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WE regret to record the death, on the 17th inst., of Mr. Richard Upjohn, of New York, the first president of the American Institute of Architects, in his seventy-seventh year. Addressed as this journal mainly is to a class which has been accustomed affectionately to regard him as the father of American architecture, it is almost needless here to recall the circumstances of his career. His first essays in architecture in this country were made at a time when the art most needed examples of good style expressed with that soberness and reserve which are the natural results of thorough training and sound, manly common sense. These qualities, which have eminently distinguished his abundant work, were the good seed sown in the midst of the wild and exuberant growth of fancy in which the young art of the nation first endeavored to express itself. We are indebted to Mr. Upjohn for Trinity Church and St. Thomas's of New York, Grace Church and Christ Church of Brooklyn, Grace Church of Providence, St. Paul's of Buffalo, St. Peter's of Albany, the Cathedral at Bangor, St. Paul's of Baltimore, and numerous other churches, besides secular buildings of every kind in all parts of the country. These were to the American public of the second quarter of the century the first monuments of pure style known to their experience; and notwithstanding our notable advance in historical knowledge and aesthetics, and in the experience of art during the third quarter of the century, many of these structures have not lost their power to teach, and none of them have lost that expression of dignity and propriety which belongs to all true and honest work in art. His personal memory will itself "stand like a tower" to those of us who in youth have had occasion to apply to him for counsel or encouragement, or who have associated with him in professional relations. Wise and slow in speech, sound in judgment, kindly and generous in sympathy, of ripe experience and fine instincts, he did more in his day than any other one man to awaken a fraternal feeling in the profession, and to break through the isolation of conventional jealousy and unreasoning distrust in which, twenty years ago, every architect found himself involved. In the earlier days of the Institute, his interest in the cause of professional fraternity was constant and active, and although, towards the date of his resignation from the office of president in 1876, the burden of years so pressed upon him that his official functions became at last little more than nominal, his honorable name alone, with its long train of professional associations, was a standard and a defence. It is not well that a life so full, an experience so complete and symmetrical, should be suffered to pass away without a testimony of respect and affection. The Board of Trustees of the American Institute of Architecture will take immediate action on his death.

IN our next number we propose to present the report of the expert committee of architects, Messrs. J. K. Wilson of Cincinnati, R. M. Upjohn of New York, and H. W. Hartwell of Boston, regarding the competitive drawings submitted for the restoration and enlargement of the Patent Office Building at

Washington, together with a reproduction of the successful design. The Secretary of the Interior has recognized the services of the committee in a letter of thanks, and by the adoption of their award, through which Mr. J. A. Vrydagh, of Terre Haute, has been appointed architect of the new works. This transaction appears to be a very gratifying indication of the satisfactory results which may be obtained from the honest and intelligent use of architectural competition in public works. There are points open to criticism, of course, in this trial case, but under the circumstances we do not see how a fairer and more auspicious beginning of a better state of things could be made. If the final result justifies the means, the other branches of Government, and Congress itself, may learn from this example how the professional resources of the country may be made available in all such national undertakings, thus relieving the Supervising Architect from a kind of labor which it is impossible for him to perform in a manner satisfactory to himself or to the country, and enabling him to prosecute his natural and proper functions as a general supervisor and auditor of building accounts without the distractions and anxieties incident to such an accumulation of purely professional and artistic work as hitherto has embarrassed the operations of this office.

SOME newspapers in opposition to the Government have not failed to take exception to this new departure in the national architectural work, and to criticise it as unnecessary, wasteful, and absurd, quoting the opinion of "several leading architects" of Washington that, while the idea of the design is very good, the design itself is "execrable," and that the proper person to furnish the design and do the work is Mr. Edward Clarke, the Capitol Architect, who is a regularly salaried officer appointed by the Secretary of the Interior, and subject to his orders. The professional character of the board of experts is sufficient to justify us in the belief that, of the designs submitted, the one chosen is on the whole the one best suited to meet the requirements of the programme. Of its intrinsic (not relative) qualities our readers shall presently be able to judge for themselves; for that reason we publish it. The national architecture is a proper subject for free and intelligent criticism. Nothing can be more indicative of a high state of civilization, nothing can more directly serve to raise and maintain a higher standard of excellence, than a tendency to discuss works of art. "The Athenians," we are told by very high authority, "spent their time in nothing else but either to tell or to hear some new thing;" and we may well believe that the architecture about Mars' Hill owed no small part of its perfection to the atmosphere of criticism in which it had developed. As the act of the Secretary of the Interior is, as he says, an experiment to ascertain whether the highest professional ability of the country may not in some way be made available for the national architecture, the charge that, for the sake of a mere sentiment, he has taken a step adverse to the public interests by thus neglecting to make use of the official architect, who may be supposed, of course, to be familiar with this especial building, virtually falls to the ground. If he shall succeed in illustrating by example that there is a better method than the old one, the true interests of the public and of civilization will have been distinctly advanced. The profession cannot remain uninterested spectators of this process of transition.

THE dark cloud of fraud and malfeasance which has lowered around the construction of the St. Louis Custom House is a phenomenon which is not in any degree cleared away by further developments. We had occasion in our issues for December 15, 1877, and January 12, 1878, to draw attention to certain investigations as to the quality of the work supplied under the superintendence of Thomas Walsh, the result of which was that three indictments were found against him and his assistant, Patrick, for conspiracy to defraud the Government, and against Lydden and Runyan, contractors, for perjury in testifying that certain piers built by them and paid for as solid were in reality hollow shams filled with rubbish and grouting. For technical reasons, or for want of what was deemed sufficient evidence, these indictments failed, and at the request of the U. S. District Attorney the cases were transferred to another judge, to be tried in January. This new trial has not taken place, but meanwhile the evidences of fraud against Walsh and his subordinate contractors have so accumulated and have become such a public scandal that, not-

withstanding the alleged unwillingness of the Supervising Architect, who, it is stated, has steadily sustained his subordinate officer while "under fire," the President, under information furnished by the District Attorney, has removed the offending superintendent, and appointed Henry G. Isaacs in his place. The building, we are informed, is only three fifths completed, yet the original estimate of total cost, four millions and a quarter, made at a time when the values of labor and materials were much higher than have since prevailed, has already been largely exceeded. Meanwhile Walsh has been getting rich on his modest stipend of \$10 per day, and of course is not inconvenienced by his enforced retirement. The courts have for some reason refused to allow the appointment of another grand jury to farther investigate the case, and it seems probable at present that the ring will go unpunished. Unfortunately, moreover, the original books in which the quantities of material were recorded as received at the building, and the daily records of laborers and mechanics, as kept by the time keepers, have disappeared, and the prosecution, if any occurs, must rest largely upon Walsh's own papers, which doubtless have been duly prepared for any emergency.

THIS journal has repeatedly called attention to the difficulty of maintaining a sufficient and honest system of supervision over work which is carried on at great distances from the office of the Supervising Architect. The multiplication of contracts in every department of labor and supply, the complication of accounts, the temptation to fraud, the ease with which conspiracies against the treasury may be contrived and maintained, in the execution of great public works of construction, notwithstanding the most accurate system of checks and balances,—all these things show that the duties devolving upon the central office cannot be properly discharged without the most suspicious, exacting, and industrious scrutiny; and even with this, the Supervising Architect must be liable to error and charges of collusion with distant rings. Doubtless the official reports and accounts regularly presented to him are prepared according to form, and arranged to meet and satisfy a usual and methodical system of auditing; he must be in receipt of constant complaints and charges against his subordinate superintendents from dissatisfied contractors, but he has probably learned from experience that these must needs come in the ordinary course of events, and must be duly allowed for. He is bound, as every administrator must be, to sustain his representatives until these charges are proved and these complaints justified. It is not our business to apologize for the Supervising Architect, or to extenuate, palliate, or deny the charges constantly brought against the office by our contemporaries of the press, as in this case of the St. Louis Custom House. We only desire to demand for an underpaid official with large and complicated responsibilities a suspension of judgment in such cases, until incapacity or collusion is made far clearer than is possible with the ordinary facilities of irresponsible observers.

THE condition of some of the California valleys would furnish the moralist with a very pretty image of the sterilizing effect upon the heart of man of the headlong pursuit of lucre. Our first generation of colonists, going there for gold, naturally disregarded all the other advantages of the country, and fell to work to get out the gold in the easiest way, without concern for what the secondary results of their procedure might be. The mining interest, being the first in the community, was allowed its own way, and for a long time nobody thought of providing any defence for other interests which it might hurt. The natural means of separating the gold from the sand was washing, and the easiest way was to carry the auriferous soil to the mountain streams, and let these wash the sand away. This system, developed by machinery, is the hydraulic method of mining practised in California to this day. The first miners, washing away in their diggings among the hills, paid no heed to what went on below them. But now that California is become a rich agricultural State, it is found that her river bottoms, the most fertile part of her lands, are being ruined by the miners. The *débris* from the mines chokes the rivers, raises their beds, diverts their currents, and is spread by the freshets over the alluvial valleys in layers of mud and sand that destroy tillage and cover the fruitful land with barrenness. Says the Sacramento *Record Union*:—

The most fertile area of the northern region is menaced with destruction. It will, if no preventive measures are adopted, be gradually buried under several feet of a barren sand, incapable of cultivation. Navigation of the Sacramento will be stopped, and the river will be transformed into a mere ditch.

THE trouble has reached such a point that the farmers are beginning to unite for self-protection. The land-owners on Bear River, a small tributary of the Sacramento, have formed the Bear River Farmers' Protective Society, and have brought a suit against the company whose mines the river washes, in behalf of one of their number whose lands have suffered. The miners are naturally unwilling to give up a long exercised privilege, even though it is destructive to their neighbors' property, and the suit has roused great interest as the first battle in a struggle of moment. If we may trust the evidence given at the trial, the issue is by no means too soon opened. It was testified that in 1857 Bear River was a clear stream, running through an alluvial bottom between banks ten or twelve feet high; that since then its bed had risen from ten to fourteen feet, so that it had overflowed its banks, in one place leaving its old channel and forming a new one, in others straggling all over the bottom; that the water had become so muddy as to be useless for drinking, for cattle, or even for irrigation; that the land of the plaintiff, Keyes, had been submerged with "slickens" (soft mud) and sand, so that hardly any crops could be raised on it, reducing its value from fifty dollars an acre to ten or fifteen; that his house had been surrounded by a sea of mud, and his orchard of five or six hundred trees destroyed; and that the agricultural population of the valley had been reduced one half. All this injury is ascribed to the influence of the mining; directly, in filling the river with sediment and *débris*, and indirectly in laying bare the rock of the hills, by which the suddenness and violence of the floods after heavy rains is much increased.

WE have received the Fifth Annual Report of the Board of Fire Commissioners of the City of Boston, which, among other things, illustrates in a most masterly way how it is possible to waste public money in printing more than double the amount of information strictly necessary. From it we learn that during the year of which the report takes cognizance there were 514 alarms which called out the fire department; 185 of these were what are known as "still" alarms, and only 278 were fires for which a public alarm was rung. The total loss on buildings and their contents was \$435,730, which is nearly fifty thousand dollars less than in any one of the preceding five years. The report shows that the Fire Department is equipped with thirty-two steam engines, eight chemical engines, one hand engine, sixteen independent hose carriages, and fourteen hook and ladder carriages of various kinds. These are managed by 264 permanent men, who can, on occasion, be reinforced by 349 reserve or "call" men. From the statistics of the fires actually occurring, which are given with much particularity, we learn that the police gave more than half of the public alarms, the members of the department gave about half of the others, while the remainder were given by citizens. One alarm, unfortunately a false one, was given by an automatic alarm, thus showing that, although these apparatus are of extreme delicacy and will be eventually of the greatest use, they require much niceness of adjustment to render them reliable. The damage to goods and buildings which is due to flooding of the building with streams of water, especially since the introduction of the steam fire-engine, has been in fifty-two cases entirely avoided. In these instances the fire-extinguisher and the chemical engine proved able to put out the fire. During the year the department, besides assisting at fires in five neighboring towns, has sent detachments to Marblehead, Mass., Providence, R. I., and Putnam, Conn.

ARCHITECTS AND ENGINEERS. II.

WE took occasion, last week, to deprecate the dissociation which there has been of late years between architects and engineers, and to point out some of the ways in which greater concert between them would be of advantage to each profession in itself. When we consider not merely how the specific work of each has its points of contact with that of the other, but how many matters of general interest are, or should be, the common care and study of the two professions, we see the same reason for concert of action between them that there is for community among the members of each. The same interchange of ideas and the same stimulus of common interest that make valuable the associations of architects or engineers among themselves ought to be as efficient between the two.

Their common subjects of study are very many; some of

them very important, and at this moment very prominent. We may instance the employment of new materials and methods of construction, and the testing of all sorts of appliances for building and of innumerable substances whose uses and properties are as yet undetermined. The problem of the use of metals, especially of iron, the pressing constructive problem of our day, is their joint problem. The fact that the use of iron depends directly on its economy of space and cost makes its design depend more imperatively on its properties than in the case of any other material. It is therefore especially necessary that constructors and designers shall study its employment together. Engineers have inquired cunningly into some of its properties; but there are others yet to be determined. Architects have groped about for suitable forms for its use, without having yet invented any which are satisfactorily characteristic. Questions of heating and ventilation, moreover, even of planning and distribution, as well as of construction in building, require the study of both. The whole of what for want of a better name people have called "sanitation" is common ground. Architects cannot, engineers should not and do not, let it alone. Ventilation and heating, the arrangement of house plumbing and drains, town drainage and sewerage, foundations and grading, are intimately connected among themselves, and constantly bring the engineer and the architect — or at least their works — into contact. The general planning or the physical improvement of towns, a most important and neglected subject, cries out for attention from both of them in consultation. It would be disheartening to say, if it were possible, how many towns have been laid out with mere machine-like formality, or built piecemeal and patched into hopeless confusion of plan, how many natural advantages have been thrown away on them, all for want of some capable authority to look out at once for their convenience, health, and comeliness.

To a certain extent experience and endeavor in all these things are made common by the ordinary means of communication, — by technical periodicals and books, by common observation of each other's work, and by the unnoted transmission which makes ideas common property. But, obviously, nothing is so efficient as personal intercourse between men who are engaged in the same pursuits. Since there is so much to be done in common, it is worth the while of engineers and architects to consider seriously how they can help each other, and increase their usefulness to the public, by joining their forces.

A good deal might be accomplished in this respect, if we would bend the twigs in the direction in which we would have the trees incline, by beginning in the schools, and educating engineers and architects more in common. It may be objected that this would be likely to confuse the bounds of the professions, but we doubt if that would be its tendency. Something of the other's skill is necessary, in fact, to qualify each for his ordinary work, in which it is not, and ought not to be, worth while to call in the assistance of the other. Not only do the two provinces overlap enough to make it desirable, but some study of the other's special work ought also to make each at once more sure of his own footing, quicker to see when he has gone far enough in the direction of the other, and more respectful of the other's power to go farther. We have more than once spoken urgently in behalf of training architects in the theory of construction; a closer fellowship between the professions should emphasize this need rather than supersede it. The architect who is well taught in construction will build more skilfully, and will see more clearly when it is well to call on the engineer, than his less trained fellow.

In like manner it would be well if engineers were given some training in design, for a certain amount of designing they will, in the nature of things, do. The mechanical draughtsmanship that they are actually taught amounts to nothing more than a training of hand. It would do the young engineer no harm to be taught early that beauty of form is a real good, quite apart from ornament, which he may abjure if he will; that the interval between beauty and deformity, measured in inches, may be much smaller than is commonly suspected; that there is usually a considerable "margin" within which, consistently with the most severe and logical construction, proportions and adjustments may be varied to the side of beauty or ugliness, and a wider one within which variation is possible in the interest of beauty without a sacrifice of essentials or of cost worth noting. To this end it is desirable that he should be taught enough of free-hand drawing to clear his perception of form. Then he could be given elementary problems in design, and instructed to

some degree, not in knowledge of styles and of ornament, nor in the historical and eclectic knowledge which architects must acquire, but in the use of outline, proportion, and distribution, the essentials of all design.

It would be well, we think, if architectural and engineering pupils were even required, in the schools, to associate in certain parts of each other's studies, and made to work in common. The architectural student who habitually saw the engineer calculating his strains and dimensions with precision might have the less patience with the careless ways in which many of his fellows use their material. The engineer who had been in the habit of watching the careful study of an architect's work might learn to distrust his own attempts at serious designing. It would even be an advantage if complex problems, involving work of both kinds, could be made a part of their course, and given out to them in common, an architectural and an engineering student working together, each contributing his special skill to the joint solution. Such exercises would teach both early in their career to respect each other's province, and would prepare them for efficient coöperation in actual work, showing them how their ideas might, without injury, be accommodated to each other's requirements, — a thing which it is not so easy to learn after one's habits have hardened in practice.

The actual professional work of architects and engineers gives many occasions, not so freely used as they might be, for personal consultation and coöperation. Now and then there are buildings which are important enough and difficult enough to lead to the employment of both an architect and an engineer. There are many problems in which it would be well if the architect would take an engineer into consultation, or the engineer an architect. There is, to be sure, a pride, natural enough but easily overstrained, in being entirely sufficient for one's own work, which may incline each to look upon resort to the other as a confession of weakness, — a feeling, perhaps, that to do so is to forfeit something of his claim to the plenary confidence which each expects from his client. In this respect the architect will have to make greater concession than his neighbor, for the capable architect must have and is expected to have constructive skill, while the engineer need lay no claim to power of design. But often the architect may reasonably spare himself the sole responsibility of a difficult construction, or may guard against error in his judgment or his computations, by consulting a specialist in construction; and as often the engineer might save his work from needless deformity by taking a lesson from his brother professional. In the way of general repute, each profession would gain more, we are convinced, by the other's tribute than it would give up, while the public would get better work from both.

In most of the German cities, architects and engineers are united in the same professional societies, and all their chief professional journals cover both specialties. In England and France there is less fellowship, but there have been and are journals devoted alike to both together. Indeed, several French engineers have written valuable architectural treatises. The "*Traité d'Architecture*" of M. Léonce Reynaud and M. F. de Dartein's "*Étude sur l'Architecture lombarde*" are known to many of our readers. There is in the United States at least one city, Baltimore, where the local professional society unites both engineers and architects; much to the advantage of both, its members maintain. There are nevertheless many subjects for common consultation peculiar to each profession, over which it would be a waste of time for the other to linger. It is probable, therefore, that in the long run it will be found better that their technical associations shall be separately organized; but we have no doubt that some sort of affiliation, which should lead to their meeting occasionally to consider together the subjects that interest both, would always be found helpful to both. Social societies might wisely arrange for occasional joint meetings, and the annual conventions in which architects and engineers come together from all parts of the country might find it for their advantage occasionally to meet in one for the discussion of topics of common concern.

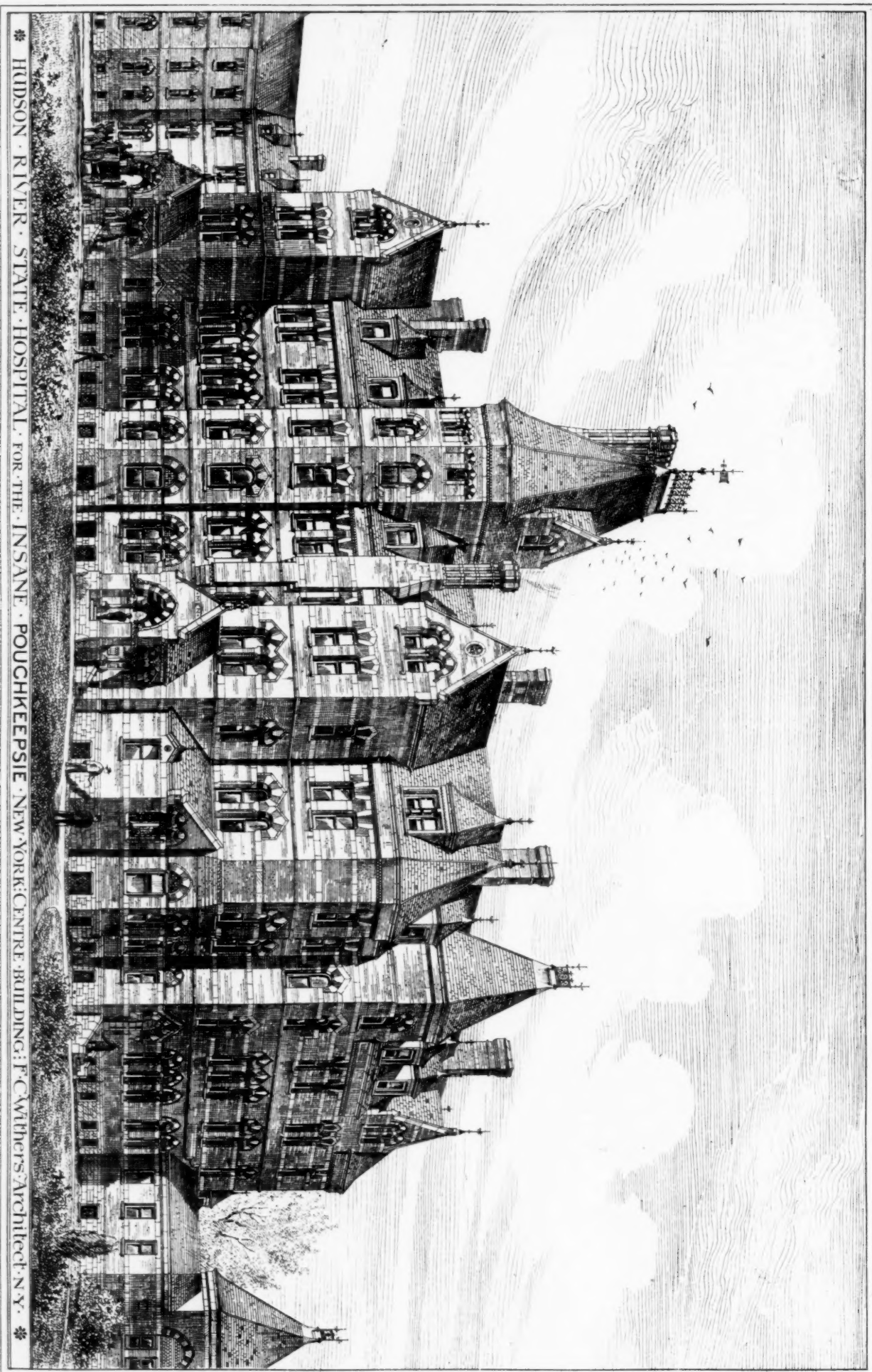
There are probably few countries in which there is more to be gained by union between these two professions than in ours. There is none, perhaps, in which both are growing so fast in acquirement as well as in organization, and none in which people at large need so much to be taught the value of their special training. Mutual support may be made to advance both their acquirements — therefore their usefulness — and the confidence of the public in them.

THE ESCORIAL.

DISMAY unexampled has been created throughout Spain by the official announcement that this unique palace and temple of Spanish pride is to be, in a manner, dismantled, and converted into a gallery of art rather than a tomb. A technical objection to the burial of the young Queen Mercedes may have influenced the royal decision, but it is none the less peremptory on that account; and, in fact, the Escorial is a structure of whose traditions, as they stand, any Spanish sovereign might well wish to be rid, more especially one to whose dead wife it refused a grave. It may, possibly, be in consequence of this that a royal decree has gone forth, transforming the gloomy edifice into a centre of holiday resort and home of pictures and sculpture, from a solitude, of art indeed, yet one which was little more than a melancholy reminiscence for Spain. The guide-books, — even the best of them, — give but an insufficient idea of that lonely, magnificent, long-walled, and high-roofed edifice, which seems like a part of the mountains amid which it stands. The Spanish architects, with all their love of tradition, can scarcely keep it intact: rain drops through the Saracen roof, and wet disfigures the Arabian floors. Yet this was the eighth wonder of the world. Thirty-eight years ago the entire edifice was in danger of perishing entirely out of sight, when a public subscription saved it; but, even since then, revolutions have stripped it of many treasures, and now, except for the intervention of the government at Madrid, with a reasonable purpose, it would be condemned to final ruin. As to the traditions, they are, like most traditions, faulty in the extreme. The structure is not a palace, or convent, or a tomb, but all three combined, and its name may as well be derived from a group of rocks, a cluster of scrub oaks, or a weed, as from the traditional gridiron of the ultra-Catholic saint. Moreover, the history is altogether uncertain which ascribes the building of the edifice to the second Philip, after the victory of St. Quentin. Modern investigations have demonstrated monastic relics of a far earlier date. The broiling work had been done, if legends may be believed, long before the architectural gridiron was constructed. But, as its history is coming now into question, and may rise into importance before long, as substituting a grand picture-gallery of Spain for a sepulchre, some little notice may be worth bestowing upon the great shrine of the dead, built over the site of a Pagan temple. Its first stone was laid, it is said, April 23, A. D. 1563, by Juan Baptista de Toledo, "whose great pupil," says the controversial authority, "Juan de Herrera, finished the pile September 13, 1584," though for neither of these statements have we any absolute warrant whatever. It is not even certain that the Escorial was either designed or erected by Spanish architects — or, still less, by French architects, — at all, while the Moorish genius was still in the enjoyment of its full glory throughout Southern Europe. The Escorial, it is true, has not the Saracenic character; it is not a multitude of green-painted copper-vaulted domes; but it is a tomb, though it was intended to be a palace. Nobody knows who erected it. The King of Spain himself could not tell. A French hodman, Louis Foix, once claimed the credit as his own. Colemanar, Moreri, and Voltaire, all asserted the design as having originated with France. To whom, however, the design is due, it was not a happy one; and the man, half king, half monk, who inhabited the mighty convent during fourteen years, could have felt little more glorious beneath its roof than if he had been an Indian fakir. Still, the Escorial, associated as it has been, through nearly the last three hundred years, with the arts of Spain, is, under all circumstances, a centre of European interest, though not, like the Alhambra, celebrated on account of its architectural and artistic wonders. Those who see it from the neighboring hills are, at a first glance, undoubtedly disappointed. They have come, probably, from the ruins of the Acropolis, or the relics even of Dax, in Southern France, and they find little in the huge Spanish structure which satisfies any antiquarian or artistic sentiment. The building is a vast uprearing of cool, gray granite; its roof is blue-slatted, with leaden pipes and gutters; it might be a manufactory, a prison, or an asylum for lunatics, for all that the outward appearances show. But the whole configuration of the place is a denial of its vulgar traditions. There are no eleven thousand windows, any more than there are eleven thousand chambers at the Vatican, or were Virgins at Cologne; what orifices exist in the heavy walls "resemble a ship's port-holes, and might be real embrasures for cannon," — unplanned for the gigantic structure they were intended to illuminate, — "bits of bigotry," as the writer of the Imperial Philip declared, and altogether degrading to an architect.

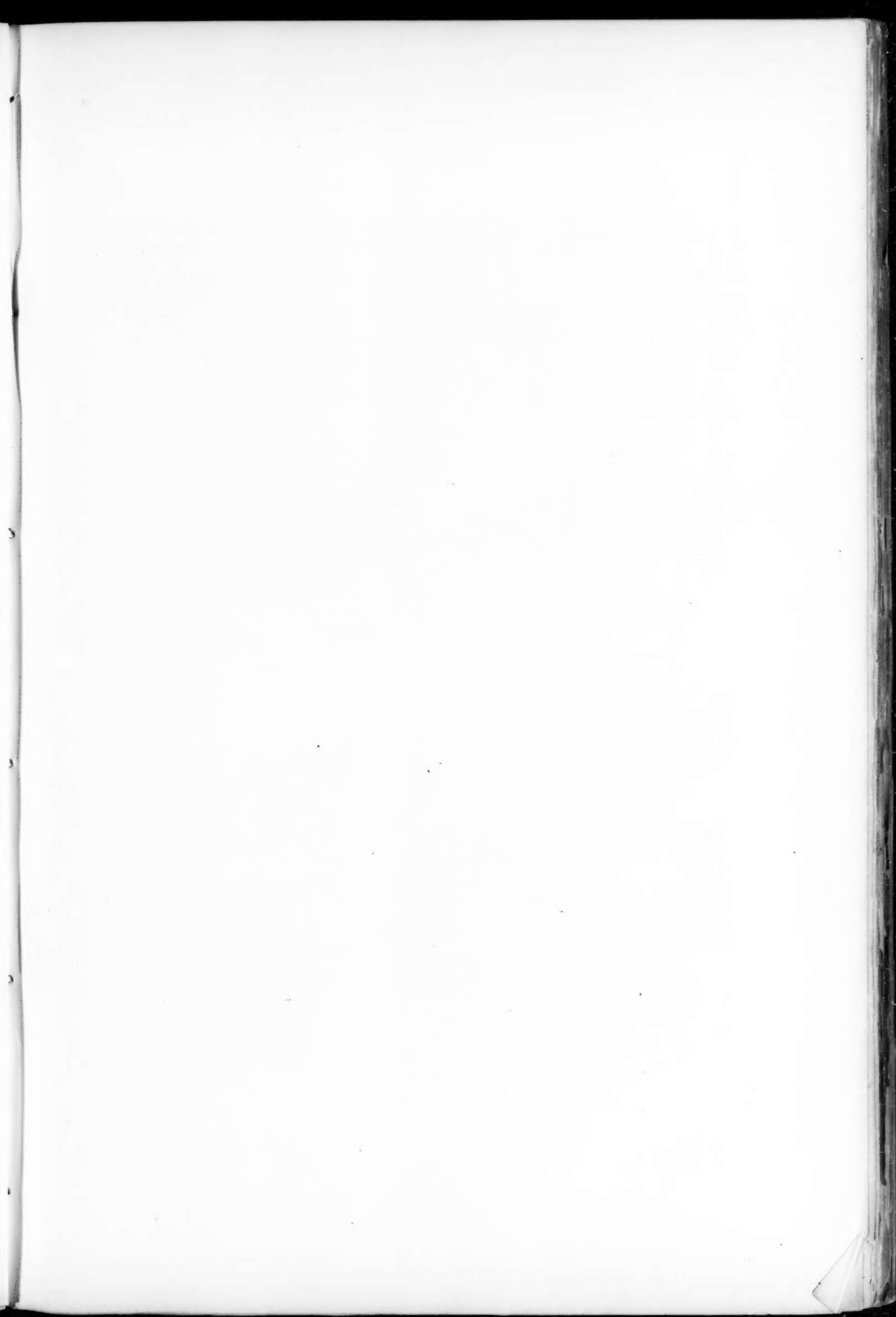
There is no such other building in the world, and we doubt whether it can ever, even as a picture-gallery, be made humanly enjoyable. Viewed from a distance, it looks, as it has been described, like a palace of death. The interior is even more gloomy. Seven hundred and forty-four feet from south to north; five hundred and eighty from east to west, partially Doric in style; gridiron, with a little addition of fancy, in shape; towered at the four corners, platformed in front, and terraced, with fishponds on the upper and under slopes; three thousand square feet in area, and, as the guides are never tired of reiterating, within the centre, the chapel surmounted by a dome; sixty-three fountains, twelve cloisters, eighty staircases, sixteen court-yards, and three thousand feet of painted fresco, "exceedingly magnificent of fame and glory through all countries," so far, the guides. We are left to better instructors when the grand interior is reached. There is nothing to view, except corruption and hideousness, in the Hall of Dead Kings, and little better in the Ves-

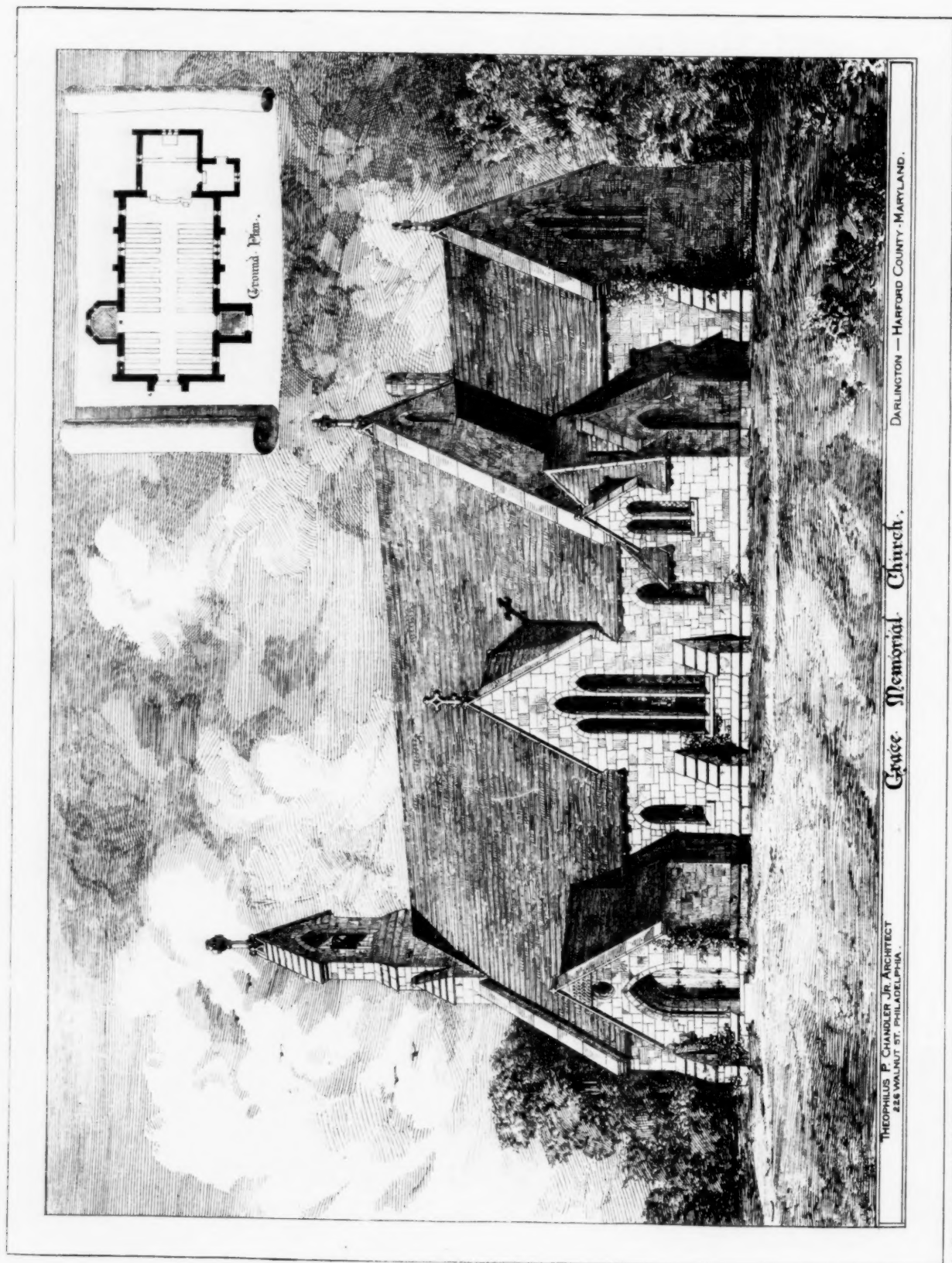
tibule of Sovereigns, with its statues of the Kings of Judah, each seventeen feet high, all cut up, the keepers of the triple structure say, from a single granite block, with hands and heads of marble, crowns of gilded bronze, and figures resembling, in all except their leanness, those of the Caryatides. In the great court the stranger is confronted, and, it may be said, confounded, by a vastness and magnificence nowhere else to be exemplified in the world, not even in the palace regions of Agra, Benares, and Delhi. For, a parallelogram opens upon him three hundred and twenty feet long, by one hundred and twenty feet less wide, marbled, colonnaded, cloistered, partly white, partly colored, some of it cloistered, some of it mosaiced, all intensified in the highest sense and meaning of architectural beauty. There are, in this open space, no fewer than two hundred and seventy-five windows, a barbaric waste of adornment, not giving a proportionate degree of light, because the whole design of the edifice is one of shadow. Nevertheless, something like a splendor is thrown upon the entire group of palaces, or temples, or monasteries, or whatever they may have been intended to represent, by the grand Arabic flat roof, the half-hidden choir, the cavern-like arches, and the perfect distinction of the mighty edifice from all other monuments approaching it in glory between the West and the East, the North and the South, of Europe. The eye is first attracted, not by ornament, but by the absence of it, — no gold and purple virgins, no blue and gilded infants, — all simple and solemn; but so far away from the present life of Spain that little wonder is left when its reigning king determines that the Escorial shall be, not tomb, or convent, or oratorio, but a bright and monumental gallery of art. Already it is so, in a particular and special sense. The chapel, in itself, is of more than Roman magnitude, three hundred and twenty feet long, two hundred and fifty feet wide, and three hundred and twenty feet up to the top of the cupola, the warning and the stigma over-crowning all, that "God alone is great!" Unlike the Alhambra, the Escorial was never devoted to other than a Christian purpose. For in it there was no "last of the Abencerages;" it has been, from its foundation, a Christian palace, temple, and sepulchre, and is now to be the Vatican of Spain. Yet, long ago, and since its existence, it has inclosed a world of art, with the red-veined steps of its high altar, its jasper columns, gold and bronzed bases; its Cangiaqui frescoes, and its senseless San Lorenzo on the gridiron. Never was so lofty a Christian shrine thus wantonly degraded, with its gigantic saints and its martyrs; its brass medallions and pasteboard roof; its wooden tabernacle and its gilded effigies of kings. The reigning monarch of Spain, according to the decree, intends, however, to respect the ancient art conserved in the chambers and corridors of the Escorial, while dedicating them to a more exact and distinctive purpose in connection with the arts for which the Spanish genius has so long and so superbly been celebrated. The bronze-gilt figures in the oratories will not be removed, or in any way disturbed; the painted effigies will still kneel at their grotesque altars, and the profane epitaphs of former Spanish monarchs are to remain unashamed of the dust by which they are rebuked; while, again, "the statues which are portraits," will not be displaced; but there is abundance of room for the royal pleasure, even though the works of Giacomo Trazzo, Lucca Giordano, and the Pellegrino Tibaldi are superseded with those, the bronze medallions, the holy rood, and the fifteen gilt statues of Pompeo Leone, not to mention the Saviour on the column, and bearing the Cross, and the Ascension of the Virgin, by Z. Zuccaro. We have here the nucleus of a magnificent Spanish National Gallery, glowing with Spanish art from the days when Spanish art was in its zenith, at its climax, and, indeed, in its perfection. Already, as we have said, those who have visited the Escorial must have recognized on its walls the masterpieces of historical portrait-painting. Assuredly, we have never admired, in the much-boasted Bavarian galleries, portraits equal to those of Philip II., the mother of Philip III., and Don Carlos, comparatively modern though they are. There are fifty inferior altars in the Escorial, each surmounted by a picture, which is not invariably a portrait, and archaeologically interesting as illustrations of armor and costume. Besides these, we have reckoned over the canopies of Navarette the Dumb, who "spoke with his pencil," the Spanish Rubens, the Zuccaro, the Sanchez, and the Tibaldi. It is to be marvelled at, however, how the young King of Spain can imagine himself as possessing a power to contradict all the traditions of his ancestors by transfiguring, as it were, this triple shrine into a sort of commonplace picture and sculpture gallery, when its principal traditions are so kingly, historical, or sacred. The Relicario itself must be removed before the building can be secularized; eleven whole bodies, three hundred heads, "Hunter," says Murray, "never founded a finer anatomical museum." A thousand other points might be polished in this light, but they are scarcely worth keeping in sight. The interest, for the living generation, consists in the future destination of the Escorial, as decreed, in his bereavement, by the young King of Spain. We have to remember that the Spanish monarchs possess absolute authority in these matters. Philip II. "kept these precious relics in five hundred and fifteen shrines of Cellini-like plate, some wrought by Juan D'Arfe, but La Houssaye took all the bullion, and left the relics on the floor. These, when he departed, the monks collected in baskets, but, in the confusion, many of the labels got undocketed, so that," etc. But, in all this splendid pillage, there were sacred images and vessels of silver and of gold, with other wonderful works in the precious metals; yet with these the world of to-day has little

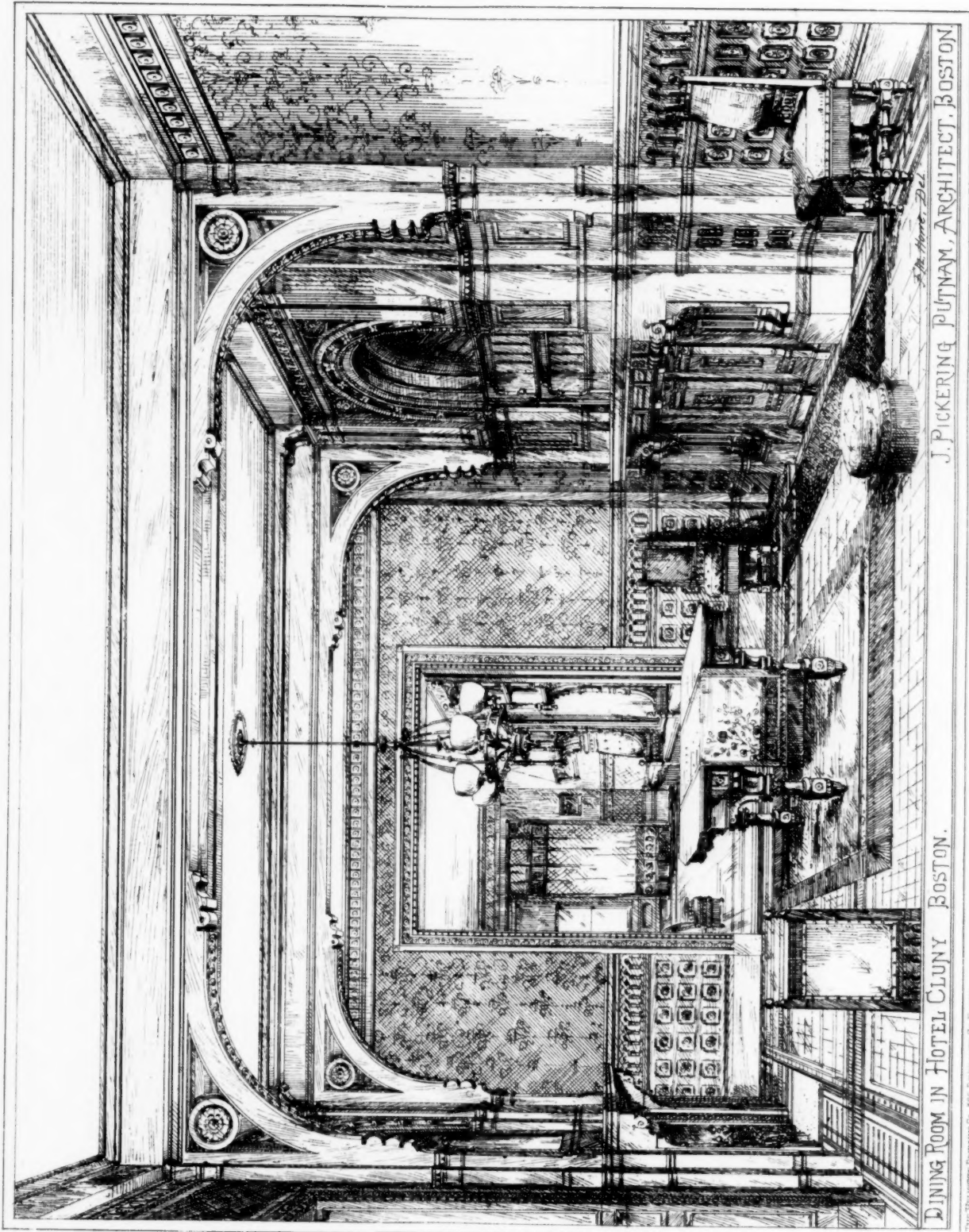


* HUDSON RIVER STATE HOSPITAL FOR THE INSANE. POUCHKEEPSIE. NEW YORK. CENTRE BUILDING. F. C. Withers Architect N.Y. *

THE ENGRAVING PRINTED BY AND PUBLISHED BY TOWN



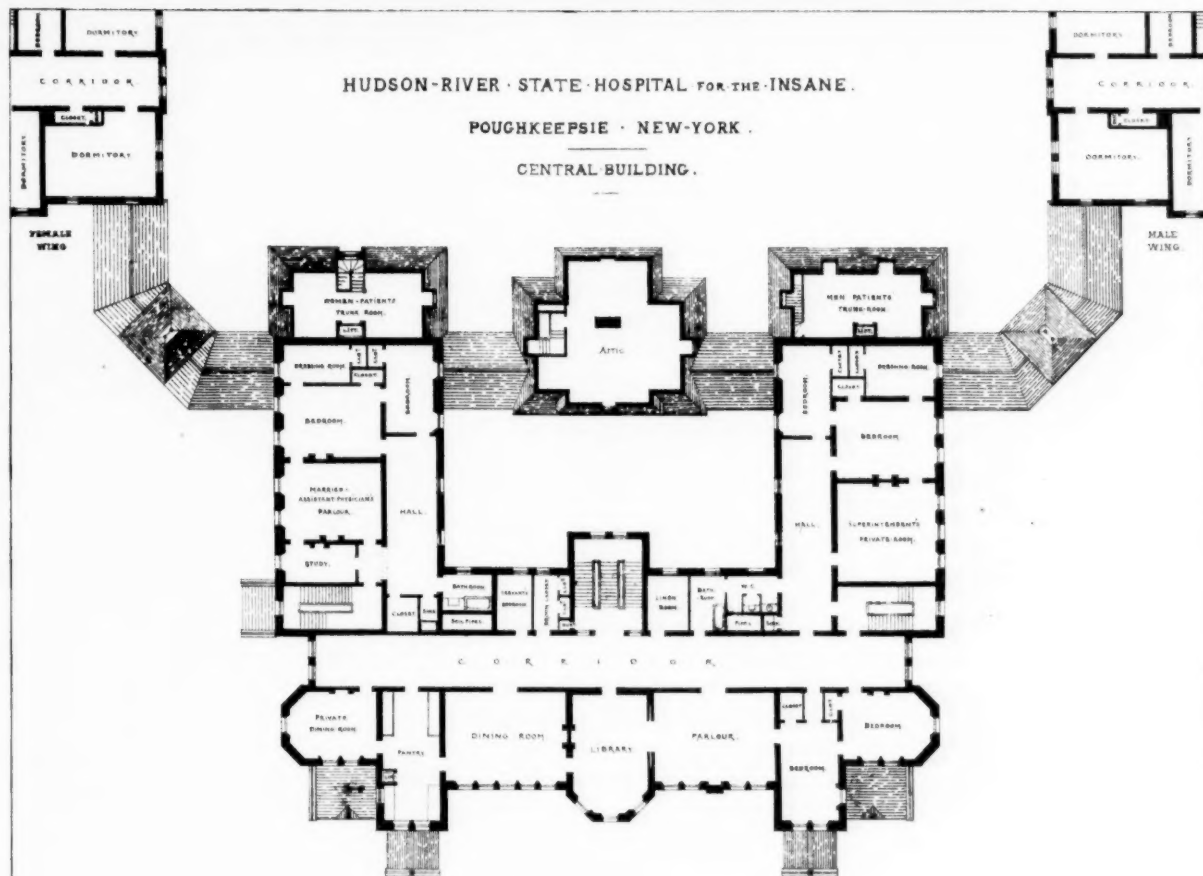




J. PICKERING PUTNAM, ARCHITECT, BOSTON.

DINING ROOM IN HOTEL CLUNY BOSTON.

THE HALLS OF THE HOTEL CLUNY, BOSTON.



PLAN OF SECOND FLOOR.



PLAN OF PRINCIPAL FLOOR.

FREDERICK C. WICKMAN
ARCHT. PAUL
120 DEVENSHIRE ST. BOSTON

enough to do; it descends, indeed, into the royal tomb, and finds nothing there beyond royal tombs, chamber-houses of death, gorgeous and ghastly with Spanish marble, gilt, and the customary Golgotha decorations. Then, a deep vault, with a land-spring, irrepressible, heard trickling behind its masonry. Afterwards, as an Italian author, copied by an English gazetteer, writes, "descending again by a green and yellow-colored jasper-lined staircase, at the bottom of the Panteone," there is an octagon, so many feet high and wide, with crucifixes, niches, and figures, sculptured by all manner of Italian artists, though not claimed as belonging to any especial type of modern, mediæval, or ancient art. The resolution of the young king, however, is rather an unsatisfactory one at the best. The Escorial is one enormous grave. It is a place of royal tombs, although, notwithstanding the terrible legends related concerning old kings and queens of Castile, the Pantheon, the Sacrista, the Camera, the palaces, and the many churches, are full of Christian history and inspirations, with the rich, dark stalls of the chapels, the low and the high stall, the Titian cloisters, and the Corinthian illustration, wrought in several varieties of wood, of the victory of San Lepanto, with its overshadowing blues and yellows, colossal books, and Syriac emblems of silence. The Escorial is, to some extent, an *epitome mundi*, a history of the modern world, on a small scale, with all its chronicles of guilt and misery; but we have nothing to do with that, — only, indeed, with the guide-maker's information, — "Walk through the royal suite of rooms, which are not very royally furnished. First visit Don Carlos's, with some pictures, a stray piece by Ribera, but a fly and a poodle are most pointed out. There is some good Madrid tapestry of hunting subjects; some china, some fine marqueterie panelling and steel hinges inlaid with gold." Amid all this wealth of art, we find the Escorial so singularly rich as to become a wonder that its treasures were never appreciated before. It was the Christian Alhambra. — *The Building News*.

THE ILLUSTRATIONS.

HUDSON RIVER STATE HOSPITAL, POUGHKEEPSIE, N. Y. MR. FREDERICK C. WITHERS, ARCHITECT, NEW YORK.

IN our issue for March 30, of this year, we gave an illustration of a portion of one of the wings of this asylum which had lately been completed. We now give a view with plans of the Central or Administrative Building, which is nearly finished, and will be ready for occupancy some time this year. The plan provides for distinct entrances for the different sexes, with waiting and reception rooms for the patients and their friends, all of which will be under the immediate control of the superintendent, whose offices will be in the centre of the building. The Dispensary Building, one story in height, is placed in the rear, so as to be accessible from either of the wings. In the second floor will be accommodations for the managers, the superintendent, and the married assistant physician; and in the floor above for the other officers of the establishment, with rooms for the servants in the attics. The walls are of brick with finish of Bigelow blue stone and Ohio stone.

DINING-ROOM IN THE HOTEL CLUNY, BOSTON, MASS. MR. J. PICKERING PUTNAM, ARCHITECT, BOSTON.

This room is one of a suite of apartments occupied by Mr. W. H. Newman, the owner of the hotel. It is finished in oak with a parquetry floor of maple and cherry. The walls are treated with a paper of Pompeian red with a rich gold figure, and the ceiling in buff with a few lines of color. The general tone of the wall surface, notwithstanding its color, is quiet, and the rich carvings of the woodwork are well relieved against it. Adjoining this room, as shown, is the parlor, finished in cherry very richly carved, ebonized, and gilded. All the carvings of these rooms and of the suite were done by the contractors for the building, Messrs. Morton and Chesley, of Boston. The plans and façade of this building were reproduced in our issue for August 3.

GRACE MEMORIAL CHURCH, DARLINGTON, MD. MR. T. P. CHANDLER, JR., ARCHITECT, PHILADELPHIA.

CORRESPONDENCE.

THE FAÇADES IN "THE STREET OF THE NATIONS."

PARIS.

A SOJOURN in Paris is often said to be worth a journey round the world, since members of so many nationalities frequent it; especially is it so now, when at the Exhibition one may see a knot of Norwegian students in white caps and evening dress clothes elbowing aside a band of Algerians or Persians in white flowing robes, or a group of Brittany peasants, unconscious of their costumes of three hundred years ago, laughing at the pig-tail of a Chinaman. Above all are these costumes interesting as one strolls down "The Street of the Nations." This is the right-hand of the two avenues which divide the semi-detached Pavilions of the Fine Arts from the other Exhibition galleries. It was a happy idea of M. Berger, director of the foreign sections, that the different countries should decorate the fronts of their sections upon this avenue each with its national style of architecture. The idea has in general been well carried out, and adds a decided interest to the Champ de Mars.

First comes England, with a far larger area than any other country, France of course excepted. She has divided her frontage

into five detached façades. The first a small city house, of brick I was about to say, but which is in fact built of a patented invention which imitates brickwork, by screwing on to a wooden frame sheets half an inch thick of some painted plaster preparation. What lofty national aspirations are thus symbolized by sham brickwork, I cannot imagine, but as it was erected before Lord Beaconsfield resuscitated English prestige, possibly now that nation may find it unworthy of her new dignity. The second building, especially set apart and furnished for the Prince and Princess of Wales, is no less unworthy of their national architecture, for it is almost a burlesque in brick and stone of an Elizabethan façade, so poorly does it represent that fine old style. After this comes a front in terra-cotta, a florid advertisement of the Lambeth pottery works. Then follow two neat and pretty cottages, showing unpainted timber framing in the old English style.

The next building is that of the United States. I am tempted to pass it by unnoticed, as I have tried to do for very shame, when walking by with foreigners; but one must be more frank with one's countrymen, who at least know of what we are capable. Frankly then, our façade is a disgrace to our country and to our art. Disgraceful to the former because it is cheap and paltry, and to the latter for its tawdry vulgarity. The French critics have said little about it, as coming from a land from which they expect only machinery and raw products. In the best guide to the Exhibition there is, however, an ingenious explanation, perfectly sincere, prompted evidently by kind feelings towards us and by reminiscences of the play of "Uncle Sam." It says that the United States with characteristic originality wished probably to show, as a type of national architecture, with what rapidity a temporary bar-room (*guinguette*) is put up in one of those wonderful cities of the far West! National pride can blind us to much, but all the gaudy shields of the various States which bedeck it cannot hide the fact that this is a perfect description of what we put forward as our contribution in the way of architecture.

From this point the façades improve. Sweden and Norway appear hand in hand, with two well-designed chalets of unpainted wood, the two joined by a gallery. The Italians have a loggia of five bays, the central one raised into the chief feature. Italy's best art industries are expressed in the building. Columns of a composition called *marmoridea* wonderfully imitate real marble. Delicately moulded terra-cotta pilasters, as well as mosaics and *sggraffiti*, — arabesques in monochrome, — are representative features of their work. The Japanese, with their wonted sober appreciation of artistic contrasts, have chosen that only a massive wooden door should give access to their world of delicate devices. Next, a gray stucco wall, stamped with fine white squares and pierced by a characteristic portal, announces the fantastic and ingenious Chinaman. Spain clothes herself gayly in the style of the Alhambra, with many colors and stalactites. Austria, not caring perhaps to offend its many jealous nationalities by a preference, has taken refuge in a most non-committal portico of coupled columns and round arches, the whole decorated with black arabesques on a light ground. Even at some distance from it the visitor is aware of something unusual before him; but it is not until he stands in front of Russia's façade that he realizes what a gallant effort she has made, in spite of the ruinous war upon her hands. She certainly has the second best of all the façades. It is of wood, and consists of a central building with steep roof connected by galleries with a large and a small pavilion, the latter reached from without by an open stairway such as is common in the churches in Moscow. It produces a curious effect to see high, steep roofs combined with dormers and turrets capped by Oriental bulbous shapes, while a heavy basement of logs contrasts with the fantastic Eastern designs in the carved window caps. But this mingling is characteristic of the "Colossus of the North," whose feet are planted on the Asiatic sands. The ornamented parts alone are painted, and in simple primary colors. The designs were sent from St. Petersburg and are said to have been suggested by the palace of Kolomna, near Moscow, where Peter the Great was born. Switzerland is tired of her chalet and appears in a more original garb. One enters under a huge portal surmounted by a gable over an open arched balcony. We are now before the finest of the fronts. Not only did little Belgium give six hundred thousand francs for this building, but her clever architect, Jaullet, has produced a real work of art in combining a historic Flemish with a modern style. A fine central pavilion, with fantastic sixteenth century Renaissance gables and dormers, is joined by modern galleries on one side with a quaint bell-tower, and on the other with a dwelling and school-house. The whole, of brick and stone, is most intelligently designed. Without ostentation many marbles and "exhibits" are introduced and quietly labelled, making it as useful as might be. It was, I believe, erected first in Belgium and then taken down to be rebuilt here, and will return to take a permanent place somewhere as a national monument. It has, in conjunction with the very fine exhibition of Belgium, added greatly to the prestige of that busy little state.

After these dark northern stones and bricks a blaze of light heralds something southern, and introduces us to Greece, represented by a house of the time of Pericles. Two stories with a slightly projecting loggia from the second suggest Greece more in the details than in the general aspect, which seems just to miss the real Hellenic character. The effect of dazzling white relieved with judicious polychromy in delicate lines, not in the brutal masses of some enthusiasts,

is at least one of studied refinement. Denmark's front would, but for the interposition of the Grecian one, have been mistaken for a continuation of the Belgian, as it is also Flemish Renaissance; but imagine one's surprise when the same style appears markedly, though with other influences, in the façade of Central and South America! A southern climate has transformed the steep, high roofs into terraces with balustrades; but here are the same little elongated pyramids rising from all the angles, the same quirks and curls in broken pediments. A moment's reflection explains this resemblance. Central America draws its traditions from Spain, who in her turn has been in times past much under Flemish influence. This influence, however, almost disappears in the second part of the building, which consists of three open arches supporting a second story, from which projects a light covered balcony closed in with glass. The whole is completed by a rather ugly square tower. Partnerships continue the fashion here, for next come Persia, Siam, Tunis, and Morocco. Each has a narrow slice of the front, and all are thoroughly Oriental. The most curious is the bit over which the White Elephant of Siam floats. It is of dark brown wood ornamented at the angles by what looks at first like forged iron work, but turns out to be the wood polished and rubbed with something which gives it a metallic lustre; add to this a Chinese-looking roof with turned-up angles, and the effect is most original. With the Grand Duchy of Luxembourg and the Principality of Monaco are associated two tiny republics of which the world seldom hears: the first, San Marino, in the northeastern part of Italy, is one of the smallest and oldest states of Europe, with an area of twenty-one square miles and an army of eighty men; the second, Andorra, on the south side of the Pyrenees, received its independence for aiding Charlemagne to defeat the Moors in 790. With its area of one hundred and ninety-one square miles it may lord it over its microscopic associate republic; but I fear neither are usually cited on the "Glorious Fourth," as hoary ancestors of our own republic. Its administration is directed by twenty-four consuls, elected from the population, I believe.

After this geographical excursion, — did I not say a visit here was like travelling round the world? — we stop before the imposing front of Portugal. The superb old monastery at Belem near Lisbon has furnished a magnificent recessed portal, filled with elaborate and fantastic carving, reproduced in plaster from the designs of M. Pascal, taken on the spot. Window tracery from the same building, of most curious southern Gothic design, divides the sections in the interior. As if to make up for their small frontage, most of these last countries have continued their style in the interior, while the first ones have left the interiors entirely to the exhibitors themselves. The Low Countries have a fine monumental structure in brick and stone, with lofty tower; and this brings us back to France and the rear vestibule, whose vast proportions make the avenue and its ordinary-sized houses seem like baby-houses as one looks back. R.

THE CONNECTICUT THEOLOGICAL INSTITUTE. — STATUES FOR THE STATE HOUSE. — EPISCOPAL CHURCH AT NEW BEDFORD.

HARTFORD, CONN.

THE most recent architectural work of marked importance in Hartford is the Connecticut Theological Institute, soon to be built from designs by Mr. F. H. Kimball of this city. The site upon Broad Street is an exceptionally good one, the lot having a frontage of two hundred and twenty-five feet and a depth of nearly three hundred. From the partially perfected plans, it is learned that the Broad Street façade will measure about one hundred and ninety-five feet, inclusive of the library which is connected with the main building by a covered way fourteen feet long. The main building is flanked by this library and by the chapel, running from which, and at right angles, is a long wing, terminating at its further extremity by a dining hall, beyond which again, in a partially detached building, are the kitchen, kitchen offices, etc., with servants' quarters above. A wing parallel with that connecting the chapel and dining hall, will be built on the opposite (or south) side of the lot, thus forming three sides of a quadrangle, the fourth side will in time be completed by a block joining the dining hall, and provision for future dormitory accommodations is made by the extension of the south line of buildings. The materials used in construction will be brick and light-colored stone. It is designed to make the library fire-proof. The chapel, located at the junction of the two principal lines of buildings, will form a prominent feature of the general design, and will have bold projections which serve to break up the lines of the adjoining blocks. The principal approach to the Institute will be from Broad Street, while the chapel has an entrance on the north side. The main building will be three stories in height, and besides a reception room, president's room, etc., will contain lecture-rooms, which with a corridor on the rear side occupy the width of the block. The north and south wings contain, upon this floor, respectively, lecture-rooms (with janitor's quarters near the dining hall) and a professor's study, reading-room, etc. The capacity of the chapel can be increased by the use of the adjoining lecture-rooms both in the main building and the north wing, these rooms having large folding doors upon the chapel side. A covered way extends along the south side of the north wing, from the main building to the dining hall, which interiorly will measure about twenty-eight by sixty feet. Communicating with the wide corridor in the main building, at either end, are the principal staircases built in the square towers at the intersection of the main building and the wings.

Above the lecture rooms, etc., the first floor, on either side of a central corridor, will be occupied by the students, whose quarters consist of a study and a separate bedroom, both well lighted and ventilated. Each study being also furnished with a fire-place. A few rooms are arranged for two men, but the majority offer single accommodation. In the wings the corridor is on the north side, thus giving to the apartments the proper southern exposure. The south wing contains an intermediate floor occupied by students' rooms, and the upper portion of the dining hall building will also furnish additional quarters. The second floor throughout will be occupied by students' rooms. A gymnasium will be built in connection with the Institute. Excavations are now being made, and the foundations will be put in at an early date. When completed the buildings will have cost in the neighborhood of seventy-five or eighty thousand dollars.

The State of Connecticut may regard with pride the embellishment of her Capitol with statuary. As mentioned in a former letter, two of the many canopied corbels, provided in the architect's design for the reception of statues, have already been occupied by the figures of Connecticut worthies, and recently large blocks of Carrara marble have been received at the works of the contractor for the building, J. G. Batterson, from which statues to crown the pedestals about the capitol dome are to be cut. The statues, twelve in number, will be at the base of the cone, and standing out in bold relief will produce an unquestionably fine architectural effect. They will be cut from models which have been made by Mr. J. Q. A. Ward of New York, and by May 1, 1879, they will be set in place according to the terms of the contract. The price of the statues will be \$1,200 apiece. The commissioners have also ordered one of the medallions upon the eastern façade of the building over the entrance, to be cut. This medallion, one of many on the front, will be enriched by a sculptured head of Dr. Horace Bushnell, a prominent theologian and a man to whom Hartford is in a great degree indebted for the ample park close by which the capitol has been built. The head of Noah Webster will form the subject of the second medallion. The crowning figure of the dome will be of bronze. It is a lofty statue symbolizing the "Genius of Connecticut," and is by Rogers, the American sculptor at Rome. The figure, which was cast in Munich, weighs six thousand pounds, and is now on its way to this country.

Mr. F. L. Olmsted of New York has furnished surveys and plans for laying out the grounds about the building, and already work has begun. The two remaining buildings formerly occupied by Trinity College will be removed this season, and under skilful treatment a handsome park will be laid out. A prominent feature of this plan is the preservation, as far as practicable, of the fine old trees which adorned the college campus.

Mr. W. C. Brocklesby of this city has in hand an Episcopal church now building at New Bedford, Mass. The church will be built of brick laid in red mortar, and will have finish of Longmeadow stone, the walls up to the water table being laid in courses of local stone. It is to be thirty-eight feet wide by about seventy long, exclusive of the chancel, which is recessed to a depth of sixteen feet; the chancel is flanked by the vestry room and the organ chamber, the former being carried out beyond the face line of the church and treated with a gable.

The length of the church is divided into five bays, buttressed to the height of the main walls. Upon the side nearest to the street a tower occupies the width of the last bay, and is carried up to a height of forty-five feet. At the ground floor level the tower serves as a vestibule, the entrance being through a pointed archway whose jambs are laid up in beaded brick. The walls above are pierced by large windows with louver openings, and above is a gable. The walls are carried out on corbels to receive the kneelers of the coping, a richly carved finial in stone surmounting the gable, and the angle face of the gable will be enriched by diaper work in brick. The main walls in the side bays of the church are pierced by a segmental-arched opening having triple windows with trefoil heads, the arches being turned with beaded brick, and the label-mould formed of bevelled brick projecting from the face of the wall. The front of the church is characterized by a gable pierced by a rose-window. A large segmental arch inclosing a series of mullion windows is a prominent feature of this façade. The central windows beneath the arch have transom-lights, the corresponding spaces of the side windows being filled with brick laid in patterns. A wrought iron cross surmounts the gable.

Internally the church will be finished in unpainted pine. The roof will be marked by the lines of the trusses which correspond with the exterior buttresses. Above the tie-beam a semicircle is formed, the sheathing following this outline and that of the curved braces below. Oak posts beneath each truss, and at a short distance from the wall, support an upright stud morticed into the truss, and a horizontal plate extends from post to post, the posts being tied to the wall by a projecting timber carried over the plate, and furnishing support for the foot of the curved brace.

A pointed arch with projecting brick-work supported on stone corbels, divides the chancel from the church. The chancel is apsidal in form. Light will be admitted at the roof. The windows of the church will be of rich cathedral glass, the large one in the front to be put in as a memorial and illustrative of Biblical subjects. Provision has been made in the plan for more ample Sunday-school accommodations in the future.

The erection of a portion of the large steam chimney which flanks the gateway at the new Trinity College buildings is now under con-

tract, and will soon be completed. This chimney is an important feature of the design for the gateway, and is treated with most excellent effect. It is circular in form, being some twelve feet in diameter at the base and tapering as it ascends. It is constructed exteriorly of rock-face ashlar and light stone, in conformity with the adjoining blocks. Within this shell the requisite flues are laid up with brick. An ornate cap of light stone is to crown the chimneys.

CHETWOOD.

THE PRESENT CONDITION OF CINCINNATI'S THREE LARGE NEW BUILDINGS.

CINCINNATI, O.

WE see by a late number of the *American Architect* that all the "public (United States) buildings are under full progress." This is certainly news to the citizens of Cincinnati, who have listened for months past for some sound of hammer or trowel from behind the high board fence surrounding the Custom-House, as indicative that this work is under full progress. To be sure, the first story, with its forest of girdled columns, is completed, and the second story seems ready and anxious to receive the weight it must inevitably bear. The seven immense derricks, high up in the air, throw out their large arms, ready to grapple with any stone coming within reach; but that is all. A few brick masons are all that are employed; and in order that these masons may do their work properly it takes an equal number of bosses and superintendents to look after them, whose high pay runs on all the same, work or no work.

The Shillito Building has been under roof for some time; the plastering is finished, and carpenters are now busy completing the immense interior. The exterior of this building, with its five hundred and sixty-seven feet of street front, and its twenty-three bays, is very monotonous. Each bay is just like its next neighbor, and the whole may be likened to a street parade of well-drilled soldiers, so uniform, straight, and severe are the windows and piers. The whole army, so to speak, is capped at a height of one hundred and thirteen feet above the pavement by an insufficient galvanized-iron cornice. The settlement of this building, which was noticed in a former number of this journal, seems to have stopped, the spalled bricks have been taken out and replaced by new and good ones, and the cracked stone has been duly patched up. What would we do without putty in some shape or other?

The Music Hall is finished, accepted, dedicated, and is now in use. At a cost of about \$300,000, Cincinnati has one of the largest halls and the largest organ in the country. Architects are familiar with the exterior of this building, as a perspective view was published in No. 122 of the *American Architect*. We feel called upon to state however, in this connection and in the cause of truth and honesty, for which we labor, that that perspective was somewhat overdrawn. There are no such reveals around the large central window as that drawing would have us believe; on the contrary, the central gable, with its large series of windows combined as one, has a rather flat appearance, and the two towers flanking it have from their lowness a tendency to make the whole building squat; and from any good point from which the building may be viewed they hide more than half the main gable.

The inside of the main hall is finished entirely in poplar, or as they term it out here "tulip wood," varnished, and it has a very barren and unfinished appearance, a great deal of inch thick stuff being used to help out the uncheerful effect. The ceiling is somewhat too heavy, and the groining might have been better. The acoustic properties of the hall, however, are good.

As for the exposition buildings, they are not built and probably never will be, so it is hard to tell how they would look.

C.

THE STATE HOUSE AT ALBANY.

ALBANY, N. Y.

THE new capitol, while promising much beauty of interior, is forever marked architecturally on its exterior with non-affiliation with original design. Highly decorated but disproportioned dormers impose their heavy stone flanks on massive bow girders, despoiling the symmetry of attic rooms, and the acroterial finials and tympanums are composed of sculptured "blazes," of funereal significance; and coats of arms and crests of some of the commissioners, with such mottoes as "JOVI-PRESTAT-FIDELE-QUAM-HOMINI," and "SI-JE-PUIS." Certainly strangely odd, and of questionable taste in free America, and on a public building.

D.

THE INDIANA STATE HOUSE BIDS.

INDIANAPOLIS, IND.

THE proposals for the work of building the new State House were opened on the 15th inst., according to advertisement. The lowest and highest proposals for the whole work were \$1,611,675.65, and \$2,114,714.13, respectively, and about as great a difference appears in the sub-bids, which goes to show that some one has made a mistake in taking out his bill of quantities, as their judgments as to the value of the work are so much at variance. The commission has taken the proposals under advisement; no contract has been awarded except that for the steam-heating, to Walworth & Co., of

Boston, for \$45,803.35. It is thought the work will be awarded in detail. The commission and architect seem much elated over the result, as the bids are much below their estimate. As far as business ability is concerned, the commission is to be commended, but it is trammelling the architect by dictation, which is unwise and unpleasant for him. It has even gone so far as to dictate what should be the style of decoration and the different design of the work. It began by fixing the per cent of his commission and, it seems, has carried its aspirations to controlling the design, so the commissioners are the architects in chief, with Mr. May as chief draughtsman. It is hoped he will assert his right and authority, and let them know who should control.

S.

AN IRISH MONUMENT.

ONE of the most interesting of the ancient monuments of Ireland, the Grinian of Alleach, in the county Donegal, which stands on the top of a hill eight hundred feet high, on the property of Lord Templetown, has just been rescued from destruction by the efforts of Dr. W. Bernard, of Derry. It is a circular fort, which was originally built in pagan times, and formed part, at a later period, of a regal residence rivalling the famous palace of "Tara of the Kings." It commands an extensive prospect, extending on one side over Lough Foyle and over Lough Swilley on the other. In the year 1101 Murrough O'Brien demolished it and ordered his men to take away one stone of the building in every empty sack which they had, and with them to head a parapet built at the top of his palace, which occupied the site of the present Cathedral of Limerick. Some other stones were taken away in recent times to build the parapet of a bridge in the vicinity of the ruin; but Dr. Bernard believes that no other stones were taken for building purposes. In the reconstruction of the fort only the fallen stones were used, except seven or eight hundred which were picked up about the hill, and a coping of masonry. It is perfectly circular and stands about twenty feet high, of conical shape, with massive walls built without mortar by wedging the larger stones together with small ones. Inside it is about seventy feet wide, having three platforms rising above each other, approached by steps, and is crowned by a parapet. There is but one entrance, which looks eastward, and there are doorways inside, which seem to lead to subterranean passages, but they have not been explored. The idea of preserving the ruin, which was in a very neglected state, and likely soon to lose all trace of its original character, occurred to Dr. Bernard about four years ago, and it is a remarkable fact that the people, when appealed to for help to restore it, and informed of the antiquarian interest attached to it, cheerfully responded and gave their time and labor to promote the work without receiving any payment. Dr. Bernard pays a high tribute to their zeal and patience, observing that if they had been hired workmen they would hardly have shown as much obedience to their employers. He could not, in fact, have obtained such services for hire, for labor was not to be had. In the course of the excavations which were carried on a number of relics were turned up, which raise the antiquity of the place beyond question. It is recorded that the Grinian existed seventeen hundred years before the Christian era, and it is marked on Ptolemy's map in the second century, which was a copy of a much older map found in Alexandria. Among the relics were bones and teeth, defaced coins, the button and the socket of a plough, round stones with holes in the centre, war clubs, sling stones, a stone found in ashes marked into squares, another of dark color shaped like a heart, another with fluted columns, and a polished cone with flat base. Working under a heap of rubbish, the laborers came upon one of the platforms, thirty feet long, six feet wide, and five feet from the ground, and in the wall, which had almost crumbled away, four steps were found, which it was inferred led to another platform. There is a fort in the county Kerry, called Staigue Fort, which differs only in the platforms being a little longer. The completion of the work of restoration was celebrated by an entertainment given at the spot by Dr. Bernard. — *The London Times*.

NOTES AND CLIPPINGS.

A FAVORITE MODE OF RETALIATION. — We once told the story of the quarrels between two property holders in Cincinnati, caused by the trespass of one neighbor in building on a few inches of the land of the other, which led to aggressions on the one hand and on the other until it resulted in one of them building a semicircular tower on his own land from whose windows he could spy out what transpired in the house of his neighbor. A course similar to this is about to be taken by a well-to-do San Francisco undertaker whose small property had been surrounded on three sides by a fence, said to be the highest in this country, which a millionaire had caused to be built, when he found that the undertaker was unwilling to sell his land, necessary to the integrity of the large garden which the millionaire was laying out. The undertaker endured the fence for a year or two, and made it useful and ornamental by training vines and trees upon it. At length tiring of passive resistance he has removed his old house to another part of the city, and is about to build in its place a tower, the lower five stories of which are to be plain and substantial, while in the upper stories it is said to be his intention to indulge in a mixture of Renaissance, Gothic, Babylonian, and Chinese architecture, — which we interpret to mean nothing other than our own vernacular architecture. The peculiar virtues of this fantastic mixture of styles as a means of torment are not very evident, and the propriety of this form of annoyance can only be explained by the possibility that the fence-building millionaire is an architectural purist.

SCAFFOLD ACCIDENT.—We have noticed during the present month at least a dozen accidents, caused by the giving way of scaffolding, which often brought death to one or more persons. The latest accident of this nature took place at Newport, Ky., on August 14, where four men were seriously injured by the giving way of a temporary scaffold, which they were using while putting on a new roof at the Gaylord Iron Foundry. These accidents may be expected to occur until builders learn that the proper designing of a scaffold is a matter for serious study, and should be intrusted only to those who have made a study of framing and bracing.

THE QUEBEC IMPROVEMENTS.—Queen Victoria has lately transmitted to the Governor General of Canada ten thousand pounds to be used in building one of the gateways in the city walls, which, in honor of the Queen's father, the Duke of Kent, is to be known as Kent Gate. The building of this gateway is one of the features of the scheme for improving Quebec which has been carried on under Lord Dufferin. It is said that the Governor General thinks that the Marquis of Lorne will build the Château St. Louis, views of which were published in the *American Architect* for April 14, 1877.

THE MANCHESTER JOINERS' STRIKE.—The committee of the Manchester joiners, who conducted the affairs of the trade during the recent strike, which lasted fifty-three weeks, has made its final report. From this it appears that the strikers gained nothing, and that in addition to the \$225,000 of their own funds which they expended during the contest, they also spent \$40,000 contributed by other trade associations.

THE POMPEIAN SENTINEL.—The *Architect* speaks in high praise of the model of Miss Hosmer's colossal statue of the Sentinel of Pompeii now on exhibition in London, and particularly notices the thoroughly masculine character which has been given to it by the sculptress, the favorite pupil of the late sculptor Gibson. Miss Hosmer has chosen as her subject one of those legionaries who, common repute has it, refused to desert their posts, although they could see the lava flood descending on them. Whether the story is true or not there is in the Museum of Naples a suit of armor still inclosing the skeleton of its former wearer, and though it is in the style of a later day, it is pointed out as the confirmation of the legend, which is referred to by General Ambert, as follows: "Within the armor of the Musée Bourbon still remains the skeleton of a soldier, who was on guard before the barracks in the seventy-ninth year of the Christian era. For eighteen centuries has this man been inclosed in this envelope of iron. At the slightest blow the bones of the skeleton are shaken and strike against their metallic covering; hence the dry sound that brought us to a stand. The quarters of the soldiers alone were not deserted; the sentinel remained immovable resting on his spear. We took an interest in visiting this post of the soldiers of days long gone by, who gave so grand an example to the soldiers of our own days. The sentinel was on guard where he was stationed, and there he remained from November 23, A. D. 79, to April 20, 1794."

CHIMNEY-COWLS.—It is said that the test of chimney-cowls lately made at Leamington, England, under the auspices of the Sanitary Institute of Great Britain, was not fairly conducted, inasmuch as the building used for testing was an isolated one, so that winds and currents of air came in a way wholly unlike the baffling and eddying currents that swoop down from surrounding houses upon the chimneys of a city, causing back draughts and other defects which it is the design of all cowls to remedy.

SEA-WATER BATHS IN LONDON.—A project for supplying London with sea-water is talked of, and though no actual company has been formed, an estimate of the cost of the undertaking has been prepared. As this rough estimate shows the probable cost to be between seven and eight millions, and as the consumers must necessarily be few in numbers, the undertaking probably will never be anything more than a project.

THE WINDOW-TAX AND RESTORATION.—The anti-restorationists can hardly find fault with what is now doing at a place known, oddly enough, as the "Restoration House," at Rochester. The building, which derives its title from the fact that Charles II. slept there on his way from Dover to London, is a genuine Elizabethan house built of red brick, and having in plan the form of the letter E, a form which was common to buildings of that date. The present owner is opening out fifty-two windows on the front, which in the times of levying the window-tax had been stopped up with plaster to avoid the payment of it.

LE PRIX BORDIN.—L'Académie des Beaux-Arts has just awarded the *prix Bordin* for the year 1878. The prize is awarded to the writer of an essay on some topic suggested by the Academy. This year the programme was, "Discover the Theoretical and Practical Differences which exist between Engineers and Architects. Taking into account the advantages and the inconveniences of the division between the two professions, deduce from this study whether in the interest of art an absolutely determined division should be made, or whether there should be a complete fusion of the two professions." Seven essays were submitted, and the one bearing the motto, "Brought up in the seraglio I know its ins and outs," was chosen with unanimity. M. Davioud, one of the architects of the Palace of the Trocadéro, proved to be its author.

A SIMPLE FIRE DETECTOR.—The *Sacramento Record-Union* says: "A device for indicating fire in any one of a series or suite of rooms has been made by drawing a long iron wire through all the rooms near the ceiling. One end is fixed to the wall, and the other is secured to a common house bell hung on a spring. In each room the wire is broken and the gap is closed by a small strip of gutta-percha. Under each piece of gutta-percha is a short slack piece of chain, so that when it melts the ends of the wire will still be held secure. In case of a fire in any room the gutta-percha melts (at one hundred degrees Fahrenheit), and the wire is drawn apart by a weight at the end where the bell is placed. This frees the spring, and the bell rings. The bit of chain prevents the weight from falling, and, as each room is provided with a different length of chain, the distance the weight has fallen records the room where the wire parted."

THE EFFECT OF DYNAMITE.—According to the *Revue Industrielle* Herr Fuchs, superintendent of the works of Alfred Nobel & Co., at Krummel, has recently made a number of experiments with dynamite, the results of which deserve to be more extensively known. The object of the series was to show that dynamite is not exploded by such shocks as it may suffer during transportation. The tests were made as follows: (1.) A keg holding about five pounds of dynamite, when dropped repeatedly from a height of twenty feet upon the pavement, did not explode, even when it was thrown down violently by several of those present. (2.) A weight of twenty pounds falling from a height of twenty feet on a cartridge of dynamite lying on the pavement completely flattened the latter, but did not explode it. This same flattened cartridge, fired with the aid of a cap, tore a board into shreds. (3.) A keg holding fifteen pounds of dynamite was fired with a cigar. Its contents burned quietly without explosion or damage to the keg. (4.) A closed keg containing twenty-five pounds of dynamite was thrown into a fire, where it burned quietly. (5.) A tin box with lid attached, holding four pounds of dynamite, was similarly thrown into a fire and burned without explosion, while a similar box was lit by means of a fuse without a cap and was found to burn quietly.

AN ELECTRIC LAMP.—The *New York Times* says that M. Reyner's new electric lamp seems to be as easily managed as an ordinary oil lamp. A rod of carbon, from twenty to thirty centimeters long and from one to two millimeters thick, is held at one end by a metal rod which tends to descend by its own weight, and at the other by a carbon wheel in a vertical position. The carbon is pressed strongly against the wheel, which is made to revolve slowly. A current of electricity from a battery of from four to six Bunsen elements raises the carbon to a white heat at the point of contact of the rod with the wheel. A splendid light is produced. If a high degree of luminosity is required, the heated portion of the carbon may be increased at pleasure. Break the current, and the lamp is extinguished. Restore the connection by turning a knob, and the light flashes forth. The battery may be stowed away anywhere, and any one can use this illuminating contrivance in a house or work-shop without being annoyed with the difficulty and expense of maintaining any magneto-electric machine or steam-engine.

THE OLYMPIAN EXCAVATIONS.—During the past three winters German explorers have brought to light at Olympia: 429 inscriptions, 904 marble objects, and the same number of terra-cotta objects, 1270 coins, and 3734 bronzes. Photographs of the important ruins have been made, and many casts taken. The third volume of the official report will be published shortly.

ARCHITECTURAL MISSIONARY WORK.—The chances for architectural missionary work which, as we lately said, are continually offering in Africa and Asia, are very markedly exemplified in what is at present going on at the site of Babylon. Here, as a correspondent of the *Times of India* says, antiquarian remains are destroyed continually by the Arab workmen, with the cognizance if not with the expressed consent of the Turkish Government, who are sufficiently aware of the value of the remains discovered to interdict strictly all researches by Europeans at Nineveh. The correspondent says that the modern town of Hillah is built, though poorly, of bricks of Babylonian make; for instance, he says: "The court-yard of the house in which I stopped was paved with large square bricks, every one of which bore the honored name of Nebuchadnezzar." Native brick merchants save themselves the trouble of making bricks, by repairing to the site of the ancient city where they can obtain bricks already made—and nearly every one of them stamped with the name of some Babylonian king—by digging trenches more or less large and deep, until some of the ancient walls are reached. No record is kept of the remains discovered, nor are any plans and drawings made, and it is only too probable that when the time comes, as it surely will come, when it is possible to undertake the disintering of this perished city, there will be lamentably many needless gaps in the archaeological record then developed. It is just possible that as England has lately assumed the protectorate of Turkey the grateful Mussulmans may be willing to concede to English hands the interesting task of determining so far as may be the fate of Babylon. We hear, too, that Dr. Schliemann will resume his researches in the Troad if he can obtain the necessary firm, and a Turkish guard strong enough for his protection.

NIELLO.—According to the *Berliner Tagblatt*, the firm of F. Zacher & Co., in Berlin, have discovered the method of manufacturing the Russian tula or Niello silver, the real composition of which has been guarded hitherto as a secret, and have made it in large quantities. It consists of nine parts silver, one part copper, one part lead, and one part bismuth, which are melted together and saturated with sulphur. This mixture produces a gorgeous blue which has often been erroneously spoken of as steel blue.

NOVEL LIGHTNING-RODS.—It is said that the peasants in the village of Tarbes, in the Hautes-Pyrenees, discovered that a bundle of straw fastened to a stick and placed upright on the roofs of their cottages formed an effectual protection from lightning during the thunder-storms common to the district. It is further said that the knowledge of the custom spreading, there are now some eighteen or more communes in which all the cottages are protected in this way.

IRISH ARCHITECTURE.—Miss Margaret Stokes is republishing her essay on "Early Christian Architecture in Ireland," which was originally prefixed to Lord Dunraven's "Notes on Irish Architecture."

A LONG ENTR'ACTE.—The following announcement has been circulated lately at Pompeii: "After a lapse of more than 1800 years the theatre of this city will be opened with 'La Figlia del Reggimento.' I solicit a continuance of the favor bestowed on my predecessor, Marcus Quintus Martius, and beg to assure the public that I shall make every effort to equal the rare qualities displayed during his management."