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A SPECIAL invitation has been extended to American artists to enter the lists with those of Europe in competition for the national Italian monument in honor of the late King Victor Emmanuel. This great memorial, the cost of which is limited to three hundred and sixty thousand pounds sterling, is expected to combine the arts of architecture and sculpture, though we believe that competitors are left almost wholly unrestricted in regard to their choice of a *motif*. Liberal premiums are offered, the first prize amounting to ten thousand dollars, the second to six thousand, and the third to four thousand. A Royal Commission is to be appointed, presumably of distinguished experts, and the competition is to remain open until September 23, 1881. If we recollect rightly, the material is to be Italian marble, but Italy presents so great a variety of stones of this sort that any reasonable demands, whether for the most delicate statuary or for polychromatic decoration, can be fully satisfied. Such an opportunity for the highest class of design on a grand scale rarely presents itself, and there are few men in any country who can boast of having had special experience in it, so that American designers of equal artistic capacity would be perhaps at no disadvantage in comparison with their Continental rivals. It is true, the extraordinary object now in process of erection at the capital of the nation to the memory of Washington would not suggest the idea that monumental art had reached an advanced stage of development in this country, but so far as we are aware, no one except the officers of the Monument Association regards that structure as representative of American design, while we suppose that the Albert Memorial, the Washington Monument, so to speak, of Great Britain, is equally far from expressing the highest flight of British genius. We think there are architects and sculptors in the Western Continent, who, working together as French and English artists do on such occasions, would be able to gain at least a share of the credit which would fall to those who gained a conspicuous place in such a competition, and we should be glad to see the essay made.

THE *Sanitary Engineer* calls attention to the fact that malarial disease has made its appearance in many parts of New England, where it was never known before, and not only in sporadic cases, but in the form of a violent epidemic. The city of Springfield, situated on high ground a short distance from the Connecticut River, has had a thousand cases within six weeks, and all the towns on the river in Massachusetts, besides many in Connecticut, have been visited. This is the more remarkable, as New England has been considered to be, either from its rigorous climate or its rocky soil, free from this kind of infection. Until within two or three years it is said that only two cases of ague had ever been known to originate in the New England States, both of which were consequent upon the draining of mill-ponds, by which the vegetable mud at the bottom was exposed to the sun. Since then, several cases have been reported near Boston, but the outbreak of this year is a thing quite unprecedented. It must be regarded also as foreboding worse troubles to come. Nothing is more certain than that the ague malaria, after it appears in places once salubrious, seldom quits its hold, but goes on increasing from year to year. The lovely district of Staten Island, in New York Harbor, was, twenty-five years ago, the synonym of suburban beauty, luxury and healthfulness, and intermittent fever was unknown, but the malaria was somehow introduced, and spread rapidly, until the reputation of the Island for salubrity is almost gone, and some of the most attractive portions are being slowly deserted. The same story may be told of many other towns in the vicinity of New York. We trust there will be some quality in the New England air which can resist the evil influence. Meanwhile, the Massachusetts State Board of Health has undertaken to study the subject as presented in that State, and its well-known efficiency promises interesting results.

AFTER much remonstrance, the famous Temple Bar, which divided Fleet Street from the Strand, — London from Westminster, — through which not even the Prince of Wales could pass without asking permission of the city magnates, was a few years ago torn down, to the regret of nearly every person of education and sentiment, because it obstructed the street. So much having been accomplished for the sake of clearing the roadway, it seems a little strange to hear that in spite of another storm of indignant protests from the same persons who mourned the loss of the old structure, a new one, of great size and massive form, is to be built in the same place as a "memorial" of the vanished Bar. It is to have niches containing statues of Queen Victoria and the Prince of Wales, a medallion likeness of the present Lord Mayor, and one of some other personage not yet named, with bas-reliefs in bronze, one representing the Queen receiving an address from the scholars of some school, and another illustrating the royal procession to St. Paul's Cathedral on the day of thanksgiving for the recovery of the Prince of Wales from his dangerous illness. A third tablet is "ornamented with scroll-work," while the fourth contains a representation of the real Temple Bar, whose stones lie neglected not far away. Perhaps the commemoration of these peaceful events is more to the taste of the present generation of Englishmen than the display of traitor's heads which once decorated the old Temple Bar, but one is tempted to doubt whether they will lend to the new structure the same historical interest. There have been efforts to bring about the re-erection of the ancient Bar as a curiosity in different parts of London, and the stones were carefully taken down and numbered for that purpose, but these schemes seem to have fallen through. Perhaps it might be possible to secure the ruins and rebuild them in America. The Central Park might well be proud to possess a gate which Sir Christopher Wren designed, through whose arches had passed every Englishman of note for two hundred years, and which had been stained with the blood of some of the greatest of them.

THE famous Marquis Campana, whose history is one of the romances of modern times, died a few days ago in Rome. Born of a noble family, and endowed with talents equal to his wealth, he soon became and for a long time remained the richest and most noted connoisseur of antiquities in the world. The great Campana Museum at Rome was founded by him, in addition to his own immense collections, and many of the most renowned works of ancient art are in some way connected with his name. In the very middle of his splendid career, he was accused, whether justly or unjustly is not known, of appropriating government funds, was hurriedly condemned and thrown into prison, where he remained for many years, comforted only by his faithful wife, while his possessions were confiscated and his treasures scattered. Emerging at last from confinement, a few years ago, he was received back as a master in the archæological world, and until his death retained his eminent position.

ATTENTION is often called to the great discrepancies which are found in the different tables used by architects and engineers for determining the strength necessary for various parts of structures. In calculating the size of floor beams in buildings to be used for public assemblies, for instance, the architect finds the estimate given by different authorities for the actual weight of a crowd of persons to vary from seventy-five to one hundred and twenty-five pounds on each square foot of floor. As to the factor of safety also, or the ratio between the ultimate strength of timber beams and the strain which should be allowed to come upon them in practice, opinions differ widely. Some think that a third of the actual breaking weight is not too much to put on ordinary beams, while others

are far more cautious, so that with such different values for two of the constants in the formulas, the results may vary so widely as seriously to impair our faith in the efficacy of such calculation. The application of the rules in other instances often tends to create doubt of their accuracy; as, for instance, in estimating the resistance of brickwork to a crushing strain, perhaps, next to that for the strength of beams, the most important of the ordinary determinations. On this point the books differ greatly, some giving the safe load on a pier of brick in cement as three tons per square foot of sectional area, while others set it as high as fifteen tons, and yet we have seen such a pier which was estimated to be loaded with forty tons per square foot, standing apparently uninjured after several years strain. In view of these diversities, it is not strange that the "rule of thumb" controls most building operations, even of a complex character, and, in consequence, that failures of the ordinary materials sometimes occur which would have been avoided by a very little forethought in studying the strains upon them. If more definite and reliable tables of constants were at hand, and the proportion between safe loads and breaking strains on different materials established by repeated experiment, great advantages in point both of stability and economy would be secured, especially in large and complicated structures.

The use of telephones has become so general that any rumors of dangers incident to the use of them attract much attention. Not long ago we heard a report that the wires of a certain circuit had been struck by lightning, a brilliant flash of fire appearing at the same time at the instruments connected with the circuit. As it happened, no one was using the telephones, but the idea of the cups suddenly emitting flames when held to the mouth or ear is anything but pleasant. Still more recently, it is said that in some way a wire used for carrying the powerful current of an electric light came accidentally in contact with a telephone wire at some point where they passed near together over a roof, and flames instantly burst forth from the instrument hanging on the wall of the office, destroying it. If such an accident should happen at night, in a dwelling-house or warehouse filled with combustible goods, the result might be very disastrous, to say nothing of the risk to persons using the telephone. Probably the best means of avoiding such casualties would be the placing of the wires underground, where they would be protected alike from lightning and from casual contact with each other, and it is to be hoped that a fatal catastrophe will not need to be added to the manifold inconveniences of the present system before so desirable a reform is carried out.

A project is afloat among the students at Harvard College for presenting a Greek play in public, with all the accessories of the classic drama. Instead of the open Grecian amphitheatre, the performance will take place in the Sanders Theatre of the Memorial Hall building, but "a prominent architect" is to plan and superintend the single scene, which is, we presume, intended to suggest the circular marble seats, the blue sky and the velarium of the ancient theatre, in order to heighten the illusion of the performance. Of scenery relating strictly to the action of the play there would be no need; the Greeks themselves did not use it. Professor Charles Eliot Norton is to arrange the costumes, which are to be designed with "strict historical accuracy." We can hardly imagine a Harvard undergraduate of our time appearing before an audience in the costume of a Theban warrior, but undoubtedly in this instance fidelity to historic examples will outweigh all other considerations. The chorus is to be directed by Mr. George L. Osgood, who is perhaps as well qualified as any one for comprehending the true genius of the ancient music, and great care is to be taken in regard to the minor accessories. The representation, which is intended to take place in May next, will certainly be very novel and interesting, and, with a proper distribution of librettos, so that the spectators generally can enter somewhat into the meaning of the text, it may easily be made also deeply impressive. The play selected is the *Œdipus Tyrannus* of Sophocles, which unites perhaps in a greater degree than any other the strange, fatalistic sentiment of classic tragedy with the human feeling which is of all ages.

Professor William B. Richmond, President of the Art Section of the Social Science Congress lately held at Edinburgh, delivered there an interesting address on the "Relation of Art to Social Science," consisting principally in a discussion of the methods of education. He dwelt with particular emphasis on the importance of surrounding the young, in their schools and elsewhere, with examples of good art, casts from fine carvings, photographs of good pictures and designs, harmonious colors, and other means of forming their growing taste. He would have, also, actual instruction in drawing begin at a very early age, but this, we think, is by no means the most important part of the work to be done. To apply the analogy of what Mr. Ruskin says is the art which in our century, by the universal familiarity of the people with it, and their correct taste in it, holds much the same place as sculpture in ancient Greece, or architecture in mediæval France, — the art of literature: we understand well enough that to exercise the mass of children in composition writing or translation is of far less importance to their proper training than to keep them surrounded by persons who write grammatically on ordinary affairs, and speak habitually with correct expression and pronunciation, and to furnish them with books containing the works of the best authors; and in the same way a correct appreciation of form and color is insensibly acquired by familiarity with beautiful objects, while the bad taste engendered by habitual association with tawdry furniture, inharmonious tints, ill-drawn pictures and clumsy forms is quite as difficult to correct when the opportunity comes as it is for one accustomed in childhood to vulgarisms of language or pronunciation to get rid of them in after years.

One of those rare accidents, a fatal case of poisoning by lead in drinking water, is reported from Granville, N. Y. A house occupied by a Dr. Nelson was supplied with water from a cistern, which collected the rain from roofs and gutters painted, it would appear, with lead. The suction-pipe to the cistern was also of lead, and two or three feet of this were constantly immersed. Both Dr. Nelson and his wife were attacked, the former dying in a few days, while the wife is reported to be in a critical condition. It would be very desirable to have a further investigation into the case made by experts. That lead paint should have been used on the roofs seems to us very improbable. To say nothing of its cost, which would be much greater than that of the common mineral roof paints, its appearance would prevent its employment in any but extraordinary cases. We have known vermilion to be used for brightening a mineral paint for roofs, but lead, unless indeed, in the form of red-lead, or minium, would injure, rather than improve the color. The pipe in the cistern would corrode and dissolve slowly in rain-water, but hardly with such rapidity as to cause sudden and fatal illness, unless this were the closing form of a long process of gradual poisoning. Whatever may be the truth of the matter, the case may serve to remind us of the importance, where rain-water from roofs is to be used, of guarding against all possible sources of contamination. Lead suction-pipes are too often used where enamelled iron would be cheaper and better, and cisterns are left not only dirty inside, but so imperfectly covered that extraneous matters, animals and insects, easily get in and add their decomposing bodies to the general impurity.

Among the recent engineering experiments spoken of in the English journals is one intended to show the practicability of propelling railway cars by means of compressed air. A machine, much like what we should call a "dummy engine," was fitted with an apparatus, the motive power of which was contained in a reservoir filled with condensed air, forced into it by a pump at the starting station. The engine ran a distance of some sixteen miles without a fresh supply of air, but a small furnace was so connected with the reservoir that it could be heated, and the tension of the atmosphere contained in it thereby increased, so as partly to compensate for the gradual expenditure of its original force. The pressure of the air in the reservoir at starting was one thousand pounds per square inch, but had diminished to eighty pounds when the locomotive come to a standstill. This seems to be simply a repetition of trials repeatedly made on horse railroads both in Boston and New York, but which have not hitherto led, so far as we know, to any practical result except demonstrating that such a method of propulsion for light railway cars is feasible. Whether it would be found desirable or not is another question. One would say that a motive power which varies during each trip between a thousand pounds per square inch and eighty, must prove rather unmanageable, as well as the reverse of economical, and the air reservoir strained by such an enormous force as the maximum tension, to say nothing of the danger that this might be greatly increased by injudicious management of the furnace, would, we fear, be a very objectionable fellow passenger.

HEATING AND VENTILATION.[1]

THIS is a volume of about 600 pages, the first of a series of three upon Construction. The succeeding volumes are to treat of the resistance of materials and the relations of physics, chemistry and metallurgy to construction.

In this volume we find a very thorough research into the physical laws which govern the processes of combustion, distribution of heat and flow of gases, in which the author has succeeded in so presenting the case to be dealt with that his method of reasoning can be followed with but a very limited knowledge of mathematics; only the simplest algebraical expressions being made use of, without which such phenomena can hardly be concisely described. The author has attempted, and with a measure of success, to show how these physical laws can be availed of by the architect. He shows in considerable detail, how, by reference to these fundamental principles, we can determine the dimensions, the capacity, and the development of the various kinds of apparatus devised for the purpose of heating and ventilation.

Among the objects which the author proposes to accomplish are the following, quoting his own words:

"Since each inventor has devised certain methods, certain processes peculiar to himself, to develop his apparatus, — his ducts, his chimneys, etc., — it behooves us now to classify these peculiar processes, and trace them back to the fundamental principles on which they are based, perfecting them at the same time where found wanting.

"It behooves us also to restore the investigation of these questions, now very complex, and too little known because of this very complexity, to that true simplicity which practice requires; and this simplicity should be all the greater since the familiar knowledge of these things ought in future to be made quite general. In fact, these matters are not only indispensable to specialists in charge of the details of construction, but the architects or the engineers who have the general charge, should control and often guide these specialists. They must also prepare the ground for them and arrange beforehand the walls and floors to receive all the apparatus for heating and ventilation. Between these men there should be a good understanding, a co-operation, which presupposes in both parties a familiarity with the principles as well as the details of construction." In following out this plan, the theory of every process is first given and formulated. The results of computations are in most cases given in graphic form on diagrams, illustrated by examples in each case, so that very little actual computation is needed by the person using the book.

Thus every chapter is divided into two parts, one theoretical, explaining the formulæ, and the other devoted to the practical consequences of the theory, with the graphical diagrams giving the results. The explanation of apparatus is well illustrated with cuts, and the apparatus described covers the whole history of the development of the subject during the past fifty years, particularly in France.

The author does not claim to introduce much that is novel in theory or practice, but rather to elucidate and formulate the experience of the past. After a chapter upon the construction of chimneys — as practised in France and elsewhere — there follows another upon "smoky chimneys." A list of causes is given for these pests, to which is added the following, in a foot note, which may interest Americans:

"This enumeration of causes was made in the last century by Franklin, who also pointed out the remedies to be employed. Since then there is little to be added to what he said."

The private houses of France have been, at least till very recently, heated almost exclusively by open fires. The furnace in the cellar, so universal where anthracite is used in America, is there rarely used except for large establishments, and as anthracite is almost unknown, wood is still used very largely for fuel. Yet the method of heating by hot-air furnaces is discussed at length, and much good advice given which is as applicable here as anywhere. Thus, on comparing the various methods of heating we find the following, page 494: "On peut donc, sans augmenter sensiblement le volume de l'appareil, résoudre le problème qui est la véritable question posée pour un bon chauffage; pour transporter la quantité de chaleur nécessaire, la confier à un grand volume d'air dont la température ne soit pas très élevée."

In speaking of stoves in private houses, they are called very economical but very "*malsaines*," with which we fully agree.

There is a class of stoves, however, which are, we believe, rarely met with in America, which are much less unwholesome than the ordinary ones, viz.: those which have an exterior casing enclosing an air-space, which is supplied by a duct from the outer air ("prise d'air") at the base, and which delivers heated air by openings ("bouches de chaleur") near the top. This does on a small scale what the American furnace does for the whole house, and has found a large development in France, if we can judge by the variety of cuts given in description of them.

The more modern methods of heating by steam and hot-water are fully described, with various useful details and data for computing the necessary capacity of the works.

The subject of ventilation occupies but a small part of the whole volume, yet seems to be treated with a good deal of thoroughness. The various methods in modern use are fully described, with the apparatus for putting them in practice.

Here, too, there is not so much that is new in the subject matter as in the manner of presenting it, which is remarkably clear and readily used for reference by the constructor.

It is satisfactory to see a subject so fully treated in less than a hundred pages, which is popularly regarded as a great mystery.

In fact, if we can judge men by their works, most American architects regard this problem as one where no sufficient data exist for its solution. At any rate the profession has to a large extent been guided by instinct, by the advice of some so-called practical man, and by the "rule of thumb," helped along by such actual precedents as came within their reach, rather than by definite computations with the view of ascertaining what could be reasonably expected from the apparatus they are using, by the action of natural laws.

There is also a general feeling among the public that nobody knows much about ventilation and heating, except as a matter of experiment, and that the subject is one which the rising generation ought to grapple with and bring into order.

So far as results go, we are inclined to believe there are not a large number of instances among the practice of American architects, which are calculated to disabuse the public of the above notion. Our opinion is that the subject has been hitherto somewhat neglected by the profession here. Such a work as this of M. Planat ought to serve a good purpose by clearing up some of the fog and bringing the important points into clear view.

It must be admitted by all who pay any attention to the subject, that the results sought for are purely physical ones, and are in reality shrouded in no more mystery than the phenomena which result from many natural causes.

One reason for this reluctance to depend upon physics as a practical guide in construction of works for ventilation, depends doubtless upon the uncertainty of many of the circumstances which may govern any particular case, depending, as they do, largely upon the weather, whose freaks no one has yet been able to account for satisfactorily. But we have now sufficient data as to the extremes and averages of weather to guide us in all modern constructions. It only remains to see what such conditions as the records show to really exist will require of us, in the way of mechanical devices, to secure reasonably certain results.

Another reason for not having depended more upon physical data is doubtless to be found in the fact that no proper application of such data can be made without a certain amount of preparatory study, which, we fear, a large number of those practising the profession in this country have considered as unnecessary. Now what we would insist upon is not that every one whose natural tastes lead him to design and plan buildings should become an expert in the laws of physics and the application of mathematical processes to their elucidation, unless one's tastes lead also in that direction. If not, as may often be the case, then we would insist that the architect should avail himself of the brains of some one who *can* do this very important part of the duty. Otherwise, his plan is very likely to be defective, or if successful, it is so more by good luck than from any better reason.

The publication of such a work as the one we have been considering may do much towards bringing these subjects within the grasp of those who have hitherto considered them too abstruse. Yet the practice of this profession is, in our day, fast being divided into specialties in the large cities, so that it is not difficult for any one who finds these problems beyond his grasp, to consult some one within easy reach, who has made a special study of these subjects, who can give the needed advice.

When practising in country towns or other places more remote from business centres, the architect must expect to depend more upon himself, and must, therefore, take pains to qualify himself in all departments, just as a country physician must learn to pull teeth and set a broken leg as well as do occasional duty as nurse, in a way which can never be expected of a city practitioner.

There is one important consideration connected with the study of physical laws and the application of natural forces to attain definite and desired results, viz.: we must be sure, before completing our plans, to have taken into the account *all* the disturbing elements of the case. We must remember that the formulæ given by the books are only general statements of natural processes, always containing some numerical factor or coefficient which has been deduced by experiment from processes supposed to be similar to those we contemplate. It must be remembered that Nature never forgets anything. Her phenomena are often the resultant of a large number of combined forces, the absence of any one of which in the formula will be found to affect this resultant more or less, and sometimes very seriously, so as to turn success into failure. It is precisely at this point that the greatest practical skill is required, and that novices generally blunder. A formula may be taken which apparently covers a case quite analogous to the one we have in hand, but when the plan based upon such and such computations is carried into practice, it is often found that various considerations were not foreseen which assert themselves with a force that cannot be ignored, and modify the result in a way that was the least expected. It is for this reason that some degree of preparation in the way of study of physical laws and the nature of materials used is absolutely necessary to complete the qualifications of an architect who intends to rely upon himself in planning and constructing buildings. It behooves those who do not

[1] *Cours de Construction Civile* a Premier partie. Chauffage et Ventilation des lieux habités, par P. Planat, reducteur en chef de la *Semaine des Constructeurs*. Paris: Ducher & Cie., Éditeurs de la Société Centrale des Architects, 51 Rue des Ecoles. 1880.

thus prepare themselves to associate themselves with others who have done so, before taking responsibilities for which they may be but poorly prepared.

THE UNHEALTHINESS OF PUBLIC INSTITUTIONS.[1]

In a paper read at the Sanitary Congress at Croydon, last year, I drew attention to the sanitary defects which had been found to exist in some of the older public institutions in this country. Special reference was made to the Manchester Royal Infirmary, which had been reported by Mr. Netten Radcliffe, of the Local Government Board, to be unhealthy from cellar to garret. The defective health arrangements at the large lunatic asylums were referred to, and the condition of the County Asylum at Frome, where thirty-two cases of spontaneous erysipelas occurred amongst the inmates between December 1878 and May 1879, was selected as a typical example of the insanitary condition of the majority of such buildings. At neither Manchester nor Frome could reliable information as to the drainage arrangements of the buildings be obtained, and no proper plans could be found. It was further stated that investigation had brought to light the startling fact, that not ten, and possibly not five per cent of all the hospitals throughout Great Britain and Ireland possess any reliable plan of their drainage arrangements. Even some of the most important hospitals in the kingdom had no such plans, and it would be easy to give instance after instance of the culpable ignorance which prevailed on this important subject. Remembering the foregoing facts, I further ventured to ask, what is the probable condition of the drains of all institutions built some fifty years ago?

Last year I specially referred to old institutions as opposed to recent buildings. By a sublime act of faith I took it for granted, that buildings erected within the last ten years would certainly not suffer either from insanitary construction or defective drainage. From the amount of attention which questions of hygiene have excited, and the numerous and competent authorities who have written and spoken on the subject in all its branches, it might at first sight have been taken for granted, that architects of more or less eminence would have brought much intelligent study to the consideration of the right construction of drains, and to that of sanitary arrangements generally. Unfortunately, experience proves the reverse to be the case, and, if anything, the newer the building the worse probably is its sanitary condition. Is it not time that the Royal Institute of British Architects took up this question of sanitary construction, and that its Council should make regulations for the guidance, instruction, and training of the rising generation of architects? Such a course will ultimately guarantee the public against the defective, unhealthy, and discreditable condition of many public and private buildings which have been erected under the supervision and from the plans of some of the most eminent men in the profession. It is quite certain that the Institute of British Architects must declare, either that the profession repudiates all responsibility for insanitary defects in dwelling houses and large public institutions, because hygienic arrangements are no part of an architect's business, or they must promptly offer adequate guaranties to the public which will protect it from the disastrous results which now, alas, too frequently follow the occupation of a newly-erected edifice. Suppose a wealthy client pays a large sum for the erection of a new house, which he has been assured by his architect is planned and arranged upon the most perfect system known to modern science. The architect cannot expect that such a client, however much he may be reconciled to the anxieties and increasing expense of each addition to his family, will, without remonstrance, submit to an annual and increasing outlay for sanitary alterations and drainage improvements, rendered necessary by the carelessness or ignorance of the architect himself. It may be thought that new buildings are as a rule carefully erected, and that there is no justification for the foregoing remarks. Unfortunately for architect and client, such is not the case.

Since the meeting at Croydon, the following cases have come under my notice, and I hold myself responsible for the accuracy of the following descriptions of three new buildings, a hospital, a convalescent institution and a lunatic asylum, which have all been built, opened, and occupied within the last seven years. All names are purposely withheld.

The *Hospital* had not been in occupation for more than eighteen months, when the atmosphere of the building and the health of the inmates pointed to defective drainage and construction. An examination of all the drains, baths, and other conveniences, proved the sanitary condition of the building to be most unsatisfactory. It soon became evident that very considerable alterations were needed to remedy the defects. This new hospital had therefore to be closed within three years of the date on which it was opened. A thorough investigation brought to light the following facts: The cisterns were placed so high that the pressure from the main was seldom or never sufficient to fill them. In consequence there was a gradual choking of the drains throughout the hospital, and an admission of sewer-gas to all parts of the building. No man-holes or means of inspection were provided, and the plans of the drains were found to be unreliable. With four exceptions the drains were laid outside the building, but the levels were very irregular; thus: the level at the lower end of a drain was 1 in 60, higher up it was 1 in 24, and above this, again, 1 in 125. No wonder the drains were found to be choked. The pipes were also badly laid. In some places they were leaky, and very foul excrementitious matter was discovered in the soil near them. All pipes were pointed with clay, not embedded in cement, and few were water-tight. In fact, the defects were serious enough to guarantee the admission of sewer-gas to all parts of the building. The hospital drains were in direct communication with the town sewer. The rain-water pipes opened directly into the drains, they were untrapped, and as they were only carried to a level with the upper part of the windows of the top wards, they conducted volumes of gas from the sewer to the wards. The soil-pipes were all inside the building, and were trapped at the foot, and ventilated by smaller pipes carried up a certain height and then bent over. These traps were quite inaccessible, and the soil-pipes were not properly ventilated, as they were only open at the top, so that no current of air could pass through them. As there was no inlet at the ground level, foul air was forced out through the lower closets into the hospital, whenever any considerable volume of water passed into the soil-pipe from the upper floors. The slop-sinks discharged into the soil-pipes, and were practically untrapped, so that by their means sewer-gas was laid on to every ward in the hospital. There were other defects, but I have given enough details, and no one will be surprised that the sufferings of the surgical patients and the general unhealthiness soon compelled the committee to close the hospital.

The *Convalescent Institution* stands in its own grounds of eight acres. It is beautifully situated. It has extensive gardens, and every convenience, not to say luxury, that modern taste could suggest. The cost of the site, buildings, etc., was upwards of £50,000; there is accommodation for some 200 patients, and it has been occupied for less than five years. Within a year of its being opened there was a sharp outbreak of erysipelas amongst the patients, and the institution was closed and fumigated. It was noticed at the time that all the conveniences opened into the building directly opposite the wards, and a suspicion of defective drainage arose, but was not credited, owing to the fact that the building had been occupied for barely one year. A few months ago the unhealthiness of the institution was so marked that the committee gave instructions for a complete examination of the drainage system. No plan of the drainage could be found, but one was ultimately furnished by the architect which proved to be incorrect in many particulars. All drain-pipes, etc., were found to be in and beneath the building. The baths, lavatories and sinks opened directly into the sewer, and many were untrapped. In that portion of the building allotted to the officers, owing to an ingenious arrangement of the lavatories and the pipes connected with them, sewer-gas was admitted at both ends of each floor. The ventilation of the drains and sewers was so defective that during certain winds the sewer-gas was driven through and into the building by means of the ventilators. Some of the drains were laid up-hill, all were pointed with clay and not embedded in cement, all leaked, and the main sewer, as it passed from the building, was laid at irregular levels, and in more than one place, owing to imperfect workmanship and improperly-made ground, the pipes of which it was composed were not in contact with one another. The main sewer had to be entirely relaid. All the drains were taken up, and with the soil-pipes were placed outside the building. It is not to be wondered at, in the face of the foregoing facts, that instead of being a convalescent institution, these defects of construction compelled the convalescents to return, not to their own homes, but to the hospitals from which they came; whilst the majority of the resident staff were placed on the sick list. Yet the architect had in this case unlimited funds at his disposal, and the fullest liberty to do all that he thought necessary or desirable.

The *County Lunatic Asylum* has been opened for the reception of patients for five years. Built regardless of expense, it was supposed to contain all the most recent improvements in lunatic hospital construction. Almost from the date of its occupation it has been the scene of outbreaks of dysentery and erysipelas. During the first eight months of 1879, cases of these diseases were of constant occurrence on both sides of the asylum. There were twelve fresh cases of dysentery and four of erysipelas every month.[2] Suspicion having fallen on the state of the drains, ultimately a competent engineer was appointed to examine them. Numerous faulty points in the system were detected, and their rectification has been followed by the disappearance of dysentery and erysipelas from the establishment.

I have here given positive proof, from the experience of the past twelve months alone, that the architects who have been entrusted with the erection of these large public buildings devoted to medical purposes have shown an ignorance, or, if you prefer it, a total disregard of the elementary principles of sanitary science. I content myself with stating these facts, and refrain from comment, but I appeal to the Royal Institute of British Architects to apply a remedy which will prevent like abuses for the future. If they fail to do this, then let them boldly hand over all matters affecting drainage and sanitary construction to the engineer. By this means they can readily avoid a heavy responsibility, and save their profession from much discredit. I must, however, leave the decision to the professions more immediately concerned, and I hope the discussion which may follow this paper will lead to a satisfactory settlement.

It behooves the public to take the question up from a different point of view entirely. Private houses and public institutions are not free, as they ought to be free, from preventable impurities, and

[1] A paper by Mr. H. C. Burdett, read at the Congress of the Sanitary Institute of Great Britain, held at Exeter, September, 1880, and published in the *Sanitary Record*.

[2] *British Medical Journal*, September 4th, 1880; page 401.

they are too often highly dangerous abodes for any one who has a tendency to zymotic disease. No permanent prevention is likely to be secured without a thorough, an independent, and a periodical inspection of all the structural and drainage arrangements of these buildings. A central office for the safe custody and registration of the drainage and other plans of all public buildings, hospitals, and private houses is a much needed reform. Competent inspectors and a central repository might be secured for a reasonable outlay, which would be over and over again repaid to those who were sensible enough to avail themselves of its facilities. At the present time no one seems to think of drainage arrangements. Nearly every one is contented with a taking exterior. Yet the magnificent elevation of the block of new buildings known as the new Foreign Office did not protect its inmates from the inconvenience attending the presence of several inches of liquid sewage, which was found in the basement of the Home Office within a few weeks of its occupation.

In the discussion which ensued, Mr. Earnest Turner argued that the engineer should be required to construct sewers, and the architect should know thoroughly how to drain a building, or neither of them would be worthy of his name. The Royal Institute of British Architects had sought to induce the legislature to make it compulsory that all persons seeking to become architects should first pass an examination. They had not succeeded in that, but the Institute had resolved that no member should be admitted to its body without having satisfactorily undergone some sort of test, a knowledge of sanitary engineering and sewerage arrangements being indispensable. He was afraid that at the present time there were large numbers of incompetent men having the sanitary supervision of large districts. It was but little use for boards of health and similar bodies to have sanitary officers if they did not trouble themselves to ascertain that their duties were properly and efficiently carried out. In many instances of which he was aware, plans were submitted, but the drains, etc., were never inspected after being laid, and the consequences were often disastrous. — Mr. Wm. White thought it was rather unfair to the architect to saddle him, as was generally the case when anything wrong was discovered, with all the responsibility and blame. — Dr. Carpenter looked upon the paper as resolving itself into the two matters of principles and details, and he considered the former should very rightly take precedence of the latter. One of the greatest causes of mischief was, that people were employed by Boards of Health in country districts who were totally ignorant of even the rudiments of hygiene, and very often thousands, and even hundreds of thousands of pounds spent in so-called sanitary improvements might just as well have been thrown into the sea. Nineteen-twentieths of the nuisance-inspectors of the country districts knew nothing whatever about the first principles of sanitary science, and the same remark might be applied to engineers. In regard to sewer-gas, which was looked upon as a fruitful source of disease, there was no reason whatever for its existence, and an engineer who could not construct a drain that would not harbor it was scarcely worthy of the name. He believed the Sanitary Institute would obtain what they were aiming at, viz.: a class of men who, being educated up to it, would thoroughly understand those principles of sanitary science about which so much had been said. — Mr. E. J. Domville said that in the prevention of disease a great deal rested with those who had the carrying out of the details of a building, and it was very often found that defects were owing, not to the architect or the engineer, but to the plumber and the mason's laborer, who had scamped their work for the sake of saving half an inch of pipe or such like. — The discussion was continued by Mr. W. J. Square, of Plymouth. Speaking generally with reference to private houses, he was of opinion that a great deal of good would be effected if the sanitary authorities of towns had the power to enter upon private houses, and inspect the sanitary arrangements. — Mr. Towle, of Oxford, and Mr. Robins of London, having spoken, Earl Fortescue said that one of the most melancholy results of local self-government was the prevalence of jobbery. In one case that he was aware of, a man had been appointed to an important position, not because of his own talents, but by reason of his being a relative of a person whose talents had brought him a reputation.

PIERRE V. GALLAND.

BY A CORRESPONDENT OF *THE ARCHITECT.*

"IT is rare," writes Georges Duplessis, the erudite Conservateur of the Bibliothèque Nationale, "to find in our days a man who does not confine himself to one special branch of art." If we have now and then a statue signed by a Leighton or a Doré, and a picture by a Dubois or a Falguière, perhaps these excursions have often excited more surprise than pleasure. Three centuries ago art study was more comprehensive than nowadays. Cellini cast the colossal statue of Jove in silver to please Francis I, and chiselled the ring for the *piccolo dito* of the Medici duchess, with the four masks, and the fruits, and the *leggaturine*. Michael Angelo was not a solitary example of an artist possessing a profound knowledge of various branches of art, although he was of transcendent genius. Viollet-le-Duc attributed the subdivision of art study to the influence of academies, and deprecated the newly-coined term, "decorative art," maintaining that all art is decorative, whether expressed by architecture, sculpture, or painting, and whether destined to fill a defined or an undefined space. He bitterly complained of the indifference manifested in the present day to harmony in the sculpture and paintings which decorate a building without the slightest regard to its architectural lines or to their relation to each other. The subject was too important to be passed over, and a Chair for special instruction in Decorative Art has been founded at the Ecole des Beaux-Arts, of which M. P. V. Galland is naturally the Professor. The school, of which he may be considered the head, includes such men as MM. Puvis de Chavannes, Baudry, Mazarolles, Chavignard, Carrière, Belleuse, etc., names familiar to Frenchmen. That of P. V. Galland has acquired the most world-wide reputation, his field of labor having extended from Constantinople to Scotland, including St. Petersburg and London within its limit, as is proved by a glance at the designs in the Salle Galland of the Musée des Arts Décoratifs, and by the works now in course of execution at his *atelier*, Rue Fontaine St. Georges. An illness of several weeks has been the first interruption in his artistic career, and has delayed the completion of the work ordered by Government for the Panthéon.

M. Galland has scarcely attained middle age. His house has the type of an English home. The *atelier*, erected by himself fifteen years ago, is a separate building, and stands in his own courtyard. He receives his guests and explains his theories of decorative art with a lucidity and charm of manner which causes an hour spent in his *salon* to glide rapidly by. "'*L'architecture est la plus haute manifestation de l'art*,'" he said, "as it undoubtedly is the most ancient; but an architectural work, however great, requires the aid of sculpture and the beauty of color which a painter alone can introduce. A decorative artist," continued M. Galland, "requires to have studied architecture, to enable him to adapt his designs to the genius of the building he is called on to decorate. He must also have studied sculpture, in order to judge precisely what degree of color will display to best advantage the sculptures which adorn it. It is essential for the perfecting of a palace, for instance, that a thorough understanding should exist between the architect, the sculptor, and the painter; and the latter, if he truly apprehend his mission, will subordinate his decoration to the requirements of the sculptor. This understanding, unfortunately," remarked M. Galland, "does not exist. A French architect rarely, if ever, in the present day confers with a sculptor or a painter when designing a palace, a theatre, or a cathedral. A certain jealousy exists between architects and decorative artists. I am myself," he said, "an example of this. I commenced my studies in M. Labrouste's *atelier;* my *camarades* are necessarily now the architects of the day. It would be natural that they should summon me to complete their work. This has never in any one instance occurred, yet we all are personal friends. If my *atelier* has for years past been crowded by orders, I do not owe one to an architect. I am summoned when the architect's work is over. I am requested to decorate ceilings in compartments to which I must suit my conception; whereas, in many instances, the architectural beauty of the space would have been increased had a larger surface been given, on which my conception would have been entirely executed, *et ainsi de suite*. The genius of a decorative artist, therefore, displays itself in accommodating his designs to the adverse circumstances, and in making the very difficulties presented by the architecture of the building a means of success. This Raphael victoriously accomplished in the *Dispute du Saint Sacrément*. It will be observed that he actually turned what to a lesser genius would have proved insurmountable obstacles, into points of beauty. But we are not all Raphaels. If a true feeling of brotherhood existed between architects, sculptors and painters, the result would be a perfectly harmonized whole. The architect would summon a sculptor and direct certain friezes, bas-reliefs, caryatides, etc., in harmony with his design. These executed, the sculptor would summon a painter, and explain to him where color was required to throw out the points in the architectural design which his sculptures had already ornamented. He would say, for example, 'I want the brightness of gold here, and a glow of color there;' and, *de facto*, the chief part of the decoration of a building lies with the painter. For instance," he continued, "suppose the ceiling of a dome is committed to a sculptor and painter to decorate. They agree on the design. The sculptor executes certain figures in bas-relief. The painter completes the conception *en grisaille*, and attracts light to certain parts by ornaments in gold, such as masks, etc. The spectator's eye imagines the whole decoration to be the work of the sculptor. If the ceiling were subjected to a coat of whitewash he would then be aware how much of the effect was due to the artist's brush. The sculptor's province in decorative art is best expressed in caryatides. Realistic sculpture cannot appropriately blend with architecture. We have a great sculptor, Dubois. For the tomb of General De Lamoricière he executed four statues: Prayer, Meditation, Courage and Charity. Each was a *chef-d'œuvre*. Yet, as all who studied the tomb at the great exhibition observed, these statues did not suit the architecture. Sometimes I get my own way, and the architect alters a detail to suit my conception. This happened not long ago. Prince Narischkine asked me to execute *un panneau décoratif* for his palace at St. Petersburg. The Prince drew the plan of the vestibule it was to decorate. This was reached by a broad staircase. A balustrade of wrought bronze ran along the wall, which was divided into three sections by marble columns. I was to paint one of these sections. The price was agreed on. I then suggested the removal of the balustrade, and proposed a subject which would occupy the whole wall-space. I conceived the idea of painting a *fête* held in the open air in the early part of the sixteenth century. On the extreme right a princess and her suite arrive. Figures leaning against the intersecting columns watch the incident. Personages

on a staircase occupying the *panneau* on the right stand prepared to receive her. 'Let me,' I said to the Prince, 'paint a balustrade through which the robes and feet of the personages will be seen. Thus I can manage shadows with which your bronze balustrade will interfere.' The Prince consented, and I gladly painted the three *panneaux* for the sum agreed upon for one." There are lovely water-color drawings of the said work in the Salle Galland, as also photographs of the paintings, which are *encadré* by a wreath of flowers and leaves. A shield, bearing the Prince's arms supported by genii, forms the central ornament.

The first work which strikes a visitor in M. Galland's *atelier* is a central medallion painted for a ceiling. The subject is *La Jeunesse*, represented by a young girl seated on a rock by the seashore, to whom Cupid, descending from the blue ether above, brings gifts. The upper part of the figure is in half-light, in consequence of the reflection of drapery blown upwards by a friendly zephyr, thus revealing the graceful movement of the figure and its sculpturesque *modelé*. The background, all sea and sky, is the loveliest blue. A work intended for the Panthéon is the Preaching of St. Denis. The canvas measures 6.50 metres by 6 metres. The splendid draughtsmanship and scientific grouping of the eighty Frank men, women, and children who crowd to the water's edge, to receive baptism from the saint, is all that can as yet be studied, for illness has interrupted the progress of the work. Government has entrusted to M. Galland the difficult and delicate task of connecting by decorative ornamentation the various works in course of execution for the interior of the Panthéon. These are, as the *Moniteur des Arts* informs us: *Episodes de la vie de St. Geneviève*, by M. Puvis de Chavannes; *Episode de la vie de St. Louis*, by M. Cabanel; *Martyre de St. Denis*, by M. Bonnat; *Episode de la vie de Jeanne d'Arc*, by M. Baudry; *Episode de la vie de St. Geneviève*, by M. Meissonnier; *Les Derniers Instants de St. Geneviève*, by M. J. P. Laurens, and seven other equally important works. For each of ten of these compositions £2,000 will be paid, and £800 for each of the two remaining. MM. Chapu, Dubois, Montagny, Mercié, Falguières, Guillaume, and other sculptors, have received £800 for each of their works. . . .

M. Georges Duplessis, Conservateur des Estampes Bibliothèque Nationale, in the course of an article on M. Galland, gives the following details of the artist's career: Pierre Victor Galland, born at Genoa, 1822, was the son of a distinguished engraver in precious metals. He learned his father's art as soon as he could hold a tool, and eagerly acquired the habit of conscientious and careful work. M. Galland *père* entertained a profound respect for art, and never allowed a piece of work to leave his *atelier* unless he was thoroughly satisfied with it. His boy inherited from him the conviction that persevering effort alone creates aptitude for any special result, and that unless a man is severe to himself he will never attain success.

At sixteen, young Galland entered the studio of Henri Labrouste, having determined to study architecture as a preparation for the vocation he felt for decorating vast spaces. Two years later he also joined Drolling's classes, in order to acquire a knowledge of color. His regular absences at these respective studios attracted the attention of both masters, who, however, permitted, if they did not approve, this double training. On his father's withdrawal from business, Galland felt it to be his duty to provide for his own future, and began life as assistant to decorators employed in theatres, palaces, etc. He was specially employed for figure-painting, for which his exact knowledge of perspective and of the effect of distance qualified him. Ciceri, Cambon, Ruhé, and many others entrusted him with their most important orders. A wealthy Armenian merchant heard of his talent, and commissioned him to decorate a palace built by Melick, one of Henri Labrouste's pupils, at Constantinople. Galland left France in 1851, and completed the decoration of ten of the reception rooms in eighteen months, to the satisfaction of the Armenian, when he asked for and obtained leave of absence to return to France to visit his family. He made use of his journey to visit Italy and study the loggie of the Vatican, the decoration of the Sixtine, the gallery of the Farnese, and the Ducal Palace at Venice, where the works of Carpaccio, Bellini, and Veronese fascinated him, and at the same time completed his artistic education. On his reaching Paris, he learned that the whimsical Armenian, having taken a sudden dislike to his new palace, had literally ordered it to be razed to the ground. Here was a stumble on the threshold which would have utterly discomfited a less resolute spirit. To Galland the disaster was simply an incentive to fresh labor. The reputation he had acquired at Constantinople preceded his arrival in Paris. He was overwhelmed with orders, the first of which was a commission to execute "*tympans*" for nine of the chapels of Saint Eustache. The Marquis de Casariera, the same year (1853), ordered him to paint the ceilings in his hôtel. In 1854 he was commissioned by Government to paint eighteen *dessus de porte* and five ceilings at the Ministère des Finances, subsequently burned when the Communists set fire to the building in March, 1871. In 1855 Galland executed a ceiling for the Palace of St. Cloud, representing the arts of Peace, Poetry, Literature, for the panels. These were burned by the Prussians in December, 1870. In 1863 he painted ceilings for M. d'Erlanger; in 1864 for the Hôtel of the Comte d'Acquade, Rue de l'Elysée; in 1865 for that of the Marquis de Guadalcazar at Madrid, where he executed several similar commissions; in 1866 he painted a ceiling for Baron Rothschild's house in London; in 1866 he was summoned to Stuttgart by the King of Wurtemberg to paint eight panels for doors, of which the subjects were Science, Literature, and Art; for Count Derwis, at Nice, he painted a ceiling at his Villa des Roses; for Mr. Majoribanks two ceilings and panels for *dessus de portes*. In 1872 M. Galland decorated two ceilings for Mr. Brassey, and in 1877 he was sent to St. Petersburg by Prince Narischkine. He has now on hand nineteen panels, of which six are finished, for the Elysée, to be executed in Gobelins tapestry; a ceiling in *camaïeu* for Madame de Cassin's hôtel; the Preaching of St. Denis for the Panthéon; four large *voussures* for Mr. Vanderbilt, New York; and Painting, Sculpture, Music, and Architecture for M. Pigny's (the architect) hôtel in Paris. M. Galland is Professor at the Ecole des Beaux-Arts, and Inspector of the Manufactory of Gobelins Tapestry. The duties in his first-named office consist in delivering lectures on decorative art to the students of the painting and sculpture classes, and in the second, to select the subjects to be executed in tapestry, and watch the progress of the works, it being essential that an eminent artist should constantly superintend the progress of copying the paintings the manufactory undertakes to reproduce.

THE ILLUSTRATIONS.

COMPETITIVE DESIGN PREPARED FOR THE METROPOLITAN OPERA HOUSE, NEW YORK, N. Y. MESSRS. POTTER & ROBERTSON, ARCHITECTS, NEW YORK, N. Y.

The accompanying design was prepared after a careful examination of the plans, sections and descriptions of nearly all the celebrated lyric theatres of Europe. The dimensions of the lot on which it is proposed to erect the New Opera House, has created certain conditions which made the arrangement of the ground plans somewhat difficult of solution, and which has led to a different arrangement from that usually accepted. The lot is wider than such a project requires, and has not sufficient depth — the width and depth fixed by experience as the best proportions for a lyric theatre and its adjuncts being in the ratio of three to five. It is imperative that the main entrance to a theatre of large size should be at a point directly opposite the centre of the stage, for from this point all parts of the house and all seats are most equally accessible. The two grand stairways, at each end of the main entrance hall, lead directly to the balconies — one stairway to the first balcony, the other to the second balcony. Both run up to the level of the second balcony, so that while they are used singly as entrances, they are to be used together as exits — thus affording two means of exit for each balcony. The effort has been made to proportion the number and the capacity of the stairways providing means of entrance and exit to the different parts of the house to the number of seats which any given part may contain. The greater the number of seats to empty, the greater the capacity of the stairways. Stairways, ample in size and number, have been provided for the artists, orchestra, etc., and for the service of the stage — for scene-shifters, carpenters, attendants, etc. The entrance-halls and lobbies are ample in size, and as similar lobbies are provided at each balcony floor and at the gallery floor, free movement of the public during the entr'acts, and in entering and leaving the theatre, would be assured. The lobbies or corridors back of the three tiers of boxes, into which the boxes open, have been planned similarly to those of the New Opera House of Paris — an admirable method, as experience has proved. The best form for the auditorium of a lyric theatre has been shown by experience to be an elongated or horse-shoe curve. The semi-circular form, admirable for a theatre of the spoken drama, has not been found adapted to the representation of the lyric drama. The plan of the auditorium of La Scala has been pronounced as the most perfect in existence, and it has been upon the proportions of this auditorium that the one shown on the accompanying plans has been designed, in so far as the conditions of the problem would allow. In the treatment and arrangement of the boxes, balconies and gallery, the method employed in the New opera house at Paris has been followed, as well as in the treatment of the decorative construction. There are eighty-five boxes in all, some arranged for six persons, but generally for four. These boxes are not enclosed or separated absolutely, as is the case in most Italian theatres, but a sloping separation, which divides the boxes without enclosing them, has been employed, such as have been used in the new opera houses at Paris and Vienna. The boxes are so arranged that they can be thrown together, forming large boxes if required. The stalls are arranged for arm-chairs, similar to those used in London. They are ample in width, twenty-three inches, and three feet three inches from back to back, between the rows. The aisles are of sufficient width and reached by five entrance doors. The balconies and gallery are so arranged in the slope of the seats that a perfect view of the stage is assured to each seat. The seats are placed in short sections, with frequent and ample aisles, and with ample width of seat and distance between the rows. A bar and smoking-room is provided under the main entrance hall, reached by stairs under the main stairways. The grand foyer and the salons in connection with it, which form the suit of assembly rooms, have been placed on a level with the first or middle tier of boxes, as the most central and convenient level. The seating capacity and the number of boxes fall short of the limit fixed in the instructions to the architects, but this is to be attributed to the want of depth in the lot. The fact that seating capacity for 2,656 persons has been furnished, as against 2,156 seats in the New Opera House at Paris, and about 2,500 in San Carlo, shows this would be one of the largest theatres in the world, in so far as its seating capacity is concerned. The introduction of three galleries over the three tiers of boxes has

carried up the ceiling of the auditorium to the utmost limit of height. In fact, unless it were to be considered absolutely essential to the financial success of the enterprise, the omission of one gallery would seem advisable. There are one or two theatres of equal and even greater height, but they are correspondingly deeper. The stage has been carried across the entire width of the main division of the plan — that is, between the walls enclosing the auditorium. The scene-docks, for storing scenery not in use, have been placed on each side of the stage, open to it. The stage is of sufficient height for the management of all scenery. The artists' entrance is separated from the stage by heavy brick walls. A staircase near the entrance leads up to the different stories of dressing-rooms. There are twenty-five dressing-rooms provided for the artists, a number sufficient to accommodate a first-class troupe. The orchestra has been dropped below the floor of the auditorium and partly under the stage, in the manner in which it was arranged in the Bayreuth Theatre, built for the production of Wagner's operas. Above the dressing-rooms, is the scene-painting room, and in the story partly over the foyer are the carpenters' and machine shops, and the sewing-rooms for the manufacture of costumes. The exterior was intended to be finished in brick, relieved with brown stone. The construction throughout was arranged with a view to protection from fire. Stout brick walls would enclose the auditorium, and separate it, as well as the artists' dressing-rooms, from the stage. All stairways were to be enclosed in brick walls. The construction of the roof was to be of iron. The floors of the boxes, balconies and gallery were to be carried on wrought iron beams and girders supported on columns. The partitions forming the salons back of the boxes were to be built of thin fire-proof material.

SEATING CAPACITY.

Stalls	550
Three tiers of Boxes	348
First Balcony	550
Second Balcony	550
Gallery	658
Total number of Seats,	2,656

COMPARATIVE TABLE OF THE DIMENSIONS OF THE AUDITORIUM AND STAGE OF CERTAIN OF THE LARGEST THEATRES OF EUROPE.

THEATRES.	AUDITORIUM. Depth. Feet.	Width. Feet.	Height. Feet.	STAGE. Depth. Feet.	Width. Feet.
Imperial Opera, Paris, (old)	75	65	65	84	107
New Opera, Paris	90	67		83	133
Grand Theatre (restored), Bordeaux	58	50	58	71	84
Her Majesty's, London	76	60	65	44	88
Covent Garden, London	78	62	68	85	90
Drury Lane, London	63	56	59	50	84
Theatre Royal (rebuilt), Munich	68	61	68	87	97
New Opera, Vienna	83	67	67	83	100
Grand Imperial, St. Petersburgh	74	55	56	110	87
La Scala, Milan	94	71	65	78	85
San Carlo, Naples	97	72	82	71	113
Carlo Felice, Genoa	87	65	55	78	104
Accompanying Design	82	66	75	60	117

ST. ADELBERT'S R. C. CHURCH, CHICAGO, ILL. MESSRS. EGAN & HILL, ARCHITECTS, CHICAGO, ILL.

This church is now in course of erection on the corner of Paulina and Seventeenth Street. Its dimensions are 56 feet by 118 feet. The basement of the church was built several years before, on a different design, which, however, did not give satisfaction to the priest, Rev. Father Adolphus Suigurski. Messrs. Egan & Hill were called upon to make an entirely new design, using as much of the constructed basement of the former edifice as possible. The estimated cost of the finished building, which is a brick structure with light Lemont limestone finish is $25,000.

HOUSE FOR MR. G. W. VAN SLYKE, ALBANY N. Y. MR. A. W. FULLER, ARCHITECT, ALBANY, N. Y.

CORRESPONDENCE.

RECENT PICTURE IMPORTATIONS.

NEW YORK.

IT seemed to me last autumn as if the importations of the New York picture-dealers were of sufficient interest to be noticed side by side with our annual exhibitions and sales of a public character. If the exhibitions are a test, more or less accurate, of the doings of the producer of art, the dealers' importations are a criterion of the actual status — the progressive or the retrograding taste — of the consumer. From this point of view they are always worth considering; and in themselves, moreover, they are at least as interesting and delightful this year as they were a year ago. All the dealers unite in saying that the season promises well commercially — promises to be as good as the last, which far surpassed any season for many years in the quantity of sales, and every season whatever, I imagine, in the quality of the work demanded.

The best and most striking of the autumn importations are works of the very highest rank in modern art. The great Frenchmen of the generation which is just passing away are worthily represented. Immense prices are asked and given for their works, as compared with the prices the same canvases would have brought not many years ago; but to-day, when we read of the money paid for merely clever, sensational work, or for work which, though good of its kind, is yet far below the level of the highest creative art of our times — when we read, for example, of $30,000 being paid by an American millionaire for a Meissonier as yet unseen by him, we do not complain that $10,000 is asked for a fine Diaz, or $7,500 for a superlative little Rousseau. I wish to insist once more upon the credit due to our resident dealers for much of the appreciation which our public shows to-day for the best work. Much as our picture-buyers have done toward educating themselves, much as they have learned from foreign travel and the making of foreign purchases, yet a great deal of their appreciation has been due to the constant iteration of dealers at home that *these* are the great men of the time; that Millet, and Diaz, and Dupré, and Rousseau, and Corot, and Daubigny are the men to patronize, if we would get the best and make a permanently good investment. Many men have come intelligently to love them, and their love has made these pictures the fashion, even with those who never could love them, or, perhaps, any picture whatever, very sincerely. Fashion is more wise than usual in her present choice of those whom she delights to honor; but Fashion cannot teach discrimination in cases where she is no longer at hand to serve as guide. Our dealers trust the public to-day as appreciators and purchasers of the best and most celebrated modern work; but they do not seem to trust it beyond this point. A survey of their importations rather goes to prove that they are afraid of introducing novelties that have not been universally endorsed — clever work by newer men, that would have to stand on its own merits and win its price from the discriminating good taste of purchasers alone. Our wealthy buyers follow the fashion — and it is a very good one to follow, I repeat — with the greatest eagerness, and often with true and cultivated zeal; but there are not more than one or two among them, I think, who would dare to be sure that in following their own taste about new work they were *setting* a fashion that another generation would follow with avidity. There is too little variety in the importations of this and other years to indicate the most healthy possible state of public taste. Even the very greatest artists do not suit all tastes or all moods of any man. There is much other work being done to-day in Europe, I will not say as good as the work of the men I have just mentioned, but good in the same sort of way — good as the best kind of art, if not as the strongest and rarest possible specimens of that kind. Such work, for example, is that of the newer Dutch and Belgian painters: of Mesdag, and Mauve, and Mettling, and the Maris Brothers and their co-workers. Such work is that of many young French landscape artists. We see their names occasionally, it is true, in our catalogues and our dealers' advertisements; but there is not the demand there should be for them, not in place of the demand for the most famous work, but supplementary thereto, from people, for instance, who cannot afford quite such high-priced treasures. They are themselves not inexpensive, but still they are a good step below the giants, to whose works death, moreover, is from time to time giving a further element of preciousness. The Spanish-Roman school, which has been with us only second in popularity to the great French landscapists, has not appeared in force of late, whether because the demand has fallen off, or because its canvases are hard to get, I do not know.

Of actually new names that bring a revelation of a fresh artistic nature whatever its quality, there are very few to be noted. At Mr. Avery's gallery I saw a couple of canvases, however, which formed an exception, and a very noteworthy one. They were signed Jettel, and the artist is, I believe, a young man, a Hungarian, and a friend of Munkacsy's. I do not remember ever to have seen or heard of his work before, but it is mature in a remarkable degree in spite of an unfamiliarity which argues an artistic career not long since begun. The larger canvas is a solemn yet glowing landscape with a pool in the foreground where boys are bathing, and a background of dark, evergreen-looking trees. The solidity of the painting, the simplicity and clearness, yet perfection of the atmospheric effect, the beautiful scale of color, the freshness in composition, the strong yet serene and balanced individuality of the canvas as a whole, make it a striking and a satisfactory picture. It is, — what one can say but seldom of a landscape unless by an acknowledged master, — a coherent whole, a complete *picture* in the most exact sense of the word. When I say that in sentiment it reminds one more strongly, perhaps, of Calame than of any newer man, I am not to be understood as saying that it is *like* a Calame. The second, smaller canvas by the same artist, is a bit of sea-beach, pale and gray in tone, and as different as possible from the other in every way, but also very good.

In the same gallery one is interested to find the portrait of himself by Whistler — the head with a large hat — that has long been known to us from reproductions. It is a powerful work, clever and a little audacious in handling, rich in color, but above all remarkable for its intense expressiveness. There are some portraits, which, whatever their other faults, at once persuade us that they are very accurate likenesses. It is not this quality which so impresses us in Whistler's work. The feebler portrait of him by Fantin, which hangs next and is sufficiently similar in scheme to be compared with his own, is very likely more true to the original. What speaks to us from Whistler's portrait is an intensity, a dramatic force, so to speak, of expression which makes us believe not that the artist has necessarily depicted with accuracy the type that was before him, but that he has vividly portrayed a face which, whether literally copied or built up in great part from fancy, has taken strong hold of his mind, and takes, in consequence, very strong hold of the spectator as well. Even if the Fantin head be more like the model, even if Mr. Whistler's family might prefer to have it on this account, yet no one else would covet it much, while any one of us would be secure of a fund of endless pleasure with this somewhat sinister, but fascinating, intense face of Whistler's in his possession. Nor does this difference in artistic value

come from deficient technique in Fantin's work. He is a fairly competent artist, but he has painted the outside, and Mr. Whistler has painted the outside permeated with the very essence of a peculiar human soul. Souls alone, — psychical views of humanity given more prominence than the corporeal — are not fit essays for art. But when the outside is seen in a truly pictorial way and the inside is expressed as well, we have the very highest style of portraiture, whether actual or imaginative. There may, perhaps, be some fault found with the actual work of Mr. Whistler's brush in this case, but it is so slight that the dramatic force of the canvas causes us willingly to overlook it.

Just at this time one may also note at Mr. Avery's rooms a fine and fiery Josef Brandt, a sea-beach by Munthe, "Un Braconneur" by Delort, which is a well-painted snow-scene in the forest of Fontainebleau, and a large and decorative canvas by Jeannin, "Crysanthemums."

At Goupil's I noticed for especial comment among a number of average but not very interesting pictures, two by Boldini, one an interior, the other an exceedingly clever out-door scene in water-colors. A fine Heilbuth represents a cardinal talking on the Pincian hill with a group of school-boys, — ecclesiastics in embryo. This picture may serve as an example of a subject interesting from other than strictly pictorial reasons, — excelling in expressive faces and suggestive ideas, — yet at the same time so treated that these are subordinated to the pictorial effect, which in itself is quite strong and fine enough to make the picture valuable on its account alone. So much can rarely be said of pictures whose ideas, so to speak, would attract the observer who does not care for painting except with regard to its "literary" qualities. The way in which the vivid red of the cardinal's dress harmonizes with the dark greens of the foliage and the soft creamy color of the scholars' robes, and is, although the only bright tint in the picture, by no semitone out of harmony with the rest, is worthy of all praise. Heilbuth is not to be called a great painter, but he is a very clever one, with exquisite taste and a thoroughly good balance, free from any flavor of academic conventionalism, or routine work of any sort.

Very different from his picture, mystical, poetic, full of distinct personality, is the painting by Mettling, which hangs near at hand. It is a late sunset effect, with two peasant women and a couple of sheep following the homeward path. The tones of the picture are wonderfully soft and melting, but as real as reality itself. The atmospheric effects are admirable, as they are, indeed, almost sure to be in the school to which Mettling belongs. The figures are true peasants, such as modern art has at last come to recognize with profit to itself. They have no hint of idealization about them, yet their simple forms and motions are instinct with a grace that may well be called sculpturesque.

A large Daubigny is also to be mentioned in this place, and a couple of Diaz landscapes. The smaller of these, a glade in a wood with rising ground in the distance, is as perfect a specimen of this sort of work as Diaz, I think, could ever have painted. Its charm is as fresh, as unique, and takes us as much by surprise as though we had never seen a wood and glade of his before. Gérome's "Sword-Dancer," with the thin arsenic-green drapery, which was seen some years ago at this gallery, is again on exhibition. It is, I am sure, one of the least attractive of his works. Benjamin Constant, who has painted such very good things, — no one that saw it can fail to remember the admirable "Arab Prisoners Drinking from a Pool in the Desert," which Mr. Schaus had a year or so ago, — has now at Goupil's a "Judith" that is far below his reputation. The color is unpleasant, the flesh-modelling not above reproach, and the Judith herself may have performed her task on the French stage, but never in Judea. Marchetti has a couple of little canvases which are very good in parts, but chiefly interesting as showing how such a method of *aquarelle* painting as we know, for instance, in the small works of Leloir, has been transferred to oil practice. The colors in the tiny figures, the horses and the cart of the more attractive of the two pictures are not blended at all, but have been applied with the point of the brush in little sparkling quantities of contrasting hues, and have not been unified by that brush, but left to be unified by distance and the eye. So minute is the manipulation, however, that even a distance suited to the examination of works on so small a scale performs its appointed task.

The pearl of Mr. Schaus's importations this year is perhaps a little Rousseau painted about twenty-five years ago, and representing a peasant's cottage in the middle distance surrounded by trees and with some water in the foreground. Nothing could be finer for quality and color and a richness of surface that would make the canvas look like a precious *substance* even to a savage who might not know what a picture is. No picture could be more definite, more carefully elaborated, and yet though the scale is so tiny, how great the power and breadth of the whole! It is such a work as this which makes one ask whether it is possible to *define* breadth, that quality which is more valuable, perhaps, than any other in art, and which exists as truly in these few inches of elaborate workmanship as in the largest canvas and the boldest strokes. There is no more "niggling," no more search after details for their own sake, than in the powerful large canvas by Yon, which hangs in the same room. Next I should speak of a figure piece by Diaz, a "Promenade" with a figure in bright blue in the foreground. This picture is not such a marvel as the "Nymphs" which the same firm imported last year, but it is none the less a very fine specimen of the artist's power, and a very beautiful picture. Another, a single figure of a child seated amid foliage, is also very good. In strong contrast to these two, and showing well the artist's wonderful versatility, is a study of a russet bit of forest. Strength is here to be remarked instead of grace that is a trifle fantastic, definiteness instead of half-shadowy charms, and solid warmth of color instead of its more evanescent or more sparkling beauties. An admirable Corot, in his lighter scale of color, is to be especially noted for its wonderful sky and distance.

Signed by a worthy though less celebrated name is a solemn Italian landscape by Chauvel, very strong, and very impressive. Turning from the poetry to the veriest prose of art, I may now mention a peasant interior by Carpenter, called the "Coming Storm." The figure of the mother is admirably characterized, that of the daughter who sulkily waits for the breaking of the domestic tempest, is less successful. The painting is capable, and the color satisfactory. It is, as I have said, a good example of work without the least pretension to be more than prose unornamented by any imaginative faculty or any special graces of technique or of coloring. It is to be wondered at, finally, that such a canvas as the large river-scene by Yon, to which I have already referred, should have remained so many months in Mr. Schaus's gallery. It is a splendid piece of vigorous handling, and is by no means rivalled, I think, by a somewhat similar large canvas by Defaux, which has more recently been imported.

In conclusion, I may note that at Mr. Moore's gallery of American pictures there is not very much of interest to be seen that has not been seen there before. The artists' summer harvest has not yet been gathered, and most of the works have hung on the walls since last season.

M. G. van Rensselaer.

ST. ALBAN'S ABBEY.

The following correspondence is an extreme instance of the amenities that attend an archæological discussion. Our excuse for reprinting it is that Sir Edmund Beckett's utterances, even when they take the vein so popular in Billingsgate, are always entertaining.

Mr. Henry J. Toulmin, Hon. Secretary St. Albans Abbey Restoration Committee, states, in a letter to the *Times:* "That Sir Edmund Beckett has now given orders under a faculty lately granted to him to destroy Abbot Wheathampstead's west window (of the date of Henry VI), and to replace it with a window of his own composition, which may be exceedingly effective to those who admire the high art of the nineteenth century, but extremely distasteful to those who respect bygone times and the historical associations of this ancient abbey.

"If the Society for the Protection of Ancient Monuments, aided by a small public subscription, would now proceed against and obtain an injunction, they would," in Mr. Toulmin's opinion, "prevent this iniquitous proceeding, as Sir Edmund's faculty was to repair the west front, and not destroy any portion of it. Sir Edmund is carrying out his own wilful way, against the remonstrance of his bishop and the wish of the archdeacon, rector, churchwardens, and sidesmen of the abbey church; and a petition signed by the Lord-Lieutenant and many of the leading inhabitants of the city of St. Albans and its neighborhood has lately been sent to the bishop of the diocese, requesting him to interfere. Even a lavish expenditure of money from ample resources in this pseudo-restoration will hardly recompense the men of Hertfordshire for the injury done to their great county church. A sum of £400 to £500 would be, I believe, sufficient to repair the window to make it last for a great many years to come. I may say Mr. John Scott, whom Sir Edmund promised to consult (but on such terms as no leading architect could submit to), deprecates and deplores this iconoclasm as much as we do."

The following is Sir Edmund Beckett's reply:—

"Poor Mr. Toulmin, of Childwickbury, near here, is suffering from a complication of disappointments. The other day he summoned the committee on whose behalf he professes to write, and which only survives to try and pay the hopeless debt which he helped them into in my absence last year by a little mistake of £1,600 in the accounts, and not one of them would come, as he only wanted them to incur another debt, coupled with a lawsuit, if they did, by undertaking the restoration of the present decayed and vile west window. He pretended to have an estimate of about £400 for it, as he says to you, knowing very well that the very able clerk of the works, who has been here for ten years and whom he had always before sworn by, had estimated it at £2,000, and the builder's estimate was rather more, for what must be done by whoever undertakes to make it stand. No doubt he thinks he knows better. A great man in this country is quoted for saying of him that 'whatever he wants he believes,' and, I must add, asserts. He then wrote a letter accusing the committee of 'half-heartedness and lukewarmness,' enlivened also by some doggerel verses, which he delights in. And now, in despair, he sends off his dirty linen to be washed with the sheets of the *Times*. As he does, I have no objection to mangle it for him. I know nothing of his petition to the Bishop, who has no more power in the matter now than you have, except by report and from himself. He has been for six weeks pestering people of all degrees to sign it as a favor to him, and some of them have done so to get rid of him, saying that they knew that it was useless; and the day he sent it he confessed that he knew that himself. I have good reason to believe that not

much more than half a dozen of the signers have even seen the design of the window they profess to dislike; for the design that was exhibited here and deposited in court omitted all details of window-tracery, and expressly reserved power to alter any details preserving the general outlines shown. Several persons in this city have told me that they would get up a petition the other way signed by twice as many people, including many of his, in a few days, if I wished it. I told them that it was not worth the trouble. In fact, the thing has been the joke of the neighborhood. He did not, of course, disclose the fact that he had been bothering me for nearly a year, while he thought I was going to do what he now pretends to want, begging me on no account to restore such a vile window as that, but, on the contrary to destroy, not only the tracery, but all traces of any great west window, and to substitute some 'nineteenth century' lancets as a purely imaginary restoration of the unknown ones of the twelfth century; for nobody worth naming pretends to know their size, number, position, or anything about them. When he at last became sensible that I did not mean to attend to any such nonsense, he turned round within a week, and alarmed me by announcing that he was 'going to move heaven and earth' to make me restore the present window. Everybody knows that all he cares for is to be able to boast that he has meddled with some effect one way or another, and particularly that he has made me do something. This also is vanity and vexation of spirit to him. As he quotes the Bishop, I must say (what he knows very well) that the Bishop in several letters to me, early and late in the business, has called my original design, on which he forwarded the faculty, 'beautiful,' and has spoken as disrespectfully of the present window as Mr. Toulmin himself. That design showed the very window that is going to be executed, as a probability, in case the present one was found too ruinous to stand without great repairs. The new one has been approved and admired by every one who has seen it, except himself, for his present object, including some very good judges who have equally condemned the present one. At least twenty times as many persons have done so as all who have seen it and signed his absurd petition. As he lugs in Mr. J. O. Scott, evidently with his consent, I am obliged to tell that it was the exhibition of a copy of a rival design for the whole west front by him that brought over all the local opponents of my faculty, saving always the implacable arch-deacon, who preferred that the nave should fall to having it saved by me, and that nobody was so loud in preferring my design as this new agitator against it. And yet he has the face now to complain of my only offering the job to Mr. Scott on condition of his carrying out the approved and authorized design. Having now got all the drawings done, I can only say I am very glad he refused my offer. His assertion that my faculty only authorizes 'repair,' is a somewhat striking specimen of believing for the time whatever he wishes, seeing that he was present at the Chancellor's judgment, and was reminded by me very lately of what the faculty is, and knows perfectly well that any restoration of the west front must be an invention, as all except the middle is flat brick walls with not even a door or a window at present. The one thing which is the whole truth and nothing but the truth in all his letter is that the work was duly ordered as soon as the drawings were sufficiently complete, so that it will go on if I am murdered to-night in compliance with a printed invocation circulated by some anonymous doggerel verse-writer for another Fitzurse, who disposed of my namesake in the early days of abbey-building, and if all the crazy societies in England pass some more resolutions and move for the injunctions which Mr. H. J. Toulmin thinks he understands as well as architecture; and so he does, no doubt. I have only to say to the few respectable people who honestly think that all future generations ought to be condemned to gaze on modern copies, called restorations, of vile and ugly fabrics, because they have 'associations' with their recollections all their lives, that I do not agree with them, or argue with them; only that I am not going to spend £20,000 or £30,000 to gratify whims of that kind; nor would I let them spoil a design which has received such unusual approbation if they offered to pay for spoiling it themselves, which they have not the smallest idea of doing. Much less shall I gratify such a meddler as this by letting him have to say that he has meddled with success. Dogs that go out to bait quiet bulls must not be surprised if they get tossed and gored."

9 BUCKINGHAM ST., ADELPHI, W. C., October 16.

Sir, — A letter appeared in the *Times* of October 8, from the Hon. Secretary of the St. Albans Abbey Restoration Committee, deploring the course Sir Edmund Beckett is about to pursue in destroying Abbot Wheathamstead's west window to make room for a new one of his own design — a proceeding which, it is stated, has the disapproval of Mr. John Scott, the architect to the committee.

As it is proposed in that letter that the Society for the Protection of Ancient Buildings should be the nucleus for gathering subscriptions and opposing this act of vandalism by legal means, we venture to hope you will favor us with the insertion of this letter as an explanation of the reason why such action is now impossible to the Society. Some months ago, when Sir Edmund Beckett's proposal for restoring (not repairing) the west front of the cathedral at his own cost and from his own designs became known, the Society, after much deliberation, determined, as the only course that seemed open to it, to oppose the issue of the faculty. It took this extreme course because it was evident that the restoration proposed would cause absolute ruin to the front, not only as the Society would view it, but from the point of view, also, of those who see no objection to reproductions of ancient work, if done carefully and with respect to precedent. It might have been supposed that in this action the Society would have been supported by those who had lived under the shadow of the old church and respected its age and history. Unfortunately, those most interested seemed influenced only by the wish to secure for the building the expenditure of the large sum promised by Sir Edmund Beckett for the carrying out of his own plans, and, not suspecting, let us hope, the mischief that would follow, they not only refused their aid to the Society, but actually opposed its efforts. The Society failed in its attempt, and the failure was largely due to the opposition of influential men, some of whom had even promised their aid, and who now would place the Society in the unpleasant position of appearing to refuse. If these gentlemen really feel the misfortune they have brought on the building, they, and they only, by serious efforts, may yet be able to prevent it.

I am, sir, on behalf of the Society for the Protection of Ancient Buildings, your obedient servant, NEWMAN MARKS, *Secretary*.

THE TEMPLE BAR MEMORIAL.

THE following shows again the amiable spirit in which Englishmen conduct their controversies in public.

The Common Council have shown their usual wisdom in erecting this obstruction on the spot where Temple Bar stood. We are glad that Mr. Street has given his opinion on the memorial, and with his usual force of argument proves that, as a refuge, it is in the wrong spot, and that he has not been a party to its erection, and has not even seen a design for the memorial now erecting. Mr. Street says that "at a meeting held some three or four years ago the memorial now in course of erection was not so much as suggested. At that time we were told that some ornamental lamp-posts would suffice, and to such a proposal I, of course, had no objection to offer. It is very surprising, therefore, to be told by Mr. Bedford that the memorial now being erected 'was agreed with complete unanimity to be the very best in all the circumstances of the case,' and that I was of that opinion.

"Not less surprising are Mr. Bedford's statements about the space for carriage traffic. No provision was ever made for the five lines of traffic of which he speaks. But provision was made out of the land purchased for the Courts of Justice for an addition of six feet to the roadway in the Strand (which gave space for four lines of vehicles) and of five feet to the foot pavement, the latter being intended to be fifteen feet in width — not an inch too much for a pavement which has to accommodate, not only the crowd ordinarily passing along the Strand, but also the people having business in, and the inevitable loungers in front of, the Courts of Justice when the courts are sitting. The simple fact is, I regret to say, that the whole of the space for the proposed memorial — five feet — has been taken out of the foot pavement on the north side, which will now be reduced to ten feet in width, to the great damage of the appearance of the new Courts of Justice and to the great inconvenience of the public. The right place for a refuge is undoubtedly about one hundred feet to the west of the memorial. The roadway at this point, being wider, would admit of a larger refuge, and it would much better serve the convenience of passengers to the most important entrance of the new courts.

"I have never had any chance of seeing the design for the proposed memorial. I am glad, however, to believe that it will be, as Mr. Bedford says, a beautiful work of art; and I only wish that it could be erected with as much regard to convenience as to beauty and sentiment."

To the above letter Mr. Bedford has replied as follows: — Mr. Street has evidently not a retentive memory, or he could not possibly have made the statements contained in his letter of Saturday. He states that at the meeting alluded to "the memorial now in course of erection was not so much as suggested," and that he was told "that some ornamental lamp-posts would suffice." Anything more astounding I have scarcely ever read. A memorial such as that now being erected was not only suggested and approved of, but even some of its details discussed. To prove this was the case, I have now before me a letter dated March 23, 1877, from Mr. Pownall, Messrs. Child's surveyor, in which, alluding to what took place at the meeting held at the Temple on the 5th inst., he says: — "The understanding is that a rest will be formed in the middle of the road for the erection of a pier or column of an ornamental character, as a memorial of its being the site on which the Bar stood." Not only so, but I remember very distinctly that I myself expressed a hope that its architectural details would be in entire harmony with the adjacent Law Courts. I even suggested that the finished design should be submitted to Mr. Street for his approval as regarded details, but this was overridden on a question of professional etiquette. One suggestion was that it should be somewhat in the form of a Queen Eleanor Cross, but eventually the design was left to the City Architect. I don't very clearly follow his statement about the foot pavement, but even supposing it to be, as it possibly is, quite correct, I think all will agree with me that a refuge of five feet in width in the middle of a roadway will be more protective of life and limb than an addition of five feet to the foot-path opposite the Law Courts. As the memorial will be finished in a very few weeks, it is of course needless to express any further opinions as to its probable results; but I do know that the intention was, and the hope of the Corporation is, to use Mr.

Street's words, that "it should be erected with as much regard to convenience as to beauty and sentiment."

Mr. Street again writes in answer: —

"Mr. Bedford says I have not a retentive memory. He gives us the date of the meeting which I attended in the Middle Temple, and I have been able now to refresh my memory by an entry in my diary made the same day. It is as follows: — 'Then to meeting at Treasury of Middle Temple, to meet City authorities about Temple Bar. They are prepared to move the Bar, and only put a post to mark their boundary.' My memory is not, therefore, at fault, and I recollect that the chief spokesman on behalf of the City was Mr. Rudkin, and that he spoke of a highly ornamental lamp-post or posts.

"On the other more important point Mr. Bedford admits that I am right, and that he was wrong in his statement made to the Common Council. If he does not follow me exactly it must be because he has only learned a few of the facts from others. He will find on further inquiry that the pavement on the north side of the Strand for a length of one hundred and seventy feet will have to be reduced from fifteen feet to ten feet in width, in order to allow of two vehicles passing abreast eastward from the Strand to Fleet Street, and that his reduction in width is solely caused by the desire to erect the memorial on the exact site of the Bar, instead of on the most convenient spot. In one of Mr. Bedford's letters I see that he regards the memorial as an erection which will be a 'joy forever.' If so, it will surely require some protection from the rude attacks of heavy wagons, and, in addition to the five feet which the memorial is to measure, there must be another deduction from the carriage-way for posts of some sort outside its base. Mr. Bedford evidently mixes what was proposed at the meeting of March 17, and what was afterwards elsewhere talked of and suggested, and of which I have no knowledge. The letter of 'C. F.' in the *Times* entirely supports my positive contradiction of Mr. Bedford's statement that anything like the memorial now in course of erection was suggested and agreed to with complete unanimity by us. The meeting was attended by a number of professional men. No plan or design of any sort was produced, and we had to trust to Mr. Rudkin's words for our ideas of the proposal. It is absurd to suppose that any body of men would unanimously approve a scheme so vaguely described, that while some of us thought it was for an ornamental lamp-post, others thought it was a solid structure adorned with statues and other elaborate details!

"In his speech to the Common Council Mr. Bedford inaccurately said that I attended the meeting at the Temple as representative of Her Majesty's Office of Works. If he was present at the meeting he ought to know that I most distinctly disclaimed any such position, and stated that I had no authority from the First Commissioner to attend or express any opinion." — *The Architect.*

THE OPEN FIRE-PLACE. — XXV.

APPENDIX. — MISCELLANEOUS EXAMPLES.

200. Fire-Place in the Castle at Heidelburg.

NOTES AND CLIPPINGS.

The Mormon Temple. — During the past twenty years over $4,000,000 have been spent in the Mormon Temple at Salt Lake City, and the structure has hardly assumed shape. It is estimated that its total cost will exceed $27,000,000. The contract has yet sixty years to run. It is to be built of Utah granite.

Damage to a Reservoir. — A telegraphic despatch says that about thirty feet of the earthwork of the town reservoir at North Adams, Mass., broke away on the night of Nov. 7, owing to the pressure of water, agitated by the heavy wind-storm. The main body of water was kept back by the solid masonry work. The road leading to the water-works was badly damaged and the south highway was filled with débris, stopping all travel with teams for a day at least.

Stephano Madern's "Cecilia Lying Dead." — After the time of Pope Paschal, the Church of St. Cecilia again sank into ruin, but in 1599, Cardinal Sfondrati had it carefully repaired and redecorated, according to an article in the November *Atlantic*. On this occasion the tomb was reopened, the robe of gold tissue in which the embalmed body was first shrouded still remained, together with the linen cloths steeped in her blood and wrapped around her feet. Touched by the pathetic grace of the recumbent figure, Sfondrati sent for Stephano Madern, a sculptor of celebrated skill, and ordered him to represent it in marble. This work, entitled "Cecilia Lying Dead," is perhaps the most perfect and beautiful of all bearing her name, and is thus described by Sir Charles Bell: "The body lies on its side, the limbs a little drawn up; the hands are delicate and fine; they are not locked, but crossed at the wrist; the arms are stretched out. The drapery is beautifully modelled, and modestly covers the limbs. . . . It is the statue of a lady perfect in form, and affecting from the resemblance to reality in the drapery of white marble, and the unspotted appearance of the statue altogether. It lies as no living body could lie, and yet correctly, as the dead when left to expire — I mean in the gravitation of the limbs."

Roman Villa in the Isle of Wight. — A new interest has lately been added to the historical charm of the Isle of Wight by the discovery of a Roman villa upon Morton Farm, not far from Brading. The remains exposed have already called forth a decided interest among the archæologists, and some of them have recommended the Antiquarian Society to undertake further excavations in order that the entire building and its manner of construction may be studied, as only a part of it is as yet laid bare. The credit of first discovering the villa should be given to Captain Therpe in Garbridge near Brading, whose knowledge of the neighborhood prompted him to the explorations which have proved of such value. The exterior walls, so far as visible, form a quadrangle of fifty-two by thirty-seven feet, and contain six rooms, with corridors etc., which probably stood in connection with many others. Besides an inlaid floor, remnants of heating-apparatus, chimneys, fresco-painting, roofing tiles, coins, pottery, etc., the remains of a mosaic pavement, with an unusual pattern, have been found. The ruins appear to cover a large area, the surface of which is mostly used for farming purposes; still every assistance towards further investigation is given by the proprietor, Lady Oglander, and the present occupant, Mr. Cooper. The excavations, therefore, have been recommenced within a few days, and another chamber has already been found containing an interesting mosaic, the central-piece being the figure of Orpheus, playing upon the lyre and surrounded by animals. Coins also appear, notably several bronzes of the age of Victorinus: 268 A. D. These discoveries are of great historical as well as archæological interest, throwing light upon the occupancy of the island by the Romans. It is worthy of remark that the dark hair and fiery eyes of the natives of the Isle of Wight are due to those Roman colonists.

Magnesocalcite. — A few days ago, about thirty gentlemen gathered in the boiler-room of the Equitable Building Boston, Mass., for the purpose of witnessing a test of Dr. N. C. Fowler's magnesocalcite fire-proof material. There have been previous tests of this material, once at the Mechanic's Fair in that city, and in New York, and they were in all respects successful, but further improvements have since been made, and Monday's exhibition was most gratifying, demonstrating the value of the invention beyond a doubt. A cast-iron box twelve inches square by eighteen inches long, and lined with fire-proof material, was filled with circulars and other papers, one gentleman proving his faith in the success of the instrument by putting in a roll of greenbacks. The box was then closed and placed in one of the boiler furnaces, and the fire was forced to its utmost capacity for about an hour, the coal being heaped up about the box and the drafts all opened. At the end of an hour the box was taken out, and it was found that the cast-iron bottom was entirely burned off. On opening the box, however, after it had been cooled by water, the papers, including the money, were found intact, and in as good condition as when placed there. In the mean time another test had begun, a bond and note case made of wood, six inches square and twelve inches long, entirely unprotected by any iron covering, was filled with papers and placed in the furnace, where it was subjected to the same intense heat for about half an hour. It was opened after being cooled, and the papers were found to be unharmed. The heat to which both boxes were subjected was not less than 2,500 degrees Fahrenheit, and papers begin to carbonize at about 300 degrees. It was stated that the intensity of the heat was even greater than that borne by any safe in the great Boston fire. The tests were conducted by Dr. Fowler, under the auspices of Commissioners Fitzgerald and White, Chief Engineer Green, Edward Atkinson, and some twenty of Boston's first merchants. It is stated that a business project on a large scale is being organized for the manufacture of the new fire-proof material, which can be made and sold as cheaply as common wood sheathing, and which can be put to many practical uses, such as the protection of roofs, shutters, floors, partitions, the lining of safes, vaults, boxes, etc. The gentlemen who were present expressed themselves as highly pleased with the success of the tests. — *Fireman's Journal.*

BUILDING INTELLIGENCE.

[Reported for The American Architect and Building News].

[*Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.*]

BUILDING PATENTS.

[*Printed specifications of any patents here mentioned, together with full detail illustrations, may be obtained of the Commissioner of Patents, at Washington, for twenty-five cents.*]

232,820. CISTERN-SPOUT AND TRAP. — Josephine M. Hicks, Boston, Mass. Rain-water cisterns are liable to have their water seriously injured by insects or vegetable matters washed into them through their spouts. With this trap, most, if not all such detrimental matters are arrested in their passage down the spout, and may be readily removed. In Fig. 1 of the drawings, A denotes the trap and B B' the spout;

Fig. 1

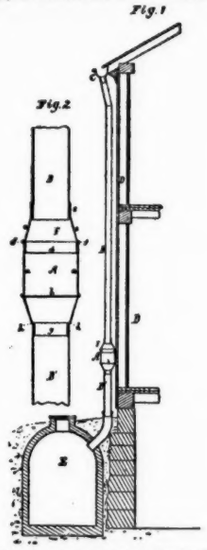

Fig. 2

C, the gutter from which the spout leads; D, the building of which the spout forms a part, and E the cistern. The spout, as shown, is made in two separate tubular sections, B B', with the trap A between them. This consists, not only of a hollow cylindrical case *a*, open at top and bottom, but of a woven-wire strainer, *b*, extending across the trap at a suitable distance above its bottom. Besides these there is a cover, F, which is composed of two short cylindrical tubes *c d*, and an intervening tubular conic frustum, *e*, arranged as represented. It will be seen that, while the trap is supported by and between the two sections of the spout, the cover of the trap is not only sustained in place by the trap-body, but can be moved upward on the upper section of the spout.

232,830. ICE-HOUSE. — Joseph Lederle, Edgewater, and Ludwig Oberlein, New York, N. Y. It is not a matter of great difficulty to properly ventilate an ice-house when the outer atmosphere is more or less in motion; but in periods of positive calm, which are not very scarce during heated terms, the exchange of

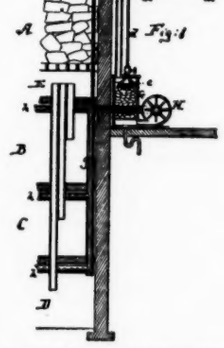

Fig. 1

impure for pure air in such ice-houses is substantially interrupted, and this invention seeks to supply a remedy for this defect by providing for artificial ventilation in times when the movement of the atmosphere is not sufficiently active to allow of automatic ventilation. To this end the invention consists in combining an air-purifying chamber with suitable conduits, supplying its contents with the melting water of the ice from the ice-house, and with suitable conduits for taking the impure air from and carrying the pure air to the ice-house, all arranged so that the apparatus will purify merely the air of the house and cool it, but will not allow outside air to enter the ice-house unless purified by passing through the purifier. A represents the ice-chamber. B C D are the several floors of the ice-house below the ice-chamber. E is the cooling chamber, directly below the ice-chamber, which receives the drip-water from the ice. A pipe, *a*, leads from the chamber E into a tank, F, and a pump, *b*, may be used to pump the drip-water from the chamber E into said tank F. From this tank the drip-water flows through another pipe, *d*, into a sprinkler-tube, *e*, which is contained within a box, G, that is charged and partly filled with broken pieces of coal, which are moistened by the spray of water thrown upon them through this sprinkler-tube, *e*. A fan, H, draws the air, by a tube, *f*, from the upper parts of the floors B C D, the tube *f* being properly joined to a flue, *g*, which connects with air-pipes *h*, that are placed in the upper parts of the several floors or store-rooms and perforated to receive the heated and spoiled air, which is thus taken from the building by the fan H. The fan discharges the air thus taken from the ice-house into the lower part of the purifying-box G, causing it to pass up through the stratum of moistened coal, and to thereby become cooled and purified, and the air thus purified is finally discharged by a pipe, *i*, into the upper part of the ice-chamber A, as shown, so that it is possible at any time, by simply starting a pump and the fan, to thoroughly purify and cool the vitiated air, which would otherwise gather and remain in the upper parts of the several store-rooms, and to utilize the reduced temperature of such air. When it is found that the air in the ice-house has been brought to the proper degree of purity, the fan and pump may rest until further occasion arises for setting them in motion.

233,856. DOOR-HANGER. — Charles W. Bullard, Chicago, Ill.

233,857. DOOR-SPRING. — Thomas Crane, Fort Atkinson, Wis.

233,846. PLANER-CHUCK. — John H. Greenwood, Columbus, Ohio.

233,853. FLOOD-GATE FOR TILE DRAINS. — Edgar M. Heater, Bloomington, Ill.

233,864. WATER-CLOSET. — Laurin L. King, Chicago, Ill.

233,867. LATCH. — Thomas F. McGrath, Newark, N. J.

233,872. LOCK FAUCET. — Andrew H. Parker, Carlisle, Penn.

233,893. PIPE AND NUT WRENCH. — Josiah C. Stevens, Cambridgeport, Mass.

233,909. BRICK-MACHINE. — Thomas H. Andrews, Keokuk, Iowa.

233,938. RAIN-WATER CONDUCTOR. — John G. Lamont, Chelsea, Mass.

233,943. WATER CUT-OFF. — William J. McLeod and Geo. H. Cormack, Rockford, Ill.

233,945. REFRIGERATOR BUILDING. — Jacob G. Müller, Buffalo, N. Y.

233,948. MANUFACTURE OF ARTIFICIAL MARBLE OR STONE. — Alvin M. Richardson, New York, N. Y.

233,952. APPARATUS FOR SLOTTING METAL. — Warren H. Taylor, Stamford, Conn.

233,953. THE SAME.

233,960. ARTIFICIAL STONE AND MARBLE. — William H. Young, Buffalo, N. Y.

233,961. CURTAIN FIXTURE. — Gilbert L. Bailey, Portland, Me.

233,962. VENTILATORS FOR BUILDINGS, ETC. — Jas. F. Baldwin, Lockport, N. Y.

233,972. RAIN-WATER CUT-OFF. — Dennis Brady, New Orleans, La.

233,974. SHUTTER BOWER. — John Broughton, Brooklyn, N. Y.

233,975. LOCK-HINGE. — John Broughton, Brooklyn, N. Y.

233,981. TENON SAWING MACHINE. — William H. Clayton, Carrollton, Ga.

233,986. BENCH-DOG. — Philip Cook, Detroit, Mich.

233,987. AWNING FRAME. — Egbert C. Cook, Chicago, Ill.

233,988. AWNING-FRAME. — The same.

233,998. FIRE-ESCAPE LADDER. — Amos Cummings and Jamison Harrison, Boston, Mass.

234,000. SHUTTER-FASTENER. — Vasco D. Dearborn, Boston, Mass.

234,002. LOCK AND KEY. — Charles C. Dickerman, Boston, Mass.

234,014. BLOWER OR EXHAUST. — Lemuel S. Fithean, Brooklyn, N. Y.

234,015. STEAM AND HEAT CONDUCTING PIPE. — Mark S. Foote, Burlington, Iowa.

234,018. HINGE. — Thaddeus Fowler, Seymour, Conn.

234,043. SASH HOLDER. — Philip F. Kuerborth, Greenup, Ky.

234,064. KNOB-ROSE. — Job F. Peacock, San Francisco, Cal.

234,071. SASH FASTENER. — Addison V. Sanford, Binghampton, N. Y.

234,078. WINDOW-SASH. — Thomas Sharp, Fort Yates, Dak.

234,084. LEAD AND CRAYON HOLDER. — Charles Sneider, New York, N. Y.

234,086. MECHANISM FOR DETECTING WASTE OF WATER FROM PIPES. — Benjamin L. Stone, New York, N. Y.

234,089. APPARATUS FOR SLOTTING METAL. — Warren H. Taylor, Stamford, Conn.

234,091. WRENCH. — Henry A. Thompsen, Farmington, Me.

234,092. GATE-LATCH. — Adna A. Treat, Indianapolis, Ind.

SUMMARY OF THE WEEK.

Baltimore.

BUILDING PERMITS. — Twelve building permits have been issued since the last report. The following only are of sufficient importance to be mentioned: —

Moro Phillips, four-st'y brick building (warehouse), on South St., near Pratt St.

Boston Fear, 5 three-st'y brick buildings, on Edmonson Ave., north of Mount St.

M. M. Irvine, 3 three-st'y brick buildings, on southeast cor. Edmondson Ave. and Mount St.

Lorentz & Ritter, two-st'y brick factory, on Leadenhall St., between West and Stockholm, 77′ x 155′.

John Malony, 3 two-st'y brick buildings, on Aisquith St., north of Federal St.

Messrs. Posners & Bro. are making extensive alterations and additions to their store, 136 and 138 Lexington St.; cost, $3,000; Mr. C. D. Hook, builder.

Messrs. George Blome & Son are erecting a new and handsome building, 445 West Baltimore St. The building is to be of brick, four stories high, and trimmed with Ohio stone and terra-cotta, 25′ x 110′. The interior is to be finished with solid walnut; Mr. Chas. L. Carson, architect; John Asendorf, builder.

CHAMBER OF COMMERCE. — Work is progressing rapidly on the new Chamber of Commerce building. The foundations are all in, and the walls will be ready for the first floor-joists the coming week. The foundations are massive and of first-class workmanship, and calculated to impress one with the magnitude and character of the structure.

Boston.

BUILDING PERMITS. — *Brick. — Mt. Vernon St.*, cor. Brimmer St., for the Church of the Advent Society, 1 church, 78′ x 79′; Woodbury & Leighton, builders.

Commonwealth Ave., No. 251, for Jos. S. Bigelow, 1 dwell., 28′ x 68′, three stories and mansard.

Fairfield St., cor. Commonwealth Ave., for Geo. P. King, 1 dwell., 32′ x 76′, four stories; Standish & Woodbury, builders.

Wood. — Norfolk Ave., No. 184, C. P. Fenno & Co., 1 carpet-cleaning factory, 22′ x 50′; Wm. Tasker, builder.

Wyman St., near Curtis, for Ferdinand M. Nagle, 1 dwell., 19′ x 28′; Jacob Luippold, builder.

Perkins St., near Prince St., for William Wallace, 1 ice-house, 105′ x 232′; Jos. P. Shaw, builder.

Mercer St., No. 27, Hattie L. Ham, 1 dwell., 21′ x 32′, Edwin J. Howe, builder.

Williams Ave., near Beaver St., Mary A. Sanborn, 1 stable, 30′ x 35′.

WAREHOUSE. — An iron warehouse and store is being built for Messrs. Bacon & Co., on Oliver St. It is two stories high, size 82′ x 82′; Messrs. Vinal & Dodge and Cressy & Noyes, builders; cost, $10,000; Mr. C. S. Luce, of Boston, architect.

Brooklyn.

BUILDING PERMITS. — *Sixteenth St.*, n s, 62′ west of Seventh Ave., 2 three-st'y brick tenements, 19′ x 45′; cost, $3,000 each; owner, Margaretta K. Welsh; architect, F. C. Merry; builder, P. J. Carlin.

Fifteenth St., s s, 66′ 6″ west of Seventh Ave., 5 two-st'y brick dwells., 19′ and 18′ 6″ x 40′; cost, $3,000 each; owner Margaretta K. Welsh; architect, F. C. Merry; builder, P. J. Carlin.

North Elliot Place, w s, about 44′ north of Auburn Place, 1 three-st'y brick tenement, 22′ x 42′; cost, $4,000; owner, R. Bracken; builder, C. Cameron.

Hewer Place, w s, 289′ s Harrison St.; 2 four-st'y brown-stone tenements, 28′ x 66′; owner, J. W. Dearing, 464 Henry St.; architects, Parfitt Bros.; builder, J. B. Dearing.

Fourteenth St., about 200′ east of Third Ave., 2 three-st'y brick dwells., 22′ and 18′ x 40′; owner, Mr. Holder, Fifteenth St., between Third and Fourth Aves.; architect, E. C. Squance; builder, Wm. Ovington.

Sixth Ave., w s, 60′ north Ninth St., 1 two-st'y brick store and stable, 20′ x 20′; owner, Mr. Fuchs; architect, E. C. Squance; builder, John Beauchanon.

Park Ave., cor. of Graham Ave., 3 three-st'y brick bakery and tenements, 18′, 17′ 6″ and 22′ x 40′ and 60′; cost, $5,000 each; owner, Gustav C. Weidig; architect, Carl F. Eisenach; builders, Smith & Gibbons and Wm. Zang.

Park Ave., n s, 60′ east of Graham St., 1 two-st'y brick stable and carriage-house, 26′ x 57′ 6″; cost, $6,000; owner, Gustav C. Weidig; architect, Carl F. Eisenach; builders, Smith & Gibbons and William Zang.

Hancock St., s s, 130′ e Bedford Ave., 3 three-st'y brown-stone dwells., 20′ x 45′; cost, $7,000 each; owner, etc., J. H. Townsend.

Reid Ave., w s, 20′ south of Bainbridge Street, 4 two-st'y brick dwells., 17′ x 40′; cost, $3,500 each; owner, C. Kolle.

Reid Ave., e s, from Bainbridge St. to Chauncey St. 10 two-st'y brick dwells., 20′ x 40′; cost, $4,000 each; owner, C. Kolle.

Himrod St., w s, 100′ north of Bushwick Ave., 1 one-st'y frame chapel, 40′ x 80′; cost, $5,000; owner, South Bushwick Reformed Church; architect, C. C. Buck; builder, Robert Wright.

North St., Nos. 226 *and* 228, 1 one-st'y brick foundry, 45′ and 50′ x 50′; cost, $2,000; owner, W. L. Schaen, on premises; builders, Thomas Gibbons and Edward Burk.

Hall St., e s, 45′ north of Park Ave., 1 four-st'y hat-factory, 48′ 6″ x 58′ 6″; cost, $3,000; owner, Jane Everts, 91 Clinton Ave.; architect, John A. Hanlon; builder, Thomas Hanlon.

Filmore Place, n s, 109′ east of Fifth St., 1 three-st'y brick tenement, 19′ 6″ x 45′; cost, $3,800; owner, Samuel W. Woolsey, 167 Grand St.; architect, J. J. Clyde; builders, Jas. Rodwell and R. B. Ferguson.

ALTERATIONS. — *Pacific St., No.* 283, roof raised three feet, six inches; also three-st'y brick extension, 8′ x 20′, tin roof, wooden cornice; cost, $2,000; owner, Mrs. Holahan; architect, W. A. Mundell; builders, C. Cameron and J. B. Jacobs.

Meserole St., cor. Old Bushwick Road, altered to five stories; cost, $7,000; owner, Otto Huber, on premises; mason, C. Stohl.

New York Ave., cor. Herkimer St., one-st'y frame extension, 24′ x 60′; cost, $4,000; owner, New York Ave. M. E. Church; architects, Parfitt Bros.

Clymer St., cor. Division Ave., interior alterations; cost, $2,000; owner, W. F. Bridge; architect and builder, G. Holliday.

Chicago.

BUILDING PERMITS. — B. P. Hutchinson, four-st'y brick stores, 100′ x 100′, Franklin St., near Randolph, cost, $40,000.

Whitman, 2 two-st'y brick dwells., 40′ x 52′, 517 and 519 Warren Ave; cost, $8,000.

J. Jerusalem, three-st'y brick brewery, 28′ x 60′, Halsted St., cor. of Reese; cost, $3,500.

C. Koretke, two-st'y brick dwell., 22′ x 46′, Seminary Ave.; cost, $2,500.

B. P. Hutchinson, three-st'y brick store and dwell., 48′ x 56′, 320 and 322 Clark St.; cost, $8,000.

A. Schillo, two-st'y brick dwell., 25′ x 56′, 520 Division St.; cost, $6,000.

M. C. McDonald, 3 two-st'y brick and stone dwells., 42′ x 50′, Lincoln Ave.; cost, $12,500.

John Burke, three-st'y brick store and dwell., 24′ x 80′, 2137 Archer Ave.; cost, 7,000.

Cincinnati.

Building Permits. — During the month of October there have been the following building permits issued: —

H. Hemmelgarn & Co., three-st'y brick; cost, $4,000.

L. F. Menge, 4 one-st'y frames; cost, $2,500.

Robert Rogers, two-st'y brick; cost, $2,500.

J. H. Mack, 4 three-st'y bricks; cost, $17,000.

David Malley, three-st'y brick; cost, $2,600.

G. W. Coolridge, two-st'y frame; cost, $2,500.

James Gamble, two-st'y brick; cost, $2,500.

T. W. Wright, two-st'y frame; cost, $3,000.

J. Bernard, three-st'y brick; cost, $2,500.

Theo. Richter, two-st'y brick; cost, 2,600.

Wm. White, 4 two-st'y frames; cost, $6,000.

Fred Voight, four-st'y brick; cost, $4,000.

28 permits for repairs, total costs of, $15,450.

Total cost for the month, $71,950.

Total permits for the month, 41.

Total permits to date, 600.

Total cost to date, $1,435,900.

New York.

Building Permits. — *One Hundred and Fifteenth St.*, n s, 95′ east of First Ave., 2 four-st'y brick tenements, 25′ x 57′; cost, $10,500 each; owner, William Fernschild, 2162 First Ave.

Willis Ave., w s, 47′ 6″ north of One Hundred and Forty-First St., 2 two-st'y brick dwells., 13′ 9″ x 45′; cost, $33,000 each; owner, Augustus Gareiss, Willis Ave., between One Hundred and Forty-First and One Hundred and Forty-Second Sts.

Fifty-Seventh St., cor. Park Ave., 2 four-st'y Carlisle stone and brick dwells., 22′ and 25′ x 67′ and 64′; cost, $60,000 and $40,000; owners, James & Scrymser; architect, Stephen D. Hatch; builder, Richard Deeves.

Thompson St., Nos. 227 and 229, w s, 100′ south of Amity St., 1 four-st'y express stable, 40′ 8″ x 90′; cost, $15,000; owner and builder, Edward Kilpatrick, 342 East Seventy-Ninth St.; architects, D. & J. Jardine.

East Eleventh St., No. 818, 1 three-st'y brick dwell., 21′ x 40′; cost, about $3,600; owner, Hermann Moritz, 270 Seventh St.; architect, W. Scott West.

East Eleventh St., No. 820, 1 two-st'y brick store, 19′ x 78′; stable, 40′ x 22′; cost, $2,000; owner, Hermann Moritz; architect, W. Scott West.

Pleasant Ave., w s, 50′ north of One Hundred and Fourteenth St., 2 three-st'y brown-stone dwells., 12′ 6″ x 50′; cost, $4,500 each; owner, Benjamin Richardson, 63 East One Hundred and Twenty-Fifth St.

One Hundred and Thirty-Second St., n s, 200′ west of Seventh Ave., 5 three-st'y brown-stone dwells., 15′ x 55′; cost, $7,500 each; owner, M. Just, 1267 Broadway; architect, M. C. Merritt.

West Fifty-Eighth St., No. 232, one-st'y brick stable, 20′ x 100′ 5″; cost, $11,000; owner, James Buell, 18 West Fifty-Eighth St.; architect, W. Wheeler Smith; builders, Joseph Thompson and John Downey.

One Hundred and Twenty-Third St., n s, 250′ east of Eighth Ave., 3 three-st'y brick dwells., 16′ 8″ x 50′; cost, $10,000 each; owner and builder, Charles Hubner; architect, W. R. Dunning.

West Thirty-Fourth St., Nos. 628 and 630, 1 three-st'y brick feed-store, 50′ x 92′; cost, $6,000; owner, J. S. Ostrum, 351 West Twenty-Fourth St.; architect, M. C. Merritt; builders, O. E. Perine and John Farrell.

East Fourteenth St., Nos. 22, 24 and 26, extending to Thirteenth St., 1 five-st'y cast-iron dry goods store, 75′ and 83′ 10″ x 206′ 6″; cost, $75,000; owner, James McCreery, cor. Broadway and Eleventh St.; architects, D. & J. Jardine.

Second Ave., cor. One Hundred and Sixth St., 4 four-st'y brick tenements, 25′ x 61′; cost, $8,000; owner, Wilhelmina Juch, 341 East One Hundred and Fourth St.; builder, W. A. Juch.

One Hundred and Sixth St., n s, 73′ west of Second Ave., 1 four-st'y brick tenement, 25′ x 60′; cost, $8,000; owner and builder, same as last.

Alterations. — *West Thirteenth St.*, raised two stories, four-st'y brick extension, 25′ 6″ x 34′ 9″; cost, $6,500; owner, A. J. McQuade, 537 East Thirteenth St.; builder, J. Fish.

Orchard St., No. 59, six-st'y brick extension, 25′ x 17′ 6″; owners, E. Ridley & Son, Grand St., cor. Allen St.; builder, Wm. Shears.

Green St., No. 51, front alterations and roof altered; cost, $5,000; owner, W. H. Gunther, 184 Fifth Av.; architect, J. B. Snook; builders, Jos. Smith and D. Hepburn; iron by Lindsey, Graf & Meguier.

Church. — The corner-stone of what is to be a large and handsome brick church was laid in Rivington St., just east of Columbia Street, last week.

Home. — Mr. J. C. Cady has drawn plans for the Home for Inebriate Men, to be built on Madison Avenue, corner of Eighty-Sixth St. The building will be of brick and brown-stone, with terra-cotta trimmings, and will cover a lot 65′ x 100′; the cost will be about $50,000.

Flats. — It is reported that a large and expensive flat building will be erected on Boulevard, corner of Sixty-Second St., at a cost of $200,000, for Mr. Jno. Thompson, from designs of Mr. J. C. Markham.

Houses. — Messrs. Lamb & Wheeler have drawn plans for 12 houses, two-story and Mansard roof, to be built of brick, for Mr. Henderson, on Eighty-Sixth St., corner Avenue B, at a cost of about $60,000.

Philadelphia.

Building Permits. — *Emerald St.*, south of Madison Ave., 6 two-st'y dwells., 15′ x 42′; Evan Morris, owner.

Bailey St., west of Ninth St., 3 two-st'y dwells., 16′ x 30′; E. Cubberly, contractor.

Delaware Ave., cor. Bainbridge St., ten-st'y sugar-house; E. C. Knight & Co., owners.

East Girard Ave., Nos. 19 and 21, four-st'y store-house, 38′ x 60′; W. J. Heiss & Bro., owners.

Reese St., south of Somerset St., four two-st'y dwells., 12′ x 30′; Michael Fox, owner.

Ridge Ave., No. 2111, three-st'y hotel and dwell., 25′ x 55′; C. Bachle, contractor.

Richmond St., south of Alleghany Ave., two-st'y dwell., 20′ x 52′; Jacob Ebuer, 1736 Richmond St.

Broad St., cor. Wood St., one-st'y addition to art building, 60′ x 60′; R. J. Dobbins, owner.

Thirtieth St., south of Chestnut St., one-st'y house, 84′ x 84′; Wetherill & Bro.

North Front St., No. 1146, four-st'y warehouse, 18′ x 70′; J. A. Dougherty & Son, owners.

Preston St., south of Aspen St., 4 two-st'y dwells., 12′ x 40′; J. F. Wenner, owner.

Pechin St., west of Schurs Lane, 4 two-st'y dwells., 16′ x 40′; W. Rainer, owner.

Frankford Ave., north of Huntingdon St., three-st'y dwell., 18′ x 45′; H. B. Dennon, contractor.

Frankford Road, No. 3211, two-st'y dwell., 18′ x 54′; John Klebe, contractor.

Thirteenth St., cor. Hamilton St., three-st'y factory, 66′ x 100′; W. Zeiss, owner.

Nineteenth St., cor. Wharton St., three-st'y dwell., 16′ x 50′; Jno. Dougherty, owner.

Additions. — The continuance of improvements among the manufacturing interests will be noticed in the following, viz.:

W. F. Read, of the Victoria Mills, has under course of erection an addition to his factory, 48′ x 55′, one story high.

Jno. Williams & Sons, Twelfth and Carpenter Sts., are building, in addition to their main building, which is under cover, an engine and boiler house, 29′ x 34′.

Messrs. Green & Lineham, iron founders and machinists, on Adams St., Frankford Road, are erecting extensive buildings on Mill St., east of Frankford Road, consisting of foundry 86′ x 124′, one story high, two-story office, 16′ x 25′, a pattern-shop, 20′ x 150′, two stories high, and a cleaning-house, 20′ x 32′.

Thos. Potter & Son, manufacturers of oil-cloths, are increasing the number of buildings by one 50′ x 108′, four stories high.

Campbell & Kickards, Howard and Huntingdon Sts., are building an addition 50′ x 62′.

The Thirteenth and Fifteenth Sts. Passenger Railway Company are building an addition to their car house, at Fifteenth and Cumberland Sts., 64′ x 64′.

St. Louis.

Building Permits. — Twenty-four permits have been issued since our last report, of which six are for frame structures of slight importance. Of the rest, those worth $2,500 or over, are as follows: —

Owners' Name.	Use.	Str's	R'ms	Cost.
George Drage,	Dwell.	..	1	$5,000
J. & P. Shehan,	Dwell.	..	1.	4,000

General Notes.

Austin, Tex. — Texas has a cash balance of about $1,000,000 in the State treasury, which it is proposed to devote to establishing a State university, the building of penitentiaries and a State house at Austin.

Buffalo, N. Y. — The corner-stone of the soldiers' monument to be erected in Forest Lawn Cemetery was laid October 21.

Clifton, Mass. — Messrs. Allen & Kenway, of Boston, are the architects of a house for C. G. Wood, Esq.; size, 40′ x 50′.

Colusa, Cal. — Work has been commenced on the new Catholic church.

Cumberland, Md. — Mr. Chas. L. Carson, architect, Baltimore, is preparing drawings for a cottage for Messrs. Shaw & Bros., 35′ x 40′, two stories and attic; cost, $3,500.

Elyria, O. — The buildings for the Brass Works, consisting of main building, 40′ x 400′, foundry, 70′ x 150′, office, 35′ x 50′, and outbuildings are being built from plans of Mr. C. S. Luce, of Boston; cost, about $60,000.

Fall River, Mass. — Within six weeks, the supervising architect thinks, the new government building will be finished. As soon as it is completed, the contracts for furniture will be let.

Flushing, L. I. — Messrs. Lamb & Wheeler, of New York, have drawn plans for a frame dwelling, to cost about $8,000, for Mr. Morris Franklin.

Grinelle, Iowa. — A block of stores and offices, 65′ x 80′, is being built from plans of Messrs. Allen & Kenway, architects, of Boston, Mass. The building is of brick and freestone, two stories high.

Hannibal, Mo. — A Union Depot 260 feet long is to be built here.

Long Branch, N. J. — For Chas. E. Wallack, a frame house and stable, in the Queen Anne style, are to be erected, at a cost of about $10,000, from designs of Mr. Geo. A. Freeman, Jr., of New York.

Monson, Mass. — The trustees of the state primary and reform schools, have in consideration the erection of a new hospital building for the accommodation of the Monson primary school.

Nashville, Tenn. — Samuel Watkins, the richest citizen of Nashville, Tenn., who recently died worth $600,000, began life as a bricklayer, and left the city $100,000 to increase the knowledge of those unable to attend the higher schools and colleges. The money is to be put into a block, to be known as the Watkins Institute, in which the ground floor is to be rented for stores and business purposes, the second story being devoted to any association that will use it as a public library, and the third to a hall for public lectures.

Newark, N. J. — The corner-stone of a new home for the aged, under the direction of the Little Sisters of the Poor, at Eighth Ave., cor. Sixteenth St., near Prospect Park, was laid October 24.

Newport, R. I. — Mr. C. S. Luce, architect, of Boston, is drawing plans of a house for Mrs. D. Archie Pell. It is a two-story house, 40′ x 50′, and will cost about $7,500.

The trustees of Long Wharf have voted to build a school-house, to cost $10,000.

New Bedford, Mass. — Cyrus Lee is to build a house on Hawthorne St.; George W. Gay is to be the carpenter, and Nathaniel H. Green the mason.

Phillipsburg, Pa. — Mr. E. Ale, of Altoona, is the architect of the large block now building here, size 110′ x 110′, two stories, brick, with Sutherland Falls marble finish; to be occupied for stores and Masonic hall.

Union, S. C. — A town-hall is to be built here at a cost of about $9,000, from the designs of Mr. G. L. Norrman. The same architect is to build a dwelling-house, which will cost $6,000.

Washington, D. C. — Colonel Casey, in charge of the work upon the new State, War and Navy Department Building, has submitted to the Secretary of War a report of the operations pertaining to the construction of the building, for the fiscal year ending June 30, 1880. The east wing was completed at a total cost of $2,672,287.43; the total cost of the south wing, previously completed, was $3,373,939.35. These figures are exclusive of the cost of furniture, but include other expenses. Work upon the north wing was nearly suspended at the close of the fiscal year, but $450,000 having been appropriated by Congress, it was resumed September 15th. It is expected the work will now go on uninterruptedly till June 30th, 1881, when the roof will be completed. The total amount expended upon this wing to date is $975,074.21, and the balance of appropriations on hand is $452,-906.39. The new appropriation asked for the fiscal year ending June 30th, 1882, is $450,000.

Waltham, Mass. — The green-houses and potting-houses on the estate of W. E. Bright, Esq., are being built by Messrs. Ripley & Stearns, of Cambridge. Messrs. N. J. Bradlee & Winslow, of Boston, architects.

McNeil Bros., of Boston, are building a house for Ezra Baker, off Pleasant St. Messrs. N. J. Bradlee & Winslow, of Boston, architects.

Wethersfield, Conn. — The corner-stone of the first Roman Catholic church erected in the ancient town of Wethersfield, four miles from Hartford, was laid October 31. It is intended to have the church ready for occupancy early in the spring, and it will be known as the Church of the Sacred Heart.

White Sulphur Springs, Va. — Proposals will be received up to, and including, November 10th, for building a new hotel. Mr. J. Crawford Neilson, of Baltimore, architect.

Wolf Trap, Va. — Messrs. Wilson Bros. & Co., of New York, are preparing plans for a hotel to be built for the Richmond & Danville R. R.

Bids and Contracts.

Cleveland, O. — Mr. Jno. T. Watterson has been awarded the contract for completing the Plymouth church, which contractor Copperfield left, after putting in foundation.

East St. Louis, Ill. — The contract for the erection and completion of the new grain elevator at East St. Louis, Ill., for the Union Elevator Co. has been awarded to J. T. Moulton & Son, grain elevator architects, of Chicago. The main building measures 87′ 6″ x 177′, and has facilities for receiving and shipping from three tracks inside the building, and shipping facilities to two tracks on both sides of the building, on the outside. The main building is connected with a large shipping tower on the river bank by a belt conveyor, 350 feet long, supported upon trusses. The elevator is to have a storage capacity, when finished, of 500,000 bushels.

Philadelphia, Pa. — Contracts have been awarded as follows:

For building a public school-house at Twenty-Sixth St., cor. Jefferson St.; cost, $33,689, to Chas. O'Neill.

For building an addition to the Kenderton school-house; cost, $6,085, to Hiram A. Miller.

Industrial.

Chester, Pa. — Ground has been broken for a new cotton mill, which is being built for Samuel A. Crozer. It will be 60′ x 160′.

Cresson Springs, Pa. — A large hotel, to contain 250 rooms, is to be built for the Pennsylvania R. R. Co., from designs of Messrs. Wilson Bros. & Co., of New York.

Hartford, Conn. — The Hartford Machine Screw Company are building a new factory, which will cover a space of 200′ x 300′, will be built of brick and stone, and be made as nearly fire-proof as possible.

Meriden, Conn. — The Meriden Britannia Company are contemplating the erection of a new factory on State St., opposite their present one, wing on Miller St. The new building will be four stories high and 440 feet long.

Milwaukee, Wis. — A $30,000 building is to be added to the buildings of the Schlitz Brewing Company of Milwaukee. The building will be begun at once and finished by the end of February.

New Orleans, La. — The Louisiana Ice Company are now at work on their new factory, which is to be built on Front St., between Lafayette and Poydras, and will push it rapidly forward.

Northampton, Mass. — The rebuilding of Vernon Brothers' paper-mill has been already begun. The new structure will consist of a main part, 30′ x 100′; also, two additions, the first 70′ x 86′, and the second, 30′ x 70′. The whole is to be roofed with iron. It is hoped to have the mill ready for use during next January.

Ogdensburg, N. Y. — Mr. Eddy, of Hull, Ill., opposite Ottawa, a manufacturer of pails and matches, is about establishing a manufactory here, where he will employ eight hundred hands.

Springfield, Mass. — The Springfield Sewing-Machine Company will soon begin building an addition to their factory on Taylor St. It will be of brick, 40 x 100 feet, three stories high.

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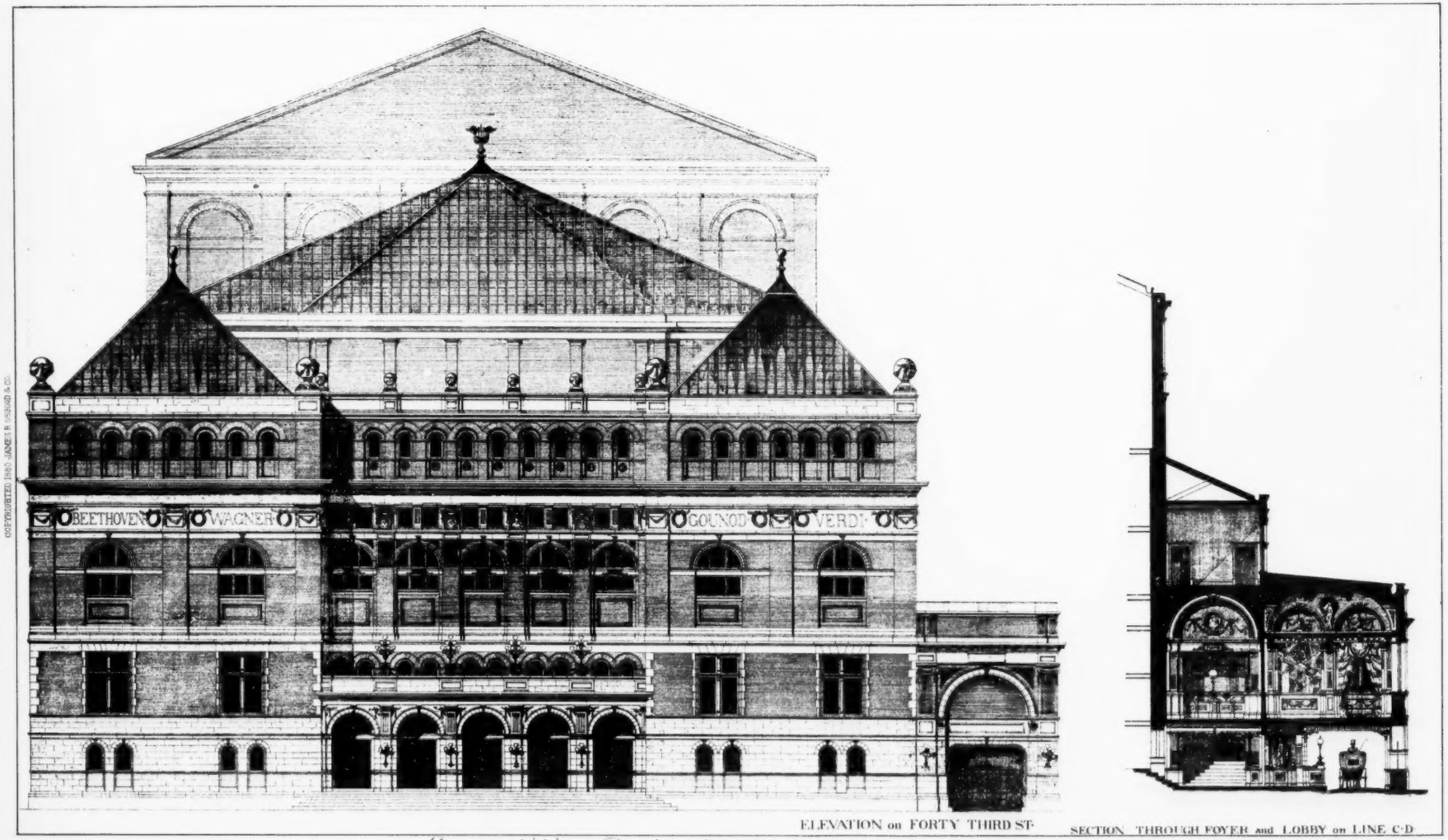


ELEVATION on FORTY THIRD ST.

SECTION THROUGH FOYER and LOBBY on LINE C-D

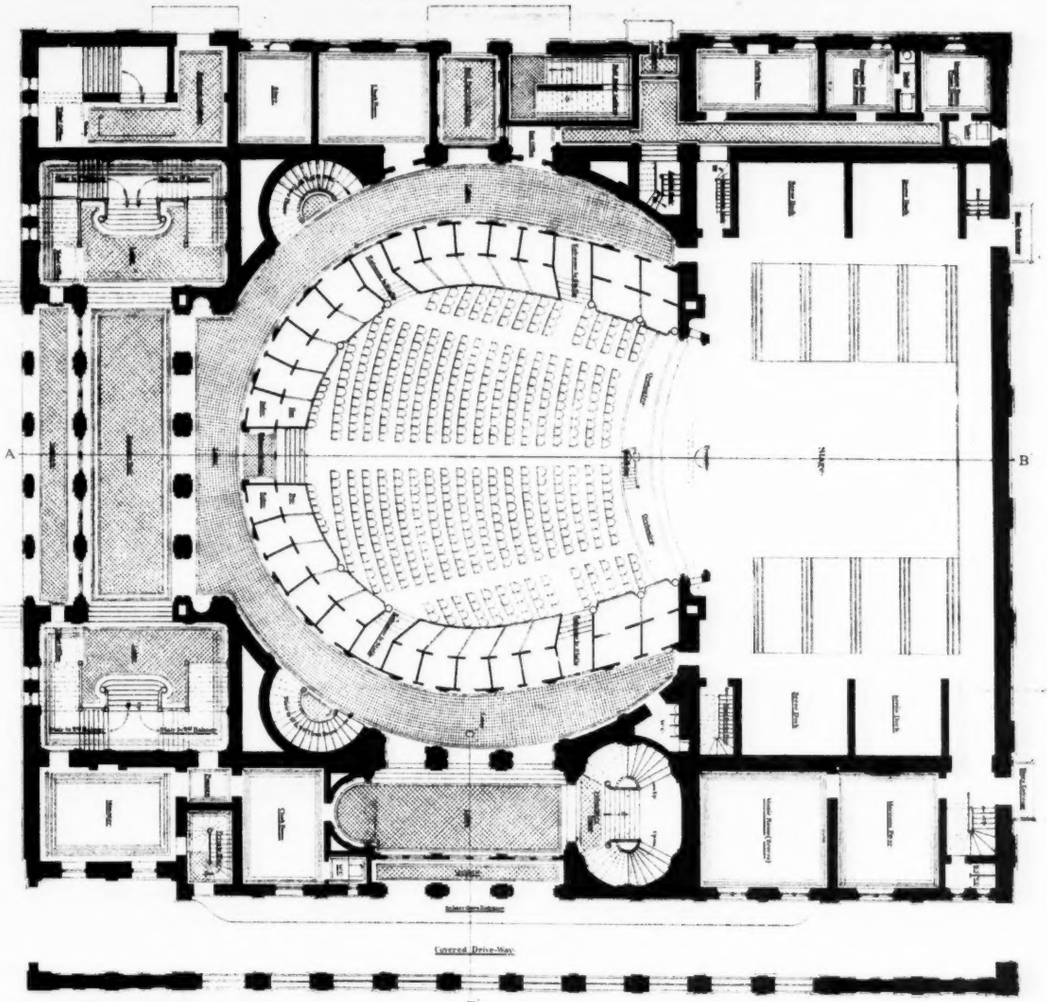
Competitive Design for the METROPOLITAN OPERA HOUSE.

NEW YORK, N.Y.

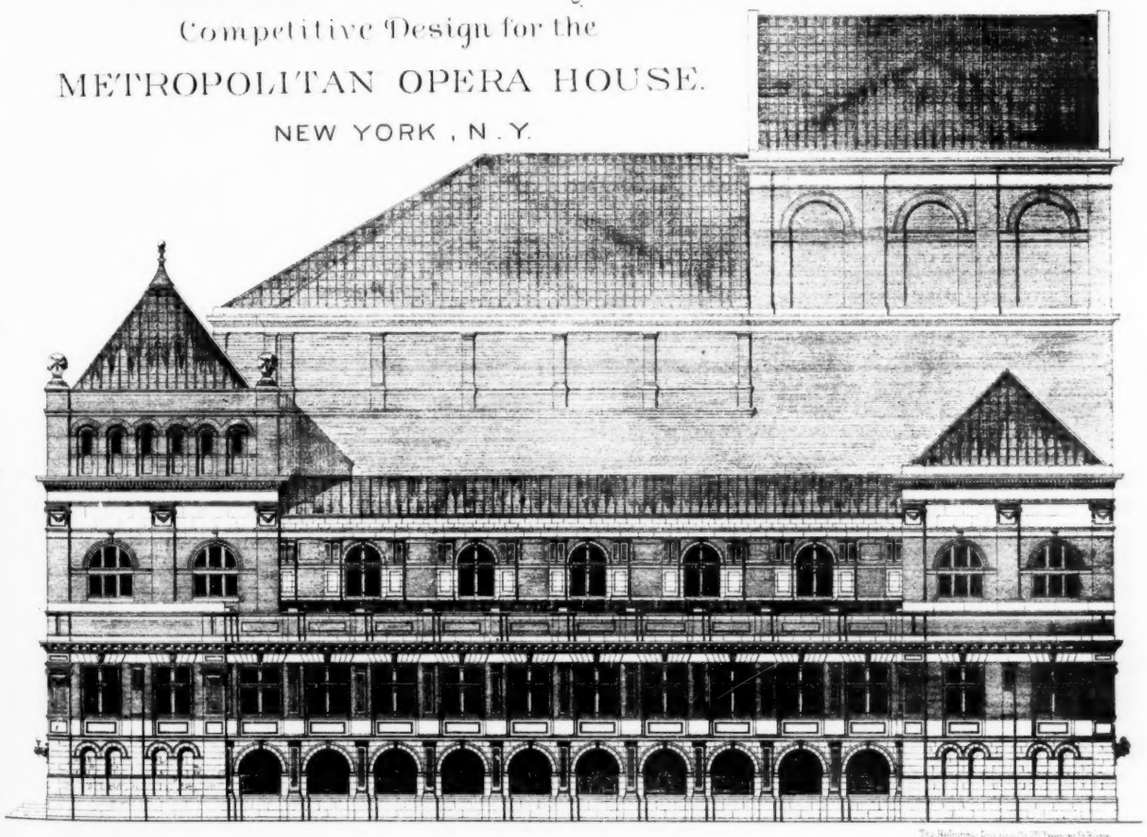
The Heliotype Printing Co. 211 Treasurer St. Boston.

Potter & Robertson Architects 39 William Street

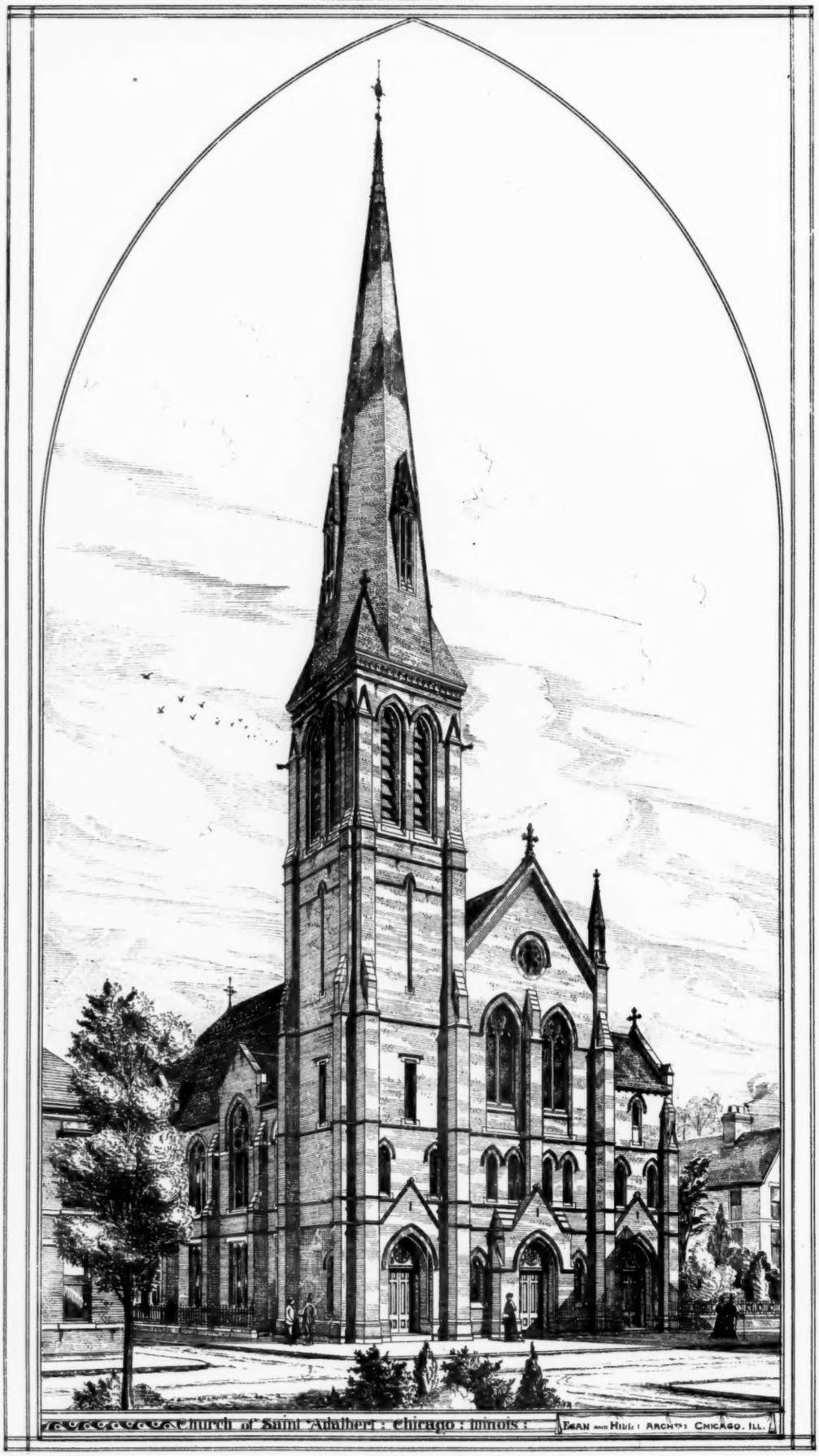
PLAN of ENTRANCE FLOOR with PARTERRE BOXES and STALLS



Competitive Design for the METROPOLITAN OPERA HOUSE. NEW YORK, N.Y.



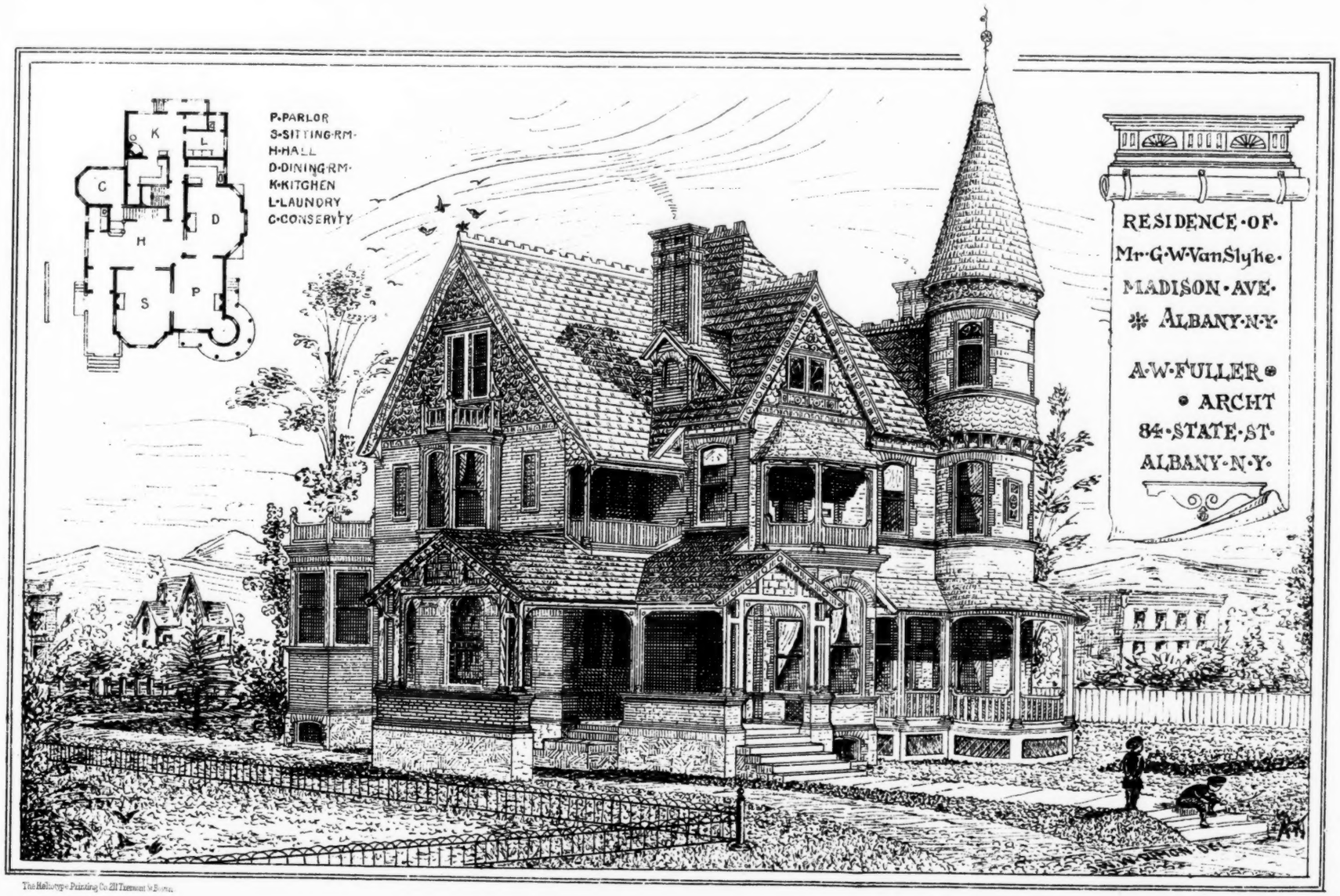
ELEVATION on VANDERBILT AVE.



Church of Saint Adalbert : Chicago : Illinois : Egan and Hill : Arch'ts Chicago. Ill.

The Heliotype Printing Co. 211 Devonshire St. Boston.

American Architect and Building News Nov. 13, 1880. No. 255



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