

Weather Resistance of Building Stones *

By J. E. Lamar, Geologist, Illinois State Geological Survey

In the August-September issue of the Bulletin there appeared an editorial which dwelt on the question of the weather resistance of some of the sedimentary rocks such as dolomite and sandstone used in buildings in the Chicago area and inquired as to what tests are available to determine "wearability or durability to the weather." Our editor has asked the writer to comment on the possibilities of scientific tests which would indicate whether a stone would "stand up in our climate for 100 years without spalling." Users of stone for concrete aggregate, railroad ballast and filter stone for sewage disposal plants have for some time been interested in the same question of "soundness" and there are available two tests which give considerable light on this question. As yet it is not possible to definitely correlate the results of these tests with the number of years a building stone may be expected to remain unaffected by the weather. However, they do afford a means of classifying sedimentary rocks, especially limestones or dolomites, according to whether they are apt to have poor, fair, or good soundness, that is weather resistance.

When aiming at 100 years of service from a building stone it should be borne in mind that the improper use or care of the stone in a building may so speed its destruction that even stone which laboratory tests show to have a high degree of soundness may fail. Thus bed-facing a stone in a wall is usually less desirable from the standpoint of structures which allows rain and snow water to stand on or continually flow across and thus seep into a piece of building stone makes it frequently saturated and therefore particularly vulnerable to disruption by freezing.

The tests referred to above are the freezing and thawing test and the sodium sulfate soundness test. The first consists of submitting test specimens to repeated cycles of freezing and thawing; the second involves soaking of the test specimens in a saturated solution of sodium sulfate for 20 hours and drying the samples for four hours. The test roughly duplicates the action of the freezing and thawing test but is more severe and causes more rapid failure of the test specimens. For this reason it is sometimes referred to as the accelerated soundness test. Currently concrete aggregate is required to pass five cycles of the accelerated soundness test without appreciable failure while stone for filter beds of sewage disposal works is required to pass 25 cycles. There exists no generally proven value for the number of cycles of freezing and thawing equal to a cycle of the sodium sulfate soundness test and it may be that no close correlation can be made; nor is there an exact correlation between either of the soundness tests and the service of a stone in a wall expressed in terms of years.

As a step toward developing a scientific basis for the prediction of the soundness of the dolomites of the Chicago area, including Joliet and Kankakee, the Illinois State Geological Survey at Urbana had well under way before the war a project, cooperative with the Bureau of Materials of the State Division of Highways and the Engineering Experiment Station of the University of Illinois, on the soundness of these dolomites, but the investigation had to be dropped temporarily for more urgent war work. The work to date, however, has shown that the dolomites of the Chicago area may be classified into 16 lithologic types on the basis of grain size, porosity and the nature and distribution of impurities. Further, it indicates that judged from the freezing and thawing test results, including tests up to 790 cycles, these types may be classified into groups each of which has a characteristic soundness. Thus it was found that the porous, pure dolomites of the Chicago area, which look as though they might break down easily have the greatest resistance to freezing and thawing tests whereas certain other types of dolomite, some of which have been favored as building stone, had poor or only fair resistance.

Results of the sodium sulfate soundness tests have not as yet been evaluated but it is anticipated they will show the same general relationship.

A third phase of the investigation remains to be done and involves examination of outcrops which can be dated, such as old quarries, and of buildings and bridges made from Chicago area dolomite, classification of the stone involved therein according to type and lastly description of the weather resistance record of the stone. From these data and the information from the freezing and thawing equal to a cycle of the sodium sulfate hoped to answer or throw light on the following questions: (1) Of the 16 lithologic types of dolomites in the Chicago area, which stand up longest in Chicago weather? (2) What type of failure characterizes the various lithologic types of stone in buildings and outcrops? (3) Is there a correlation between years of satisfactory service and the results of the soundness tests? and (4) Is there a correlation between the results of the freezing and thawing tests and those of the sodium sulfate soundness tests?

Sandstones present a somewhat different problem than limestones and dolomites in that when exposed to the weather some of them "case harden," that is develop a surface induration that more or less effectively protects the stone from weathering. Thus the St. Peter

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sandstone of northern Illinois, widely known as a source of silica sand, though normally so loosely cemented that it can be crushed between the fingers, in places develops a case hardened surface which it is difficult to penetrate with a hand pick. However the same soundness tests are available for separating the better from the poorer sandstone building stones as were discussed under limestone.

Discussion thus far has centered on the discovery of a building stone's resistance to the freezing and thawing which characterizes our climate. Weathering has at least two other additional phases, expansion and contraction due to heating and cooling and chemical disintegration. In the main these are regarded as secondary in their importance to freezing and thawing and though in special cases either of these phenomena may cause spalling or other failures of limestone, dolomite or sandstone building stone it is felt that in the main the effects of these phenomena complement, facilitate and accelerate the action of freezing and thawing in producing spalling.

Some A.I.A. Publicity Releases

A home has the best prospects of retaining its value when it is built in a neighborhood subject to well-conceived regulations and zoned against commercial and industrial intrusions and land overcrowding, and when the neighborhood has been developed according to a balanced plan designed to provide all the requisites of living, each placed appropriately within convenient reach—and when a method of assuring the maintenance of all buildings, shopping center, recreational facilities and public spaces, within the neighborhood has been adopted.

The architect will be expected to design homes which are less subject to the damaging effects of depreciation and obsolescence, and this means that the neighborhood instead of the single building should insofar as possible be made the unit of design.

"It is interesting to note," Chairman Orr, A.I.A. Public Relations Committee explained, "that the recent report of the National Housing Agency, 'Housing Costs,' shows: The cost of materials is 14.8 per cent, and the cost of transportation of the materials to the site is 3.9 per cent of the total cost of the house and land. And that these two items alone account for 18.7 per cent of the cost of materials when delivered at the site. According to this NHA report, materials account for 45.70 per cent of the total capital cost of the house and land; cost of labor at the construction site, 29.50 per cent; overhead and profits of contractors, 12.30 per cent; land and site improvements, 12.50 per cent."

In order to bring the cost of housing more nearly into line with the incomes of prospective buyers and users, he stated, it appears necessary to start combined studies to cut housing costs all along the line, from the cost of land, taxation and financing through the cost of the building itself. This requires collaborative effort of all those interested in meeting the housing problem.

"Private enterprise has already done a great deal more in housing families of low incomes than is generally acknowledged. Private enterprise has still a larger problem to solve, while much can be done by improved planning techniques and in the continued study and development of standardized units and prefabricated elements, the cost of financing of land, of utilities, and of site improvements, which are among the major costs, must also come in for consideration if the overall costs are to be reduced."

Is an architect encroaching on the profession of a landscape architect if the architect designs his building columns in forms of mushrooms, or builds his buildings around trees, or over brooks, to hide the glory of the creation of Nature?

—A. C. Fehlow, I.S.A.

Our Country's Culture 1820-1850

Between 1820 and 1850 the United States discovered its soul. In a land without extremes of wealth or poverty, the common man glorified his self-dependence, tried to reduce all knowledge to his own level, magnified his achievements, and fancied his native wit superior to special training. In religion he was apt to be enthusiastic—in economics also—and sometimes he dwelt in remote and unreal worlds of his own imagining. From nature and nature's laws men fashioned for their faith a moral universe, reflected in miniature in their own homes; by that faith they sought to reform their institutions, and to extend their control over nature itself. Critics of this faith there were, at home and abroad, but the South romanticized even its criticism. To most Americans their land was God's chosen vehicle of progress, and in their literature, in their minor arts, in their music, in their diplomacy and in their war, and in their triumphant western expansion, they proclaimed a trust in manifest destiny and in America's mission for the world.

Stanley Pargellis, Librarian, Newberry Library

Today and Tomorrow

Robert Hutchins, of New York, one of the keenest of the newer generation of architects, and also possessed with an ability to express himself in words as well as with pencil, posed to the New York Chapter of The Institute, a while ago, the possibility that present-day architects have a certain sterility of imagination. There is the thought that the profession is too much hedged in, since fertility is in its essence an openness to the outer impulse.

I cannot say that was the full meaning Mr. Hutchins had in mind, but I present it as a possibility. A chronological line drawn to divide acceptable architecture from non-acceptable architecture is dangerous, since obviously there must be good and bad before a certain period, and good and bad after that period. Therefore an inflexible prohibition against the forms of a past date, even if possessing merit, is a check-rein on Pegasus. It does not promote fertility and free inspiration.

Yet at the same time the reason for such inflexible prohibition must be understood. It is, briefly, that you cannot create a new style by too great a use of the forms of previous styles, which tend to distract and pull you backward from your style creativeness.

That is reasonable and imperative, and anyone who criticizes the Modern style, in its inception, because its proponents insisted upon a complete purge of historic forms, is obviously wrong. You must bend the tree far in the opposite direction to make it eventually assume a perpendicular position. —From "Architecture of Today and Tomorrow" by Edwin Bateman Morris in the Nov. Journal of the A.I.A.

Harking Back to 1806

In 1937 Denison B. Hull, Chicago architect, planned and had carried to execution, restoration to its pristine glory of Old First Church of Bennington, Vermont. The church, erected in 1806 after plans by Lavius Fillmore, second cousin of U. S. President Millard Fillmore, shows the influence of Asher Benjamin's publication "The Country Builders Assistant."

Records show the original cost to have been \$7,793.20. Its probable cost if erected today is estimated to reach about \$100,000.00. Original artificial illumination was by candle light. Each box pew was provided with a pewter candle holder. Some of these have been preserved. They have now been duplicated in antimonial lead and the church completely equipped so that on special occasions services may be held by candle light.

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Editor Monthly Bulletin

ARTHUR WOLTERS DORF, 520 N. Michigan Ave., Chicago 11, Ill.

All-important to the architect, as well as to others in the building field, is postwar building construction. This subject has been much discussed and has filled hundreds of columns in the press since before shooting in the war ended. Sociologists, municipal bureaus, housers, real estate organizations, vied with one another in presenting statistics of what an enormous lot of building would be instituted immediately after the war. The National Housing Agency estimated that 630,000 units annually are needed from 1946 to 1955 to house families now living in apartments and other dwelling types, which must be replaced because of run down condition. The cost estimate on this was given as \$15-billions yearly, or a total for the entire period of between \$75- and \$100-billions. To this must be added reconversion of industrial plants that had been given over to war materials manufacture, and then a natural increase in industrial buildings.

The architects, draftsmen and engineers who had gone over to war planning, as well as those in the armed forces, are returning to their homes and seek civilian jobs. There is very considerable preliminary planning going on, particularly where hospitals and similar institutional buildings are needed, but when can the average home, industrial plant and other privately financed structures be carried out in building materials with equipment!

The average building mechanic has an hourly wage of \$1.85 to \$2.00. Common labor is \$1.20. Strikes for higher pay are threatened where they are not already declared. President Truman has announced that labor should earn more money, without putting in more hours, but that the cost of the finished product to the public must be kept within the present ceiling. This seems unjust for no private business can live without showing a profit in order to continue the business.

Building materials in many instances are scarce, expensive and at times unattainable. Most architects have

depended upon clients other than public bodies and private industry cannot proceed with building unless the cost is within limits to produce at least a small percentage of profit.

It looks as if many of the projects glowingly talked of will be laid aside for a time after the cost estimates have been obtained from detailed plans and specifications. And so the rosy glow of wonderfully good times may be in the more distant future rather than in the earlier months of 1946.

To have encompassed four score years with physical and mental vigor; to have practiced architecture for more than fifty years with ability and distinction; to have served not only private clients but his country, his state, his county and his city with ability, courage and honor—all these accomplishments, though rare indeed, have been achieved by our good friend and confrere Richard Ernst Schmidt, Chicago architect, who is first in his office every day and last to leave when the day is done.

So Mr. Schmidt's partners in the firm of Schmidt, Garden & Erickson, Architects and Engineers, determined that so important an event as Mr. Schmidt's eightieth birthday must not pass without due celebration. Accordingly a sumptuous cocktail party was given in the recently enlarged offices of the firm after office hours (party time, 4:30 to 7 P.M. though many stayed until 8) on November fourteen.

It was a joy to meet old timers whom one had not seen and perhaps not heard of for years; to make mental notes of changes time had wrought or youth preserved. But younger generations were well represented too, and the office force was everywhere in evidence. Flocks of telegrams and letters of felicitation from Boston and New York and points west to San Francisco had accumulated in Mr. Schmidt's private office. Among these was one from Washington from the national A.I.A. President, James R. Edmunds.

The I.S.A. Bulletin joins Dr. Charles Collins in his command when he says "All aboard with Richard for the second eighty years."

Prompted by public libraries that bind and keep for reference volumes of the Illinois Society of Architects Monthly Bulletin (appearing bimonthly at this time) this number is marked Vol. 30, No. 6. Volume 30 will continue with the January-February '46 issue numbered 7-8; March-April, 9-10; May-June, 11-12. Thus the Bulletin year ends with the close of each Society administration. Volume 31 begins with the bimonthly July-August '46 issue, appearing August 1, numbered 1-2 and ends with the May-June '47 number. This, we believe, will bring our numbering and volumes in conformity with librarians' wishes without a change in date of issue.

Since V-E Day 6,900 industrial establishments have adopted apprenticeship programs. This rapid growth of apprenticeship activities, it is pointed out by Apprentice-Training Service, U. S. Department of Labor, clearly indicates that industry in this country is becoming increasingly alert "to the vital need for a greatly enlarged skilled worker force to carry forward the postwar industrial reconversion and expansion."

A chandelier with lamps made to look like ears of corn was the first fixture designed for use with incandescent lighting. It was manufactured in Boston.

Illinois Society October and November Meetings

The monthly meeting of the Illinois Society of Architects falling on October 23, was held in the club room of the Art Institute. This was a return after many years of wandering to quarters that in the early years of the Society and the Chicago Chapter A.I.A. was the regular monthly meeting place, until after the death of Art Institute President Charles L. Hutchinson. Then Art Institute Director Harshe notified the two senior architectural bodies, as well as other organizations that had used these rooms for their meetings, that the Institute had other uses for the room and the societies must seek other meeting places.

The wanderings of the Society and the Chapter after that are a matter of history, chronicled in the Bulletin at the time and need not be repeated here. Anyway, a good turkey dinner was served the 42 attending the October 23 meeting by the Art Institute restaurant before the business meeting went into session.

President Smith had Secretary Koenigsberg read the minutes of the September meeting which were approved without change. The president introduced as guests of the evening, Captain George Schreiber, son of the society's long time member, George Schreiber, Sr. The Captain, in uniform, had returned to Chicago after three and one-half years of active service in the South Pacific with the Air Forces. Lt. Charles B. Sommer, recently of the Navy was next introduced. Out of town members attending and asked to rise and take a bow were Benjamin A. Horn, of Rock Island, of the Board of Arbitration, and John A. Scribbins of Kewanee. Then J. G. Gatewood and Ralph B. Priestly, newly elected members, were presented.

No further business to report had accumulated so President Smith turned to the program of the evening and introduced the speaker, Ralph R. Root, Landscape Architect. Mr. Root is well known as a practicing landscape architect, a writer on the subject of landscaping and founder of the Department of Landscaping at the University of Illinois.

Mr. Root's large experience in landscaping for individual homes, housing projects, industrial plants, parks, golf courses and estates, makes him well qualified to answer questions in these fields, and Mr. Root conceived this speaking engagement accordingly. He had no set speech prepared. He had a few notes. He began by telling of the natural conditions of the Chicago territory where originally among trees only the elm and the maple were found, while further inland and across the lake in Michigan the wealth of varieties of species of trees and shrubs indigenous to the soil and climate was in marked contrast. For such a contrast he pointed to the forests at Lakeside, Michigan. The speaker then commented on architects perspective backgrounds for proposed work with criticism that much of the foliage and growth features indicated were often quite impossible and unsuitable.

The speaker dwelt upon the elevation setting of homes, with reference to a level of immediate surroundings, of surface drainage in contradistinction to subdrainage, of shrubs that after growth would hide part of the house and make the house look as though it had sunk into the ground, the selection of proper trees, the spacing between trees, selection of flowering and other shrubs and many other questions. He said little of the planting on great estates covering acres of ground, but devoted himself largely to the setting of moderate priced homes and their landscaping. The building of the private road was not forgotten.

Questions from the hearers were invited and your reporter remembers no meeting in recent years where the interest was as live as demonstrated by the questions and answers that followed. They showed that the members had a great interest in the subject and many had personal experience with plants. These questions and answers kept up at a lively pace until 9:30 when the meeting adjourned.

The Society's monthly meeting on November 27 was held in the Club Room of the Art Institute, preceded by an excellent dinner to the 50 men attending. President Smith had Secretary Koenigsberg read the October meeting minutes, which were approved. No correspondence of importance had

been received. As usual there will be no December meeting since such a meeting would come during the holidays. The President then introduced the seven speakers on the program. The subject was "Availability of Building Materials."

The first speaker was Russell Creviston of the Crump Company, who spoke on plumbing and heating supplies. Such plants, he said, were today producing 25% of the 1940 production, and that April 1st production will be three months behind in deliveries. Labor is very scarce, many of the men that had left for military service had turned to other fields of employment. The raw materials are missing, though nearly all plants are working. Cast iron soil pipe plants, however, are partly closed. New materials, so much talked of, are not imminent. It will be five years before these are in regular production and sale, since much experimentation and testing must precede introduction. Mr. Creviston stated the time has arrived to tell the public the truth. He said (not in these words, but in substance) that it was time dizzy figures by Washington bureaucrats and visionary housers be exploded and that it was incumbent upon the architect to set the public right.

A. J. McGivern spoke on electrical materials. The supply, he said, was short, though this he hoped would not be for long. No price change has occurred since 1940 but the prices to come are questionable and may require exclamation points. He said there was much electrical work to do in bringing installations up to date. Early installations were merely a question of more light, when scientific lighting was unknown but today these installations require rewiring which will keep many electricians busy in the future.

Roy B. Howard of Howard Matz Brick Company spoke on face and common brick. There is a labor shortage but progress is being made. There is a supply for sixty to ninety days, but with the great scarcity of brick layers, the supply is equal to the demand for material.

J. D. McGue of Russell & Erwin Manufacturing Company spoke on hardware. The production problem is difficult because of the scarcity of brass and bronze. Iron, however, for other parts is not so scarce. There will be a restriction on the patterns fabricated. The situation is getting better.

A. C. Heimerdinger of Trucson Steel Company spoke on metal windows and metal products. There is a steel scarcity. There are reconversion difficulties. His firm, like most of his competitors have adopted the modular system of measurement. Their plant is now booked to April 1946. Reinforcing bars they can deliver within two or three weeks. Steel deck steel joists and metal lath require ten weeks for delivery. Deliveries on very large steel doors are good.

Leo Kraemer of Hines Lumber Company spoke on lumber. Mr. Kraemer is a fast talker with a scientific mind. His rapid reference in millions and billions of feet of lumber seem, to this reporter, like the presentation of a conjurer. The war had completely depleted lumber stocks in the yards. He denied that the forest cutting had been deleterious to forest growth. The outlook was not bright. Strikes and more strikes were imminent. The architects were taken to task for accepting lower grades of lumber in the interest of rapid construction progress. He did admit that northern white pine suffers from depletion. He made no prediction when a permanent steady supply may be expected.

John H. Morava of Carnegie-Illinois Steel Corporation spoke on structural steel. Big steel shapes are not depleted as are some smaller dimension steel. However, steel mill production is poor. The effort is to maintain 1941 production. Strikes are expected by January 15. Increases in prices are inevitable.

On Nov. 5 the Memphis and Arkansas Bridge Commission announced that it had rejected all four bids submitted for the construction of the superstructure of the new four-lane Mississippi River Bridge at Memphis, Tenn. E. H. Crump, commission chairman, said the bids were "about \$600,000 too high" and that no new bids would be received for at least six months.

Northwestern University will build a \$2,000,000 apartment hotel for faculty and students, including returned veterans, on Orrington Avenue in Evanston, Ill. It will contain not less than 208 apartments of from one to five rooms each. Features are: a basement garage of 126 cars capacity; dining room seating 240 persons; two playgrounds for small children and one for older ones. Holabird & Root are architects. Construction is planned to begin in January.

Chicago Chapter A.I.A. October-November Meetings

The regular monthly September meeting having been cancelled, the October meeting occurring on the 9th, was the first general meeting of the Chapter year—1945-46. Sixty attended. President Paul Gerhardt, Jr. presided. No minutes of the June meeting were read, but instead Secretary Schlossman read minutes of two executive meetings. He mentioned the names of two men proposed for membership. The secretary then reported architectural competitions in Chicago, one for a Jewish temple on the south side—the other, the Chicago Tribune competition for small homes.

President Gerhardt then reported on a meeting called by the Chicago Building Congress which was held in the City Hall. He next discussed releases by Federal bureaus. Jerrold Koebel talked on the effect of these, dwelling on hindrances still prevailing in the building industry, beginning with the scarcity of draftsmen for architects offices, increases demanded by labor, scarcity of essential building materials and the unknown quantity of costs. Alfred Shaw spoke of the position of mechanics in Britain and the U.S.A. Elmer Jensen contributed a thought on the dearth of draftsmen, and also spoke of the Chicago Technical Societies Council.

The president then referred to the newly passed Professional Engineering Act and urged architects to make application for license under that act. He then turned to the question of seeking permits for building from the Chicago Building Department—the new directive of the department requiring detail layouts and a plumbing contract let before a permit is issued. He referred to Mr. Spaulding's work as coordinator on permit applications in the department. Jerrold Koebel moved the appointment of a committee of three to work with the department for clarification and simplification. Alfred Shaw spoke of the A.I.A. plan for registration of architects desirous of doing federal building, and expected the proposed committee of ten to vote on the names for recommendation for this work and their final submission of three names without recommendation of individuals to do federal architecture. The question seems to be pretty much in the air, though the Chapter's views are sought.

The program of the evening came next. It was a discussion on separate contract versus general contract, for building operations. President Gerhardt turned over the conduct of this discussion to L. Morgan Yost. Yost spoke first quoting Cass Gilbert in a 1910 statement favoring a return to the letting of separate contracts by the architect for the various sections of construction and finishing of buildings. Mr. Yost dwelt largely on residential work of moderate cost. He favors the separate contract system with additional compensation to the architect of 2% on the cost.

The next speaker was R. N. Friedman who read a paper based on his experiences. His practice varied from general contract to separate trade contracts let by the architect. He favored the cost plus contract with a guarantee of maximum cost where the architect would decide what subcontractors the general contractor employed. There were questions and answers on Mr. Friedman's presentation.

Lawrence B. Perkins favored separate contracts though he felt that these entailed an additional burden on the architect for which he should be paid additional compensation.

Then came a general discussion taken part in by Messrs. Yost, Benkert, Friedman, Perkins and others.

The Chicago Chapter A.I.A. met November 13 in monthly meeting in the Grill Room of the Builders Club. Fifty eight attended. There was the usual dinner, followed by a business meeting. President Paul Gerhardt, Jr. introduced Messrs. Kamar, Fallin, Steinberg, Sobel and Lesser as new members present. He then announced that the reading of the minutes of the October meeting would be waived, but he would report on executive committee meetings of October 16 and November 6.

The President went into detail as to committee reports received and of the Federal Public Works registry for which the Chapter had circulated post cards to all members for the filling in of ten names that the membership voted on as com-

mittee members. No less than 132 different names had been counted.

The President then introduced J. Morgan Yost as program chairman, whose function it was to introduce the speaker of the meeting. He prefaced his introduction by thoughts on windows in dwellings. Evidently he only thought of the double hung window for he spoke of raising the window from the bottom and dropping it from the top, and the effect on the temperature within and on drapes and hangings. The speaker expected was Professor William H. Scheick, Coordinator of the Small Homes Council of the University of Illinois. But Mr. Scheick was unavoidably detained and sent his associate, Professor Lendrum to pinch-hit for him. The story of course was the Small House Council in which both Scheick and Lendrum are active workers. They have two buildings in use on the University campus for experimentation and the Council is publishing regularly, circulars to be read by the layman advising him on everything from financing the home, the home site, designing, kitchen, etc., etc. This report will not go into the details since Professor Scheick contributed to the Illinois Society Bulletin a careful dissertation on the Small Homes Council's function, which appeared in the June-July 1945 issue. Mr. Lendrum's statement was practically a repetition of that published, with pleasantries interspersed.

Questions were invited from listeners. One inquired whether the group of ten or more small houses built at Purdue University some ten years ago, with the same purpose in mind as that of the Small Homes Council, and they were to be occupied by Purdue University professors, whose task it would be to report on the service these houses were giving under the wear and tear of living. Mr. Lendrum stated he was familiar with these houses, had visited them, but that no report had ever been made on their fulfillment of expectations and that the University did not expect to make such a report because the concerns paying for the individual houses did not wish it.

December 7 it the date of the next monthly meeting at the Drake Hotel. National Directors of the A.I.A. will be in attendance.

Mrs. Rosenman Reports on Britain's Housing

Mrs. Dorothy Rosenman, President of the National Committee on Housing, spoke at a luncheon meeting on Tuesday, October 23, 1945, sponsored by the Chicago Housing Authority, the Metropolitan Housing Council and other organizations. Her report covered observations of the Mission which she headed, in response to an invitation from the British Ministry of Health, to see what was being done by public and private enterprise and to confer with leading builders, financiers, architects, planners, and officials, in Great Britain.

Every city has its plan, delimited and ready for enactment, without consideration to cost or ways and means of carrying it out. Recognizing the need of identifying plans with economic regional units rather than city limits, groups of communities have worked cooperatively on the proposed development of their particular regions. The Manchester region was cited as one where comprehensive regional plans covering industrial development, agriculture, land use, transportation, exploitation of natural resources, housing, etc. are being evolved. The communities pay their share for the services of a professional planning staff, who work under a committee of representatives of all the communities in the region.

Throughout Britain, programs are afoot for "depopulating" the congested urban areas through creation of satellite towns on the outskirts. It is traditional in Britain that rebuilding blighted areas is never done at a higher density than previously characterized the area, a philosophy which has raised many a British eyebrow at the density of slum clearance projects in some American cities. In Manchester, for instance, the maximum density is 28 families to the acre. Suburban building, by either private or public enterprise, has rarely been more than 12 families per acre . . . at the most 16. The Greater London plan, delineating four rings surrounding the center of the city, contemplates decanting families from the most densely populated inner ring into the fourth or outer ring, to "thin" out the center area. No additional families are permitted to move into the second ring

Anent Four Blighted Areas in Chicago

The Editor: The "Master Plan of Residential Land Use" was submitted to the City Council Committee on Housing, of which I am a member. I protested against the lack of opportunity for more thorough study before acting on same, and when the plan was submitted to the City Council on March 13, 1945, I moved to re-refer the report to the Committee with instructions to hold three public hearings. The first to be devoted to the City wide aspect of the plan, the second and third, respectively, to be devoted to a more detailed study of the north-and-south halves of the City. My motion was lost and the report was adopted with myself and Alderman Bohl-ing voting no.

This Master Plan contains a map designating certain areas as blighted and other areas as near-blighted. From my study of this map, it does not seem to conform altogether with the map as contained in your Monthly Bulletin. I have gone over this question with two members of the staff of the Chicago Plan Commission. They disclaimed to me the idea that LaSalle Street was included in this area.

The whole matter is very complicated inasmuch as the Chicago Housing Authority apparently has authority to make application for funds to the State Housing Board, and the City Council has only indirect control of a limited nature; of course, as far as the five million dollar City bond issue goes, the City has complete control in designating areas.

In the 43rd Ward, there is only a very small section that is designated as blighted, and as far as my present study goes, I have no complaint with this designation. The near-blighted section, however, which takes in the Wells Street and westerly area, is a much more debatable question.

I do not suppose that my answer is entirely satisfactory as I am in a very preliminary stage in my study of the question. There is a meeting of the Housing Committee this Friday, which may bring up some of the issues involved. October 17, 1945.

James B. Waller, Alderman 43rd Ward

I have read over the article by Mr. Kincaid and I am thoroughly in accord with what he says. However, I do not agree that the area from Fullerton Avenue south to Armistage should be included in the section which is considered blighted, inasmuch as there are pleasant residential sections where the property has been and is owned by the occupants who keep up their property well.

November 1, 1945 *John J. Grealis, Alderman 44th Ward*

In the four blighted areas recommended for redevelopment in Mr. H. E. Kincaid's article "New Homes for Old" in the Oct.-Nov. Bulletin, it is clear that the recommendation is for the rebuilding of sections within the areas outlined, and not tearing down of every building within the area—some of which are quite servicable, and others can be made so at comparatively low cost.

The great problem is not merely the tearing down and rebuilding slums or blighted areas. It is one of housing in some sort of decent manner the lowest income, or no income, groups now living in the worst of the structures in these areas, during the period of reconstruction. Private enterprise simply cannot afford to build housing at current costs for most of these people, except as a matter of philanthropy. Therefore if it is to be done otherwise it must be with the financial help of the general public—in other words, the government—local or federal. Such government financed housing should be of the simplest and cheapest design and construction consistent with sanitation and low up-keep, and should in no way compete with the cheapest housing that can possibly be built for profitable rental by private interests. It should be looked upon merely as a decent substitute for the the decaying and unsanitary shacks now occupied by those who at present cannot possibly afford rentals based upon privately financed income producing housing, or even some of the government assisted projects now built or under consideration.

October 22, 1945

Victor A. Matteson, I.S.A.-F.A.I.A.

The House of Tomorrow Spells

Anyone who views post-war morals with alarm need only look at Tomorrow's Small House, as a recent exhibition at the Modern Museum calls it. It is, in model form at least, an absolute guarantee of chastity. The designers of the future have made sin impossible by a series of architectural principles far more potent than statutes or sermons.

In the first place, this pre-fabricated dream is two-thirds made of glass. Not glass bricks, not frosted glass, just window-glass—the stuff you see through. Every corner of the room is thus flooded with light, abolishing shadow. There would be all right if the room fronted on virgin forests. But the house of the future consists very often of a row of such rooms all facing on a common terrace or patio. Anyone on that terrace can, by simply walking from east to west, look into all the rooms at any time. This would be discouraging to all but the most brazen exhibitionists. There are curtains at hand, to be sure, but drawing them across the mammoth panes would be a rather crude advertisement, if not downright misleading.

The architects have, with fiendish ingenuity, done away with hallways, cubbyholes, attics, or any enclosed space where darkness or the shutting of a door could ensure at least a modicum of privacy. The modern house, in fact, is remarkably free of doors. Instead, there are movable screens, often slatted, movable partitions, easily displaced, and a number of other devices by which the fourth wall—the shield of man—is dispensed with.

Marya Mannes in Vogue, October 1, 1944

I.S.A. President Smith Reports

The Board of Directors has again considered the Institute's proposed Registry of Architects for use by governmental bodies. It is still opposed to placing the architect in a category as it feels that it is a limitation on his freedom and opportunity. Though three members of the Board are specialists who, it might be thought, would benefit by such listing it may be interesting to know that all of them are opposed to it.

Discussion has continued about some form of state unification of our architectural societies. The Board considers unification desirable in principle but the Society's status must be continued unimpaired.

Our by-laws contain a provision that a member upon reaching the age of seventy and having been a member for not less than twenty-five years, can be made a member "emeritus" by the Board. Two of our members, S. Milton Eichberg and John W. Miller have attained that mark and so are now members "emeritus".

J. G. Gatewood, Ralph B. Priestley and Adrian Reznay have been elected to membership in the Society.

In company with many others we had the pleasure of attending a reception held in honor of one of the "grand old men" of our profession, Richard E. Schmidt. The occasion marked his eightieth birthday and something over fifty years practice as an architect. It was an eloquent demonstration of the respect held for him by all his friends.

G. Harold Smith, President, I. S. A.

Five architects and four builders make up the jury of awards in the Chicago Tribune's Chicagoland Prize Homes Competition. The architects are: Paul Gerhardt, Jr., Philip B. Maher, John Merrill, A. N. Rebori and John W. Park. The builders are: Irvin A. Blietz, Arthur E. Fossier, J. E. Merriam, and John R. O'Connor.

A distiller exhibited an invoice for 513 gallons of 190 proof grain alcohol. The alcohol was priced at 63 cents a gallon, total \$323.19. The tax was \$9 a gallon. Total tax \$4617.00.

Capitalism is an "imposter term," inasmuch as any modern civilization requires capital. The truly competitive system has actually never been tried, and in departing farther from it, we move backward rather than forward.

E. C. Harwood

Housing as a Key to Post War Jobs

During the past several war-torn years we have heard and read much of post war planning with all the hodge-podge crackpot theories of Utopia for America, and most of the "blueprints" for the future happiness and security for the nation as seen through the eyes of the theorist, lie in the works of the construction industry.

Millions have been appropriated by states and cities; Chicago has voted 50 millions for post war improvements, principally in building construction and slum clearance. The pent up demand for new homes is enormous. Anyone who has had recent experience in trying to find a place to live, whether it be hotel, apartment, or house, knows how infinitesimal the supply and how great the demand. And this pressure for living accommodations increases day by day, if through no other reason than the veterans' return from the wars.

Almost a million men and women from Illinois in the armed services either have returned home or will be returning within the next twelve months. While not all of these men and women are potential home builders, it might be safe to say that at least half will be in the market for a new home, or at least a different home than they had before the war. The city has increased in population several hundred thousand since building stopped with the advent of the war, until now the housing facilities of the city are fairly cracking open.

What does all this mean to our economy?

When the entire construction industry is fully employed, we know from experience that prosperity is enjoyed by all. There are 125 thousand building trades mechanics in the Chicago district. Perhaps there are five times as many people employed indirectly when there is prosperity in the building industry. For example; architects, engineers, workers in factories, lumber yards, hardware and other materials, and the makers of all manner of things people buy for new homes. But the whole economy of the construction industry hangs in delicate balance.

Boom in building is inevitable, but will it be followed by the "bust" as we have seen in the past—"boom and bust"? Probably the safety factors which were wisely applied after the last boom and bust, may be effective in preventing such catastrophe again. The Federal Government has made the irresponsible financing of building construction through the "3% First Mortgage Gold Bonds" a thing of the past, and only bitter memory to us.

But there are other danger spots which must be eliminated before the building industry can take its proper place in our national economy. During the depression years, the labor unions dealing with construction have put limitations on production through their make-work programs, have put barriers in the way of modern development of the newer techniques of construction. For instance; the painters' union will not allow the use of the spray gun, but insist on painting being done by hand brush, with even a limitation on the size of the brush. The concrete workers will not permit the use of pre-mixed concrete, although Chicago is the only metropolitan city in the country where pre-mixed concrete is not allowed. The carpenters insist that certain cabinet work must be done by hand on the job, and hardware cannot be applied in the factory. The glazier must set each pane of glass in putty on the job and not in the factory where windows are made.

All these restrictions on output of labor put a serious brake on construction. Particularly so when modern development calls for much prefabrication. The term fabrication, as applied to housing, is often misunderstood. It does not necessarily mean an entirely prefabricated house, which has been manufactured and brought to the site for assembly. This type of operation has been denied to the people of Chicago, even under wartime necessity; denied through the combination of labor unions and politics.

Prefabrication in the larger sense refers to unit parts of building which may better be built and assembled in a factory. For instance; soon to be on the market, is the complete bathroom with fixtures, pipes, walls, doors and all accessories, completely assembled and finished, ready to set into the house and connect to water and sewer. But without a radical change in the attitude of the unions, this modern development will be only a picture, as far as Chicagoans are concerned, because now, the plumbers' union even insists on pipes being cut and fitted by hand on the job.

Then, City ordinances governing building construction, which are restrictive in nature must be changed before we may expect building construction in its necessary volume. As an example; the ordinances require 3 coats of plaster in all habitable rooms, when 2 coats are sufficient in most cases.

And the so-called dry wall construction, or use of plaster boards and other modern substitutes for plaster, is out!

I am bringing these matters to your attention, in order to show that for our economic stability, the construction industry must go forward, and be allowed to function without the artificial handicaps imposed by labor and politics. History shows that building construction goes in cycles of about 18 years, between its highs and lows. The economists now advocate a backlog of Federal, State, and City public works to take up the slack when the construction cycle begins to slide to its 18 year low, with the thought and hope that by the use of public works backlog, that the industry may be stabilized to a more level course.

In a discussion of this kind, your mind may picture the solution of the housing shortage in the building of individual houses. While the building of single family houses may reach many thousands, yet the construction of apartment units will probably far exceed the number of individual house units built. And there is a very good reason for this statement. If the individual house is built within the city limits, ordinance requirements, as to brick walls, raises the cost considerably above those houses built in the suburbs without those requirements. But, building in suburban communities, while probably at less cost, involves travel and other living expenses, which exceed those in the city. Therefore, it may be assumed that many people will find it more economical and more convenient to live in a new apartment in the city, than to build and own a single family house, either in the city or in the suburbs.

The question of present high costs of building is thought by some to be an absolute barrier to the progress of the industry. Let's think in these terms for a moment. Construction labor now averages \$1.85 per hour, the highest hourly rate in our history. Present construction labor contracts expire next summer, and it may be expected that labor will ask, and in all probability receive, a raise to \$2.00 per hour. This raise for labor on the site will be followed immediately by demands for increased wages for shop labor, thereby increasing cost of materials. So, we may reasonably expect an advance in total cost of construction.

In Washington, the economists who have to do with price control, the real estate interests, and the home builders, are now engaged in heated discussions on price limitations for completed houses. The far-famed governmental restriction on construction, known as Order L-41, which was placed on the industry as a war time measure, is about to be lifted. The governmental economists want to enforce substitute restrictions, whereby government may continue price control. Private industry, in this case represented by the real estate interests and the home builders—that is home building contractors, want all price restrictions removed.

Labor stands by on the sidelines and takes no part in the scrap, for labor is certain to come out a winner, whoever wins the controversy, and one thing is sure, the consumer, the home owner, or the home renter is going to pay more.

While the Federal Government agencies which are participating in the controversy on price, really are concerned not in price, but in profit, all their talk of keeping down the price of a house or the rent of a house, is based, not on original cost, but rather on operating cost and profit after the house is completed. It is my firm belief that government does not want to see construction done at less than present cost, and certainly shows no inclination to lower construction wage rates. The reason is apparent. To service our staggering national debt, income taxes must be kept high and steadily flowing into the Treasury. It would appear then, that the role of government in construction is to promote, through easy financing, the construction of the many million homes now required without lowering wages.

Now, this being true, it would seem that the Federal Government should by law, remove all restrictive policies of labor which have to do with cutting of efficiency, or output of work of the building mechanic. A five day week for construction cannot be denied, as this policy is probably best from the standpoint of health and decent living, to which certainly all building mechanics are entitled. But limitations on number of members in a construction union, the union policy with respect to not giving apprenticeships, and the limitations on output of work and restrictions on the use of prefabricated materials, unless corrected before the building boom gets under way, will wreck our whole construction economy.

There are six most important factors which must co-

operate for the success of the building industry: First—Real Estate—The developers of land for housing must think in terms of a community, and plots for sub-divisions must be located not on, but adjacent to present or projected high-speed traffic arteries. The community must provide adequate parks and playgrounds, set aside land for commercial development only to the extent of the necessities of the community. Pedestrian safety must be paramount. Land for individual houses must be adequate in size to provide space for gardens and play areas, *irrespective* of the size or cost of the family dwelling. The cost of building lots must be kept within the limits of prospective purchasers, and it cannot be forgotten that the median income of our urban population is under \$2000 per year.

The second factor in this cooperation is the planner, the architect—for it is through his skill in planning design and working in harmony with the other factors that success can be attained. The planner and architect must design the community for safety of living, and provide for those amenities of life which are now found to be lacking in practically all past urban development.

The third factor is the banker, who must provide adequate financing for this development. The Federal Government has provided the pattern for a method of financing at low cost and with a minimum of hazard to the financial interests. Recent legislation in Illinois has opened the way for the investment of funds of the insurance companies, in housing projects, and within a short time we may anticipate large developments owned and operated for rental purposes by insurance companies, similar to those successful projects in New York and California.

The fourth important factor in the success of a construction program is the building contractor. He is the assembler of materials and the employer of labor. For the contractor to do his best work, he must be furnished both materials and labor at a cost which may be depended upon, in order to cut down his financial risk, and when that risk is cut to a minimum, the contractor can do with comparatively low profits. For example; if a building contractor could be assured that there would be no strikes by labor, either in the factories for fabricating materials, or upon the job, considerable risk would be eliminated. If he could be assured that labor unions would not restrict output of labor, could and would furnish to him adequate labor, that they would not quarrel among themselves over jurisdiction of installation of various items wrought into the construction, many of the financial hazards would be taken off the back of the building contractor with inevitable lower costs.

The fifth factor to be considered is the material which goes into construction. Our old time tried materials, such as brick, stone, wood, and plaster, we can always depend upon. But now come the newer materials, the synthetics, the plastics and the prefabricated units. These newer materials will doubtless act as a substitute at lower cost than the traditional materials, but manufacturers of new materials must be honest with the public, honest in their advertising, and not recommend the use of the new thing until tested, with first cost and maintenance cost assured.

The last factor, and possibly the most vital factor, is labor. When the unions stabilize wages, observe contracts, accept responsibility, stop jurisdictional disputes, provide an adequate supply of help through an apprenticeship system and forego all limitations on output of individual effort, we may then expect steady progress, with the ultimate goal of a prosperous industry. When all six factors combine with the one thought in mind, namely, to provide adequate housing for our population, we may then expect a real prosperity—for it is an axiom that the prosperity of the nation depends upon the prosperity of the building industry, and therefore, if jobs for people mean prosperity—then housing is the key.

*Address by John R. Fugard, I.S.A.-A.I.A.
before the Rogers Park Kiwanis Club*

(Continued from Page 5, Column

—the third ring is devoted to industry and park space, and the fourth to new development.

In Britain one sees virtually no such planned communities as may be seen in dozens of American cities and suburbs. Further, its housing projects, while of admirably sturdy construction, lack most of the amenities which Americans consider indispensable. The average British home produced in the great building wave between the wars, either by private enterprise or government, was notably lacking in built-in closets, quality of hardware and other fittings, and conveniences such as ice-boxes. Present planning is, however, mak-

ing up for this deficiency, and central heating, refrigerators and even outlets for washing machines are now being introduced.

The extreme urgency of Britain's need for homes, so desperate that Vigilante Committees began seizing empty houses for homeless families, during the past summer, and so serious as to have been an issue in the general election, was, in Mr. Rosenman's belief, a factor in the result of that election. The Labor government is determined to produce a better result, regardless of the cost. Aneurin Bevan, Minister of Health, stated; "You in America have demonstrated how well a nation can live on an unbalanced budget."

*Dorothy L. Rubel, Acting Director
METROPOLITAN HOUSING COUNCIL*

A Realistic House for a Family in Georgia

Progressive Architecture—Rich's, Inc., institute an architectural competition for a realistic house in Georgia, open to all architects, architectural draftsmen and architectural students. The closing date is January 21, 1946. The competition is authorized by Reinhold Publishing Corporation and sponsored by Rich's Inc., Atlanta, Georgia.

It is the wish of both Progressive Architecture (Pencraft Points) and the sponsor, Rich's, Inc. of Atlanta, Georgia, that this competition shall be a realistic one, seriously aimed to encourage design of small houses that will not only be "better" but within the reach of the \$3,000-a-year white collar family that wants to build a home right after the war.

There are six prizes totalling \$10,000, the first prize being \$3,000, the fourth \$500, twenty-five mentions of \$100 and a special Georgia prize of \$1500. There are seven judges, four of whom are F.A.I.A., the remaining three A.I.A. They are from seven different cities in the U.S.A.

For a program of this competition apply to Progressive Architecture—Rich's Inc., Competition, 330 W. 42nd St., New York 18, N. Y. Drawings to be delivered to Progressive Architecture, placed with the Post Office or Express Company not later than six pm standard time, Monday, January 21, 1946.

Oscar A. Reum, esteemed by architects and builders through many years, died in Chicago, October 18, age 78. Born in Beloit, Wis. he worked for August Zander, plastering contractor in 1883. Zander-Reum Co. was formed 1903. In 1919 Reum became its president. The company's plastering contracts extended into many states. Mr. Reum was president for 27 years of the Contracting Plasters International Association. From 1937 to his demise he was president of The Building Construction Employers Association.

Major H. Ring Clauson, until entering the U.S. Army two years ago, heading the architectural firm of H. Ring Clauson, Inc. of Chicago, died in Los Angeles, Cal., November 7, age 42. Edgar Martin, architect for the State of Illinois in Governor Lowden's administration, was the corporation's vice president. Mr. Clauson's talent lay especially in residential work as many homes in Chicago's north shore suburbs testify.

Patrick M. O'Meara, prominent architect in the design of Catholic institutions, died October 27 in St. Louis, age 55. He practiced in that city beginning in 1923 and maintained offices in Detroit and Minneapolis. Among the buildings in St. Louis of which he was architect is St. Mary's Hospital. In Rochester, Minnesota, he was architect of part of the Mayo Clinic. Mr. O'Meara was born in West Bend, Wisconsin. He became an A.I.A. in 1932.

Gabriel Massena of the firm of Massena and Du Pont, Wilmington, Delaware, died in Delaware October 23. Mr. Massena was born in Martiques, southern France and came to the United States in 1929, soon after which the partnership with Alfred V. Du Pont was formed. Mr. Massena became an A.I.A. in 1931.