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ELIZABETH SCOTT HUNT, Managing Editor
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MINUTES OF MARCH
EXECUTIVE BOARD MEETING

State Association of Wisconsin Architects

The Board of the State Association of Wisconsin Architects met on Saturday, February 23, 1946, in the Chestnut room of the Plankinton House, Milwaukee. The regular business session was delayed by the absence from the meeting of President Edgar H. Berners until after lunch.

Present at Morning Session: Emil F. Klingler, Districts Nos. 1 and 2; Henry Auler, District No. 5; Leigh Hunt and T. L. Eschweiler, District No. 7; Robert S. Chase and A. J. Seitz, District No. 8.

By Proxy: C. Madsen and Gage M. Taylor, District No. 4; Perc Brandt, District No. 5; Allen J. Strang, District No. 6.

Absent: Lewis Siberz, District No. 6.

The meeting was called to order by Mr. Klingler, seconded vice president at 11:40 o’clock and was adjourned for lunch at 11:50, when we were joined by President Berners, Mark F. Pfalher, and Attorney Gerald L. Rice.

The session was resumed at 12:40, with President Berners in the chair.

Minutes of the previous meeting were approved as printed in the December 1945 Wisconsin Architect.

Mr. Eschweiler reported on a meeting of the Wisconsin and Milwaukee Chapter of the General Contractors Association held at the Pfister. Mr. Rice and Mr. Hunt also spoke on the meeting. The discussion was on the subject of the need for an interim joint committee on legislative matters. The matter was left till the A.G.C. April meeting.

Mr. Eschweiler reported on the work of the Joint Committee composed of the Engineer’s society and the State Association on a full time secretary for the Board of Examiners. He reported that the problems had been discussed. It was decided to drop the request for a full time secretary at this time.

The Publisher read the financial report of the Wisconsin Architect and the report was approved as read.

The motion was made by Mr. Eschweiler and, seconded by Mr. Seitz that the State Association have one delegate to the 1946 Convention of The American Institute of Architects to be held in Miami Beach, Florida, on May 8, 9, and 10, and that this delegate be the president and he to be paid $15.00 per day for expenses and also be paid the cost of railroad and Pullman transportation. The motion was carried.

The motion that Leigh Hunt be the alternate delegate on the same terms as those found in the preceding motion, was made by Mr. Klingler, and seconded by Mr. Auler—Carried.

The Chair read a list of architects to act as advisors to U.N.O. for the selection of the architect.

Mr. Eschweiler moved that 2000 copies of the New Schedule of Proper Minimum Charges and Professional Practice be printed and that the President appoint a committee for the purpose of studying this schedule. Seconded by Mr. Klingler. Carried.

It was moved by Mr. Auler and seconded by Mr. Pfalher that this committee study the charges for architects’ services and discuss the matter with Attorney Rice.

The motion that the secretary be directed to pay the association’s dues to The American Institute of Architects as state association member, was made by Mr. Pfalher, seconded by Mr. Auler and carried.

The meeting was adjourned at 4 p.m.

Respectfully Submitted
Leigh Hunt, Secretary

WISCONSIN CHAPTER
BOARD OF DIRECTORS MEETING

Minutes of the Board of Directors Luncheon Meeting, Wisconsin Chapter, A. I. A., held at the Plankinton Hotel Tuesday noon, March 12, 1946.

Those present were: R. H. Kloppenburg, T. L. Eschweiler, Leigh Hunt, Guy E. Wiley, Elmer Johnson, John J. Brust and Fred A. Luber.

Absent: Edgar H. Berners

The meeting was called to order by President Kloppenburg.

George Spinti, who had previously been appointed chairman of a committee to arrange for the March membership meeting program, was present to discuss the proposed details of the program. Mr. Spinti stated that he had been in touch with Mr. Jacobson of the Wisconsin State Chapter of the American Institute of Decorators, Inc., and that various types of programs were being considered. It was finally agreed that Mr. Spinti had the matter well in hand and would proceed to develop the final details with Mr. Jacobson and would then furnish the necessary information to the secretary in order that notices of the meeting could be sent out. Mr. Spinti left the meeting after the subject was disposed of.

The secretary reported that copies of booklet “Let’s Plan a Peacetime Home” have been received and sent to the eight members who had ordered them at the last membership meeting.

The secretary was directed to again write the Chicago Chapter, A.I.A., with reference to nominations for regional directors. The letter sent Mr. Schlossman on February 20, 1946 had not been acknowledged.

The notice of application for membership in the A.I.A., dated February 25, 1946, of Maury Lee Allen was sub-
MITTED TO THE BOARD, AND UPON MOTION BY LEIGH HUNT, SECONDED BY T. L. ESCHWEILER, AND UNANIMOUSLY CARRIED, THE BOARD WENT ON RECORD AS APPROVING THIS APPLICATION.

LETTER FROM MR. OBERWARTH OF THE INSTITUTE, DATED MARCH 10, 1946, WAS PRESENTED. MR. OBERWARTH INQUIRED AS TO WHETHER THE SECRETARY OR PRESIDENT OF THE CHAPTER NOW ACTS AS CHAIRMAN OF THE MEMBERSHIP COMMITTEE, OR IF A SEPARATE COMMITTEE AND CHAIRMAN ARE APPOINTED. THE BOARD DIRECTED THE SECRETARY TO NOTIFY MR. OBERWARTH TO THE EFFECT THAT THE SECRETARY WILL HEAD UP THIS ACTIVITY AND WILL OBTAIN SUCH ASSISTANTS FROM THE MEMBERSHIP AS REQUIRED FROM TIME TO TIME.

THE SECRETARY REPORTED THAT HENRY P. PLUNKETT HAS RETURNED FROM MILITARY SERVICE.

COPIES OF THE PAMPHLET ENTITLED "OPPORTUNITY UNLIMITED" HAVE BEEN RECEIVED AND DISTRIBUTED AMONG THE BOARD MEMBERS.

THE SECRETARY SUBMITTED A LETTER FROM THE NEW JERSEY CHAPTER WITH REFERENCE TO A MONTHLY BULLETIN WHICH THAT CHAPTER NOW PUBLISHES. THE SECRETARY WAS DIRECTED TO ACKNOWLEDGE RECEIPT OF THIS BULLETIN AND TO SEND THEM A RECENT COPY OF "THE WISCONSIN ARCHITECT".

THE SECRETARY ANNOUNCED THAT LEROY A. RIEGEL HAS NOW BEEN FORMALLY TRANSFERRED FROM THE KANSAS CITY CHAPTER TO THE WISCONSIN CHAPTER.

A COPY OF A RESOLUTION PASSED BY THE CHICAGO CHAPTER AND CONTAINED IN A LETTER FROM NORMAN J. SCHLOSSMAN, SECRETARY, DATED FEBRUARY 12, 1946, PERTAINING TO QUALIFICATIONS FOR MEMBERSHIP IN THE A. I. A., WAS SUBMITTED TO THE BOARD AND WAS BRIEFLY DISCUSSED. NO FORMAL ACTION WAS TAKEN.

THE SECRETARY PRESENTED A LETTER FROM MAYNARD W. MEYER OF MILWAUKEE INDICATING THAT HE IS DESIROUS OF TRANSFERRING HIS MEMBERSHIP IN THE INSTITUTE FROM THE CONNECTICUT CHAPTER TO THE WISCONSIN CHAPTER. THE SECRETARY HAS FURNISHED MR. MEYER WITH AN OUTLINE OF THE PROCEDURE TO BE FOLLOWED TO EFFECT THIS TRANSFER.

THE SECRETARY PRESENTED A LETTER FROM THORVALD PEDERSON, SECRETARY OF THE CENTRAL NEW YORK CHAPTER, DATED FEBRUARY 20, 1946, WITH REFERENCE TO THE CANDIDACY OF WILLIAM G. KAELBER FOR THE OFFICE OF REGIONAL DIRECTOR, NEW YORK DISTRICT. THE SECRETARY WAS DIRECTED TO INFORM MR. PEDERSON THAT OUR DELEGATES TO THE CONVENTION WILL BE UNINSTRUCTED AND THE CHAPTER, THEREFORE, CANNOT VERY WELL SPONSOR ANY INDIVIDUALS.

THE APRL MEETING TO BE HELD ON WEDNESDAY, APRIL 17TH, IS BEING ARRANGED FOR BY MESSRS. CARL ESCHWEILER AND LEIGH HUNT. IT IS THE INTENTION TO ENTERTAIN THE YOUNGER DRAFTSMEN AND ARCHITECTS AT THIS MEETING. FINAL DETAILS OF THE PROGRAM WILL BE ARRANGED BY THE COMMITTEE. THIS IS TO BE AN EVENING MEETING BUT NO DINNER IS TO BE SERVED. THE COMMITTEE SHALL ALSO SELECT THE LOCATION AND ARRANGE FOR THE RESERVATIONS.

THE MAY MEMBERSHIP MEETING WILL BE HELD ON MAY 15TH, AND WILL BE UNDER THE DIRECTION OF JOHN J. BRUST. THIS WILL BE A NOON MEETING TO BE HELD AT THE PLANKINTON HOTEL. MR. BRUST REPORTED THAT HE IS NOW CONSIDERING AN ILLUSTRATED TALK TO BE GIVEN BY ED KLOTZ ON THE DEVELOPMENT AND USES OF PLASTICS. THIS PROGRAM WAS TENTATIVELY APPROVED BY THE BOARD, AND MR. BRUST WILL PROCEED ACCORDINGLY.

THE APPOINTMENT OF AN ENDOWMENT COMMITTEE IS TO BE DEFERRED.

THE SECRETARY STATED IT WOULD BE NECESSARY TO APPOINT DELEGATES FOR THE MIAMI BEACH CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS TO BE HELD ON MAY 8, 9, 10, 1946. THE SECRETARY WAS DIRECTED TO NOTIFY THE MEMBERSHIP TO THE EFFECT THAT THEY ARE TO INDICATE WHETHER OR NOT THEY ARE INTERESTED IN BEING CONSIDERED AS DELEGATES TO THIS CONVENTION. ALL THOSE SIGNIFYING THEIR DESIRE TO BECOME DELEGATES WILL BE VOTED ON AT THE MEMBERSHIP MEETING TO BE HELD MARCH 20TH. IT IS UNDERSTOOD THAT ALL OF SUCH DELEGATES WILL PAY THEIR OWN EXPENSES.

THE MEETING WAS ADJOURNED AT 2:15 P.M.

RESPECTFULLY SUBMITTED,
F. A. LUBER, SECRETARY

MEMBERSHIP MEETING, WISCONSIN CHAPTER, A.I.A.


THE PROGRAM CONSISTED GENERALLY OF A ROUND TABLE DISCUSSION ON THE RELATIONSHIP BETWEEN ARCHITECTS AND INTERIOR DECORATORS. THE FOUR QUESTIONS PARTICULARLY DISCUSSED WERE:

1. WHERE DOES THE ARCHITECT'S WORK LEAVE OFF AND THE WORK OF THE DECORATORS BEGIN?
   THE ARCHITECTS' POSITION WAS OUTLINED BY MR. PHILIPP AND THAT OF THE DECORATORS BY MISS JENSEN.

2. HOW CAN INTERIOR DECORATORS AND ARCHITECTS WORK TOGETHER?
   THE ARCHITECTS' POSITION WAS PRESENTED BY MR. SCOTT, AND THE POSITION OF THE INTERIOR DECORATORS BY WILLIAM MACARTHUR.

3. TO WHAT EXTENT WILL MODERN STYLES IN DESIGN REPLACE THE OLDER PERIOD STYLES?
   THE ARCHITECTS' POSITION WAS PRESENTED BY MR. PHILIPP, AND THE POSITION OF THE INTERIOR DECORATORS BY MR. JACOBSON.

4. TO WHAT EXTENT WILL THE MUCH PUBLICIZED NEW MATERIALS AFFECT RESIDENTIAL DESIGN AND CONSTRUCTION?
   THE ARCHITECTS' POSITION WAS PRESENTED BY MR. PHILIPP AND THE POSITION OF THE INTERIOR DECORATORS BY MR. JACOBSON.

THE ABOVE DISCUSSIONS WERE FOLLOWED BY A QUESTION AND ANSWER PERIOD, RELATING TO ARCHITECTURE, TYPES OF CONSTRUCTION, AND INTERIOR DECORATING, IN WHICH NUMEROUS PERSONS PARTICIPATED.

GENERALLY, THE MEETING WAS CONSIDERED VERY SUCCESSFUL AND BROUGHT TOGETHER TWO GROUPS WHOSE WORK IS CLOSELY AFFILIATED, AND WHO SHOULD MAINTAIN THE FULLEST COOPERATION. THE THOUGHT WAS EXPRESSED THAT POSSIBLY ONE JOINT MEETING A YEAR OF THE TWO GROUPS WOULD BE DESIRABLE IN ORDER THAT MEMBERS OF BOTH GROUPS CAN BE ADVISED OF ANY NEW DEVELOPMENTS IN THE FIELD AND CAN INTERCHANGE IDEAS.

THE MEETING WAS ADJOURNED AT 9:15 P.M.

RESPECTFULLY SUBMITTED,
F. A. LUBER, SECRETARY
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NATIONAL WAGE STABILIZATION BOARD

Division of Public Information

On February 16, 1946, following the issuance of the President’s Executive Order 9697, the Chairman of the Wage Adjustment Board issued a public release, a copy of which follows herewith, which emphasizes that wage control still exists in the Building and Construction Industry. This means that rates paid to employees in this industry which exceed those approved by the Wage Adjustment Board for the particular area in which the work is performed, are illegal payments which subject the employer to rather severe penalties. The penalty for unauthorized wage payments includes the disallowance for income tax purposes of the entire payroll affected by the illegal increase, and in cases of willfullness the penalty may be one (1) year in the penitentiary or $1,000 fine, or both.

Violators are given a notice of hearing before the Wage Stabilization Board Enforcement Division which hears the case and makes a determination as to the existence of a violation and assesses the penalty provided for by law.

The following statement regarding wage increases in the building and construction industry was issued by Chairman Arthur D. Hill of the Wage Adjustment Board, an agency of the National Wage Stabilization Board, to avoid any misinterpretation which might result from announcement of Executive Order 9697 establishing a new national wage-price policy:

“Wage increases in the Building and Construction Industry which have not received the prior approval of the Wage Adjustment Board are still illegal and are still subject to the penalties prescribed by the Stabilization Act.

"Under the newly announced wage-price policy, the rule for most wage increases is that prior approval of the National Wage Stabilization Board must be obtained if the employer wishes to use the increased wages as a basis for price relief or for increasing costs to the government, but a wage increase which the employer is willing to absorb is not illegal. In the Building and Construction Industry, however, the rule has been and continues to be that all wage increases made without prior approval are illegal.

"The continuation of direct wage control in the building construction industry was decided upon right after V-J Day when the legal restrictions were removed for most wage or salary increases. Executive Order 9599 issued on August 18, 1945, merely authorized the stabilization agencies to relax direct wage controls in such cases as it thought desirable. Because of the special inflationary problems in the building construction industry, wage controls in that industry were not relaxed. The Executive Order issued yesterday, did not operate to change the situation.

"Employers wishing to make increases affecting employees in the Building and Construction Industry are required, therefore, to apply to the Wage Adjustment Board before putting the increases into effect in exactly the same manner as has been required heretofore."
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The story of the building of Salisbury Cathedral is perhaps the most romantic of the great medieval churches in England. Two miles north of the city and four miles from Stonehenge lies the great prehistoric station of Old Sarum.

In the Norman period a Cathedral and its appurtenant buildings were erected on the site in 1092; the outlines of the plan are visible to-day in the preserved walls.

In 1220 Bishop Richard Poore took the courageous step of transferring the building of his great new cathedral to the “water meadows” down by the Avon and it is here that our main subject begins. The new site at that time was said to be one “to which the whole world cannot produce a parallel.” That is not entirely extravagant. The area of the Close is slightly less than half a mile in length and width. It adjoins the Avon which was navigable for transport until recent times. The surface is devoid of gradients and has the best possible geological formation for carrying great buildings.

For the new Cathedral church a plan of great dimensions was laid down. From the start, design and construction were of the highest order of that Early English technique, marked throughout in its beautiful craftsmanship and design. The plan consists of a ten-bay Nave, a Choir of seven bays, north and south Transepts, all with aisles, a Reiochoir, Sacristy, north porch, Chapter House, Muniment Room, Library and Cloisters. The total length is 480 feet, the width of the Transepts 230 feet, the internal width of the Nave, the Choir and of the early tower, 33 feet. The plan remains generally in its mediaeval form. Two Chapels, Hungerford and Beauchamp, were, however, removed in the early nineteenth century from the sites on either side of the Lady Chapel Choir. A porch was removed from the north transept wall, otherwise the Cathedral remains in its original lay-out.

The vault of the Nave is 64 feet high. The thirteenth century height of the low tower was about 115 feet from the floor. Then followed one of the most remarkable feats in building of all time. In the fourteenth century two stages of a tower and a great stone spire were added upon the original structure, together with a considerable amount of metal reinforcement in the earlier and later masonry, reaching ultimately to a height of 400 feet. These dimensions convey a general sense of the scale of the Cathedral, and although it is by no means the largest example, its principal character lies in the abnormal height of its central feature and in the general uniformity of thirteenth century design throughout.

Below the top soil of the site and at a depth of five feet is a deep bed of coarse flint ballast, somewhat uniform in its structure and permeated by a chalky clay mixture which has a binding effect. For foundation purposes it is ideal but irksome to excavate and to spread. The saturation line of the site is at a general high level varying with the rise or fall of the river. The Nave floor is slightly below the surface of the site of the precincts and in exceptionally wet seasons the interior of the Cathedral is subject to flooding.

This formation receives abnormal, concentrated loads. In modern engineering requirements a load of six tons to the square foot would be deemed a safe calculation, yet the great weight of the piers carrying the tower and spire indicate that there are 20 tons to the square foot on the gravel soil. In 1937 this calculation was confirmed by the well-known consulting engineers, Messrs. Douglas Fox & Partners. The foundations hitherto explored go down no more than five to six feet from the surface; the bases of the piers have in several instances tilted, or have compressed the ballast, but the formation remains firm, without con traction. This tilting or depression has not increased for hundreds of years. There is no attempt at footings as we understand them beyond the use of larger flints and occasionally some old stone re-used and roughly laid in mortar. The stone throughout is from the Chilmark quarries in Wilts — a reliable limestone of a greenish-grey colour. A great quantity of Purbeck marble is also seen in constructional features as well as in applied decorative works; it is mainly used to carry concentrated loading.

Fortunately the mortar throughout is composed of lime and sand and it is largely due to its adaptability that no great destruction from the inevitable movement of unbalanced features has resulted in the body of the Cathedral. The structural condition, however, is not stable nor indeed reliable, but the general state after 700, and in parts 600 years, indicates the great quality of the masonry. Constant qualified supervision is indispensable, however.

The comparatively slight sinking of the tower supports is relieved in the ridges of the main roots which dip as they near the tower.

Mediaeval builders were highly skilled yet intrepid. During the great Norman period when Church building was rapidly extending, much construction appears to have been hurried and thus imperfectly considered. Much collapse has subsequently taken place in buildings of that period, mainly due to the poor and hasty wall construction. The walls were usually stone-built on the inner and outer faces and the intervening space filled with lime-mortar rubble. Inevitable shrinking and poor quality of the cores has accounted for most of the early defects and for the collapse of central towers of Cathedrals in the past. At Salisbury Cathedral the thirteenth century core of the walls is very good of its kind in all the instances which I have examined, and it accounts largely for the reliable state of the walls. Externally there is practically no indication of a faulty core within.

All the main arcades have strong solid piers of Purbeck marble to which are applied or attached, small shafts with no constructive purpose, but which by their scale combine with the moulded Chilmark stone features and carry down the elaborate work of the arches. The vaulting ribs are good stone members supporting the webs or cells of a light chalk-like concrete. There
is practically no masonry in the vaulting cells. This is a distinctive feature unusual in composition and character of this period. Apart from some inevitable and slight shrinkage the concrete construction of the main vaults remains sound. It is light in weight yet homogeneous and cast in curved forms in the cells or webs. Some internal movement of piers and arches is, however, visible mainly as reaction to displacement by the stupendous central load and it has existed for at least six centuries with comparatively little subsequent development. The Nave and Choir arcades, for instance, are reclining from end to end but receive good abutment from piers in the east and west walls.

The general delicacy in many of the constructional features offers but little resistance. Much of the building design is daring and intrepid yet beautiful in form, unsurpassed in any period of church architecture.

A remarkable example of accurate building is seen in the Purbeck shafts supporting the vaulting of the Lady Chapel. There are clusters of four of such shafts and a number of single shafts of this nature carrying vaulting with hidden heavy stone walls which in turn support the extensive oak roof framing and its external lead covering. The foundations of the shafts are sound, and again reflect the reliable and constant character of the soil of the site. The single shafts are 11 inches in diameter and are 30 feet in height, in two lengths; each single joint is tied or set in a narrow brass band as is seen in shafts in the north porch and elsewhere throughout the building, inside and out. Other shafts of similar height and forming groups of twos and fours are respectively 5½ and 7 inches in diameter, 30 feet high. I cannot conceive any more daring example of building construction and it has survived for over seven hundred years. Moreover, it is particularly beautiful in form and material. It is very delicate in character, being liable to disturbance from movements of the oak roofs which are all covered with lead.

Turning now to the great problem of the immense central feature of tower and spire. It was a general conception of the times to limit the space above the crossing to a height of the abutting roofs, terminating internally in a traditional form of lantern. Westminster Abbey is such an example but has remained in an incomplete state. This feature at Salisbury is traditionally deemed to have ended at a level slightly above the ridges of the main roofs for which the change in external and internal design—from Early English to Decorated—offers supporting evidence. The thirteenth century wall above the great arches of the Crossing is 45 feet in height and is arcaded in a beautiful form, again with Purbeck shafts. It is 6 ft. thick but has a two-foot passage in the centre of the thickness. The passage until recent years was approached from spiral stairs at each of the four angles entered from the main roofs. The two storeys of arcaded passages is perhaps unusual, yet they produce a magnificent effect when viewed from the Nave level. The internal dimensions of the tower are 33 feet square; taken with 6 feet walls the overall outside width is thus 45 feet.

It is upon this hollow wall that the two great stages of the fourteenth century tower and the immense stone spire have been added and which after much anxious care and attention have survived for 600 years. There

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The Electric Company
is nothing more beautiful in design or more daring in construction in the history of church building. The first step in the development was the filling in of the void above the main arches of the crossing with a substantial stone vault somewhat elaborate in design, and above it was placed an oak timber floor. The moldings of the main stone arches of the thirteenth century were reworked to indicate the change of period. Then followed an extensive introduction of wrought iron bar reinforcement, from which the new walls rose. These later walls, however, are solid, of an average thickness of 6 feet and are raised some 85 feet in two storeys, in which oak beams and floors were inserted. At a height of 204 feet from the Nave floor the spire construction begins in the stone squinch-es or diagonal arches, off which the octagonal tapering form of the spire rises to an additional height of 176 feet. By this means the spire load is transferred to the solid walls which rise off the hollow arcaded thirteenth century walls, and then descends by the great arches and piers of the crossing to the ground below. In all this great distribution of loads much wrought iron “bandage” has been used. Such is the brief outline of this marvelous venture in stone building. The stonework of the spire averages 9 inches in thickness. The spire contains an elaborate and unusual feature in retaining the oak scaffolding off which the masonry was originally laid. It ascends practically to the full internal height and is supported by two stages of oak beams in the floors below. Much of this scaffolding touches the walls of the spire and assists in steadying the whole structure. It is a very interesting collection of oak struts, beams and braces and there remains still the original oak windlass which raised the spire stonework and other materials from the Nave level. All this developed central load has reacted visibly upon the walls, piers and arcades below.

It is a common feature in most central towers to find distortion in the supports. This is largely due, as Wren first pointed out, to the thrust of the side arches of the aisles and transepts. My view is that the distortion took place during building operations and that it increased when the vaults or roofs began to be built.

This condition is present in the majority of churches so planned. It is, for instance, observable at Westminister, which has no load of a spire or high tower. At Salisbury the same deflection probably existed prior to the raising of the central feature but increased considerably as the spire and tower loads developed. It reacted to such an extent as to deflect the arcades of the Nave, the Choir and transepts. This gave rise to some anxiety in the fifteenth century. Two large stone screens were then inserted in the north and south transept arches of the Nave to resist possible movement of main piers on that side of the Crossing. No similar precaution was taken in a traverse direction but a very important insertion of inverted arches was built in the arcades of the north and south choir transepts to steady and uphold the heavily leaning arcades of the Choir. It is interesting thus to observe the general disturbance of the arcades abutting on the central space and their resulting flexibility.

It is truly remarkable that such stupendous structures yield, without collapse, to unrestrained yet active forces. It is the common story, however, that the first builders made little provision for the ambitions or responsibilities of their successors.

One of the delicate features of general construction concerns the preservation of the early wrought iron reinforcement partly buried in the walls of the thirteenth century stage of the tower, and which is rusting generally although slowly. While it is holding at the present time it has until recently been kept continually under observation. This reinforcement is mostly in the form of a series of wrought iron bars two inches square. Wren added a considerable number of wrought iron rods and ties at this, the tender level.

Much additional reinforcement was introduced in 1869 by Sir Gilbert Scott. This mainly concerned four tiers of crossed diagonal ties at the “lantern” level, gripping the walls of the angle staircases. There are four sets of these ties with an overall diagonal length of 65 feet and are unsupported yet taut.

There is a wealth of interesting design in the masonry of the spire, including pinnacles, panels and much moulded work. A predominating carved feature is a great distribution of the carved “ballflower” — the typical “Decorated” emblem.

The periodical testing of the lightning conductors is
also important, for the spire was struck in 1741 when fire broke out in the oak timbers. Since that date the Cathedral has escaped further injury from this cause.

There are four bells in the first stage of the tower which are used for chiming the hours. They cannot be rung in the ordinary manner without risking disaster to the fabric; they are therefore used for chiming only. There is no external dial nor does the position of the clock action lend itself to it.

The Clerestory stage of the walls of the Nave and the Choir is of great interest. They are again, roughly speaking, six feet thick and contain the usual passage space. The supreme tops of the walls are paved with heavy stones gripping the inner and outer thickness of the Clerestory and upon this paving the roof construction lies. With the exception of the roof of the north choir transept, which is the only mediaeval type—trussed rafters—remaining, all the timber framing is of tie-beam and purlin form. It is a replacement dating mainly from the eighteenth or late seventeenth century consisting of heavy oak tie-beams 42 feet long, with braces, and trussed rafters. Longitudinal bracing has been included in most cases but it was omitted from the mediaeval roof and of the Choir transepts, resulting in the bending southward of the north and south gables. The cause of this displacement has been remedied. There is an abundance of light and air passing through this timber construction in which there is scarcely any evidence of death watch beetle attack.

The outsize cast lead covering is laid upon deal boarding, much of which is set diagonally, thereby stiffening the construction. Practically no condensation reaches the oak members. The roof of the Muniment Room and Sacristy has been covered with sheet copper after replacement of some timbers which had been infested with boring insects. This metal is about one-eighth the weight of lead and any possible condensation on the underside of the metal carries a dilute poison which restricts the growth of a minute fungus upon which the beetle feeds in the dark unventilated crevices.
GENERAL CONTRACTORS ELECT OFFICERS

The General Contractors Association of Milwaukee, Milwaukee Chapter of the Associated General Contractors of America, held their Annual Board of Directors Meeting on Tuesday, March 19, 1946.

The following officers were elected: W. H. Emory, Klug & Smith Company, President; T. L. Cottam, Hunzinger Construction Company, Vice-Pres.; Leo P. Bauer, Leo P. Bauer Construction Company, Sec-Treas.; William F. Kachel, Siesel Construction Company, and John Dahlman Jr., Dahlman Construction Company, Directors.

Copies of the New Schedule of Proper Minimum Charges And Professional Practice may be obtained through the Secretary. 3¢ a copy.

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