

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. VI.]

Copyright, 1879, HOUGHTON, OSGOOD & CO.

[No. 202.]

BOSTON, NOVEMBER 8, 1879.

Entered at the Post Office at Boston as second-class matter.

CONTENTS.

SUMMARY:—

The Death of Mr. A. C. Martin.—The Chicago Music-Hall.—Southwell Minster.—A Question of Restoration.—Architects and the Society for the Preservation of Ancient Buildings.—Cleopatra's Needle.—The California Débris Question.—An Architect and his Sub-Contractor	145
THE OPEN FIRE-PLACE. XVII.	146
THE RECOLLECTIONS OF SIR GILBERT SCOTT. II.	148
THE ILLUSTRATIONS:—	
Design for the Washington Monument.—House and Stairway Hall in House of H. R. Towne, Esq., Stamford, Conn.—The Grand Stands at Adrian, Mich., and Toledo, O.—Northern Doorway of St. Lambert's Church, Münster, Westphalia	149
CORRESPONDENCE:—	
Letter from London.—Letter from Chicago	149
THE POMPEIAN CELEBRATION	151
A RECORD OF GREAT FIRES	151
COMMUNICATIONS:—	
The Grand Stands at Adrian, Mich., and Toledo, O.—An Architect and his Sub-Contractor	152
NOTES AND CLIPPINGS	152

MR. A. C. MARTIN, architect, died in Boston Wednesday, Oct. 29, from the effects of an accident. He was a member of the American Institute of Architects, and one of the founders of the Boston Society of Architects, of which he was for some time secretary. He died in the prime of life, being forty-eight years old, and in the full activity of a successful practice. He was the architect of many buildings in and about Boston,—country and city dwellings, shops and warehouses, hotels, school-houses, and churches. He had in early life, if we are not mistaken, in obedience to his father's requirements, learned a trade; but this was so little to his taste that he soon abandoned it and set out on a sea voyage. Returning from this he went to study engineering at the Scientific School of Harvard University, where he took the degree of S. B. in 1856. He preferred, however, to be an architect rather than an engineer, and entered the office of Mr. Arthur Gilman, who then had a large practice in Boston. The amount of responsibility thrown upon him here, and his own active intelligence, helped him to acquire rapidly a thorough knowledge of an architect's work, so that when he began on his own account his success was more than usually quick. Later he went into partnership with Mr. S. J. F. Thayer. After eight or ten years of busy practice he went to Europe in 1867, where he spent a year in professional study and travel, at which time he dissolved his partnership. Returning to Boston he continued his professional work actively till his death. He was driving home with one of his clients after a professional consultation when an accident occurred at a drawbridge which they were about to cross, and Mr. Martin, getting down from the carriage, was run over by a frightened horse, and received injuries from which he died four or five days after.

His scientific bent and his studies in engineering made him a thorough constructor, and led him to give special study to the subject of ventilation of buildings, in which he was an authority among his fellows, while a certain breadth of design and feeling for refinement in treatment and in detail showed that the practical did not overbear the artistic sense. He made some essays on school-house ventilation, which were new, and proved very successful. This probably led to his being called upon to design the large abattoir at Brighton, the first building of its kind in the country; and one of his last works was the building of the new Park Theatre, Boston, in which he ventured on some experimental devices for ventilation which have shown themselves efficient. Mr. Martin was a man of vigorous mind, interested in many studies, and in all the literature of his profession. He was an early contributor to this journal, and wrote a number of papers for different societies and occasions. As a practitioner he was of uncompromising uprightness, with a keen sense of the interests of his clients. It might be said of him more literally, we suspect, than of most architects, that his clients always returned to him. To his personal friends his alert intelligence, his buoyant disposition, the vivacity and kindly sincerity of his intercourse will long remain a pleasant memory.

A SHORT time ago Mr. L. Hallberg, an architect of Chicago, wrote to one of the newspapers of that city to say that some of the brick piers and party-walls of the new Music-Hall now

building there were not strong enough for their work, were even now beginning to crumble, and that when the building was finished and full of people there would probably be a terrible accident. The complaint was too serious to be passed over; the building committee who have the hall in charge at once appointed a committee of four experts, Messrs. R. B. Mason, E. S. Chesborough, Max Hjortsberg, and P. B. Wight, to examine the building and its plans, and report whether there was any insecurity either in the plans or in the work. Two of these gentlemen, Messrs. Wight and Hjortsberg, had inspected the plans before the building was begun, and pronounced them safe if certain modifications of construction were adopted. The report of the experts, published in the Chicago papers, sets forth that the modifications recommended by Messrs. Wight and Hjortsberg have been carried out, and that—

"After a careful examination not one of this committee has been able to discover any evidence of crumbling in any of the walls and piers. They have considered every possible contingency that may exist in the future, and have tested the present and ultimate strength of the walls and piers in question by the well-known rules and data which form the authority accepted by architects and engineers. They find the same to be constructed within the limits of safe strength required in such a structure, and are of the opinion that no such calamity as has been predicted is in any way likely to occur.

"The brickwork in question now carries seventy-five per cent of the ultimate load of materials, contents, and human beings packed closely together on every floor, as well as possible accumulations of snow, and gives no evidence of weakness. It now has the strength of freshly built brickwork only, and its actual strength will increase with time as the mortar hardens. The brickwork is superior to the average grade of brickwork in the city. The location of openings in the party-wall, between the main hall and front building, does not weaken the same sufficiently to make it dangerous in any portion, or reduce its aggregate strength below a proper coefficient of safety for such a building."

THE war between church restorers and anti-restorers in England does not cease. We find its progress recorded in a correspondence which has been quoted in recent numbers of the *Architect*. The battle which was waged last year over St. Alban's Abbey was renewed this year over the less conspicuous but famous minster of Southwell, a church with a bold Norman nave and very fine Early English choir, but disfigured, in the eyes of architects at least, by a flat nave roof built after a fire at the beginning of the last century, and by certain plaster choir-screens and cheap pews put in within sixty or seventy years. The church having fallen somewhat into disrepair, the Ecclesiastical Commissioners had been occupied in setting it in order, and, with the advice of their architect, Mr. Christian, had gone so far as to remove and replace the pewing, and to threaten to substitute a high-pitched Gothic roof for that which covers the nave. We have before mentioned the sore quarrel with the anti-restorationists, in which the committee on the St. Alban's church were involved by their resolution to substitute Mr. Scott's proposed high roof for the flat, late mediæval one that existed. The renewal of the roof question at Southwell quickly brought the Society for the Protection of Ancient Buildings to the front, represented by their secretary, Mr. William Morris, who wrote during the last season some earnest remonstrances to the Ecclesiastical Commissioners, and so induced a lingering correspondence about the propriety of the intended restorations. Mr. Morris's letters, which are published in the *Architect*, are of interest, because they show in effect, if not formally, the fundamental postulates of the anti-restorationist party, and the conclusions to which they lead in practice. Without laying down a general doctrine, he protests in turn, apparently, against every alteration which has been undertaken. The flat ceilings of the nave and transepts which would be displaced by the proposed open-timbered roof are assumed to be probably "rude, but still not unsatisfactory, copies of those which were destroyed by fire," and very possibly in the shape of the original roof; the plaster side screens, modelled on the fourteenth-century rood-screen of the church, which has not been removed, as we understand it, were "very interesting," and the pews and choir fittings, "poor though they were, fulfilled the requirements of the service of the church by providing seats for clergy, singers, and people."

To these objections the Commissioners' architect, Mr. Christian, made answer that there was enough evidence in the building to show the steep pitch of the original roof and the level of its collar-beams, and that a new roof following those

lines would be a great improvement, a point on which Mr. Street, called into consultation by the Commission, seconded the architect, by saying that there could not be two opinions about it. The obvious answer to the defence of the fittings which were removed was that they were unworthy of their position and ought to be supplanted by things which were less so. The upshot of the controversy, so far as appears, was that the Commissioners, having heard the protest of the Society, declined to continue the correspondence, and went on their way as before. The conspicuous thing in the correspondence, and it is characteristic of the whole restoration controversy, is that the parties to it fight each on his own ground, not really venturing on that of the other, so that they hardly meet. The architect decides the question on the ground of artistic effect and the needs of the church service, aiming, with a due reverence for history and archæology, but with little respect for the latest additions, at giving the church what he thinks the best effect. Mr. Street characteristically illustrates his whole doctrine of restoration by the general formula: "The true course is first of all to restore the thirteenth century of the fabric [in idea, that is], then next to see whether a due and good use cannot be made of the building when so restored," and then, if anything is found incompatible with this, "to have the courage to remove the obstruction."

IN Mr. Morris's letters, artist though he is, we find but small and perfunctory consideration of the question of art, and we read between all the lines the real doctrine of the Society for the Preservation of Ancient Buildings, — and probably, whether distinctly acknowledged or not, of the whole body of anti-restorationists, — that whatever is to be preserved, without entering into the question of its excellence or its appropriateness. The strongest accepted argument against restoration is the preservation of the history of art; that of association, though in many cases entitled to consideration, being after all, under most circumstances, purely personal and temporary. But in the history of art some things are important and some are not. It is not to be supposed, for instance, that anybody would ever have used the rude, flat ceiling or the plaster side-screens or thin deal pews of Southwell Minster for serious study. The contest really turns upon the antagonism between the conservatism which opposes every change in what exists, which uses the arguments of history and association as its shield, and which, though not in itself deserving of very much respect, is of great service in the world, like many other rather blind instincts; — and what we call the spirit of progress, which is good in one manifestation and bad in another. An incident of the present strife is that Mr. Street and Mr. Christian, who strenuously opposed the removal of the flat roof of St. Albans, on the ground that it was mediæval and good, though clearly not the original roof, were the architects to recommend the destruction of that at Southwell, as poor and modern. As may be supposed, the irrepressible Sir Edmund Becket, who had energetically championed the new roof at St. Albans, did not fail to put in an appearance in this controversy, not from anxiety to defend a principle, but with a simple pleasure in taunting his old adversaries for being found now on one side of the fence and now on the other.

THE persons who have felt an interest in the project to bring Cleopatra's Needle to New York were disquieted a short time ago by the story, which came through London, that the creditors of Egypt had attached the obelisk and would prevent its removal to the United States. The story was officially discredited in this country, and indeed, taking it for granted that the obelisk had been actually transferred to American citizens, as was understood, there was no great reason to think that its removal could be interfered with. The dispatch sent the editor of the *World*, a few days ago, by Lieut.-Commander Gorringer shows that the story was untrue, though not without some foundation. The report sprang, said the dispatch, from an actual attempt by the Italian officials at Alexandria to interrupt the removal, which, however, was set aside promptly by a claim upon the obelisk as American property. Commander Gorringer adds, "There is a great deal of antagonism here on the part of foreign residents to the removal of the obelisk to the United States, and threats have been made of an attempt to seize the obelisk and sell it in Europe for the account of European creditors of Egypt." It is not surprising that the foreign residents should look unfavorably on the abstraction of the Needle; for to take away what

has been for ages a famous landmark and has stood in a conspicuous part of the town (now in front of the railway station) where it cannot but be missed, is a very different thing from the removal of its fellow, which had lain unregarded and half buried in the sand at its feet; and in fact it does wear a little the aspect of pillage. The proposal to sell it to Europeans, however, could hardly mend the matter in this respect, and seems to point either to a rather unamiable jealousy, or to a desperate desire to squeeze money out of what was likely to prove a somewhat unmarketable commodity. We may suppose, from what the dispatch tells us, that these attempts are at an end, and that the only risks now in the way are those of shipment and transportation. The shipment itself is likely to be considerably more difficult than that of the fellow obelisk. The other lay conveniently on the sand, ready to be encased and rolled into the water, where it floated in its shell. It is a different matter to take down an upright monolith seventy feet high and stow it safely on shipboard. Hence the necessity for sending out the elaborate apparatus of which we lately quoted the description.

THE suits which some farmers of the Sacramento Valley brought to defend themselves against the ruin of their lands by the debris washed down from the gold mines among the hills, as we have described in some former numbers, were decided in their favor by the courts, which ruled that the miners must take care of their washings, or be liable for their injuries to the farmers below. But the evil has grown so widespread with the general adoption of hydraulic mining, the actual and possible injury to cultivable lands so great, that the farmers as a body are anxiously looking for some government intervention which shall so regulate the methods of mining as to protect them. Meanwhile, the actual injury to navigation in the lower part of the Sacramento River is alarming. A speaker at the late Grangers' convention said that in what is called Steamboat Slough, where large vessels could pass only two years ago, there was now but four feet of water. Further up the debris had accumulated to twenty feet in depth. It is also said that a large part of Suisun Bay has been made unnavigable. State legislation is called for, to regulate the operations of the miners and protect the farmers. On the other hand, the question is raised of an appeal to Congress with the hope of inducing it to come forward with money enough to provide the means of protecting the county, by dikes, or sluices, or other appliances, so as to secure the contending interests, without cost to either, against injury from each other.

A CORRESPONDENT in another column writes to ask us how an architect's standing and relations would be affected if he were to allow one of his sub-contractors to display a sign giving notice that he paid no commissions to architects or agents, and inviting owners to deal with him directly. The effect and significance of such an announcement would depend considerably, we should say, upon where it was displayed. If it were at the contractor's own place of business, as we may take for granted, it would be an announcement of a kind that it is certainly not the custom to put upon sign boards, and one that reflected, by no means flatteringly, on the architects and agents of the neighborhood; but we do not see that the particular architect, for whose work the advertiser held a sub-contract, need consider himself more concerned with it than others, or how he could help allowing it. From the client's point of view one might say that if the first part of the announcement were true the second was unnecessary; and that in that case, if the practice of architects and agents were as dishonorable as the advertiser hinted, he was just the person with whom they might be trusted to make contracts. If it should appear, however, — which we can scarcely believe, — that the sign was displayed at a building which the architect controlled, there would be a temptation to infer either that the architect did not visit his work often enough to be aware of what went on there, or that for some reason or other he was extraordinarily ready to pocket an affront.

THE OPEN FIRE-PLACE. XVII.

ACCORDING to Bernan, the way in which large buildings or rooms were formerly heated, particularly for manufacturing purposes, where open fires were inadmissible, was by a sort of Dutch stove, formed of a large cast or wrought iron vessel, generally square, and set upon a foundation of brickwork, enclosing the fire, and this apparatus was placed in the room to be heated. But it was found to

be dangerous, and a large proportion of the accidental fires which in former times destroyed many factories originated with ill-constructed stoves. The air of the room did not move by the heated surface rapidly enough to carry off the heat as fast as it was produced, and the stove was consequently frequently red-hot. This great heat rendered all the adjacent wood-work very combustible, and when the stove cracked, or a joint opened, or any inflammable substance came in contact with it, a conflagration was inevitable. Moreover, close stoves do not assist essentially in promoting ventilation, for the quantity of air withdrawn from the room is only what is needed to support combustion. Morin estimates the ventilation from these to be less than seven cubic meters of air for every kilogram of coal consumed. Indeed, the circulation of air they produce in a room is so sluggish that the temperature of the room varies greatly at different heights. "Ruttan, whose observations were made in Canada, states that in a stove-heated basement room, over a cold cellar, he has frequently seen water freeze on the floor when the temperature of the air at the ceiling was 100°, and has often observed a difference of 4½° (F.) in the temperature of the air for every foot of height in a stove-heated school-room, sixteen feet high, which was exposed on two sides to outside air at 0°." But if a casing is arranged around a stove, with a space left between it and the stove open below and above, the column of air within the casing will be doubly heated by contact on one side with the stove and on the other with the casing. Being protected from the cooling influence of the surrounding air it will rise rapidly and produce a circulation in the room which will equalize its temperature.

The next step was to put the stove in a chamber by itself, adjoining or below the room to be heated. The external air was admitted into this chamber, warmed, and conducted by flues about the building, and the whole formed a hot-air furnace. A large amount of fresh air is brought by the casing in contact with the heating surfaces, and it strikes them forcibly on account of the strong current produced by the hot-air flues. The fresh air is generally taken from the outside, and it is in this respect, as well as in the principle of the circulation produced by the casing, that the furnace is superior to the close stove, while in the loss of the advantage of direct radiation from the sides of the heater it stands inferior to it.

The most important point to be considered in the construction of all basement furnaces alike, is the acquisition of a good chimney draught, because of whatever material or in whatever manner they may be made, they cannot be rendered absolutely gas-tight. Even though the materials be non-porous and the joints be tight, the very openings required to admit fuel to the fire or air to the fuel may, under a back pressure, also emit gas. Where these openings are out of sight and immediate control of the occupants, the noxious gases, often imperceptible to the senses, may enter the house without their knowledge; and this is the most prevalent cause of trouble with the hot-air furnace as it is now constructed. It is, therefore, of the first importance with these that the draught of the smoke-flue should exceed in strength that of the hot-air circulation pipes, whose powerful action is shown by the force with which the warm air issues from the registers. The hot-air flues in a basement furnace being frequently nearly as long as the smoke-flue, and the maximum utilization of the heat of the fuel, or of its smoke, being considered the grand desideratum, these hot-air flues become hotter than the smoke-flue. The column of air in the former being, therefore, lighter than that in the latter, the smoke or gases will rush into the fresh-air flues through any crack or joint connecting the two columns together, or they will enter the house through the feed and draught doors.

The above difficulties might, however, be obviated, and absolute safety against the escape of gas be obtained, together with a complete utilization of the heat of the smoke, by bringing distinct currents of fresh air simultaneously against the heating surfaces of the furnace at various points of these surfaces, properly located with reference to each other and entirely separated from each other. By this means a good draught might be obtained at all times, and yet the temperature of the smoke-flue be reduced to very nearly that of the outside air.

Let Fig. 129 represent a furnace (devised by the writer) constructed after this principle. The fresh air enters the furnace at A, B, and C, simultaneously, but into heating chambers entirely separated from each other, say at points corresponding with each floor of the house. The hot-air flues start at A', B', and C'. The outer air entering the first chamber might lower the smoke, say, from 300° to 150°, and be itself raised from 0° to 10°. A second current of fresh air at B, entering the second chamber or division of the furnace, might further cool the smoke to 75°, and be itself raised from 0° to 40°; and, finally, a third supply at C, entering the third chamber, might, by taking a direction the reverse to that of the smoke, reduce the latter to or very near to 0°, and itself be raised to 40°. The average temperature of the smoke in the chimney would, though entirely cooled at the top, be

$$\frac{300 + 150 + 150 + 75 + 75 + 0}{3} = 225 + 112.5 + 37.5 = 125^\circ.$$

This would be much higher and the velocity correspondingly greater than that in any fresh-air flue, so that the chimney draught would be good, even if the fresh-air flues were maintained at 40° or 50°

throughout their entire length, and this length were equal to that of the smoke-flue. In a furnace constructed in the manner described, however, each compartment of the furnace would have only its own floor to warm, and the air flues would have little or no perpendicular extension beyond what would be required to create in them the necessary draught. The temperature, therefore, of the fresh-air column would practically be that of the house, say 20°, and its length only the distance from its commencement at A', B', and C', to the ventilator D, on the roof, and consequently always less than that of the smoke-flue.

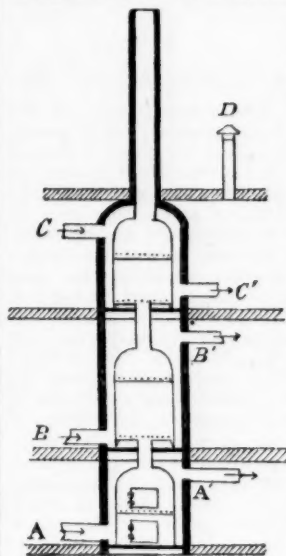


Fig. 129.

Inasmuch as the diffusion of gases will take place even in opposition to a considerable current of air, no porous material is suitable, under any circumstances, for the construction of a furnace, since the porosity not only permits an escape of gas at all times, but also serves as a connection between the hot-air and smoke columns in cases of back draught. The joints should be made in such a manner that the contraction and expansion of the materials cannot work them loose, however long the furnace be in service.

Where metal is used, its kind or thickness has but little effect, within ordinary limits, upon its heating power; for the quantity of heat which can be conducted through the thickness of metal usually employed is much greater than can be carried away by contact of air. But for greater thicknesses the amount transmitted by small pipes increases with the thickness. A cast-iron pipe one decimeter in internal diameter, heated on the inside to 100° and exposed to the air at 15°, with different thicknesses of metal, would lose heat per meter and per hour as follows: The thickness being nothing, or infinitely small, the loss would be 254 units; for thickness of 2.5, 5, 10, and 15 centimeters the loss would be respectively, 363, 472, 676, and 848 units, or in the ratios of 1.4, 1.8, 2.6, and 3.3 to 1 respectively. Where stone, brick, or terra-cotta pipes are used, whose conductibilities are much smaller than that of iron, say as 15 and 4 to 250, the variation for great thicknesses is much smaller. The reason of this is that the increase of thickness increases the radiating surface of the exterior, so that while each square meter of such surface gives out less heat than a square meter of the surface of the thin pipe, in the proportion of 0.95, 0.92, 0.89, and 0.85 to 1, for the cast-iron pipe one decimeter in diameter, of the thicknesses mentioned above, yet the surfaces are greater in the proportion of 1.5, 2, 3, and 4 to 1. Thus, thickening the heating or radiating flues of a furnace made of good heat-conducting materials increases their effectiveness just as do ribs or spikes cast upon the radiating surface, by increasing its superficial area. Indeed, unless the ribs are properly placed, a simple thickening of the pipe is sometimes even more effective. Thus a threaded pipe, 1 centimeter thick, 18 centimeters in diameter, and 10 meters long, threading 0.5 centimeter deep, standing vertically, was tested by the writer, and found to yield less heat than a smooth pipe 1 centimeter thick, and of the same diameter and height, although the actual radiating surface was twice as great on the threaded as on the smooth pipe. The threading being perpendicular to the direction of the air current, it lost more than half of its effectiveness in heating the air by convection, owing to the fact that the ascending air current struck only the lower outside edge of each thread, while the loss by radiation remained the same, because, though the radiating surface was twice as large, yet half the rays fell upon the surfaces of the threads themselves, and were by them reabsorbed.

It is a mistake to suppose that furnace heat is necessarily dry and unhealthy. Where the heating surface is raised to a high temperature the vegetable and animal matters, which are always to be found, to a greater or less degree, floating in the air, and can easily be seen under a ray of sunlight, come in contact with an over-heated surface, they are roasted or burned, and emit an unpleasant odor. When these surfaces become red-hot they may decompose the air itself, forming, with the iron, acid gases injurious to the health, or gases may pass through the furnace, as already stated; but so far as depriving the air of its moisture is concerned, by which a too rapid evaporation from the skin is induced, causing headache and unpleasant sensations of the nose and throat, the same effect is produced by steam or hot-water pipes and by every other method of heating, when the temperature of the outer air is warmed to the same degree. Cold air, when expanded by heat, has a greater capacity for moisture in proportion to the extent of the expansion. In the open fields this needed moisture is supplied by nature through the agency of rivers and lakes. In our houses, where rivers and lakes do not form themselves naturally about our hot-air furnaces (unless the unskilful plumber has opened for them sources in the drain and

water pipes), their places should be supplied by art in the form of evaporating-pans, and the disagreeable sensations arising from dryness will quickly disappear.

THE RECOLLECTIONS OF SIR GILBERT SCOTT.¹ II.

THE Hamburg competition made Scott a famous man. It was undoubtedly of great advantage to him in other ways than merely extending his reputation. It took him out of the ruts of a more or less local practice and local associations, and broadened his mind by contact with a fresh circle of men of another nation and other habits of thought, and by the study of a nobler architecture than he had as yet known. For in those days photography was undiscovered, and, as we have already said, his first journey into foreign parts was made as a preparation for this competition. But once having realized that the world was larger than England, he felt it to be worth his while to extend his knowledge of Continental architecture. From this time he was in Germany nearly every year, and two years later, in 1847, he went to France, and in 1851 to Italy, where, however, he allowed himself no more than a hasty run through the chief northern cities. His French travel was the result of his appointment as architect of the restoration and refitting of Ely Cathedral, the first of the great churches upon which perhaps his best work was done, and the work in which he took the greatest pleasure. "It was," he says, "from the excitement produced in my mind by Dean Peacock's description of Amiens Cathedral, which he had visited that autumn, that I was led as late as the end of November to make a short run over to France, chiefly to Amiens and Paris. My eyes were at once opened. What I had always conceived to be German architecture, I now found to be French. I thoroughly studied the details of Amiens and those of the Sainte Chapelle, which bore most closely on my previous German studies, and I returned home with a wholly new set of ideas and with many of my old ones dispelled. It seems curious that I should have been twelve years in practice before I became acquainted with French architecture, yet I was the first among English architects, as I believe, to study it in detail in any practical way and with a practical intention."

The Italian cities threw him into a state of great excitement, and his account of the journey is as full of enthusiasm as the journal of a gushing youth on his first travels, though he had now "come to forty year." He was, however, convinced after all that Italian Gothic as such must not be used in England, but equally convinced "that the study of it was necessary to the perfecting of our revival." From this time his designs for civic buildings were strongly influenced by Italian feeling. His churches do not, as we remember them, show this influence in any marked degree.

In 1856 the whole profession in England was set at work by the competition for the Government Offices. Scott was then occupying his hours of leisure, which were for the most the hours spent on the road, in writing his book on Domestic Architecture, in which he has stated at length the argument for the revival of the Gothic style, and the principles which guided him in his own practice. He considered himself, therefore, to be in a certain sense prepared for this portentous struggle. He considered it wise, however, to give himself some special training for it, of which his account is curious.

"Long before the programme came out, I set to work to put myself systematically through my facings. My family being, as was usual in the latter part of summer, in the Isle of Wight, I retired to a great extent from active engagements, and set myself to design the elements which I thought most suitable to a public building. I designed windows suited to all positions, and of all varieties of size, form, and grouping; doorways, cornices, parapets, and imaginary combinations of all these, carefully studying to make them all thoroughly practical and suited to this class of building. I did not aim at making my style Italian Gothic, my ideas ran much more upon the French, to which, for some years, I had devoted my chief study. I did, however, aim at gathering a few hints from Italy, such as the pillar-mullion, the use of differently colored materials, and of inlaying. I also aimed at another thing which people consider Italian,—I mean a certain squareness and horizontality of outline. This I consider preëminently suited to the street front of a public building. I combined this, however, with gables, high-pitched roofs, and dormers.

"My opinion is that, putting aside the question now rife, as to whether we should or should not introduce foreign varieties of Gothic, my details were excellent, and precisely suited to the purpose. I do not think the entire design so good as its elementary parts. It was rather set and formal. With all its faults, however, it would have been a noble structure, and the set of drawings was perhaps the best ever sent in to a competition, or nearly so.

"A little before the competition, but subsequent to my designing the speculative elements of it, I had a good opportunity of trying these elements beforehand. Mr. Akroyd had asked me to design a town-hall for Halifax to suit a site which he favored. I made a design which I flatter myself was as good a thing of its kind, and of its small size, as had been made at the time, nor do I think I could now do better. It was the first-fruits of my design for the Govern-

ment Offices, and, in my opinion, was better than any subsequent design for these buildings."

The designs were sent in in the autumn of 1856. The judges, "who knew amazingly little about their subject," were long in making up their award of the premiums, which were divided into two groups, five for the Foreign Office and five for the War Office. Scott was awarded the third prize for the Foreign Office, the first being awarded to Messrs. Coe & Hofland, of whom Mr. Coe was Scott's old pupil; and the second to Banks & Barry. Both of these designs were in the classic style; Scott was apparently prepared to accept his defeat, until it was discovered that Lord Palmerston, then premier, had set aside this verdict, and was about to appoint Mr. Pennethorne, who had not competed at all, to the position of architect of both the War and Foreign Office, when Scott felt at liberty to stir. "A meeting took place at Mr. Beresford Hope's, at which Charles Barry, myself, and Digby Wyatt were present; and, if I remember rightly, it was agreed to stir up the Institute of Architects. To the best of my memory, the Government had just changed, and Lord John Manners had taken the Office of Works, when a deputation from the Institute laid the matter before him. The result was the appointment of a select committee to inquire into the subject." This committee took the evidence of the assessors or experts, who had advised the judges as to the merits of the various designs; and at length, stating their conclusion as to the rival styles, to the effect that they were "equal in convenience and cost," they virtually recommended the Commissioner of Works to make his own choice between the Gothic design of Scott and the Renaissance design of Banks & Barry. The committee's report was made in July, but no decision was reached until late in November, when it was given in favor of Mr. Scott's design for the Foreign Office. The War Office in the mean time had been abandoned, and an India Office was to be built instead. Lord Stanley, Secretary of State for India, had drawn up a memorandum for the appointment of Mr. Scott to this building, in connection with the foreign department. But Mr. Digby Wyatt, then the official architect to the India Office, called upon Scott and proposed joining forces. Scott assented, the plans were drawn and accepted, and the working-drawings for both buildings well under way, when Mr. Tite, the architect of the new Royal Exchange, at that time a member of Parliament, made a violent attack upon the designs in his place in the House of Commons. Lord Palmerston supported him in another speech, and the battle was begun which was to rage unabated for more than two years. Scott replied to the attacks in Parliament by a letter in the *Times*, which only provoked a second attack, and was considered by certain architects to reflect upon the profession to such an extent that it was proposed that the Institute of Architects should refuse him the gold medal which the council had recommended. This insult was avoided by strong remonstrances on the part of Scott's friends, but Scott and his design were now understood to be the proper mark for any arrows of contempt and abuse which any ill-natured person, professional or other, might have to throw. He had, however, still some good friends in Parliament, and Lord John Manners, the Commissioner of Works, stood manfully by him. So they went on with the working-drawings, though doubtless in great distress of mind, as not knowing how soon they might all be found useless. All of a sudden there was a dissolution, a new election, and behold my Lord Palmerston in power again, with a new Commissioner of Works of his own choosing. Then came a bad season for the much-injured architect. "I forget," he says, "the precise order of events, but the builders' estimates were by that time in a forward state, and were allowed to come in, and they turned out very satisfactorily. Lord Palmerston, however, sent for me, and told me in a jaunty way that he could have nothing to do with this Gothic style, and that though he did not want to disturb my appointment, he must insist on my making a design in the Italian style, which he felt I could do quite as well as the other. That he heard I was tremendously successful in the Gothic style, but if he let me alone, I should Gothicize the whole country, etc., etc."

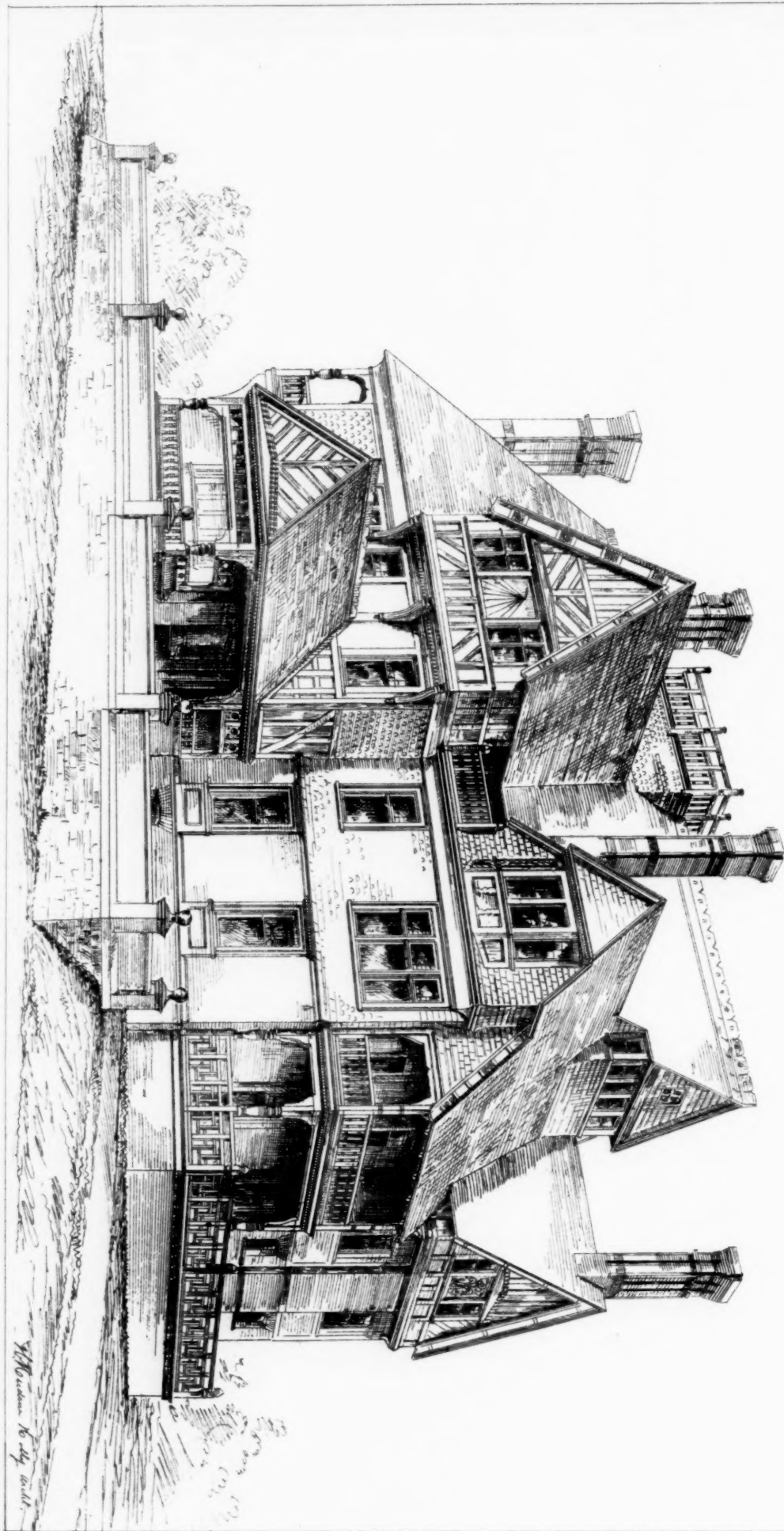
In the mean time the quarrel had spread. On the one hand a deputation of M. P.'s waited on Palmerston to argue in favor of the Gothic style. On the other hand, a deputation of architects waited on Palmerston to encourage him in his resistance to this encroaching barbarism, Sydney Smirke, one of the deputation, declaring that "if they began with Gothic in King Street, it would never stop till it reached Charing Cross." Scott tried to get up a counter address, but could find only a faithful few among the architects willing to commit themselves so far as to sign it.

Shortly afterwards "Lord Palmerston sent for me, and, seating himself down before me in the most easy, fatherly way, said, 'I want to talk to you quietly, Mr. Scott, about this business. I have been thinking a great deal about it, and I really think there was much force in what your friends said.' I was delighted at his supposed conversion. 'I really do think there is a degree of inconsistency in compelling a Gothic architect to erect a classic building; and so I have been thinking of appointing you a coadjutor, who would, in fact, make the design!' I was thrown to the earth again. I began at once to bring arguments against the proposal, but the blow was too sudden to allow me to do justice to my case *viva voce*, so on my return I immediately wrote a strong and firmly worded letter, stating that I had been regularly appointed to the work; that Mr. Gladstone had assured me that my appointment would be respected; that he,

¹ Personal and Professional Recollections by the late Sir George Gilbert Scott, R. A. Edited by his son, G. Gilbert Scott, F. S. A., etc., etc. London. 1879.

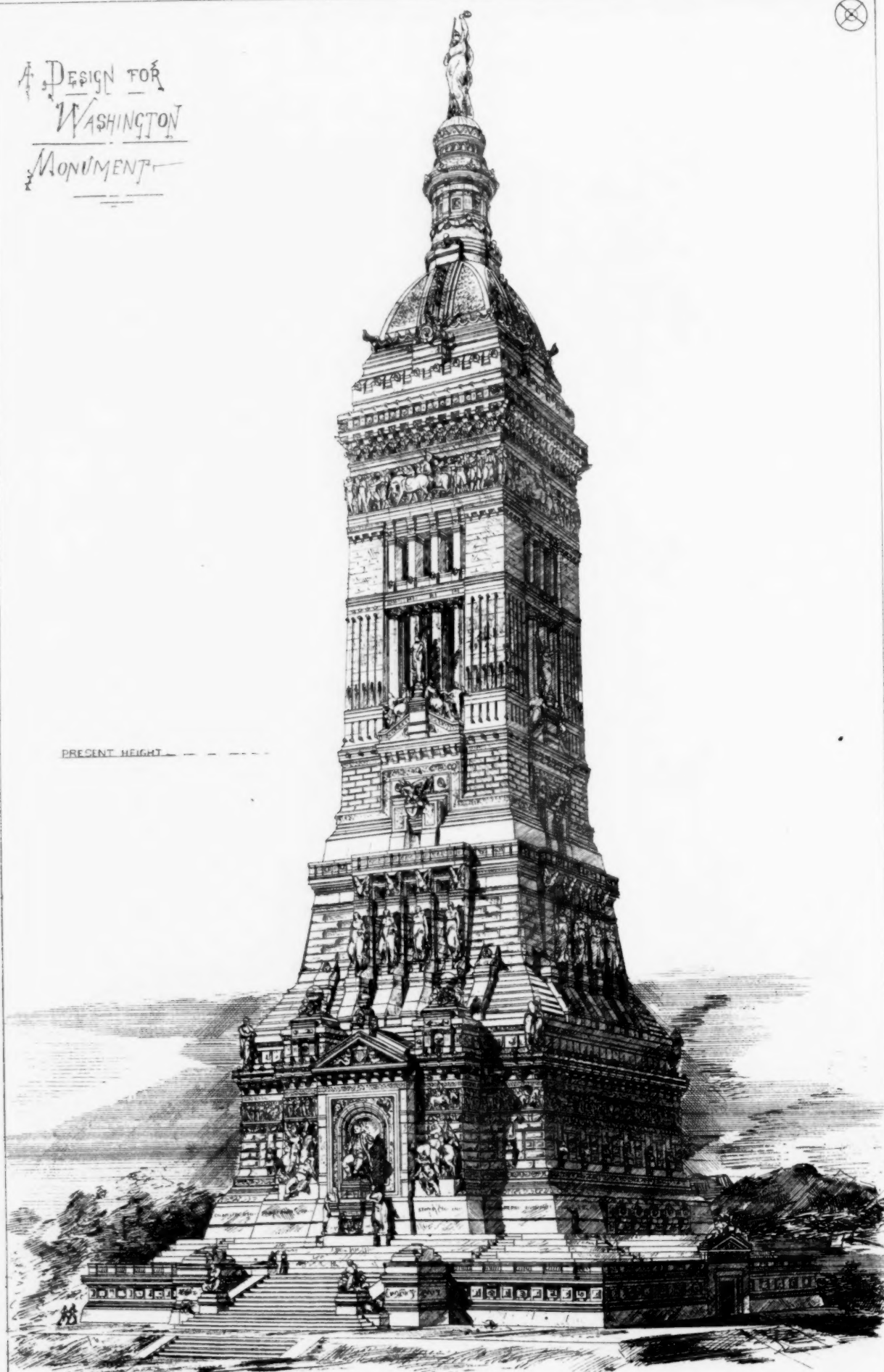
HOUSE OF H. R. TOWNE ESQ. STAMFORD, CONN.
H. H. HOLLY ARCHT.

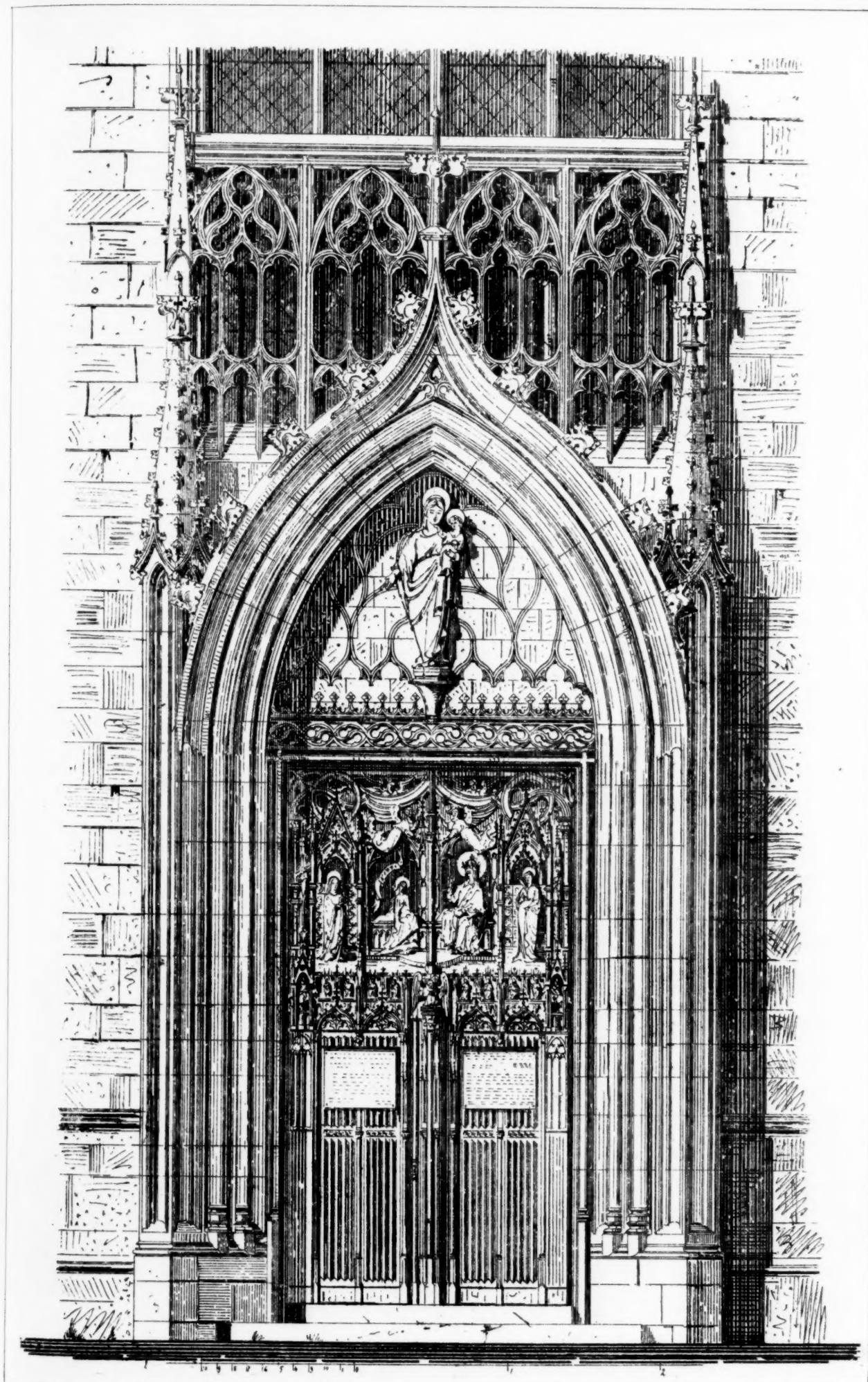
THE PICTURE PRINTED BY THE PUBLISHERS OF THE ARCHITECT



A DESIGN FOR
WASHINGTON
MONUMENT

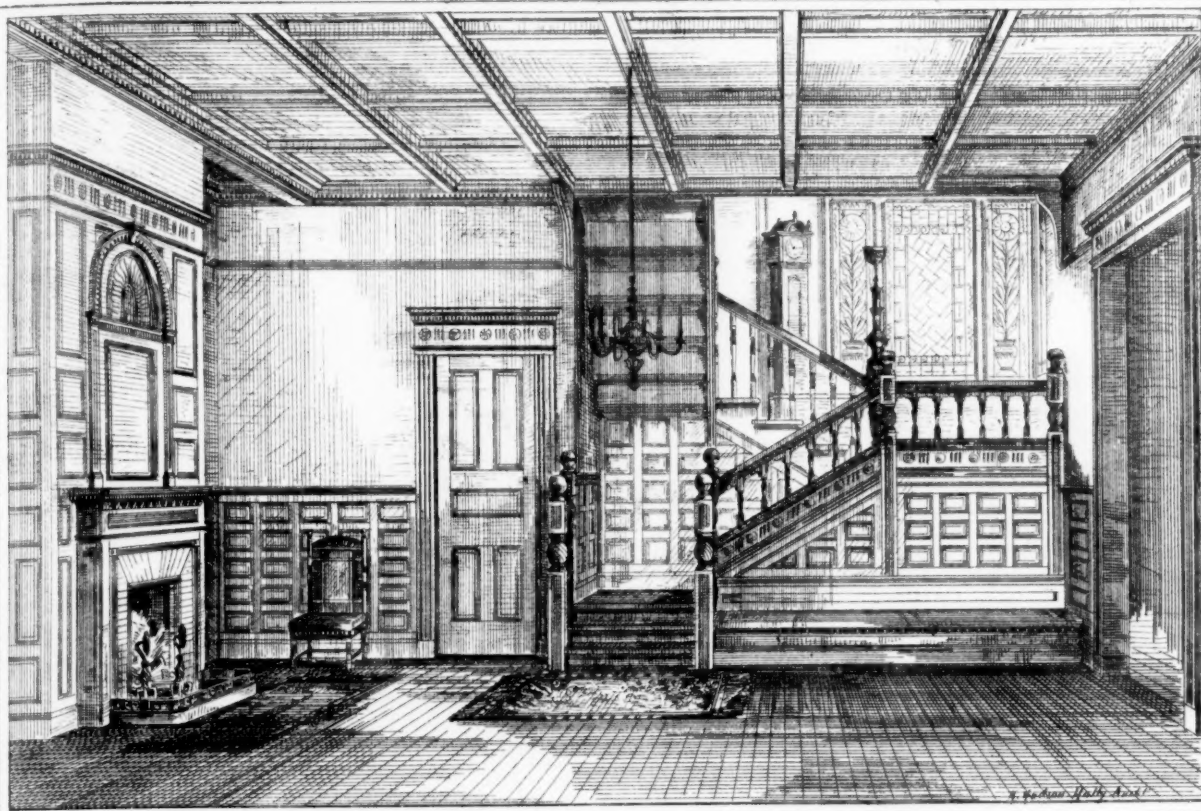
PRESENT HEIGHT



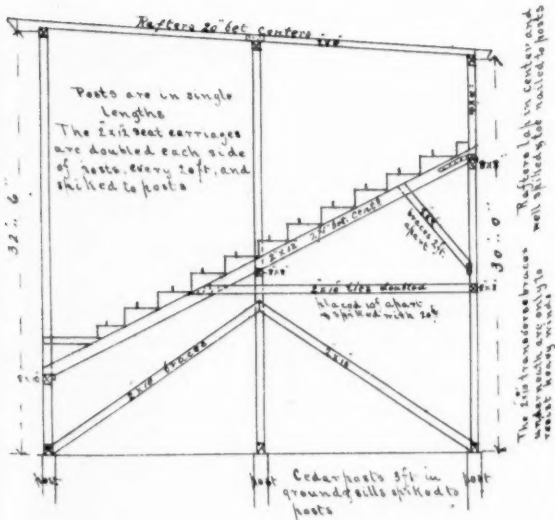


NORTHERN DOORWAY OF ST. LAMBERT'S CHURCH MÜNSTER, WESTPHALIA.

THE HELIOTYPE PRINTING CO. 220 DEVEREUX ST. BOSTON

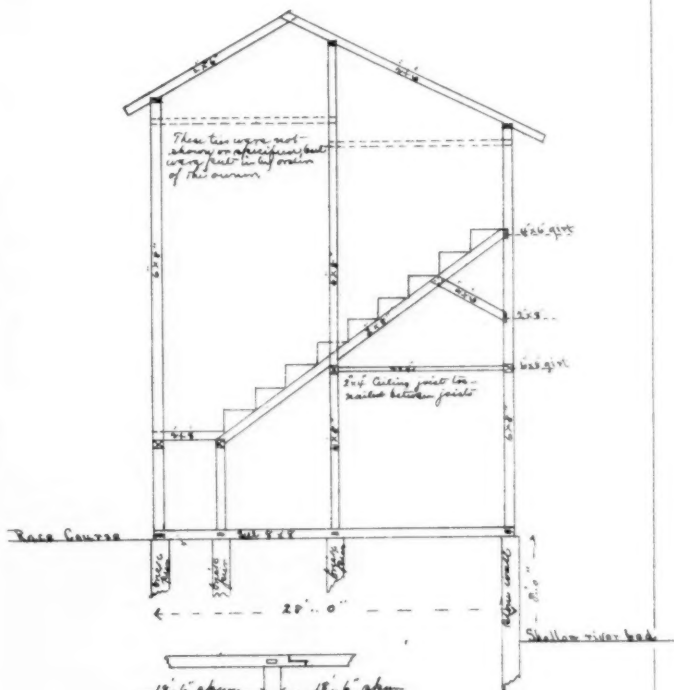


MAIN HALL IN THE HOUSE OF H.R. TOWNE ESQ. STAMFORD, CONN.
H.H. HOLLY ARCHT.



All timbers morticed & glued & braced. Braces pinned in & nailed. Seat carriages Exit rest on girts & are nailed & anchored with iron anchors.

Section of Toledo Grand Stand
Size 34 x 400 ft.



The Grand Stand at
Adrian Mich.

Lord Palmerston, had done the same, both personally and in Parliament. I dwelt on my position as an architect, my having won two European competitions, my being an A. R. A., a gold-medalist of the Institute, a lecturer on architecture at the Royal Academy, etc., and I ended by firmly declining any such arrangement. I forget whether he replied." Poor Scott now began to consider whether it might not be possible to compromise by making an alternative design which should pass muster with Palmerston as classic, while really avoiding the characteristic features of that style. So he made a sort of modified Byzantine design, which his friends approved, and showed it to the Commissioner of Works, who promised to make an appointment for him to meet Palmerston. The appointment was made and Scott kept it, but Palmerston did not. Instead, "he kept me waiting for two hours and a half in his back room (during a part of which I heard him very deliberately going through his luncheon in the next room), and then sent me away unseen." The design was finally got before the impracticable minister, and Scott thought he liked it but did not like to say so. More delay, in the midst of which he heard, "by a side wind," that one of the unsuccessful competitors had made a new design, which was actually under consideration at the Office of Works, whereupon Scott drew up a formal statement, recounting the history of this ignoble affair, so far, and protesting strongly against the course secretly taken by the Government. This protest was sent to the Commissioner of Works, and Scott's friends in the House of Commons were informed of what had been done. This step proved effective, and the new move of the Government was defeated. Scott was now directed to make certain changes in his semi-Byzantine design, to bring it more into harmony with the views of the Government. The design thus altered was submitted to the joint opinion of three architects, Messrs. Cockerell, Burn, and Ferguson, who made a joint report, recommending its acceptance, subject to a few additional modifications. Thus modified, it went again before Parliament, "which had no liking for it, but let it pass," being presumably tired of the affair. Not so Palmerston, however, who now ceased fencing and followed Dr. Johnson's example: "If his pistol misses fire, he knocks his adversary down with the butt." On the 8th of September, 1860, he sent for Mr. Scott, "when he told me that he did not wish to disturb my position, but that he would have nothing to do with Gothic, and as to the style of my recent design, it was 'neither one thing nor t'other, a regular mongrel affair, and he would have nothing to do with it either;' that he must insist on my making a design in the ordinary Italian, and that though he had no wish to displace me, he nevertheless, if I refused, must cancel my appointment. He did not stop for a reply, but went on to tell me that he had made an arrangement with Sir Charles Wood, which necessitated an entire change of plan," etc.

Further resistance was useless. Scott's friends counselled submission, and he submitted. A new design was prepared, in the classic Italian, with which we are familiar. "And thus," he says, "after more than two years' hard fighting, I was compelled to 'eat my leek.'"

The result was mortifying enough, but one can only smile at the abject humiliation and shame with which poor Scott felt himself to be overwhelmed. He had made a gallant fight, and the Philistines, as might be expected, had proved too strong for him, but the defeat was not one to be ashamed of, and the repeated apologies which he offers, for yielding to the Government in carrying out the buildings in the style which they prescribed, show the extent to which his mind had become penetrated by the ethics of Ruskin and Pugin. "My shame and sorrow were for a time extreme, but to my surprise the public seemed to understand my position and to feel it, and I never experience any annoying or painful rebuke, and even Mr. Ruskin told me that I had done quite right."

THE ILLUSTRATIONS.

A DESIGN FOR THE WASHINGTON MONUMENT AT WASHINGTON, D. C.

THE legend which is submitted with this design states that the stones which fill the panels in the terrace wall below the balustrade are to be presented by the different States and Territories, while the stones which have been similarly presented by foreign countries find their places as ornaments to the battering plinth of the pedestal. The figure of Washington is seated on a pedestal in front of a niche, and is supported on either hand by statues of Truth and Industry, while larger groups representing Peace and War find a place on either side of the niche. The busts in front of the panels in the die of the pedestal represent the heroes and statesmen of the Revolution. A Procession of Industry in bas-relief serves as frieze to this portion of the monument. The four statues at the angles of this entablature represent Liberty, Justice, Education, and Suffrage. The thirteen original States are represented by the engaged statues which mark the second stage of the structure. The statues surmounting the pediments midway of the main shaft typify the four sections of the country, North, East, South, and West. The Army, in bas-relief, surrounds the shaft as a frieze. The figure of America surmounts the whole monument, which is designed to be three hundred and thirty feet high. The present height of the uncompleted shaft reaches only to the cornice line of the pediments which support the figures, North, South, etc.

HOUSE FOR HENRY R. TOWNE, ESQ., STAMFORD, CONN. MR. H. HUDSON HOLLY, ARCHITECT, NEW YORK, N. Y.

INTERIOR VIEW OF THE MAIN HALL OF THE SAME.

SECTIONS SHOWING THE CONSTRUCTION OF THE GRAND STANDS AT TOLEDO, O., AND AT ADRIAN, MICH.

See communication in another column.

DOORWAY OF ST. LAMBERT'S CHURCH, MUNSTER, WESTPHALIA.

We here reproduce one of the doors of the Church of St. Lambert, which, like the other views of portions of the same building which we have published, is copied from the *Allgemeine Bauzeitung*.

CORRESPONDENCE.

NEW BUILDINGS.—THE FRUIT AND VEGETABLE MARKET.—THE PROPOSED COLONIAL MUSEUM.

LONDON, October 16, 1879.

THE "dull season" is coming to an end and most people are back at their work again. Work, however, in an architectural sense, still suffers from the effects of the general depression, though there are signs of improvement in several quarters. A few large buildings recently decided by competition, such as the City of London Schools, the Greenock Municipal Buildings, the Over Darwen Town-Hall and Markets, the Wesleyan College at Birmingham, etc., will presently be carried out, besides smaller works, and others already in hand, so that the prospect is, on the whole, better than it was last year at this time. The recent revival of the iron trade in the north will also have a beneficial effect on building in that quarter, in connection with which may be mentioned the acceptance of the contracts for the new railway bridge across the Forth, at Queensferry. A Sheffield firm has obtained the contract, at £700,000, for the steel and iron work; and a Glasgow firm, for £300,000, that for the masonry, etc. The bridge, which is being built from the designs of Sir Thos. Bouch, the engineer of the Tay bridge, will be one of the largest and most important engineering works in the world, and, as the contracts show, will cost over £1,000,000 sterling. When finished it will be the great connecting link between the railways north and south of the Forth. Here in London the public buildings make steady progress. The Natural History Museum at Kensington is just about completed, and another portion of the Law Courts is to be ready for occupation at the beginning of the November Term. The contract has also been accepted, at £109,000, for the new Fruit and Vegetable Market at Smithfield. This is the third large market at the same place, and, like the other two, is from the designs of Mr. Horace Jones, the city architect.

In general architectural character the new market will resemble the others, the style being a free treatment of classic, in red brick, with stone pilasters, cornices, etc. The principal difference is in the planning, the new building being what is termed an "open" market, that is, a large central area, with shops facing the surrounding thoroughfares, as well as this central space. The general area of the market is about 44,000 square feet, of which about 17,000 square feet are occupied by some 40 "outside" shops, while inside there will be 33 shops, each having in front a "pitching stand" for goods and wagons. In the centre of the market area will be a space of 4,400 square feet, available for independent pitching stands, covered by a roof 70 feet high at the centre, 45 feet to the ridge, and 28 feet to the plate, supported on only 16 columns, so as to leave the area as clear as possible. The basement will be devoted to storage purposes, and to the railway lines of the Chatham and Dover Company, so that fruit and vegetables may be brought direct from every railway in the country. The great success which has resulted from the central markets scheme, so far, leaves little doubt as to the future of the new addition from a financial point of view, while architecturally the new market will complete the occupation of nearly all the space created by the Holborn Valley Improvement Scheme of the corporation.

We expected ere this to be able to chronicle some definite progress in the scheme for converting the unfinished National Opera House on the Thames Embankment into a Colonial Museum. As this seemed to be the most hopeful, and for the general public the most important, of all the proposals for utilizing this unlucky building and its magnificent site, it will be a matter of the greatest regret if it is allowed to fall through from want of support. From the elaborate statement prepared by the promoters at home, and sent to the various colonial governments for their consideration, a few of the details may prove interesting. It is calculated that the freehold of the site, together with that of four houses in the rear, can be had for £88,000, and this, it was proposed, should be provided by the mother country. An arrangement was entered into to purchase the unfinished building from the Opera House Company for the sum of £40,000, though it seems that no less a sum than £65,000 has been spent on it. Plans were prepared by Mr. F. H. Fowler, the architect of the Opera House, showing how the entire building could be adapted for the purposes of a Colonial Museum, providing ample exhibition space for the different colonies, with library, reading, and lecturing rooms, as well as offices for the various agents-general, at a cost of £135,000, which includes a sum of £10,000 for water, heating, and lighting, and full provision for all incidental expenses.

This, with the £40,000 to be paid for the existing buildings, would bring the cost of the structure to £175,000. In addition to this, however, it is estimated a further sum of £10,000 will be required for the fittings and arrangement of the various portions, which would bring the total amount up to £185,000. To keep on the safe side, and to avoid the necessity of supplementary grants, it was thought prudent to adopt the sum of £200,000 as a basis for calculation, and this, it was proposed, should be provided for by the colonies according to a carefully prepared scale of the probable space required by each.

From the plans prepared by Mr. Fowler the general arrangement appears to consist of a large central hall 225 feet long by 102 feet broad, with two tiers of galleries. On one side there will be three floors of independent exhibition rooms, communicating with the central hall, and on the other a block of six groups of offices, each with its separate entrance, and its direct access to the museum. The floor space provided for exhibition purposes amounts to 70,000 square feet, which is subdivided into a series of sections for each of the great colonies or groups of colonies. In the basement is a large lecture-hall for 1,000 persons, a smaller hall for 350 persons, library, reading-room, the necessary offices, committee-rooms, storage, retiring-rooms, etc., giving an additional 15,000 square feet, while the block of offices available for the agents-general give 19,000 square feet more. The main entrance would be from the Victoria Embankment, and another entrance hardly less important from Derby Street, which is only some 30 yards distant from Parliament Street. In architectural treatment the elevation to the embankment is a repeat of the façade of the Opera House, with the addition of a pediment filled with sculpture in the centre, while, of course, the high rectangular mass which marked the stage and the semicircular roof which covered the auditorium are omitted. The colonnade in front of the entrance hall remains as before, and the crush-room on the first floor appears to be devoted to the island of Ceylon. The circular angles, a feature in the Opera House plan, are retained, and seem devoted to cloak-rooms on the ground floor, and Ceylon, Malta, Gibraltar, etc., on the first floor. Considerable ingenuity has been shown by Mr. Fowler in adapting the present building, so far as it goes, to the altered purposes, and from its ample space, no less than its central position, the scheme seems an admirable one.

In regard to its management, following the precedent of the British Museum, it is suggested this should be vested in a body of trustees constituted as follows: The Crown agents and the agents-general of the various colonies as representing the colonies, with the Secretary of State and the permanent Under Secretary for the Colonies, the Lord-President of the Council of Education, the Lord-Mayor of London, the Chairman of the Metropolitan Board of Works, and the Presidents of the Associated Chambers of Commerce, the Society of Arts, and the Royal Colonial Institute, as representing the mother country. The trustees to have the entire management and control of the annual expenditure for maintenance, etc., which is estimated at £12,000; and this, it is proposed, should be provided one half by England and the other half by the colonies, voted annually by their respective parliaments. No revenue is anticipated from the museum itself, as it would be undesirable to charge a fee for admission from the public, but a rental of £2,700 is estimated to accrue from letting the offices to the agents-general of the various colonies, and this would in the first instance go towards meeting the annual expenses of the institution.

From the prominent part taken by the colonies in the Exhibitions of Philadelphia and Paris, and the collections likely to be available from those of Melbourne and Sidney now coming on, the present is deemed an exceptionally favorable time for bringing the scheme to maturity, and we can only hope that the proposal of which we have given a brief outline, and which is destined to possess a truly imperial character, and fulfil truly imperial functions, may be supported both at home and abroad with the spirit it deserves.

Estimates varying from £65,410 to £50,526 have been received for the new Church of the Oratory at South Kensington, to be built from the designs of Mr. Herbert A. Gribble, who, it may be remembered, won the first prize in the recent competition, the conduct of which gave rise to so much dissatisfaction, so there is a prospect of this long-talked-of work being commenced at last: perhaps some day even the new Roman Catholic Cathedral for Westminster may come to the front. Speaking of cathedrals we are reminded that the late Sir G. G. Scott's great work, the cathedral church of St. Mary, at Edinburgh, is to be consecrated on the 30th of this month, and the clearing of the site for Mr. Pearson's cathedral at Truro is to be commenced immediately after Christmas, by the demolition of the present St. Mary's Church. The five hundredth anniversary of the foundation of New College, Oxford, was celebrated on the 14th inst., when the chapel was reopened, after having been renovated at a cost of £20,000, from the designs of Sir Gilbert Scott.

THE NEW CENTRAL MUSIC HALL. — ARTISTIC WORK IN TERRA-COTTA.

CHICAGO, ILL.

THE latest "investigation" we have had has been in relation to the new Music Hall now being erected after the plans of Mr. D. Adler. With the exception of the City, County, and Government

buildings, the Music Hall is the most important architectural work now in progress in this city. It is situated on the southeast corner of State and Randolph Streets. It consists of a music hall proper with front on Randolph Street, but with the main entrance on State Street, and a business building on State Street with stores on the first floor, in the centre of which is the entrance to the Music Hall. But the business building contains not only the stores and offices, but a commodious concert hall for chamber music. While in the upper stories are large rooms for musical societies, and a suite of rooms designed especially for photographic purposes. Over the front portion of the Music Hall are a number of artists' studios, while the remainder of the auditorium has a glass roof. The ceiling of the hall under the glass roof is to be of rolled cathedral glass. The floor of the main hall is on a level with the street, and egress is provided on three sides. It will seat about 2,500 persons on the main floor and in two galleries. The seating arrangements are similar to those of a first-class theatre, but no provision will be made for scenery on the stage. The fact that the building is rented for a term of years to the Central Church, presided over by Rev. David Swing, is sufficient reason for such an omission, and in place of it a powerful organ will be erected, serving alike for church exercises and musical performances. The organ will be in two sections, placed one on each side of the stage.

The building is now being plastered and promises to be in every way an architectural success. The exterior is of Lemont limestone, and the entrance porch of polished red and gray granite. It belongs to a stock company called the Central Music Hall Company.

A few weeks ago Mr. L. G. Hallberg, an architect in this city, made a direct charge in one of the daily papers that the building was unsafe in two essential particulars, and predicted that it would be the scene of a horror similar to those of Rockford and Adrian. His letter was decidedly of the alarmist order, and such an one as, if allowed to receive credence from the public generally, or become the subject of town talk, was calculated to do serious injury to the reputation of the building, as long as it might stand. The Building Committee, therefore, decided to have an examination and report made by expert constructors. They selected R. G. Mason, civil engineer and ex-mayor, E. S. Chesbrough, late city engineer, Max Hjortsberg, civil engineer, and P. B. Wight, consulting architect. The report has just been presented.¹ As it will forever set at rest all ill-judged criticisms on the construction of the best building for the purpose that has ever been erected in this city, further comment is unnecessary.

A small book called *Terra-Cotta in Architecture*, being a republication of part of a work on Ceramic Art and Art Education, by James Joseph Talbot, of Philadelphia, and distributed as an advertisement by the Perth Amboy Terra-Cotta Company, has just made its appearance in Chicago. In giving what purports to be a historical account of the progress of terra-cotta manufactures in America, it makes a statement which fails to do justice to the part that Chicago enterprise should be credited with in the development of this art. Mr. Talbot says, "An establishment devoted especially to architectural work was started in Chicago, about the year 1868, but does not seem to have produced any work of much artistic importance. About ten years later its projector removed to Boston, and began the manufacture on premises in Federal Street. Early in 1879 this establishment passed into different ownership, and is now known as the Boston Terra-Cotta Works. They operate one kiln only, but produce some very creditable work." Mr. Talbot's knowledge of terra-cotta manufacture seems to be confined to the seaboard States, and I think that a visit to this city would considerably enlarge his ideas as to the capacity of the Chicago works and the quality of its workmanship. But as to the latter he could have found extensive evidences in many eastern cities. For the information of himself and your readers I will say, in contradiction of what his first sentence implies, that the Chicago Terra-Cotta Works are still in operation, and during the last two months have turned out \$7,000 worth of work. This is not a large amount compared with their capacity and what was once done. But the demand for this work is increasing, and the production is of the highest order in artistic merit. Among the works now in progress are the new Museum of Natural History for the State University of Michigan at Ann Arbor, and the building for the Psi Upsilon fraternity at the same place, both of which contain much artistic work in carved terra-cotta, such as was first introduced in America by Mr. Sanford E. Loring. But among the works of "much artistic importance" produced in Chicago both before and while Mr. Loring was endeavoring to start a factory in Boston, and sent to eastern cities, may be found the following: In Philadelphia, where Mr. Talbot resides, may be seen work done in 1876 and 1877 on the exterior and interior of Christ Church Chapel, from designs of J. P. Sims, architect. Much of it is carved and "artistic" terra-cotta.

In New York the first example of carved red terra-cotta produced in America may be seen in Mr. Brahm's house on Thirty-sixth Street near Fifth Avenue, by Mr. G. B. Post, architect. The carved panels made in Chicago for this house are nearly four feet long, a remarkable size for such a material. All the terra-cotta finish for the Morse Building, on the corner of Beekman and Nassau Streets,

¹ We have already given the most essential parts of this report in our Summary, and do not therefore repeat it. — EDS.

New York, except the finials of the front porch, were made at the Chicago Terra-Cotta Works. In Boston, two dwellings on Commonwealth Avenue for W. W. Lewis, architect, were finished with terra-cotta made in Chicago in 1877, and in these houses are the first fireplaces made of terra-cotta and brick in America, which are full of artistic carving, done in Chicago. In Providence may be found the following works designed by Stone & Carpenter and executed in Chicago: Mr. Godard's dwelling, fronting Brown University; the new dormitory of Brown University; the work on the Hotel Dorrance, commenced in Chicago and finished in Boston. In conclusion, let me add that inasmuch as what is known as "artistic terra-cotta" is work carved in solid clay just before it is fully dried, the first work ever done by this process was executed by Mr. Isaac E. Scott, a self-educated Chicago carver, and now a most successful designer and decorator, and is now in Plymouth Church in this city. The interiors and exteriors of our finest dwelling-houses recently erected from designs of Jenney, Addison, Wight, Treat & Foltz, Burnham & Root, and others in this city, contain quantities of examples of carved terra-cotta executed here, which we consider to have "much artistic importance."

THE POMPEIAN CELEBRATION.¹

A *Times* correspondent was present at the excavation in the insula parallel to that numbered five in the north region, according to Fiorelli's plan, in a shop entered from the Decumanus Major, commonly known as the Strada de Nola, leading to the gate of that name. For the first five minutes there was a breathless silence as the men worked; then, as the scoria fell away, part of a green object became visible. In a moment the workmen's hands had cleared the space around it, and amid deafening cheers a small bronze horse, 9 inches in length, was held aloft. Then a large amphora appeared; then two bronze vases, one with handles; then a large iron key, and as each in turn was lifted high for all to see, "*Bene, bene!*" burst in a chorus of hearty satisfaction from the people. A list, with the briefest description of the things which then followed in rapid succession, would fill a column. There were at least a dozen bronze vases of different shapes, sizes, and uses, with and without handles, and in one a number of bronze coins oxidized together; and many other coins were found at intervals during the excavation. There were many handsome bronze fibulae, several bronze bracelets, a number of rings, many terra-cotta vases, tazze, and amphorae, and a remarkable number of little terra-cotta water cups for bird cages, various kitchen utensils, a spit, forks and knives of iron, a bronze bottle, a number of little bronze bells, a dagger with ivory handle, a knife with ivory handle, a bronze casserole, and a terra-cotta money-box.

There soon followed abundant proof that this had been the shop of a seed merchant and seller of singing birds, and very little imagination was required to see the place as it was the day before the fatal eruption of 79. At first the room seemed to have been a mere receptacle for a miscellaneous collection of bronze and earthenware objects. There was no special character about it. The walls bore no traces of painting; but, as the clearing continued, to the left of the door on entering a heap of millet seed was found, so carbonized that on taking up a handful it flowed between one's fingers, for every grain was separate and distinct. It was taken away in baskets full. Close to this a quantity of hemp seed and of what appeared to be small beans, in the same well-preserved condition, were found, and among them considerable fragments of the sacks in which they had been kept, the fibre and texture clearly distinguishable. Behind these heaps and against the wall more seed was dug out, mixed with pieces of carbonized wood, iron hinges and nails, and some iron hoops, evidently the remains of small barrels and bins which had been ranged on this side, while along the opposite wall a double row of terra-cotta ollae for holding grain was gradually revealed. Suddenly there arose a cry, "*un ossa,*" "*un scheletro,*" and the excitement became intense; but the bones were small — at first they seemed mere fragments, and then the Director exclaimed, amid quickly following laughter, "A chicken." Here the filing in had become somewhat solidified, and as it broke apart a complete skeleton was revealed. It was that of a little singing bird, entirely imbedded in the mass, and near it were fragments of other tiny bones. There could no longer be any doubt that the use of the little terra-cotta pots had been correctly described. It became clear why so many of them were found there, and that the number of plain bronze rings of about an inch and a half in diameter, and pieces of fine chainwork discovered, had been used for hanging bird cages. But what connection had all those bronze vessels and ornaments near the door with a seed and bird seller's shop? This also soon became evident. As the excavators continued farther into the room, great masses of carbonized beams of wood were found, each somewhat inclined downwards, and among them a quantity of fragments of intonaco and stucco wall-facing, colored porphyry with a border of green and white. These were at once seen to be the remains of the floor of the room above, with some of the plastering of its walls; and from the direction in which the beams were lying, it was evident the floor had given way in the middle and towards the door of the shop below, precipitating the greater part of the contents of the upper room in that direction, the remainder falling towards the middle, and it was here the ele-

gant long stemmed candelabrum was found among the masses and fragments of carbonized wood. Did the worthy bird-seller live above his shop? Did this candelabrum and the various bronze vases and other utensils form part of his domestic furniture? Who can tell? They were elegant in form, but for the most part unornamented, and not out of character with the requirements of a person of that condition. There were some finger-rings of bronze, but none of richer material; there was a strigil with a plain handle; there were women's bracelets and fibulae of delicate workmanship, but only of bronze; some glass beads, and a delicate blue glass cup broken in pieces. The smaller terra-cotta vessels were all of the plainest workmanship. Among them were three small amphorae, with flat bottoms for standing on the table, and the bronzes were of the variety of size and form adapted to household purposes. Some were like jugs with one handle, others were in the form of flat oval tazze with two handles, and one of these had two others of smaller size lying within it. There was one the exact counterpart of a pint pot, several of flat shape, like casseroles, with a straight handle on one side, and some without handles, like deep bronze soup plates.

Among other things found in this room were a number of small bronze bells slightly depressed into a rectangular form, like the tiny gold bell found on the Esquiline some years back, and which is so well known as the Margherita bell from the number of copies made for ear-drops; two double bronze inkstands, the chain and other fragments of a balance, a bone paper-cutter, — a knife of large size, with a bent blade like those used by gardeners, — a small square Corinthian pilaster cap of marble, and in one corner of the shop, against the wall, the remains of a mensola.

A RECORD OF GREAT FIRES.

HISTORY is full of accounts of the devastation caused by fire in the cities and towns of nearly every country of the civilized world. A record of these conflagrations cannot but be of interest. In the year 798 London was almost entirely destroyed by fire, and again in 982 the greater part of the city burned. In 1086 all houses and churches, from the East to the West Gate, burned. What is known as the "great fire" occurred in 1666. It began September 2, and continued three days, burning over 436 acres. Houses to the number of 13,200, including many public buildings, were destroyed, and six persons were killed. The loss was estimated at \$50,000,000. In 1794, 600 houses burned; loss over \$5,000,000. In 1834 the Houses of Parliament were destroyed; 1871, Tooley Street wharves burned, entailing a loss of \$10,000,000; in 1873, Alexandria Palace was destroyed. The great fire at Edinburgh occurred in the year 1700. At Brest, France, in 1784, explosion and fire in a dockyard caused a loss of \$5,000,000. Paris (Communist devastations), 1871, \$160,000,000. A fire at Rome in the year 64 lasted eight days, and ten of the fourteen wards of the city were destroyed. Venice, Italy, was almost wholly destroyed by fire in 1106, and in 1577 the greater part of the city was ruined by an explosion during a fire at the arsenal. Leipsic, Germany, in 1420 lost 400 houses; 1491, Dresden, Germany, was destroyed. In 1811 forest fires in Tyrol destroyed 64 villages and hamlets. In May, 1842, at Hamburg, a fire raged one hundred hours; during the fire the city was in a state of anarchy, 4,219 buildings destroyed, one fifth population homeless, and 100 lives lost; total loss, \$35,000,000. After the fire contributions from all Germany came in to help rebuild the city. At Copenhagen, in 1728, 1,650 houses burned; 1794, Royal Palace, with contents, destroyed; 1795, 1,563 houses burned. At St. Petersburg, in 1736, 2,000 houses were burned; the great fire occurred in 1862, when the loss was \$5,000,000. In 1752, at Moscow, 18,000 houses were burned. On September 14, 1812, the Russians fired the city to drive out Napoleon. The fire continued five days, and nine tenths of the city were destroyed. The number of houses burned was 30,800, and the loss was \$150,000,000. At Constantinople, in 1729, a fire destroyed 12,000 houses and 7,000 persons. In 1745 there was a fire which lasted five days; January, 1750, 10,000 houses burned; April, same year, loss \$10,000,000; later, same year, 10,000 houses destroyed; 1751, 4,000 houses; 1756, 15,000 houses and 100 persons; years 1761, 1765, and 1767, other great fires; 1769, 1771, and 1778, great fires; 1782, fire burned three days, 10,000 houses and 100 lives lost; February, same year, 600 houses; June, 7,000; 1784, 10,000 houses; 1791, between March and July, 32,000 houses burned, same number in 1795; 1707, in suburb of Para, 13,000 dwellings, and many magnificent buildings destroyed; 1861, August 16, 12,000 houses and 3,000 shops in finest quarter were destroyed; 1818, August 13, fire destroyed several thousand houses; 1826, 6,000 houses; 1848, 500 houses, 2,000 shops, loss estimated \$15,000,000; 1865, great fire destroyed 2,800 houses and public buildings, 22,000 persons left homeless; 1870, June 5, the suburb of Pera, occupied by the foreign population and native Christians, was swept by a fire which destroyed over 7,000 buildings, many of them among the best in the city, including the residence of the foreign legations; loss estimated at nearly \$25,000,000. Scutari, Greece, 1797, 3,000 houses burned. Smyrna, Greece, 1763, 2,600 houses consumed; loss, \$1,000,000; 1772, 6,000 houses; 1796, 4,000 shops; 1841, 12,000 houses. Yeddo, Japan, 1872, six square miles burned over, 20,000 persons homeless; 1873, 10,000 houses destroyed.

At Boston, Mass., 1679, all the warehouses, 80 dwellings, and

¹ Some fragments of this account have been given in a previous number.

vessels in the dockyards were consumed, loss \$1,000,000; 1760, fire caused loss of \$500,000; 1787, 100 buildings destroyed; 1794, 96 buildings burned; 1872, great fire November 9 and 10, the richest part of city destroyed, an area of 65 acres burned over, 776 granite and brick buildings consumed, loss \$75,000,000. Charleston, S. C., 1778, fire caused the loss of \$500,000; 1796, 300 houses burned; 1838, one half of city burned, loss \$3,000,000. Savannah, Ga., 463 buildings, loss \$4,000,000. New York, 1835, 530 buildings in business centre of city destroyed, 52 acres burned over, loss \$12,000,000; 1845, 300 business blocks, 35 persons killed, loss \$7,500,000. Pittsburgh, 1845, 300 buildings destroyed, loss \$10,000,000. Albany, 1848, 600 houses burned, loss \$3,000,000. St. Louis, May 17, 1849, 15 blocks, 23 steamboats, loss \$3,000,000; May 4, 1851, three quarters of the city burned, 2,500 buildings, loss \$11,000,000; same year, 600 houses, loss \$3,000,000. Philadelphia, 1850, July 9, 400 buildings burned, 30 lives lost, loss \$7,000,000; 1865, 50 buildings burned, 20 persons killed, loss \$500,000. Washington, 1851, part of Capitol and whole of Congressional Library burned. San Francisco, May 4 and 5, 1851, 2,500 buildings and a number of persons burned, more than three fourths of city destroyed, loss \$10,000,000; June, same year, 500 buildings, loss estimated at \$3,000,000. Chicago, 1857, 14 lives, \$500,000; 1859, September 15, \$500,000; 1866, August 10 and September 18, \$500,000 each; 1871, the greatest fire of modern times, October 8 to 10, 2,124 acres, or 3½ square miles, burned over in the very heart of the city, 250 lives lost, 98,500 persons made homeless, and 17,430 buildings, one third in number and one half in value of buildings in city, consumed, loss estimated at \$190,000,000. Troy, N. Y., 1862, nearly destroyed by fire. Portland, Me., 1866, great fire of July 4, one half of the city burned, 50 buildings blown up to stop the progress of the fire, loss \$11,000,000. Quebec, 1815-1816, \$1,000,000; 1845, May 28, 1,650 houses burned, one third population made homeless, loss \$3,000,000; another fire, June 28, 1,300 dwellings, 6,000 persons made homeless, loss \$1,000,000; 1866, 2,500 houses and 17 churches in French quarter burned. St. John, N. B., 1837, January 13, 115 houses and nearly all the business part of the city burned, loss \$5,000,000; 1877, June 21, 200 acres burned over, 1,650 dwellings, 18 lives lost, total pecuniary loss, \$12,500,000. St. Johns, Newfoundland, 1846, loss \$5,000,000. Montreal, 1850, June 7, 200 houses in finest part of city burned; 1852, July 9, 1,200 houses burned, 10,000 persons destitute, loss \$5,000,000. Santiago, South America, fire in the Jesuit church, 2,000 persons perished. — *Fireman's Journal*.

THE GRAND STANDS AT ADRIAN, MICH., AND TOLEDO, O.

TO THE EDITORS OF THE AMERICAN ARCHITECT:

Dear Sirs, — In justice to Mr. N. B. Bacon, of this city, who designed and superintended the Toledo Grand Stand, I wish to say that his evidence before the coroner's jury at Adrian, Mich., as printed, carries the wrong impression. The original plans and specifications were and are considered by the most competent builders sufficient to insure a structure amply strong for any emergency. There were, however, braces added "as an afterthought," simply to resist the heavy winds, which often prevail in fall and winter, in the region of Tri-State Fair Grounds. These braces, however, have nothing to do with the general strength of the structure, as far as supporting weight is concerned. No braces were added to prevent the roof from spreading, as there was no possibility of such an occurrence, as originally planned. Mr. Sizer, the architect (?) of the Adrian stand, could not copy the construction of the Toledo stand, nor could any one, without removing the seats and the finish underneath them. Consequently the most important points in the construction of the Toledo stand, and those which the superintendent of the structure was at greatest pains to enforce during its erection, were wholly overlooked in the Adrian stand. The Grand Stand at Toledo Tri-State Fair Grounds is well known to horsemen, all over the country, as having been repeatedly put to the very severest tests. It has several times contained nearly double the number of persons the architect intended it to hold, and yet the slightest tremor cannot be detected. The Adrian Grand Stand was built stronger than the plans showed. The plans indicated 2 by 16 inch seat-carriages, sawed out like the rough stringer of stairs, leaving only four or five inches of timber. The owner had 2 by 8 inches put in instead, and the seats built on them. Enclosed please find sketches of both stands.¹ R.

AN ARCHITECT AND HIS SUB-CONTRACTOR.

St. Louis, October 27, 1879.

TO THE EDITORS OF THE AMERICAN ARCHITECT:

Dear Sirs, — Having been an attentive reader of your valuable journal for a number of years, and admired the plain and open manner in which you attack all unprofessional actions, I take the liberty to write and ask your opinion on a subject which has caused me much reflection lately. For instance, should an architectural firm allow one of the sub-contractors on a building which they are superintending to display a sign to the effect that they "pay no commissions to architects or agents," and that "owners will do well to con-

¹ These sketches are printed in the plates of this number. Anything more ignorant and foolish than the framing of the Adrian Stand is seldom seen, we trust. — Eds.

fer with them direct." How would this, in your opinion, affect their standing as architects and relations to the profession at large? An early answer through your paper will greatly oblige,
Yours respectfully,
"JUNIOR."

PUBLICATIONS RECEIVED.

A PRACTICAL TREATISE ON NATURAL AND ARTIFICIAL CONCRETE: Its Varieties and Constructive Adaptations. By Henry Reid, author of *The Science and Art of the Manufacture of Portland Cement*, etc. New Edition. London and New York: E. & F. N. Spon. 1879.

TERRA-COTTA IN ARCHITECTURE. By James J. Talbot. 1879. ILLUSTRATED CATALOGUE of Locks, Builders' Hardware, and Cast Bronze and Brass Work, manufactured by Hopkins and Dickinson Manufacturing Company. October, 1879.

NOTES AND CLIPPINGS.

WHAT CONSTITUTES A PEDESTAL? — The Assistant Secretary of the Treasury has instructed collectors of customs that the decision which admits pedestals or statues at the same rate of duty as statuary, when such pedestals are invoiced and accompany the statues, should be strictly construed. The pedestal and statue must be evidently intended for each other. An importation by a dealer in marble-work of several figures, with as many pedestals, adapted to one as well as another, and as well adapted to receive an urn as such figures, would not come within the decision. Such pedestals should be classified as manufactures of marble, liable to a duty of fifty per cent ad valorem. When the work claimed to be a pedestal is out of proportion to the statue which is to surmount it, so that it becomes a monument with a statue surmounting it rather than a statue with its appropriate pedestal, such a structure will not be regarded as part of the statue. It is not intended that dealers shall enter expensive monuments, which are in fact manufactures of marble, at a duty of ten per cent ad valorem, by merely importing with them or placing upon them cheap figures in marble, although such figures may be brought within the definition of statuary.

STATUE OF SAMUEL ADAMS. — The model for the bronze statue of Samuel Adams made by Miss Annie Whitney has been adopted by the special committee of the Boston board of aldermen. The city is to pay Miss Whitney \$4,800 for the statue, which will be cast at the foundry of the Ames Manufacturing Company, of Chicopee, Mass. It will be ready for delivery on July 1, 1880, and it will probably be unveiled on the 4th of July following.

THE ARCHITECT OF ABBOTSFORD. — Mr. Blore, an architect, from whose designs Abbotford was built, died lately, aged eighty-nine. Sir Gilbert Scott succeeded him as architect to Westminster Abbey.

INSURANCE AND FIRE LOSSES. — The fire insurance companies have power, if they choose to exercise it, to reduce the number of fires in this country annually seventy-five per cent, and the losses proportionately. Fires occur because insurance is cheap and easily obtained. This induces carelessness, recklessness, and incendiarism. In the list of causes of fire there are none mentioned, unless we except the few caused by lightning, that could not have been prevented by the exercise of ordinary precaution. If the insurance companies would insist upon the exercise of this precaution, both as a means of prevention and extinction of fires, instead of \$100,000,000 annual loss we should not have \$20,000,000. — *Fireman's Journal*.

THE PRECIOUS METALS IN THE INDUSTRIAL ARTS. — The Director of the Mint is making an effort to ascertain what has never been known accurately, — namely, the amount of precious metals used in the arts, sciences, and manufactures. Very frequently estimates have been made, based upon the amounts coined and exported compared with the amount produced, and the Silver Commission of 1876 placed \$46,000,000 as the probable value of gold and silver absorbed in this way. But Mr. Burchard desires to ascertain the facts as closely as possible, and has addressed a letter to all the manufacturers of the country who use precious metals, to chemists, and to those who are supposed to be informed on the subject. All the communications are to be treated as confidential, but Mr. Burchard proposes to prepare a statement showing the amount of gold and silver absorbed in other ways than by coinage.

A BELGIAN WINTER GARDEN. — The winter garden which the King of the Belgians has had constructed in the park of Laeken is the largest structure of the kind in Europe. The immense cupola of iron and glass is two hundred feet in diameter, and one hundred feet in height in the centre. It is supported by thirty-six columns of white stone, each over three feet in diameter.

ANECDOTE OF MR. HUNT. — The late William M. Hunt had, as is well known, a comprehensiveness in his ideas of art which led him to condemn that minute attention to detail which is so often mistaken for artistic excellence. A friend who met him soon after the completion of his great work at Albany congratulated him on having had a subject so worthy of his powers. "Well," said Mr. Hunt with a gravely humorous air, "it is better than staying at home and fumbling two or three years over a button." — *Boston Transcript*.

OAK AND TEAK. — In 1878 there were imported into Great Britain 60,254 loads of oak, of the estimated value of £354,916, against 120,118 loads in the previous year, being a decrease of 59,864 loads. The various oak-producing countries contributed as follows: Russia, 3,151 loads; Germany, 25,048 loads; Austria, 3,014 loads; United States, 2,641 loads; British America, 25,402 loads; other countries, 998 loads. Last year, 37,990 loads of teak were imported to Great Britain, against 20,072 loads in 1877, showing an increase of 9,918 loads. — *Timber Trades' Journal*.