided.

Atrium-Garden: This space will function as a place where people can gather before and after services, a place for waiting for coats being checked and for friends. During high holidays services expansions will be into this area. This space can also be used for the services of Succoth, when the out-of-door atmosphere is needed.

During most of the year this area will be used as a lobby with lounge chairs and sofas. Religious exhibits, trophy case and bulletin boards for future activities can be located here. Somewhere within this area there is to be a storage space for skull caps and
 Hibbes before entry is made to the temple proper.

This space will also be used for serving refreshments after the Sabbath services.

Toilets: Men's toilets will contain three water closets, two urinals and three lavatories; women's toilets, four water closets, a powder room and three lavatories.

Check room: The check room should have a capacity of 400 coats with five coats per lineal foot or eighty feet of hanging space. This room will have a regular attendant during High Holiday Services and other equally large activities.

Heating and ventilating equipment rooms: The boiler room will be approximately 10% of single floor area. A radiant heating system, in conjunction with a vulcan convection system, will be used in the temple, atrium and assembly rooms, the water to be circulated at 110 degrees fahrenheit. Ventilation is to be provided to these areas by ceiling ventilation distribution system. In the kitchen, adequate ventilation and heating will be provided by hoods over the stoves to prevent excessive condensation, humidity and odors. The heat and equipment room will contain two hot water boilers, automatic and oil fired, and a year round air-conditioning system.

Janitor’s facilities and rooms: Located near the service entrance there is to be a space for janitor’s office with shower, water closet, dressing space and lavatory. Within this office is to be a work bench and space for extra equipment and he has the opportunity to keep a check on equipment, schedules and general running and upkeep of the synagogue. In addition to this, there will be a small janitor’s closet with slop sink, storage and ventilation of rags, mops, vacuum cleaner and other cleaning equipment.

TWO GENERAL STORAGE ROOMS (Approximately 200 sq. feet). This space used for storing of accumulative equipment and additional storage, etc.

PARKING FOR 400 CARS

BIBLIOGRAPHY

BOOKS

Jewish Art in European Synagogues ............ George Loukovski
Pictorial History of the Jewish People ............ Nathan Ausubel
Origins of the Synagogue and Church ............ Dr. Kauman Kohler
The House of God ................................ Desider Hollier
Dura Europos and its Art .................... Nukhail Ivanovich Rostovtser
Open Timber Roofs of the Middle Ages ........ Raphale Brandon
The Excavation at Eura-Europus ............. Yale University
Ancient Synagogues in Palestine and Greece .......

Mohammedan Architecture in Egypt and Palestine ....... Martin Shaw Briggs
The Muslim Architecture of Egypt .... Cresswell, Reppel Archibald Cameron

Acoustics in Theatre Design ........ Sabine
Acoustical Principles ......................... Cullum
Trends in Synagogue Design ........ Acoustics in Theatre Design

PERIODICALS

Acoustics ..................... Architectural Forum ........ Sept., 1939

Architectural Record ............ Sept., 1947
Architectural Record ............ April, 1950

BLUE PRINTS — WHITE PRINTS

PHOTOCOPIES

Supplies for

Architects — Engineers — Draftsmen

H. A. ROGERS CO.

817 Marquette Ave. 48 East 4th St.
Minneapolis, Minn. St. Paul, Minn.
LI. 7655 Capital 4-2368

THE

OVERHEAD DOOR

TRADE MARK

WITH THE

MIRACLE WEDGE

OUTSTANDING for STRENGTH

and

DURABILITY

SALES—INSTALLATION—SERVICE

OVERHEAD DOOR CO. OF MINNESOTA

1935 University Ave. Prior 1087—Mi. 8388
St. Paul

ARCHITECT

53
PACAL ANNOUNCES NEW, PERMANENT, ADJUSTABLE POST

A new 3-inch, round, adjustable steel post for residential and commercial construction has been announced by Paper, Calmenson & Co. of St. Paul.

The Pacal Adjustable Steel Post adjusts to the exact height and load variations encountered in construction. In use, the entire post assembly (see exploded view in our illustration) is set on a concrete footing and turned up tight, leveling the beam. As the building nears completion, final leveling adjustments are made. When complete and trued up the cement floor is poured over the adjusting section of the post, locking it into the floor for life. Price and other details can be obtained from the company, addressed at County Road B and Walnut St., St. Paul 8, Minn.

BIRD OF OSSEO HEADS CONSULTING ENGINEERS FOR 1954-55

Homer M. Bird, consulting mechanical and electrical engineer of Osseo, Minn., was elected president of the Minnesota Association of Consulting Engineers at the recent annual meeting of the association.

Walter H. Wheeler, immediate past president, will continue as an ex-officio member of the executive board of the association for the ensuing year.

Other newly elected officers of the Association include A. L. Sanford, consulting mechanical engineer of the firm of G. H. Johnston, architects and engineers, of St. Paul, who was elected vice-president, and N. Bert Persson of the firm of Food Service Equipment, Engineering of St. Paul, who was elected secretary-treasurer.

The executive board elected to serve this year includes Gilbert Bauer, consulting structural engineer of the firm of Schuett-Meier Co., St. Paul; Borge Nielsen, consulting electrical engineer of the firm of Nielsen & Brush, Minneapolis; Dr. J. B. Calva, consulting chemical engineer of the firm of J. B. Calva & Co., Minneapolis; Fred Otto, consulting electrical engineer of the firm of Toltz, King, & Day, St. Paul; Robert J. Ellison, consulting civil engineer of St. Paul; and Charles Britzius, consulting civil engineer and technical director of the Twin City Testing and Engineering Laboratory, St. Paul.

QUICKIES

being footnotes on some news developments in the industry

AN ELEVATOR TRAFFIC SENTINEL is the latest electronic safety device to be presented to the public by the elevator makers. The sentinel sends an infrared beam across the doorway of the elevator about a foot from the floor. It gauges the numbers of passengers entering and leaving and controls the automatic doors accordingly. Previously, completely automatic elevators had doors which remained open a certain length of time, usually four to seven seconds. With the new device, made by Westinghouse, light traffic means shorter door-open periods, heavy traffic longer periods. Time decisions are made by an "electric brain" in the mechanism.

SAMARA IS A NEW HARDWOOD from equatorial Africa which is being introduced to the American market and at the low-cost level of materials. The wood resembles African mahogany or Spanish cedar and is being marketed as a plywood surfacer. It is light red in color, marked with bold, highly decorative grain patterns. Plentiful supplies are available as prospectors have uncovered huge forests from which the wood can be drawn. Supplies are in stock of most lumber yards.
STEEL HELPS SCHOOLS through work of the United States Steel Foundation, which in 1954 will give some $700,000 to liberal arts colleges throughout the nation. Recipients are privately supported colleges which have been having rough sledding of recent years as compared with the tax-supported institutions. A limited number of graduate fellowships at major schools are included in the year's plans.

AID FOR THE SMALLER BUILDER is appearing to help him compete with the large scale builders, whose ace-in-the-hole has been their special prices because of the large quantities of everything they buy. Now some lumber and equipment suppliers are making up “packages” which are sold to the smaller builders at a reduction in price. These units obtain for them same-throughout materials with the attendant lowering of price.

COOPER, PAGE CO. MOVES
The Cooper Page Co. has moved into a new office at 617 National Bldg., Minneapolis. The company represents the Frank Adam Electric Co., Major Equipment Co., and Sperti-Faraday, Inc., manufacturers of electrical equipment, in this area. Leo H. Cooper, Sidney H. Page and Howard K. Page contact users of electrical equipment for the firm.

BJERKIN NAME CHANGED
The new name of Bjerken-Bartlett, Inc., has been given to the former firm of A. C. Bjerken & Associates, St. Paul. The firm's new address is 2645 University Ave.

NEW BROCHURE ON BROS PACKAGED BOILERS
Available on request is a new 9-page brochure on Bros Packaged Boilers. It includes information on operation and specifications on Type 1, Type 2 and Type 3 Packaged Boilers built to meet steam requirements in the medium pressure range, from 4100 to 30,000 lbs. of steam per hour. These units burn gas or oil or combination of both.

Engineering data and photos of these boilers are included. Write for Bros Packaged Boiler Brochure WT-7 to Wm. Bros Boiler and Mfg. Company, 1057 Tenth Ave., S.E., Minneapolis 14, Minnesota.

WILSON DOORS
For All Services
Rolling Steel Grilles & Doors
Sectionfold Overhead Doors
Midget Slat Steel Enclosures
Rolling Steel Shutters
Rolling Wood Doors
Rolling Partitions
Manual or Electrical Operation
Joel F. Jackson
790 Henn. Ave., Rm. 808, Minneapolis

Pick your package

ANEMOSTAT
HIGH VELOCITY ASPIRATING UNITS

Here’s Anemostat’s answer to the problem of high velocity air distribution.

Each of these easy-to-install packaged units consists of a combination static pressure and velocity reducing valve, plus sound attenuating chamber and one of several types of Anemostat draftless air diffusers. A wide choice to meet all your engineering and architectural requirements. For top flight performance in high velocity air distribution systems, pick your package from Anemostat's line of tried and proven high velocity units.

Write or phone for complete engineering service.

THERMAL COMPANY, INC.
2526 University Avenue
St. Paul 14, Minnesota
Phone NEstor 1564

ANEMOSTAT®
DRAFTLESS Aspirating AIR DIFFUSERS

ARCHITECT
Chippeway or Ojchipwe (o-tchi'-pwe).

How Shall We Spell It?

When we talked with Indians, or about them, we called them “Chippeway” and it was their word too. We said it plain like an American word. We knew nothing of semantics, of how “sounds-alike” spoken words can hold very different meanings—“red” paint in a can—“read” stories from a book; identical sound but no identity of meaning at all. It was years before I connected the word Ojibway in “Hiawatha” with the Chippewas on our wilderness island.

In view of my own obtuseness in this matter I have tried, in these writings, to again emphasize the uncaptured-by-printed-letters-on-paper character of this wild language. To accomplish this I have let the tribal name be spelled just as comes naturally in my running text, and in all the different ways I have seen it printed or heard it spoken in the forest.

The book makers beginning in 1530 who put these Indians on paper were all unable to discount the ancient habits of their own tongues and ears. Then too, their questions about tribe names were answered, by the Indians, with speech in the spirit of the occasion—with tones of modesty, suspicion, fear, anger, pride or practical information. There was no dictionary way to say it. The word was unconsciously reshaped by the creative artistry of speech, very precious and important to those who have no need to write.

Thus it happens that you find “Ojibway” (“Hiawatha”), “O-ship-u-wuck” (explorers), “O-jib-wug” (traders), “Chippees” (lumber-jacks), “O-tchi-pwe” (Slavic scholar), and perhaps strangest printed form of all, “Ou-geb'-ouy” of the French voyageur. This seems to us the most remote of all and very Frenchy. If you will shape your lips to it, not look at type, and listen to yourself as you say it “by heart,” I think the sound will be nearest to what I heard by the quiet camphre. So you will see, how a correct spelling would be incorrect, for the Indians said it in as many different ways as the American pioneers said common words from Maine to Alabama, to Pennsylvania, to Indiana. The linguistic logic here is the vast complex akin to the forest itself, not the “this-so-that” of philosophers and dictionaries—it’s FREE.

For the meaning of the word “Chippeway” see page 46.

Under an Ancient Oak
Salisbury Cathedral
Sunday, June 11, 1927

The sense of antiquity in an object of past times is increased not by the passage of days and years, but by the change in ideas and attitude towards life. Aspects of Rome and Greece are more modern than is this Salisbury sanctuary.

It seems very venerable.

If there is a common bond under all the changes, then the sense of antiquity takes on an especial quality—we become part of the process of the aging.

Mayan objects of the 14th century have one kind of oldness.

This cathedral has another kind.

I pocket my note-book and have a little talk with Sidney Scott, age 12, who sits on the grass and tells me he wants to be a sailor. The singing in the cathedral drifts across the lawns.

True Love

“For when true love awakens,
Dies the self, the dark tyrant.”

Rumi (Persian)

In his book “Listening with the Third Ear” (Farrar Straus), Theodore Reik says in the chapter “Love and the Dark Despot”:

“There is a great difference between a knowledge that we acquire by learning, hearing, or reading, and what we learn by experience. Only this second kind of knowing cannot be taken from us, because it is blended with our experience. The two kinds of knowing are psychologically different even when they have the same content.”

While the rose blows, along the river bank,
With old Khayam the Ruby Vintage drink;
And when the angel with his darker draught
Draws up to Thee—take that and do not shrink.

Omar Khayam

“Westwinds” Diary
Economics as People

I continually wonder at the human interest factors and paradoxes of “business.” This is a poor mind in which to conduct one’s personal business affairs—especially when, as “landlord” (such an unpleasant word), one finds himself financing on partial payments the newly arrived infant of his tenant. But I must report to you an episode which in brief or in detail was quite unbelievable.

I bought a small house as an investment, very pretty place, seemed most promising. I rented it within thirty minutes of publication of offer to the original owner! She had bought it; lived in it ten years; sold it four years ago at the fabulous postwar prices; and then discovered that no house to live in could be found at any
"reasonable" figure, rent or buy, everybody else wanted to make money too! She forgot that.

Well, she was desperately homesick, had been startled to see her "own house" offered for rent—she rushed to find our agent and put down a month in advance. And so apparently I have the best tenants for life.

P.S. People as People.
My conclusion above was premature. Five months after the above was written, a sweetheart she hadn't seen for twenty years, came to Pasadena on a vacation jaunt. They were married in four days, packed and cleared out on Saturday without notice and were on their way to Canandiagua and a new life. Well, good luck and no hard feelings. A new tenant moved right in.

◆ December 15, 1925 ◆
This very minute you live!
Realize it—NOW—or never.

BRIGHT morning sunshine on my pen.... I am thinking that it is not sufficient to grasp basic truths with the mind, but these must be translated into action, through opportunities and skills at hand. Since one cannot perfect himself in many means of expression, one or a few can be chosen and those fully developed. To rush about from one interesting thing to another...
BUILD WITH NATURAL STONE
Performance ... Beauty
BEDFORD
CRAB ORCHARD
ACME LANNON
ARIZONA
COLORADO
NEW YORK BLUE
FLAGSTONE
CARTHAGE MARBLE
HARVEST HILL
DESERT BLEND
PANETTI
KASOTA
GRAN-A-STONE
CANDY STRIPE

Gopher Stone & Brick Co.
150 Irving Ave. No. Minneapolis, Minn.
Phone AT 4551

ORNAMENTAL IRON WORK
IRON RAILINGS
IRON & WIRE FENCES
STEEL STAIRS
FLAG POLES
FIRE ESCAPES

METAL BUILDING PRODUCTS
Let us estimate your requirements
C. W. OLSON MFG. CO.
1300 Quincy St. N. E. Minneapolis 13, Minn.

R. E. STANTON CO.
Representing
INTERNATIONAL STEEL CO.
Revolution Doors
WM. BAYLEY CO.
Steel and Aluminum Windows.
THE MILLS CO.
Metal Partitions
THE AIROLITE CO.
Door and Wall Louvers
GRUND EXPANSION GASKETS
For Copings, Parapets & Facings
2395 University Ave.
St. Paul 14
Midway 1400

is like looking at advertisements or comics as an escape from satisfying concentration.

I see bright and clear, like this sun-shaft moving across my hand, meanings that are apparently hidden from those whom I meet: their views likewise unseen by me. The things seen are as plain as the stem of an apple. How to get them forth in some form, put them in action, prove them, that is the puzzle; not to be done in some big enterprise, but by the multiplication in action, over and over again, of the small results of right seeing.

AGAIN it is the “NOW,” of 1954; a mellower sun on my fingers and pencil. There have come and gone some 10,500 days, with 10,500 new NOWS (and knows) in each of these days; like a drift of salmon eggs, some became fish and sought the sea.

◆ Behind the Postage Stamp ◆

COLLECT HISTORY

The letter inside along with its “cover”.

Dear John and Selma:

I have been reading this evening about Andrew Jackson — and 1846 — in Slesinger’s Book and I got to thinking about the lighting up of oil lamps and candles, and the effect of that rite on people’s lives. Lamp lighting took a bit of time; something done that stayed done all evening. It all carried a meaning very different from the “on-off” of electric light, all without a thought.

Until she left the old Oak Park home at 219 N. Kenilworth Avenue in 1906, Grandmother Gray, as she had in that house for sixteen years, lighted the kerosene bracket lamp, in the hall by the door of her bedroom, each evening just “at dusk” and there it burned until the last person to come in put it out — the midnight hall usually smelling a bit of shut-in kerosene fumes.

December 31, 1899, I got home from some party about 11:45, and, quite excited about the beginning of the new Century, stood in the wide upper hall before Grandfather Gray’s portrait, waiting for the New Year’s bells to ring. On the opposite wall under the lamp was the quaint turned-spindle “whatnot” bookshelves, which he had had in his college room in 1848-50. My eye fell upon the green volumes of Thoreau. I took one out and stood there reading for ten minutes. Outside the snow creaked and whined under an occasional passing iron tired wheel and the recently installed electric street light on the corner glinted through the prisms of the leaded windows of the door to the upper porch balcony.

This was my introduction to Thoreau who, until that time, was just a name talked of by fire-side. That oil night-lamp burning for my return, the grandparents asleep in their beds, the words of a fresh new author and the clang and bong of bells for a new century photographed a vivid scene on my mind. I put the green book back on the thin black shelf and looked again at the portrait of the great man I loved so well. I was nineteen years old and Grandfather Gray was seventy. As I turned out the light and went to my room I
thought of my future — wondered what would be for me — but never doubting it would be very wonderful. And it has been.

In eighteen months I was to lose this great friend but I could not have appreciated him more had I known that he would not live to bless for me another thirty-five years; as did "Kitty" his wife, my beloved grandmother.

W.P.

To Mr. and Mrs. John Jager
No. 6 Red Cedar Lane, Minneapolis

Notes:


The portrait of Wilkam Cunningham Gray, Ph.D., L.L.D., was painted in 1891, by Lawton S. Parker. 1887 Dr. Gray brought Parker from Karney, Nebraska, to study at the Chicago Art Institute. In two years he became an honor student and Dr. Gray then covered his expenses for two years in Paris, 1889-1890. From 1906-1920 Parker had become a leading portraitist in U. S. A. and was the only American artist to win (1906) and the Munich gold medal for portraits. Lawton Parker, after fifty years in Paris, escaped from the Nazis in 1943 and at 86 is now living and working in Pasadena.

If you don’t know Thoreau, who furnished Ghandi the base for his eventual emancipation (we hope) of India, there is no better time to read him than now—dozens of editions are available from 25c to $3.00. "A Week on the Concord and Merri-mack" or "Early Spring in Massachusetts" would be a good place to start.

♦ A CARVER OF MOUNTAINS ♦

Unsaddled of Tradition
He Lived and Spoke the American Word

"No individual’s life is worth the immortality he seeks unless he articulates the voice of his tribe."—Gutzon Borglum in “Give The Man Room”, Page 105. Robert J. Casey and Mary Borglum. Bobbs Merrill, 1952.

A recommended book which recounts the successful expression of sculpture as a function of life around us, today but feebly developed and unsurely organized by either sculptors or architects.

♦ FIRST ARCHITECTURAL EXPERIENCE ♦

ON MY VELOCIPDEDE at about five years of age I was riding on the board sidewalk around the side of our house. Looking up I saw that the shutters on the center window of the group of three on the east side were closed. Why? It must be dark in there. In where? The left-hand window lighted our library. From there I looked out on snowy days and rainy. The right-hand window lighted our “sitting room.” By that window I sat to draw and read in the evening. A bit troubled, I rushed in to see about opening those closed shutters that looked so strange, as if the house were not wholly awake. But when I got indoors there were the familiar windows as always. But where was that shuttered window? I rushed out again
— there, it was. Gradually, I began to realize that this shuttered window came directly opposite to where the chimney stood. Slowly it became clear to me that this really wasn't a window at all. It was nothing but a fake. I could hardly believe it, but my grandfather confirmed the idea when he returned from business in the evening.

The whole thing was a mental shock. Every circumstance connected with this revelation of human duplicity is one of the clearest and earliest things I can recall. That one event conditioned me so completely that it became the basis of my whole subsequent approach to architecture — abhorrence of frauds.

W. G. P.
Pasadena, 1949

◆ From Here on In ◆

THOUGHT SCOUTING FOR BETWEENAGERS

A “How to .........” guide that should have been produced by an architect.

At this point I should like to insert 144 pages of useful, whole-grain, linotype food for your daily nourishment. We are not able to actually remill a fresh bag of this Serial because our column-bins are too few and the frumentum is owned by others.

But for around $3.30 you can and should buy — or ask your library to buy — “An Approach to Design” by Norman T. Newton, Graduate School of Design, Harvard University, 1951, Addison-Wesley Press, Inc., Cambridge 42, Massachusetts.

Looking back along my trail it seems to me that no one can produce any living object of necessity, spiritual or economic, who has not learned by experience, or acquired by study, what this book has to say, and says better and plainer than any one heretofore.

Architects! — all you need to steer a better course and secure the gratitude of your fellow citizens is to put to work the “How to Design” directions of this book. Merely reading the book or having the tools from it in your attic (if any) will not serve. You must act upon what you will come to know from the study of this potent work — and I do not mean act-of-thinking. I mean production under the practical demands of living necessity.

Western Apartments

(Continued from Page 16)
Machine application of vermiculite plaster on gypsum lath for two-inch solid partitions.

Steel and lightweight concrete and plaster construction. Non-load bearing partitions are lightweight steel and lightweight plaster. The floors and roof are lightweight steel and lightweight concrete.

Among the advantages claimed for machine application in home construction are that it is fireproof, rot-proof and vermin-proof; that it is twice as strong as standard wood construction, has superior insulating qualities, makes for lower maintenance cost and obtains lower insurance rates. Machine-applied construction is said to cost no more than standard wood construction and gives the architect complete freedom of design.

It is also reported that this new sprayed-on, load-bearing wall construction technique has proved successful in new fireproof school buildings at savings of 30 per cent on the construction dollar.

Laundry tubs have been reduced by as much as 90 per cent in weight as designers plan new features for the homebuilder. In addition to reducing the tubs' weights, they are now being offered in handsome colors and patterns and their stands are decorative iron pieces instead of the angle iron legs they used to have. Made of Fiberglas-reinforced plastics, the new style tubs are available in green, yellow, blue and white.

Quality Hardware Since 1884

GARDNER HARDWARE CO.
311 Nicollet Ave., Minneapolis 1, Minn.

Distributors
RUSSWIN Architectural Hardware
SCHLAGE Cylindrical Locks
STANLEY Hardware & Tools
GENEVA Steel Kitchen Cabinets

Member National Builders' Hardware Assn.
Three Basic Changes In Progress

Missouri River Basin Dams to Provide Vast New Supplies of Electrical Energy and Improve Other Aspects of Area’s Economy

Missouri Basin Power
Basic Development No. 3

As far as the best thinkers in industry see it, one of this country’s vital needs for the future will be large additions to the electric power supply for manufacturing and other purposes.

New industries are being established near, or are moving closer to the sources of abundant electric energy.

One of the results from the Missouri River Basin Development will be great additions to the nation’s supply of electric power. The first instalments of this new supply are scheduled to be ready early this year, when the Pick-Sloan dams near Fort Randall in southeastern South Dakota are expected to start production of electric energy.

This will be an epochal event because it comes at a time when the tremendous iron ore development on Minnesota iron ranges, along with the unfolding progress in the Williston Oil Basin of the Dakotas and Montana, and the continued forward movement of manufacturing are all serving notice that greater supplies of electric power will soon be needed.

The Missouri River Basin Development is the largest river valley improvement program ever undertaken in the United States.

Agitation for it was started in the 30’s when drought, dust storms, and a general let-down were goading the country into action to improve economic conditions. After a procession of dry years, irrigation farming was being looked to as a future aid to the farm economy.

The program was given a vigorous push in the early 40’s by devastating floods along the Missouri River. As finally charted, it was authorized by Congress in 1944.

This artist’s sketch shows some of the many ways Missouri Basin planners expect projects to advance area’s interests
Flood control had then become one of the first considerations in this improvement program, but also up front in the plans were the conservation of water for land irrigation, improved river navigation, electric power, and better water supply for municipal and industrial uses.

The final cost of this vast improvement, federal and state, is expected to total around 15 billion dollars. Congress engaged in this enterprise believing there would be nation-wide returns from the investment. Electric power has all along been calculated a leading source of such returns. The government aims to collect back those billions in original plant cost and maintenance.

This vast river basin improvement—The Pick-Sloan Plan—is a merger of plans for Missouri River Basin work originally urged by two different government departments.

Dams Planned in Series

Under it, a series of great dams are being built across the Missouri's main channel, and a hundred lesser dams on the Missouri's many tributaries.

The big Fort Randall dam in southeastern South Dakota is about ready for service, including the production of electric power. A still greater dam, at Garrison, N. D., 70 miles north of Bismarck, is about two-thirds completed. It is scheduled to begin generating electric power in 1955. Two other big dams have been started, the Oahe dam just above Pierre, S. D., and the Gavin's Point dam near Yankton, S. D. Construction of the fifth, the Big Bend dam, between Pierre and Chamberlain, is still in blue print stage awaiting unfolding of the long-range program. Tied in with these dams is the Fort Peck dam in eastern Montana built in the 30's. Its generating capacity is now being doubled.

These huge dams will create an almost continuous lake through the Dakotas. While these huge dams are the most impressive, the smaller dams rising on the Missouri's tributaries are also important. They, too, will store flood waters, irrigate land, and generate electricity.

Electrical Power Primary Benefit

One of the first benefits from these dams will be electric power. The total of energy obtained from them will be three times the present generating capacity of the region. A great grid of power lines is being constructed to carry this current to cities, towns, and farms.

In eastern Montana, North and South Dakota, Minnesota, and western Wisconsin, the area in which the most of this new electric power will probably be used, there are close to 5,000,000 people living in approximately 1,400,000 households. There are about 400 cities, towns, and villages of more than 1,000 population each.

Total buying power for this area is placed at 6 billion dollars annually. Retail sales total above 5 billion dollars per year.

More than 4 billion dollars worth of goods are made and sold annually by manufacturing plants in the area. Tourist reports say that $200,000,000 is spent annually in Minnesota alone. Notwithstanding the general talk about the decline in farm income throughout the country, the close to 350,000 farms in the region constitute an industry of world renown.

This is the rich and inviting empire which, as a part of, or closely adjacent to, the Missouri River basin area, is ready for the arrival of that large addition to its supply of electric power.

This region is confident that mining and processing of taconite iron ore, the Williston Basin oil, and increased miscellaneous manufacturing, will bring a resulting climb in population and new industrial and agricultural growth, and will steadily develop into a still greater distributing and consuming market for all kinds of products from other parts of the country.
BOUND STUFF
being some notes on new books, pamphlets and other printed matter

STANDARD SPEX for vermiculite in plaster and acoustical plastic have been revised and result is new 12-page booklet available to architects and others. The specifications cover all standard procedures and a final section on "Suggestions for Best Plastering Results" gives some special tips which will improve jobs undertaken. The section on "Studless Solid Partitions (Metal Lath and Plaster)" presents some new information on this type of wall.

Price—free
Address—Vermiculite Institute
208 S. LaSalle St.,
Chicago 4, Ill.

MARBLE AND RADIATION come in for a generous discussion of value to planners who have atomic bombs and other radiation sources in the backs of their minds as they design a new publication called "Marble Used as a Radiation Shield." However, this book is concerned primarily with high voltage radiations of the new cancer treatment machine, the cobalt 60 hectarcurie teletherapy unit. Fully illustrated and well presented, the 32-page booklet provides the architectural and medical professions with the first complete summary of the problems involved in, and the results obtained by, using various methods and materials for shielding. The material is a report by Dr. Marshall Brucer, chairman of the Medical Division, Oak Ridge Institute of Nuclear Studies. It is of special value to those handling medical design.

Price—free
Address—Marble Institute of American,
108 Forster Ave.,
Mount Vernon, N. Y.

HOUSING FOR THE ELDERLY is a timely publication in this time when geriatric problems are coming ever more to the fore. A neatly edited and ready reference for architects and others concerned with planning facilities for older persons, the booklet's sections lead the reader step by step through the problems involved, apartment planning, building patterns, sites and finally specifications. Well detailed, the publication gives a concise review of law, diseases and other special concerns of the elderly, requirements of their living and so on. As valuable to the experienced architect as to the student, the booklet is well worth the eighth-inch of shelf space it will occupy among your reference materials.

Price—free
Address—Massachusetts State Housing Board,
Boston, Mass.

SANITATION problems of septic tank systems and a record of performance of plumbing gear are rounded

NEUBAUER "TWIN-POST" STEEL SHELVING

with new rigid "Twin-Post" corners

Here is the one Adjustable Steel Shelving that is stronger and more rigid at the vital points—corner posts. The "Twin-Post" design is actually 2 posts with 3 strong corners (see inset). Shelves fit tightly . . . everything stays in line. Smooth, beautiful and strong, it's adaptable for most shelving needs.

18 and 20 ga. steel shelves range in 25 sizes from 44 3/8" to 48" x24", 16 ga. posts from 6" to 10". Clive Green or Airline Grey, baked-on enamel. Special colors available.

FREE ESTIMATES

Write today for complete information.

Ask about NEUBAUER "TWIN-POST" Basket Racks for school and factory locker rooms.

NEUBAUER MFG. CO.

with new rigid "Twin-Post" corners

Here is the one Adjustable Steel Shelving that is stronger and more rigid at the vital points—corner posts. The "Twin-Post" design is actually 2 posts with 3 strong corners (see inset). Shelves fit tightly . . . everything stays in line. Smooth, beautiful and strong, it's adaptable for most shelving needs.

18 and 20 ga. steel shelves range in 25 sizes from 44 3/8" to 48" x24", 16 ga. posts from 6" to 10". Clive Green or Airline Grey, baked-on enamel. Special colors available.

FREE ESTIMATES

Write today for complete information.

Ask about NEUBAUER "TWIN-POST" Basket Racks for school and factory locker rooms.

NEUBAUER MFG. CO.
up in two recent federal publications—"Septic Tank Soil Absorption Systems for Dwellings" and "Performance of Plumbing Fixtures and Drainage Stacks." With the trend of residences out into the suburbs where individual water and disposal systems are required, the first publication becomes a ready volume for information about the manner in which best results are obtained with present-day equipment. The second booklet is a detailed presentation of its subject. It covers the diffusion of gases through water seals, evaporation of water seals, discharge characteristics of plumbing fixtures and the hydraulics and pneumatics of 2-inch building drainage stacks, among other items. The septic tank publication is the Housing Research Construction Aid 5 and the fixture booklet is Housing Research Paper No. 31, both from the Housing and Home Finance Agency.

Price—25 cents each
Address—Superintendent of Documents,
U. S. Government Printing Office,
Washington 25, D. C.

LETTERING for your buildings is the subject of a new catalog of the Oregon Brass Works, Portland, Ore. Six different alphabets are shown in the catalog and a complete discussion of bronze and aluminum alloys and finishes and recommended methods of spacing and installing letters is included. The alphabets are suitable for tracing to use in drawings of proposed structures.

Price—free
Address—Oregon Brass Works,
1127 S.E. 10th Ave.,
Portland 14, Ore.

WOOD FRAMES AND WINDOWS and their specifying is the subject of the third brochure in a series by the Architectural Woodwork Institute. A technical booklet, this item shows installations of various types of wood windows and frames and discusses adaptations to many construction problems. It is Brochure No. 3, "Wood Frames and Windows."

Price—free
Address—Architectural Woodwork Institute,
332 S. Michigan Ave.,
Chicago 4, Ill.

W. L. HALL CO.
CUPPLES ALUMINUM WINDOWS
Double Hung, Fixed, Projected
AETNA HOLLOW METAL
Steel Doors & Frames
Label Doors & Frames
CRITTALL STEEL WINDOWS
Pivoted, Projected, Casement,
Combination & Continuous
2814 Dupont Ave. So.
Minneapolis, Minn.

A. C. Ochs Brick & Tile Co.
General Office & Plant
SPRINGFIELD, MINNESOTA
SALES & DISPLAY
Ground Floor—Foshay Tower
106 So. Ninth St., Minneapolis, Minn.

American Cancer Society
Time after Time it's SCs for:
✓ Appearance
✓ Economy
✓ Utility
✓ Speed of Erection

The HONOLULU GAS CO. BUILDING is a 7-story and basement structure in the heart of the Honolulu business district. The attractive exterior is light green with white trim and Coral Rock Veneer.

By eliminating flared columns, drop beams and panels with SMOOTH CEILINGS SYSTEM, maximum space was utilized, structural strength (earth quake resisting) assured and construction costs cut to a minimum. Specify SCs* for your next building.

WRITE FOR COMPLETE DETAILS

Architects: Wimberly and Cook—Honolulu, Paul D. Jones, Associate
Contractor: E. E. Black, Ltd. Structural Engineer: Pacific Eng., Ltd.

ADVERTISERS

American Art Stone..................................................38
Ammerman Co., C. L..............................................59
Babcock Co..........................................................57, 29
Bartley Sales Co......................................................45
Bros Boiler Co........................................................19
Canton Lumber Sales—Back Cover...............................59
Central Building Supply Co......................................59
Child, Rollin B.........................................................31
Crown Iron Works..................................................Cover II
Dakota Plate Glass Co...............................................45
Dox Blocks.............................................................33
Drake Marble Co....................................................47
Forman, Ford & Co..................................................30
Fuel Economy Engineering Co..................................52
Gardner Hardware Co..............................................61
Gerrard Co., W. A....................................................17
Glacier Sand & Gravel.............................................52, 57
Globe, Inc...............................................................21
Gopher Stone..........................................................58
Haldeman-Homme, Inc..............................................15
Hall Co., W. L..........................................................65
Maven-Bush Co.......................................................25
Mebron Brick Co......................................................32
Heltne Ventilating Co...............................................60
Hier Co., L. E..........................................................42
Insulation Engineers............................................... 7

Joel F. Jackson.......................................................38, 55
Keelor Steel Co......................................................36, Cover III
Klampe Co.............................................................49
Layne-Minnesota ....................................................64
Lewis, Geo. R..........................................................43
Louis & Son, Al. J.....................................................48
MacArthur Co..........................................................6
Mankato Stone Co...................................................48
Mason City Brick & Tile Co.......................................43
McGraw, Hill Book Co..............................................32
Minneapolis Blue Printing........................................50
Minnesota Fence Co................................................51
Minnesota Mining & Mfg. Co.....................................26
Mitchell Products Co., J. M.......................................45
Morse Co., F. J..........................................................43
Muckle Mfg. Co.......................................................61
Neal Slate Co., W. E................................................36
Neubauer Mfg. Co....................................................64
North Central Supply Co...........................................32
Northern States Power Co.........................................4
Northwestern Sash & Door Co....................................50
Ochs Brick Co., A. C...............................................65
Olson Mfg. Co., C. W...............................................58
Overhead Door of Minnesota......................................53
Paper-Calmenson Co...............................................34, 35
Paulle-Midway, L.....................................................44
Pella Products.......................................................13, 11, 37
Producers' Council..................................................28
Raverty Ornamental Iron Co......................................46
Rayner Hardware Co...............................................27
Rich McFarlane Cut Stone........................................28
Rogers, H. A., & Electric Blue Print...........................53
Roofings, Inc..........................................................60
Rydell, A. T.............................................................29
St. Charles Kitchens...............................................11
St. Paul Structural Steel Co.......................................48
Schultz, A. W..........................................................54
Shiely Co., J. L..........................................................41
Smooth Ceilings System..........................................66
Stanton, R. E...........................................................58
Steel Structures......................................................23
Structural Clay Products Co.....................................39
Tjernlund Mfg. Co....................................................41
Thermal Co., Inc......................................................55
Twin City Brick Co..................................................61
Twin City Testing & Engineering...............................50
Twin City Tile & Marble............................................46
Villaume Box Co.....................................................10
Western Mineral Products.........................................5

NORTHWEST
Here's why architects say.....

Corruform is the only engineered form for light concrete floor and roof slabs, with reliable strength and adequate safety margin for normal construction loads!

Permanent Corruform is attractive, furnished galvanized and/or vinyl-primed (ready to paint) for exposed joist construction. It is also available in natural, black sheets for unexposed joist construction.

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

ECONOMICAL Corruform eliminates waste. Light rigid sheets quickly placed won't bend, sag, stretch, or leak. The concrete you save actually pays for CORRUFORM. Clean-up time and expense are minimized, too!

SAFE Corruform provides an extra-tough, secure steel base for trades and concrete...a form which maintains structural principles and integrity, with no side pull on joists, beams or walls.

DURABLE Corruform is nearly twice as strong as ordinary steel of equal weight. It's an ideal vapor seal, too! With coated Corruform, insulating slabs serve better, last longer.

For Good-Looking Exposed Joist Construction, Always Specify CORRUFORM Tough-Tempered Steel

SPECIFICATION

Guaranteed average strength over 100,000 psi and certified minimum strength for single test over 95,000 psi. Weight .72 lbs. per square foot.

WRITE FOR FURTHER INFORMATION OR CALL AT 4291

IMMEDIATELY AVAILABLE FROM MINNEAPOLIS WAREHOUSE STOCK

KEELOR STEEL, INC.
Northwest Distributors
909 NINTH ST. S.E.
MINNEAPOLIS 14, MINNESOTA
BUILD WITH REDWOOD—
REMODEL WITH REDWOOD!

These pictures, taken in Minneapolis, illustrate Redwood's natural charm and the ease in adapting redwood to remodeling jobs.

Quality is particularly important on commercial buildings.

Specify

Palco Redwood is milled to perfection and is the only redwood guaranteed not to shrink, warp, twist or cup.

Directly above is shown the adaption of 1x4 comb grain (striated) Palco Redwood into a modernistic, yet warm, suburban store front. To the right and at the top of the page, a tavern and grocery store used stone and 1x8 Palco Redwood V-Joint.

Canton Redwood Yard, Inc.
Palco Redwood Wholesale Distributors Since 1930
Phone or Write for information concerning specifications or items available
221 W. 78th STREET, MINNEAPOLIS, MINNESOTA Phone: ROCKwell 9-3221