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The Architecture of Boulder Canyon Project

About eight years ago I was appointed Consulting Architect to the Bureau of Reclamation of the Department of the Interior. As far as I know, that was the first time that an architect had been employed by the Bureau to act in that capacity. At the beginning of my appointment, I was a bit dubious about successful results being possible by having engineers design and determine a building and then asking an architect to do something about its appearance. I suppose I shared a not uncommon viewpoint that architects design buildings and engineers make them hold up, or check them to see that they will hold up.

Since then I have learned a lot, and I cannot imagine any experience that has been as broadening and refreshing as my association with some of the finest engineers of the country, and the nice part of it is that my education was quite gentle and painless, and I count it all as clear gain. Now I find myself as conscious of the engineering necessities as the engineer and, in turn, the engineers of the Bureau are as much concerned with the appearance as their Consulting Architect. This, of course, is just what the relationship should be.

With this introduction, it follows that the architecture of Boulder Dam emerged and grew, remained in flux and finally came to rest. It never was a definite theme or preconceived scheme of any kind, but rather an attempt to give form to the engineering requirements, step by step, often hesitating, sometimes stepping backwards, but never sideways. We never dodged an issue.

Concrete was used as the basic material. That was the result of location, geology, stresses and strains, costs and ease of erection, and in itself was responsible for much that happened subsequently. The smooth, monolithic, plastic possibilities of concrete, together with the shape and size of the Dam, seemed all that was necessary, except at the crest or parapet. Viewed from below, it was felt that some stabilizing element should be introduced where the top of the Dam reached up and met the sky. The size and scale of the project precluded any trivial motifs like balusters or bands or grooves. Anyway, they were pointless.

The only necessary structures on top of the Dam were the elevator towers and some provisions for rest rooms. That gave us our start, and these structures which finally developed quite logically to be equal in size, were set at suitable locations on top of the Dam. But the plain parapet between these towers seemed still to lack rhythm, until the projecting platforms spaced evenly between the towers, were developed. These gave a minor beat to the whole top, accented in a major way by the elevator utility towers. Furthermore, it was desirable to create some place or places on top of the Dam from which a vertical view could be obtained. Plaster models were made at 1/20th inch to

the foot for the whole Dam, and 1/8th inch for the towers, and much study was given before the scheme finally took its present form.

The Intake Towers in the lake offered many interesting possibilities, the size, plan, and height generally being pretty much established by their purpose and functions. At one time we had a scheme where stationary concrete louvres were contemplated instead of windows, but the machinery inside could not be exposed to dust. The next question was whether the cost of windows, plus the cost of louvres, could be justified. It was agreed that the louvres would give a feeling of shelter and coolness out there on the lake.

But figures developed the following astounding quantities. Each tower would have twelve sets of louvres about 40 feet high and 12 inches on center, or 2400 lineal feet, making an imposing and expensive total of 9600 lineal feet of reinforced concrete louvres. Almost two miles! Obviously that was no way to advocate spending public funds.

Incidentally, we were always meeting with astounding quantities due to the size of the project and the lessons in economies were frequent and fruitful.

Study of the huge Power House at the foot of the Dam covered a considerable period of time. Plaster models were made at 1/20th and larger scale. Again, the size and location were more or less predetermined by the equipment. There is only one need for a Power House at all, and that is to shelter the equipment of the power plant. There are many power plants built without power houses to shelter them. In these cases the equipment is of an outdoor type, and the crane to handle the equipment is of the gantry type. An outdoor plant of this kind has been recently built for the TVA at Wheeler.

However, in the case of the Boulder power plant, it proved advantageous to build a Power House to provide not only shelter for the sixteen enormous generators, but also to provide permanent supports for the crane rails. These generators are located in the two wings along the cliffs, more or less parallel to the river. The center portion at the base of the Dam—a structure about 100 feet high—is given over to machine shop, control room, offices, and rest rooms.

The elevators on top of the Dam drop down the 700 odd feet to the central portion of the Power House and constitute the only convenient access down into the canyon.

A great deal of most interesting research was done in connection with various parts of the Power House, a rather unusual instance being the roof construction, which, in turn, had a real bearing on the final architectural treatment.

The problem was one of rocks of considerable size spalling off the canyon walls onto the roof. The roof, therefore, must withstand such a shock, as failure of the roof

would mean untold damage to the generators and other expensive equipment. Information was obtained from artillery engineers and data applicable to fortress construction was referred to. Finally, the present scheme of a great sand fill was employed, which, in turn, added tremendously to the weight, not only of roof trusses but supporting columns.

This added weight caused the building to be unusually sturdy in construction and appearance.

Vertical treatment of the structure seemed to develop automatically due to construction joints every 60 feet. These joints are actual separations with double columns and double roof trusses, each carrying independently their respective sections of building. Only a limited amount of fenestration was needed, the width of the wings and central portion making it impossible to consider daylight as the sole means of light. The cost of power being very low, artificial light could be depended upon at no undue expense.

In studying the windows, it developed that the spray from the needle valves contributes greatly to corrosion of metals. Since constant repainting is a requisite for corrosive metals, the economic choice was thrown to non-corrosive metals. Careful investigation finally developed that aluminum would satisfy the practical, aesthetic, and economical requirements, and so all windows, doors, and railings throughout are of aluminum.

The painting of equipment was studied carefully by Allan True of Denver. Being a mural painter of note, he has a fine sense of the correlation of color and achieved very creditable results. He also designed and supervised the terrazzo floors in various places. These designs are largely adaptations of Indian motifs, the permanent recording of these being justified by the general locale.

Oskar Hansen won the competition for the sculptural panels over the elevator tower doors, as well as the flagpole and surrounding treatment on the Nevada approach. This work, which is now nearing completion, marks the end of all of the external phases of the project, with the exception

of a small building to house the guides, forest rangers, and first aid station.

At the time of writing, this building is being studied both as to location and design. Being a relatively small building among this mass of vastness, it deserves particular attention. Furthermore, there are no engineering requirements, and it is quite surprising how the lack of such limitations seems to increase, rather than decrease, the problems from an architectural point of view.

On each side of the entrances to the elevator towers there are bronze tablets commemorating the names of officials, engineers, consultants, and contractors who took part in this great venture. These names represent men I have learned to admire and respect, not only for their individual qualities and abilities, but also for the fine team work they have achieved all along the line.

Since Boulder Dam is receding into the past, the Bureau of Reclamation has worked and is working on many other projects, notable among these being Grand Coulee Dam and Power House and the Central Valley Project.

My work in connection with these will be along the same lines as it was at Boulder. It is stimulating work and the trips to the Denver office of the Bureau of Reclamation have become pleasant interludes. The projects are planned well ahead of time so that study can be given in a more deliberate manner than is frequently possible in private work.

The responsibility of meeting the budgets for technical services, as well as costs of construction, rests with the Bureau, and the Consulting Architect can approach his problems from an entirely detached and impartial viewpoint.

The size and scope of the work is a constant source of inspiration, and acts as a fine foil in the more or less trying problems of everyday practice.

—Gordon G. Kaufmann, A. I. A., Los Angeles.

Age of Big Trees

Western America big tree's only close competitor for record length of life, in Dr. Molisch's tabulation, is the baobab tree of Africa, which is given an estimated age of 5,000 years. However, this is only an estimate, whereas the equal age of the Big Tree is backed up by actual counts of annual rings in the trunk.

Next in line comes the banyan of India, sacred for having sheltered the Buddha. The identical tree under which Gautama sat when inspiration came to him is still pointed out, and since it has been a holy place during all the centuries, it is quite probable that the tradition is accurate, so that the estimated 3,000 year age of the "bo-tree" is well supported.

Not so well fares the giant cypress of Tule, in Mexico, at which stout Cortez marvelled, and which the famous German traveler, von Humboldt, estimated to be 4,000 years old. "Comparative estimates have indicated, however, that this swamp cypress can scarcely be more than 2,000 years old," says Dr. Molisch.

There were city ordinances against skyscrapers in medieval Europe—Paris, no buildings over 60 feet, Florence none over 100.

Outline Roman Empire

Work of mapping the whole Roman Empire was started in 1930 by an international commission of geographers. Since then various countries that control regions of the one-time empire have helped with the problem.

Ruins of old forts and roads and embankments have to be studied by the slow, hard process of excavation. But it is the flying archaeologists who have been scouting out the lay of the land for the excavators and mapping for them the most elusive lines of lost frontiers.

In Syria, a French archaeologist, Père R. P. Poidebard, has done much to trace Roman fortifications from Bostra eastward toward the Tigris. His interest in aerial photography goes back to 1926.

Père Poidebard has learned by experience that in this desert country ruins appear and vanish even so far as the sharp eye of the camera is concerned.

Ruins of a huge theater with a stage over 400 feet long and accommodation for 12,000 spectators have been found in Syria at Apames.

A new kind of paint made in Germany is said to be fireproofed by having nitrogen salts and synthetic resin mixed in it.

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Editor Monthly Bulletin

ARTHUR WOLTERS DORF, 520 NORTH MICHIGAN AVE., CHICAGO

The mills of time grind slowly, yet they grind. They are grinding toward an amalgamation, a reorganization of architects in the United States into one representative national organization. The American Institute of Architects has been a national organization for three-quarters of a century, aiming to draw the most distinguished practitioners into its fold. It has often been charged with being exclusive, desiring to be looked upon as an academy of architecture, and while this has been denied, the thought has persisted in many sections of the country. Its membership today includes about one-quarter of the practicing architects in the land and in that sense it is not representative.

From time to time efforts have been made at annual conventions to broaden the Institute's scope and at the 1934 Convention a serious effort was made along these lines. Succeeding conventions pushed further the idea of reorganization through discussion, when in the 1937 Boston Convention, John R. Fugard, Past President of the Illinois Society of Architects, was appointed by the Institute, Chairman of the Committee on State Organization.

Between the 1937 and 1938 Conventions, Mr. Fugard labored untiringly to secure the voice of the profession as a whole as represented in state societies and state associations of architects. Institute chapters appointed committees to study and report on the same subject. Mr. Fugard's committee organized regional meetings in the Middle West, on the Atlantic Seaboard and on the Pacific Coast, which were held in January, February and March respectively. To each of these meetings came representatives from every state in the district and here were voiced criticism, ambition, and hope.

While state association affiliation has existed with the Institute, where each Society is entitled to one delegate to an Institute convention, the number that had joined was four, while at least fifteen were in existence and functioning. Since the New Orleans Convention, the number of state organizations has increased to twenty-one. Representation of one delegate from each Society, as called for by the by-laws at present, is unsatisfactory. The regional meetings brought out the fact, clearly stated in Mr. Fugard's searching report printed in the June, 1938 "Octagon," that state autonomy and full representation are fundamental requirements. Every architect should read Mr. Fugard's

exhaustive report as it appears in the "Octagon."

The New Orleans Convention spent much time discussing the subject and the Board of Directors appointed Leigh Hunt of Milwaukee as State Society representative on the Board of Directors of the Institute for one year, pending the election of such a director-member at the 1939 Convention. Mr. Hunt started in July on a circle tour of state societies, associations, and A. I. A. chapters, numbering no less than thirty-five. It is hoped that his visits and personal contacts will crystallize still more what is necessary to achieve the goal. His report will go to the A. I. A. Board of Directors at their November 1938 meeting.

Elsewhere in this issue of the Bulletin, Mr. Hunt's statements before the Illinois Society of Architects and before the Chicago Chapter, A. I. A. at their annual meetings are printed. Consummation of the plan of reorganization may not come within a year, but it is on the way.

Before September 1 of this year, every licensed architect eligible to practice in the State of Illinois will receive, without cost, a copy of the 35th edition of the "Handbook for Architects and Builders," published under the auspices of the Illinois Society of Architects. This Handbook has gone hand in hand with the life and progress of the Society. The purpose of its publication is to keep practitioners thoroughly posted on the changes occurring in building construction and design by reason of advancement through science and experience, as interpreted by changes in the building code of the City of Chicago.

Bulletin readers know that for about eleven years commissions have been at work to formulate a new building code for Chicago. This code has now been enacted into law by the Chicago Common Council and the new edition of the Handbook contains that new code, properly indexed and cross-indexed. A good, workable index has never been the part of any publication of the building code before. It is hoped that the new Handbook's index will prove satisfactory to the delver after requirements laid down by the new code.

The Handbook, however, contains much more than Chicago's new building code. There are presented, under the editorship of Emery Stanford Hall, many subjects that the practitioner today must be familiar with. Authoritative articles appear on air conditioning, refrigeration, heating and ventilating systems, modern sanitation, lumber standards, insulation, architectural finishes, the code of the American Institute of Steel Construction, glass and glazing as used in its modern sense, and other irritating and challenging subjects. As in the past, a list of all architects licensed to practice in the State of Illinois, membership lists of the Society, the Chicago Chapter, A. I. A., and the Chicago Architectural Club will appear.

The 34th edition of the Handbook carries the date 1931-32. It contains 575 pages. The 35th edition will be larger by at least 100 pages. It is hoped that the new Handbook will maintain the reputation of earlier issues and continue to be an authoritative and much consulted reference book in every architect's office.

How few basic inventions in furniture have been made since the days of the Pharaohs! Value of these ancient pieces is significant in showing how modern and beautiful was Egypt's line of furniture. Beds generally resembled daybeds, but there was a variety of styles. Chairs included arm chairs, armless dining chairs, carrying chairs to be lifted by bearers, folding chairs. The rocking chair they somehow failed to invent, leaving that for Ben Franklin to think up for America.

Illinois Society Annual Meeting

On June 28 there assembled at the Architects Club of Chicago, a company of seventy to attend the dinner and annual meeting of the Illinois Society of Architects. The Society was ending a successful year and good spirit was breathed by all those present, including the half dozen ladies who lent color and charm to the evening.

The dinner was good, the wine of a superb vintage and the program attractive, for Robert Kingery, Secretary and General Manager of the Chicago Regional Planning Association, was the principal speaker. Another speaker was Leigh Hunt of Milwaukee, the recently appointed State Association representative on the Board of Directors of the A. I. A. The program announced that presidents of all North Central State Societies of Architects had been invited. They, however, must have been present in spirit rather than in the flesh.

Secretary Fairclough read briefed minutes, followed by President Jensen's synopsis of a series of reports by committees made to the Board of Directors. Among these were the Secretary's report, enumerating the number of Directors' and regular monthly meetings; the report of the Sub-Committee on Statewide Building Code; the Membership Committee, which showed that the membership stood at 360 at the time of this meeting; the Committee on Public Action, which is printed elsewhere in this issue; the Treasurer's report, which announced that the Society was free from debt with a substantial balance in the treasury. The Committee on Education had reported that no meetings had been held, and the President promised that in another year a different report from the Education Committee would be forthcoming.

The President now turned to his annual report and message, with the announcement that the current meeting closed forty-one years of the Society's life and activities. He spoke of the Society's current year and work and then turned to the subject of reorganization—reorganization as interpreted by the A. I. A. This reorganization is an effort to create a national body of architects, built on the venerable American Institute of Architects which looks back eighty-one years to its founding. With about 2500 A. I. A. members, a total of about 10,000 practicing architects comprising about 7,000 offices, it is aimed through reorganization to create a national society that will be truly representative of the profession.

He spoke of the last statewide meeting at Peoria and its accomplishments and announced that the next statewide meeting will be held this fall at Urbana. Progress on the Chicago building code was discussed and hope expressed that the Common Council would soon pass the code and leave slight imperfections for future revision.

Cooperation of four committees with the University of Chicago's School of Business in a cost analysis of building was explained and great hope held out for the result. The illegal practice of architecture and how to stop it was discussed next. Home ownership followed, and then the problem offered by the 100 square miles of Chicago's blighted area (detestable word, blighted), necessity for a land use survey, and finally a tribute to the untiring effort in behalf of the Society by the man who now clothes the office of Financial Secretary and who, under one name or another, through fair weather and foul, has worked in the interest of the upbuilding of the Society from its birth to the present day — Herman L. Palmer.

When Mr. Kingery was introduced by the Chairman, he was applauded by the company as a welcome repeater and old friend. He spoke well and fluently, as always. His subject on this evening was "Looking Forward and Planning for a Better Chicago Region." This Chicago region embraces a territory with a 50-mile radius surrounding the city. He told of how Chicago looked in 1838—its population, its surrounding territory. He gave population figures for later decades and population growth tables carried to the year 1960. With this as a basis, his Association gives advice to cities and towns in the Chicago region on parks, highways, forest pre-

serves, water purification, and much else.

He told how in the last nine years the County forest preserves had grown from natural wooded areas with the soil badly cut up by ruts caused by automobiles driving and parking anywhere, to the condition today when drives and parking spaces are regulated, leaving the remaining area for new growth, which growth has brought paeans of praise from landscapists and other authorities from far and wide.

Mr. Kingery went into detail in the matter of highways and how they had been made to tie up, thus carrying the motorist over many miles of beautifully paved road where now trees have been planted which will in time shade the traveler and add beauty to the landscape. He referred to the state of Connecticut and its markers of historic buildings, and pointed to DuPage County, Illinois, as a section that was setting a like example for other counties in its state to follow. Water purification of rivers and creeks was another subject touched upon in a most interesting way.

Inspired citizens like Mr. Kingery will certainly make for a more beautiful and healthful countryside.

Elmer Roberts, newly elected President of the Chicago Chapter, A. I. A., pledged the cooperation of the Chicago Chapter to the Society in the interest of architecture and other public improvements.

Leigh Hunt of Milwaukee, who starts out early in July on his circle tour of architects' societies, state associations and chapters throughout the land in the interest of reorganization, spoke briefly on the subject of reorganization, stating that before the recent New Orleans Convention there were fifteen state societies, while today there are twenty-one. But it is not alone state societies he will visit. He will visit Chapters and other architects' organizations, numbering no less than thirty-five. Details of practice of the profession vary in different states and it is his idea that simplification of practice will tend to create a reasonable standardization that will help to bring all elements together into a strong national organization.

With the President's call on the tellers for their announcement of the results of the election, he surrendered the gavel to a member of the Executive Committee. The Administration Ticket being successful, returning all of the present incumbents to office, the Committeeman had the pleasant duty of returning the gavel to President Jensen.

Carl H. Sheldon, a member from Madison, Wisconsin, took occasion to compliment the officers and directors for their efforts in bringing the Society through another year of successful achievement.

Report of the State Arts Committee

The State Arts Committee of the Illinois Society of Architects, the duties of which are "to advise the Board of architectural projects initiated by public authorities and to express to the Board approval or disapproval thereof" begs to report:

There are six principal public authorities which design and construct architectural projects. These are: The State of Illinois, County of Cook, City of Chicago, Chicago Park District, Chicago Board of Education, University of Illinois. There are, of course, numerous other public bodies, too numerous for the committee to contact.

The architectural activities of the six authorities listed above, together with the recommendations of the committee, are as follows:

STATE OF ILLINOIS: The State of Illinois has architectural work in its 1938 program which will approximate \$2,500,000. These buildings will consist mostly of additions to State institutions, such as hospitals, homes, penitentiaries, and service buildings. To the best of the committee's knowledge, no buildings of a monumental type are contemplated at this time.

The Board's attention is called to the Lincoln Monument, now partially completed on the Illinois side of the Vincennes bridge over the Wabash River. It is the opinion of the committee, reinforced

by a large portion of the public, that the design of this monument is extremely bad and does not in any way supplement the pylons on the bridge nor harmonize with the work done on the Indiana side.

Beginning with 1938 the architectural design of bridges and grade separations to be constructed by the State has been placed in the hands of an architect. Previous to this year, all such designing was done by bridge engineers, not necessarily trained in architectural design. The committee feels the 1938 action is a step in the right direction.

COUNTY OF COOK: Cook County is not contemplating any new work for the year 1938, therefore there is nothing for the committee to report.

CITY OF CHICAGO: The City of Chicago also has no work in contemplation in the near future and the committee has, therefore, nothing to report.

CHICAGO PARK DISTRICT: The Chicago Park District has under construction the completion of Soldier Field, which work is in the hands of Holabird and Root, who have been the architects of the entire project. The committee certainly commends the Chicago Park District on retaining this firm for the work of completing its project.

CHICAGO BOARD OF EDUCATION: The Chicago Board of Education will build approximately twenty-seven buildings during the current year, which work is in the hands of Mr. Christensen, who has been the architect for that organization for many years.

THE UNIVERSITY OF ILLINOIS: The University of Illinois has no definite building program for this year. The University, however, has acquired during the past year the studio of Lorado Taft and is placing about the campus various works of that sculptor. The University has also been presented by the Chicago Park Board the statue of Louis Pasteur, which is to be placed on the campus of the medical schools in Chicago.

RECOMMENDATIONS: The committee recommends: (1) That an effort be made by the Illinois Society of Architects to secure the privilege of criticising before construction, the design of public buildings, monuments, and statues. (2) That the Society recommend to the Chicago Park District, the Sanitary District of Chicago, and other public authorities, that the design of bridges, viaducts, grade separations, and similar projects be entrusted to architects of recognized ability. Too often this work is handled by draftsmen in these offices with not too satisfactory results. The committee refers to the Port of New York Authority which has employed Mr. Aymar Embury with outstanding results.

Respectfully submitted,

Ralph C. Harris, Chairman
James F. Eppenstein
John A. Holabird
I. S. Loewenberg
John H. Raftery
Ernest L. Stouffer
STATE ARTS COMMITTEE

Report of the Public Action Committee

During the past year the Committee on Public Action has received from various sources a large number of complaints of alleged violations of the Illinois Architectural Act. There has been some complaint that your Committee has not been active in prosecuting these cases.

Among these complaints, two cases have been received of such nature that prosecution could have been made if sufficient evidence had been furnished. In both cases your Committee asked for this evidence, but the complainants were either unable or unwilling to secure it. A few of the complaints received charge some architects with the practice of stamping drawings made by unlicensed persons. Where accompanied by competent evidence, such cases could be prosecuted. In no case, however, has sufficient evidence been furnished to warrant prosecution with any hope of success. Until such time as the Society is able to engage salaried assistance, it must

depend upon evidence submitted by those making complaints.

A number of cases, although apparently coming within the law, were forwarded to the Bureau of Inspection, Department of Registration. Efforts have been made—without result—to learn from this Bureau what action, if any, has been taken.

Typical complaints received are accompanied by photographs of sign boards, clippings from magazines or pamphlets, all of which advertise the advantages of dealing with some particular builder, real estate firm, or other promotional concern, who usually claim to be home-building “designers,” or who employ the services of a licensed architect. The claim is usually made, or at least intimated, that the prospective home owner will secure better and more complete service at less cost and trouble to himself than if he dealt with an architect. This is, of course, in direct competition with the ethical practice of architecture, and many of the claims made are without foundation. It is hurting the architects. However, so far as complaints of this nature are concerned, no illegal cases have been found.

Your Committee desires to emphasize the fact that the majority of complaints received refer to practices which interfere with the architectural profession, and in some cases are violations of good taste and ethical procedure on the part of the architects; these cases, however, are in no sense violations of the Illinois Architectural Act as it now stands.

Based upon the nature of the complaints of law violations received, your Committee believes that the purpose of the Illinois Architectural Act is not clearly understood by many architects. Broadly speaking, the purpose of the Registration Act is the protection of the public, and is in no sense intended to create a monopoly for the architects.

—Public Action Committee
Victor A. Matteson, Chairman
Illinois Society of Architects.

A Correction

The Editor: I am always glad to get the issues of the Illinois Society Bulletin. This note is not merely for the purpose of making this statement but to call to your attention an unintentional error in Mr. Ferrenz' leading article in the June-July Bulletin about the Convention in which on page two he states that the Board of Directors of the A. I. A. selected me as chairman of a Special Committee to draw up provisions for administering the new Small House Program. I merely want to point out that while I am a member of the committee appointed for this purpose, Herrick Hammond of Chicago was appointed by the President of the Institute to act as chairman of the Committee. In the interest of accuracy, it might be well to make note of this correction in your next issue.

—William Stanley Parker.

Excavation of Solomon's port, the Bible town of Ezion-geber on the shores of the Red Sea at Tell el-Kheleifeh, is reported by Dr. Nelson Glueck, director of the American School of Oriental Research in Jerusalem. The president of the American Schools of Oriental Research, Prof. Millar Burrows, of Yale, said that the lost site was rediscovered at the northern end of the Gulf of Aqaba.

The seaport flourished from the tenth to the eighth century B. C., according to finds unearthed in the ruins. The inhabitants worked at ship building, copper smelting, fishing, and manufacture of such copper implements as spear heads and nails.

Only the last of the dinosaurs, which lived in Cretaceous times, ever had a chance to see snakes, and those were of the earliest models. Snakes really began to get down to business on this planet at about the same time that mammals started their long climb to domination.

Chicago Chapter Annual Meeting

The Chicago Chapter, A. I. A. annual meeting fell on June 14 and was held at the Tavern Club. Its program, offering Walter R. McCornack, Cleveland, A. I. A. Housing Chairman, John R. Fugard, A. I. A. State Organization Chairman, and Alfred Shaw, A. I. A. Membership Committee Chairman, did not succeed in whetting the appetite of the Chapter's two hundred or more members, for the total attendance at the meeting was but twenty-nine, including four guests, leaving a Chapter attendance of twenty-five.

The cocktails and dinner were excellent and Secretary Heimbrodt followed with the minutes of the May meeting. He reported eleven new members, resignation of Clarence Farrier, one-time Chapter President, six member terminations, seven suspensions and two deaths, the latter being George B. Helmle and Henry J. Schlacks.

Later in the evening Mr. Heimbrodt read communications from Mayor Kelly and Alderman McDermott; also one from the Washington, D. C. Chapter, requesting the Chicago Chapter—since Washingtonians have no vote in politics—to write to Congressman Dirksen, expressing the Chapter's appreciation of the Congressman's efforts in behalf of private practitioners in architecture.

Treasurer Roberts made his report of the Chapter's finances.

President Merrill opened his annual address with reports from the Membership, Program, Legislative, Portrait, Municipal Art, Fellowship, Small House, Exhibitions, Architectural Training and Housing Committees, reading many of them in full. He next reported a telegram from Mr. McCornack in which the sender expressed his regret at being unavoidably detained in Cleveland.

This was followed by an introduction of Mr. Nixon of the Washington office of FHA, who reminded his hearers of the outstanding work and recent phenomenal success of the Federal Housing Authority in securing loans for private builders with government insurance. Mr. Nixon announced three meetings for architects, builders, and prospective home owners in Chicago to be addressed by Henry Klaber of the FHA, falling on June 27, 29 and 30.

Alfred Shaw, national Chairman of the Institute Membership Committee, gave a lengthy report of his Committee's recommendations to the New Orleans Convention and how these recommendations were received. He spoke of the various forms of membership; he spoke against architectural bureaus, criticized the present plan of affiliation of state societies and associations with the A. I. A., and endorsed strongly Chairman Fugard's efforts in behalf of reorganization in the hope of the Institute becoming the representative of the entire body of architects throughout the land, rather than of one-fourth their numbers, as it is at present. Mr. Shaw's address and recommendations were divided into twelve points.

Two of the guests had come from Milwaukee and represented the Wisconsin Chapter. These were Leigh Hunt and Richard Philipp. Mr. Hunt, as newly appointed director of the A. I. A. to represent state societies, promised to visit no less than thirty-five of these societies between July 5 and October 5, to enable him to make his report to the A. I. A. Board in November. These societies are scattered throughout the land.

Mr. Philipp pleaded for better service to the community on the part of the architect—a service supplementing the practice of his profession. The architect must function in a broader way.

John R. Fugard reported the efforts of his Committee on State Organization which were laid before the New Orleans Convention and received encouragement there. The first important step was the appointment of Mr. Hunt to the Directory.

President Merrill here continued his annual address, referring to the Chicago Chapter men functioning in a wider capacity as government officials in Washington service, in State of Illinois service, and in the service of the City of Chicago.

The routine of a Chapter election where there is but one ticket and no opposition was gone through with when someone moved that the Secretary cast a ballot for the membership. Carried. The new officers are: Elmer C. Roberts, President; John Howard Raftery, First Vice President; Jerrold Loeb, Second Vice President; Carl E. Heimbrodt, Secretary; Lawrence Perkins, Treasurer. The Directors are: John O. Merrill, Philip Maher, Robert DeGolyer, and Thomas E. Tallmadge.

President Roberts, with a few fitting and graceful remarks, accepted his new office, asking the cooperation of the membership.

Mr. Fugard stated that owing to Mr. Rufus Dawes' inability

to be present at the New Orleans Convention to accept Honorary Membership in the A. I. A., a luncheon would be given him by the Chapter on June 24.

William Jones Smith complimented the retiring officers on their achievements during the past year.

Rufus Dawes Honored by A. I. A.

Forty-one men, composed of Chapter members, Producers' Council Club members, ex-Century of Progress officials, Mr. Rufus C. Dawes and Dr. Pusey, both of the Century of Progress, William Stanley Parker of Boston, and last but not least A. I. A. President Charles D. Maginnis, met at the Tavern Club in Chicago on June 24 at luncheon, arranged for presenting to Mr. Dawes honorary membership in the American Institute of Architects for his outstanding service in the cause of architecture and the arts while President of the Century of Progress.

In formally presenting Mr. Dawes with the membership, President Maginnis read this citation:

"Rufus Cutler Dawes, as President of A Century of Progress, rendered a signal service to the architecture of America; with a vision unobscured by precedent, with a courage undaunted by opposition, he explored new horizons for the architecture of the Exposition; with confidence and energy he faced the greatest economic depression our nation has known and brought his great task to a successful conclusion.

"The commission of architects under his leadership created for the first time in this country an exposition in a functional style; honest in its purpose, beautiful in its form, and prophetic in its being."

But this was not all. President Maginnis followed the citation with an address that held his hearers spellbound. The address is as follows:

"We have come with a disposition to do honor to a rare type of citizenship. The Institute of Architects is not easily provoked to gestures of compliment. In this instance it is difficult to contribute a significant honor to one already so distinguished. I am eager, therefore, it should be understood that the Institute is conscious rather of receiving distinction than of bestowing it.

"It is desired to mark in this formal way the sympathetic identification of Mr. Dawes with the high aims of our profession and our sense of the spacious and enlightened way in which he has promoted them. Obviously, he has the temperament and the imagination of the architect and lacks only the experience of the drawing board. It was Francis Thompson who said that the poet held the lyre in his hands and the love of poetry in his heart.

"The influence of the architectural profession is strangely limited. It is concerned too narrowly with the individual items of the physical community and rarely is given opportunity to deal with it as an organism. In consequence, our typical city is positively ugly in totality, even while it boasts some oasis of architectural adequacy.

"The imagination and technical skill of our architects are now beyond question and, indeed, may be said to have given a wholly new direction to American genius. In Europe there is even the disposition to acknowledge the title of the American architect to international leadership, though it is complained that he has managed to give the world a too flattering impression of our public taste. This creative enterprise as it contributes, for example, to the flamboyancy of the New York skyline, finds an admiring and responsive public, but the interest of the laity in its less dramatic and more philosophical essays is not particularly notable.

"In the magnitude of the national scene, the architect is hardly more than a carver of cherry stones. It may be questioned whether, in terms of vision, the gradual defilement of our high-roads by oil stations and hot dog stands and the commercial despoliation of our landscapes by the blatant billboard are not as apt to be accepted as the measure of our civilization.

"The new boulevard between Baltimore and Washington might well be contrasted as an instance of such barbarities with the charming transformation of the Bronx River in New York made possible by the initiative of two or three citizens of intelligence and vision. Our great cities are generally approached by the railroad through acres of tin cans and general litter of discarded things. My own city of Boston is entered through a most wretched and

uninviting vestibule of which it is astonishingly unaware. On a recent trip abroad, I sought hopefully for evidence that we were not the only bad municipal housekeepers, but was completely baffled.

"I am not a political cynic. In these extraordinary times, when nations are experimenting dangerously with strenuous principles of government, I was never more persuaded of the validity of our own political order. At the same time, I am aware that democracies, however perfect, are bound to be ugly in spots. This is not only that in their tolerant nature they do not stifle ugliness. Cultural movements must depend with us, therefore, on casual and spontaneous public impulse. Our pride was recently hurt by the reference of a foreign visitor to the unsightliness of our villages, but our national resentment revealed a condition quite as stultifying, namely, that we were unaccountably ignorant of it ourselves. After all, we are a particularly traveled people, and are on familiar terms with the most beautiful precedents of Europe. But we are too apt to experience these with an intoxication of spirit that sensitizes our appreciation for the time, so that we return with a new loyalty to the realities of our own land, complacent and uncritical. Under the stimulus of Baedeker, we conform, however uncomfortably, to a ritual of intelligent travel which prescribes a contemplation, for example, of great galleries of paintings and sculpture. Whether we do this exactly as students, carrying our own minds about with us, or whether we entrust them for the time being to the cicerone of Mr. Cook is not of consequence. Once at home again, we daily pass by the splendid museums of America, as if they were chilly and intimidating institutions with which we have no emotional concern.

"It is in this larger field of educational opportunity where the artistic sympathies of Mr. Dawes have found an admirable exercise. I may say that the felicitous nature of this public service is as familiar to Boston as it is to you, and Chicago is fortunate that it has a great citizen whose authority and influence are directed by a lofty purpose to make it notable among the beautiful communities of the world."

Mr. Dawes' reply was memorable for its modesty and humor.

That Small House Problem

To suggest to a group of architects that there is a small house problem immediately produces widely conflicting opinions regarding its solution. That this is a real problem is fully recognized. We have the problem—have had it for many years—and to date nearly everyone else is attempting a solution in some energetic fashion, according to his own selfish lights.

Architectural pens and others have written reams of material on this subject, but it is all quite varied in concept and tremendously diversified in its solution. A general criticism of most plans proposed is that they are too complicated to succeed. Simple measures augmented by some sane thinking can accomplish wonders.

The problem of the small house, as it confronts the architect, is not what to do about it, but frankly, how to get into the market the small house offers. Estimates indicate that about 85% of all residential building receives no architectural service. This is a high percentage, if true. This field is now being served by stock plan services, as well as by many other individual plan services prepared by unprofessional interests.

We are not now, and never have been, in the small house field to any extent as a profession. To say that others who have ideas of their own on this subject are in competition with us is a weak attempt to satisfy our ego. We are confronted with a far greater need for homes today than ever before. This is not news. People, individually and collectively, are doing something about it and are profiting by it.

The interest of architects as professional men in the small house field has been primarily to criticize what everybody else is doing. They do not offer any constructive plan or remedy toward its solution. The only professional effort that I know of to attempt to materially influence this situation nationally was the program of the Architects Small House Service Bureau whose ideals were set for them by the American Institute of Architects, which eventually communicated it at the Milwaukee Convention in 1935.

Following the Milwaukee episode, it was decided that small local groups of architects should be formed and be allowed to

attack the problem on a modified service basis. As a result, we have plans of varying types now in operation in such cities as Buffalo, Washington, D. C., Boston, Indianapolis, Memphis, Detroit, and a number of other places. What success and popular acceptance they may obtain will be reflected directly by the number of detached dwelling units completed. To date, nothing spectacular has been reported and it is almost a safe conclusion that nothing will be reported. This is a natural situation because the architect profits less than others, particularly the building material and equipment industry.

I seriously question whether the architects as a profession really know to what extent other interests, particularly the lumber and cement industries, are entrenched in the promotion of the small house. A bird's eye view quickly reveals not only these industries, but also the various other groups of building material manufacturers, as well as publishers of various magazines and newspapers, state agricultural colleges, builders and general contractors, some real estate interests and a host of individuals, each exploiting its own product or interest. To this add the newer agencies—the various government housing bureaus.

From the above groups there come today many diversified plan services sponsored or supported by their respective interests. These varied interests found it necessary to establish and maintain these services as "selling tools" in their merchandising programs. The important thing about this is that these services, promoted and merchandised by their local dealers, are so thoroughly entrenched and also so popularly accepted by the public that the question of an architect goes unheeded. The merchandising methods employed by these manufacturers are logical and rational elements of their business and the continued operation of them puts us farther and farther out of the public mind.

This is not the only place we are losing ground with the public. I am informed that it is common practice in a number of eastern cities for operative builders to employ architects to prepare *plans and specifications only* for large projects. Do we call that practicing architecture? Those who do this sort of thing say it is, because they have the jobs. The rate at which we are losing ground because of practices herein mentioned will continue to further weaken us in the public mind. I recently heard our position humorously defined by a prominent Chicago architect something like this: "We are losing out in so many fields that before long one of us will be stuffed and placed on exhibition in a museum beside the buffalo and other declining species."

Earlier I said something about simple means and sane thinking. I think several facts must be stated and recognized, whether we like them or not.

First: We never have been in the small house field as a profession.

Second: By talent and training we are best equipped to render service in that field.

Third: If it be true that 85% of all residential building receives no architectural service, it is logical and rational for architects to try to get actively into this field.

Fourth: Others now control this field through financially supported agencies established and operated for their particular benefit.

Fifth: These forces have not the slightest intention of relinquishing control of this field, but intend to promote their programs in even more intensive fashion.

Sixth: These interests are not in competition with architects because we have never been in control of this field, and the market they serve is unwilling to pay anything for architectural service.

Seventh: The small house is now being successfully merchandised along lines of recognized sales methods by people or organizations who are equipped to do this. This is a natural function of a material dealer. He is doing it better today than ever before.

Therefore, it certainly looks as though the architects are going to have to make some concessions in order to "play on the team" if they wish to get their rightful position in this field. Since we are not now in a position to demand anything, we will have to agree to work with these interests and try to regulate them for mutual benefit. Oddly enough, they recognize that the architect's influence and ability increase the value of their product and program and that the architect is necessary to their increased success. This is demonstrated by the fact that many manufacturers, building material yards, etc. maintain their own "Architectural Departments," or em-

ploy architectural draftsmen. They especially like a draftsman with a license, paying him a pittance more for his service, while he assumes the responsibility of the design. Some of the individuals so employed are architects by decree of law. By and large they are not representative of the profession. These other people need us but have been unable to use us as a profession because we demand a fee that the public is wholly unwilling to pay.

Why don't we sit down and take stock of the whole idea, definitely find our place in the picture, and then make some correlative advances to these commercial producers and thus get our rightful share of this market? We shall have to do this because they, particularly the lumber industry, now control this field of stock plan activity and have indicated to us that they not only intend to retain it but further promote it, although they have indicated on several recent occasions a willingness and desire to have our cooperation along lines that will meet public acceptance.

The first move is to meet some of these manufacturers and discuss frankly all phases and elements of the problem, clearly understanding where each one's interest lies and then definitely recognize the rightful position of each in the picture. Once this is done the plan of procedure is a relatively simple one.

Isolated cases of cooperation between an individual architect with the other elements of the building industry in the small house field are proving fruitful to the architect. These cases are rare, so rare that mere mention of them suffices. Billings, Montana is one of them.

If this field offers us any opportunity, we should make an energetic effort to get into it. Otherwise let's forget the whole mess.

—Carl E. Heimbrodt, A. I. A., Chicago.

The Bulletin welcomes views by architects and others whose thoughts have dwelt upon the subject Mr. Heimbrodt discusses.

—The Editor.

J. Hardouin Mansart—His Career

"Colbert made himself Surintendant des Bâtiments in 1664, combining more or less the functions of a First Lord of the Treasury, a Minister of Fine Arts and a First Commissioner of Works. He proceeded to organize a large staff, composed of the leading architects of Paris at the time. Colbert styled himself 'Surintendant et Ordonnateur Général des Bâtiments, jardins, tapisseries, et manufactures de France,' at a salary first of 15,000 livres a year; rising under the skillful manipulation of Jules Hardouin Mansart, twenty years later, to 60,886 francs. Under the Surintendant were the various 'officiers des Bâtiments,' (1) three Intendants, at salaries of 6000 francs a year, (2) three Contrôleurs at 4500 francs a year (André le Nôtre was a contrôleur for the last thirty-two years of his life), (3) three Trésoriers at 2800 francs a year.

"One of Colbert's instructions begins, 'Il faut travailler incessamment,' and under that iron man his subordinates must have had a difficult time. Below these permanent officials came the architects, paid 'pour servir généralement dans toutes les maisons royales,' and at the head of the list came Louis le Vau, 'premier architecte de Sa Majesté,' at an annual salary of 6000 francs. These appointments were eagerly sought for and could be obtained by purchase or inheritance. They were more or less confined to certain families, their friends and connections, and in spite of Colbert's watchful eye they afforded plenty of opportunities for jobbery. What the elder Gabriel designed, his brother and his uncle contracted for, and some other relation checked the accounts, and the dangerous system of measure and value in use in the 16th century seems to have continued under Colbert. Within this ring fence of monopoly, and with direct interference by the Surintendant, there was little room for adventure. François Mansart was the last representative of that old school, free and unfettered, in which men designed according to their own ideas of what was right and not to an iron standard of design. After 1664 no French architect would have dared to treat a royal commission with the casual independence of François Mansart when called in at the Louvre.

"From this date forward, French architecture becomes official, to a large extent standardized. The Academy laid down rules for the right use of the orders and other details of architecture. The happy freedom of Fontainebleau, the resolute individualism of the manner of Henri IV, the high ideals of such men as François

Mansart, were now to be things of the past. Versailles was the standard, and Jules Hardouin Mansart and le Brun the protagonists of 'le bon goust,' and we must look for a period of consummate accomplishment, rarely relieved by flashes of genius. . . .

"In his reorganization of the State machinery Colbert had established a staff of architects who were in the King's pay, and were entitled to call themselves 'Architectes du Roi.' Among them were many able architects who are now almost forgotten, owing to the astonishing success of Jules Hardouin Mansart, who succeeded in monopolising all the important work that was done in France before the end of the prosperous days of Louis XIV. . . .

"Jules Hardouin Mansart owed his immense and overpowering success to qualities very different from those which distinguished le Nôtre. He was born in 1645 and his real name was Hardouin, but on his mother's side he was a grand-nephew of François Mansart, and Saint-Simon says that on the death of that great architect in 1666 he took the name of Mansart 'pour se faire connaître et se donner du relief,' but Saint-Simon, who hated and despised Mansart for his familiarity and pretensions, did not do justice to his energy and unscrupulous thrust, for he was undoubtedly very able. Jules Hardouin seems to have been a typical 'faux bonhomme,' as the French say, the sort of man who would slap a royal duke on the back, tell him a coarse story, and in cases get away with it, for his success was amazing. In 1674, by an obscure intrigue, he managed to supersede Anthoine le Pautre in the design of Clagny for Madame de Montespan; and from that time forward his fortune was made. He was brought into touch with the King. Colbert pushed him into the Academy and in 1676 the King entrusted him with the immense undertaking of Versailles. This meant the end of the old regime and the definite inauguration of the new. Colbert had failed in his effort to keep the King in Paris. The works at the Louvre were abandoned and Louis XIV indulged himself in his hobby of building palaces and country houses at great cost and with complete disregard of the interests of the State. . . .

"So far as his career was concerned, Mansart was probably the most successful architect that has ever lived. When he died he was Chevalier de l'Ordre de St. Michel, Comte de Sagonne, surintendant et ordonnateur de ses (the King's) bâtiments et ses jardins aussi que des arts et manufactures royales,' a post probably worth not less than some 12,000 pounds a year, with infinite possibilities of commissions and patronage, and he was also director of the Academies of painting, sculpture and architecture, practically in control of all the arts of France. With all his multifarious appointments, and with the constant necessity of keeping himself well to the fore and preserving his position with the King, it is quite certain that Mansart could not possibly have designed all the work attributed to him; and that was the opinion of his contemporaries, but he had working for him some of the ablest young architects of his time. . . .

"A bridge designed by him collapsed at Blois, so did the bridge at Moulins. Saint-Simon relates that when Louis XIV inquired about the bridge at Moulins, the governor of the province replied that he understood that it had last been heard of at Nantes. It was in consequence of these failures that the department of 'Ponts et Chaussées' was established. . . .

"Jules Hardouin Mansart died in 1708, having outlived his own reputation and his period, for the immense building activity of the earlier years of the reign of Louis XIV came to an end about the year 1690-91. Thirty years' extravagance had exhausted the savings of Mazarin, and after 1690 the King had other things to think of. . . .

"Mansart had done well for his relations, for by 1708 de Cotte was in receipt of an annual salary of nearly 30,000 francs a year with 4000 francs a year for his son, an incompetent youth of twenty."—From *Three Hundred Years of French Architecture: 1494-1794* by Sir Reginald Blomfield (Alexander Maclehose & Co., London, 1936).

George F. Bannister, an architect in the Chicago territory for nearly half a century, died in Chicago on June 3, 1938. He became a member of the Illinois Society of Architects in September, 1915. In recent years, by reason of dwindling practice, he conducted an employment agency for architectural draftsmen.