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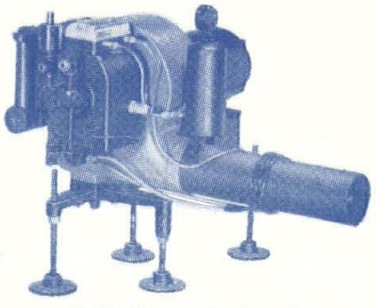

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ARCHITECTS are in an excellent position to raise the standards of both quality and efficiency of workmanship among the building trades. One of the best ways of doing this is to give good workmen credit for good work when we see it. A word of praise to a craftsman for a good piece of work will have the effect of encouraging that man to continue to keep giving to his job the best skill, interests and efforts he possesses in the knowledge that his work is appreciated.

ANOTHER thought along these lines suggests that there is no architect but who cannot benefit from knowledge he picks up by discussing with good workmen details on the job. The cumulative knowledge of the years of practical experience of the men who actually install the materials is something seldom found in books.

THE architect who will give careful consideration to suggestions passed on by the men who transform the lines of the blueprints and the words of the specifications into reality will gain and hold their highest respect. Mutual respect and co-operation are important factors in the achievement of any modern-day building.

Front Cover

Picturing many of the members of the Minnesota Society of Architects at the 14th Annual Convention in Minneapolis where they gathered to rekindle the fires of fellowship and take advantage of the once a year opportunity to discuss and work out on a statewide basis some of the many common problems which the profession faces today. We are indebted to the *Construction Bulletin* for the photographs.

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Engineering Principles in House Design

The critical needs of the building industry have focused attention on methods for saving material. In this connection, the strength of houses should be given careful scrutiny, not because houses need be stronger—for few fail—but to judge how much material is superfluous. In carrying out an extensive research program on building materials and structures, the National Bureau of Standards has developed and applied an engineering approach to house design which promises substantial aid to the building industry. This approach, accomplished through application of accepted engineering principles, facilitates the use of unconventional materials and unusual methods of construction.

Strength of houses in the past has been made adequate by patterning them after those which have withstood the test of service conditions. Architects and builders of small structures have followed closely the traditional methods handed down from craftsmen of medieval England. From these traditions, cities have crystallized building codes that are now enforced under the police power of the community.

Except in rare instances, houses have been strong enough to withstand the loads imposed in service. When weaknesses have become apparent, they were more often attributable to defects in relatively small portions of the house than to a general insufficiency of materials. However, available service records do not provide accurate criteria for judging how much excessive material is being used in the construction of houses.

Building material is costly as is the labor required to shape and fit it into place. Application of engineering principles to the design of houses presents a complete and logical method for determining allowable loads for walls, floors, and roofs; and makes it practicable to develop house constructions that have sufficient strength yet require the least amount of material and labor. This is the procedure that is followed in the construction of great bridges and other spectacular structures. Intensities of the service loads are first estimated; each material is then selected to serve a specific function and so distributed as to provide structures of adequate strength at minimum cost. The vast fund of technical information on materials can be utilized similarly for the benefit of dwelling houses when applicable engineering principles and design practices are developed and used.

Suggested methods for designing small houses to have adequate strength without waste of material are described and illustrated in considerable detail in a recent Building Materials and Structures Report[1] of the National Bureau of Standards. Because this is a pioneering attempt to apply engineering principles in the design of houses, further studies will no doubt be needed before universally acceptable methods are developed.

Subjecting complete houses to known loads is very expensive and requires time; therefore, Bureau engineers followed the procedure of applying loads to specimens which accurately reproduced the most important structural parts of a house. These parts, such as walls, floors, partitions and roof, have been designated as "elements." For each element, the prescribed methods of loading in the laboratory simulated the actual loads under service conditions. Results of measurements on the structural elements of a house are especially useful to architects and engineers, and approximate closely the results which would be obtained by testing a complete, full-sized house. It is possible, by this method of test, to determine the structural properties of a new construction without waiting for a performance test over a period of years.

In actual service, house walls are subjected to vertical compressive loads by the dead weight of the walls, floor, and roof above; and by live loads such as wind, weight of snow on the roof, and furniture or persons on the floor. Horizontal transverse (bending) loads caused by the wind act upon the outside faces of such walls and sometimes upon the inside faces.

Walls may also be required to withstand concentrated loads, that is, large forces over a small area such as a ladder placed against either face. Impact loads may be applied accidentally to a wall, for example, by a coal truck backing against the outside or by a person or bookcase falling against the inside face of the wall. Concentrated and impact loads, to a considerable extent, are unavoidable under service conditions. Racking (shearing) loads are applied to a wall by intersecting walls against which a wind is blowing. This effect is simulated in the laboratory by forces at diagonally opposite corners of the wall.

The same kinds of forces act on load-bearing partitions as on outside walls, but their magnitudes may differ. Nonload-bearing partitions are not designed for compressive or racking loads, which under service conditions, are negligible and may therefore be ignored. However, impact and concentrated loads, through accident, are sometimes applied to nonload-bearing partitions.

Floors are subjected to transverse, concentrated, and impact loads. Transverse loads result from the weight of furniture and persons; concentrated loads occur under the legs of heavy furniture; and impact loads are caused by objects falling or persons jumping on the floor.

Roofs must withstand transverse and concentrated loads. The former type is caused by wind and the weight of snow or workmen; the latter by the weight of material and tools during construction or repair of the roof.

Fundamental data on the wind, snow, and occupancy loads that are likely to be imposed have therefore been obtained, and convenient computational methods developed by the National Bureau of Standards for estimating the manner in which these service loads are distributed to the different structural elements of houses. That is, for each element of a house, compressive, transverse, and racking loads were computed by recognized principles of engineering mechanics for typical one-and two-story frame houses in several locations representative of extreme wind and snow loads in the United States. Allowable loads (those considered safe) for 100 wall, partition, floor, and roof constructions were then compared with assumed actual loads for the two types of houses in three locations. The comparison shows that some had insufficient strength while others were much stronger than necessary.

This engineering approach to strength of houses will, it is believed, open the way for designers to introduce unconventional materials and unusual methods of fabrication through laboratory tests to determine whether the constructions possess adequate strength. Such data will greatly shorten the time required to develop and obtain acceptance of new types of construction for houses. At the same time, a substantial saving of materials as well as improved protection against storm damage should result.

[1]BMS 109, Strength of Houses: Application of Engineering Principles to Structural Design, Herbert L. Whittemore, John B. Cotter, Ambrose H. Stang, and Vincent B. Phelan. BMS 109 can only be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. $1.50 a copy.

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An interior view of "The Flame" in Duluth—sound-quieted with Vercoustic.

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Versatile Vermiculite

Vermiculite is a mineral used for insulating and fireproofing. A quarter-century ago, it was known only to geologists, and then only as a mineral, not as an industrial commodity. Today, it is used in construction around the world. This rapid growth in popularity has been due, in part, to the unique properties of the mineral itself and to continuous research which has developed new uses.

Let us consider these properties first. Vermiculite is a non-metallic mineral belonging to the mica family. A chunk of crude ore is made up of thousands of tiny, separate layers which can be split off into paper-thin sheets. Trapped in the mineral and between its layers are microscopic quantities of water, which, when subjected to heat, turn to steam and "pop" the layers apart. This is the source of the important expansion properties of the mineral. In the exploding process, tiny dead air cells are trapped within the granules; and these provide most of the insulation value. The remainder comes from the shiny surfaces of the expanded laminae, which reflect radiant heat in the same way that a mirror reflects light.

The insulating and fireproofing properties of vermiculite are easily demonstrable. A favorite device is to ask a cringing bystander to hold a handful of expanded material under a blow-torch. Even this terrific heat does not penetrate to the skin or char the material. As a matter of fact, laboratory tests have determined that it takes 2462° F. to reach the fusion point of vermiculite; hence, its unparalleled value as fireproofing.

Vermiculite is very light in weight. Its specific gravity, as a mineral, is only about 2.50; and a cubic foot of processed vermiculite weighs from six to ten pounds. This light initial weight makes possible the formation of a concrete weighing about 40 pounds per cubic foot, compared with 145 pounds per cubic foot for ordinary sand concrete, and 75 to 95 pounds per cubic foot for concrete made with cinder, slag, or burned clay aggregates. Vermiculite plaster aggregate, when mixed with ordinary fibered gypsum to form a base coat plaster, weighs only 27 pounds per sq. yd. one-inch thick, compared with 84 pounds per sq. yd. plaster of the same thickness. It is obvious that great economics in dead weight, as well as structural steel requirements, can be effected by the use of vermiculite concrete and vermiculite plaster for fireproofing.

Vermiculite, whether it be crude or expanded, is tough and durable. Weathering does not have any appreciable effect on it. The expanded product can be soaked in water, and dried, heated, and cooled without physical or chemical change. Its geologic age is exceedingly great. It is usually associated with rocks of pre-Cambrian age; in other words, the mineral is millions of years old.

Vermiculite occurs widely in nature, but few deposits are of commercial importance. The largest deposit in the United States, according to the U. S. Geological Survey, is at Libby, Montana, where it is strip-mined with power shovels. Other deposits occur in the Carolinas, Wyoming, Tennessee, and Georgia. A large body of ore was recently located in Africa.

So much for the mineral. As to its uses:

Vermiculite insulating concrete (in which vermiculite concrete aggregate replaces sand or gravel) has gained wide recognition as efficient roof insulation. It does not rot, disintegrate, or burn. It is placed monolithically, so there are no joints to open up. Roof leaks will not deteriorate vermiculite concrete, because it is not affected by moisture; and leaks are confined to the area of the break, since water does not penetrate or travel far through the concrete by capillary action. The customary built-up roof of asphalt or pitch-and-gravel is applied over the vermiculite concrete slab after it has set and dried out.

Vermiculite concrete roof fill is placed over decks, such as concrete, steel, tile, or wood. When placed over a wood deck, a layer of waterproof paper should be put down first to cover the wood. Decks may be designed dead level, and the insulating concrete placed sloping to the drains (2-inch minimum thickness at drains). Cants, saddles, and crickets also may be placed all at one time. The thickness of the insulating concrete slab may be varied to meet the insulation requirements and to provide proper drainage. A 1-to-6 mix (1 part Portland cement to 6 parts vermiculite concrete aggregate) is recommended for roof fills. It produces a concrete with a density of 24 lbs. per cu. ft., a compressive strength of about 115 lbs. p.s.i., and a "K" factor of .65 B.t.u.

In the construction of roof decks, a 1-to-4 mix is recommended. This produces a concrete with a density of about 30 lbs. per cu. ft., a compressive strength of 240 lbs. p.s.i., and a"K" factor of about .79 B.t.u. The material is placed over a form, such as ribbed metal lath, gypsum or asbestos board, paper backed wire mesh, etc. The forms are fastened to wood or steel supports spaced not to exceed 32 in. on centers, and the vermiculite concrete slab is reinforced with 6 in. by 6 in. by 10 gauge wire mesh. If ribbed metal lath or paper-backed wire mesh is used, no additional reinforcing mesh is required. Minimum thickness of the slab should be 3 inches.

The fire-protective properties of vermiculite concrete roof decks were officially recognized by the War Department early in World War II. The Pentagon Building in Washington, D. C., has vermiculite concrete roof decks as protection against incendiary bombing, when that was expected in the early stages of the war in Europe; and literally millions of square feet of vermiculite concrete were used for roofs of war plants throughout the country.

Vermiculite insulating concrete floors and floor fills provide efficient, light-weight thermal insulation in heated buildings, in refrigerated buildings, and in animal shelters. Properly installed, they remain dry even in buildings where relative humidities are unusually high. They can be quickly placed in new or existing structures. For grade level floors, the area is filled with coarse stone or gravel, at least 4 inches in thickness, and thoroughly rolled and tamped to prevent settling. The gravel is covered with a vapor barrier. A 1-to-4 or 1-to-6 mix is recommended, according to the type of installation. If the concrete is placed over an existing wood floor, a vapor barrier should be installed before placing the concrete, to prevent swelling and warping of the wood from the water in the mix. Vermiculite concrete floor slabs are then covered with a wearing surface of ordinary concrete, of suitable thickness to carry the design load.

(Continued on Page 8)

Highlights From Mr. Orr's Address at Annual Convention

Douglas W. Orr, President of the American Institute of Architects, envisions the architect as the logical leader of the "Renaissance of building which this nation is now facing."

He told the Minnesota Society of Architects at its annual meeting in Minneapolis that the architect "has come of age as the man of impartial authority and integrity in all matters relating to the buildings in which civilized man spends most of his days."

As such, he asserted, the architect must be "ably qualified" to lead the Renaissance of building which is due "because in 1948 we have few of the structural limitations which plagued the builders of Classical, Medieval, and Colonial Times.

"We can do things today in building which were beyond conception even as recently as 20 and 30 years ago, because of the enormous strides in metallurgy, technology, and research," he declared.

Architects, he continued, acknowledge that today "we face an era of transition in building.

"Regardless of our individual beliefs," he added, "whether we incline to the so-called traditional or modern schools, or both, architecture is making a sincere attempt to relate structure to the life of the day—to bring it into closer harmony with the ever-changing conditions of the Twentieth Century—and with the demand which our age of machines makes upon us."

This demand he labeled as "Gargantuan in size" because of the demands for housing "and the backlog in building of hospitals, schools, libraries, and industrial plants now facing us, the architects, and the entire construction industry.

"We must meet this challenge squarely," he declared. "We must solve intelligently the problems which are presented to us, and we must provide the kind of planning and construction which will be as sound in 1968 as in 1948."

Turning to the question of new materials in building, he stated that materials, as well as new methods of construction, "are never static but always developing, and the movement is evolutionary rather than revolutionary.

". . . Evolution is slow and we have not yet learned to clothe most of our buildings in anything but the materials of the past—wood, stone, and brick. We have not yet reached the point where we are sheathing our buildings in plastics or metals. These devolpments will come, undoubtedly, but the speed at which they will arrive is uncertain.

"We have yet to find ourselves in architecture but we will eventually attain beauty in freedom and simplicity," he declared. "Our future housing, as we all know, may be quite different from what we have known

(Continued on Page 18)

(Continued from Page 6)

Vermiculite plaster, which is applied in the conventional way, provides fire protection, insulation, reduces the possibility of cracking, and, as already stated, cuts down dead load, thereby reducing the hazards of building settlement. The material may be used over any kind of base suitable for sand plaster. One-coat browning is satisfactory over rock lath and ordinary masonry. When metal lath, insulation lath, or wood lath is used, a scratch-and-brown coat of vermiculite plaster is applied. The brown coat should always be applied over a scratch coat that is firm and hard. When vermiculite plaster is applied directly to monolithic concrete surfaces, the concrete should first be coated with a specially prepared bond plaster for use on concrete. Any of the conventional plaster finishes, such as a lime putty finish or a floated sand finish may be applied over a brown coat of vermiculite plaster. The vermiculite plaster brown coat develops suction much faster than ordinary plaster, and allows the finish coat to be put on sooner.

An acoustical plastic, having a sound absorption coefficient of .65, is also made with vermiculite. This type of acoustical treatment may be used as a finish over a brown coat of plaster, or over concrete and masonry walls, old "hard wall" plaster, and even over metal ceilings and painted surfaces, as long as the paint is permanently water-resistant. This ease of application has been a considerable factor in its rapid adoption. Vermiculite acoustical plastic is one of the very few acoustical treatments that is absolutely fireproof, another important consideration. It is applied in two coats, each about 1/4 inch thick, to a finished thickness of not less than 1/2 inch. The first coat must be dry before the second coat is applied. The surface may be left smooth under the darby; or, if a textured finish is desired, the surfaces may be stippled while wet. Vermiculite acoustical plastic is easily decorated by spray-painting with a non-bridging coat of water-thinned resin emulsion or casein paint, and can be redecorated without impairing its sound-absorption properties.

Nationally known laboratories and many building codes give high fire-resistive ratings to various assemblies involving the use of vermiculite.

Steel plate floor assemblies with 2-inch vermiculite concrete topping over the steel floor, and 1 inch vermiculite plaster on suspended metal lath underneath the floor have been approved for a 4-hour fire rating. All types of steel floor assemblies, including plate, joist and cellular type, which are protected by 1 inch of vermiculite plaster on the ceiling underneath the floor, and a minimum of 2½ inches of sand concrete on top have also been approved for a 4-hour rating.

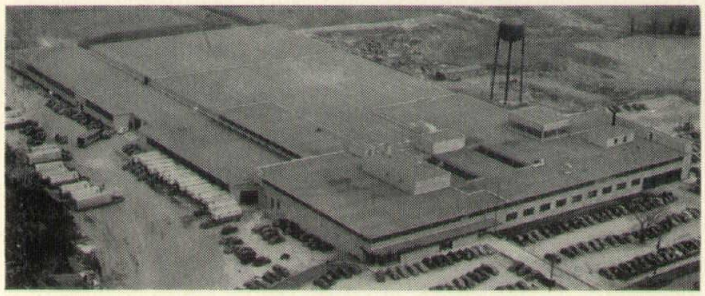
Steel I-beams with a protection of 1 inch of vermiculite plaster on metal lath with incombustible construction above the ceiling, 4-hour fire rating. Columns protected with 1 inch of vermiculite plaster on metal lath, 3-hour rating. In this instance, the lath is spaced 1¼ inches from the column and the space behind the lath on the flange faces filled with vermiculite plaster. Load-bearing wood stud partitions with 3/4 inch of vermiculite plaster on metal lath, both sides, 1-hour rating.

Vermiculite insulating fill, used to insulate and sound-deaden sidewalls and ceilings of all types of building, provides good insulation. A 4-cubic-foot bag weighs

(Continued on Page 18)

Acres of Coverage

Two of the largest roofing jobs ever undertaken in the northwest, total area for which is the equivalent of 13 acres, were those recently completed by B. F. Nelson Co. for Red Owl Stores, Inc., and National Tea Co. at Hopkins, Minn. Nees Bros., Minneapolis, was roofing contractor on the two projects. Owners of the buildings are assured of 20 years of trouble-free service from their roofs by the Nelson company's 20-year bond, written by Fidelity and Casualty Co., New York.



The roof of the one-story National Tea warehouse covers 323,000 square feet, equaling approximately seven acres.

The Red Owl building, shown in the picture, contains administrative offices, warehouse, supermarket restaurant, coffee roasting plant, bakery, civic auditorium, employe clubrooms, undercover docks and store fixture shop. Dimensions are 406 by 707 feet, requiring 253,300 square feet or about six acres of roofing. The front half of the Red Owl structure is of two-story construction.

Application of the roofing is supervised by qualified inspectors of the Nelson company staff. The job is inspected again at the end of the first two years of service when the roofing contractor, by prior agreement with the Nelson firm, is obligated to make any repairs deemed necessary to make certain the roof will give uninterrupted service beyond the guarantee period.

Years of testing the 20-year product under the extremes of Minnesota climate has shown that its life probably is more than twice the length of the guarantee, according to Frank Reinhard, manager of the Nelson built-up roofing department.

Another roofing project which is only slightly smaller than these two is the Sears-Roebuck Co. warehouse 28th St. and Longfellow Ave., Minneapolis, on which 224,800 square feet of the Nelson bonded roofing was used. Rainville-Carlson, Inc., was contractor on the project.

U. S. Bureau of Standards Paper on "Efflorescence"

Technologic Paper No. 349 of the United States Bureau of Standards reporting on an investigation of the physical properties of limestone, states:

"Efflorescence is a growth of crystals on the surface and in the pores of masonry where a salt solution evaporates. The solvent carrying the salt is probably always water. The source of the salt may be varied, but in most cases it is leached from the masonry walls by water as it slowly percolates through the pores.

"No building material is entirely free from water-soluble salts and the small amounts of such which usually appear in chemical analyses as a few tenths of 1 per cent are sufficient when leached out and concentrated at some point on the surface to cause efflorescence."

It will be noted that all masonry materials are subject to occurrence of efflorescence. The amount and character of the deposits vary widely, apparently depending on the nature of the soluble materials and atmospheric conditions. The deposit may or may not be soluble. In some cases, therefore, it disappears by being washed off by rain.

In the case of concrete, mortar, stucco, cast stone or concrete masonry, the hydroxide (soluble) is an inevitable product of the reaction between cement or lime and water. When this soluble material is brought to the surface by water, it combines with carbon dioxide in the air, forming calcium carbonate (very slightly soluble), which appears as a whitish deposit known as efflorescence.

Efflorescence usually appear after long rainy periods. In summer the rain evaporates so quickly that comparatively small amounts of the salt are brought to the surface.

Is Indication of Absorption

Efflorescence is an indication of absorption and any preventive measure must necessarily limit absorption to the point where insufficient water enters the mass to dissolve the salts and transport them to the surface.

While calcium carbonate efflorescence is practically insoluble in water it is easily dissolved by a dilute solution of muriatic acid (one part concentrated acid to five to ten parts of water). Surfaces treated in this way should immediately be washed thoroughly with water. Walls should be thoroughly wetted with water before acid is applied. This acid wash should be tried out on a small inconspicuous section of the wall to note its effect before proceeding with the whole job.

Cast Stone

Low absorption is the best assurance against efflorescence. Cast stone made from properly graded aggregate, with low water-cement ratio, puddled or compacted to produce maximum density, and thoroughly cured, will have minimum absorption. Rich dense mortar in tight well-pointed joints will help keep water out of the wall, and effloresence from appearing on or close to the joints.

Stucco

With properly graded aggregate, stucco made and applied according to A.C.I. specifications is relatively free from efflorescence. Lime used to increase workability should be hydrated lime and free from calcium sulphate.

Light-colored stucco will show much less efflorescence than darker shades.

Stucco should be cured by sprinkling lightly and frequently. or should be protected to prevent evaporation that would render the stucco weak and porous, thus paving the way for excessive efflorescence later. This is especially necessary for the finish coat.

Concrete Masonry

In particularly porous concrete the evaporation may take place back of the surface so that the deposit of salts, while present, is not visible unless the units are broken.

In extreme cases where efflorescence is unusually heavy, it may be advisable to wash the wall with a muriatic acid solution, dry it thoroughly and apply boiled linseed oil, or a colorless commercial dampproofing material.

Curing concrete in the presence of carbon dioxide gas appears to be beneficial in changing the calcium hydroxide to calcium carbonate. The carbonate seems to be formed in the pores at or just below the surface. The pores are thus partially or nearly filled, preventing the passage in or out of sufficient water to produce efflorescence. This method would appear to have possibilities in the manufacture of products.

Monolithic Concrete

In dams, retaining walls and similar structures, especially where water or earth is held on one side, incrustations may occur if water seeps through. This is most likely to occur at construction joints. To prevent efflorescence and incrustations it is necessary to provide a structure which will not permit the passage of water. This requires watertight concrete and watertight joints, obtained by proper portioning, placing and curing. Over-wet mixtures which segregate are a prevalent cause for leakage at joints. Where necessary, metal water stops should be provided in the joints.

PROFESSOR KWIZ

(See Page 13 for Answers)

1. What is a colloidal paint?
2. Portland cement will pass through a screen mesh having *200, 10,000, 40,000, 500* holes a square inch.
3. Give any 5 of the 8 common defects found in pine lumber.
4. What do the following have in common: *Black Swanton, Bois Jourdan, Tavernelle?*
5. What is the main product of combustion of gas?
6. What metals comprise pewter?
7. English bond means: *Alternate headers and stretchers, alternate courses of headers and stretchers, 100 proof and no ice.*
8. Chigguresque is: *a small bug, Indian for "jiggers here comes the boss," a style of Mexican architecture.*
9. The botanical name for genuine Northern White Pine (now almost as extinct as a dodo bird) is: *Pinex, Pinus Strobus, Pinus Resinosa, Loo Epino.*
10. Summer wood is more dense and darker than spring wood chiefly because: *it has absorbed carbon from the air, it's shaded by the leaves, it's warmer in summer.*

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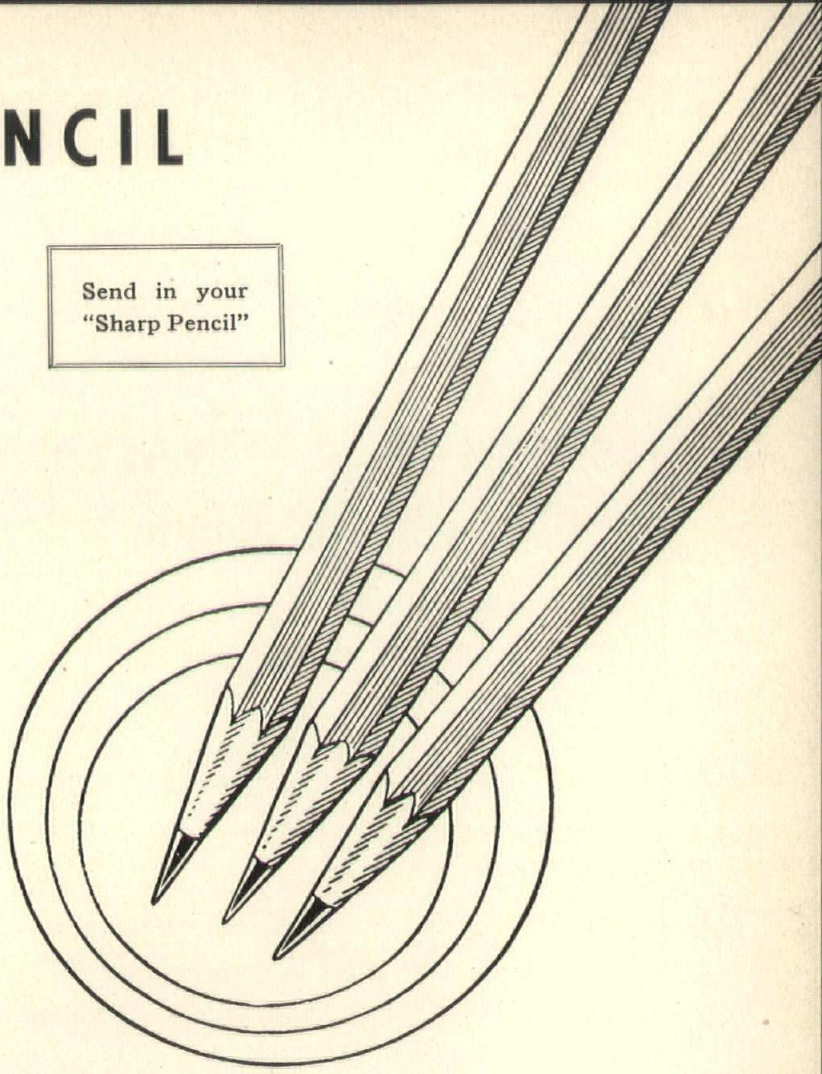

1948 CONVENTION DECLARED SUCCESS

The 1948 Convention of the Minnesota Society of Architects has been called "one of the best we ever held." The attendance at the four roundtable discussions was especially gratifying and those participating learned a great deal in the free exchange of ideas. Next year the roundtable idea should be carried further and more time allowed for discussion of the subject matter.

The following summaries of the roundtable discussions will act as "refreshers" for those who attended the sessions and will give those who did not attend somewhat of an idea as to the subject matter discussed.

Specification Systems

Leader—John W. Dawson, St. Paul

It was generally agreed that architects should try to eliminate the use of generalized phrases which might be used to require materials or services in excess of the quantity or quality which might reasonably be required in accord with the specifications and drawings. Such phrases may be eliminated by preparing more complete drawings and specifications that are written very specifically for the project at hand.

All present were agreed that briefer forms of specifications are desirable. Few present had tried the type of specifications where full sentence structure is generally eliminated. Those who had tried the system had found it difficult to apply it to all parts of the specifications. No doubt others will experiment with this technique further.

The group was interested in the method used in several offices of consistently dividing the specifications into divisions, using the same division names and numbers in all specifications, omitting divisions not applicable to the particular project. The specifications divisions should agree with the usual separation of the work between the various trades.

The separation of "materials" and "workmanship" under each division was recommended.

The use of "Master Specifications" in one office was described. The particular office writes its own master specifications for each division, modifying the master writing as required for particular jobs, or writing a new "master" when permanent improvements seem desirable.

Reference was made to A.S.T.M. standards. It was pointed out that reprints of various A.S.T.M. standards are available to anyone at nominal costs. One firm finds membership in the A.S.T.M. advisable.

Closer association of the specification writer with the work as it progresses in the field was thought desirable.

The possibility of composing standard specifications for certain divisions of the work for the use by all Minnesota architects by reference or inclusion was discussed. At a later meeting of the Convention, this proposal was recommended to the State Society for possible further action.

Wages and Hours, Etc.

Leader—W. H. Tusler, Minneapolis

Wages and Hours:

1. Moved that this meeting recommends a standardization of office practice.
2. *Hours:* Moved that the Society consider the standardization of office hours per week taking into consideration the State Labor Relations Law.
3. *Holidays:* Moved that the following holidays be allowed:
   New Years Day—Memorial Day—4th of July—Labor Day—Thanksgiving Day—Christmas.
4. *Vacations:* Moved that it is the sense of this meeting that vacations be given on the basis of 1 day for each month of employment up to 1 year, after that 2 weeks for each year.
5. *Sick Leave:* Moved that if a man is out less than one week he should make up the time. In all cases over one week, it is up to the office to establish own policy.
6. *Termination of Employment:* Moved that this meeting recommend to the committee that the employer give two weeks minimum notice to the employe, and that the employe be required to do the same. It is also recommended that the committee check with the State Labor Relations Law.
7. *Draftsman's Training:* Moved this meeting recommend that the Committee confer with the University School of Architecture and Dunwoody Institute concerning the establishment of a course

on draftsmanship in accord with standards which will be set up by the Committee.

Owner-Architect Contracts

Leader—A. I. Raugland, Minneapolis

Recommended that the present Code of Practice, Fees and Ethics be reconsidered and revised and that a Committee be appointed to develop a standard form or forms of Owner-Architect Contracts for the State Society and that such forms be submitted to the next convention of this Society.

Building Codes

Leader—A. O. Larson, Minneapolis

The round-table discussion gave consideration to two subjects—the proposed State Building Code and Municipal Codes.

The efforts of the architects for the past ten years or more to secure legislative enactment of a state building code were reviewed. It was the consensus of opinion that the Minnesota Chapter should exert every effort to place before the forthcoming legislature a bill which would create a state building department which would have authority to formulate a state building code. The Minnesota League of Municipalities has gone on record as favoring a uniform state building code.

As for municipal enforcement of building codes the general comment was that there should be a means of establishing a greater degree of co-operation between the architects and the building inspectors. The continuous amending of codes has been a more or less hit-and-miss method. There has been but little uniformity of codes throughout the state.

The obsolete State Housing Code was discussed. The Minneapolis Society of Architects has a committee working with the City Council with the intention of attempting the repeal of that law through its removal from the Minneapolis City Charter.

All of the Architects should be vitally concerned in any efforts toward building codes which will both be uniform and which will represent all phases of technilogical progress which has been made in the industry.

Wood Conversion Company Promotes Five

D. M. Pattie, Vice President and General Manager, Wood Conversion Company, St. Paul, Minnesota, announced the following sales staff promotions: J. D. Fischer to Manager, Building Products Sales; P. L. Berquist to Manager, Industrial Product Sales; R. E. Backstrom to Assistant Products Manager; D. B. Anderson to Manager, Merchandising Department; and A. J. Moorman to Chicago District Manager.

Mr. Fischer, who was formerly Manager, Specialty Product Sales, and prior to that New York District Manager, will be responsible for the sale of all building products sold by the Company. Mr. Fischer joined the Company in 1936 as sales representative in Connecticut. In 1942 he was promoted to New York District Manager and in 1947 was brought to the General Sales Office in St. Paul as Manager, Specialty Product Sales.

Mr. Berquist, formerly Chicago District Manager, will be in charge of Industrial Product Sales. Mr. Berquist joined the Wood Conversion Company in 1927 as sales representative; in December of 1936 he was appointed Sales Supervisor in the Chicago area; and in 1943 was promoted to Chicago District Manager. He is a graduate Civil Engineer from the University of Minnesota.

Mr. Backstrom, who has served Wood Conversion Company in various executive capacities over the past twenty-one years, will function as Assistant Products Manager in both Industrial and Building Product Sales. Mr. Backstrom joined Wood Conversion Company in 1927 as Sales Engineer. He is a graduate in Mechanical Engineering and a Registered Professional Mechanical Engineer in the State of Minnesota. He is Past President of the Minnesota Chapter, American Society of Heating and Ventilating Engineers; Past Chairman, Twin City Section of the American Society of Refrigerating Engineers; and at present, Section Director Member of the Council of the latter organization.

Mr. Anderson joined the Company in 1933 as Sales Engineer. The Merchandising Department, which will be under the direction of

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ANSWERS

1. One in which pigments are not ground into the vehicle but are reduced to extreme fineness and colloidally suspended in the vehicle.
2. 40,000.
3. Checks, decay, cross grain, knots, pitch, shake, split, stain, warp, pith, imperfect milling.
4. All types of marble.
5. Water.
6. Tin and lead.
7. Alternate courses of headers and stretchers.
8. Mexican Architectural style.
9. Pinus Strobus.
10. It has absorbed carbon from the air.

Excerpts from speech of Paul Gerhardt, Jr., Director, North Central States District A.I.A., Made at Annual Convention of Minnesota Society of Architects

I desire to commend Minnesota on its progressiveness and to congratulate the architects of the State in supporting their professional organizations so zealously.

This is the first opportunity I have had to meet with the architects of Minnesota since the Minnesota Society of Architects obtained a new charter as a state organization of The American Institute of Architects. This, as you know only too well, does not refer to a newborn child, but rather, as I see it, the adoption of a full grown youth by an elder counselor, since the Minnesota Society is many years old, as attested by the fact that this meeting is identified as the "Fourteenth Annual Convention." The Minnesota Society has been recognized as a leader for a long time and should not lose its identity. I hope the activities and interests therein of a large number of you will be maintained, for, as we all know, it is only through the active interest and constant support of individuals that professional organizations have value and accomplish results.

The Minnesota Chapters and the Society are particularly fortunate because of the number of distinguished architects in these parts who obviously are interested in their Chapters and this Society to the extent of contributing an appreciable portion of their time and thought for the welfare of the profession. In my opinion, your record is outstanding, at least in the North Central States District, of which I am especially cognizant. May I urge those of you who are not now active to become so, for in that manner will you be assured of inestimable reward. The personal experience is invaluable and the indirect benefits through increased recognition of the profession are considerable.

All Architects Should Be Members

All architects within the state should be members of such a state organization, for in union there is strength, and since the prime purpose of the state society concerns matters within the state, it is well to represent all within said boundaries when making representations. Furthermore, if a member of our profession is not worthy of such membership he should not be practicing a profession whose foundation is based on "integrity." Certainly he must be violating some phase of your registration or licensing laws if he is not worthy of being a fellow member of your state society. I may be treading on toes of others, but I am convinced that for the good of the profession, membership in organizations at the state level should be as all inclusive as utterly possible.

As I see it, one of the important reasons for a state organization apart from chapters of The Institute, is for political recognition at the state level, and on this score, numbers are impressive. A secondary purpose as I have already suggested is to gather within a group, all practicing architects of the state, whether or not they are eligible to or worthy of membership in The Institute, and again on that subject there are diverse opinions. Some feel that chapters should accept all reputable architects practicing within the state, preferably as corporate members, but otherwise, as associate members, while other chapters feel that those

(Continued on Page 16)

PROMOTIONS (Continued)

Mr. Anderson, is responsible for Advertising, Sales Engineering, and Market Analysis work of the Sales Department. A graduate Architectural Engineer, he is a Registered Professional Structural Engineer in the State of Minnesota. Mr. Anderson is Past President of the Minnesota Chapter of the American Society of Heating and Ventilating Engineers and a member of the Industrial Packaging Engineers Association of America.

Mr. Moorman, now Chicago District Manager, joined the sales organization in 1936. In 1938 he was promoted to Sales Supervisor in the Northwest District and in 1947 became Assistant Chicago District Manager. He is a graduate of the School of Architecture, University of Minnesota, and a Registered Professional Architect.

According to Mr. Pattie, Wood Conversion's production facilities are being greatly increased to meet present-day housing and industry demands. Wood Conversion Company began construction of its first production unit in Cloquet, Minnesota, nearly 26 years ago. From the original small plant producing a single product—Balsam-Wool Insulation—and employing less than a score of people, the Company has expanded to an organization of national prominence.

(Continued from Page 14)

eligible to membership in the chapter should be finely screened, regardless of the classifications of membership, since a state society might be more inclusive. There certainly is no objection to this latter procedure, providing, of course, the eligibility requirements are not unduly restrictive and there is an opportunity for all practicing architects to enjoy membership in the national organization in some form or other.

I hesitate broaching the subject of eligibility for membership, since it is so controversial. Some of you are certain to disagree with my viewpoints. I can only hope that the majority will concur.

In olden times, membership in The Institute was highly restrictive. It was realized, however, that in order to increase stature it was necessary to broaden the base of membership as well as the service to the profession. Since that change in policy, The Institute has grown to a membership of over 7,500, more than half the architects of these United States, and its recognition and accomplishments have been magnified out of proportion to its relatively small number.

A few years ago there was discussion of the "Wisconsin question" and the "New York resolution" as to who was or should be eligible to membership as a corporate member of The Institute. The question is tied into the subject of "Ethics," "Principles of Practice," "Rules of Behavior," or however you wish to identify it. In virtually all states, registration provides a minimum legal requirement for the practice of architecture. The American Institute of Architects accepts this as a minimum requirement for corporate membership. Beyond this, we seek to inculcate the duty of serving clients on a high standard of competency and integrity. The interpretation of this attitude is left to the chapters in determining whether or not an individual architect may become a corporate member of said chapter. There are, however, those who for their own reasons do not wish to become members of The Institute, but still wish to be a part of the local professional organization. Most certainly provisions for a type of membership for such men should be made, even though it is unfortunate that it cannot be clearly presented to them that they owe it to themselves, as well as to their chosen field of endeavor, to become a part of the national body which is devoted to the improvement of the position of the architect. In fact, associate mem-

bership in a chapter, although limited in time, is the least which should, in my opinion, be considered.

Upon several occasions in the past, in speaking to groups of architects, I have taken the opportunity to relate my observations of our profession, as a result of my serving as Commissioner of Buildings of the City of Chicago, in which capacity there came constantly before me the drawings and representations of architects. It was depressing to observe the accuracy of a statement made some years ago by one of your own members, to the effect that, individually, we do not know enough about architecture. Owners are served most inadequately in too many instances. It is for that reason that meetings such as this Fourteenth Annual State Convention of the Minnesota Society of Architects is gratifying; particularly the round table discussions which are scheduled for tomorrow. Likewise, the so-called "seminars," which have become a part of the national conventions, and which are so popularly received. They give us opportunity to keep abreast of the times, to learn from others, and to give a helping hand to our fellow practitioner. We should jointly assist one another in better serving our clients, and I know of no better way than through active participation in such meetings as these, which should be repeated at stated intervals.

So again may I stress one of our precepts, "competence."

The Young "Architects"

Another thought, there are young architects coming from school all the time and it is not only desirable from our professional viewpoint to have them become active members of our organizations, but we, individually, have an obligation to take them in hand, to guide them and see to it that they do not follow improper paths. We must be mentors and actively aid these youngsters. Because of our indifference, too often these young men are lost to our profession, after having good educational training.

It should be made more easy for these young men to sit around the table with their fellow members of the profession and to hear what is considered proper, as against improper practice, gaining a full understanding of the functions, duties, and *responsibilities* of architects. I have a firm belief that anyone who has graduated in architecture and has determined on it as his career, loves the profession and wishes to do the correct thing by it, and it is only when he is not given proper enlightenment that he may fall by the wayside. You, up here, have an excellent opportunity to be of such service with the students of the University. Perhaps you are already doing it. If so, let the world know about it.

Architects must *themselves* assume the task of moulding desirable public opinion regarding architects. Too large a proportion of the public still feels that the architect is primarily an exterior decorator, concerned purely with aesthetics, and someone who merely incidentally considers engineering and costs. By becoming more active among these people we can convince the public that we are honest, practical individuals, with a superior knowledge, ability, and experience in the field of design, construction, and economics of buildings. Let us individually determine to continue our interest in and knowledge of public affairs, by greater participation therein!

MARNUS PRESENTS INTERESTING ILLUSTRATED LECTURE AT CONVENTION

Lars Marnus, outstanding architect from Copenhagen, Denmark, presented a very interesting illustrated lecture covering the evolution of architecture in northern European countries during the past 20 years to the architects and guests attending the 14th annual convention of the Minnesota Society of Architects. Among the buildings illustrated and discussed by Mr. Marnus were the airport and Olympic stadium at Helsingfors, the new radio building in Copenhagen, some outstanding restaurants incorporating unusual and clever uses and adaptations of modern materials. He also showed several schools and housing developments from both Sweden and Denmark.

Mr. Marnus was accompanied by his attractive wife and they both ingratiated themselves upon the Minnesota architects with their charm and sincerity and the deep feeling with which Mr. Marnus' excellent photographs were discussed. While visiting in Minnesota they were the house guests of Mr. and Mrs. William Ingemann.

MR. ORR'S ADDRESS—Continued

in the past. The home builder will be forced to analyze his needs in terms of space he can afford."

The number of parts in a home will be reduced, he prophesied, "but we will have a better integration of these parts—a development which will make our homes more livable." He cited furniture as an example, saying that eventually it will be considered as a unit with the building.

"We will also have many more one-floor houses and basements will be eliminated. Roofs will be both flat and pitched. These houses will have much to recommend them: ease of operation for the lady of the house; safety in the elimination of stairways, especially those leading to the basement; general comfort and convenience for all the occupants; the admission of much more sunshine; and the use of the solar idea for heating."

In his closing remarks, Mr. Orr asserted that, for architects as "individual practitioners and experts . . . the horizon is unlimited, and I bid you to face it squarely and confidently.

"We of the architectural profession look forward to the period when the new Renaissance of American architecture will come into being, when the needs of the intellect and the emotions will be satisfied by our buildings as well as those requirements which are purely physical and utilitarian," he declared.

"As a united profession dedicated to the truth and to the advancement of the art of architecture, it is our task to face these problems, with their attendant responsibilities, wisely and courageously. This is our challenge. We must live up to it."

Mr. Orr delighted and impressed the architects attending the convention with his affable and sincere manner and his very evident understanding of the problems of the average practitioner.

His kind comments on NORTHWEST ARCHITECT with particular reference to the timely article by Ben Nash in the April-May issue were appreciated.

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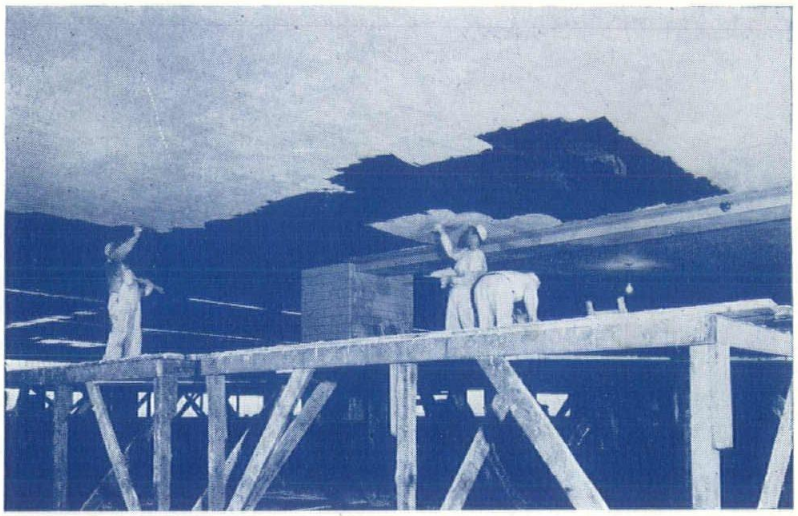

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