MONTHLY ILLINOIS SOCIETY «OF ARCHITECTS» BULLETIN

VOL. 18. APRIL - MAY, 1934 Nos. 10-11

Richard E. Schmidt

Chicago Metropolitan Housing Council and Housing Authority

The housing problem in the metropolitan area of Chicago is generally divisible into two phases: (1) provision of housing to meet the demands of the groups who can pay for the kind and amount they need; and (2) provision of housing adequate for the groups who are chronically unable to pay for dwellings which come up to the socially desirable minimum standards. In addition, there is an emergency housing problem for the time being.

The action of Congress in the National Industrial Recovery Act and the recent passage by the Illinois legislators of a Housing Authority Act are designed to reach and solve the problems of socially acceptable minimum standard housing for those who commonly cannot pay for it, and who therefore live in dwellings which menace public welfare, impair municipal finances, and blight large areas of our cities.

The Chicago Metropolitan Housing Council is a non-profit corporation dedicated to coordinating all three phases of the housing problem in that area. It is designed to bring together the key men of existing housing committees, the Building Commissioner's department, the Health department, the Fire Prevention Bureau, and such other organizations as from time to time concern themselves with aspects of the whole problem. It is estimated that there are upward of a hundred civic, social, and professional groups now engaged on housing studies and activities in those cities.

Financial support of the Council comes from the member groups. Individuals are admissible by invitation of the Officers, but are not expected to contribute substantially. Membership is divided in three categories so that the participation in the Council approximates the ability of the local group to cooperate.

The Council was organized in response to the instructions of a group who met January 19, 1934, at the Palmer House. They were representatives of some forty commercial, civic, social, and political groups. Speakers there emphasized the lack of cooperation between groups struggling with parts of the housing problem, the wasteful duplications of effort which are being made daily in these matters, and the failure to utilize existing information just because no one organization is gathering it together. A committee was appointed at that time to investigate the desirability of forming a group which might bring these activities into such coordination that they would supplement each other and advance the cause of better housing more rapidly. That committee consisted of John R. Fugard, president of the Illinois Society of Architects; Alfred K. Stern, chairman of the State Housing Board; Jacob L. Crane, Jr., federal adviser to the Illinois Planning Board; Edward L. Ryerson, Jr., president of the Council of Social Agencies; Joel D. Hunter, general superintendent of the United Charities of Chicago; Arthur Bohnen, vice-president of the Chicago Real Estate Board; Edgar S. Nethercut, secretary of the Western Society of Engineers; W. W. DeBerard, ex-president of the American Society of Civil Engineers; and Albert J. Weisberg, president of the State Realty Trust.

This committee canvassed the situation and decided that a group should be formed for the purpose of coordinating the housing activities of existing agencies. Incorporation under the name, Metropolitan Housing Council, was completed March 12, and the Council's offices located at 1 No. La Salle Street.

The first project which the Council decided to foster was the one involving the CWA in the demolition of useless structures. The order permitting this work provided wide powers for the local CWA administrators in cooperation with local groups. In order to have this work go forward, the Council has stimulated the Building Commissioner's department, the Census Bureau, the Chicago Plan Commission, the City Architect's office, the Health department, the Chicago Title and Trust Company, the County Assessor's office, the State Auditor's department, the Council of Social Agencies, the State Housing Board, and the local CWA.

At present the CWA is demolishing the old county jail, the city garbage reduction plant, and several other city-owned buildings. They expect to work presently on a building now controlled by the West Parks Board, removal of which will provide space for a much-needed playground at Taylor Street and Racine Avenue. The CWA has preferred to push these projects because they were controlled by tax-supported bodies while waiting for special instructions from Washington before going ahead with privately-owned buildings. The impending transfer of CWA activities to local relief auspices makes it improbable that CWA will proceed very far on the privately-owned structures, but the project is expected to be transferred to the new administration on April 1, whereupon this work can begin promptly.

The Council expects to take steps presently toward advocating the establishment of minimum housing standards for the Chicago area so that the re-housing of families now living in inadequate dwellings may proceed systematically. It is also investigating various possibilities for financing rehabilitation of buildings which are structurally sound and which, if repaired, would be community assets, with a tendency to stabilize neighborhood conditions.

These steps working in unison will tend to retard the spread of slum conditions and restore the values now depreciated in building areas.

* * *

The State Housing Authority act provides in the case of Chicago that the Mayor appoint a commission of five with powers to own and operate housing dedicated to low-income groups.

It appears that the Federal government is prepared to go forward with housing projects in Chicago which will be definitely of a slum-clearance nature. It appears to be the thought of the Washington administration that such projects would be valuable demonstrations of ways to achieve satisfactory housing for the groups who are now able to occupy only sub-standard dwellings. However, it is the wish of the Washington administration to not involve itself in prolonged local operations. Therefore, the first work of the Housing Authority in Chicago will be to advise the Public Works Emergency Housing Corporation as to areas which should be utilized for these Federal demonstrations, to recommend methods for selecting the tenants so that the benefit of the new housing shall actually reach the impoverished groups for whom it is intended, and to manage these buildings through their life.

The legislature has provided adequate powers for the Housing Authority so that in future years it will be able to engage directly in the construction of housing for the low-income groups without Federal assistance.

* * *

The Chicago Housing Authority will be directly charged with the management of its projects so that a maximum benefit to the public shall accrue. The Metropolitan Housing Council expects to cooperate intimately with that Authority in achieving that purpose. The great advantage that may be expected from this arrangement is that the Council will be able to gather together informed, worth-while views on the details involved and assistance in the

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The Romance of Aluminum

Aluminum was an unknown quantity 110 years ago. Many persons still believe, because of its newness, that it is a rare metal. Yet aluminum is the third most plentiful element in the earth's crust, and is the most plentiful metal. Geologists calculate that it constitutes about 8% of the crust—about twice as much as iron. Since all fruits and vegetables take small quantities of aluminum from the soil, the metal is in nearly all food that is consumed. It is absolutely harmless to the human system.

Of the nine most prominent metals in use today, viz., iron, copper, aluminum, lead, tin, silver, gold, zinc and nickel, aluminum was the last to be separated from its naturally occurring compounds. Chemists suspected the presence of some unknown element in earths and rocks more than a century ago. In 1825, Hans Christian Oersted, a Danish scientist, succeeded in producing a minute quantity of what is now known to be aluminum.

Aluminum, in the years after Oersted's discovery, was exceedingly expensive because a chemical process of extracting it from the ore was necessary and great amounts of sodium had to be used. Sodium was very costly.

The potential possibilities of a metal, which weighed only one-third as much as iron or copper, gave impetus to scientists to discover a method of production which would permit its use commercially. One group of scientists devoted their efforts toward producing cheap sodium; another tried a different angle of attack. In June, 1886, a patent was granted to H. Y. Castner, of New York, for a process of inexpensive sodium production. This process was used, not in aluminum production, but in the manufacture of caustic soda!

Four months previously, Charles Martin Hall, a recent graduate of Oberlin College, discovered a method of producing aluminum from the ore by means of electrolysis. A short time thereafter, an almost identical method was developed by P. L. T. Heroult, a young Frenchman, working independently. Today, the process is commonly called the Hall-Heroult process.

The new metal was first used for novelties, trinkets, and souvenirs. In one notable instance it was applied to the architectural field even previous to the Hall discovery. This was the 100 oz. pyramidal cap placed on the top of the Washington Monument in 1884, the cap being the largest single aluminum casting produced up to that time. Today it still sends a glint of light to the sightseer on sunny days.

After Hall's invention came the wide use of aluminum for cooking utensils and electrical conductors, replacing other metals in general industry. The softness and relatively low strength of the pure metal was overcome first by the development of the simple alloys. These were cold worked to give them greater strength, but this cold working sacrificed easy workability. Heat-treating, developed in 1905 by Alfred Wilm, a German scientist, gave greater strength with much less sacrifice of good working characteristics. Wilm called his alloy "duralumin," the name still commonly applied to certain of the strong alloys of aluminum.

Cold worked alloys were used extensively before Wilm's discovery. Aluminum helped to win the 1895 race for the America's Cup, because the "Defender" was constructed of aluminum plates above the water line. These alloys were cold worked. Thirty-five years later aluminum again helped to win the race because of the aluminum alloy mast used on the "Enterprise."

During the World War both the consumption and general knowledge of aluminum greatly increased. After the War, aluminum began to be used for printing inks, candy wrappers, paint, chairs, trucks and truck bodies, for the airplane industry and also in the architectural and structural fields. More than 80% of all cable used for high-power transmission lines is made of strands of aluminum, steel reinforced.

Last year, engineers of the City of Pittsburgh tried a most radical experiment. They did not care to tear down the old Smithfield Street Bridge, built in 1882 and erect a new one. The cost was prohibitive. But a new structure was necessary because the old trusses could no longer safely uphold the 1933 loads. So the entire floor structure of the old bridge was torn off and replaced with aluminum plates, girders and beams. The cost of this replacement was $370,000, which is lessened when one considers the fact that aluminum has a high scrap value. At the end of the bridge's usefulness, the city will be able to sell the scrap aluminum at a handsome price. A new bridge in steel would have cost $2,000,000.

Tremendous steps forward have been taken in the sale of aluminum, in various forms, as an architectural material. The aluminum spandrels on the Koppers Building in Pittsburgh, the Empire State Building and the various buildings in the Rockefeller Center Development in New York, the facades of the Research and Engineering Building of the A. O. Smith Corporation in Milwaukee, and many others, have directed the attention of the architects to this new metal. Sixty thousand pounds of aluminum busbar have been used in the Field Building in Chicago, to say nothing of the 3,244 spandrels and the 3,285 double-hung windows.

The Chicago Post Office has 879 spandrels and 85,000 pounds of ornamental aluminum windows. Other installations in the Chicago District include 380 spandrels installed at 1260 Astor Street, and 538 on the 1242 Lake Shore Drive Apartment Building. The shaft of the Lindbergh Beacon is enclosed in aluminum extruded shapes, while the inner dome of the Bahai Temple is made up of structural aluminum.

Approximately 50,000 aluminum windows are now in service in various parts of the country. Aluminum frames and sash do not require painting and adjacent surfaces are free from the rust streaks and discolorations which have been so objectionable in the past. Extruded sections are used throughout in the construction of aluminum windows, contributing greatly to their strength and rigidity. The use of extrusions makes possible a distribution of the metal in such a way that the greatest possible section modulus is obtained.

The repeal of the Eighteenth Amendment has brought about a resumption of the uses of aluminum in the brewing and distilling industries which came to a temporary standstill in 1919. Breweries are making their beer in aluminum fermenting tanks and employing aluminum storage tanks and wort coolers. Aluminum beer barrels carry beer from breweries to the dispensers. Coils of aluminum carry the liquid from the barrel to the tap. Pilferproof and tamperproof aluminum caps protect whiskey bottles in their journey from distiller to consumer, aluminum foil labels enhance the appearance of the packaged article.

The old-fashioned railroad train now in service is about to give way to a younger and more energetic contender. The Union Pacific Railroad is now placing in service a streamlined, articulated, all-aluminum train which has a cruising speed of 90 miles an hour and a maximum speed of 110 miles an hour. This entire train, consisting of three cars and seating 116 passengers, also having mail and baggage compartments, weighs less than one present day Pullman car. The car bodies are built entirely of strong aluminum alloys.

The fact that a metal, which the public during the last two generations has thought of only as a cooking utensil metal, has been so developed is a tremendous tribute to alloy development through metallurgical research. If the first Union Pacific train, built in 1869, had been made of aluminum, it would almost have been cheaper to have made it of solid gold. The price of aluminum in 1852 was $545 a pound. Today's ingot price is about 23c a pound.

It has been a common observation during the last forty years that "aluminum is in its infancy." This statement seems to be just as true today as it was forty years ago.—*R. T. Griebling*

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Editor Monthly Bulletin

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Committee on Public Information

E. S. HALL, CHAIRMAN TIRRELL J. FERRENZ ARTHUR WOLTERSDORF

The Board of Directors of the Illinois Society of Architects as well as the editor of the Society's Bulletin are pleased with the endorsement so often expressed of the contents and appearance of the Bulletin.

The Bulletin is the profession's only mouthpiece in Illinois; it aims to represent the entire state; it is sent to architects without charge.

The Bulletin has no budget, its editor and contributors working without any pecuniary remuneration. No secretarial or other expenses are charged the Society. But the printer and the post office must be paid. The Bulletin has for the last three years been appearing bi-monthly because of the Society's shrunken treasury. It is a *monthly* bulletin and should appear monthly.

If each of the four hundred twenty-five members of the Society will pay his dues when they become due, the membership and the profession may count on receiving monthly the best architectural news bulletin that the profession's talent in Illinois can produce.

Without dues, the Society's resources disappear—its influence and prestige as a professional organization fades —the Bulletin vanishes. If you value the Society's efforts in behalf of the profession, which includes publication of the Bulletin, respond favorably and promptly to the financial secretary's notices of payments due.

March 2, 1934 was the date fixed for the Code of Fair Competition for the Construction Industry to go into effect, at least as far as Chapter 1—General Provisions—is concerned. After many months of labor in formulation, discussion, revision and re-discussion, this Code, to cover all branches of the building industry including architects and engineers, has been born. The intentions throughout are of the best and the Code Committee is to be congratulated upon the thought and care generally shown in Chapter 1.

All are expected to follow the Code as presented in Chapter 1, unless the chapters not yet approved make provision for modification. The eight articles of Chapter 1 cover Application; Definitions; Hours, Wages, and Conditions of Employment; Administration; Appeals; Adjustments; Competitive Bidding Practices; and General.

The architect will be particularly interested in Article 7: Competitive Bidding Practices. Section 2, Bid Peddling and Bid Shopping, should go far to eliminate evils that reached their climax in insolence and ruthlessness in the boom years from 1922 to 1929. Section 4, Uniformity of Information, must be heartily approved by every decent practitioner. Section 5, Qualification of Bidders, will be universally endorsed by architects of experience who know that their work does not end with making plans and details. Final achievement in constructing what has been carefully planned, detailed, and specified, requires a standard of workmanship and financial responsibility that the architect should always have in mind in inviting bidders.

This section says: "The awarding authority shall not *invite* bids from a bidder unless . . . . " Should this not have read: "The awarding authority shall not invite nor *consider* bids from a bidder unless such bidder shall have demonstrated to the satisfaction of the awarding authority that he is competent . . . ." If the awarding authority submits to appeals from uninvited bidders, must not the awarding authority show the same consideration to the appellant's bid that is shown to the invited bids?

Kemal Pasha, Turkish Overlord, two years ago granted the Byzantine Institute of America the privilege of uncovering and restoring the Christian art of mosaic sheathing the domes and walls of Justinian's fane in Constantinople, the present Istanbul. This is a great concession by a Mohammedan people. The decorations so far uncovered in the narthex are of an imperial splendor. St. Sophia is conceded by all students of architecture to be one of the greatest architectural interiors ever created. We are indebted to Mr. Whittemore's diplomacy, ingenuity and patient skill for this concession to uncover these early Christian mosaics. They were created at a time when Constantinople was not only the most learned and civilized, but also the busiest and richest city of the world.

Home Economics

Paint ultimately starts to peeling,
The plaster of the walls and ceiling
Eventually needs renewing,
Roofs leak and porches get to skewing,
The weather cracks each window casement,
Concrete needs fixing in the basement,
Floors sag a bit and need new varnish,
And metal fixtures dim and tarnish,
And even quite the best of plumbing
Has rehabilitation coming.

Time, use and weather variations
Cause numerous disintegrations,
And it's no mean householder's item
To get the wherewithal to fight 'em.
From chimney top to cellar loam
Each part and portion of a home
Is prone to grow dilapidated
And has to be rejuvenated—
Except the mortgage, which appears
To gain fresh vigor with the years!

—*Berton Braley.*

Philip Reis' "Ferntoener," literally "far sounder," the world's first telephone, is now on exhibition in the great Deutsches Museum at Munich. Alexander Graham Bell was the first to make practical use of the telephone, but Reis anticipated him in the discovery of its principle.

Painters of pictures often practice for thirty years and get steadily worse. When I think of all the money that has been spent on raw and burnt Sienna to turn out the modern paintings that you see all over the world I feel like weeping.—*Bruno Lessing.*

(Cotinued from Page 1)

formation of general policies meeting the needs of the component problems. Being able to present its findings to the Housing Authority as the spokesman for the multitude of subsidiary interests, its advice should be very helpful.

It cannot be too strongly emphasized that the fundamental purpose of both the Council and the Authority is to safeguard and promote the interests of the public in better housing. These are but steps in the many efforts now being put forth to make the Chicago metropolitan area more liveable. The Council feels that it is already making some progress because an official of the Washington staff of the CWA upon inspecting the progress being made on the demolition project in Chicago said recently, "Chicago is farther ahead on its demolition program than any other city in the country. This is largely due to the effective coordination brought about by the Chicago Metropolitan Housing Council."—*John Reed Fugard.*

Housing Shortage or Surplus? Washington Investigates

Willard L. Thorp, Director, Bureau of Foreign and Domestic Commerce, Department of Commerce, under whose supervision the Real Property Inventory is being conducted in 63 cities, states that there has been much talk in Washington about giving aid to building, but when several persons discuss the matter they divide into two groups. The first group argues that there is a housing shortage. The second group insists that there is a surplus. Those who take the latter position offer three forms of evidence: the great activity in construction during the years 1923-29; the high percentage of vacancy reported in most cities; the fact that rents have fallen considerably. These facts indicate, they argue, that we are well supplied with housing facilities. Those in the first group argue that the post-war activity merely made up for the lean years during the war; that the high percentages of vacancies are spurious, being more than offset by doubling up and delayed marriages, so that with the return of prosperity the shortage will become uncomfortably apparent; that many houses now occupied are not fit to live in. The Government hopes to learn from the Real Property Inventory which of these groups is right.

Joint February Meeting

At the Architects Club of Chicago on February 20, the Illinois Society of Architects in conjunction with the Chicago Chapter, A. I. A., held its February meeting. Before going to dinner, the company was interested to examine the many drawings exhibited by the Northern Illinois District of Historic American Building Survey. All these, and more, are to be filed with the Library of Congress in Washington. The drawings are fine, composition and co-ordination on the sheets good. Many were interested in the presentation of the Second Baptist Church at Morgan and Monroe Streets, which had been the First Baptist Church at LaSalle and Washington Streets, Chicago. After removal, it was dedicated in January, 1865. Then there was the Heideman wind mill from Addison; the Pre-Emption House, Naperville; Hinsdell House, Elgin; and others.

After the dinner, the Chapter proposed a short business meeting, President Reed in the chair. Arthur Woltersdorf, chairman of the Chapter's Portrait Committee, reported the Committee's efforts toward securing a painting for the Chapter's collection of John M. Van Osdel, Chicago's first architect.

Mr. Reed, speaking as District Officer for Northern Illinois, Historic American Building Survey, commented on the work of the Survey locally, the enthusiasm and morale of the men, the orders from Washington to begin reducing the number employed, and the appeal for the passage of a resolution recommended by the Executive Committee of the Chapter. This resolution was passed and ordered forwarded to the authorities at Washington, appealing for permission to continue the survey to completion, covering 30 odd projects. Rudolph J. Nedved spoke next, as senior squad leader in the Survey's office. Evidence of his contention that the quality of work was of a high order was shown by the exhibition above referred to. A number of the Survey's draftsmen spoke.

E. Stanford Hall reported a recent legal decision to the effect that corporations cannot legally practice any profession. This statement projected a prominent member electrically and vertically with the question: "Then how can the Federal Emergency Housing Corporation, a Delaware Corporation, including in its articles the planning and supervising of buildings, practice architecture?" No answer was forthcoming, and the member in a downward movement was merged with the multitude.

By now the Chapter meeting had taken more than its share of the evening, and Tirrell Ferrenz, Vice-President of the I. S. A. and chairman of the program, with a swing like Sheridan on horseback, swung through a nominal meeting of the Illinois Society direct to the program.

The speaker on the program was F. G. Outcault of the Linde Air Products Company. His subject was "Welding in the Construction and Rehabilitation of Small Buildings"—Illustrated. The title was a misnomer. The speaker prefaced his remarks by enumerating arc welding, spot welding, and other weldings, and finally oxyacetylene welding. The latter was his special field and the speaker confined himself to the welding of sheet metal not thinner than 14-gauge, to piping in many metals and went into detail on piping for ventilating ducts, plumbing, heating, air conditioning and conduits. He referred to the experience and lessons learned by the company and then showed pictures of gutters and sheet metal roofing, vent ducts and piping of many sizes and metals. But of structural members that are used to build houses, not a word.

The Bulletin presents in this issue an authoritative article on structural welding.

Structural Welding Aids Building

Hundreds of examples stand as proof of the recognition of welding as the most useful tool introduced to the structural industry in the last quarter century. In 1907, to the writer's knowledge only six arc welding machines were in operation in the United States and were used to fill in defects in large steel castings. Since then, use of welding has grown by leaps and bounds, some being—building up rail ends, rails, switches, cross-overs, frogs, etc. for railroads; tank and boiler welding. The automobile industry became interested and there followed a multitude of applications in this field. All-welded boilers came in about 1920; hoppers and secondary structural members followed. Today we have completely welded structures.

The Chicago area has at least one hundred examples of structural welding. Early examples are the swimming pools in the Union League, Standard, and Steuben Club buildings. The Sky Ride Towers, 1,500,000 gallon water tank in Evanston, guy derrick on top of Bahai Temple in Wilmette, Jefferson Electric Co's. plant in Bellwood, Mississippi Valley Structural Steel Co's. plant in Melrose Park, perhaps 30 or more structures at A Century of Progress, reinforcement of roof trusses at old Auditorium Theatre, remodeling of 33 North LaSalle St. building, building at Zoo in Brookfield and the new train shed of the LaSalle St. Station, illustrate work done recently.

Over 300 load carrying connections at the LaSalle St. Station job, which is under construction, are welded. The major brackets supporting the 38 roof trusses of this structure are stubs of 24" CB 130 lb. beams welded to the old columns, each supporting from 50 to 60 tons. A test was performed on this job to remove any fear, which those unfamiliar with good welding work on structural steel might have had. Four inches of ½" bead during this test with-

stood without fracture approximately 152,000 lbs. of combined shear and tension stress, or about 38,000 lbs. per lineal inch. The working stress allowed per lineal inch of ½" bead was 3,500 lbs. Thus a factor of safety of at least 11 was assured.

Some advantages of arc welded structures: 1. Less weight of a structure. 2. Simplicity of design. 3. Elimination of noise and vibration during erection. 4. Ease in making reinforcements for strengthening deteriorated structures. 5. Decided price advantage in remodeled work, sometimes in new work also. 6. Harmonizing welded work with interior or exterior design. 7. Obtaining maximum rigidity in a properly designed welded structure. 8. Elimination of field drilling in connecting new steel to old. 9. Where dimension clearances are important, many times welding solves the problem. 10. Introduction and use of the so-called battle-deck floor systems for buildings. 11. Economical remodeling of reinforced concrete construction.

Important facts to bear in mind: 1. Welding is an art and must be handled as a profession, not as a trade. If considered in this manner, the success of structural welding work is equal with the success of the professions of architecture or medicine which have endured through the ages. 2. Welds can be tested by sight inspection with an equal degree of reliability as rivet ringing by one experienced in his work. The factor of safety, as in riveting work, serves its purpose. Several other methods of tests can be employed to dispel unfounded fear, unless the welding is given to incompetent firms on structural welding work. 3. Design of welded joints has not been standardized to date. Each problem has been treated individually. The writer has worked on many such problems and some information is available. Usually a direct substitution of welds for rivets makes a poor welded design.

The Ford Motor Building at A Century of Progress will have 56 welded stiff framed bents and 18 major field connections, plus over 50,000 secondary member welds. The writer recently figured over 250,000 lineal feet of welding requiring over 1½ railroad carloads of welding wire for the trash racks alone on the Boulder Dam project. U. S. Government ship hulls since 1931 are specified to be welded. Foreign countries are also alert as to welding possibilities. Germany, for example, in the last two years has built several all-welded railroad terminals in Berlin.

The building industry in the United States cannot afford to neglect the use of such a valuable tool wherever practicable.

—Robert S. Hale, Structural Welding Consultant.

Joint March Meeting

March 20 the Illinois Society of Architects and the Chicago Chapter, A. I. A., met at the Architects Club. The company numbered about 100 men and a handful of women. Business meetings of both societies were called and disposed of in a most perfunctory manner, resolutions being passed to submit all minutes for review to I. K. (Pond). Delegates to the A. I. A. national convention were balloted upon, and the names of those elected were announced later in the evening.

The star of the evening was the special speaker brought here from Detroit, Architect Albert Kahn who has designed the Ford Motor Company's building now being erected at the Century of Progress. After hearing him present his case, one is not surprised that he is one of the most successful practitioners in this country. He has dynamic force, penetration, appeal, humor, to say nothing of architectural ability. He stood with a pointer in hand before drawings of this Ford building from his own office and from the hand of Hugh Ferris who had made stunning renderings in black and white of in- and exteriors.

The building will be the largest on the Fair grounds. Its central Pantheon-like structure rises higher than anything in the Fair—a quality prompted by reclame. From this point the structure expands with arms of comparatively low elevation. There will be a museum where Mr. Ford will show many of his most precious acquisitions now in the Dearborn Museum. Mr. Ford's theory is that all industry is based upon the soil, so the exhibits are planned to show material found in or on the earth's surface, carried through the various processes to its culmination as part of a Ford car.

Space does not permit going into Mr. Kahn's lucid address, punctuated with anecdote. Suffice it to say that the Ford building in color will be white with blue; that the General Motors building, the Travel and Transport, the Chrysler and other buildings in that section of the Fair will follow the same color scheme, depending upon night illumination for variegated color. The color scheme of the exposition buildings to the north is not yet fixed.

In the middle of the Ford Pantheon will be a pool of water for cooling purposes, surrounded by rings for the housing of electrical equipment to give variation in color. Seats will be aplenty throughout the Ford building, for Mr. Ford when visiting the Fair in '33 got very tired and missed adequate seating accommodations. He contemplates employing an orchestra to play the finer music in his building, music on a higher plane being one of the elements lacking in 1933.

Mr. Kahn dwelt upon the speed in the planning and erection of this building. He also told how he came to be employed originally by the Ford Company, then personally unknown to Mr. Ford and Mr. —— now Senator—James Couzens. Since then Mr. Kahn has designed work for the Ford Company that has cost upwards of $200,000,000.

Howard L. Cheney explained with a map on the wall the location of new features, concessions and the exposition's own additions, for the 1934 Fair.

Chicago Art Institute's Preferred Architects

The Editor: The Art Institute of Chicago has invited two Chicago architects and five New York architects to compete for designs for the proposed additions to their building, and the architects of Chicago may well ask themselves why this is so.

Are there only two architects in Chicago competent to undertake this commission? Are all of the older men, excepting those chosen, too old and doddering, dry witless old duffers, only waiting for the sexton and parson to end a career long since closed? Are our younger men too green and impulsive, too lacking in experience and wisdom to be trusted? The answer to these questions is clearly "No" on every count.

The situation appears to me to be so extraordinary that comment is compelled. The money to be spent probably comes principally from Chicago, and unless there are better reasons than appear on the surface, should be spent in Chicago.

I am told the architects invited are:

Holabird & Root	James Russell Pope
Bennett, Parsons & Frost	Delano and Aldrich
Raymond Hood	Paul Cret
Hyram Walker	

—George Wallace Carr

In the cultures of the modern world the problem of change is central. Structures that have stood the storms of centuries are now crumbling. Institutions which to the historian have had a clearly defined cultural significance in the life of a people are now acquiring a new cultural meaning for the modern generation. Symbols have an altered emotional value for the aspirations of a new age. Modernism is a world-wide fact. Change in the historic past moved with a slower tempo. The influence and effects of trade relations were absorbed gradually. The thrust of a conquering army shocked a generation and then the old rhythm of life was resumed, the conqueror and his gifts of culture added to the ancient pattern. When waves of ruthless destruction overwhelmed a high culture, the early world required centuries to build on the ruins a new synthesis.

A. Eustace Haydon, U. of C.

1876 — John Norton — 1934

A master craftsman has passed on to labor in fairer fields, to carry to other spheres the torch that he held so high in this. Architecture is poorer in the passing of one who worshipped at her inmost shrine and whose supreme joy lay in the decoration of her outer forms.

For John Norton was a true craftsman—a great teacher—gifted with a sublime sense of the fitness of things and an ability in his chosen field to make the very walls sing. From many indications it would appear the earlier years of his work were but preparation for the flowering of his later efforts. In the role of a successful portrait painter he found disappointment in that it did not permit the full use of his constructive ability. In his water colors from Morocco, Mexico and Barbados, interesting and fine as they are in themselves, there appears an indication that they are but studies for use in mural painting, while in his studio were to be found literally thousands of sketches of landscapes made, perhaps, with the painting of murals in mind.

In the course of his work John Norton developed a great admiration for Piero Della Francesco, fifteenth century Italian, and for the work of the early fifteenth century above that of the emotional work of the later renaissance, in which fact may be found a key to the character of much of his work.

The commission for a mural in a Wisconsin museum became the nucleus of a series of paintings that have made the name of John Norton famous, not only in the Middle West, which is particularly favored with his work, but throughout the country.

He was versatile, as may be easily imagined from the following selections of his work, many of which, fortunately, are accessible to the reader.

In the library of Loyola University are presented scenes of the Indian Country opened up by the Jesuit explorers. On one whole wall of the Chicago Motor Club there is a practical map of the United States, blending beautifully with the entire conception. A colossal figure, some 35 feet in height, of Ceres, Goddess of Corn, commands the Trading Room at the Chicago Board of Trade. On the ceiling of the concourse of the Chicago Daily News building is depicted, in a stupendous effort, the gathering, printing and distribution of the news of the world, picturing, incidentally, practically the whole gamut of our present civilization.

In the lobby of the Court House at Birmingham, Alabama, are murals which portray the contrast between the gentility and culture of the aristocratic days of the South before the Civil War, with the changes that brought into existence the business, commerce and manufacturers of today. In the Council Chamber at St. Paul are four murals telling the story of the Northwest's pioneer days and its rise to its present greatness.

At a Century of Progress a frieze 150 feet in length enlightens the beholder on the intricacies of chemistry and physics in a tremendously interesting and clear manner. In the limited time he had to execute this, his logical selection of the progressive phases of science was, indeed, marvelous.

John Norton had the power of finding for all his problems the logical simple forms best fitted to express them, and then with almost childlike spiritual clarity. He had a great sense of scale with an amazing knowledge of the ultimate effect from the viewpoint of the observer.

In the lounge of the Tavern Club is to be found one of the more intimate examples of his work, one for which he was awarded the Architectural League Medal in 1930 and one that, perhaps, permits of a closer examination of his style of craftsmanship. From a fixed palette of seven or eight major colors are developed cool greys, yellow greens, sparing grey ultramarines in blue waters with warm red accents, greys of close values and of infinite graduation.

In his work, generally, his use of close values gives monumental scale and yet his work always remains "on the wall." There are no terrific contrasts; his forms as a rule do not cast shadows and are very solid. His forms and figures are stylized, formal rather than dramatic, and possess a quiet static repose. John Norton possessed such pride of craft in his work that the possibility of artistic confusion was excluded. He disliked all pretense and the burning of incense before works of art. A good drawing, well conceived, well painted and well done was his entire satisfaction.

Exhibiting such a great individuality, he was surprisingly liber in his attitude to the works of others. He admired the work the extreme moderns, as well as that of the past; in fact, all wor if sincere, and he hated any suggestion of slavery to an academ regime.

He exerted a great influence over younger artists and studen and in giving criticisms he could always feel his fellow artists' poin of view and criticize in the man's own terms. In his ability t teach he was supreme.

John Norton was intensely practical; he was an inventor i his craft; his studio was a veritable laboratory; science, with ac ventures into the realms of higher mathematics, was his delight He possessed a most logical mind and his desire for the exactne of things was intense.

His studio was a mural painter's dream. Formerly the Essena Studio where the early Charlie Chaplin pictures were produced, i was spacious and had a 30-foot ceiling. Here were all the accoutre ments of his craft—projecting machines to enlarge his smalle sketches, etching presses, lithograph equipment, and myriad device for experimentation. He prepared his own canvases and in all way his knowledge of the media of his craft was exact and far-reaching

John Norton's contribution to the problems of an architec was always valuable and when called into conference he was a great listener to the other man's ideas.

In his work he gave first consideration to the wall and the architecture to which it belonged; secondly to the need of fine workmanship; and lastly to his own individual expression, telling in his own way his reverence for architecture and his recognition of it as the mother of all arts.

While there are thousands of painters interested in expressing themselves on small canvases, only a handful can attempt the paint ing of murals. John Norton belonged to this precious few. His philosophy of life seemed to be largely based on his keen analysis and understanding of humanity in general.

John Norton was a much loved man.

—*Henry J. B. Hoskins.*

Tax Bills Cut in Cook County

The mailing of real estate tax bills for 1932 has just bee completed and throughout the county there is real rejoicing over the 25% cut in assessed valuations.

"This reduction," announced Assessor Jacobs, "will release millions of dollars for other necessary purposes and will stimulate business and employment. It will reduce the cost of operation of improved properties and start the revival of faith in real estate by laying the ghost of confiscatory taxation."

Representatives of various civic groups have acclaimed the Assessor's action with the assertion that it is the most constructive step which has yet been taken to bring Chicago and its citizens out of the depths of financial depression.

The Illinois Society of Architects joins its commendations to those already expressed and calls the attention of its members to the humble roll which the Society has filled in helping to bring about this courageous action by the Assessor.

As long ago as February 8th of the past year the Architects Advisory Committee addressed a communication to the Assessor which concluded with the following paragraph:

"In the spirit of helpful cooperation that this Committee is anxious to show, we suggest that the possibility of making a horizontal reduction in appraised values for the 1932 tax is a matter that deserves the most serious consideration, and we offer our cooperation in determining the percentage of reduction in building costs between the periods under consideration."

It is a tribute to the constructive statesmanship of the Assessor to say that the significance of the above suggestion was immediately recognized by him and acted upon.

It should be pointed out, however, that valuations alone do not make the tax. The size of the bill is determined by the amount of public expenditures and not by the valuations set by the Assessor. Further drastic reductions in governmental expenditures must be made if citizens are to obtain the full measure of relief which is necessary to bring about recovery in the building industry.

Architektonisches Gestalten

Architektonisches Gestalten (architectural form-building) is a presentation to the profession through Felix Kayser, editor and compiler, of a sixty-six page book on a new architecture designed and fostered by anthroposophical architects in Switzerland, South Germany, Vienna and The Hague. The work of twelve architects is shown. The fundamental ideas underlying this work are all drawn from the teachings of Dr. Rudolf Steiner, founder of the Anthroposophical Society whose branches are now found in many countries of the Western world.

The book opens with a pictorial presentation of the Goetheanum at Dornach near Basel in Switzerland. This building is the parent house of the Society and incorporates a theater with large stage, class rooms, laboratories, etc. It is the second building of this name in this location, the first, a wood structure, having been destroyed by fire. The present Goetheanum was designed in reinforced concrete. Both first and present buildings were designed by the late Dr. Steiner, who did not live to see the second reach fruition. He had, however, made a model which others followed faithfully, the building reaching completion in 1928. This Goetheanum, designed by the master, is the key to all efforts of anthroposophical architects.

The fifty-two pages of illustrations are accompanied by text which should be considered in any review. First the publisher contributes a note, reminding the reader that a new German art is in the making; that to a publisher of vision it is of value—even a duty—to give voice to the most diverse streams and thought tendencies for purposes of discussion. Particularly is this so owing to the over-emphasis in the most recent past on use-values of house, interior, and furniture. Though the forms developed in the work of anthroposophical architects may not appeal, their spiritual content should not be denied, but rather encouraged in the hope of re-establishing higher meanings in architecture and raumkunst.

The foreword is written by Oberregierungs- und -baurat Dr. Gessner. He complains that today justice to material is not developed from character of that material, but that the tool dictates. A new art must develop a static which justifies organic forms precedent to calculation. The pictures, he says, may leave the impression that modest beginnings of new aesthetic creation are for the present dealt with. The road is clear. That it is traveled is encouragingly evidenced by the illustrations.

George Nemes, architect, whose work is illustrated, comes next with a statement that more and more voices are raised against the spiritual paucity which is evident today also in architecture. In architecture the great spiritual barrenness of the present is mirrored. He rejoices in the interest shown by the executing mechanics—the mason, the carpenter, and others—in working out the living organic forms of this new architecture. Mr. Nemes cites Goethe as finding the method of a fruitful point of view more important than the ultimate achievement.

Finally comes the word of the editor, Felix Kayser. He says the same forces that in the plant world move upward to the light and create multifold form differences, come forward in aesthetic transformation—figuratively. Such forms may therefore properly be called organic. He does not believe in roof organization for simplicity over the entire structure, but seeks rather to roof individual rooms separately, thus giving a stepped and varied roof to a structure. He who has learned to observe, says Mr. Kayser, must experience a flat roofed house as he would a man without a head. He calls this "rump architecture." For what shocks him in flat roofed buildings is the complete lack of relationship to spiritual forces—forces that have developed man in his form from the cosmos.

It is not the purpose of this reviewer to pass judgment on the results given through photographs in this book. That Dr. Steiner's Goetheanum is plastic, a quality befitting concrete, no one will deny. The habit of nipping off the corners from rectangular openings with an oblique line is often not understandable by this reviewer. It must be prompted by some spiritual reason he does not understand. In the work of Dr. Steiner's architect disciples, the flaring out of concrete walls to meet what ordinarily might be eave or gable overhang, this writer experiences as unbeautiful and again does not understand the reason. This book presents to the architect, however, the precipitation in architecture of anthroposophical convictions and should be studied with an open mind.

The book is published by Akademischer Verlag Dr. Fritz Wedekind & Co., Stuttgart, Germany, and a copy may be found in the Burnham Library of Architecture, The Art Institute of Chicago.—*A. W.*

Building in Scandinavia

Architect L. Marnus of Copenhagen, Denmark, delivered an illustrated lecture on "The Art of Building in Scandinavia and Scandinavian Countries" in Fullerton Hall of the Art Institute of Chicago on Friday, March 2. He told his audience that during the last decade very few monumental buildings had been erected in these countries, the bulk of the work being workingmen's dwellings, factory buildings and blocks of flats, a type of work which strangely enough had never before been the greatest aspiration of the better architects. The pictures showed that the classical attitude is reflected in the work of today and each country has retained its own individual characteristics, where traditional charm and functionalism are successfully combined.

Mr. Marnus prophesied that reinforced concrete will last only until another material with fireproof qualities is developed to take its place. His plea is for architects the world over to cooperate on the development of standard units for the house of the machine, so that individual dwellings may be within the reach of all.

Arthur G. Brown, Chicago architect, died on a train at Atlanta, Georgia, en route to Florida on February 18. Mr. Brown was a Californian by birth, having been born in Marysville, that state, in 1869. His architectural experience began on the Pacific coast. He came to Chicago in 1889 and worked in the office of John M. Van Osdel II about one year before returning to Los Angeles. A year later he was in the office of D. H. Burnham & Company, Chicago, during the building of the World's Fair of 1893. In 1893 he entered the office of Wm. A. Boring, architect, in New York. In 1895 Mr. Brown was again in the Van Osdel office in Chicago. From 1901-10 he was chief draftsman for Frost and Granger; in independent practice in 1910; his firm from 1912-16 was Brown and Walcot. Since 1925 he had been in the employ of the Pure Oil Company as architect. Bob o' Link Golf Club, Dawes Lodging Hotels in various cities, churches and residences, were among his outstanding works. He became a member of the A. I. A. in 1911.

Jason F. Richardson, Jr., architect, of Ottawa, Illinois, member of the Illinois Society of Architects since October 27, 1914, died during the middle of February.

Paul F. P. Mueller, well-known builder, died in Mercy Hospital, March 11, of a heart attack, aged 69. Mr. Mueller was born in Neuenkirchen, Germany, came to the United States with his father when he was 16 years of age, studied structural engineering and was employed in the office of Adler and Sullivan, architects, during the planning of the Chicago Auditorium. He was made superintendent of construction on that building by the architects.

He was the builder of the Schiller Building, Chicago, designed by Adler and Sullivan. In New Orleans he constructed the Atheneum Club and buildings for the U. S. Navy. For Frank Lloyd Wright, architect, he built Larkin Soap Company's office building, Buffalo; Unity Church, Oak Park; Midway Gardens, Chicago; the new Imperial Hotel, Tokyo, Japan, which withstood the earthquake of 1923; and more recently a residence in Tulsa, Oklahoma, for Richard Lloyd Jones.

Saw the falls of Terni. They used to be the finest in all Europe. Lord Byron wrote a poem about them, telling how the waters of the Velino come splashing down in a foamy cataract. But that was long ago. The falls have gone flat. Hydro-electric works have diverted the power to provide Rome with electricity. Too bad!—*Bruno Lessing.*

Sign over the desk of a leading dairy executive: "All that I am I owe to udders."

It takes jacks or better to open a Pullman window.

The Architects Club of Chicago

Architect Members: The Chairman of the Membership Committee insisted that I write and sign this communication.

"Bill," he said, "you can do this much better than I, for you speak their language."

I leaned back in my chair, oblivious of his presence. "Speak their language" I kept repeating. My thoughts took full rein. I looked around the large panelled room where all was quiet and restful. "Speak their language" I kept repeating.

Here, in the quiet, I had a feeling of unseen eyes watching me. Shadows which looked down—Wight....Jenney....Beman....Root ....Burnham....Anderson....Sullivan....Adler. "Granger," I read, "1867—". In my fancy I saw the old Temple Building where we, in the office, marvelled at his extravagance of a clean shirt a day. "Pond," I read; what old Y. M. C. A. memories that name evoked. And like Poe's raven, I kept repeating, "Speak their language."

"Of course, Mr. Chairman, I speak their language;" but sadly to myself, I thought, the public has long forgotten it. Maybe it started when we built the temple. Maybe we alone were left with our babel of voices, while even in those remote ages, the world moved ever onward.

Like the toy dog and musket of "Little Boy Blue" our five orders have been laid away....gone forever, while through the world a change has occurred....organization....organization....organization.

Do you know that in Chicago alone there are over one thousand architects? Open the Illinois Society Handbook, check up on your classmates and friends. Call them on the phone. Preach ever the panacea for this era....organization....organization....organization. Surely there must be 300 who will be glad to be welcomed into our club; and paraphrasing the immortal words of Lord Nelson: "Remember, the Club expects every architect to do his duty".

The dues have been reduced to $25 per annum, paid quarterly in advance. Further, the initiation fee of $100 has been waived.

—*W. Gibbons Uffendell, President*

Brooklyn Bridge Fifty-One Years Old

Fifty-one years ago the Brooklyn Bridge was completed. It was the crowning achievement of John A. Roebling—a monument to his vision, courage and genius. He had conceived and developed the modern method of constructing cables by stringing wires through the air, and had built a number of notable suspension structures including the recordbreaking spans at Niagara and Cincinnati. Those achievements, however, were but preliminary training for this greater work that was to cost him his life while crowning it with glory. When he presented his plans for flinging a mighty span across the East River, he had to fight his way, inch by inch, against disbelief, ignorance and prejudice, before the right to try was given him. He overcame all obstacles and succeeded in seeing his project finally launched. But he was not fated to behold the fulfillment of his dream—he died during the first year of construction from an injury received on the work.

The work he had planned was carried forward with loyalty and courage by his son, Washington Roebling—but not without further vicissitudes and sacrifices. During the sinking of the deep foundations, fire broke out in one of the timber caissons and young Roebling fought heroically to save his father's dream from destruction. For twenty-four hours without relief, Roebling remained in the heart-crushing pressure of the compressed air in the subaqueous chamber, fighting the flames hour after hour until the structure was saved. He was carried out, broken in body, a paralytic invalid for life. On the day when the bridge opening was celebrated, amidst clanging of bells and shrieking of sirens, the procession marched in front of Roebling's home to do honor to the man who had sacrificed himself to carry the project to its consummation.

When the Brooklyn Bridge was completed in 1883, it wa heralded as one of the "Wonders of the World." It was a triump of the bridge builder's art.

But the science of bridge building was then in its infanc The first crude theory of suspension bridge analysis did not appe until too late to influence the design of the Brooklyn Bridge. A cording to modern analysis, the stiffening trusses of that structu are grossly inadequate. Nevertheless, the Brooklyn Bridge, designe by empirical judgment and rule of thumb, has been carrying, aft a generation of service, two or three times the loading for whic it was planned. The trusses are weak and can be replaced, bu the towers, cables and anchorages are good for centuries.

The Brooklyn Bridge and the Eads Bridge (completed 1874 represented practically the first use of pneumatic caissons for bridg foundations. The successful completion of those foundations wa regarded as a great achievement. Since then the methods of sinkin deep foundations have been greatly improved and greater depth have been successfully reached.

The recently completed foundations of the Carquinez Bridg in California go down through 90 feet of water in swift curren to a depth of 135 feet below the water surface. In sinking th foundations of the Hell Gate Arch Bridge, a chasm was encountere in the underlying rock and this was bridged by a concrete arc built under the caissons at a depth of 70 feet below the surfac Such improvements in the art of building foundations have extende the range of feasibility of bridge projects.—*D. B. Steinman, Con sulting Engineer.*

From Dr. Traprock's Memory Book

It was a gay, happy year and I regretted the faculty mandat that finally graduated me in '87. I hated to give up my connectio with the University, so that summer I organized the Traproc Student Tours, Inc., an educational enterprise for undergraduat of means. Social polish was not demanded as that was the ver thing the tour was supposed to provide. It was an enormous su cess. Forty young men with ample letters-of-credit sailed with m on the "Umbria," then the crack Cunarder. After a few days i London we crossed to Paris where we visited Napoleon's tomb Montmartre, the Latin Quarter, Morgan Harjes and historic rac courses in the environs.

From Paris various research groups departed for Vienna Munich, Trouville, Monte Carlo and other *monuments historique* while others remained with me in the French Capital to make a exhaustive study of the lives and habits of the natives. The only hitch was the re-assembling of the groups. Some of the student didn't get back to New Haven until after the mid-year examinations The faculty, while warmly in favor of my educational aims, re quested me thereafter to confine my enrollments to graduate stu dents, which I promised to do.—*George S. Chappell.*

The early Dutch Colonial homes of Northern New Jersey after two hundred years still offer their mute lesson on how to beat the mortgage racket. The Historic American Buildings Survey shows that the little two-room and loft wing was built first, and when the owner could afford it, the main house was added later. Stone walls, solid oak beams and character these houses possessed and now they suffer the crowning glory of that artistic triumph of our boasted "high standard of living"—the paper shingled roof.—*Quid Nunc, Architects League of Northern New Jersey.*

Under all the changing embodiments of culture through the ages runs the unconquerable drive of the desires of men for the satisfactions of the complete life. This creative force does not fail. The phoenix arises from its own ashes. Out of the dissolving cultures of the past new forms and structures based on new philosophies of life are emerging. To the observer of world change the most fascinating phase is the creative transformation of the "unchanging East."—*A. Eustace Haydon, U. of C.*