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CONTENTS.

THE most distinguished of English architects, George Edmund Street, died on Saturday or Sunday last. Particulars of his death, which must have been a sudden one, have not yet reached us, and we await with sad interest the arrival of the English mails for more extended accounts of his last days. Although not yet past the active period of middle age, Mr. Street had attained a distinction in the profession which has fallen to the lot of very few. When yet a young man, fresh from his pupilage under the late Sir George Gilbert Scott, he published a book on Brick and Marble Architecture in Italy, which at once attracted attention and has taken its place as one of the most useful works of its kind; and a few years ago a second book, on Gothic Architecture in Spain, increased the reputation which he had acquired as a writer on architectural subjects. The preparation of these works, however, formed only the occupation of the few leisure moments in a most active professional career. His power in design and unrivalled facility in drawing naturally led him to enter frequently into the great competitions which give excitement to an architect's life in England, and in these he was very generally successful. The greatest struggle of the kind was that for the new Law Courts at Temple Bar, in which he secured the victory by a noble design, the execution of which has just been completed. This building is unquestionably his masterpiece. Though constantly overwhelmed with private and public business, he devoted himself to it with the closest fidelity, and it was his boast that the drawings for every detail of the enormous and richly decorated structure had been made by his own hand. While this work was in progress, a vacancy occurred in the ranks of the architectural branch of the Royal Academy, which he was at once chosen to fill, and about a year ago he was appointed Professor of Architecture to the Academy, and in this capacity delivered those remarkable lectures on architectural history to which we have before called attention. A little later he was elected to the Presidency of the Royal Institute of British Architects, after a close contest, and the stirring address delivered a few weeks ago before that body indicates how efficient and valuable his services would have been to the profession if he had been spared. The influence and usefulness to which he had in such ways attained will make his loss very deeply felt, not only among his associates, but among American architects, who regard the course of professional life in England with unfailing interest and sympathy, and his example will, we trust, long serve to cheer those earnest toilers in both hemispheres who have set for themselves a standard as high as his, but find themselves often discouraged by the difficulties which he also encountered, and overcame.

THE *Fireman's Journal* of December 10 contains an excellent article on the recent Grand Street disaster in New York, giving statistics of the present duties of the Building Bureau, with the means available for performing them, and defending the Fire Commissioners and the Bureau successfully, as we think, from the charge of neglect of duty which was brought against them by the coroner's jury. According to the Commissioners' report, there are two thousand one hundred and sixty new buildings now in process of construction within the limits of the city of New York, and two hundred and sixty-five more are undergoing repairs or alterations so extensive as to require the surveillance of the Bureau. To watch all these operations, exercise the great discretion with which the law invests the officials of the Bureau, and assume the grave responsibility which necessarily attends such arbitrary power, eighteen inspectors are provided, who, in return for the most meagre salaries, are expected to direct the details of construction, and to answer for the strength and stability of all the structures placed within their control. A simple process of division shows that to do this each inspector must take upon himself the charge of one hundred and thirty buildings at once, besides making regular reports at the office of the Bureau, and making extra examinations. That the work accomplished by the Bureau, if not all that could be desired, is as much as could be expected under the circumstances can hardly be denied, and although we are not disposed to approve the system under which the statutes for the regulation of building in New York are enacted or carried out, there is no question that Mr. Esterbrook and his subordinates have shown a vigor and thoroughness in executing them which, with one-third the means allotted to former Departments, has made the present Bureau more feared and respected than any other administrative body which ever attempted to control building operations in New York.

THE Boston Society of Architects, with whose coöperation the recent test of fire-proof building materials was made in that city, not satisfied with the information obtained from the first trial, has taken steps to secure, if possible, a second, and much more comprehensive test, in which the different kinds of fire-proof construction shall be subjected to strains such as they would endure in actual practice, and each material shall be used over a considerable surface, and exposed to a fierce and long-continued heat, the fire being kept up, if possible, until all the varieties of construction have succumbed. By the side of these, and subject to the same conditions, it is proposed to place one or more examples of the ordinary so-called fire-proof structure, consisting of naked iron beams, carrying brick arches, and supported by unprotected cast-iron columns, as well as corrugated iron-work, with and without concrete filling, brick vaults and various kinds of fire-resisting shutters and doors. The subject is one of vital importance to all who own or insure warehouse, office or banking buildings, or the property contained in them. At this moment, the United States Government has some fifty millions of dollars invested in freestone or granite piers and unprotected iron columns, supporting bare wrought-iron girders, which in their turn carry the brick arches of the floors and roof; and private individuals in the city of New York alone have about as much more; yet the unanimous opinion of experts, sustained by some private tests, is that in point of security against fire these costly edifices are little better than frames of timber and plank, and far inferior to timber frames covered with wire-cloth and plastered. The accumulation of costly goods in our great cities is now so enormous that it has become a matter of imperative necessity to discover some mode of constructing buildings which can be depended upon to contain them safely. Scores of patentees claim to have solved the problem, but a thorough comparative test of the various inventions has never been made, and it would be much for the interest of all underwriters, owners or lessees of buildings for the reception of valuable goods to respond to the appeal of the Boston Society of Architects, and contribute toward the fund which must be raised before the project can be carried out.

MR. WALLACK'S new theatre, which is to be opened to the public before the New Year, will apparently be one of the safest in the world. The suggestion of an experienced manager, that the stage roof should be carried much higher than that of the auditorium and furnished with sky-lights, so that in case of fire the draught should be directly upward, instead of outward into the auditorium, has been followed, and if the necessary supplementary precaution is taken to have the currents of air for ventilation follow the same course, from the

auditorium to the stage, instead of the contrary, the principal source of danger will be avoided. The dressing-rooms for the actors are situated in an adjoining building, well out of reach of any fire in the theatre, Mr. Wallack's professional sympathies having probably concurred with his good sense in making this provision for a need which is in most theatres entirely ignored; and space is left for an iron curtain between the stage and auditorium, in case it should be required, although Mr. Wallack has little faith in the practical value of such appliances. In the decoration of the house, papier-mâché has been very freely used, but as this material is far less combustible than wood, there can be no objection to its employment, although perhaps stamped metal would have been still safer, and equally suitable for the purpose. A reporter of the *Sun* recently visited all the theatres in the city, and noted the time occupied in clearing the house after the fall of the curtain. The result was quite gratifying, several places being emptied easily in less than four minutes; but the New York Fire Commissioners are determined to leave no possible doubt on this point, and have ordered extensive alterations to be made in all theatres which seem to them insufficiently provided with exits.

Another illustration of the danger to be apprehended from leaving electric-light wires suspended in the streets of a city, without efficient insulation, comes from Cincinnati, fortunately without the tragical character of some previous ones. A private telephone in a counting-room on Vine Street had just been called from the central office, and the owner had taken the telephone in his hand to apply it to his ear, when a large flame suddenly burst from its mouth, and the wire coils both of the telephone and the transmitter were melted. Simultaneously with this appearance, similar phenomena were observed in the central telephone office, frightening the operators out of the room. No further harm ensued, and on investigation it was found that during the high wind which prevailed at the time, the telephone-wire had swung until it came in contact with an unprotected electric-light wire near by, and the appearance of the current at the nearest ground connections was a matter of course. The ruined instruments were exhibited before the Department of Public Works, with the suggestion that the electric-light companies should be compelled to bury their wires forthwith, but no action has yet been taken in the matter. The Cincinnati *Gazette*, however, undertook an investigation, and sent reporters to obtain information from the manager both of the Brush Electric-Light Company and the Bell Telephone Company. The former was disposed to look with indifference upon the whole affair. The smoke and flame, if any really appeared, he thought must have proceeded from the burning silk in the telephone, claiming that the insulation of the wires used by his company was quite sufficient, and that the telephone company only wanted an excuse for getting rid of the electric-light wires, which interfered with its business by the induction from such powerful currents; while on the other hand, Mr. Eckert, the manager of the telephone company, disavowed any purpose beyond the protection of his customers and the public, and challenged his opponent to stand with a telephone at his ear while the wire was crossed with an electric-light wire. Up to the present time this invitation has not been accepted, and it certainly looks as if Mr. Eckert had the best of the argument.

Some weeks ago we spoke of an accident that had recently taken place in New York, by which two men were killed through the fall of the scaffold on which they were working, as an instance of culpable negligence on the part of the official inspector of buildings in that district, who should, we thought, pay as careful attention to the design and condition of the stagings as to any other part of the work. Since then, some of the New York daily journals have taken up the matter, and their reporters have ascertained that the inspectors of the Building Bureau do not consider themselves authorized to direct or criticise the construction of scaffoldings, believing that the law restricts their attention to the permanent edifice, for whose erection the scaffold serves only as a means. This, while it may excuse the inspector in this particular case, is surely a most mistaken view of the subject. Every builder knows that the design of the stagings has an important influence on the character of the walls built from them; that a scaffold suitable to one building would be totally unfitted for another, while the fall of a structure so intimately connected with the fresh masonry might, under certain circumstances, injure the work seriously; so that the deputies of the chief inspector not only may, but ought to claim as complete a control over these accessory constructions as over any part of the building. In foreign countries such details are regarded with the greatest solicitude, and in case of such an accident as the one in question, the architect and the public officials, as well as the contractor, would be held to strict accountability.

Notwithstanding the lack of financial success which has made the Crystal Palace at Sydenham such a burden to its owners, there is no question that the collections contained in it, and the unique decoration and furnishing of its "historical series" of rooms, have been of great service in educating intelligent young people by the most effective of all methods, — that of actual observation. Convinced of this fact, the French Government has recently taken measures to establish a similar educational museum, as it may be called, at St. Cloud, just outside the fortifications of Paris, utilizing in the construction the picturesque ruins of the Renaissance palace of the same name, which crowns the hill above the village. The building will be mostly of glass, like its English prototype, and is to contain a "retrospective museum" of French art, including woven fabrics, jewelry, and other objects, classified according to the several periods to which they belong, but comprising only articles of French origin. In the cellars of the palace, which are very extensive, will be arranged reproductions of all the celebrated crypts and catacombs of the world. An appropriation has already been voted for the building, and operations will begin at once, so that it may be opened to the public during the summer of 1882.

A case was recently decided in London which is of peculiar interest to young architects, who have not learned how much caution is necessary to avoid being made the victims of enthusiastic but irresponsible speculators. A certain Mr. Langston was employed in January, 1876, by the Reverend Bonavia Hunt, Warden of Trinity College, an institution just founded for the cultivation of music and other purposes, to prepare designs for permanent buildings for the college, and to make inquiries for a suitable site. He made plans, accordingly, which were accepted, and a perspective of the structure was published in the College calendar; and also entered into negotiations for the purchase of land, and supervised some works of alteration and decoration in the temporary quarters of the College. Four years elapsed, and nothing was done, either about carrying out his plans or paying him for any of his services, and he at last brought suit for his money. The College authorities admitted that he was entitled to payment for superintending the decoration of their temporary premises, but claimed that he was employed to select land and prepare plans for the permanent building with the condition that he should only be paid if the project was carried out, and that, as lack of funds had prevented this, he was not entitled to anything. Probably they considered the valuable experience which he had gained to be a sufficient compensation for his trouble, but the jury thought otherwise, and very properly considering that in default of positive evidence it would be preposterous to assume the existence of such a bargain as that alleged by the defendants, in which all the profit was to be on one side, and all the risk and expense on the other, they promptly brought in a verdict in favor of the architect, for the full amount claimed.

M. Planat, the distinguished conductor of *La Semaine des Constructeurs*, has just published the first two parts of a work on school-houses and orphan asylums, which promises to be of great value to architects. An architect himself, M. Planat understands thoroughly the needs of practitioners, and besides presenting concisely and clearly in the text the approved results of theory and experience in regard to lighting, heating, ventilation, furnishing and sanitation, he illustrates the subject by a full collection of examples. The two parts already published contain, besides numerous wood-cuts, sixty autographed plates, giving plans, elevations, and sections of no less than thirty-three schools, mainly for young children; those of a higher class being deferred to the succeeding volume. Among the number are examples from England, Scotland, Belgium, Holland, Austria, Hungary, and the United States, besides all parts of France, and the whole book seems likely to prove, if possible, even more useful and complete than E. R. Robson's admirable work on the same subject.

FIFTEENTH ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE AMERICAN INSTITUTE OF ARCHITECTS.

TO THE AMERICAN INSTITUTE OF ARCHITECTS:—

THE Board of Trustees for the year 1880 held one meeting after the last Convention, and the present Board has held all its regular quarterly and monthly meetings, as well as three special ones, making twelve in all. They have generally been held in the office of the Treasurer, while most of the effects of the Institute are housed with the New York Chapter.

The lengthiest paper read at the last Convention was prepared by an honorary member, a civil engineer by profession, and was published by his professional society, while the shorter ones were published by the *American Architect and Building News*. The cost of the issue of the rest of the Proceedings of the Fourteenth Convention being thus reduced to a minimum, the Committee on Publications were not under the necessity of calling for such a large appropriation as usual, and the remuneration of the editor of the Proceedings was placed at the low figure of $100. On the other hand, the work and coincident expenses of the Treasurer's office have not been sensibly diminished; while those of the Secretary's office have unavoidably been heavier than before. In accordance with the financial requirement adopted at the last Convention, as per Section 3 of Art. II. of the By-Laws, your Board, at its February meeting, fixed the money penalty therein called for at twenty per cent on the amount due.

At the same meeting a motion was made looking towards some definite action of your Board with reference to the vital question of increasing the membership and efficiency of the Institute, but it was not till the June meeting that the Secretary was authorized to publish and distribute a circular letter which he had prepared with these objects in view. This was published in July, and as a copy was sent to every professional member of the Institute, it is placed in the Appendix. The letter was forwarded to those past members who, for non-payment of dues or other causes, had been dropped from the roll of the Institute; and as fast as the Secretary has been able to ascertain the addresses of probably eligible parties, it has been sent to a goodly number of other architects practising all over the country. The result has been a large demand for the By-Laws, Proceedings, and other documents, and for more detailed information than can be found in these.

Some idea of the correspondence arising from this and ordinary sources may be formed from the fact that the Secretary's letter-press book shows that he has been called on to write during the year over two hundred letters, exclusive of replicates, routine notices, and other perfunctory correspondence; while these again have been exclusive of the work of recording the minutes of the monthly meetings of your Board, and that resulting from the reception of visitors. Many of these letters are of necessity long ones, explanatory of nice points, and offering suggestions on complicated questions which only an architect of long practice, and a member of the Institute, familiar with its history and methods, could competently deal with.

Some of the most important actions of the last Convention was obviously grounded on the impression that the Institute had heretofore been too loose in the qualifications it demanded from professional members of the higher grade, as shown in its limitation to Fellowship of seventy individuals, the number to be kept up by selection from the inferior grade of those professionally distinguishing themselves; and on the other hand too exacting in its requirements from that lower grade, as evinced in the easement of qualifying processes demanded from, and the increase of privileges accorded to Associates. And in the circular letter of July, just mentioned, these facts, as well as that of the great reduction of dues payable by both grades, were of course reverted to. But it is yet too early to predict the final results from it; for its distribution, commenced late, went on and is still going on somewhat slowly, owing to unavoidable delay in the accumulation of the latest eligible names, to changes of address, and to the necessity felt by the Secretary for largely using the resultant correspondence to sift the claims of actual or probable candidates, with a number of whom he is still in correspondence.

The elections so far have included two Fellows, — Mr. Gordon W. Lloyd, of Detroit, Mich., and Mr. Augustus Bauer, of Chicago, Ill.; while two candidates have made application. The following have been elected Associates: Messrs. D. Knox Miller and Thos. D. Evans, of Pittsburgh, Pa.; Albert M. West, of Des Moines, Iowa; Stanton M. Howard, of Wheeling, W. Va.; Warren R. Briggs, of Bridgeport, Conn.; Samuel Huckel, Jr., and Edward Hazlehurst, of Philadelphia, Pa.; W. L. B. Jenney, of Chicago, Ill.; R. P. Southard, of Charleston, S. C.; N. W. Wall, of Trinidad, Col.; H. G. Knapp, of New York City; C. F. Driscoll, of Omaha, Neb.; Wm. C. Smith, of Nashville, Tenn.; F. E. Davis, of Baltimore, Md., and C. A. Didden, of Washington, D. C. Three additions have been made to the list of honorary members; viz.: Mons. Emile Trélat, of Paris, France; Prof. Chas. Eliot Norton, of Cambridge, Mass.; and Mr. J. H. B. Latrobe, of Baltimore, Md.; while Mr. Jos. Thatcher Clarke, of Boston, now in Assos, Asia Minor, has been elected Corresponding Member. The only resignation has been that of Mr. L. D. Cleveland. The necrological list for the year, so far as information has been received, includes only two names: that of Associate Alex. R. Esty, of Boston, and that of Mons. Hector Martin Lefuel, Honorary Member. The *American Architect* of July 9, in an appropriate obituary, stated that Mr. Esty died at Framingham, Mass., on the 2d of that month, aged fifty-four years; that the late Richard Bond, of Boston, had been his preceptor, and that he had practised in and about that city for many years with eminent success. After enumerating a number of his principal public works — churches, colleges, schools, and a railroad station — the *American Architect* observed that he was an influential citizen of his native town, had been Chairman of its Board of Selectmen, and a Representative in his State Legislature, besides occupying various other responsible offices, and that his loss would be regretted as that of an architect of high and well-balanced attainments, an upright citizen, and a conspicuously active and intelligent man. At the March meeting of the Board, the following resolution, prepared by the Secretary, was adopted and transmitted to the widow of Mons. Lefuel:—

"The decease, on the last day of the past year, of the eminent French architect, Mons. Hector Martin Lefuel, for many years an Honorary Member of this Institute, and of numerous other societies connected with architecture, has been widely recorded in the public prints, and the melancholy intelligence was brought to the official notice of the Board of Trustees representing the American Institute of Architects at its last meeting, by means of a *faire part* letter, received by Mr. President Walter, from the widow, family and relations of Mons. Lefuel. The death of a man so distinguished, alike as a practitioner in some of the most important public works of his country, as an instructor of aspirants to the profession, and as the recipient of many merited honors from abroad, calls for special notice, and this Board, on behalf of the whole Institute, which is not at present in session, desires to place on its minutes its recognition of the deplorable loss sustained by the world of architecture in his death, and its appreciation of his high professional character and career. The Board begs to tender to his widow and his family and relations the expression of the Institute's sincere sympathy in their affliction, and has desired the Secretary to transmit this minute to Madame Lefuel."

From the correspondence arising out of the issue of the circular letter to past members and others, the following is selected as representative of a certain portion:

—— AUGUST 18th, 1881.

MR. A. J. BLOOR, SECRATARY:—

Dear Sir,—I have received two copies of a circular of the American Institute of Architects which aims to secure a return to the Institute of past members.

I take the liberty to inform you of some of the reasons which tend to the failure of that effort.

1st. Some prominent "Fellows" do not observe that honorable bearing towards other members of the profession which common business courtesy, no less than the rules of the Institute, demands. To specify: Information comes to me, both from professional and non-professional sources, that Chapter men habitually under-cut in charges, and that, too, with regular clients of other architects. For instance, one of my best clients, who has retained me from my commencing practice, has received an offer from a prominent Chapter man to do his work for two and a half per cent. He still pays me four per cent. I know of other offers of a like character from the same party and others.

Again: By an act of the Chapter some time since, in declining the request of a number of applicants for Junior Membership, it seems to an outsider to have taken a decidedly non-progressive position.

If I must contend against underhand proceedings, I do not wish to be in close association with the men who make use of them.

Yours very truly, X.

AUGUST 20, 1881.

MR. ——:—

Dear Sir,—I have your favor of the 18th inst. There are a number of Chapters in the Institute, representing the various centres of the country. I presume your references are to the . . . Chapter, and some of its members.

I have not before been informed as to the action you allege of it in regard to the application of parties for Junior membership. It seems to me desirable, as a rule, to encourage candidature for any grade in a Chapter, but if the majority of an organized body vote against a proposed addition to membership it is to be presumed that it has what must appear to it to be good reasons for its course. In regard to your other point: Assuming to be correct the information which you say has come to you of questionable practices on the part of certain members of the Chapter of your locality, allow me to ask if you think there is more or less of such practices prevalent since the establishment of the Institute and its local branches (or localizing agencies, as the Chapters may in one sense be called), than there was before either the Institute or its Chapter system existed? My own opinion is not only that the Institute has made it easier for the American architect of to-day to collect five per cent on his work than it was for old-time practitioners to collect one per cent, but that where one man is now tempted to undercut a rival — often keeping out of the Institute mainly to enable him the more readily to do so — ten men formerly thought under-cutting a legitimate business transaction. Can you suggest any more practicable and effectual method than stated opportunities for intercourse with each other, outside of the lines of professional competition, for (not attempting to alter human nature and abolish its selfishness, but) securing to architects a platform on which the temptation to undercutting may be reduced to the minimum, while the occasions it offers for influencing the public in their favor are constantly on the increase? If you can, I shall be well pleased to have your suggestions, and to present them to the Institute. Yours truly, A. J. BLOOR.

It is proper to add that this correspondence was referred, for the information of his constituents, to the Secretary of the Chapter referred to, and that it elicited remarks from him of which the following are extracts: "The under-cutting, if such exists, has never come to my knowledge. . . . Certainly there would seem to be little need of under-cutting below five per cent. I have never had any trouble in getting that, and have rarely had the claim disputed or regarded as too much. At the time of ———'s withdrawal from

the Chapter, it was generally understood that it was caused by very different reasons, presumably in connection with certain clauses in the Institute Constitution. This, of course, was principally surmise on the part of those who knew the inner workings best."

The donations during the year to the Institute Library have been as follows: From Mr. R. M. Hunt, Fellow, ten large photographs of Dutch engineering work; from Mr. Wm. T. Hallett, architect, his volume entitled, "Specifications for Frame Houses;" from Messrs. Palliser, Palliser & Co., their formula for specifications and agreements; from Mr. Robert Briggs, C. E., and Corr. Mem. of the Institute, copies of his pamphlets on the "Ventilation of Halls of Audience," and "The Properties of Air relating to Ventilation and Heating." The record of donations from foreign sources falls within the province of the Secretary for Foreign Correspondence, but one of the foreign donators, the Chevalier J. da Silva, Honorary Member, and for many years an active and honored correspondent of the Institute, elicited the following action, at their January meeting, on the part of your Board:

"The Board of Trustees A. I. A. has heard with pleasure and edification of the public labors of their esteemed Honorary Member, the Chevalier J. da Silva, and desires to express its hearty appreciation and commendation of his zeal and generosity in the cause of architecture and archæology, and his munificent gift of several hundred copies of the same to the Governments of Portugal, Spain, and Brazil. As the Board recognizes that whatever is "accomplished in any country in the direction of science, art, or industry, necessarily enures in the end to the benefit of all communities in the commonwealth of nations, it derives great pleasure from hearing that the French Government has suitably marked its appreciation of the Chevalier da Silva's valuable labors. The Board, at the next annual Convention of this Institute, will make report of these facts, and will meanwhile be greatly pleased to hear anything on the subject the Chevalier da Silva may find it convenient to communicate. The Board would recommend him to correspond with the Secretary for Foreign Correspondence, Mr. T. M. Clark, who will doubtless be able to give him information [as requested by him] as to the lately organized archæological association in this country."

As the Institute acquires years and influence, there is, as might be expected, an increase in the calls upon it for authoritative opinions, in contested cases naturally falling within the jurisdiction of its specialty; and there is every reason why its Trustees, while careful not to neglect the current and minor duties devolving upon them, should not shirk the more occasional and important ones thus legitimately imposed upon them. The following preamble and resolutions, passed by your Board at a special meeting in August, and based upon a series of minutes presented by Mr. Congdon, summarizes a case of considerable interest.

"The Board of Trustees of the American Institute of Architects, presuming the accompanying letter of Mr. George Keller, A. A. I. A., of Hartford, Conn., to be the correct statement of facts relating to a design furnished by him to the Committee of the Common Council of Buffalo, N. Y., for a soldiers' monument, have duly considered the matter, as a question of professional practice, and resolve as follows:

"If, as alleged, Mr. Keller's design was selected two years ago by a Committee of the Common Council of the City of Buffalo, N. Y., for a soldiers' monument, and the report of said Committee was adopted by said Common Council, and the monument authorized to be built, they are in honor bound to carry it into execution under the superintendence of the architect of the design, at the usual rate of compensation, as per schedule of charges A. I. A.

"The Committee, in rejecting Mr. Keller's design, after having adopted it two years ago, and in appointing a sub-committee to ascertain if a better design could be obtained (while still retaining Mr. Keller's original design, and notwithstanding a majority were still in favor of his design at a second competition), without giving him notice that the competition was abandoned, have, in the opinion of this Board, acted unjustly to Mr. Keller as an architect, and brought discredit upon the whole system of competition, which requires the utmost fairness in its detail to make it anything but unacceptable to the best interests of the profession and of the public.

We would also state that, in the opinion of this Board, taking into consideration the circumstances of the case as stated in the accompanying letter of Mr. Keller, professional courtesy should prevent any interference with just rights while this matter is in its present unsettled state."

Mr. Keller has since furnished the Secretary with a series of reasons why, in the interest of the maximum of the artistic rendering of such work, the architect should sometimes combine the functions of designer and contractor for its execution. This case will remind old members of another which occurred seven years ago as reported in the eighth Proceedings, and in which the Quarter-Master General of the United States Army sought and obtained an opinion from the then President of the Institute, the late Mr. Upjohn, which was afterwards endorsed by the Institute in Convention, — in regard to the proper remuneration of an architect for monumental work performed for the United States Government.

The following illustrates another instance of resort to your Board for an official opinion on an important question raised by one of the documents of the Institute itself — the schedule of charges recommended by it. The opinion was given at its September meeting. The question had been asked a number of times in previous years and had been responded to from the Secretary's office, but an answer had never before been officially formulated by your Board.

"It is the opinion of the Board of Trustees of the American Institute of Architects that the supervision or superintendence of an architect as distinguished from the superintendence of a clerk of the works, means such occasional inspection of a building in process of erection, or of other work, as the architect, personally or by deputy, finds necessary to insure its being executed in conformity with his designs and specifications or directions, and to enable him to decide when the successive instalments provided for in the agreements are due and payable. It includes among his other duties, the exercise of authority to stop the progress of work condemned under it, to decide in constructive emergencies, and to order necessary changes."

In conclusion your Board feels its duty to urge the necessity of an increased *esprit de corps* on the part of the whole profession, as represented in America, if it is serious in the desire to make the most for itself and the public of its opportunities and possibilities. To meet the unavoidable expenses of such necessary work as has herein been exemplified or implied, the Board can only suggest a large increase of membership and a full appreciation on the part of its constituents generally, that such work, faithfully done, up to a maximum mark, cannot be accomplished in amateur or sporadic fashion; but requires at least as high qualifications and at least as close and prolonged application as are demanded for the success of the most extensive individual practice.

And moreover members should reflect that associative obligations,— that adequate attendance at local meetings, are as important as the prompt payment of dues. The fallacy should at once be discarded, if it is entertained by any one, that a member who simply pays his dues — even supposing them to be much higher than they have been reduced to, — can do as much for the Institute as the Institute does for him.

Respectfully submitted for the Board of Trustees, by

A. J. Bloor, *Secretary*, A. I. A.

[Appendix.]

American Institute of Architects.
Secretary's Office, 335 Broadway, New York, July 1st, 1881.

Dear Sir, — The American Institute of Architects has reduced its Annual Dues for Associates to five dollars — no Initiation Fee being required — while it has given them the privilege of voting, before withheld. For Fellows (limited to seventy) the Initiation Fee has been reduced to ten dollars, and the Annual Dues likewise to ten dollars.

The Board of Trustees assume that architects old enough to remember the former drawbacks to practice recognize the fact that it is chiefly the Institute which has been instrumental in raising the profession so far towards its natural influential position. The schedule of charges recommended by it is now generally acknowledged in the Courts, by corporations, and by private individuals. The Institute publishes every year a pamphlet of the Proceedings of its successive Annual Conventions (of which fourteen have been issued), as well as other matter of technical and general interest to practitioners. These are but the beginnings of what may be secured by intelligent interchange and concerted action among the members of the profession, through the medium of its recognized society.

The Secretary is instructed to forward this note to the past members of the Institute — a list of whom may be found in the lately issued Fourteenth Proceedings — in the hope that the increased practice resulting from the general prosperity of the country and the decreased financial obligations within the society may restore old ties; and to architects generally in the persuasion that they will recognize the benefit to all of an active and organized *esprit du corps* among practitioners in the same art. He will be very glad to answer questions and forward documents giving information in detail.

Respectfully,

A. J. Bloor, *Secretary*. Thos. U. Walter, *President*.

SCULPTURE AND SCULPTORS.[1]

Sculpture has been called the daughter of Architecture: whether this is not rather too broad a claim we will not pause here to discuss; but certain it is that in the remains of ancient monuments, especially of Egypt, we find these two arts very intimately combined, the former sometimes even subordinated to the latter, while in the buildings of the Middle Ages they appear very twin sisters, sculpture often supplying structural parts of the erection. The highest examples of the sculptor's art, however, that we possess, are to be found in the statuary of Greece and Rome, and to these models, the modern sculptor directs his study, and from them derives his laws. That the ancient Greeks excelled all others in this art, goes without saying; their familiarity with the human form enabling them to portray corporal beauty with a delicacy and perfection that no society reared in any other situation and surrounded by other influences could ever attain. With them beauty was the chief aim, it having in their eyes so great a value that everything was subservient to it. As has been said, "It was above law, morality, modesty and justice." Greek art, as we know it, began about 600 B. C., but it did not attain its perfection until the time of Pericles, a century and a half later in the person of Pheidias, who illustrates consummately its most striking characteristic, — the simplicity with which great efforts are attained and the perfect harmony which obtains between the desire, and the conception, and the realization and execution. It flourished for nearly four centuries, greatly degenerating however toward its close about 200 B. C. Sculpture languished from this time for nearly fourteen hundred years until the beginning of the thirteenth century, when the Renaissance epoch was anticipated by the great sculptor, Niccola Pisano. We halt at his name to introduce Mrs. Shedd's useful manual.

[1] *Famous Sculptors and Sculpture*, by Mrs. Julia A. Shedd. Boston: James R. Osgood & Co., 1881. 319 illustrations.

The work before us is a remarkably attractive volume both in its appearance and in its interest. It gives a condensed history of the art in the lives of the artists and contains much desired information convenient for ready reference. "The record commences with the dawning of the best period of Greek and Roman Art, giving an account of the most celebrated sculptors and their works to the decline of classic art. Commencing again with the revival of art in Italy, as shown in the works of Niccola Pisano, who flourished in the early part of the thirteenth century and who is honored as the father of modern sculpture, it extends to the present time, not however, including living sculptors." Of course to tell so long a story in the pages of a brief volume it was necessary to condense severely and make the individual sketches exceedingly brief. But Mrs. Shedd has been very successful in her handling, and has preserved the kernel carefully throughout. The most complete notices, being also the longest ones, are those of Pheidias, Niccola Pisano, Donatello, Leonardo, Michael Angelo, Canova and Thorvaldsen, and there is a general accuracy in the facts given that is very satisfactory and refreshing in this day of slovenly work, especially noticeable in the compilation of some of our recent art-books. The American sculptors recorded in this volume are Frazer, Powers, Greenough, Hart and Crawford, the latter of whom Mrs. Shedd calls Thomas *G.* Crawford. We think this initial is an error as we have never seen it used before, and have some autograph letters from Crawford signed without it. Nor are we quite sure that Mrs. Shedd is correct in naming John Frazer (1790–1853) "as the first sculptor of American birth and parentage." William Rush, the eminent wood carver, who is deserving of a place in every American work upon the fine arts, was born in Philadelphia, July 4, 1756, but whether he was of American parentage we are not able to verify. Guiseppe Ceracchi, the Italian, who modelled a head of Washington from life, and whose superb bust of Alexander Hamilton is so well known and justly admired might also have found a niche in Mrs. Shedd's work. There is one curious error running throughout the volume that we hope will be corrected in future editions. The artists are divided into Sculptors of Antiquity and Sculptors of the Renaissance; the Renaissance beginning with Pisano, 1200, and continuing to our own Crawford, 1857. Now the well-defined Renaissance period covered merely the fifteenth and sixteenth centuries, those before belonging properly to the mediæval epoch and those after to the modern era. The volume closes with catalogues of Antique, Renaissance and Modern Sculptures with their present location and another list of Interesting Works in Modern Sculpture in the United States, which constitute a serviceable hand-book. The thirteen heliotypes given as illustrations are not as satisfactory as they might be, seven of them being fictitious portraits of early sculptors from Canova's modern busts. Surely some more interesting and valuable examples of the plastic art could as easily have been reproduced.

C. H. H.

NEW YORK ILLUSTRATED.[1]

UNUSUAL knowledge has presided over the choice of subjects in this well printed pamphlet. It would be too much to ask of the compiler of any popular guide of this kind that he should refrain from giving representations of big and notorious buildings simply because they are devoid of any architectural interest, and appear to be, like poetry in the estimation of Carlyle's commercial friend, "the production of a rude age." But it is to be said in excuse for the hospitality of the editor of the present compilation, that he has not given pictures of many bad buildings unless they were very big and very notorious. There is no escaping Stewart's up-town store and Stewart's down-town store, and Stewart's palatial residence, and the New York Post-Office, and the Grand Central Depot, and the Grand Opera-House. It would be a kind of breach of faith with the public to leave these things out of a "New York Illustrated" for no better reason than that they were bad. But then it must be possible to ignore the palatial edifice occupied by the New York Life Insurance Company, and there can be no general popular clamor to behold a representation of the Park Avenue Hotel, or the Drexel Building, or the Mount Sinai Hospital. However, we have nearly exhausted the list of sins of commission, excepting the outrageous "Normal College," and a specially uninteresting "block" in Fifth Avenue. On the other hand, there is a view, not very good, of a specially interesting block in that street, comprising three of the Vanderbilt houses, and a view of Madison Square after a picture by Wordsworth Thompson, in which the buildings lose half their evil by losing all their detail. There are illustrations, for the most part tolerably well done, and sometimes better than tolerably, of nearly all the buildings in New York of architectural interest, and it is evident that somebody has gone about New York and observed her streets with an eye for such few picturesque glimpses as the streets afford. One of these is the look up Wall Street closed by Trinity Church, one the vista of Pine Street closed by the monument in Trinity church-yard, and one a glimpse of Nassau Street, showing the Morse Building and the *Tribune* tower. Of individual buildings, some of the best are represented, as well as some of the worst. The Jefferson Market Court-House is given, and the new buildings of Columbia College, and the Lenox Library and Trinity School, and the Union League Club, *quantum valeat.* Among churches, Trinity, and the Cathedral, and Grace, and St. Paul's are given as matters of course, and a somewhat nefarious structure at Lexington Avenue and Sixty-third Street, rather unaccountably. But St. Thomas's, and the Holy Trinity, and the Collegiate Reformed Church in Fifth Avenue, and St. Bartholomew's, and St. George's and the two synagogues, are also given, and some of them in pen-and-ink sketches, which are not only spirited, but show a rather rare knowledge of what detail must be kept, in order to represent the building, when some must be sacrificed. These qualities are still better shown in the illustrations to a chapter on "Architectural Features," which give "bits" of street architecture for the most part well chosen, and well rendered in pen-and-ink sketches. Many of the things represented have already been noticed in these columns. These things make the pamphlet very well worth possessing.

It is to be regretted that the publishers did not employ a competent writer to do the text of their pamphlet. As it is, the text is comically inadequate. Mr. Withers, for example, will be apt to view with some astonishment the statement that his Jefferson Market Court-House "is of a composite nature, showing characteristics of the Byzantine and Renaissance, but tastefully harmonized;" and Mr. Eidlitz will be surprised to learn that the "Church of the Holy Trinity is a richly decorated building, in the style of the Renaissance." After this we read with comparative equanimity that the building of the New York Life Insurance Company is "of the Ionic order of architecture, the design having been suggested by the temple of Erechtheus, at Athens," and that the Gothic porch of the Queen's Insurance Building, in Wall Street, "rests on short pillars, Corinthian in style, and the latter are again supported on buttress-like pilasters, carved with the peculiar Corinthian decoration." These things prepare us for what would otherwise be the very dark saying that "most of the fine churches of New York do not offend by that elaborate ornateness of decoration into which the architect is tempted when he seeks to combine the elements of various styles in his design."

[1] *New York Illustrated:* — A Pictorial Delineation of Street Scenes, Buildings, River-Views, and other Features of the Great Metropolis. New York: D. Appleton & Co.

CAN AN ARCHITECT RECOVER UNDER THE MECHANIC'S LIEN LAW?

BALTIMORE, December 1st, 1873.

BALTIMORE CHAPTER OF A. I. A.: —

Gentlemen, — In answer to your inquiry — whether an architect can recover a claim under the Mechanic's Lien Law of this State, I beg leave to reply, that as this question has never been directly brought before our Court of Appeals, nor any decision been given by that Court, sufficiently broad in its principles to cover this case by necessary implication, it is impossible to give a decided opinion. The most we can do is, 1st, to apply the usual rules of legal interpretation to the language of the Statute; 2d, to inquire if any decision upon the point has ever been given in our lower Courts; and 3d, to consult the Reports of other States to discover if any principles have been laid down by their Courts that would probably have weight with our own Court of Appeals.

1st. In regard to the interpretation of the Statute. — Here the general rule, that a remedial Statute is to be liberally construed so as to advance the remedy, has application. *Hess et al. vs. Poultney et al.*, 10 Md., 257; A. A., 1845, ch. 287, sec. 1; *Oster vs. Rabenean*, 46 Mo., 595.

It is probable that the original design of these Statutes, which are now general throughout the States, was to protect the *laboring mechanics* engaged upon the construction of houses, and who, as a class, were ill able to sustain loss; but the remedy was so equitable and convenient that it has been enlarged in its scope, so that it would now seem to include the claims of *all* classes of persons furnishing labor or material of any kind in the erection of houses or machines. Material men and *contractors* are persons specially named in our Statute as being entitled to the benefits of its provisions (vide sections 20 and 21), and it would seem that the contractor, who often does no more than give his time to the general supervision of the work, does not stand in any more favorable position than the architect who furnishes his time and skill in the preparation of designs and working plans, and also very frequently in the supervision of the work as it proceeds. These plans are just as necessary to the erection of the building, to insure its tasteful and convenient arrangement, and its safe construction — qualifications demanded by the person erecting the house when he employs an architect, as the actual material employed in the body of the structure: they are also of equal value to the architect himself, who furnishes them for the benefit of his employer, being the product of his time and skilled labor, which have as marketable a value as lumber or brick. Further, in the 19th section of the Statute, it is required that the name of the contractor, or *architect*, or builder, shall, in certain cases, be set forth in the claim filed as co-defendant with the owner of the property, thus putting these three classes of persons on *an equal footing;* while in the very next section (20th) the right of the builder, or contractor, to file and enforce a claim is recognized; thus seemingly implying an equal right in the architect.

It is difficult to see why the claim of an architect who furnishes drawings, or his time in superintendence, or both, is not as equitable as those of the persons who furnish the material or time and experience in supervision; and as these liens are usually enforced in the Courts of Equity, it is presumed that the equitable and liberal rules which there prevail would be applied to support it. But the law-

guage of the Statute seems to be broad enough to entitle to a recovery also in a Court of Law. The exact words to be found in the 1st and 14th sections are, "Every building erected, and every building repaired, rebuilt, or improved to the extent of one-fourth of its value, shall be subject to a lien for the payment of *all debts* contracted for *work done*, or materials furnished *for or about* the same;" and further, "*Any person* furnishing work, or material, or both, and complying with the provisions of this article, shall be entitled to the lien hereby given, without regard to the amount of his or their claim." Certainly an *architect* who furnishes his time and skilled labor, either in the preparation of drawings, or in supervision, comes within the scope of this language.

2d. I have been able to find only one case in which an architect's claim has been filed in our lower Courts, and in that case the claim was allowed by Judge Pinckney, without any demurrer from the defendant. The case referred to is that of *Pohl vs. Spreckelmeyer*, and the claim, which is to be found in the Mechanic's Lien Docket, Liber 16, p. 176, set forth that it was "for services as an architect in preparing plans, specifications, and details, and in superintending the erection of six buildings in Gilmor Street."

3d. There is a great dearth of cases bearing on this point in the Reports of other States, but I find a decision of the Supreme Court of Pennsylvania, a Court of high repute, and which would undoubtedly have great weight with our own Court, almost entirely confirming the views I have taken. The case is entitled the *Bank of Pennsylvania vs. Gries*, and is to be found in the 35th Pennsylvania Reports. The claim made by Gries was for plans and superintendence, and the lower Court having allowed his claim, the Bank appealed, and the decision of the lower Court was affirmed. Thompson, J., delivering the opinion of the Court in that case, lays down the principle, "That an architect employed to make the plans and drawings for a building, and to direct and oversee its erection in accordance therewith, is within the provision of the Mechanic's Lien Law, and entitled to a lien against the building for his labor." It is to be noted here that the language of the Pennsylvania Statute is, if there is any difference, less broad than that of Maryland, the exact words there being "for work done or materials furnished for or about the erection and construction" of all buildings, etc. Further, the Court decided in that case, "that an architect is entitled to recover the full amount of his contract, although the work was stopped by his employers, before it was entirely completed." This case, however, is not altogether satisfactory on account of an *obiter dictum* delivered by the Court, viz.: "*It seems* that a *mere* architect who only furnishes the plans and drawings and performs no service in the erection of the building is not entitled to a lien." The reasoning of the Court seems to be founded on the idea that an architect not being technically a *mechanic*, cannot come within the provisions of the *mechanic's* lien law, except when he performs quasi-mechanical duties, as in directing the work about the building. But *material* men are not usually mechanics, and they are specially included in the scope of the law.

There is also a decision in 1st Oregon, 169, to the effect that "time and skill employed to supervise and direct in the construction of a building are grounds for a lien thereon." From these cases it would seem, that where an architect, besides furnishing plans, supervises the erection of a building, *he is clearly entitled* to the benefit of the Mechanic's Lien Law; but from the various considerations adduced above, I feel quite confident that the Maryland Courts would support a claim for the furnishing of plans and specifications only.

In view of the importance of the principle to your profession, I would advise that one of the members of your Association, having a claim sufficiently large to provoke the defendant to appeal in case of his loss, should bring a suit in equity to enforce it, so that the question may come before the Court of Appeals, and be definitely settled.

I think I have given some good reasons for believing it would be settled in your favor.

I am, very respectfully yours, Lawrence Turnbull,
Attorney at Law.

THE ILLUSTRATIONS.

RUINS OF THE HIPPOSTYLE HALL, TEMPLE AT KARNAK, FROM A WATER-COLOR SKETCH BY MR. ARTHUR ROTCH, ARCHITECT, BOSTON, MASS.

[*Colored Print.*]

INTERIOR OF ST. STEPHEN'S CHURCH, LYNN, MASS. MESSRS. WARE & VAN BRUNT, ARCHITECTS, BOSTON, MASS.

For exterior view, details, and description see *American Architect* for November 5, 1881.

DESIGN FOR A DWELLING-HOUSE. MR. CARL PFEIFFER, ARCHITECT, NEW YORK, N. Y.

COMPETITIVE DESIGN FOR CHRIST CHURCH (MEMORIAL), DANVILLE, PA. MR. R. M. UPJOHN, ARCHITECT, NEW YORK, N. Y.

LEGAL NOTES AND CASES.

Contract made on Sunday. — Subscription to Build a Church. — Charity.

The Supreme Court of Pennsylvania on October 3, 1881, in *Dale vs. Knapp*, had under consideration the question of the validity of a contract made on Sunday. The defendant made a subscription on Sunday to a fund for the erection of a church, and having refused to pay it, he was sued; and he set up as a defence, the illegality of the contract, as it was made on Sunday. The court below decided in his favor, but the appellate court reversed this judgment and said he was liable on the ground that as the subscription was for a charitable purpose, it was a valid contract. Judge Mercer, in the opinion, said: A contract made on Sunday is not void at common law. *Kepner vs. Keefer*, 6 Watts, 231; *Fox vs. Mensch*, 3 W. & S. 446; *Shuman vs. Shuman*, 3 Casey, 90. If then, this contract is void, it is by reason of the Act of April 22, 1794: "If any person shall do or perform any worldly employment or business on the Lord's day, commonly called Sunday, works of necessity and charity only excepted, and such other exceptions as are mentioned in the proviso, every person so offending shall be subject to a penalty prescribed." It may be conceded that the making of this subscription is not a work necessarily done on Sunday. The question then is, whether the raising money to build a house of worship is a work of charity within the meaning of the act, or is the solicitation of contributions for that purpose from a congregation assembled on Sunday for religious worship a work of charity? Charity is active goodness. The means which long established and common usage of religious congregations show to be reasonably necessary to advance the cause of religion are not forbidden, and they may be deemed works of charity within the meaning of the statute. It is not essential that they be purely charitable. It is sufficient if they so far partake of that character as to be recognized by the congregation as part of its active goodness, and not expressly forbidden by the statute. *Commonwealth vs. Nesbit*, 10 Casey, 398. The inclination of the court has long been not to permit a person to set up this law against another person from whom he has received a meritorious consideration, or on whom he has inflicted an injury. *Moliney vs. Cook*, 2 Casey, 342; *Long vs. Matthews*, 6 Barr, 317. It is not a violation of the act for a hired domestic servant to drive his employer's family to church on Sunday in the employer's private carriage. *Commonwealth vs. Nesbit, supra.* A will executed on Sunday is not void, although at the time the testator be in his usual state of good health, and live five or six months thereafter. *Beitman's Appeal*, 5 P. F. S. 183. Contracts for services on Sunday of the preacher, the sexton, the organist, and the singers are not illegal, although these persons may engage in such employment as a means of livelihood. Their services are in furtherance of the same great charity. The custom of soliciting contributions on Sunday from congregations assembled for religious worship is very general, and has existed from an early period. Sabbath offerings may be for the incidental expenses of the church; to assist the poor; to repair, enlarge and rebuild the church edifice; to support foreign and domestic missions. The latter often extend to furnishing aid to poorer congregations towards erecting houses of worship. If it be illegal to give or to agree to give for such objects on Sunday, it must be illegal to solicit the giving. We are not aware that it has ever been held that the preacher became liable to the penal provisions of the statute by soliciting from the pulpit such contributions, nor any of the officers of the church for taking up the collection. It is true, there is a legal distinction between having given and agreeing to give, yet, inasmuch as we think a subscription towards the erection of a house of worship is a work of public charity, such agreement is not prohibited by the Act of 1794. The conclusion we have arrived at is not in accord with the doctrine assumed in *Cullett vs. Trustees*, 62 Ind. 965, but in principle it is in harmony with the rule declared in *Flagg vs. Millbury*, 4 Cash, 243; *Bennett vs. Brooks*, 9 Allen, 118; *Doyle vs. Town*, 118 Mass. 195, and directly sustained in *Allen vs. Duffy*, 9 Reporter, 646. The support of religious societies is a charity. It is a giving for the love of God or the love of a neighbor, in a broad, catholic sense. Whatever is morally fit and proper to be done on Sunday in furtherance of the great object is likewise a charity. H. E.

Repairs of County Property — Interest-bearing Orders in Payment.

A County Board having authority to contract for the repair of its court-house and the building therein of fire-proof safes, without restriction as to the amount to be paid, or the mode of payment may contract to pay the charges therefor in interest-bearing orders of the county. *Jackson County vs. Readleman*, Supreme Court of Illinois, September, 1881. H. E.

Injunction — Possession of Real Property — Action of Attorney.

An injunction was granted against a defendant, his servants, agents and employees, restraining them from disturbing the complainant in the possession, use and enjoyment of a certain house, and his attorney put other persons in possession thereof, under a subsequent employment. The court decided that he had violated the injunction and would be held to be in contempt, unless he put the complainant in possession of the premises within a time specified. *Phinizy vs. Wimpy*, Supreme Court of Georgia, September, 1881. H. E.

THE BERGSTURZ AT ELM.

The event called in German Switzerland a *Bergsturz*, where a portion of a steep mountain-side precipitates itself down, sometimes through thousands of feet, into a plain or valley below, has no parallel in countries such as ours. We have indeed no proper name for it; for our term *landslip*, referring to the gentle movements of earth known in the Isle of Wight and some other British localities, fails to

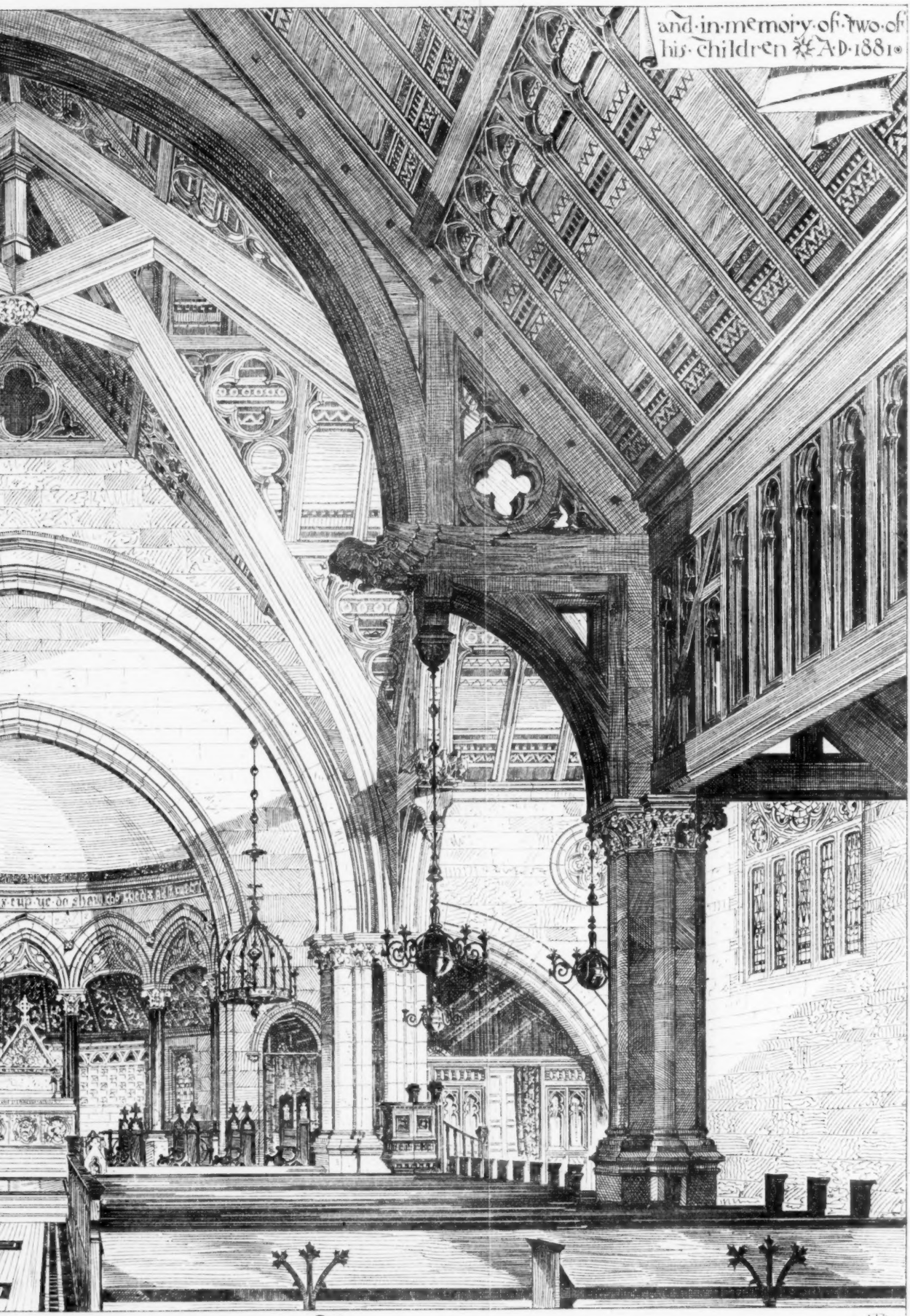
Design for Christ Church (Memorial)

Danville Pa. R. M. Upjohn Architect
New York

Heliotype Printing Co. [illegible] Tremont St. Boston

St Stephen's Memorial Church at Lynn

The Heliotype Printing Co 211 Devonshire St Boston



...nn Mass Messrs Ware & Van Brunt Architects Boston

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give any adequate idea of the terrible violence of the Swiss occurrence. For this reason I retain the original expressive compound word; for even the rendering *mountain-fall* would be too tame, as the verb *stürzen* means far more than mere motion downwards: it adds the idea of enormous energy, which no simple English word seems adequate to convey.

Events of the nature referred to are naturally to be looked for in countries where deep valleys with precipitous sides have been excavated in rocky material; for such material is seldom so solid and compact as to be free from liability to fall to pieces, especially when subject to the action of the weather. It is a curious instance of this that it has been found necessary to line the great railway rock-tunnels of Mont Cenis and St. Gothard almost entirely with substantial masonry. In travelling through Swiss valleys we find abundant evidence of falls from the sides that have taken place at former times, and such falls are known to continue in the present day. It is, however, but seldom that they are of sufficient magnitude to do much mischief and become historical. The greatest on record, whether estimated by its actual dimensions or by the extent of the damage it caused, was that of Goldau, on the 2d September, 1806. Here an enormous mass forming the upper portion of the Rossberg, a high mountain north of the Rigi, suddenly gave way and dashed into the fertile and populous valley below, destroying several villages, half filling up a lake, and entombing 457 human beings in a horrible grave.

A calamity of the same nature has lately occurred in the Canton of Glarus, and although of smaller extent than the Goldau fall, it has been very destructive to life and property. A notice of it, founded on a visit I paid to the spot a few weeks afterwards, may possibly be interesting to the readers of this magazine.

Among the crowds of tourists who travel, every autumn, from Zurich on their way to Chur and the Engadine, many will have noticed a lateral valley which opens on the western end of Lake Wallenstadt, and penetrates in a southerly direction among very high lands. This valley is watered by the Linth, a river notable as evidencing one of the greatest triumphs of science over natural disadvantages. It was at one time the scourge of the whole valley, which its floods laid under periodical devastation; but, thanks to the skill and energy of one man, a local engineer, it has not only been entirely cured of its mischievous propensities, but has been forced to become a valuable servant to the district, by furnishing an ample store of well-regulated water power to a host of busy and prosperous industries. And it is curious that the Swiss nation, in spite of their democratic prepossessions, have conferred on their benefactor a patent of nobility, honorable alike to him and to them. "Escher von der Linth" carries in his title at once an explanation and a justification of his well-earned fame.

The valley of the Linth is singularly picturesque. It has its origin in the high snowy group of which the Tödi (nearly 12,000 feet) is the culminating peak, and throughout its course, particularly near the well-frequented baths of Stachelberg and the bustling little town of Glarus, it presents mountain scenery unsurpassed in beauty. At Sewanden, about three miles above Glarus, the Linth is joined, on the east side, by a tributary called the Sernf. The valley that brings this down rises sharply from the junction and bends to the southward, finally losing itself against the immense mountain ridge that forms the northern wall of the great Romansch Valley of the Vorder Rhein, and separates the Glarus district from the Canton of the Grisons. There is a good carriage road up the Sernfthal, passing through the villages of Engi, Matt, and Schwandi, and terminating, about nine miles from the Linth, at the chief place, Elm, the site of the catastrophe now to be described.

Elm lies at a height of 3,230 feet above the sea. In its remote position it is little visited by pleasure tourists, but it is known to climbers as the meeting point of several high passes. One of these has an historic celebrity, being the scene of the disastrous retreat of Suwarrow and his band before the victorious French army in October, 1799. The house in Elm where the defeated Russian hero took up his quarters is still shown, and the traditions of his appearance and behavior yet survive.

All visitors to the locality are shown a natural curiosity called the *Martinsloch*, a small hole in one of the peaks high up above the snows to the southeastward, through which the sun shines down on the village at a certain morning hour twice a year. The Elmers are proud of this, and it is a standing joke against them that, at the time of the introduction of the New Style, they stiff-neckedly objected for a long time to its adoption, lest it should interfere with the regularity of the solar movement, and deprive them of their long-cherished morning beam.

The inhabitants of the village numbered, according to the last census, something over a thousand. They and the dwellers in the valley generally are a strong, hardy, and handsome race, particularly in the male sex; they are industrious, home-loving, proud of their good name, and renowned for their uprightness of principle and conduct, for which reason capitalists have always been ready to invest money in their undertakings. The surplus population have frequently emigrated to America, not as paupers, but as well-to-do settlers, and a flourishing colony called "New Elm," has been founded by them in Wisconsin. The education of the young is well cared for, and appears to extend to some accomplishments, as the people are famed for their singing of a rude kind of *Volkslieder*. A verse of one of these songs runs thus: —

"Bis die Berge thun sich büge
Und die Hügel senke sich
Bis der Tod mir nimmt das Lebe,
So lang will i liebe Dich!"

The merry parties singing this have little thought what a mournful event they were anticipating; but the idea expressed, and the fact that one of the neighboring hills is called the "Mörderhorn," would seem to imply a long-existing dread of some danger of the kind.

Elm may be considered to stand at the head of the valley, and it is closely overshadowed by the great mountain-wall already mentioned, which towers up to a height of some 6,000 feet above it, in an unbroken ridge, covered in many parts with glaciers, and with that peculiar formation of half-consolidated snow which is called in German *Firn*. The catastrophe originated in a spur of this wall, called the *Tschingelberg*, and lying about three-quarters of a mile to the southeast of the village. It consists of a bluff promontory rising very steeply, almost precipitously, out of the valley bottom, for a height of about 2,000 feet, and having above it more moderate slopes forming the "Tschingel Alp," these again rising to the great ridge above.

The Tschingelberg was of great interest to the Elmers on account of the important slate quarries that had been formed therein. Strata of this useful material had been found and profitably worked in many parts of the valley, particularly near Matt, and the Commune of Elm took advantage of a similar formation existing in the lower portion of the Tschingel promontory. The exploitation of these quarries had much increased of late years, and the produce of the "Plattenberg," as this part of the hill was called, had formed the chief revenue of the Commune. About three years ago a company offered a royalty of 10,000 francs a year for a lease of the quarries for twenty years; but the offer was at once refused, and with reason, as the income in 1880 turned out to be 70,000 francs. The slates from this source were chiefly used for forming large slabs, and the workings involved large excavations into the heart of the mountain.

Close under the Tschingelberg is a small side valley called the *Unterthal*, very narrow, and bounded on the opposite side by a hill called the Düneberg. In the Unterthal was a small hamlet, principally devoted to the slate trade, and connected to the main-road near Elm by a short branch-road, crossing the Sernf by a light iron lattice bridge. Many houses and other buildings also existed along this road, and otherwise scattered about in the space between Unterthal and Elm.

The Tschingelberg, above the quarries, although largely covered with pine forests, and presenting no more dangerous appearance than is customary with steep rocks generally, had been long known to be in a somewhat loose condition, and falls of stones from it occasionally occurred. The hot and dry summer of 1881 was succeeded by heavy rains which, penetrating into the cracks and fissures, made matters worse, and the dislodgements became more frequent. Some alarm was created, and on Friday, the 9th of September, an examination was made by competent persons deputed for the purpose by the Commune. The result was a recommendation that some protective measures should be undertaken, but no immediate danger was apprehended.

During Sunday, the 11th, rain fell in torrents, and in the afternoon the falls of stones became so much increased as to attract anxious attention upwards to the hill. A little after 5 P. M. some observers saw the fir-trees, on a patch of ground high up above the quarries, begin to move, and to bend, as they said, "like stalks of corn before the sickle of the reaper." It was now clear that some greater fall was imminent, and shortly afterwards, at about half-past five, a large mass of rock fell with a fearful crash into the Unterthal, shattering several buildings in its way. Then arose a great cry, exhortations to *flüchten* (fly) and *plündern* (remove your goods) being heard in all directions. Able and active men heroically rushed to relieve those who were in danger; but alas! before anything could be done, all help was rendered unavailing. A quarter of an hour after the first fall occurred a second which completed the destruction of the Unterthal, and then immediately followed the third and most frightful of all. The whole side of the mountain gave way, and dashed into the valley below, accompanied by a roar as of a thousand thunders, and enveloping the whole neighborhood in a thick, opaque cloud of dust, producing a darkness deeper than the blackest night.

When towards seven o'clock the atmosphere had somewhat cleared, the fearful devastation became visible. Providentially the greater part of the village of Elm had escaped, but everything between that and Unterthal, — fields, crops, houses, and everything in them, — had disappeared, buried under thousands of tons of shattered rock and stone. It was then getting dusk, and, as the night closed in, blank despair spread around, for it was evident that there was no hope of rescue. This was confirmed in the morning when offers of help poured in from all the neighborhood. A few horribly mutilated corpses were found in some ruined buildings visible at the exterior of the mass, but this was all. Some energetic attempts were made to remove the débris in places where it was thought houses might be reached, but they were altogether without success, and the efforts were soon discontinued. Only one person was rescued alive; this was an old man of ninety-two years of age, who was found among some ruins with no other hurt than a bruise on one foot. The wound

was immaterial, but he died from the nervous shock a few weeks afterwards.

When, in a few days, the statistics came to be inquired into, it was made out that the falling mass had overwhelmed 22 dwelling-houses, 50 stables, 12 stores and workshops, and, saddest of all, 114 inhabitants of the valley. It was sad, too, to learn that the heroic men who had, on the first approach of danger, hastened to help their friends and neighbors, had all perished in the noble act — not one of them was heard of more.

Some touching incidents that occurred during the catastrophe are described by a Zurich observer who visited the spot forty hours afterwards.[1] He says:

"When I arrived at the village, women were weeping at their house doors, in a state of the bitterest anguish: they answered my questions in sobs and broken sentences, as if their breath failed them in their feeling of horror.

"I saw, lying at the foot of a tree, a pretty little box that had been picked up among the dirt; there was an inscription on the lid, 'A new year's gift from Johannes Reiner to his dear goddaughter, Katherina Reiner, 1855,' and in it were found an embroidered neckerchief and some other fancy articles of female apparel. The inscription reminded me of a person of the same surname, Burckhardt Reiner, a strong, upright man of seventy, with whom I had been speaking shortly before. I asked him if he had relatives among the lost ones, and he told me his sorrow. He lived on the hillside, out of danger, but his son, with a wife and two children, dwelt in a house a short distance away, on the Elm road. Burckhardt's daughter had gone on the Sunday afternoon to see her brother and his family. When the first alarm was heard at Unterthal, the old man's wife ran to her son's house to urge them all to come away with her; not that any real danger was feared at that great distance, but from a natural desire to get all her family together when trouble was near. But before they could leave the house, the great mass came down and involved the mother, daughter, son, son's wife, and grandchildren, in one common destruction; 'and now,' said the old man, weeping like a child, 'I am alone in the world.' 'Ach weun ich doch nur noch Eines hätte! ach nur die Tochter! die Tochter noch, sie ist so gueti gsi (so gut gewesen)!' I pressed the old man's hand and went sadly on my way.

"Outside a house in Schwandi, I saw, sitting on the bench, a pale, sad woman, Elsbeth, the sister of the Hausfrau; she had two girls, of about six and nine years old respectively, clinging to her. She lived in Unterthal, and on the first alarm she took her two children, the girls who were with her, by the hand, and dragged them, she says, with almost superhuman force, up the steep hill for safety. She called to her father and mother-in-law, and an old uncle, who were living with her, for God's sake to follow; the three old people obeyed, but they had not her strength, and Elsbeth lost sight of them. She herself, after she had got a little higher, lay down exhausted with the girls in a rock crevice. She had not been there many moments when the great earth torrent came thundering by, enveloping her in darkness, but fortunately leaving her unharmed. The old people had been overtaken by it, as had also her husband, who, like Lot's wife, had lingered too long after his possessions, and had paid the sad penalty."

The funeral, if such a name could be given to the interment of the few mangled remains that had been collected, took place on the 14th September, when thirteen coffins, eleven adults' and two children's size, were deposited in consecrated ground. There was a large concourse of mourners, and appropriate addresses were delivered by two of the local clergy.

As soon as the most pressing care for human life was past, it was seen that serious evils were threatened by the interference of the fall with the natural flow of the land drainage. The rubbish had obliterated the former courses of the rivers, and the hill and glacier streams, swollen into torrents by the rains, began to collect in dangerous accumulations, or to wander wildly over the country, causing further destruction of property; this therefore called for immediate attention, and the help offered was devoted energetically as the first object to open suitable drainage channels.

The general distress was aggravated by alarm as to the possible continuance of danger. For some time afterwards stones continued to fall, and there was reason to believe that wide fissures had been formed, and large masses rendered insecure by the loss of support. Warnings were circulated, and in the night between Monday and Tuesday the remaining portion of the village was almost entirely deserted; but as the mountain appeared quiet, courage was restored, and at the time of my visit nearly all the houses were occupied as usual. But the Government of the Canton thought it advisable to institute a definite inquiry on the matter, and they commissioned Professor Heim, of Zurich, a distinguished engineer and geologist, to examine the mountain. His report, lately presented, is by no means reassuring. He says there appears danger in three several spots adjoining the great scar already existing on the hill; and that some of these threaten the remainder of the village. No precautions, he says, are possible to prevent the falls, and he therefore recommends the inhabitants to leave their houses till the danger is past. But this they are reluctant to do, and the only alternative is constant watching, sentinels being accordingly posted to give warning by day or night of the appearance of danger, so that the people may flee in time.

It may be well now to give some idea by actual figures of the magnitude of the Bergsturz. The greatest height of the fall, *i. e.*, the height from the valley to the top of the fracture, was about 2,000 feet. The quantity of material that fell is estimated at about 360,000,000 cubic feet, or say 20,000,000 tons, and it is believed that half this came from the upper half of the hill. When it is considered that the velocity due to a fall of 2,000 feet is about 350 feet a second, some idea may be formed of the tremendous amount of mechanical force expended on the shock.

The effect of this force was manifested in various ways. First by the smashing up of the débris. There are, no doubt, some very large pieces lying about; one of the biggest measuring about 50 feet by 40 feet by 25 feet — or 50,000 cubic feet. But the great mass is broken up into comparatively small fragments, and a large proportion was pulverized into fine dust, which, as in the eruptions of Vesuvius, spread over the neighborhood for miles around. Then, the behavior of the falling material gave singular evidence of the force inherent in it. A large portion crossed the Unterthal (a horizontal distance from its original site of about half a mile), struck the opposite hill of the Düneberg, and mounted up it to a height of some 350 feet, at the same time rushing up the rising slope of the valley to the eastward. But the great mass fell in the open valley and followed the natural fall towards Elm, rolling with prodigious impetus down the slope, and at the same time spreading out laterally. It covered a surface of ground equal to about one square kilometre, and lay thereon in some places as much as 100 feet deep. The rocky stream extended westwards to a distance of a mile and a quarter from its origin, reaching and carrying away a part of the main road leading to Elm. It was here that some of the most valuable lives and property were destroyed; for as the village had been increasing in population and wealth, a new suburb of good houses had been built along this road, and they were all either buried in the mass or upset and crushed to pieces by the shock. Some isolated ruins of them were visible near the edge of the débris when I visited the spot, smashed-up joinery, household utensils, and furniture lying scattered about among the rocks and mud. It was here that the human remains were principally found.

The feature that most impressed me was the great similarity of the behavior of the mass to that of a stream of mud or other semi-fluid substances, and it required some mental effort to convince one's self that the whole was formed of angular rocky fragments. This again shows the tremendous *vis viva* of the great mass, which, notwithstanding the immense frictional resistance of its elementary components, caused it to follow to a certain extent the laws of fluid motion.

I remember, having frequently had occasion to pass over the field of the Goldau Bergsturz, remarking also there evidences of enormous force, but manifested in a different way; the rock of the Rossberg, a hard conglomerate, offered much more resistance to breaking up, and consequently the force was expended more in tossing the huge fragments about. When one looks at the colossal blocks, almost mountains in themselves, which lie scattered over the wide valley, one can hardly believe they have been projected from the rift in the hillside miles away.

One remarkable feature of these mountain falls is the great disturbance of the air caused by the swift motion through it of such an immense bulk of material. In this instance, it was remarked by some near observers who had the good fortune to escape, that immediately after the giving way of the great mass, but before it reached the lower ground, a tremendous blast of wind drove down the valley. It completely carried away the iron bridge, about twelve tons weight, over the branch road to Unterthal, and deposited it, crumpled to pieces, at some distance. It is known also that some persons who had collected on this spot (thinking themselves safe such a way off) were whirled into the air by the hurricane and killed. Among these was a local judge, proprietor of the principal inn, and a man much esteemed in all the country round.

It is interesting in a scientific point of view to inquire if any cause of a geological nature can be assigned for the rupture of the mountain. In the Goldau case a distinct geological origin could be traced for the disaster, namely the superposition of stony beds on inclined strata impervious to water, which under certain conditions formed a slippery surface on which the upper beds could slide down. This kind of stratification is very visible in many parts of the neighboring hills, particularly on the Righi, where slips are not unfrequent. One of some magnitude that occurred some two years ago is visible from the Kaltbad railway station. I cannot learn, however, that any similar cause was present in the Elm case. The rock is marked in Studer and Escher's geological map as *Terrain nummulitique*, belonging to the tertiary Eocene formation; and although it consisted of a mixture of two constituents, limestone and slate, these do not appear to have lain in any such relative positions as to favor the fall. It is more probable that the cause was the very simple and ordinary one which produces falls in general, namely, a loose, fissured state of the rock generally, which was aggravated by the plentiful flow of water through its crevices, and the consequent further erosion of the mass, till it lost the coherence necessary to maintain it in its highly inclined position.

Then the question arises whether the working of the slate quarries had any share in the matter? It is natural that under the painful circumstances, this question should have been dealt with very tenderly; but as a matter of science one can hardly think it likely that large excavations could be made in the side of a steep hill of this character without danger. But it is an ill wind that blows nobody good, and as it appears that the public attention has been directed to

[1] *Der Bergsturz von Elm.* Von. J. Hardmeyer-Jenny. Zurich, Füssli, 1881. I am indebted to this little brochure for many of the particulars here given.

other workings of a similar character in the neighborhood, it is to be hoped that the warning, though a fearful one, may not be without its utility.

It is difficult to form a money estimate of the damage done. Independently of the property in buildings, furniture, etc., a large area of very precious land in the valley and on the hillsides has been utterly and permanently ruined, and a great quantity of valuable timber destroyed. A sum of about one and a quarter million of francs, or £50,000, has been named, but this cannot include the annihilation of the slate quarries, which, bringing in about £2,800 a year, would of themselves represent a very large value utterly lost to the Commune. To mitigate the serious private losses, subscriptions were opened throughout Switzerland, free reference being made to the old adage of the Confederation, *Einer für Alle, und Alle für Einen;* and it is pleasant to know that these appeals have been liberally responded to. — *William Pole in the Fortnightly Review.*

ACOUSTIC VASES.

A PAPER, by Gordon H. Hills, Associate, on "Earthenware Pots (built into churches), which have been called Acoustic Vases," was read at a late sessional meeting of the Royal Institute of British Architects. The following is an abstract of it and of the discussion which ensued thereon: —

The paper, Mr. Gordon Hills explained, was occasioned by the discovery, in August, 1878, of about fifty earthenware pots built into the walls of the nave of Leeds Church, near Maidstone, Kent, which suggested to him the collection for the first time, from English and foreign sources, of notices of previous discoveries of the kind. The name given to such pots built into church walls, with their openings towards the interior of the church, was "acoustic vases." It was given to them on the strength of a passage in Vitruvius (V. 5), which the author quoted at length. In it this Roman architect of the Augustan age (who, however, owns his obligations to the Greek writer Aristoxenus) gives technical instructions for making and placing, expressly for acoustic purposes, brazen vessels in theatres. In the theatres at Rome there was no such arrangement, which Vitruvius explained from their being built of wood — a naturally resonant material. In some provincial theatres in Italy such vases were used, and they were common in Greece. Vitruvius added that "L. Mummius on the destruction of the theatre at Corinth brought to Rome some of its brazen vessels, and dedicated them as spoils at the temple of Luna;" and in the concluding sentence of the extract he explains the transition from brazen to earthenware vases. "Many clever architects," he wrote, "who have built theatres in small cities, have, for want of others, made use of earthen vessels yielding the proper tones." After a lapse of many centuries, the chronicler of the monastery of the Celestins of Seans at Metz was the next witness cited, in a passage under 1432 (p. 133 of the MS. Chronicle), which was also given *in extenso.* It recorded that, in the year named, Ode-le-Roy, prior of the monastery, caused to be introduced into its church an arrangement of acoustic vases, having been struck with the good effect of such a device in another church. A marginal note to the account, "Ecce risu digna," was attributed to the chronicler himself. In a work of the year 1665, written by the Abbé St. Leger, and entitled "L'Apocalypse de Meliton," the author gave this instance, amongst others, of the neglect of their duties evinced by the religious orders "Of fifty singing men that the public maintain in such and such a house there are sometimes not more than six present at the service: the choirs are so fitted with jars in the vaults and in the walls that six voices there make as much noise as forty elsewhere." An attempt made by a correspondent of *The Builder* to connect with acoustic pottery certain terra-cotta cones discovered by Mr. Loftus in ancient Chaldean walls at Warka had utterly miscarried. Examples of acoustic vases belonging to classic times had been collected by Mr. R. R. Brash. The greater theatre at Hierapytna in Crete had recesses for at least one row of *echeia* or jars. At Lyttus there were three rows. Like provision seemed to have been made at Saguntum. The ancient theatre at Scythopolis in Syria had seven recesses for *echeia* in the position indicated by Vitruvius, and like arrangements had been found in a theatre at Arizani in Asia Minor. Coming to mediæval examples of so-called acoustic vases, Mr. Hills remarked that they had all been found solidly built into walls — a departure from the Vitruvian doctrine suggesting a different purpose. Beginning with continental instances, Mons. Stassoff, editor of the official Archæological Journal of St. Petersburg, was cited to prove that acoustic pottery had been found in a great many ancient Byzantine or Græco-Russian churches in his country. For Sweden and Norway, Mons. N. M. Mandelgren, a Swedish architect, claimed a pretty considerable number of churches furnished with earthenware pots built into the walls and vaults, with their orifices turned towards the interior of the building. This testimony of the Scandinavian antiquary to Mons. Didron, in 1861, was supported by one instance which Mr. Hills quoted from his published works. Passing on to France, where the evidence seemed wholly negative as to the survival of any fragment or trace of the pots put up by Ode-le-Roy in the church of the Celestins at Metz, Mr. Hills said it was in April, 1842, at the church of St. Blaize, at Arles, that the first modern French discovery of earthenware pots built into the walls was found. Of this a detailed description was given, after Mons. Didron, who called the pots found "*cornets*" of baked earth, and "*pots acoustiques.*" They were shaped quite like the horns sounded by French herdsmen. The Abbé Cochet's experiences of acoustic vases in the churches of Alvimare, Mont aux Malades, Peruel, and Contremoulins, were next spoken of, reference being made to his work, "Les Eglises de l'Arrondissement de Yvetot," first published in 1852. The same author afterwards described like discoveries in the old church of St. Laurent en Caux, Canton de Doudeville, and two other churches. Besides these the so-called acoustic pottery had been reported at Aberbrach in Brittany, St. Martin Angers, and Clisson. In Switzerland it was commonly said that numerous examples of acoustic pottery in walls were known. A few particulars were cited from Mr. Albert Way, F.S.A., and Dr. Keller, President of the Society of Antiquaries at Geneva. Crossing over from the Continent, Mr. Hills found one Irish and a few English instances, on all of which he dwelt more or less. The Irish discovery was at the fine old collegiate church of St. Mary's, Youghal. The English finds of pottery built into church walls were next spoken of in order, from the earliest at Fairwell in Staffordshire, in 1771, to the latest in 1878 at Leeds Church, near Maidstone. This last Mr. Hills elaborately described from personal examination of the site and all the architectural features and facts. Intermediate examples were the churches of St. Nicholas, Ipswich, where the discovery was made in the course of repairs going on about 1848–9; St. Peter, Mancroft, Norwich, in 1852; Fountains Abbey, Yorkshire, in 1854; St. Peter, Mountergrate, All Saints Church, and St. John de Sepulchre, Norwich; St. Olave, Chichester, in 1851; Upton, near Southwell, Notts., in 1863; Denton, Northamptonshire, in 1864; St. Clement, Sandwich, Kent, in 1869; East Harling, Norfolk, in 1872. In conclusion, Mr. Hills spoke to the question of the intention of the imbedded jars. Vitruvius, Ode-le-Roy, and the Abbé St. Leger declared the purpose to be acoustic. Mandelgren expressed no opinion as to the single Swedish example he had discussed in print, yet it was conceivable that the five rows of jars in the vault of that little choir might have been placed there to check the echo of the chanting. Mons. Didron was sceptical as to the acoustic purpose until he became aware of the avowed design of Ode-le-Roy. The Abbé Cochet fully believed the object of his examples to be acoustic, perhaps rather from the resemblance of his jars to the French rustic horns of our days, than from their disposition in the buildings; for in no case did his observations point to acoustic arrangement. The Irish example gave arrangement in the spacing of the jars and want of arrangement in their form, unless, as Vitruvius would have had it, the variety in form was meant to produce a distinctive note from each. Mr. Brash, who reports this instance, firmly believed in the acoustic effects, and said that since the restoration of the chancel he had repeatedly experienced them, and found they made sounds originating in the chancel audible, to an unusual degree, in other parts of the church. Nevertheless, Mr. Hills inclined to say with Mons. Didron, "Ce moyen d'acoustique me parait assez puéril," or with the Metz chronicler, "Ecce risu digna." The five similar instances in England (one at Ipswich, three at Norwich, one at Fountains Abbey) had all been variously set down as "acoustic" and "doubtful" and "for warming." They undoubtedly formed a class by themselves. Mr. Hills thought the position of the jars beneath the floor decidedly militated against the acoustic theory. In the examples at St. Olave's, Chichester, Upton and Denford we returned from jars sunk beneath the floor to those having an elevated position. In these instances, if acoustics had been in view, the means adopted seemed quite insignificant, whilst St. Olave's was so tiny a structure that we could hardly conceive the need for any aid to sound. It had been suggested that in this instance the earthenware jars might have been connected with the keeping of relics. Some of these and previous instances had suggested to Mr. Hills means for the suspension of hangings.

Thomas Blashill, Fellow, had seen pots of the kind in the wall of Denford Church, Northamptonshire, placed about nine feet above the floor, and the bottom of the pots was towards the face of the wall. Some raggedness about the edges showed that the end had been broken out, and, after putting his hand through one, he fancied he felt the wall on the other side. The idea that a hollow object of a sounding nature might be used in a building for increasing and improving sound had been carried out at a much later date than the lecturer seemed to imply. One instance had impressed itself on his (the speaker's) mind, not in respect to pottery, but in a case quite analogous. The objects used in that case were horses' skulls, such skulls being remarkable, as they well knew, for large cavities. He remembered being present, exactly thirty years ago, at a gathering in a large room of an old inn about eight miles from Hereford, and the floor of that room, the landlord told him, was laid over a quantity of horses' skulls which had been put there "to improve the sound of the fiddle." Now two or three years ago, he (the speaker) passed that same inn, which was then surrounded with scaffolding, and on the top of each scaffold-pole was placed a horse's skull. It appeared that, in the course of the alterations, the workmen had come upon those skulls, twenty-four in all, laid in three rows, and screwed through the eye-holes to the under side of the floor-boards. Mr. Blashill remembered another case, he thought in Lancashire, where on removing a floor the main beam was found laid over horses' skulls.

Arthur Cates, Member of Council, proposed a vote of thanks to Mr. Gordon Hills for his exceedingly interesting paper, and he trusted that, when the complete paper was printed in the Transactions, the observations of Mr. Conyngham with reference to the

openings or recesses in the theatre at Saguntum would be appended, for they might serve as a little comment on the remark that vases were not found there, though it was hardly likely that any brazen vessels would have been left by the spoliators. He (the speaker) thought that Mr. Conyngham went into some detail respecting the application of the principle laid down by Vitruvius. There was another instance that might serve to throw light upon the Swedish architect's practice of placing five rows of vases in a wall. In one of the early editions extant of Terence the speaker had met with a sort of introductory essay by a commentator — the name and date of whose existence were equally unknown — who mentioned the use of brazen vessels for increasing sound, and who said that in certain temples of antiquity, at the springing of the vaults and in the upper parts there were rows of cavities in which brazen vessels were placed with their mouths turned outwards. Those vessels served to increase the distinctness and the melody of the singers within the temples. Mr. Cates hoped that the passage he had quoted from a commentator of Terence would be added to Mr. Hill's paper, and that the author himself would furnish, between the present time and that of the publication of his paper, additional information.

Charles Fowler, Fellow, referred to a similar application of pots at the theatre of Taormina in Sicily (Tauromenium), for when there, some twenty-five years ago, he had made notes and sketches of a number of pots arranged in rows. He remembered making his guide go on to the stage and speak, for the purpose of judging of the acoustic properties of that theatre; and he heard with extraordinary distinctness all that his guide said, though the latter only spoke in a moderate tone of voice. One other point occurred to him: it was that the late Professor Cockerell, when engaged in completing St. George's Hall at Liverpool, had intended to apply some similar kind of arrangement of vases in the concert-room. The Professor contemplated placing pots or vessels of some sort under the seats, because he believed that thereby the acoustic properties of the room would be improved, more particularly for music. Mr. Fowler seconded the vote of thanks to Mr. Hills.

Professor Kerr, Fellow, spoke of the music of the ancients as being of a scale different to that of the moderns; it was like that produced by the black notes of a pianoforte. It occurred to him that the bells, described by Vitruvius as having been placed in theatres, were introduced for the purpose of increasing resonance, which could be more readily done in that peculiar style of music. If so, pottery vases or ordinary domestic utensils, burnt hard, would give much the same effect; and it seemed to the speaker by no means an irrational idea to put such articles into churches when intoning was an important part of the service. Though the lecturer had, while reading the paper, left the matter in some confusion, for he seemed very sceptical about the whole theory, the discussion had put the thing on a different footing.

Hugh Stannus, Associate, desired to ask Mr. Hills whether he had considered ventilation as being the purpose of those pots. Vitruvius referred to brazen vessels, but the illustrations before them were of earthenware pots, many of which had neither top nor bottom. That from Leeds Church was simply a tube. In the present day, when ventilating bricks were easy to obtain, pots would not be used for such a purpose; but in walls of rubble-work it was not easy to leave an opening for ventilation. It was a natural thing to use any ordinary utensil lying about, to knock the bottom of it out, and insert the pot, as a tube, in the wall.

The chairman said that the theatre at Taormina, to which Mr. Fowler had alluded, was one of the grandest things in the world, and Mr. Fowler's experience with respect to that ancient building — entirely Roman work — was favorable as regards the manner in which the pots were placed. A short time ago, when he (the chairman) visited the theatre at Argos, where there were no traces of pots, he had had an opportunity of trying how the voice sounded there. That theatre was very nearly 500 feet in diameter, and the orchestra part, in which the chorus used to perform, was 200 feet in diameter. To give an idea of the size of the theatre, he would state that the orchestra alone could have held Covent Garden Theatre. He had asked one of his companions, a clergyman, to stand in a position where the stage originally was and speak. A wind was blowing right across at the time, and though the clergyman spoke in the same tone of voice as in a church, his voice was heard distinctly. It was a perfectly successful experiment of open-air speaking. With regard to Fountains Abbey, and the vases discovered there, some reports by the late Earl de Grey, printed in 1853 in the Transactions, afforded a great deal of information on the subject.

Gordon M. Hills, Associate, in reply, thought that the Vitruvian arrangement must have produced a sounding and resonant effect. The articles used, as Professor Kerr mentioned, were bells, the mouth of the bell being placed downwards, supported in front by a small block or wedge; but it was expressly stated that the effect produced was a sound striking against the outside of the vase or bell. He (the lecturer) was far from saying that the use of earthenware pots would not have any resonant effect; he was not willing to say that such a complete arrangement as that put up by Ode-le-Roy, or as that found at Leeds Church, would not have had some effect. But in the mediæval cases — except the account given by the Abbé St. Leger — the application of those pots seemed to have been a failure, and in the Ode-le-Roy case the pots were done away with very soon after they were fixed in their places. He thought that it might be taken for granted that, in all cases, the mouth of the vase was turned outwards. As to the point whether such pots were used as tubes, those at Leeds Church had perforated bottoms, though they were built solid in the wall, and in every case the mortar had to be cleared out of the perforation. The instances related, where open tubes were found in roofs, he took to be purely constructive, and he had employed that system of obtaining a subdued light in a church he had erected in Malta. But in his paper he had attempted to confine himself mainly to the application of pottery for the purposes of sound. He thanked the meeting for the favorable reception accorded to his paper.

THEATRE STAGE VENTILATORS.

Toronto, December 12, 1881.

To the Editors of the American Architect: —

Gentlemen, — The terrible loss of life at the Ring Theatre, Vienna, is one more warning added to the long role of such calamities, which should awaken the authorities to the importance of having such buildings so planned and constructed as to give a reasonable degree of safety to the audience in case of fire.

In this connection I wish to offer a suggestion which I would like to see carried out in all theatre buildings, old and new.

It is well known that in nine cases out of ten, fires in these buildings start on the stage or in that portion of the building behind the proscenium, and that the best means hitherto devised for the protection of the audience, has been a brick party-wall supplemented by a wire-work drop-curtain between the auditorium and the stage. As a further safeguard, I think there should be a large sheet-iron chimney-flue or duct commencing at the ceiling of the "fly" or scenery room above the stage and extending up to a point eight or ten feet above the highest part of the roof; said flue at bottom to have an area not less than one-tenth of the area of ceiling aforesaid, and to taper inward to five or six feet diameter at the top, and to be placed directly over the centre of the stage to carry off the smoke, heat and flame from a possible fire below. This flue would operate in the desired manner for the following reasons: 1st. That division of theatre buildings behind the proscenium has very few and small door and window openings to create cross draughts, being almost entirely dependent for air and light upon the proscenium arch. 2d. With the exception of the outer walls all the materials in this part of such buildings are of a light and highly inflammable character, quickly ignited and making a fierce, rapid fire of short duration if confined to themselves. Therefore, in case of fire, the flames rush upwards and if there is no adequate outlet at the top, they will, of necessity, burst out through the proscenium arch into the auditorium, filling the house with suffocating smoke, heat, and flame almost instantly.

It is self-evident that such a flue or duct of proportionate size to the area of the working division of a theatre placed over the centre of the stage, would in any case give the audience ten to fifteen minutes time to get quietly out of danger, even if it did not save the building from destruction.

I do not give the constructive details of the above suggestions as these would be slightly varied in each case; and in no case need the adoption of this improvement entail a large outlay.

Yours respectfully,

Charles A. Walton, *Architect*, C. E.

[Mr. Walton's suggestion is not, though good, an entirely new one; indeed, as will be seen in our Summary for this week, the practice he advocates has already been put in use. But like all protective apparatus in a theatre this stage ventilator might be found ineffective at the critical moment because of the momentary non-existence of a draught in it. It occurs to us, however, that this defect might be entirely obviated and something effected toward counteracting the air-currents which habitually flow from the stage toward the auditorium, if the heated and vitiated air should be led from the ventilator of the auditorium, by means of ducts laid between its ceiling and roof, up to this more elevated stage ventilator. If in addition to this properly arranged heating coils and fans are put in place and used at every performance, we see no difficulty in establishing and maintaining an air-current which shall always flow through the proscenium arch from the auditorium and towards the stage, thus negativing one of the most prolific causes of danger. — Eds. American Architect.]

THE RECENT TEST OF FIRE-PROOF MATERIALS.

December 19, 1881.

To the Editors of the American Architect: —

Sirs, — In a communication from Mr. P. B. Wight, General Manager of the Wight Fire-Proofing Company, published in the *American Architect* of the 17th inst., he states that he considers the assumption that the hole in the ceiling of the experimental building, which consisted of plastering on wire-cloth, was punched with a stick "is not founded on facts or reason." As I made that assumption, I wish to give my reasons for doing so.

I think that I was the first person who examined the building on the morning after the test; and as I knew that the large hole which I found in the planks which were protected by wire-cloth and plaster must have been made by the fire of the night, I examined the place very minutely, and I found that in the two places where the fire had charred the plank, the wires of the cloth were displaced, so as to make two or three holes in the cloth, exactly such as the end of a stick would produce. I do not see how the water could bend the wires in such a manner and more than that how it could have knocked out the plastering which was between the plank and the wire-cloth. As was stated there were several places where the wire-cloth

could be seen, but in only those which appeared to be punched was the plastering displaced.

The above reasons were sufficient to satisfy me that the ceiling had been meddled with, and afterwards on talking with a gentleman who witnessed the test, and who is not personally interested in any particular system of fire-proofing, he told me that he *saw a person punch* the said ceiling, and I think I saw him myself, although I would not state it for a fact.

These are my reasons for the assumption that the hole was punched with a stick. I give them not because I am particularly interested in that system of fire-proofing, but because I never intend to say anything for which I cannot give some good authority or reason.

F. E. KIDDER.

THE DURABILITY OF PAINT ON BRICKWORK.

DECEMBER 12th, 1881.

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

Sirs, — Will you be kind enough to inform us, through your paper, as to the probable durability of paint applied to brick before laying? the suggestion having come up when this method was proposed to obtain an even color and yet have the joints show that the dampness from the mortar absorbed into them at the time of laying might damage the paint.

Also, what is the best coloring material to give a durable and pleasing red?

A QUESTIONER.

[PAINT adheres very well to bricks if dry at the time of painting, but we should say that the almost inevitable scratching in laying, together with the daubing of lime over the surface, and perhaps the contact of acid in cleaning down, would disfigure the coating seriously. In such cases it is not unusual to paint the brick after laying. The joints can be kept clean, or repointed afterward. The coloring matter generally used for red mortar is Venetian red. If of good quality it is very permanent, and of a bright color. When used for laying Philadelphia or other dark-colored bricks, lamp-black is often added, to darken the tone a little. — EDS. AMERICAN ARCHITECT.]

NOTES AND CLIPPINGS.

ELECTRIC-LIGHT BUOY. — An iron buoy, fitted with apparatus intended to convert the power of wave motion into electricity, which will, in turn, supply an electric light, has been anchored in the lower bay outside of New York harbor.

THE IMPENDING DOOM OF ELM, SWITZERLAND. — A dispatch from Geneva to the *Daily News* reports that the complete annihilation of the village of Elm, in the Canton of Glarus, appears to be only a question of time and bad weather. The summit of the peak nearest the village is moving.

DESTRUCTION OF ROCKS UNDER WATER. — Major Lauer, an Austrian engineer, has made some experiments at Krems on the Danube which have excited great attention. He placed a cylinder loaded with dynamite upon the surface of the rock, and exploded it by an electric current. However small the quantity above the cylinder, the rock was crushed into bits so small that they were easily swept away by the current. The process is said to reduce the expense of removing submerged rocks forty per cent. — *Les Mondes.*

GLASS MAKING NEAR DENVER, COL. — A trial of glass making with the sand and natural alkali of Morrison, not far from Denver, has been successful. In that place there is a ridge of sand two miles long, which is of most excellent quality; also deposits of alkali and lime covering an area of two hundred and forty acres, with all the materials at hand for the production of fine glass. Experiments made by Professor Short of Denver University, and Dr. Burdsal of Morrison, with these materials, resulted in the production of an unusually clear and colorless glass. Potters' clay of superior quality is also reported in the same vicinity.

COTTON AND STRAW HOUSES. — It is said that fire-proof houses can be built of cotton and straw. In preparing these materials, raw cotton of inferior quality, the scattered refuse of plantations, and sweepings of factories are mixed and converted into a paste, which becomes as hard as stone, and then is called architectural cotton. It may be made in large slabs, whereby the building of a house would be rapid in comparison with the practice of laying brick after brick, and at about one-third the cost. For the other part wheat straw is treated in a way already known, and converted into pasteboard. The sheets thus prepared are soaked in a solution which hardens the fibres, and they are then compressed under enormous power into beams and boards of any required size. The effect of the soaking is said to render them difficult of combustion. — *Southern Manufacturer and Builder.*

SOUTHERN WOODS AT THE ATLANTA EXPOSITION. — One of the notable exhibits at the Cotton Fair is a fine display of Southern woods, both rough and polished. It includes the sweet gum (Liquidamber styraciflua), a light-colored wood, often worked up for coffins; the tupelo, or sour gum (Nyssa multiflora), a tree that cuts like cheese, but cannot be split, used by the negroes for corks; the palmetto (Sabal palmetto); the Spanish bayonet, with stiff blades sharp as needles and serrated edges; the swamp cypress (Taxodium distichum), with its pointed excrescences three feet high springing from the root; and the curled pine, which takes a grain polish like the curled maple, but infinitely more vivid and beautiful. The Georgia sawmills — there are eight hundred of them in the State — have sent in some colossal pine logs, one of them a sylvan monarch, straight as a needle, seventy feet long, twenty inches in diameter at the smaller butt, and some four feet thick at the base. — *N. Y. Tribune.*

THE FEMALE INVENTORS OF ANTIQUITY. — Netocris, the spouse of Nebuchadnezzar, is described by M. Baudrillart as the soul of his works, and to her is attributed the design of the lake named after her, which served the double purpose of a fortification and a dam against the Euphrates when in flood. The famous hanging gardens are also attributable to female influence: to the longing of a Median princess, born in a more elevated region, for the coolness and shade of her native mountains. There were five of these gardens, about four English acres each, on terraces supported by columns and covered with mould thick enough for the largest trees to take root in it. One of the columns was hollow and contained a hydraulic machine to raise the required quantity of water. In fact, the art of gardening, with all its modern appliances, including irrigation and the transplantation of grown trees, was practised in Babylon as effectively as in the Bois de Boulogne or Hyde Park. The Roman writers speak of silk as a product of India, and it was unknown in Europe, except as an imported and rare article, prior to the sixth century; but the Chinese claim for an empress named Siling-Chi, who lived B.C. 2650, the discovery of the art of breeding and domesticating silkworms, that of winding off their cocoons, and the fabrication of stuffs of silk. She was deified as the discoverer in the threefold capacity, and down to our time, according to M. Baudrillart, the Chinese empresses, attended by their maids of honor, have been in the habit of making annual sacrifices to Siling-Chi, and have deemed it a duty to rear silkworms. The export of the seeds of the mulberry tree and the eggs of the worm was prohibited under pain of death, and the prohibitory law was rigidly observed for ages, till a Chinese princess, betrothed to a king of Khotan, unwilling to dispense with silk, contrived to smuggle some of the seeds and eggs across the frontier in her hair. But the secret did not reach Europe till A. D. 552, when two monks of the order of St. Basil made a present to Justinian of some of the seeds and eggs, which they brought from China in the hollow of their pilgrim staves. — *Quarterly Review.*

EARLY BARGAINS IN ART. — At the annual public meeting of the five academies, held in Paris last week, M. Gruyer, of the Académie des Beaux-Arts, delivered an address on M. His de la Salle, the well-known collector, in the course of which he recounted many amusing anecdotes relative to the low price of art objects at the commencement of the present century. The following is worthy of reproduction: On one of his exploring expeditions to Florence, M. de Salle, immediately on his arrival, came across a large-sized bas-relief in bronze, representing a Madonna surrounded by a crowd of angels, and in it he recognized one of the Santo bronzes. He paid 20 *f.* (16 *s.*) for this exquisite work, into which a follower of Donatello had thrown all his rare talent as an artist. At that epoch there were many needy Italian nobles living from hand to mouth in the midst of the richest collections of art, which to them were scarcely more than incumbrances. A foreigner seeking the works of masters of the fifteenth century, and paying 20 *f.* for a bronze bas-relief caused quite a sensation and flutter of hope among this class. M. de la Salle received an invitation to visit one of the most renowned palaces of the city. On arriving, he found himself in presence of a noble of the highest lineage, who, after praying him not to disclose his name, caused to be spread before him the contents of several large sacks. To the astonishment of the collector, these proved to be the rarest plaques and medallions of the Italian Renaissance. "How much?" "A crown (4*s.*) apiece," was the reply. It is hardly necessary to say that M. de la Salle emptied his pockets before leaving. — *The Architect.*

DRAINING MEXICAN MARSHES BY ELECTRICITY. — The most extensive application of electricity to engineering ever attempted will, by the plan of Mr Maxim, of New York, be employed for draining the basin around the City of Mexico, to do which a company has been formed, the funds raised, and the contracts signed. The plan in brief is to establish on the western slope of the mountains, where the fall is great and rapid, a number of water-wheels sufficient to develop some 20,000 horse-power, and make them drive dynamo-electric machines of high electro-motive power. The current from these machines is to be conducted about twenty miles to a set of electric motors placed on the margin of the lake, and driving pumps, which will require about 7,000 horse-power to work them. The water has to be raised about forty feet to clear the ridge, but once raised it has uninterrupted fall toward the Pacific of several thousand feet, so that the descending water is made to keep up the work. The whole apparatus constitutes what Mr. Maxim calls an "electric siphon." The plan will, it is believed, succeed, and thus relieve Mexico from the inundations that have submerged it so much for several centuries. — *Engineering News.*

AN IRON-CLAD CONTRACT. — A shipbuilding firm on the Thames has undertaken to build an iron-clad of novel construction for the Brazilian Government, under a contract which includes a novel series of penalty clauses. The ship is designed to steam fifteen knots per hour, but if she fails by a quarter of a knot a penalty of £2,000 is to be paid; and so for every quarter of a knot in an ascending scale, until for a shortcoming of a knot of speed per hour a penalty of £16,000 will have to be paid; while the loss of a knot and a quarter will involve a fine of £32,000, and if a speed of less than thirteen and a half knots per hour can only be attained, a sum equal to one-sixth of the total price of the vessel will be forfeited. If, again, the vessel when launched draws an inch of water more than the draught named in the contract, £1,000 is to be deducted from the price to be paid for the ship, and so on, again, in ascending scale, until a penalty of £25,000 is reached for six inches excess of draught.

WELL-WATER FOR CITY WATER-SUPPLY. — The engineer employed by the city of Lincoln, Neb., to examine the practicability of large wells to supply the city with water, reports that a well fifty feet in diameter by sixty in depth, to cost between $5,000 and $10,000, would afford ample supply for all purposes. The engineer estimates the entire cost of water-works, including twelve miles of mains, at from $94,000 to $100,000.

Prospectus for 1882.

THE present indications are that during the coming year the editors will be enabled to make the *American Architect* more interesting and valuable than ever before, and the fact that each successive year has added new attractions to what was already of considerable merit may be taken as a guaranty that during the year 1882 the standard of its performances will be in no degree lowered. The editors would prefer not to make any announcement of their intentions until some plans now under discussion are definitely decided on, but custom seems to require that about this season of the year a prospectus for the ensuing year shall be issued by all publishers of periodicals, and we follow in the beaten track, suggesting to our subscribers, however, that they may safely read between the lines promises of more than actually meets the eye.

The character of the illustrations depends so largely on the interest which the more capable designers in the profession take in the publication of this journal that the editors might stand excused from pledging themselves either to maintain the standard of excellence already attained or to raise it still higher. But there are certain veins of individual endeavor which the increasing prosperity of the journal will enable them to pursue with considerable vigor, and as "nothing succeeds like success" they may hope that the impetus that they are able to give this important feature of the *American Architect* will be followed up by former contributors, and that those members of the profession who have never contributed a design to its pages will no longer leave to others the privilege of upholding in the eyes of the reading public of both hemispheres the dignity of architecture in America.

As in past years the illustrations will consist of photo-lithographic reproductions of American and foreign buildings, while the pure Heliotype views from nature will as before be published occasionally as circumstances may demand — and it is sincerely hoped that the demand may occur with increasing frequency. In like manner colored prints of interior decorations and other suitable subjects will be published in the course of the year. The feature, however, which will add most to the attractiveness of the paper will be the publication of a greater number of cuts in the body of the text of each number, which will give to the journal an entirely fresh and, it is hoped, more attractive aspect, for it will be the endeavor of the editors to make every cut of value to the architect as well as interesting to the general public.

The Competitions in design with money prizes will be continued through the year.

The general tone and literary character of the journal will accord with its past performance, and it is perhaps invidious to particularize even those papers for which arrangements have already been made. The papers on "Building Superintendence" which have appeared during the year 1881 in the first issue for each month — or the Monthly number, so-called — and which have detailed the manner of constructing a stone chapel, and have proceeded so far in the construction of a wooden dwelling-house as the plumbing work, will be continued during the year, and after completing the construction of this house will next describe the manner of building a large city office-building, during which description a discussion of the strength of materials and other matters of general scientific construction will be taken up. The instructive series of papers on "Building Stones" will probably be extended through the year.

In the line of fresh endeavor it may be stated that arrangements are now making for series of papers on the following topics of general and special interest: —

A series of illustrated papers by different writers on the architectural character and buildings of different cities throughout the country; a series of papers on village improvements and village improvement societies; a series of practical papers on scaffolding; a series of illustrated papers on what American decorative artists are accomplishing; a series of papers on wood-engraving; a series of papers on sanitary matters; and possibly a series of papers on steam heating.

About this skeleton-work of subjects, which as may be seen are diverse enough in character to suit the most dissimilar tastes, while they are all of much general interest, will be arranged articles on kindred topics and matters of current interest, as has been the custom of the journal in former years.

The following well-known writers may be expected to contribute of their knowledge during the coming year:

EDWARD ATKINSON,
PROF. CHARLES BABCOCK,
ALEXANDER BLACK,
ERNEST W. BOWDITCH,
J. M. BRYDON,
PROF. T. M. CLARK,
F. CROWNINSHIELD,
CHARLES A. CUMMINGS,
HIRAM A. CUTTING, PH. D.,
CHARLES H. HART,
PROF. W. P. P. LONGFELLOW,
PROF. N. CLIFFORD RICKER,
R. RIORDAN,
ARTHUR ROTCH,
MONTGOMERY SCHUYLER,
HENRY VAN BRUNT,
MRS. SCHUYLER VAN RENSSELAER,
PROF. WILLIAM R. WARE,
GEORGE E. WARING, JR.

In conclusion it may be said that the policy of the *American Architect* is in the largest and best sense a liberal one, and its aim is to cover with what completeness it may the whole field that by the widest construction may be conceived to be included within the limits of its elected province, which is defined only by the boundaries of Architecture, Construction, Sanitation, the Fine Arts, and the Arts of Decoration.

The journal is not and will not be partisan in tone; its pages are open to the discussion — within proper limits — of any pertinent subject from every point of view; it is not the tool of any association, clique or body of men; it is conducted solely by its editors, and they alone are responsible for its utterances and the facts and theories it promulgates.

To those who have in the past helped to make the *American Architect* what it to-day is the editors desire to express their grateful acknowledgments, and at the same time to assure them that their coöperation in the future will be cordially accepted.