Mount Zion Lutheran Church . . . . . . . . . Minneapolis
Armstrong & Schlichting, Architects
Victor Carlson & Sons, General Contractor

NORTHWEST ARCHITECT
JANUARY-FEBRUARY 1952

IN THIS ISSUE:
MONEY AT WORK . . . . . . PAGE FOUR
PRIZE DESIGNS . . . . . . PAGE SIX
ARCHITECT-CONTRACTOR CO-OPERATION . . . PAGE TWELVE
BUSINESS OF ARCHITECTURE . . . PAGE SIXTEEN
LEON ARNAL . . . . . . PAGE THIRTY-SIX
F.Y.I. . . . . . . PAGE TWENTY-FOUR
VOLUME XVI NUMBER ONE
FOUR YEARS LATER ... and it still looks like new!

Lounge in the TOWN HOUSE, St. Paul, Minnesota ... sound-treated with VERCOUSTIC more than 4 years ago.

PERMANENT BEAUTY is an important advantage of Vercoustic. A vermiculite material with a high degree of sound-quieting efficiency, Vercoustic retains its attractive texture for years ... needs only the usual maintenance of cleaning and repainting. It may be spray-painted in harmonious colors, without impairing its sound-absorption qualities. Vercoustic is easy to apply on both old and new surfaces. Write today for complete information about this permanent, practical, low-cost sound-quieting treatment.

VERCOUSTIC ACOUSTICAL TREATMENT

GONE WITH THE WIND

THE GREEN PAPER TOKEN called $1 lacks the force it had only year before last. Whatever money you saved since 1948, or earn today, you are poorer. In 1948 you bought stocks or bonds with your savings. If you were well advised (or just lucky) you find that someone will now buy your stock and pay you other paper warrants, still called “dollars,” and more of them than you gave in 1948 to “own” the stock. But did you own it? You did not own more than half of it.

IN THE INSTANCE of the “profit” on the stock, “Oh, Boy,” are you pleased! But is it a profit? Not when you buy groceries. Your unconsidered satisfaction in capital gain is premature. And your continued pain over more restricted living is impractical.

IT IS the PURPOSE of our leading article in this issue to clear up some common errors and perhaps improve the future circumstances of us all.—W.C.P.
MONEY AT WORK!
STOP, LOOK! AND LOOSEN!!

A STUDY IN INVESTMENT of Capital and Savings Funds, designed to assist architects and persons engaged in the building industry, or others who have a particular interest in this field.

By William Gray Purcell, A.I.A.

EVERYONE WITH a few hundred dollars in the Savings Bank which is paying him 2 percent might like to invest it in stocks and bonds if he could only be sure that when he wanted to sell them, he could sell at a profit. He would also like to know that during the time he owned his shares, he could be receiving more than the two percent Savings Bank interest. Perhaps he might get five percent. “Well—fair enough! Aren’t such investments made every day?” On the other foot, we unfortunately know that too many people have lost by buying the wrong investment.

This piece does not propose to tell you what are the right investments. It is also not going to be very helpful to those who have bought investment paper that went down instead of up, or which failed to pay any dividends. This review is going to be directed to people owning securities which now sell for more than they paid for them, and who continue to receive a good interest return and therefore believe that they have a sound investment.

THE SITUATION which we have to examine is this. What is a Sound Investment? Was your investment which went up and paid interest, really a sound investment? And should you continue to hold it?

THE JOKER in this picture is the misconception regarding the application of the idea “MONEY” to the results of your transactions. The successful investor assumes that MONEY has a value in itself, that a dollar bill or a silver dollar in hand is worth a dollar. You think if you loaned out one hundred dollars, to someone who a couple of years later paid you back one hundred dollars plus interest, that you would then have twenty-five dollars more “money” than you had before. This is the common assumption, but it is an assumption which your daily visit to the grocery store should convince you is absolutely unsound.

You invested a hundred dollars in, say, 1946. A hundred dollars then would have bought a hundred good substantial meals. You now wish to sell, to convert the promise-to-pay of some person, or corporation, into a promise-to-pay by your government. You are pleased to find that your “paper” (money) is “worth a lot more.” You can get, say, one hundred twenty-five dollars back, plus the twenty-five dollars interest which has been earned during the five years. “Well, pretty good!” You started with a hundred and you now have a hundred and fifty. The catch is that the one hundred and fifty dollars will NOW not buy you 150 good substantial meals—it probably will only buy you 75 good substantial meals. Instead of making a profit in this transaction you have actually suffered a loss of 50 of the present day now feeble dollars. What we really must begin learning to say is, “I did not profit by fifty dollars; I lost 75 meals.”

THE INVESTMENT PROBLEM TODAY, therefore, is not simply to acknowledge this situation. You want to keep your hand and eye on what will still continue to BUY THE SAME AMOUNT OF GOODS AND SERVICES, never mind what the tickets of exchanges are called.

YOU MUST MAKE a working connection between the knowledge of what a dollar will not do for you, when you go to the store, or pay your rent, and the ideas about how to store your capital, where it will not evaporate in this fashion.

By now everyone knows that this gradually diminishing ability of the dollar to buy the things you want, is called INFLATION, but the trouble is that inflation has now become a word that is tossed about, while practical individual action aimed to protect one’s self against the evaporation of personal capital becomes immediately confused with all the conventional rules and tests of thinking about “how to determine the present ‘return’ and future value of stocks and bonds.” And that just is not the problem.

The minute you talk to an investment broker about the purchase of sound securities he begins to talk in...
terms of dollars, how much you pay, what the investment will probably do in the way of increase in price in terms of dollars and how many dollars it will pay you back. But he is not concerned as to what kind of dollars those are. He is concerned as a citizen and father, but not as a stock broker. He couldn't be and stay in business—or remain sane. If the same number of dollars you paid in are paid back to you, with a decent rental for the use of the money, he feels that his obligation is at an end, that the investment was sound, and that the honor of all the parties was maintained. This is, of course, true, but only in a bookkeeping sense. It is true only within the rules of a game which is changing so fast that the rules no longer have much reality. Truth is not static. Economic truth does not lie in word logic but in organic procedure.

**People generally assume that money is something which has value and therefore it is good to have a lot of it, in hand or on order at the bank. But those 1% government engravings are only a transferable receipt.**

**Let's get** some data points. Metal money — silver dollars — are also only a receipt, so made only because they don't wear out so quickly, and of course to aid the mining industry. The paper dollars are worth perhaps fifty dollars per ton, and at no time is the metal in the dollar "worth" the goods it will buy. Paper money could be "worth" more cash than metal money. They won't even let you hold the gold tokens and the law prohibits you from making the silver dollars into jewelry. You could sell dollar bills for paper pulp if the dollar keeps on going down.

But you say, "for all practical purposes" a "dollar" does have a substantial value, because you can put down a dollar and take home a sack of food. How much food? And for how many "tickets," "coupons," "tokens," "long Greens," "folding cash," called "dollars'? Your "practical" concept leaves out the very important governing factor — the always changing "passage of TIME."

If you keep on saying these words and depending on the labels, without examining the actual content, without considering the real substance for which the money is only a bookkeeper's record, you will lose your "capital" — and so will we all. We must THINK STRAIGHT OR GO BROKE.

**We must reconcile** this present feeble dollar at the grocer's counter, with what appears to be a lively dollar in investment but IS NOT. There are three principal ways to do this:

**Note for men** you are sure will represent your interests at all levels in Washington; who will move before too late to do the much that can still be done to maintain an honest currency, and do it now. TIME is the key factor: it's the key factor in "interest" return too. This action should have no party-political factor. Compel your candidate to subscribe in plain language to the specific measures that he will really work for and will vote for.

**Let a clear plan** in your working mind of how to beat the always changing value, by ownership of things you can use, and men and machines that can work for you. Don't continue to mistake the nature of the tokens in your pocket. Their only value is to save you the trouble and expense of driving a herd of steers to Detroit in order to steer a motor car home. You can then eat the steer which you still have in your field.

**Find some place** to store your capital so that whatever you get back when you "sell," will buy you as many good dinners in 1952 as that much capital bought you in 1946.

**Another answer** is investment in a certain special class of improved real estate, selected under very tight specifications that are not ordinarily used by realtors because their interest is naturally in current dollar business, or future dollar earnings.

**I propose** that you own a certain proportion of your capital in income real estate in the following classification. In example I give the rules drawn from my experience in selecting real estate to produce a nominal return most of the time and a secure protection against the failing force of the dollar at all times.

A. Never buy unimproved real estate—or special use buildings.

B. Buy no buildings of commerce, industry, or office use. These should only be bought by specialists in that field. I have not had one failure in following these rules. Here is no "buy and sell at a profit" idea. This is property to own and rent, to hold even if it rises and can be sold profitably — to keep holding even if its capital and income should depreciate. A new high cycle is bound to appear — average length of cycles is seven years.

C. Buy single family dwellings.

D. Preferably all on one floor.

E. Not less than a 50 x 120 lot and not on a corner; 60 x 150 up to 200 even better. In my opinion longer lots will be in increasing demand on account of gardening accent resulting from adulterated and deteriorating foods.

F. The property should rent for not less than $65 a month and for not more than $95 a month, at the current 1952 dollar value. (In 1940 the correct range was $35 to $55).

G. If you are planning to own more than one piece of property, never own two pieces side by side, or even within several blocks of one another. Tenants gang up on you and if you do repairs or redecorating for one, you have to do it for the other whether they need it or not.

H. The dwelling should be located in a part of the community that is either stabilized or gaining, but not one that is on its way down in "character" (even aside from its passing dollar value).

I. It should be within walking distance of markets, church and school, bus or streetcar lines. In rental property, to be owned over long periods, do not depend solely on automobile transport. The availability of cars, new or used, could become very tight quite aside from the cost factor. We could easily get into a car rationing era based on certificates of necessity.

J. A fenced property is very desirable as it appeals

(Continued on Page 38)
PRIZE DESIGNS

Recent University of Minnesota Winners' Drawings Typify Fine Quality Prize Competitions Engender

THROUGH the generosity of architects, material manufacturers, and architectural organizations, the School of Architecture of the University of Minnesota has a number of prizes to award for the best solutions to design problems. A few of the designs recently awarded prizes are shown here. There are other highly meritorious ones which space prevents being shown.

The Thomas F. Ellerbe Prize of $300 is donated by Thomas F. Ellerbe of Ellerbe & Company, Architects, St. Paul. It is administered by the Co-operative Educational Foundation. Its purpose is to encourage the study of the co-operative movement in general, its benefits to society, the "Ten Rochdale Principles" and the possibilities attainable through co-operative movements. A part of the work involved in each competition consists of reading, discussion, and research on the subject of co-operatives. The other part involves the design of a building to serve a co-operative enterprise.

The problem illustrated here is a unit of a co-operative housing project. It was intended to form part of the housing facilities included in the Minneapolis neighborhood replanning problem that was illustrated in the November-December issue of the NORTHWEST ARCHITECT. The program required the usual living, eating and cooking space, plus two bedrooms, all to be contained in 1,200 square feet of floor area.

The prize was divided equally between Richard Acott, Daniel Fourre and Richard Soderlind. The designs illustrated are by Mr. Acott and Mr. Fourre. The critics in charge were Professor Cerny and Professor Nagle.

The George F. Melcher Prize is made possible by a special provision in the Flour City Architectural Education Fund. That fund, established several years ago by The Flour City Ornamental Iron Company and generously maintained by annual contributions, is largely used for student scholarships. The special annual Melcher Prize of $100 was set up in honor of the architectural profession's long-time friend and patron, George Melcher. It is awarded for a problem dealing with the decorative use of metal. The subject of the problem illustrated here is a large window at the chancel end of a church. The program called for stained glass set in a metal frame. The design shown was by Richard Aune. The critic was Professor McClure.

The C. H. Johnston Prize is donated by the office of C. H. Johnston, Architects, St. Paul, and amounts to $200 annually. The design illustrated is for a Union Bus Terminal in St. Paul. Two possible sites were chosen through investigation by students and critics, one on Kellogg Boulevard and one on Robert Street. Students could choose whichever site they preferred. The prize was split equally among three men, Foster Dunwiddie, Richard Soderlind and Robert Sperl. Mr.

By Louis Angelikis
Soderlind's design for the Kellogg site and Mr. Sperl's for the Robert Street site are illustrated here. The critics were Professor Cerny and Professor Nagle.

The Magney, Tusler & Setter Prize of $200 is do-

By Richard Soderlind

The necessary reduction of the drawings shown here may obscure some details, a fact the editors regret, but space limitations are adamant.
nated by the Minneapolis architectural firm of that name. Two separate competitions for this prize were scheduled last year. One of them is illustrated here. The subject is an Entrance Gateway to a Military Reservation, a short problem criticized by Professor Vivrett and Professor Graffunder. The author of the prize design is Louis Angelakis.

A fifth prize of many years' standing is offered by the Gargoyle Club of St. Paul. It is awarded for the best thesis submitted during an academic year. The last award was to Foster Dunwiddie. His thesis, a Medical Center, has already been illustrated in this magazine. A new prize of $200 annually has recently been donated by the Ochs Brick and Tile Company of Springfield, Minnesota, for a design involving the use of brick. The first competition will be held later in the current year.

A.I.A. ACCREDITS FIRST NORTH DAKOTA STUDENT CHAPTER

First student chapter of the American Institute of Architects in North Dakota has been accredited to the North Dakota Agricultural College in Fargo. The new official chapter will retain the name it had when it was merely a student organization of architectural students—Atlier Chat Noir (Society of the Black Cat). It is the first such group accredited to North Dakota in the history of the 95-year-old A.I.A. It will be placed within the province of the A.I.A. Chapter in Rochester, Minn.

Officers of Atlier Chat Noir are President Jose Iranzo of Venezuela, S. A., Vice President Loran Huber of Fargo, Secretary Frank Hayashi of Fargo and Treasurer Richard Krieg of Fargo. Knute A. Henning, professor of architecture and NDAC architectural chairman, is faculty sponsor.

By Richard Aune

Other prize designs will be found by turning to pages 10, 20 and 24.

BETTENBURG, TOWNSEND, STOLTE ANNOUNCES CHANGES

The firm of Bettenburg, Townsend and Stolte, architects and engineers of St. Paul, has announced the withdrawal from the partnership of Donald W. Pung.

The firm will continue as a partnership of Philip C. Bettenburg, George B. Townsend, Sidney L. Stolte, all members of the American Institute of Architects and of the National Society of Professional Engineers, and Gordon M. Combs, A.I.A. Mr. Bettenburg, a brigadier general, is at present on active military duty.

MINNEAPOLIS A.I.A. AUXILIARY PUSHES HOSPITAL WORK

The women's group of the Minneapolis Chapter, A.I.A., has been making real progress in its sponsorship of the student nurses of the Minneapolis General Hospital Nursing School, according to its officers.

On March 6 the auxiliary members met at a luncheon in the hospital, after which they made a detailed tour of the buildings. Through efforts of the group, Frederick Hilgendorn of the Minneapolis Circle Theater, well known for his dramatic coaching, work with the Children's Playhouse and other groups, has agreed to instruct the student nurses in theater technique and drama. The nurses of this group call themselves, "Players in General." They are making plans for their first play, to be presented later this year.

During the winter the architects' wives provided transportation for the nurses' choral group, which takes part in school and church programs in the Twin Cities as part of the recruitment program of the school.
Residence of Architect
ALBERT G. PLAGENS
1595 East Arlington St.
St. Paul, Minnesota

Designed with spacious open plan . . . living and dining areas . . . affording maximum light . . . visual spaciousness . . . privacy. Clear-story lighting to hall and its storage wall. Hot water baseboard heating system provides constant winter comfort.

Pella Casements . . .
Prize Designs . . .

By Richard Soderlind

Please turn to pages 20 and 24.
Units to carry out your design ideas are on excellent display in our showrooms. Come in and study them. We shall be at your disposal to answer questions and help solve special problems.

Kohler — W. A. Case — Briggs
Weil McClain Boilers & Radiation
Berger Cabinets
A. O. Smith & Hoffman
Hot Water Heaters

Roberts-Hamilton Company

Wholesale Distributors
PLUMBING, HEATING AND KITCHEN SUPPLIES
Park Avenue and Third Street
Minneapolis 15, Minnesota
Architect Can Help Contractor

Contractor Can Help Architect

The subject, "How An Architect Can Help a Contractor and How A Contractor Can Help An Architect," sounds perfectly simple and very easy to enlarge upon at length until you realize how long architects and contractors have been working together. To point out new ways where each can be of assistance to the other after all these years is something that makes you stop and ponder.

The one thing that stands out above all others and has done more good is the Joint Committee of Architects and Contractors on which I have had the pleasure of serving for several years. I refer to the local, not the national committee. To this local committee have been given many problems that have bothered either the architect or contractor, or both, for years.

A few of the problems that come to mind that were wrestled with, some successfully and some with partial success, are:

1. Eliminating the catch-all phrases from the architect's specifications, such as "As directed by the Architect," "to the satisfaction of the Architect," etc.
2. Dividing the specifications according to the local practice of awarding subcontracts and having them uniform each time.
3. Reducing maximum retained percentage amounts on jobs under construction to 10 per cent.
4. Standardization of bidding procedure, length of bidding time, number of sets of drawings issued, staggering of bidding dates.
5. Standardization on forms for submitting monthly estimates by contractors on both lump sum and cost-plus contracts.
6. Paying contractors for detailed pre-bidding estimates.
7. Furnishing contractors the names of bidders and the amount of each bid submitted.
8. Immediate return of plans by contractors after bidding.
9. Some standardization of the furnishing of and paying for temporary heat during construction. This includes the relationship between the general and the heating contractors and taking over the heating plant by the owner before completion of the job.
10. Limiting or trying to limit the number of contractors figuring on private jobs.
11. Instrumental in having the national committee change the cost-plus contract between contractor and owner so that it is more applicable to local conditions.
12. Instrumental in having the national committee change the American Institute of Architects' General Conditions with particular reference to fire insurance.
13. Developing of standard symbols and legends for architects and engineers.
14. The question of roofing bonds and of affirmation and the responsibility under them were discussed at length so that both architects and contractors had a better realization of the obligations of all concerned.

Many other matters related or unrelated to the items above were gone into and a better understanding reached by both. Many of the tougher problems, such as temporary heat, are not entirely settled and some, such as the one-contract system, have not been tackled.

The architect can always help the contractor by preparing more adequate drawings, details and specifications. On this you would be a better judge than I as few architects have an opportunity to examine other architects' working drawings and specifications, and contractors are always too polite to point out deficiencies.

It was suggested by one contractor that architects might give more definite information on subsoil conditions on their drawings. The advantage of this is too evident for any further comment.

Prompt return of deposits on plans by architects and the selection of colors and materials such as hard-wax, (licking, wood, etc., would be a great help.

Furnishing preventive and adequate supervision by the architect, and by that I mean giving help that will prevent a contractor from misinterpretation of a drawing or specification, rather than calling attention to a mistake already made is important.

**Aid Is a Mutual Responsibility**

The contractors, on the other hand, can assist the architects by a more prompt return of drawings after figuring and, I might add, not abusing them when figuring. That I know is entirely chargeable to your subs but we do have drawings returned that are hardly reusable and specifications with pages removed. When a set costs $75, that can run into money.

Letting subcontracts sooner and seeing that subcontractors submit shop drawings in time would be a great help. We frequently have subs submit shop drawings direct, not through the general, and because of the late submittal expect us to check them while they wait.

Contractors, for their own protection and for the good of the job, should see that the foreman on the job gets copies of all change orders and all memos. This

(Continued on Page 32)
The Large California Redwood Trees Contain the Best Texture and Grain for Sidings, V-Joint, Mouldings and Finish Lumber!

No other wood can equal the advantages of California Redwood for Interior or Exterior use—whether you paint or stain, or leave it natural. You need paint Redwood only if you wish to change your color scheme.

Specify Palco Redwood For Perfect Quality!

**BUILD with REDWOOD**

- Longest Paint Holding
- Dimensional Stability
- Incomparable Beauty
- Greater Utility
- Non-Rotting

**INSIST ON**

*The Palco Trademark*

**Palco Redwood Costs No More**

Why be satisfied with anything but the best.

Only Palco Redwood is:

1. Selected for texture
2. Air dried one year. Then kiln dried
3. Available in all-heart (all red)
4. Available in either edge grain or slash grain

Palco Redwood is manufactured by the Pacific Lumber Co., Scotia, California (the oldest and largest Redwood producer). We have sold Palco Redwood in this area since 1930 and are the only distributors that dare to guarantee their Redwood.

**PALCO PANEL—1" x 16" x 8' REDWOOD V-JOINT**

For Interior or Exterior Paneling

Two carloads on hand to care for Spring requirements and ample supply anticipated

**Canton Redwood Yard, Inc.**

WHOLESALE DISTRIBUTORS

Box 1303 Washburn Park Station, Minneapolis 19, Minnesota

Phones: ROckwell 9-5511, 9-5696

Drop us a card if you are not on our Redwood data mailing list. We invite your phone calls or letters to discuss Redwood specs. Ask for Ed Canton, Bob Canton or Buster Stanton.
LEON ARNAL: Minnesota Asset

from Mnesides News Letter, Alpha Rho Chi

On June 15, 1948, Professor Leon Arnal retired from the University of Minnesota. In an unprecedented show of affection and good wishes the alumni of the school united and contributed a handsome parting gift, two round trip tickets to France for both Mari and Leon Arnal. There are few parallels of such spontaneous feeling on the Minnesota campus, or any other university campus in this country, but it is only a small measure of the warmth that each alumnus feels for this great man and his wife. The trip to France was made that summer and the Arnals were able to visit with many friends and relatives in France, particularly those in Marseilles, and also with many classmates of the Ecole des Beaux Arts in Paris and throughout France.

Shortly after their return to this country, they purchased a house on Linden Hills Boulevard just a block from Lake Harriet. The new home and a cabin on Apple River have brought the Arnals all the joys and problems of home ownership. Mari Arnal has proceeded to plan the redecoration and modernization of both places and each year finds a crowded schedule of the usual tasks of home maintenance plus such jobs as building new shelves, painting and repainting, constructing outdoor fireplaces, etc. In Leon's own words, "Why man, I have some carpentry tools now. I am starting a new profession." These tasks, together with his continued interest in the school and profession, his stamp collection a very busy social life and correspondence with his many students and friends keep them busy from morning until often late at night.

Some years ago Mari Arnal started painting as a hobby with Art Kerrick, formerly of the Walker Art Center in Minneapolis. Mari's career has expanded rapidly until her reputation now rates her among the top local artists. She has won several prizes at local shows and has had a painting purchased by the Minneapolis Institute of Art. She has had a one man show at Modern Center, Incorporated, in Minneapolis and at that time critic John K. Sherman of the Minneapolis Tribune wrote a very excellent critical analysis of her work, hailing Mari Arnal as a new, vigorous and important artist in the Twin City area. Leon is very proud of his wife's career and jokingly paraphrases President Truman's statement that he will soon be known as the father of Margaret by suggesting that he may soon be referred to as Mrs. Arnal.

Arnal's retirement from the School of Architecture was considered a serious loss to the school and only after his retirement and the loss of his day-to-day influence in the classroom is the measure of his greatness becoming apparent. We in Minnesota have a curious complex in all of the creative fields, assuming generally that no matter how well we do here, the eastern schools are doing better. This is not true. Of the many famous Frenchmen who migrated to this country, Carlu, Cret,

(Continued on Page 37)

ATTENTION ARCHITECTS!

You'll want to know these essential facts about . . .

CRAWFORD MARVEL LIFT DOORS

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, waterproofed 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 1/4" diameter with both inner and outer races of hardened steel (use of roller shaft as inner race will not be permitted), bottom corner brackets mortised under bottom of door and of sufficient height to be secured across both rail and stile. Doors over 12'6" wide shall be additionally reinforced with suitable horizontal trusses to prevent sagging when open. Doors over 16'0" wide shall have suitable support to prevent sagging when closed.

GUARANTEE:

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

— DISTRIBUTED BY —

HARDWARE

RAYMER HARDWARE CO.

SERVICE

180 East 6th Street

Telephone Ga. 4807

St. Paul, Minn.
Gloria Dei Lutheran Church
SNELLING & HIGHLAND PARKWAY — ST. PAUL

C. H. JOHNSTON
Architects & Engineers

LANTERNs
STAIR RAILINGS
AREA RAILINGS

STEEL PAN STAIRS - LADDERS
CIRCULAR STEEPLE STAIRS

'The Crowning Touch of Beauty'
by
MINNESOTA FENCE
AND IRON WORKS
240 University Ave. — St. Paul, Minnesota
Craftsmen in Iron Since 1869

Add 'The Crowning Touch of Beauty' by Minnesota Fence to your next structure. A fine building can become superb with functional and ornamental iron by Minnesota Fence & Iron Works.

To REVEREND CLIFFORD A. NELSON, and his Congregation
Congratulations on the completion of your magnificent new church. We are proud to have been a part of the building one of the Northwest's outstanding edifices.

MINNESOTA FENCE & IRON WORKS
240 University Ave. — St. Paul, Minnesota
Your speaker's qualifications, however doubtful, to stand up here and talk on this business of architecture stems from his basic training at the Cornell University College of Architecture, early experience in a Chicago architectural office, promotion and research on building materials for several manufacturers and, thence, to professional management consulting with the opportunity to tell other people how to run and manage their own business.

It so happens, and perhaps as a surprise to some of you, that this business of management consulting finds itself closely associated with the professional architect from time to time. On occasion, an architect has even sought assistance from a management consultant for some specific client problem or, more important to today's subject, has sought assistance for the planning of his own professional growth and expansion of his business.

Essentially the interest of this group, I believe, is in "Architecture as a Business," or, put another way, earning a living and good architecture as fundamental objectives of the architect's office large or small.

Architecture is a profession, depending for its success on the co-ordination of highly skilled and talented individuals. This, however, does not relieve it from maintaining certain basic fundamentals of good business management or from the effects of growing confusions and complexities of doing business now or in the foreseeable future.

At the center of every successful enterprise, or division of an enterprise, there must be a leader or administrator who gives life and purpose to a wide variety of activities going on around him. There are probably four basic duties that must be performed by the head of any business. He must:

1. Establish objectives, policies and operating plans that indicate what the enterprise is in business for, and what it is to accomplish.

2. Build an organization through which these plans will be carried out.

3. Assemble the resources—men, equipment, capital—necessary to enable the business to operate efficiently, and

4. Supervise and control actual operations to make sure that the objectives are being fulfilled as planned.

It has been my experience that many architects, generally speaking, give lip fundamentals but do not actually come to grips with them in an effort to improve their performance and determine where they are headed. It is very true that the fundamentals of doing business have not changed but the growing complexities of our economic structure have placed the intelligent, personal, detailed direction of almost every business beyond the ability of any one man. An architectural office requires good management, and must have it if it is to succeed. Many architects shy away from responsibilities for seemingly mundane areas of their operations like good accounting practices, intelligent sales planning and promotion and good organization of personnel. Management is highly paid labor, and requires thinking of the highest order if a firm is to keep from drifting into narrow channels of operation. There is nothing more lacking in all business today than the knowledge of good organization principles and I believe the capacity for organizing has been misapprehended. Many of us have the impression that organizing is the application of common sense, which to some degree it is, and that common sense is a commodity which is common. Another general impression is that a business executive or the head of an architectural firm who has been successful is necessarily a good organizer. Nothing could be farther from the truth, although the average architect or business man would be highly incensed and seriously insulted if he were told just that.

It appears to me that the professional architect by the very nature of his work has a definite obligation to society and, because he has, he should be interested in the long range activities of his firm and its continuation after he has ceased to be active in it. This demands leadership and a leadership that introduces co-operation. Real co-operation is that intangible something which is the heart and soul of any organization and surely the determinant of all of its characteristics. Let us look at the real requirements of leadership and think of our own organizations as we do. Leadership is management and administration and has four principal requirements or functions:

The first is "planning" and I believe the architect has not given it the attention he should except in terms of the drafting board. He tries to make things constant for himself by disregarding the only constant thing in the world—change. He needs to think in terms of tomorrow, next week, next month, next year, 5 years and 10 years hence. Planning includes also the past experience of the business and the careful appraisal of present trends acting as "the crystal ball." In terms of planning, he needs to determine his present plan of organization and personnel and the accompanying duties and responsibilities; has he got the kind of a top team to be successful in this business? Is he inclined to hire men that he personally likes regardless of specific abilities and who are capable of contributing little to the group activity except to duplicate abilities he already has? This business is complicated and requires top manpower of varying background, interest and ability but all with a common purpose to provide the best in architectural services through teamwork and co-operation.

No architectural firm is too young or too old to begin to evaluate and appraise the business it is doing or has done.
for repairs or specialties

Call...BROS, Minneapolis

these mammoth BROS facilities can work out your steel fabricating problems

- When you're faced with boiler or steel fabrication problems... the kind that will require fine engineering talent, real manufacturing skill, the best of plant facilities and plenty of steel fabricating experience... call BROS, Minneapolis.

Because... that's exactly what BROS can give you. We've been supplying industry nationally with a complete line of highly regarded, job-proven products and fast, reliable steel fabricating service since 1882.

And... you can get that BROS skill and efficient service for your small repair and special installation jobs.

The BROS fleet of specially-equipped trucks is ready at a moment's notice to bring complete facilities and skilled steel workers and welders to your door.

So... whatever your steel fabricating problem, call BROS, Minneapolis. You'll get fast service, skill, experience AND COMPLETE FACILITIES to handle the job.

FABRICATORS OF STEEL SINCE 1882

BROS

PHONE Gladstone 5921    PHONE Midway 6230
WM. BROS BOILER AND MANUFACTURING COMPANY, MINNEAPOLIS 14, MINNESOTA
Unusual applications of Balsam-Wool Sealed Insulation—details difficult to obtain elsewhere—are contained in this series of Balsam-Wool Application Data Sheets prepared by the makers of the original sealed blanket type insulation. A complete set of these data sheets is yours for the asking. Write for them.


WOOD CONVERSION COMPANY

BALSAM-WOOL • Products of Weyerhaeuser • NU-WOOD

WILSON DOORS
rolling steel doors
midget slat steel closures
rolling steel grilles
rolling wood doors
sectionfold overhead doors
rolling partitions

SOLD and SERVICED by
Joel F. Jackson
Agent
808 Pence Bldg., Minneapolis 3, Minn.

RUSSELL & ERWIN DIVISION
The American Hardware Corporation
Announces the Appointment of the
Gardner Hardware Co.
311 Nicollet Ave., Minneapolis 1, Minn.
as distributor of

RUSSWIN
ARCHITECTURAL HARDWARE

Where does the business come from, how and why did we get it, what is the gross dollar volume and profit by types of buildings? The successful architectural firm, for instance, will know the strengths and weaknesses of its own partners. These will be common knowledge of the partnership and will be discussed from time to time in order to make the best use of these variances of personality in client handling and prospect hunting. I know a firm that takes particular pains to fit its manpower to the specific personnel peculiarities of a particular client. This takes practice, objectivity, control of pride and a deep sense of the requirements of co-operation for long-range success.

Planning requires that you specifically determine the volume of business that your present partnership wants to do; also what the individual requirements will be to attain this goal. We all can't promote, we all can't design, we all can't supervise construction, we all can't interview building material salesmen, and most of you don't want to keep books. We must come to a careful conservation of our time within prescribed limits and do those things which best use our talents and bring us the greatest personal satisfaction.

The planning activity also goes farther and demands that we give careful consideration to our capital requirements in line with our business development. We must carefully plan our requirements for additional personnel and the relationships under which it will work, as well as the floor space and cost required to carry on the type of business we have or hope to have. Certainly most architects' offices need good accounting methods and procedures, a sound system of reporting which provides a breakdown of costs into the various areas such as sales expense, drafting, partner time, consultants' or associates' time, office overhead and profit (if any). If the office is big enough, it should finally absorb an individual into the partnership as a "controller" or "business manager" who from time to time provides everyone with the "facts of life" on the operation and acts as a balancing influence in the architectural boat.

Every Organization Needs "Direction"

The second characteristic of leadership after planning is "command" or "direction." Good administrators don't command, however, they "lead" in the direction of getting the planning put into execution.

The third is "co-ordination," which is the focal point of administrative action. Here is the place where many architects step on their toes, as do many businessmen. We forget to think in terms of the whole organization and over-emphasize one area of operation or another.

The fourth and last characteristic is control or the checking of results. Control, in the true sense, is a timely criticism or the check against established objectives and predetermined plans and is the one area which so many architects fail to appreciate and, consequently, do nothing about.

I would now like to take the four essential functions of the architect's office and discuss each in terms of the whole. The first is "New Business, Promotion and Public Relations." The scope of this activity needs to be carefully determined and the responsibility centered in the best qualified individual for co-ordination. Everyone usually has a hand in this activity but some are better qualified than others to make a forceful presentation, to meet people, to know when to listen and to influence those who have to be influenced. In a business-like manner, the office should have a complete list of its past and present clients broken down by type of job, the location of the assignment, how the job was obtained, who got it, who worked on each phase of the work and, finally, after completion, a written and pictorial memorandum indicating problems encountered either in personnel or working conditions which will be valuable to future assignments.

The office needs an up-to-date list of prospects and suspects and friends of the firm. This is ever changing and demands constant attention. To what extent we expand the promotion of successful assignments depends on the money available for this activity and nothing else. You must sell, promote and advertise in the best sense of the term, if you are to meet established objectives. This activity must be budgeted and a definite

(Continued on Page 40)
As you know, we used Johnston Perlite in plastering two new hotels we have just completed—the Ray Hotel in Dickinson, North Dakota, and the Plainsman Hotel at Williston, North Dakota. This work was done in mid-winter and, so far as we know, were the only two large construction jobs that proceeded throughout the winter in North Dakota.

"Your material proved entirely satisfactory—even under these rough conditions. We particularly like it for its quick drying and, of course, its lightweight has many advantages.

"We expect to continue to use it in our future buildings."

L. J. Orabka
Executive Vice President

Johnston Perlite comes in convenient four cubic foot bags that can be stored next to the mixing operation. This saves on overall costs by reducing handling and labor expense. Prolonged storage does not cause deterioration.

Johnston Perlite is known for its sharpness under the trowel. It provides a brown coat that is 100% stronger than other lightweight aggregates and will rod and darby to a true and even surface.

Water required for mixing is about 30% less, resulting in a fast drying surface ready for finish coat in a minimum of time. Perlite plaster will not run or sag on the wall and does not leave a high suction base.

Workmen like to use Johnston Perlite because it is safe—it does not become slippery under foot.

Write or call for more data on Johnston Perlite Lightweight Aggregate for plaster or concrete.
More Prize Designs . . .

By Richard Acott

See also page 24.
Lighting for Seeing

TWIN CITY FEDERAL SAVINGS AND LOAN ASSOCIATION, MINNEAPOLIS

ARCHITECT: MAGNEY TUSLER & SETTER
ELECTRICAL ENGINEER: BORGE NEILSEN
ELECTRICAL CONTRACTOR: BATZLI ELECTRIC COMPANY
FIXTURES: SOLAR LOW-BRIGHTNESS TROFFERS

A DE LUXE QUALITY OFFICE INSTALLATION EMPLOYING LOW-BRIGHTNESS ALZAC ALUMINUM TROFFERS WITH 60-INCH 40-WATT T-17 LOW-BRIGHTNESS FLUORESCENT LAMPS. THE 60 FOOT-CANDLE LEVEL, WHICH WILL BE MAINTAINED, PROVIDES ADEQUATE ILLUMINATION FOR THE SEEING TASKS INVOLVED. LOW-BRIGHTNESS CONTRAST BETWEEN VARIOUS SURFACES IN THE ROOM, INCLUDING LIGHTING EQUIPMENT, PROVIDES PRACTICAL ELIMINATION OF DIRECT GLARE.

Information compiled by Lighting Service Section
NORTHERN STATES POWER COMPANY
For factual lighting information, technical data on light sources, fixtures, relative costs, etc. Call Lighting Section—MA 6251
A BIG JOB...WELL DONE

Now substantially completed, the new Soo-Line Freight Car Repair Shop located at Shoreham Yards, Minneapolis, represents another construction job well planned and executed.

The Stahr Company, Minneapolis, was the General Contractor. Mr. L. V. Johnson, Chief Engineer and Mr. A. S. Krefting, Assistant Chief Engineer for the Soo-Line, designed and supervised construction of the 120 x 240-foot structure.

We are pleased to have fabricated and delivered the 300 tons of structural steel necessary for the job.
Final Design

By Robert Sperl

Northwest
Quality....Economy
STASCO SEAMLESS SEATS
OFFER OUTSTANDING VALUE

Whether for factory, home, school or institution — Stasco seamless seats are the choice of architects everywhere.

Stasco quality is a mark of good judgment.

That's why architects recommend Stasco.

Wherever hard use is anticipated Stasco offers the architects assurance of lasting quality — lowest cost per year of service.

Stasco Ebonite Solid Black Plastic Seats are molded in one piece, strong, durable, and sanitary and will not support combustion.


Completely Sanitary
Both seat and cover are molded in one solid piece under heat and tons of pressure. No joints show through covers.

Splitproof Strong Durable
Available in a variety of colors. Plain or mother of pearl, white, blue, black, green, orchid, peach, burgundy and ivory.

The Standard Tank & Seat Company can furnish colored seats to match any of the leading manufacturers enamel or pottery ware.

Manufactured By
STANDARD TANK & SEAT COMPANY
Camden, New Jersey

REPRESENTATIVES
GRANSE CORPORATION
Bill, Gene and George K. Granse
1954 University Ave. • NEstor 1889 • St. Paul 4, Minnesota
CARNEY SPUN-LITE PROCESS IMPROVES ROCK WOOL PRODUCTS

Lighter in weight, cleaner and more compact mineral wool is being produced by the Carney Company, Mankato, Minn., through its new Spun-Lite Mineral Fiber Process. This improved insulation material, the company points out, makes possible higher insulating factors for the well known lines of Golden Fleece, Pouring Fleece and Silver Fleece.

"Our Spun-Lite process marks the biggest improvement yet developed by the industry," Harry Carney, president of the company, said. "Our new products have approximately 50 per cent more fiber at less weight, and that means more insulating air cells and more efficient insulation.

"The light weight of these new fireproof mineral wool products enables us to substantially increase our shipping area. The compactness of the product means less handling and warehouse space for both our customers and ourselves."

JOEL JACKSON REPRESENTS DAVIDSON ENAMEL PRODUCTS IN THIS AREA

Davidson Enamel Products, which were presented through a story in last month's issue as being set up for architectural reference in the company's new file (A.I.A. File 15-H-2), are being handled for Northwest distribution by Joel F. Jackson, Minneapolis.

The enamel products, much used in store fronts and for similar "traffic-stopping" designs, are well outlined in the new publication. It includes a number of standards, color charts, etc.

ECONOMIZE USE MODULAR FACE BRICK FOR LOWER BUILDING COSTS

Here is the perfect answer to design simplicity and lower building costs. Economical modular face brick gives you the cost-saving advantages of modular size...

Our modular face brick comes in a wide range of exciting colors and textures... permits architects new individuality of design.

See for yourself how Des Moines Clay Company's modular face brick can help you. Send today for your free copy of the full color illustrated brochure—"First in Fine Face Brick."
thick, supported by an eight-inch base slab of standard concrete reinforced by steel and wire mesh. The wearing surface is another three-inch slab of regular concrete.

Additional space for another 300 cars is provided in the store’s regular parking lot.

MOTHBALLING BATHTUBS LATEST CONSTRUCTION PROTECTION IDEA

Using the same material the navy used to “mothball” fleet and air units after World War II, a new method of protecting bathtubs and similar units installed during construction from being scratched and marred has been announced.

“Liquid Envelope” is the product of Better Finishes and Coatings, Inc., 268 Doremus Ave., Newark 5, N. J. It is sprayed on, with an extra coating on horizontal surfaces. Then scaffolding, plaster droppings, workmen’s shoes and similar hazards to highly polished finishes are guarded against during subsequent construction.

When finished, the protective film is peeled easily and the underlying finish emerges in its high polish. The material can be used to protect any such surfaces during construction or manufacturing processes.

PORTABLE ELECTRIC DEHUMIDIFIER OFFERED BY FRESH’ND-AIRE

A portable electric dehumidifier has been placed on the market by the Fresh’nd-Aire Company, which says the new model has several striking improvements over current dehumidifiers on the market.

Equal in capacity to present models, it has been designed to take less space, its makers say. Over-all dimensions are 17 inches high, 12 high and 18 long. The unit requires no bucket but has a built-in, easily removed tray to catch the moisture removed from the air. When the unit operates over a drain, the tray is removed and the water falls directly into the drain.

It will effectively dehumidify areas up to 10,000 cubic feet, removing up to three gallons of water in 24 hours. It draws only 200 watts, operates on 115 volt, 50/60 cycles, AC current.

HEBRON BRICK COMPANY LOCATED AT ONE OF WORLD'S BEST CLAY DEPOSITS

Located at the site of one of the finest clay deposits in the world, the Hebron Brick Company of Hebron, N. D., has through the years produced the many types of brick materials demanded by varying architectural designs and is constantly adding to its lines those new styles which meet developing needs of the building industry.

The company was organized in 1904 and, despite a high production level, reports deposits of fine clay assure continued supplies for “another several hundred years.” The company's bricks pass all tests for A.S.T.M. Specifications C62-49 Grade SW Brick.

Hebron brick products have been well discussed and illustrated in a pamphlet published by the company. This can be obtained by those interested from the company in Hebron or from its Minneapolis office, 727 Lumber Exchange Building.

ROMANY TILES ARE REAL TILES

IN SCHOOL CORRIDORS

There is an ever-growing demand for ROMANY, the real clay tile, for wainscotting and fully facing the walls of school corridors. The hard glaze finish makes this tile practically indestructible and exceptionally easy to keep clean. Many attractive non-fading colors. Wherever wall protection and decoration is deserving of the very best—write the name ROMANY in your tile specification. For full color samples of real tile:

Ask for Sample Chart No. 6

Rollin B. Child
Sales Representative
45 15th Ave. No.; Hopkins, Minn.
Phone No. 8379
VERMICULITE PLASTIC SPECS ISSUED BY INSTITUTE

A new, 12-page booklet of interest to architects and others in the design and building industries is that covering new standard specifications for vermiculite plastering and acoustical plastic, recently issued by the Vermiculite Institute, 208 S. LaSalle St., Chicago 4, Ill.

The plastering specs are in general agreement with American Standard Specifications for gypsum plastering. The material covers all phases of the problem, including application to lath and masonry bases, solid partitions and standard finish coats.

The booklet is available through the institute.

GARDNER DISTRIBUTES RUSSWIN

The Gardner Hardware Co., 311 Nicollet Ave., Minneapolis 1, Minn., has been appointed distributor of Russwin architectural hardware. Gardners is one of the oldest distributors of contract builders' hardware in this area. They have a staff and sample room equipped to serve architects and contractors alike.

CURTIS BUYS AMERICAN PLYWOOD

The Clinton, Iowa, firm of Curtis Companies, Inc., has purchased the American Plywood Corporation, New London, Wis., and its subsidiary, American Veneer Corporation, Oconto, Wis.

Brand names formerly used by American Plywood will be continued but will carry the prefix "Curtis."

DOUBLE-PANE GLAZING TREND ON INCREASE, EXPERTS SAY

This year will see an even greater number of buildings equipped with double-glazed fenestration, according to George Schuchman, housing consultant. The trend may eliminate single-pane windows in future housing, he said.

A strong influence will be the development of thermopane lights of standard sizes which can be installed in uniform sash and thus provide this double-pane glazing for all parts of a house.

"Some architects predict that the movement to around-the-house dou-
**Reinforced Masonry or Brick Arch Lintels**

![Diagram of Reinforced Masonry or Brick Arch Lintels]

One of many ways to save critical structural steel

Reinforced brick and tile lintels offer substantial economies of structural steel by eliminating the need for steel angle lintels. As a further economy, the reinforcing steel is completely protected from the elements, eliminating the cost of periodical painting of exposed steel surfaces.

For short spans use segmental brick arches or brick jack arches. Both of these arches will eliminate either structural or reinforcing steel.

At the top of the page you will find a typical construction example, illustrating the reinforced tile lintel, one of several ways to save steel with structural clay products. Other ways this non-critical material will work for you are:

- Loadbearing brick and tile walls, masonry piers and pilasters, tile and concrete floors and furrowing with clay tile.

For complete brick and tile lintel design data write to:

**Structural Clay Products Institute**

Ames, Iowa
Region 6

---

**Rubber Matting Has Three-Dimensional Pattern**

A rubber matting whose three-dimensional pattern is such that it actually seems to rise has been released for distribution by the United States Rubber Co.

The new matting, highly decorative, is non-slip and provides excellent foot cleaning facilities for use in hotels, theaters, lounges and restaurants as well as in homes. It also is useful in automobiles.

Available in standard sized mats and by the yard in a 30-inch width, it is made in black, maroon, red and green.

---

**Temperature Control Unit Announced**

Correlating indoor and outdoor temperature changes for the optimum in heating control is the job of the Weather-Flo unit introduced...
FOR YEAR ‘ROUND COMFORT

Stock size units with louvered sections at top, bottom or sides of stationary window pane, may be used singly or in groupings, for new construction or remodeling. Weather-tight baffle doors regulate circulation of fresh air... keep out unwanted heat and cold. No rain or snow can enter. Solar Air-Flo windows add beauty to any dwelling... fit into all kinds of wall construction, reduce heating costs, create cheerful rooms, provide more light and clearer vision.

ASK FOR FREE LITERATURE

Pella PRODUCTS

927 Washington Avenue S.
Minneapolis, Minnesota

317 Oppenheim Building
St. Paul, Minnesota

610 Torrey Building
Duluth, Minnesota

673 2nd Avenue N.
Fargo, North Dakota

SOLAR AIR-FLO
ENGINEERED ALL-WEATHER WINDOWS

FOR YEAR ‘ROUND COMFORT

Specify “Villaume” for

- MILLWORK AND SPECIAL WOODWORK
- SASH AND DOORS - KILN-DRYED LUMBER
- ROOFING - PLYWOOD - INSULATION
- PLASTERBOARD - SHEATHING

by Automatic Devices, Inc., Western Springs, Ill.

The unit, according to its makers, anticipates weather changes and governs heat input accordingly. It is usable with all fuels—oil, gas, coal—all classes of building and hot water, steam, warm air and radiant panel heating systems.

Details of the unit and material covering its installation and operation can be obtained by writing the maker at the address given.

BRASS USES OUTLINED IN
ARCHITECT’S WORKING FOLDER

Detailed drawings showing proper utilization of copper and brass metal work in construction have been made available to architects in a standard file folder by the Anaconda Copper Co.

The drawings have been developed with an eye to minimum use of sheet copper for maximum protection against weather. Overhang, flashing, copings, chimney bases, sill protection and many other problems are concisely shown in two-color drawings.

The folder, covering subjects in A.I.A. File No. 12, can be had from The American Brass Co., Waterbury 20, Conn.

SIGNAL EQUIPMENT LISTED

Hospital and commercial signal equipment has been listed in detailed descriptions with pictures by the Cannon Electric Company in a 32-page brochure available to architects and others in the building field.

Designers of special buildings will find the listings answer many of their problems arising from the peculiar needs of such buildings and hospitals and others which employ signals. Other items needed in fitting up such buildings are also listed... such as visual annunciators, code relays, fire alarm stations, grounding intercoupers, in-and-out registers, isolation transformers, lamp sockets, program bell transfer panels, corridor lights, nurses’ call systems, silent paging systems, etc.

The brochure is Bulletin HSE-1, available on request from the company at P. O. Box 75, Los Angeles 31, Cal.
PRODUCERS' COUNCIL NOTES

Northern States Power Company will stage an informational meeting in the Radisson Hotel, Minneapolis, on April 10. Invitations are to be sent to A.I.A. members throughout the territory covered by the Minnesota-Dakota chapter of the Producers Council. This meeting is sponsored by the Producers Council and is to cover commercial cooking and kitchen planning.

Robert Albyn, former branch manager for the Fiberglas Corporation, has been transferred to the Chicago office. Ivan Spurlock will succeed Mr. Albyn in the territory covering Minnesota, North and South Dakota and the western third of Wisconsin.

Harold Verger, district manager for Libbey Owens Ford Glass Company, has been transferred to Toledo, Ohio, to be general manager of sales for safety glass division. Howard Lewis is to be the new district manager for L. O. F.

Crown Iron Works has announced that E. P. (Andy) Alberts is to be the manager of the metal specialties division. Among the products warehoused by this division are those manufactured by Crown Iron, Kawneer, Ceco Steel, Virginia Metal Products and U. S. Plywood fire doors.

ARCHITECT-CONTRACTOR
(Continued from Page 12)
will prevent much misunderstanding, confusion and expense.

No additions or deductions or changes from the drawings or specifications should be undertaken without a signed change order, giving price change, except in an emergency. This applies equally to instructions by either the owner or architect. The architect's nightmare are claims for extras that are presented at the completion of a job for work done months before.

It would help if contractors would instruct their foremen how to make concrete cylinders so that accurate tests can be made.

A more thorough search for materials would help. General contractors frequently call up too late in the game to say that such and such material or color of material is not available. We get on the phone and, after a search, have frequently been able to tell the contractor where he can get the material in stock.

Contractors can help architects by suggesting simpler, more practical ways of obtaining results. We do not want to design buildings that are costly to construct but we frequently do not have the know-how to do the job simply. That is where you and your foremen, the mason, the mill man, can be of help.

The lack of interest of contractors in taking care of small unimportant but annoying details at the end of a job is very costly to the architect. This makes necessary additional supervision trips, letters, telephone calls and embarrassing explanations to the owner.

A poor foreman on the job can be costly to both architect and contractor and no contractor would put one on if it could be avoided.

Frequently we have difficulty getting contractors to accept new methods and materials. This does not apply only to general contractors but mechanical contractors as well. As an example, let me refer to our experience with modular dimensioning. Our office has made quite a study of it and has spent many dollars trying to perfect our drawings and details so they would work simply and with a minimum of dimensions.

Forty-one organizations promoted the modular system and were instrumental in publishing the "Guide." Among the forty-one was your organization, the As-
Reprints of "Circular of Information on Architectural Practice," which appeared in the last issue of Northwest Architect, have now been prepared and can be obtained for 25 cents a copy, or 6 copies for $1.00 from either:

E. Richard Cone, President.
Minnesota Society of Architects.
440 Endicott-on-4th.
St. Paul, Minn.
or
Dale R. McEnary,
McEnary & Krafft,
1110 McKnight Bldg.,
Minneapolis, Minn.

associated General Contractors. The American Institute of Architects and The Producers' Council are spending over $15,000 a year to inform and educate the construction industry in its use.

Glass brick, clay tile, clay brick, some steel and aluminum windows, insulation, plywood, gypsum board and a multitude of other articles incorporated in a building are of a modular dimension. The time is rapidly approaching when you will pay more for non-modular brick, if you can get them at all. Modular dimensioning is helping both you and us and we should be co-operative in its acceptance.

What is our experience with it on the job? It is new, we admit, we make mistakes in its adaption but to

Better Building Blocks
CELOCRETE*
LIGHTWEIGHT — NAILABLE
HIGH INSULATION VALUE
Excellent Stucco and Plaster Bonds
Plain • Lintel • Header • Jamb
Corner • Sill • Bull Nose • Brick

CONCRETE BLOCKS
Stocked in all above styles as well as standard blocks
All Units Produced on Besser Supervibrapac
STEAM CURED YEAR AROUND
Fast Rail Shipment from Our Own Spur

CENTRAL BUILDING SUPPLY CO.
435 W. MINNEHAHA AVE. ST. PAUL 3, MINN. 6825

Rugged in Texture

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

VENEER • FLAGGING
LANDSCAPE • WALL • INTERIOR

Quarried & Distributed by
J. L. SHIELY CO.
1101 No. Snelling Ave., NEstor 8601
St. Paul, Minnesota
I have the contractor and general foreman antagonistic or unco-operative increases our difficulties. Possibly we should clean up our own house, see that all architects use modular dimensioning and help them use it correctly.

I will point out another example, the laying of masonry walls of brick, tile and concrete blocks. We and you have both had trouble with concrete blocks. The Portland Cement Association has made recommendations for their use. When we follow their suggestions in our specifications to try to improve previous work that none of us can be proud of, we are sometimes told by the contractor that he has laid concrete blocks the same way for 25 years or more so why should he change? This same contractor when he goes home does not take a horse and buggy but uses the latest model car available. That is not consistent.

We are having trouble with brick walls and we are not alone in our misery. The Structural Clay Products Institute has made recommendations on how to improve conditions and lay a better wall. We try to follow these recommendations in our specifications and on the job. Do we get assistance and co-operation? Not always. It is a tough, uphill battle and all we are trying to do is to get a better job for the owner and to protect you and ourselves. If you feel we are impractical or unreasonable, your battle is with the Structural Clay Products Institute, which you and we should look to as the authority on the handling of their products.

If I seem to make more suggestions as to how the contractors can help the architects than how the architects can help the contractors, please remember I am an architect. We work with many contractors in the course of our business and with no architects except as an occasional association. We do not have an opportunity to examine other architects' drawings and specifications or to know how they conduct their business with contractors. If a contractor were to give this talk, he would have many more ideas as to how the architects could make life more pleasant for contractors. I imagine any of you in the audience could.

If you will notice, my suggestions on both sides are of small, trivial things, nothing that would really make or break either of us. That is because the major things have been taken care of, have been worked out to the best interests of both groups.
I.E.S. PRIZE PROBLEM WON
BY EUGENE FREERKS

Lighting a restaurant and bar with "a well conceived arrangement of line and large area light sources, concealed spotlights and fixtures" won for Eugene Freerks of Minneapolis the current Illuminating Engineering Society's Prize Problem.

Mr. Freerks received the first prize of $45 and an I.E.S. student membership. Second prize went to Richard Acott of Wisconsin Rapids, Wis., being $40 and a student membership. Other recipients of student awards were John Damberg, Richard Lenci and Lloyd Williams.

The competition was among students at the University of Minnesota's Department of Architecture. Each of the winners has had practical design experience, which led the designs into very workable channels.

The winning designers and their instructors, who included Robert Cerny, Norman Nagle, Walter Vivrett and Frederick Koeper of the architectural school staff, were guests of the Twin City Section of I.E.S. at the award dinner.

For Performance and Beauty, Specify

**Jenn-Air**

COMMERCIAL EXHAUSTER
- FITS ANY INSTALLATION
- ATTRACTIVE DESIGN
- MOTOR ENCLOSED
- BOTH WALL AND ROOF MODELS

Aluminum Rustproof Construction
Explosion Proof Models

Special design offers flexibility so great as to enable its use on almost any type of building. Will exhaust from any area accessible by ductwork.

Available in Centrifugal & Axial Types

INQUIRIES INVITED

**Kitchen-Aire**

FOR THE HOME
- ADAPTABLE TO ALL INSTALLATIONS
- ALUMINUM CONSTRUCTION
- ATTRACTIVE DESIGN
- EASILY INSTALLED

Kitchen-Aire takes the noise and bulky mechanism outside. All that appears inside the kitchen is an attractive, 8-inch, polished grill. The motor is enclosed in the unit unaffected by weather, and out of the path of exhausted fats and greases.

**Heltne VENTILATING CO. • RE 1770**

2613 NICOLLET AVENUE • MINNEAPOLIS, MINNESOTA
THEY SAID IT

Edited by William Gray Purcell

THE BUFFALO HIDE AND LODGE POLE TEPEES OF THE AMERICAN INDIANS HAD A PERMANENT QUALITY THAT WAS TRUE ARCHITECTURE: THEY VANISHED WITH THE SUNRISE BUT BLOSSomed AGAIN AT DUSK AND DID NOT FAIL FOR AGES AND AGES: THEY EXPRESSED THEIR OWN UNFALTERING SPIRIT.

From a Radio Broadcast

"THE HALLS OF IVY"
The Joseph Schlitz Brewing Co.
Mr. and Mrs. Ronald Colman
May 30, 1951

Dr. Hall:
My dear boy... because a sonnet cannot be reduced to a mathematical formula—(and I am not sure that it cannot) because it is a thing which stimulates the imagination and evokes pleasure, does not mean that it has no functional value.

Richard:
Yes, but what I mean is—

Dr. Hall:
Excuse me. You might ask me the functional value of a violin obligatto—the remembered fragrance of a mountain morning—the ripple of a trout stream—and I would say that the functional value of anything is its special purpose, its reason for being. The reason for being of all these things of the soul and the emotions is simply that they are a spiritual bank account on which human beings may draw at will. And, as a too-restricted specialist, Richard, you are well on your way to becoming an emotional pauper, spiritually bankrupt.

Richard:
I don't like to seem obtuse, Doctor, but I still don't see how I need trout streams and mountain mornings, and sonnets. Logically—where would all the philosophers and writers and artists be without engineers... without bridges?

Victoria:
Terribly wet, I should imagine.

Dr. Hall:
Like functionalism, logic can also be twisted to strange uses. I am reminded of the centipede who refused to go under the viaduct because the clearance was limited to 13 feet. Richard, you're a boy who's determined to "go places"... right?

Richard:
In charge of research. Invent things. Improve them. For people.

Dr. Hall:
Ah, yes. People. You hadn't mentioned them. I wasn't sure.

Richard:
But of course "people." They're the ones who have to buy the products, aren't they?

Dr. Hall:
I wasn't sure how you classified "people."... As customers or as mankind.

Richard:
I think I know mankind as well as the next fellow.

Dr. Hall:
Ah, now we're into semantics again. "The Next Fellow," Richard, is a mythical being utilized for purposes of reference by those seeking support for unworthy arguments. His credit standing is nil, and his social security number is zero-zero. As a practicing scientist you should not call upon such an inexact figure as "The Next Fellow."

Perhaps the Natures of both men and buildings would be the mellower for a daily beer of traditional goodness, rather than too much unhomogenized mentalizing (spelt backwards!)

Definitions of Function

in part, with comment.

From Merriam-Webster, unabridged

"Functional":
Whatever is affecting only the operational performance of an organ (or part, or any agent) but not concerned with structural or organic existence—that is to say 'function' is related to the dynamic activities of things, not to their static being."

From this it would seem that this concept "FUNCTION" is certainly not assignable to anything, which is only in possession of engineered characteristics, or suitable equipment, however competent such furniture may be, but the real meaning of the word is the mechanism or tool complete and actually accomplishing its announced objective.

"Functional" anticipates modification of such factors as structure and form, so that they may contribute the utmost to the effective functioning of the finished product."

But "functioning" does not mean solely mechanical effectiveness, but includes all social, historical and inspirational factors as well.

Then too, convenience, comfort and economy are not the prime objectives of United Nations. Such qualities are just naturally the aids to be expected from any servant. Is not "service" made almost a god in the American Success story? Well, the word "service" is surely embedded in all advertising, but acts-in-service are missing in the new United Nations Buildings as we have seen. (Look up "function" in the big dictionary, very interesting—while you're at it look up "round" and "get," you'll be surprised!)

Northwest
LEON ARNAL
(Continued from Page 14)

Haffner, and many others, Leon Arnal is the one of a very few who consistently insisted upon adhering to the fundamental principles of architecture and who enhanced and added immeasurably to the development of contemporary architecture. Paul Cret and Jacques Carlu enjoyed the greatest reputations and yet they were able to go little beyond Neo-classicism.

The sophistication and perfection of the proportion, detail and simplification of classic ornament are still being copied today but in steadily diminishing amounts. Leon’s greatness lies in the fact that he continuously saw the limitations of a Neo-Classicism and looked toward the development of a truly rational style for our age and civilization. His inquisitive mind and continuous searching within the discipline of architectural principles have kept the School of Architecture at Minnesota in the vanguard of progressive schools in the United States and has enabled those students who have remained loyal to his teaching and tradition to make important architectural progress. There are many who feel that he is the greatest Frenchman of all who came to America to teach architecture and that this reputation would have been established nationally if he had been associated with an eastern school. His reputation will be known nationally as his many students begin to fully realize the extent of his creative power, wisdom and understanding of the great architectural forces of our time.

This explains only a part of the esteem with which the alumni respect and love him. His unselfish interest in the advancement of every student and his warm personal interest in that success and happiness after graduation leaves all alumni feeling that he is their personal friend. He follows the development of all. He inquires eagerly concerning the alumni and cherishes letters from them. Few men are gifted with his combination of creative power and personality.

ARCHITECTS INVITED TO SHOW WORK AT CHURCHMAN’S EXPOSITION

Late designs of churches are being sought for exhibit at the International Churchman’s Exposition in Chicago, May 19 through 24, and Northwest architects have

ACME STONE COMPANY
CONCRETE BLOCKS and PRECAST CONCRETE JOISTS
Phone 2937 Lyndale Ave. So.
Regent 5123 Minneapolis, Minn.
been invited to submit photographs, drawings and other material.

The exhibit has been endorsed by the A.I.A. Chicago Chapter. Entry blanks and detailed information can be obtained from the exposition office, whose address is 19 S. LaSalle St., Chicago 3.

Also planned for the exposition period is an International Church Buildings Forum, where authoritative speakers will discuss and answer questions pertaining to site planning, design, creation of proper atmosphere, financing, educational side-buildings, remodeling and so on.

It is estimated between 20,000 and 30,000 church leaders will attend the exposition and to see the exhibit. It seems to NORTHWEST ARCHITECT that there are a number of outstanding new church structures in our Northwest worthy of being shown at this exposition.

MONEY AT WORK

(Continued from Page 5)

particularly to people with children on account of the danger from automobiles.

K. I find in general that children are more desirable than childless tenants. The latter may put on drunk parties and instead of scratching up the premises, they break it up.

L. Until ten years ago you were supposed to get a rental return of one percent a month of the capital value of the building, that is to say, an $8,000 investment was expected to rent for $80 a month. After paying for continuing repairs, vacancies (negligible the past ten years), insurance, taxes, that rental ratio yielded about six percent net. This simply cannot be obtained today. If you get $90 to $95 rental return on a $11,000 to $12,000 investment, that would be all you could expect. Today you cannot plan on both protecting your capital value and securing a five percent return. You must make a choice. Occasionally, if you are lucky in your buy, you can have good capital security and net three percent, but only if you are a shrewd buyer. And after all, two percent is about all you can get from "Savings and Loan," and three to three and one-half percent average from a general portfolio of investments unless you engage in speculation, which is dangerous.

Of course putting your money in "Savings and Loan," or in paper investment — stocks, bonds and so on — you have practically no protection against the falling dollar.

M. DO NOT BUY double houses, with two families side by side, or as "duplexes," one family below and one above. Ordinarily don’t try to buy a double use property, to live in one unit and rent the other. You will be
in hot water all the time. There are a few exceptions to this rule.

N. If you are in a position to make your own repairs, you do not have to be so circumspect about the condition of the property when you buy it. If you are obliged to hire others, then you should purchase property in as good repair as possible. Your best return on the property is insured by owning one that is continuously rented with the minimum of repairs.

If you have followed me to this point, you can rightly say, "Well, maybe so, but I have never cared for real estate investments—too much trouble."

Unwillingness to put up with inconvenience, and to take nuisance detail into your own hands, because you "don't like" to be disturbed by other people's little worries, will surely land you a lot of big worries. Too many people are today trying to avoid facing money trouble and a new kind of 'crisis,' now in plain sight, by retreat into the temporary emotional satisfactions of party politics, with its devious projects for vote collecting while desperately needed measures drift with the months. (Yes, Mr. Baruch, I am trying to get them to listen!)

And, too, you better not mix economic thoughts with your political party prejudices. I tried that in 1936 with very expensive results. The situation, then, was paradoxical, not just as simple as you may now assume, not as simple as I assumed—and got burned. Enjoy your politics, but keep your money in a separate pocket.

Nor can you escape, believe me, in some easy way by loaning your money to any person, project or corporation who will give you a handsome engraved receipt for a "package deal" and your permission to "process" the resulting sterilized paper. Don't put your conservatively selected securities in a safe-deposit box and "forget them"—or in anyone else's safe-deposit box.

The just elected president of a well known national Banking Association, said in his acceptance address, "The only real protection I know against the present evaporation of capital is full ownership of certain restricted classes of one family dwellings. The words 'conservative,' 'security,' 'safe,' 'sound' have reversed their meanings. Previously acceptable stock, bond and mortgage appraisal criteria no longer hold true. Conclusions, based on tests for safety long in use, must now be reversed. 'Safe and sound' investment paper, for long term holding, has actually become undependable and dangerous."

In closing this small chapter in a big subject let me give you my own conditioning formula. It calls for self resolution, and a lot of sales resistance.

In appraising a real estate offering, keep saying to yourself over and over:

"I am not proposing to buy this property because it
shows a good 'income,' 'profit,' or 'return-on-investment.'"

"I am not buying this dwelling 'to-make-money' or increase my 'average interest rate.'"

"I PLAN TO OWN THIS 'THING,' THIS SOLID, USEFUL, ALWAYS NEEDED UTILITIES, BECAUSE I WANT TO HAVE PERSONAL CONTROL OVER AT LEAST ONE CAPITAL ITEM THAT IS NOT DEPENDENT ON SOMEBODY ELSE'S PROMISE-TO-PAY."

Said the banker quoted above: "The next four years will be a good time to owe money, a poor time to have people owing you."

The good old "six percent mort-gages" suddenly appear as "speculative" investments.

To be secure, you must own the house on which the mortgage rests, with that mortgage (if any) owned by you, not to you.

Well, good luck, you'll need it, and then some. W.G.P.

BUSINESS OF ARCHITECTURE

(Continued from Page 18)

written program established which indicates individual responsibility for it. We don't attempt to do everything but attempt to meet specific quotas of business in specific areas on a specific percentage basis. In other words, we divide our potential gross fees percentage-wise, let us say, between residential, housing, hospitals, schools and industrial work and we gear ourselves to handle this kind of a promotion, selling and finally production program.

The promotion and public relations function needs to be carefully nursed in all phases of the architect's life.

It happens that I am a member of a school board close to Chicago. Over the past three years I have had an opportunity to work with several architectural firms and have been amazed at the lack of knowledge, on the part of some, of good human relations, sound job planning from presentation to completion of the building, a lack of follow-through on specific requests for information, a lack of professional acumen in handling difficult situations and progressive indifferences as the actual work is underway. This job of public relations never ends and affects every contact made by every man from the architect's office.

The second function of the architect's office is "Design and Production." Now that we've got the job what are we doing about it. Again, the office that has developed a fairly continuous flow of work requires system. Many of you shy from system principally because you do not know what it is. Certainly the principal purpose of system is to develop free time for the creative ends of this business and to shorten the distance and costs to satisfactory job completion. Each job program should be definitized, budgeted and controlled day to day. Calendar deadlines should be established and client presenta-
tion dates worked out to most advantageously serve the production staff and the client. Again, job classifications in the design and drafting areas should be established, some type of a profit participation plan should be inaugurated which rewards unusual work, initiative and ambition and makes possible the development of able men from the ranks. Perhaps nowhere have the architects done so little as in the matter of upgrading of personnel and providing for the longevity of their business through careful attention to the development of personnel. Programs should be written out and written memoranda should take the place of oral directions where time schedules, man hours, firm policies and direction of personnel are heavily involved. Early and careful preliminary and basic cost estimates should be a requirement of every office for every job.

The third function of the architect's office is construction of the work and the supervision in the field. I have only one comment to make here and it is a repetition essentially of what I said earlier. The personal relationships of those engaged in the work with the personnel of the client are overlooked from time to time. The architect, I believe, is supposed to fight the battles for the client, having been hired as his agent, and is supposed to arbitrate differences of opinion which develop on the job. It is my firm belief through some experience that many times the architect puts the client in the position of settling disputes where he does not have the background, experience, or time to make a decision.

Architects Must Also Be Managers

The fourth important function of the architect's office already alluded to is business management and control. Unfortunately, architectural training does not embody to the degree that it should basic business concepts and procedures which are essential to any business. I do not necessarily favor additions to the already lengthy training program but believe that the architect should know the fundamentals of good organization and administration and have some knowledge of finance, budgeting, cost control and personnel relations to increase his effectiveness in the field.

I know of several architects who fret under the pressures and controls imposed by this strict adherence to good business management in their own offices but who, on the other hand, have recognized the benefits, have regulated their own activity to fit the desires of the whole and have consequently seen their business grow and their personal incomes reach levels which were unobtainable under any other system of management. They also have found that they have free time to do those things which bring personal satisfaction—family, community activities, research and experiences in new fields.

I believe that the individual partner in an architect's office charged with the business management function should be an administrative co-ordinator. He should be responsible for an organization chart of the firm and through co-operative effort with his partners should assign responsibilities and see that they are in written form. He should systematize methods and procedures, construct a meaningful annual budget, and devise means for an easy flow of information and communications in the office. He should be responsible for partner meetings being held on a set schedule, for salary administration and personnel administration with periodic review of progress of employees. Employees should have a six-month review of their activities against a standard established by the partnership and made known to the employees. How else can good employees be recognized and they, in turn, informed that they do have a definite place in the progress of the firm's activity? The architectural firm, like any other business, should have written objectives which are periodically reviewed, written policies of operation which everyone understands and methods and procedures of operation which are simple, complete and productive of results which co-ordinate the individual activities of specialists.

In conclusion, let me sum up the points which I consider vital to the operation of an architectural practice if it is to be successful:

1. Establish short-term and long-range objectives for the business, which would include the following:

(a) A desire to the possession of conspicuous professional accomplishments in the field of planning and building.

(b) A desire to meld together in a business a group of individuals who are competent specialists in the architecture

ARCHITECT

A. C. Ochs Brick & Tile Company

Manufacturers of
Artistic Face Brick, Common Brick and Structural Building Tile for Every Purpose

Executive Office, Springfield, Minnesota

Minneapolis Sales Display Office
106 So. 9th St.
Ground Floor Foshay Tower
Minneapolis, Minnesota
and building fields and personally equipped to aid in the building of an organization through co-operation.

(c) A desire to establish a scope of architectural practice which sets up a desired living standard for the partners of the firm.

2. Establish policies of operation or rules-of-the game which thoroughly understood by everyone in the employ of the firm.

3. Establish a plan of organization which emphasizes the principal functions of the business.

4. Secure manpower, trained and specialized, to fulfill the responsibilities and duties of each position and job in the office.

5. Establish a personnel relations program which makes possible the securing, holding and elevation of competent personnel. This includes good job descriptions from top to bottom, a dollar evacuation of these jobs, good selection and hiring techniques, periodic evaluation of performance and some plan of reward for accomplishment and merit in relation to the total business of the firm.

6. Establish a co-ordinated activity of selling, promotion, publicity, marketing and public relations under the direction of a single individual which will, on a planned basis meet the established objectives of the partnership.

7. Establish a design, production and construction activity which is capable of producing excellent architectural design and planning, good engineering and construction techniques, within the prescribed limits of the time and dollars available.

8. Establish a center for the operational control of the business in the hands of an experienced individual skilled in financial operations, office methods and procedures, budgeting and cost analysis, sales forecasting and internal controls.

9. Develop means and methods for keeping up-to-date on new technical developments in the field, an awareness of the work of other firms within your area of activity and the general economic business, political and social development of your area.

10. Continually develop a co-operative concept in the solving of each client's problem to make the best possible use of available talent, time and dollars, and consequently develop manpower which can succeed to partnership status and the expansion of the firm's effectiveness.

I believe we must recognize that each architectural office is a complex personality in itself, made up of a wide variety of talents, abilities, ambitions and emotions. The success of a particular office should never be wholly evaluated in terms of the success of other offices. Just like personal success it should be evaluated in terms of how nearly it approaches its capacity to succeed, rather than in the prosperity of any one organization. This capacity for success is something that can be evaluated if leadership is available of the type which is never satisfied with present methods and volume of business but is continually striving to improve performance. The result should be improved efficiency in the office and better earnings because the partnership and personnel are, most importantly, better architects.

This kind of a program can't be accomplished over night, it can't be accomplished by one partner's interest in it, it can't be accomplished with your left hand but, just like anything else that pays big dividends, it demands hard work, constant attention to all details of the business and the earnest desire of all members of the firm to upgrade and improve their professional life.

What I have really been talking about is scientific management. The term confuses and scares the small businessman and especially those in professional activities. Scientific management is thought of as a body of doctrine useful only to big business and connoting complicated procedure. It does, however, have application to your business but the question always is how do we get started. One writer has said that the application of scientific management is first an attitude of mind or the development of an inquiring mind and an experimental attitude. This is the motive for investigating the possibilities of scientific management in your business. Somebody in the firm, therefore, must initiate a desire for the application of scientific methods to his operations. Through an inquiring mind he must develop an objective approach if the tempting possibilities of work simplification and an improvement of his competitive position are to be realized.
"For Sound Economical Construction"

...we preferred Stran-Steel Framing for the addition to our school. Its exceptional economy and speedy erection, plus the advantages of steel framing have proven our choice to be correct. This type of construction is adaptable to future expansion programs, which is important in school planning. We recommend it very highly to others contemplating new construction.”

HARRY E. HULS, Supt.
Eden Prairie Consolidated School

Stran-Steel Framing Members provide a versatile framing system for durable, fire-safe structures. Members consist of joists, studs and plates pre-cut to exact lengths and factory punched for pipes, wiring conduits and placing of screws. Collateral materials are nailed directly to Stran-Steel members. The special groove deforms and clenches the nail in a grip of steel. Ordinary carpenters tools and methods are used in erecting. Stran-Steel Framing permits substantial savings in building costs in several ways. For instance with conventional materials it is necessary to hold up construction at various stages to permit plumbers and electricians to get their pipe and conduit in. With Stran-Steel members the entire building can be framed and closed in without delay. The various trades may then start and complete their work inside without costly interruptions.

We will welcome an opportunity to discuss Stran-Steel Framing and its application in your building plans.

FOR MORE INFORMATION WRITE OR CALL

STEEL STRUCTURES, INC.
821 NINTH AVENUE S. E.
MINNEAPOLIS 14, MINNESOTA
Fillmore 2786  Nestor 6078

DISTRIBUTION • FABRICATION • ERECTION
ZONOLITE* PLASTER AGGREGATE
OFFERS GREATER FIRE PROTECTION

These two photos show how Zonolite Plaster Aggregate was used in the Whitefish Bay High School Gymnasium at Milwaukee, Wisconsin. 1 inch of Zonolite Plaster was applied over the steel construction. Zonolite Acoustical Plastic was then applied over the plaster. The architect was Wm. G. Herbst and associates. The general contractor was the Siesel Construction Co. and the plastering contractor was John Aaseby.

LESS WEIGHT—MINIMUM THICKNESS—LOW COST

Imagine . . . permanent fire protection, less weight, minimum thickness and low cost. All these features are now possible with Zonolite Plaster Aggregate.

1 inch of Zonolite Plaster Aggregate provides a 4-hour fire rating. And Zonolite Plaster weighs less than 1/10 as much as ordinary fireproofing materials, thereby effecting a considerable saving in structural steel. This is why so many architects and engineers specify Zonolite Plaster.

Write today for complete information. You’ll also want full details on our Acoustical Plastic for quiet, restful interiors.

WESTERN MINERAL PRODUCTS CO.
General Offices: 1720 Madison St. N. E. • Minneapolis 13, Minnesota
PLANTS AT MINNEAPOLIS • OMAHA • MILWAUKEE • DENVER

*Zonolite is the Registered Trade-Mark of the Zonolite Company