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MR. CARROLL D. WRIGHT, to whose profound study of labor problems workmen, as well as the public, owe so much, has taken occasion again, in a speech before the Boston Commercial Club, to express his opinion, based on a knowledge of the subject such as no other man, perhaps, possesses, that labor struggles, with all their train of waste and misery, almost always originate in misunderstandings and jealousies, which might easily be avoided by greater confidence and consideration between employers and employed; and he calls upon all those who either employ or are employed to invite and offer such confidence and consideration. Even the coal-miners' strike of last year, with its disastrous consequences, would, he thinks, never have occurred if the coal operators had been willing to give their men full and frank information in regard to the situation. There is no doubt that Mr. Wright's opinion, in which many students of the labor question concur, is well founded, and those who have at heart the well-being of their fellow-men can do nothing better calculated to promote it than to set the example of consideration and sincerity toward all those dependent upon them, either for faithful service, or for wages for such service. In this way, much better than by organization, can the mischievous manœuvres of labor demagogues be met. All these worthies depend for their influence upon the theory that Labor and Capital are natural enemies; and the distinction invented, for convenience in reasoning upon industrial problems, by the political economists of half a century ago has been the source of incalculable misery to the whole civilized world. As Mr. Wright thinks, the time has arrived to take another step, and this is, above all, the place for taking it. In this country there are no distinctions of rank to be overcome, so that no condescension or presumption is involved in having employers and employed meet in consultation over the business by which all of them live; while, as is shown by the results in many cases, both here and abroad, where the experiment has been tried, nothing does more to cultivate the intelligent zeal on the part of the workmen which is the most valuable element in industrial life, and, as we may well believe, the participation of the working force in such deliberations does much to restrain the recklessness, not to say the dishonesty, of officials which has brought so many industrial enterprises to grief. The great obstacle to such confidence between employers and employed is, undoubtedly, to be found in the unions, which impose upon their members duties incompatible with loyalty to the business in which they participate; so that the knowledge of the affairs and conduct of the business which would gladly be given them must be withheld if there is danger, as there always is where unions are controlled as is now usual, that it will be treacherously used to extort money for individuals, or to do injury for the benefit of an unscrupulous rival. On this side, therefore, the employed can do much to bring about a better state of affairs. If they will let their employers see that under no circumstances will they permit the trust

reposed in them to be betrayed, they will invite confidence, and will ultimately receive it, as the superior efficiency of establishments in which mutual understanding prevails begins to be manifest.

A CASE involving the principle of the ownership of plans has been decided in a Pennsylvania court. According to the newspaper reports, the officials of the Standard Steel Car Company, while employed, formerly, by the Pressed Steel Car Company, appropriated certain blue-prints of drawings of steel cars. The Pressed Steel Company sued for recovery of these blue-prints, and the Standard Company refused to give them up, on the ground that they were common property, being in the nature of a catalogue, and without special value. The Court did not agree with this view, but ordered the Standard Company to return the prints, and pay the costs of the suit. Although, at first sight, this decision seems to favor the principle that drawings made by a person employed belong to his employer, it tends also to show that the person whose interests would suffer from the copying or misuse of them has rights in them. In the case of architects' drawings, while the architect is, in a certain sense, employed by his client, he is not employed by him to make drawings under his direction, but to build for him a house, the preparation of the drawings being a step necessary in carrying out this duty, both for indicating to the mechanics the dimensions and form of the various parts of the structure, and for showing the owner of the future building its arrangement and appearance. After the house is built, the owner's real interest in the drawings ceases, and their misuse cannot harm him; while the architect continues to need them for reference, and is easily injured by their misappropriation or misuse. That he should not be recognized by the courts, as he is by the universal opinion of the profession, and the practically universal acquiescence of the public, as their actual owner, seems to be the result of a confusion of ideas as to the nature of an architect's employment, which will, we hope, be gradually cleared up as judicial decisions bring to the subject more accurate distinctions.

THE University of California has arranged for the establishment of a complete Department of Architecture, which will offer a four years' course, with all the advantages of liberal equipment and adequate instruction. Mr. John Galen Howard, of New York, has been invited to become the head of the new Department, and has accepted the invitation. The members of the profession in this country do not need to be told of Professor Howard's admirable qualifications for his new position. As one of the ablest and most distinguished students of his time in the Massachusetts Institute of Technology, afterwards as a pupil of note in the Paris School of Fine-Arts, and, for a dozen years back, as one of the most brilliant young architects in New York, he is singularly fitted to head a great school of architecture. In none of the arts does the personality of the instructor affect the pupil more than in that of architecture, and Professor Howard's quiet force, with his reverence and love for the great art which he understands so thoroughly, should have material influence in directing the artistic development of the community with which he has become identified.

A VERY singular occurrence is reported from Cleveland. As every one knows who has visited that beautiful city, its topography includes a strip of low land bordering Lake Erie, overlooked by a ridge, or range, of hills. Naturally, the railways, with their stations and shops, are situated on the low land, where are found also most of the great manufactories. After many years of quiescence, the tract bordering the lake has begun, with no apparent reason, to sink with alarming rapidity. The newspaper reporters, who see quicksands everywhere, account in this way for the trouble, but they do not explain why the quicksand should have chosen this moment to show itself. Meanwhile, the tracks of the Pennsylvania Railroad are said to be sinking at the rate of three inches an hour, and thousands of laborers are employed in bringing them back to grade by filling in cinders over the roadbed. One of the walls of the new Pennsylvania freight-house has already fallen, and some bold and rapid engineering work will, apparently, be necessary to prevent serious disaster.

THE idea of strike insurance seems to have found congenial soil in this country, and Mr. Edward Atkinson, the greatest American authority on mutual insurance, proposes that it should be taken up as a mutual affair. His suggestion is that manufacturers and large employers of labor should enter into mutual contracts of insurance against loss by strikes, as they do now against loss by fire, and he makes the novel, though excellent, proposition that non-union workmen should be admitted, and insured against loss of wages through strikes. In Mr. Atkinson's judgment, the cost of such insurance to employers of labor would be not more than one-half of one per cent a year on their invested capital; while the cost to workmen would not be over five dollars a year. If, as we suppose Mr. Atkinson intends, the losses should be diminished, and premiums correspondingly reduced, by scientific study of methods of lessening the strike-hazard, as has been done with the fire-hazard, such insurance-companies might bring incalculable benefits to the community.

AN idea which was discussed some years ago might with advantage be revived. This was the establishment, in the principal cities, of a permanent exhibition of building materials and appliances, in charge of some one authorized to take orders for anything shown. Multitudes of excellent devices in the way of builders' hardware, for example, never find any market, for the reason that people who would occasionally like to use them do not know where to get them when they want them. A few weeks ago a builder lamented to us the lack of any blind-fixture in the market which would prevent the accidental lifting of the blind off its hinges in opening or closing. The number of blinds thrown off their hinges every year in this way, and destroyed, must run well into the thousands, and it seemed to him that there would be no great difficulty in devising some means of preventing such accidents. We agreed with him in his opinion that it ought to be quite feasible to make such a fixture, and in his regret that none seemed to be available. Some days later, in tossing over the mass of samples with which every architect's office is encumbered, we came across a very simple blind hinge, by means of which, as was obvious on inspection, the blind could only be lifted off the hinge when at right angles with the wall, being securely held down in all other positions. The sample was immediately applied to a blind on our own house, and worked perfectly. Unfortunately, there was no stamp on it, no tag, or other indication of who made it, where it came from, or where similar ones could be procured. It had probably been left at the office years before, and the inventor of a very meritorious device, for which there should be a large demand, is, very likely, still wondering why his invention has not brought him in the rewards which he expected from it. Similar stories could be told of countless other new building appliances and materials, the merit of which is recognized by architects, but which, owing to the lack of any means by which architects and builders can be kept in mind of them, and informed, at a moment's notice, where to get them when they want them, never find a market, or, if they find one, do not keep it.

THE "agencies" for the sale of such articles which exist in the large cities, being purely commercial affairs, are naturally carried on for the benefit of the proprietor, whose interest it is to push the sale, not of the best goods, but of those on which he gets the largest commission; and, as a rule, these are inferior imitations of articles known to be good. In these days of universal "graft," manufacturers would have to be careful about the agent to whom they entrusted the sale of their goods, in competition with those of parties perhaps less scrupulous; but, supposing that honest and impartial representatives could be secured, a comprehensive "exchange," as we might call it, for building materials would be very useful.

THE ingenious Mr. Parks, who was convicted of extorting money from Josephus Plenti, by threatening to order a strike in his establishment if his demands were not complied with, and who was sentenced to State Prison in consequence, having been liberated on bail, pending an appeal to a higher court, was again convicted, a few days ago, of extorting money from the Tiffany Studios, by similar means. The newspapers inform us that Mr. Parks "glared" at the jury which convicted him after twelve minutes' deliberation, but it is not recorded that his glaring produced any ill effect upon the jurors.

Parks's counsel endeavored to persuade the jury that the five hundred dollars which Parks took from the Tiffany Studios was turned over to the union, but there seems to have been a decided obscurity in this part of the evidence, and the judge instructed the jury that the matter of the subsequent disposition of the money did not affect the question of extortion. Meanwhile, however, it was shown, by the evidence of both sides, that Parks, after he had "harmonized" the Tiffany Studios with himself, allowed the former to employ non-union men side-by-side with union men, without even a remonstrance. What union men will think of this manner of defending their interests remains to be seen; but with Parks, as with many other demagogues, noise and "magnetism" seem to be sufficient to outweigh any amount of proved dishonesty and treachery.

WE hope that the public is taking to heart the revelations which are made almost every day in the newspapers in regard to the systematic extortion which is practised in nearly every branch of the building trades in the large cities. Architects have, of course, known about it for a long time, but the combinations seem, just now, to be more reckless and greedy than ever, and there are symptoms that a change must soon come, through widely-diffused bankruptcy of builders, unable to comply any longer with the unconscionable demands of sub-contractors, in league with the labor unions. As we do not like to play the part of raven, we may say that predictions of extensive failures among builders have been made very freely for some months past by people well informed in such matters, so that we only repeat what most of our readers have, probably, heard before. It may seem strange that, in times of high prices for building, contractors should be on the verge of bankruptcy; but it is the sub-contractors, not the general contractors, who, by combination, get the money, and share it with the walking-delegates.

THE Farnese Palace, in Rome, has finally been purchased by the French Government, which has for many years occupied it. The price paid is said to have been six hundred thousand dollars. Every tourist remembers the unsavory quarter in which this, like so many other Roman palaces, is situated. Among these, the Farnese is, perhaps, the most celebrated. It was built about 1540, from designs by the younger Sangallo, out of materials taken partly from the Colosseum, and partly from the Theatre of Marcellus. After the death of Sangallo it was continued by Michael Angelo, who designed the cornice and the cortile. It came by inheritance from the Farnese family into the hands of the Kings of Naples, from whose representatives it was purchased by the French Government.

THE German and Swiss technical journals contain many beautiful photographic illustrations of the Albula Railway, from Thusis to St. Moritz, in the Engadine, which is rapidly being pushed to completion. The construction is much more solid than that of most Swiss mountain railways, the bridges and viaducts being all of masonry; and the stone arcades, zigzagging over the frightful ravines of that region of eternal snow, afford most picturesque effects. In several places the viaducts, even when sustained by very lofty piers, are on a curved plan. This always seems to architects a hazardous experiment with masonry construction, but the Swiss engineers understand mountain railway-building thoroughly, and it is probably not intended to run heavy or fast trains over such viaducts.

A NOVEL, and not commendable, advertisement appears in one of the German professional journals, offering, in large black type, five hundred marks, or about a hundred and twenty dollars, to whoever will obtain public employment for "young and skilful architects," with first-class references. It is quite probable that money is occasionally paid in this country to "grasters" who obtain appointments for architects, as well as for other persons; but, in the case of architects, such payment is very unusual, is made only by the most unworthy candidates, and is not even confessed, unless under cross-examination, much less advertised. Young architects in Germany naturally like to enter public employment, where they gain valuable experience, and where their pay is sure; and, in return for these advantages, they are willing to work for a very small compensation, but we do not believe that many of them buy their appointment.

THE AMERICAN ACADEMY IN ROME.¹

ORIGIN AND DEVELOPMENT.

IN 1894 a number of artists who had been engaged together upon the work of the World's Fair at Chicago established "The American School of Architecture in Rome." Their object was to enable American students of architecture who had passed with honor through leading technical schools, or who had been equally qualified by private instruction, to develop their powers more fully, under the most favorable conditions of direction and environment. The students of the School were selected by competition and received pecuniary aid. The School was wholly supported by the artists referred to and their personal friends.

The rapid improvement in the work of the students and their enthusiasm convinced those who were interested that the scope of the School should be made broader, and should include the allied arts of sculpture and painting. To this end representative sculptors, painters and architects, together with other persons interested in the subject, decided in 1897 to found, on the lines of the French Academy in Rome, a school which should be open to American students of sculpture and painting, as well as of architecture.

In pursuance of this design, the American Academy in Rome was incorporated under the laws of the State of New York, in June, 1897. A constitution was then adopted and suitable rules made for the government of the institution. All these steps were taken under advice of competent legal counsel. In 1901 the Secretary of State for the United States authorized the Ambassador at Rome to accept the position of trustee *ex-officio* of the Academy, and directed him to secure for it "all the privileges and exemptions that are accorded by the Italian Government to like institutions of other countries."

The Academy is, therefore, legally established and competent to receive and hold any moneys that may be donated.

The Academy, like the School of Architecture, has been until the present time supported solely by the incorporators and a few of their friends; to the end that the usefulness, importance and practicability of the undertaking might be fairly demonstrated before any public request was made for funds for a permanent endowment. For this reason the number of scholars sent to Rome has of necessity been small; and the facilities and conveniences for work have not been such as would be afforded by an older well-equipped and well-endowed institution.

But now the work of the Academy has justified its existence. It is no longer an experiment. It is an established institution, working along the same lines and for the same end with the French Academy, whose preëminence in the world of art has been proved by the experience of more than two hundred years. The incorporators feel that the time has come when they have the right to ask the friends of art in America for a permanent endowment; and to ask them also to become members of the corporation, in order to help provide funds for current expenses until such time as the income of the endowment fund is available for this purpose.

THE SIGNIFICANCE OF ROME TO THE AMERICAN ARCHITECTURAL STUDENT.²

TO define clearly what is meant by the significance of Rome to the American architectural student, it may be well first to go into detail to a certain extent to show just what has been accomplished up to the present time by the American student in Rome and under what conditions he studies and lives.

The existence of the French Academy in Rome has been a great object-lesson to all architects and architectural students, and for a long time the need of a rendezvous in Rome has been most seriously felt by students from this country. The growing tendency in this country within the last few years towards the Classic and Renaissance forms and a growing love of the antique in all branches of art, together with a thorough appreciation of Rome in the architectural world led to the idea of the founding of the Roman School. The present President of the Institute was the leading spirit in this undertaking and he associated with him the representatives of the different universities who pledged a certain number of students. The school was organized in the autumn of 1894 and was composed of scholarship men, and others travelling on their own resources. The object of the school as then outlined was to afford greater opportunities to the travelling student to pursue his studies in Rome and other cities of Italy by securing for him, without loss of his time, permits to visit the galleries and museums, and to study and measure the antique monuments in the city.

It is not my purpose to go into the details of the difficulties of the first year's existence of the Roman School, the weeks and months of waiting and repeated unsuccessful attempts to reach the heads of departments of the Italian Government and secure satisfactory recognition. The French School has existed for 200 years in the city of Rome and there were also the German and Spanish Schools, and certain representatives from other governments who had the freedom of the ancient city, yet the American student was an unrecognized factor, and it was only after months of the most persistent effort that the school was finally recognized and its students allowed free access to the ancient monuments, museums and galleries.

With our work laid out and the road clear, the serious work of the school commenced. It consisted in visiting these monuments, studying and measuring important details and making careful restoration to scale, at the same time studying the history of ancient architecture and in periodical visits to the galleries and museums.

The more advanced work of the second year included the measuring and the restoration of plans and visits to ancient buildings and a trip of observation and study through Sicily and to Athens.

The experience of the past few years has shown us very clearly just what it means to go to Rome with a view to an intelligent study of her great antiquities. No one can deny that a certain amount of benefit accrues to even the novice who may go there to study, but we have but to point to the example of the French school to illustrate forcibly the importance of a certain amount of thorough training before the student enters upon his important mission. We all know that no one but he who holds the Grand Prize enters the French Academy at Rome; whether it be in architecture, painting, sculpture, music or engraving, he must have passed through a certain rigid course of training and experience before he is allowed to launch into the world of original research and make his own way.

Thus, we see men of seven, eight and ten years' experience in the different arts, under the best masters and under the most favorable conditions, seeking Rome and Greece as the ultimate and crowning step in their educational career. These men, representing the different arts, are associated in the Academy under somewhat the same influence they had experienced at home, that is, the influence of association one with the other which encourages the interchange of ideas. In other words the atmosphere is there created which is most conducive to the successful study of their art. Further, they are led by a master who is himself an artist and who may be either a painter, sculptor, or an architect. Thus, we have the ideal situation of the student in Rome.

To learn the true lesson from Rome or Athens or any other centre of ancient art, to appreciate the greatness and the meaning of the things done in centuries past, it is absolutely necessary that the student should be thoroughly well equipped in the ground-work of his profession.

In founding the Roman School, it is not the idea to attempt to put it upon the same footing as the French Academy. It was intended merely to establish an anchorage where the student of certain attainment could have facilities for studying up to the limit of his capacity whatever Rome and Italy had to present. The policy of the school has not changed much in this regard, except to become more restrictive in its membership.

Admitting that our men are receiving a certain amount of benefit by being sent to Rome, is it not extremely important that we should take steps by which they should realize the full importance and get the full benefit of the valuable years spent in the foreign city? In other words we manifestly cannot be doing strict justice to a young man by rushing him off to Rome after a four years' course in a university or college, two years of which time at the most is all that he is able to give to architectural study and of these two years practically one year only is given to serious design. As architects, we know how little these men know of architecture when we come to employ them in our offices. They are not expected to have a wide knowledge of the subject. They are in no way fit to be launched on the world to pursue their studies on original lines for they hardly yet know the A B C of architecture. The same might be said of the sculptor and the painter, the musician and the engraver. Let each one of these men pass under the hand of the master before he starts on the road of original research, and then we shall be quite sure that there will be no backward tendency on his part once he is launched.

I desire to argue in the strongest terms possible against the idea of sending forth untrained men to Rome. There are two alternatives left to us, one of which is to utilize the foreign schools, the other is to train our men at home. As we have no advanced school of art in this country, my sympathies lie in the direction of the French School as a place of training for the young men in our profession. For reasons which have been enumerated above and which are apparent to all, this seems to be the wiser alternative at present. I think it is the hope of the profession in this country, to realize the establishment of a great central school of architecture, painting and sculpture, which shall give our students sufficient training to make them thorough architects. If, through superior attainments, a certain number of these students win the Roman Prize, so much the better. They will certainly be in a position to profit by their extended study abroad. I should be the last one to recommend any procedure based upon the idea of depending permanently upon the French School as an element in the development of our architects. Such a plan would indeed be a poor indication of belief in our artistic future and of confidence in our national ideals. But, in order that we may in the future become independent of this influence, it is surely most essential to profit to the greatest possible extent by the example of thoroughness, consistency and continuity in policy of which the French School is to-day the most conspicuous example. When by the establishment of a central school founded upon the broadest lines we have brought the student under the influence of a course of instruction which, in addition to a corps of distinguished specialists, enlists the services of a body of our strongest practising architects, and have thereby insured a policy for the school which is influenced by correct theory on the one side and the actual practice of the profession on the other, then, and not till then, can we look forward to our emancipation from a dependence upon foreign schools.

¹A paper read at the Thirty-seventh Annual Convention of the American Institute of Architects.

²A paper by Mr. Austin W. Lord, read at the Thirty-seventh Annual Convention of the American Institute of Architects.

For the realization of such a project as this the organization already exists, the attitude of encouragement and willingness to collaborate in the initial steps of the American School at Rome already evinced by the American Institute of Architects, and by the authorities of the universities, where schools of art have already been established, and the official recognition already accorded to the project by the U. S. Government have brought about a situation which renders comparatively easy the taking of this further step and thereby rendering complete the ultimate object of the founding of the Roman School, viz: that the men upon whom the duty is to devolve of solving the great artistic problems presented by our civilization shall be trained by ourselves and so equipped as to enable them to go directly to the sources of our artistic inspiration without the aid of any intermediary. I feel that I cannot take a purely optimistic view of the results to be accomplished by the American student under his present status. With few exceptions the Roman students have been poorly equipped for the kind of work they are expected to do, and the longer we delay in this preliminary preparation of our men the longer we delay any beneficial results to art or architecture in this country from that source, so that in the consideration of this subject, I am taking the ideal architectural student who has a knowledge of the fundamental principles involved in the production of an architectural work. It is not enough that he should have a good idea of proportion as regards plan, elevation and detail, but he should have such a familiarity with architectural forms as will enable him to compose readily; an idea of the fitness of things, and, withal, imagination. He should have a knowledge of construction and, while it is not expected that his constructive abilities shall take him necessarily into the realm of the engineer, he must have an idea of the relative proportion of the constructive members and their composition to enable him to design with freedom. I urge that he should study Classic architecture but not to the exclusion of every other style. However, it seems to have been quite clearly illustrated that where one particular style is studied systematically, where the theory of the proper adjustment and relation of parts is studied from a scientific standpoint, it should enable the architect to design successfully in any style. Our student should have a knowledge of the history of architecture, which should include a considerable knowledge of decoration and sculpture. During the course of his studies, his association with students in the other arts will have enabled him to form certain fixed ideals which, although his future studies may to a certain extent change them, will still give him some point of departure in the course of his advanced work.

Entering Rome he thus has an appreciative understanding of what Rome has to show. The purely mechanical part of the work he has already mastered. He is in a position to know of and to study intelligently the variety of detail and an unlimited number of practical solutions of the difficulties which constantly confront the architect in the development of designs. His attention is naturally attracted to the principles which govern, and his training should lead him into the way of studying all his subjects in the broadest way. In his more advanced studies concerning the restoration of plan and elevation, his imagination may be allowed free play, as the ultimate object of restoration is not necessarily to reproduce the exact monument, but to develop a logical superstructure from the plan and fragments that exist. The restoration of monuments is not wholly for the purpose of obtaining exact data of certain interesting architectural motives and details. While this side of it is useful to a certain extent, the great benefit derived is in searching out the solution of problems from the standpoint of the ancient architect who was not trammelled by any school and who solved many great and original problems in the simplest way, and without many precedents to guide him he resorted to a logical system of development; further, the limited number of types of buildings required at that time enabled him by a constant repetition to secure the most perfect results possible. Thus through the medium of restoration work the student is brought in closer relation with the ideas of the early artists, and interest in his work is enhanced by the feeling that he is put in position to discover new and better methods of solving varied problems in architecture.

Still further value has accrued to architectural students through the work of the Archaeological schools in foreign countries, notably the work of American, German and French schools in Greece and that of the Italian Government in Rome, and other cities of Italy. It has undoubtedly generated a taste for the antique which is so marked a feature of the prevalent taste throughout all civilized countries.

What is true of architecture in this respect is also true of the sister arts of painting and sculpture. The student of architecture in Rome cannot shut his eyes to the influence of the ancient productions for there will be impressed upon him in the most forcible way the intimate relation and association of the three arts and he will realize how barren would have been the results achieved by modern artists without the great examples which have been restored to us from the work of the ancients. While the ancient examples in fresco in our day are of course rare, the art of the Renaissance profited by the then existing examples and through them the student is put in close touch not only with the ancient work but with the splendid development of the fifteenth century. Here again we see the advantage of the association of students in the various arts. The student of architecture cannot well make a complete restoration

without thought of the painted decoration that was so necessary to its success, nor without the sculptural adjunct which was even more prominent during the best Greek and Roman periods, as well as during the Renaissance. In this way we see produced at the hands of the architectural student in Rome, a delineation of baths for example, which gives us if not a perfectly accurate reproduction of the original, certainly a logical reproduction including everything necessary to the successful operation of the system, from the heating plant in the substructure to the last detail of the crowning features. This includes first of all a very carefully studied plan, showing a proper relation between all the various functions. It shows methods of construction throughout, methods of decoration in brick, terracotta, marble, stucco and fresco. In other words it is a veritable project, developed of course under different conditions than existed in the school, yet under conditions which appeal vastly more to the imagination of the well-equipped student, and under conditions which have a more practical as well as aesthetic side.

This kind of study would seem to be the nearest approach possible to the work of designing for actual construction, and naturally brings the student more into the attitude of a practising architect, which is, after all, the ultimate end of foreign study.

I have already alluded to the great systems of baths which offer such a wide field for the work of restoration to students abroad. Let us look for a moment at the remarkable array of palaces with all their elaborate and complete accessories in the way of furniture and decoration, gardens and approaches, a study of which has given the world a comprehensive idea of the domestic life of the ancients; their temples and tombs, the study of which has given us an idea of their religious practices; their forms which in one chapter almost cover the political history of a nation, together with the Colosseum, the theatre and the hippodrome, which through the aid of the archaeologist practically complete the history of the life and manners of these ancient peoples. As a portion of the work of the Roman School lies in Greece, it is interesting to recall to mind the influence of Greek art in Rome for, as Laloux says, it was there that the Greek artists were found again. They there received and modified for the needs of their conquerors the traditions which had made the grandeur of their country, but before calling to herself these artists Rome had already enriched herself from the spoils of vanquished Greece; Marcellus, Mummius, Scarus had pillaged Syracuse, Corinth and other cities; Sylla had sent to Rome a certain number of columns from the Temple of Zeus at Athens to decorate the Temple of Jupiter, Capitoline; he further says that "with Nero, the most beautiful works of Greek art passed into Italy; the oldest sanctuaries, Olympia, Athens and Epidaurus, were pillaged; the ancient consecrated places despoiled, furnished from these alone five hundred bronze statues which came to ornament the forums, the circuses and the imperial palaces. The recognition by the Roman of the supremacy of Greece in the arts is so well known as to render further illustration unnecessary, but a fact not so generally appreciated is the analogy of the forms and the disposition of similar edifices of the two peoples. This similarity is most marked in temples, forums and theatres of the Romans which are similar to the temples, agoras and theatres of the Greeks; to the gymnasium corresponds the baths; to the hippodrome the circus.

I have mentioned above the evidences apparent on every side in Rome of the close study devoted to the ancient monuments by the great men of the Italian Renaissance, such as Scamozzi, Bramante, Palladio, Vignola, in architecture, Michael Angelo in all three of the arts, Raphael in his decorations and paintings, and the later men in their respective works all bear testimony to this. This may be regarded as natural and almost inevitable, but if we turn to France and England, examine the early studies of such men as Pierre Lescot, Jean Goujon, Le Notre, Wren and others, leaders of their respective periods, we still find remarkable evidence of exhaustive study and appreciative comprehension of the ancient work. In view of the recognition of the supremacy of the Greeks in the arts, the unequalled perfection attained by them in their architectural forms, the question may well be asked, Why is Rome the ideal location for such a school? A complete discussion of this point would naturally be voluminous, but it may, I think, be briefly summarized thus: In Greece we find very perfectly studied developments of a very limited number of types, while in the Roman work, although the standards of perfection never reached the same height as in Greece, a vast number of new architectural types appeared contemporaneously; types which are more readily applicable to modern requirements, and it is therefore the architecture of Rome rather than of Greece that must be regarded as the foundation and inspiration of the modern world.

Before leaving the consideration of Rome as a place of study for the American architectural student of to-day, it seems appropriate to dwell for a moment on the tendencies of modern architectural study as exemplified in the leading schools of the world in order to determine wherein the instruction of the schools is insufficient and in what directions it should be supplemented from other sources.

The great variety and wide divergence in the problem submitted to the modern architect for solution, both in the schools and in practice, is constantly tending towards the elaboration of what may be termed the technical or scientific side of his development as compared with the purely artistic side. In other words, the architectural profession to-day is engaged in the development of certain types of architecture to meet, in many cases, an entirely new set of requirements and conditions, and hence the encouragement of the

faculties of logical reasoning and resourceful ingenuity attain undue prominence as compared with that of the purely æsthetic sense. It should not be understood that this tendency is to be regarded as an unhealthy one. That the architecture of any period must be truly useful and appropriate in order to be truly beautiful is axiomatic, but, if architecture as a fine-art is to maintain in the future its supremacy over architecture as a profession, it is manifestly essential that at some time during the course of his professional preparation the architectural student must place himself in an environment where the modern conception of buildings as a logical expression of utilitarian requirements may be temporarily forgotten and where he may come into intimate touch with the pictorial and sentimental side of his art, and draw his inspiration from the same archaeological sources that have inspired the leaders of successive architectural periods for hundreds of years.

The student who has undergone an adequate preparation for such a course of study as opens before him upon his arrival in Rome is presumably thoroughly familiar, so far as books, drawings, restorations and photographs can make him so, with all the important monuments of the ancient city. This being the case, the question arises, why prolong his stay there further than is necessary to enable him carefully to inspect all those things whose general proportions and aspect his studies have already made familiar to him, and to render permanent the mental impressions received from them? Upon the answer to this question depends, I think, the determination as to whether the founders of the American School at Rome have done a wise thing, or an unnecessary one. The formation of permanent tastes in art and the determination and separation of the essential and the non-essential qualities present in any work which has strongly appealed to us are necessarily slow developments. All of us have experienced the surprise on returning to a city, or a picture-gallery, or an opera after a long interval, of finding our admiration strongly aroused by a building or a picture or a melody that has previously made no impression upon us. Brief impressions, though frequently the most vivid in their appeal to the imagination, are seldom just in their discrimination and are usually subject to revision when familiarity has given an opportunity for more analytical comparison.

The student who enters Rome with a thorough knowledge of Classic forms and details, and of the forms and details which have been the gradual outgrowth and development of them throughout the last twenty centuries, enters upon a period of careful analysis and comparison. He has before him in the Forum, in the baths, in the Colosseum and the Pantheon, in the temples and the tombs and the arches, the elementary fundamental forms from which, as a starting-point, his entire architectural education has progressed. These things are presented to his study in all the austerity and simplicity which comes from the complete elimination of trivial details or utilitarian accessories, and in many cases from a state of partial destruction and entire absence of detail.

In juxtaposition to these, he has examples in bewildering array of the developments of these primitive forms, of the radical departures from them and reversions to them which form the architectural history of Italy, and, with the knowledge previously gained of the architecture of France, England, Spain and Germany, he is in a position to trace every step in the evolution of modern architecture.

With such a preparation this is the opportunity most necessary for the American architect of the future. In order to utilize the instruction of the schools for the betterment of the architecture of his country and his period, he must learn to distinguish between the essential qualities that give to Classic architecture its simplicity, its grandeur of scale, its repose and its refinement, and the non-essential details, which may be varied without the sacrifice of these qualities. In the varying degrees of decay that mark the ruins of ancient Rome, he learns to what a slight extent these monuments depend for their majesty upon the particular details he has been taught to regard as their most distinguishing characteristics. He realizes, as never before, that what we call scale, the adequate expression of the bigness of things, is a quality inherent in the proper proportioning of masses, and has an existence entirely independent of the details and accessories which are too frequently employed in modern buildings to supply by means of their size and position the lack of the quality itself.

Our student has for years been confronted in the schools with problems involving a great multiplicity of requirements. He has been taught to strive for the kind of simplicity that results from the orderly arrangement of complicated parts. Upon his return to America and his entry upon the practice of his profession, the complications will obtrude themselves with still greater insistency. Now, for the first time, and perhaps the last, he is in touch with that kind of simplicity in architecture which consists in the entire absence of complicated parts. He has reverted to an architecture of first principles. In the light of this architecture, he is to form anew his estimate of all subsequent periods and styles. At last he has before him a standard by which he can decide for himself, with authority, what are the healthy logical developments necessary and proper for the application of Classic forms to modern requirements, and which of all the changes that have been wrought in the Classic forms and of all the new motifs that have been grafted upon them are worthy of preservation and further development.

Of all the benefits that Rome has to confer upon the student, this, it seems to me, is the chief. This is not to be gained in a few weeks,

or even months. The rapidity with which it is to be gained depends upon the adequacy of his previous preparation, but, under the most favorable conditions, two years is barely sufficient, and this extra time, added to the term of preparation for architectural practice, puts the student in a position to make his own enduring personal contribution to the architectural progress of his period, and, if properly utilized, frees him from the necessity of making choice between a rigid adherence to archaic forms on the one hand, and on the other a weak dependence upon the conclusions of other minds in adapting his work to modern requirements. Short as is the architectural history of this country, we have, nevertheless, already seen two or three distinct periods of departure from Classic precedents, and, if the present reversion to those types is to become the beginning of a permanent and orderly march of progress, it will be by means of the educational influence of a body of men who have supplemented their study in the modern schools by such a course as this, and who are thereby fitted to distinguish between the kind of originality possible within the bounds of a well-ordered and imaginative adherence to fundamental precedents and the miscalled originality that seeks distinction in the neglect and outrage of well-established laws.

A FEW WORDS ON ACADEMIC TRAINING IN SCULPTURE.¹

THE ROMAN ACADEMY.

I have been asked to express my ideas concerning the Roman Academy. What I have to say can be said in a few words and I take pleasure in so doing, not only from a sentiment arising from my early associations with the *École des Beaux-Arts* and its organization, but more because I am of the firm conviction that an institution such as that is an admirable one.

My reason for thinking it admirable is my belief that the strenuous competition required to gain access to the Villa Medici, as well as the four years of study in that wonderful spot, tend to a more earnest and thorough training than could be gained under the present conditions of life in our times.

I am not one of those who believe that only the few who possess marked talent should attempt to be artists, although I do not think that there are but a small number in the world who are gifted and who possess that indefinable quality, that elusive something, which makes the great artist. In art, as in everything else, only the fittest survive. But in our civilization certain of the population will go into the fine-arts "willy nilly," to sooner or later fall back to what the law of the survival of the fittest brings them to. However, this great band of the unfit have their work to perform; their love of the beautiful contributes to happiness and tends to a wider enjoyment of life in the revealing of beauty where otherwise it would have been ignored.

I know it is a question whether such a knowledge increases the general happiness and morality of a community. I firmly believe that it does, as I believe that any effort to do a thing as well as it can be done, regardless of mercenary motives, tends to the elevation of the human mind.

The result required by the system of the *École des Beaux-Arts* and the School of Rome, however, from the serious education, is that they will be better workmen in each of the various vocations they finally fall into. In our period of hurry and of gaining ends, no matter how superficial, in the quickest possible way, no one will dispute that this is a healthy fight to make.

In the repeated attacks that are made on the Roman Academy and on the *École des Beaux-Arts* and in the incessant cry for greater freedom in the development of the artistic mind, there is a certain truth. But in the reaction the pendulum swings too far and the real question is lost sight of. There is a middle ground on which to stand. It seems to be rarely realized that the very men who are shown as examples were, if not actually brought up in the School of Rome, all men of a thorough academic training. Only after such training does the mind become sufficiently mature and the individual personality so developed as to be able to indulge in unqualified freedom and liberty of expression.

Rodin, one of the leaders of the movement against academic training, had had a most thorough and arduous training during the early years of his career, and I am of the opinion that that training, instead of dwarfing or minimizing his extreme power of expression, has been of enormous assistance to it. Leaving out of the question the exhaustive early study of the great masters of the past, Michael Angelo *et al.*, and coming to our own times, to the brilliant men of the French School, we find that all have had the same early experience. Paul Dubois, one of the masters of French Art, who, although not a member of the Villa Medici, had a training fully equal to that which could be gained there, was one of its strongest supporters. Houdin, Rude, Falguière, men whose work lives and breathes with divine fire, were trained there. Puvis de Chavannes and Boudry, to enter another domain, I may add to my list. It is needless to say that none of these were injured by it.

Sculpture is no more exempt from the necessity of a thorough preparation than is music, architecture or any of the arts and sciences. Only constant diligence and earnest application in early years, harnessed with a natural talent, give us our master workmen.

¹ A paper by Mr. Augustus St. Gaudens read at the Thirty-seventh Annual Convention of the American Institute of Architects.

The disastrous results to those who ape the mannerisms of such masters as Rodin and follow in their wake are pathetic in their futility and weakness, when they are not comic, and their failure leaves them not only bad artists, but (and here I come to what I consider the main point of my contention) weak and crude workmen in whatever else they do. I am inclined to think that if it were not for this class and this condition of things, I should not be so proud a partisan. But the betterment of this class and at the same time the help that is given to the young master makes it worth while.

In the American Academy founded in Rome, the plan is to follow the same lines as the French Academy, but, in profiting by their experience in the selection of the students who are to partake of its experience, to better it, in that much greater liberty and freedom are benefits and in allowing them to the student in his life, and the execution of his work while there.

It cannot be denied that the four years of undistracted attention, apart from the temptations of a large city, devoid of pecuniary worries and surrounded by a sympathetic environment where the whole thought is directed to the highest artistic achievement possible, in the formative years of a young man's life, can be anything but an enormous assistance and of vital importance to the few who have the divine gift. If it were but one in a century who was helped in this way, the institution would be worth while.

CEILING DESIGN.

ON March 10, 1501, Henry VII incorporated the Plasterers' Company. The Master and Wardens were to sue and be sued as "The Guild or Fraternity of the Blessed Mary of Pargettors, commonly called Plaisterers, London." The introduction of the two names is suggestive of a development of the trade. Parget is related to the Latin word *paries*, a wall, and signified work on walls or partitions. The plasterer afterwards was less bounded in his operations, and could employ the material not only vertically but horizontally. Indeed, the London members of the guild were disposed to consider they could meddle with several trades. Before a century was over they were found interfering with the tilers and bricklayers, and at a later time the paper-stainers were compelled to obtain a special charter to prevent the plasterers from exercising the art or mystery of painting with oil-colors as well as size-colors, the latter alone being permissible with them. The document stated that they could procure for themselves and their families a convenient living and maintenance by using nothing but lathing, daubing, plastering and liming.

It is remarkable that in Rouen, where more records relating to trades are preserved than elsewhere, although the statute of the plasterers is only dated 1478, there are official regulations which go back to 1289, and the statute in question was no more than a consolidation of earlier laws which had become so numerous as to cause confusion. Most of the old houses in Rouen were of timber, and in consequence were liable to fires. Plaster was used as a supplementary material, especially in the construction of chimneys, and at the time there was no belief in its protective qualities. One of the objects of the statute was to insure that the introduction of plaster did not increase the risks of fire. It does not appear that in Rouen plaster was in the years prior to 1478 employed for ornamentation. The ceilings of rooms were of wood, and if figures, armorial bearings or decorative panels were introduced on the exterior they were generally carved in stone or wood. It may therefore be assumed that both in England and in France up to the end of the fifteenth century the use of plaster was limited to utilitarian purposes. The extension of its employment in decoration is evidence of a great change, which can be attributed to several causes.

One was undoubtedly the use of *stucco* or *carton-pierre* by Italian sculptors, and several examples of figures in that material have been preserved to our time. The Palace of Urbino is supposed to have been one of the earliest examples in which plaster was employed for architectural decoration. At a later time it was introduced in the Vatican, and Giovanni da Udine was ordered by Raphael to decorate the vaults of the loggia with the material. The use of *carton-pierre* was supposed to be derived from the small figures and ornamentations in stucco then discovered among the ruins of the Palace of Titus. Evidently the Renaissance artists had been desiring a cheap yet enduring means for decoration in relief. According to Vasari, they could obtain nothing better than a compound of gypsum, chalk, pitch, wax and powdered bricks, which they afterwards gilded. Giovanni, after many experiments, found that by mixing white marble ground into dust and sifted, with white travertine lime he was able to make stucco equal to that of the ancients. The success of the ornamentation was so manifest that more commissions appear to have been given than the artist was able to execute. Some painters were so pleased with it they endeavored to employ the material for figures in the foregrounds of their wall-paintings. Pinturicchio and Carlo Crevelli were among them. But the illegitimate combination of modelling and painting, although amazing to the ignorant, was soon discovered to be not deserving of approval.

Although the manipulation of stucco and plaster had been reacquired, there was some hesitation about applying it more than partially in the decoration of ceilings. The Moors, for instance, were admirable workers in plaster and stucco, but in the Alhambra they were careful to avoid showing large areas of the material. Owen

Jones, in the restoration of a part of the Alhambra at Sydenham, employed plaster ceilings, but he acknowledged that he departed from his model, where the ceilings are of wood, and sometimes, as in the Hall of Justice, the wood was allowed to exhibit its own color. The earlier Renaissance ceilings, in which the Gothic arrangement was departed from, consist of mouldings or ribs in connection with wooden beams, and the plaster is therefore allowed to be only a subordinate accessory. Not only the main lines are joiners' work, but the subdivisions also, although not necessarily disposed in such a manner as to suggest a system of beams. Serlio, the architect, appears to have introduced the system into France by which a series of compartments were left for decoration either by means of painting or stucco-work, and a great variety of arrangements became practicable. It is doubtful whether a Renaissance architect would not be horrified by the wide expanse of flatness, broken only by a centre-piece and a cornice, which is to be found in the majority of the rooms in modern buildings.

It is remarkable that Gothic architects endeavored to resist the innovation in some places by compromising their own style with that of the Renaissance. Viollet-le-Duc says that "in breaking away from the routine by which the masters of the fifteenth century were enslaved, they applied to new forms the resources of the art of building of the Middle Ages. At the beginning of the sixteenth century architects very frequently employed the system of vaults composed of slabs resting on ribs, which allowed them to decorate these vaults with rich sculptures and to obtain effects until then unknown. Arranging a sort of network of stone, with key pendants or floral ornaments at the points of intersection of the ribs, they placed sculptured slabs between them." But it must soon have been perceived that there was no advantage in having heavy stones and costly carving hanging over people's heads, when another arrangement was available which was light, cheap, yet effective.

In England there was at first a desire to have ribs arranged in geometrical forms, and to fill-in the panels either with plastering or with a material resembling *carton-pierre*. There is little doubt that in the sixteenth century Italian artists had emigrated to England, it may be stopping on the way in France; and, in consequence, there is often more elegance in the ornamentation of the ceilings than in the carving. Strap-work perhaps could scarcely be considered as their work, but even with it there is a filling-in of spaces which recalls the South.

The ceiling of a room presented a freer field than the walls or floor for the decorator. There need be no break in a design by the introduction of large pieces of furniture or other objects. The Elizabethan or later artist could therefore treat his ceiling as a whole, or adapt a series of panels to it. As a rule, in England there was a fear of the former system. We cannot always say which part was considered to be most important. The ceiling may have been planned in such a way as to allow of the use of some one pattern, but it is also possible the pattern was already in existence, and the space had to be accommodated to it. When we say a pattern, it may have been one of several elements that would by itself form a little ceiling. But whether simple or elaborate, it was repeated until the space at disposal was covered. The spectator must feel on looking at one of these ceilings that the ornamentation could be carried on over a far wider area; or, if necessary, vastly diminished without any loss of effect. There is neither a definite beginning nor ending. The elements may be formal, but from the manner of using them they lose much of that quality. Another peculiarity arises from the all-overishness of the ornament. There are no plain spaces to repose the eye, and by force of contrast to enhance the effect of the ornament.

Inigo Jones brought the treatment back to the more pure Continental manner then followed by Frenchmen and Italians. The ceiling was not apportioned out into divisions corresponding with one element or pattern. There appeared to be a systematic arrangement in which principal and subordinate parts were recognized. He realized also to some extent that the ornament of a plaster ceiling should be superficial, and there was no need to go back to ancient Roman examples when ceilings of temples were cut out of stone slabs or formed of bronze castings, and it was becoming to demonstrate that the material was no mere incrustation. When Wren came he had not the courage to insist on the *rationale* of ceiling decoration. He adopted French models, but in the selection he was hampered by want of sufficient acquaintance with the practice of the artists of that country. It would have been easy for him to discover that they were also partial to ornament that was in very slight relief and as delicate as if modelled by a *sucrière* or a lace-maker. He preferred the coffered style from its massiveness. Wren's ornament also was inspired by Grinling Gibbons, a sculptor who could fashion lace cravats out of wood, but who liked to present images of substantial fruits which seemed ready to drop into the mouths of spectators. They are excellent if considered as representations, but something more appropriate in form is desirable in a ceiling. — *Exchange*.

A GREAT ARCHITECTURAL ARTIST.

THE *Builder* has this to say of one who in his lifetime certainly gave much pleasure to architects on both sides of the Atlantic: — "All readers of the *Builder* will hear with regret of the death of Mr. H. W. Brewer, which was announced in the *Times* of a day or two ago. For the space of a quarter of a century he had been one

of the most important and original contributors to the illustrated department of this journal, and, though he had a wide reputation, and his work was seen in illustrated journals for general readers, such as the *Graphic*, among architectural journals his connection has always been solely and entirely with the *Builder*, for which he produced work of a class which we do not know that any one else can at present supply.

"Mr. Brewer's early contributions to our pages were simply illustrative; chiefly drawings of mediæval buildings in Germany, generally selected as rather out of the beaten track of architectural illustration. These he drew on the wood in a most masterly manner (the system of photographing onto the wood had not then come into use); they were noteworthy for the sense of composition and the breadth of light-and-shade effect which characterized them; and they were always cut by one engraver (Heaviside), who understood his work and could make the best of it; and these old engravings from Brewer's drawings have none of that hard, mechanical style of execution which (at this distance of time we may admit) characterized many of our own as well as other illustrative wood-engravings. These impressions in our old volumes afford fine examples of what could be done with the aid of wood-engraving, now, unfortunately, almost killed by the various forms of processing.

"It was almost simultaneously with the introduction in our illustrative pages of lithography that Mr. Brewer seemed to perceive that there was a wider field for an architectural artist in black-and-white than the mere representation, in however powerful and artistic a manner, of existing monuments. Thenceforth, for our pages at least, he took up one or other of two new lines of illustration; one, the invention of architectural scenes purely with a view to picturesque effect; the other, the restoration in drawing (a wholly innocent form of restoration) of monuments of the past which had disappeared, but for the reconstruction of which a certain degree of documentary evidence could be found. To the first task he brought genius and imagination; to the second, learning and research. One of the first of his pen-drawings for lithography was one which, in picturesque force and poetic feeling, he perhaps never surpassed subsequently — the one entitled 'Deserted,' showing a mediæval city, with its cathedral rising in a heap in the centre of the composition, the houses clustering round and clinging to it, silent and deserted after a visitation of the plague — not an unknown occurrence in the Middle Ages. Among others of his architectural creations were two contrasted compositions entitled 'Renaissance Gorgeousness' and 'Romanesque Grandeur'; an exceedingly fine picture called 'The Ancient Harbor,' which will be within the recollection of many of our readers; and a remarkable drawing entitled 'Measure and Value,' which was not only an architectural composition, but a critical protest. The drawing represented an immense massive cathedral front, somewhat recalling Peterborough, and the bearings of the title lay in its application — in the implied conclusion that no such building would ever have been erected on the contract system, which Mr. Brewer regarded as being at the bottom of the comparatively weak and feeble character of much modern architecture.

"More numerous, however, than his purely imaginative works were his archaeological creations, of which a great number of most remarkable examples are in existence. To this kind of task he brought imagination based on careful research, and he spared no trouble in getting the materials for his restorations. His drawing showing a resuscitation of old St. Peter's at Rome was one of the most remarkable things of the kind ever done; of the value set on it by Roman archaeologists, we could judge by the repeated applications which have been made to us to allow of its reproduction in one or another historical publication. Among other remarkable drawings of this class were those of 'London in the Time of Henry VIII'; Paris at the same period (bird's-eye views or panoramas); 'Mediæval Oxford' (also a panorama); another panoramic view of 'Some English Architecture of the Past Fifty Years,' done for the Jubilee Number of this journal; 'Old St. Paul's'; 'Nonsuch Palace'; 'Old Cheapside'; 'Aldgate in 1531,' and many others showing the same remarkable union of archaeological study with picturesque power. We have in our possession the last two drawings of this class which he made, and which still remain to be published: restorations of two quarters of Old Paris. In our next issue we will give a list of all his works which are to be found in our volumes, with the dates of publication.

"Mr. Brewer was one of the most simple-minded and unassuming of men; more interested in his art for its own sake than for any advantage he could make for himself out of it; and we know that some draughtsmen of architectural subjects far inferior to him in real accomplishment, but who had obtained a more popular repute, obtained terms far beyond what he asked, for work not to be compared to his in real value. From years of out-door sketching in all weathers, he had the weather-beaten appearance suggesting the life of a sailor rather than of an artist; and, though he always appeared to have excellent health, perhaps this exposure shortened his life. He was only sixty-seven when he died.

"Mr. Brewer was a devout Catholic, to which fact may be traced, no doubt, to some extent his special interest in the remains of extinct mediæval abbeys and other religious institutions, though architecture for its own sake was, perhaps, his leading interest. He was one who, both for his character and his talents, commanded the respect of all who knew him, and whose loss to us is one of the greatest which this journal could have sustained."



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

CHESTNUT ST. SCHOOL, SPRINGFIELD, MASS. MESSRS. E. C. & G. C. GARDNER, ARCHITECTS, SPRINGFIELD, MASS.

THE TEMPLE, PARIS. FROM A DRAWING BY THE LATE H. W. BREWER.

THIS plate is copied from the *Builder*.

PLASTER CEILINGS: TWO PLATES.

WE add to the interest of the article on "Ceiling Design," elsewhere in this issue, by reproducing from Tanner's "*English Interior Woodwork of the XVI, XVII and XVIII Centuries*" these two plates.

Additional Illustrations in the International Edition.

Oriel Window: MAXIMILIANSTRASSE C. 2., AUGSBURG, BAVARIA. [1540.] ELIAS HOLL, ARCHITECT.

Oriel Window: NO. 20 TUCHERSTRASSE, NUREMBERG, BAVARIA. [1700.]

Oriel Window: RATHHAUS, LÜBECK, GERMANY. [1586.]

Oriel Window: NO. 22 OBSTMARKT, NUREMBERG, BAVARIA. [1492.]

Oriel Window: NO. 3 REICHENSTRASSE, BRUNSWICK, GERMANY.

FOUNTAIN AT LA GRANJA, SPAIN.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

SPECIALLY APPOINTED ARCHITECTS ON GOVERNMENT BUILDINGS.

WASHINGTON, D. C., November 2, 1903.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—My attention has been called to a recent editorial of yours commenting upon Mr. Cobb's removal from the Government service. That editorial has been copied by many daily papers but, while to the point in the main, it is unintentionally misleading in some details.

It is important to impress upon your readers, those who aim at doing Government work as well as the profession generally, the necessity of precision and clearness and care in carrying on public contracts. Government methods are necessarily exact, the mass of work carried on necessitates a certain amount of red-tape and formality that are a trifle tiresome to the private practitioner but that soon make their usefulness perfectly evident to him. Departmental officers, accustomed to a certain way of doing things and finding it satisfactory, naturally dreaded putting their work out to competition; but to-day they are in the heartiest accord with, and can no longer be termed the "opponents of the present system."

I am justified in saying, and am authorized to say, that Mr. Cobb's peremptory dismissal from the Service has not had and will not have one iota of influence upon the Treasury Department in the matter of calling for competitive designs for the many buildings for which Congress has made appropriation.

The Secretary has declared that in the direction of that one building, the Chicago Post-office, there would be no more special architect, because, as a matter of fact, the Supervising Architect has had it in charge for nearly a year and will continue to do the work through his regularly organized force. About a year ago it was deemed expedient to make the change in fact, though not in name, because there were serious causes for dissatisfaction. Then, as now, the department deplored the mistake that had been made in the appointment. It was one that resulted from political influence and was not the result of competition, and the dissatisfaction with that individual appointee in no wise affected the standing of the profession.

The whole affair was an experiment. Seven years ago the Supervising Architect's office was turning out some rather inartistic work — a condition that the *American Architect* is fully aware no longer exists — and Chicago thought it wanted a special architect. There

was a scramble for the office; Mr. Cobb had the greatest influence and got the plum. That the building is artistic and handsome and well-planned is another story, but that there was the gravest mismanagement, to say the least, is notorious, and you can rest assured there will be no more politically-appointed special-architects appropriated for or appointed, however many of the brethren may be awarded commissions in the usual and legitimate way of competition.

F. W. FITZPATRICK.

NOTES AND CLIPPINGS

ITALIAN PALACES FOR SALE.—The rumor that three such historical buildings, which are at the same time remarkable examples of architectural art, as the Villa Caprarola, the Villa Madama, outside Rome, and the Farnese Palace, in Rome, are in the market, is enough to startle all lovers of art. The Villa Caprarola stands on Mount Simino, and is at some distance from the road to Siena from Rome. It was designed by Vignola for Cardinal Farnese, the nephew of Paul III. It is recorded that St. Charles Borromeo remonstrated with its owner about its magnificence. So much money, he said, ought to have been given to the poor. But the cardinal's reply was that he preferred to let them earn it. The villa is pentagonal on plan, and surrounded by ramparts and trenches. The rooms are adorned with paintings by the Zuccari of incidents in the history of the Farnese family. English visitors are somewhat disappointed with the building, for in trying to combine a fortress with a villa the result seems to be expressive of neither. The Villa Madama is said to have been designed by Giulio Romano, but it is believed the plans were Raphael's. It was never finished, but the position is excellent, and the frescos by Giulio and Giovanni da Udine are interesting. The Palazzo Farnese was mainly designed by San Gallo; the famous cornice is by Michel Angelo, and the court is by Vignola. The owner wished, it is said, to make Melighino, who had been a footman, the architect. The stones were partly derived from the Coliseum and the ruins of the Theatre of Marcellus. At the present time the palace is occupied by the ambassador of France. It is recognized to be one of the most important of the Renaissance buildings. Among the paintings is one on the ceiling, the *Triumph of Bacchus*, by Annibale Carracci, of which a large plate was published in the *Architect*.

WORKMEN BUYING BETTER TOOLS.—While the workingman is spending a great deal of time these days inventing new troubles and magnifying old ones, it is worthy of note that he is giving eloquent token of possessing more money than ever before. This is discernible in the prices he is paying for the tools of his craft. Upon the authority of a member of one of the largest wholesale hardware houses in this city, it may be stated that the workingman is now paying practically twice as much for his tools as he did a year ago. This does not mean that the prices of tools have risen, but that the artisan is buying better tools. The cheap grades of tools are a drug on the market, and the factories are far behind, many of them from six to eight months, in filling orders for implements of high grade. Carpenters are paying \$2 for saws, whereas they formerly bought those of dollar grade, and in so small a matter as a 2 foot rule, the workingman now purchases a full-bound brass one for fifty cents instead of a half-bound one for twenty-five or thirty cents. The same is true also of hammers, braces, bits and planes. The day of the wooden plane has passed; the carpenter now buys steel planes, paying for them nearly double the amount he used to pay for wooden ones. When the hardware expert was asked to account for this condition, he said: "Workingmen have more money to spend; that accounts for it." — *N. Y. Evening Post*.

STORIES OF FORGED MORLANDS.—Sometimes such precautions have been taken as to make any test other than that of taste almost impossible. I refer to the story told of Morland, who was popular enough to be forged in his lifetime. A dealer, unknown to him, proceeded with the utmost audacity. He employed Morland to paint so many pictures, provided him with a studio, free, in an upper floor of his (the dealer's) house, and begged that he would not trouble to paint for longer than the morning. The terms were good, and the artist, who was more than ever in want of money, readily agreed. But what Morland did not know was that as soon as he left, on and from the very first day, the dealer introduced some six hack copyists into the room with similar canvases, to reproduce exactly what the painter had done in the morning, and in the evening all traces of the incursion was removed. Each day, until the completion of the picture, the process was continued, and thus at the end of the engagement the dealer not only possessed the original pictures, but six copies of each, produced stage by stage in the same way as Morland's own. This, perhaps, accounts for some of the best copies extant. On one occasion Sir Samuel Montagu, the owner of Morland's fine "Farmyard with Pigs," was asked by a chance dealer to come and see a fine Morland he had for sale. Sir Samuel went, and was confronted with a Morland's "Farmyard with Pigs"—not a very remarkable production. His natural exclamation, "Why, I have the original of that!" was countered with the stereotyped reply, "How do I know your picture is not the copy?" In such a case disinterested judgment alone will satisfy the parties—or at least one of them. — *M. H. Spielman, in The Magazine of Art*.

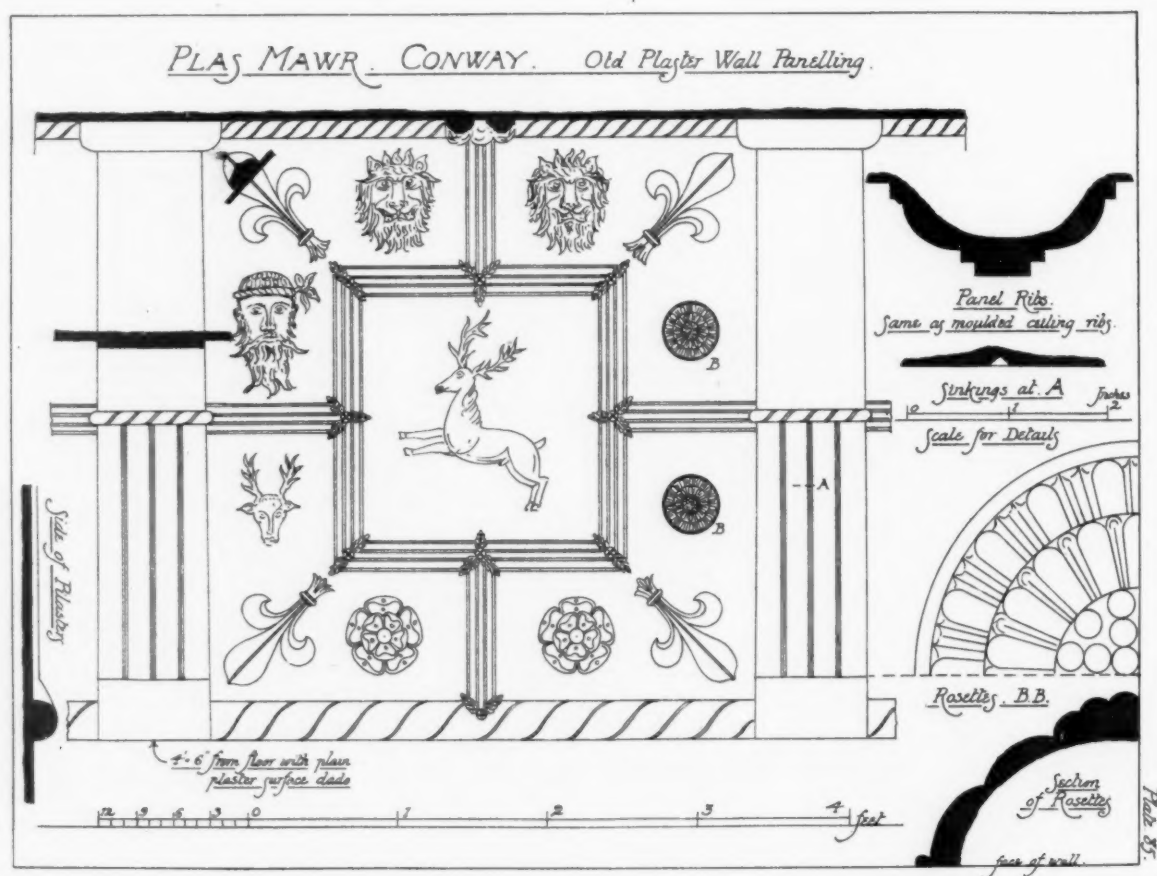
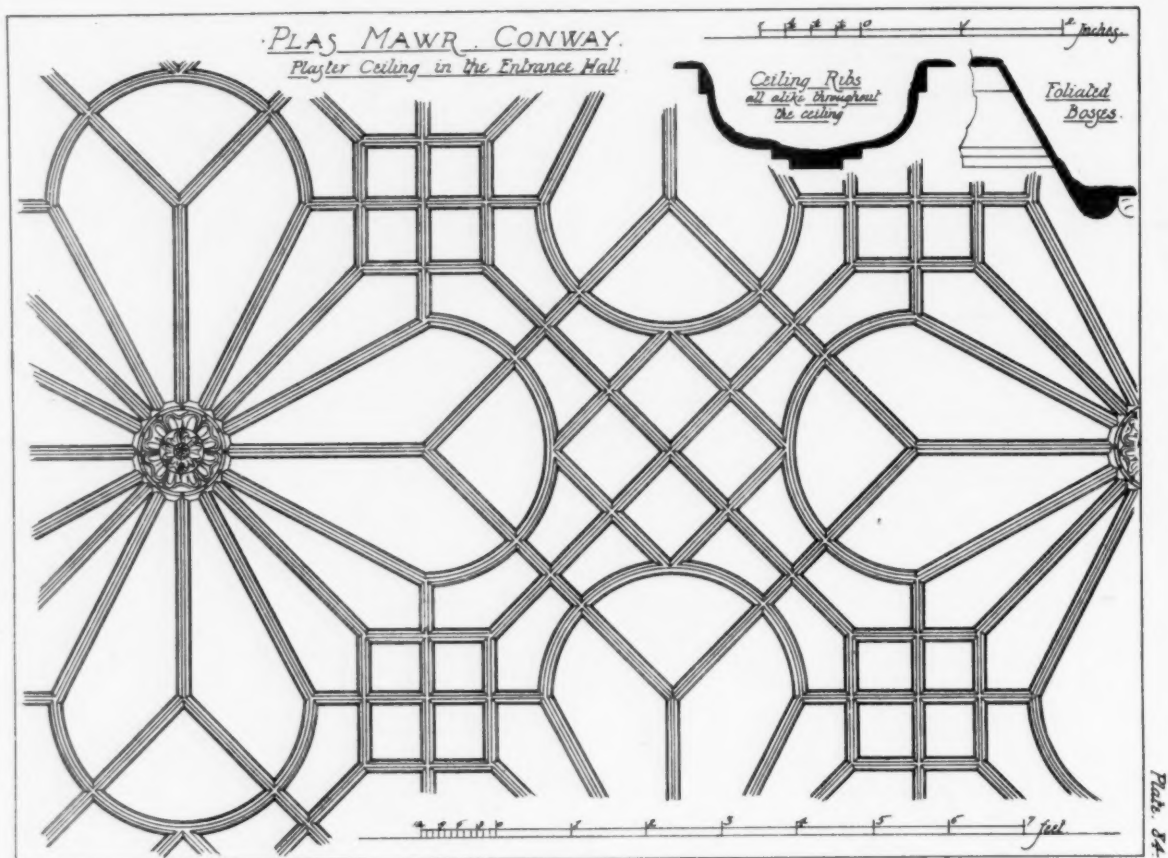
STRAYED MASTERPIECES.—The current *Academy* tells of a lost Whistler portrait. It would have commemorated a delightful friendship with the little daughter of Robert Barr, the novelist, but in the

confusion of Mr. Whistler's last move to Paris, it disappeared. Presumably, it is in existence, unrecognized until some one with an eye for painting comes upon it. Wherever it may be, it is in excellent company. The number of strayed masterpieces is not small. There is in the Yale College collection one of the most delightful bits of miniature painting by Signorelli—one fragment of the predella, or foot, of an altar piece. It had two companions. Such things are not cut up for kindling wood, and the chances are that the other two panels lie obscurely in shop or private gallery. From Botticelli's book of a hundred illustrations to Dante about a score of leaves were cut out by some vandal. About half of the missing drawings got into the collection of Queen Christine of Sweden, from whose library they passed to the Vatican. The odd half-dozen may turn up in as many shilling portfolios, for, luckily, one cannot light a fire with old vellum. Coming nearer home, Mr. Eliwanger in his entertaining essay on "The Oriental Rug" tells how twenty years ago the most beautiful Caucasian weavings were dumped upon our market under the discredited name of Daghestans. Many householders who "furnished" in the eighties are undoubtedly treading under foot masterpieces that museums seek for in vain. All of which is comforting to those who, being free of prejudice against the second-hand, have a constitutional tenderness for all venerable rubbish. — *N. Y. Evening Post*.

ST. PAUL'S CATHEDRAL.—The boast and admiration of England is the cathedral church of St. Paul. Its claims to an equality with St. Peter's at Rome, excepting for magnitude, have been advanced. That such a competition will be easily maintained, candor cannot allow, if in examining the objections made by foreigners of taste we find that they are founded in fact as well as supported by opinion. Let us attend to their statement of deficiencies in architectural science discoverable in this grand edifice, not to insist on those which are more dependent on taste. They assert that the essential and visible want of proportion in some of the principal dimensions is extremely derogatory to the praise which has been given to Sir Christopher Wren for his understanding the elegant precision of the antique or even the excellent modern style which existed in his time, and which he was fully enabled to consult and follow. They inquire why the architrave and frieze are omitted above the arcades of the nave and choir, while the entablature is complete in every other part of the fabric? Why the summit of the arcade is elevated, as in the Temple of Peace at Rome, above the capitals of the pilasters, for the whole height of the architrave and half that of the frieze? Why has the enormous cupola, which appears to overwhelm the church, a height and exterior circumference so disproportioned to the other dimensions of the edifice? And, lastly, why is the inside surface of the cupola made into an imperfect cone, which throws the pilasters out of their upright and forces them to lean towards the centre? They contend that no similar errors can be detected in the rival temple, nor will they allow the great English architect to emulate the fame of Michel Angelo and his successors in that stupendous structure. As to decoration, which must be suggested and regulated by taste alone, it may be wished that Sir Christopher Wren had not divided the body of the church into two equal orders, instead of adding an attic only, as at St. Peter's, and that he had been more sparing of festoons, which crowd the surface already broken into minute rustic, to the very summit. Of the façade, and particularly of the two hemispherical porticos at either termination of the transept, too much cannot be said in praise. The vast cupola, no less than the other parts of the structure in connection with it, when inspected from one of the angular points of the building, acquires a greater harmony of parts, as the extreme length is foreshortened and blends more accordantly with the whole. It is well known that the first design which he gave for this cathedral was more approved by its great author; and it has apparently some advantages over that which was finally adopted, after many interferences and deviations made at the instance of those who directed this sumptuous work. Among other points of superiority may be noticed that the whole fabric consisted of one order only, instead of an equal division into two, and the grand portico projected with a space an elevation not unequal to that of Agrippa added to the Pantheon at Rome. — *The Architect*.

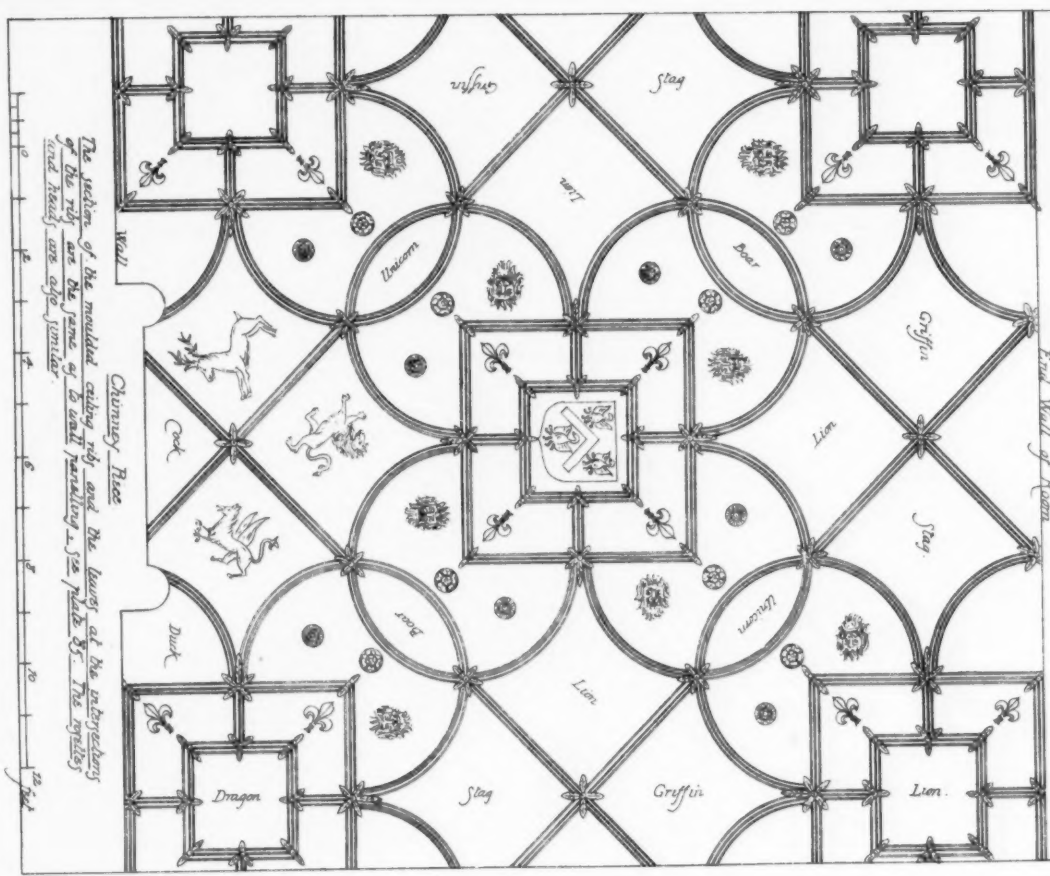
PROGRESS ON THE HUDSON RIVER TUNNEL.—At the office of the New York and Jersey Railroad Company, which is building the tunnels under North River from Hoboken to Christopher Street, Manhattan, it was learned that the north tube of the double tunnel was nearly bored through, being now under the head of the French Line pier at Morton Street, with 4,800 feet of the 5,000 feet of the entire tunnel, the mainland part included, finished. It is expected that this tube will be completed in 1904, and that the south tube will be completed in 1905. As the cars will run in only one direction in the individual tubes the railroad will not be put in operation till both tubes are completed. The nearly completed bore extends from the Hoboken side to within a few feet of the shore line in New York and the Hudson is therefore practically tunnelled. The work on this bore was started twenty-five years ago, and was discontinued at various stages of the work on account of the difficulties. — *N. Y. Tribune*.

A RECORD-BREAKING LOG RAFT.—The Milwaukee *Sentinel* is in error in reporting that a log raft recently towed into that harbor and containing 8,000,000 feet board measurement of lumber is the largest timber raft ever put together. The new steamer "Francis H. Leggett" reached this port last Tuesday night with a timber raft from Columbia River containing the same board measurement as the Milwaukee raft. The "Leggett's" raft is 730 feet long, 85 feet in its widest part, and draws 20 feet of water. Besides her big tow, the "Leggett" had a cargo of 1,200,000 feet of lumber on board. Thus one vessel brought into port on one trip 9,200,000 feet of timber, which is probably a world's record in the lumber-carrying trade. — *San Francisco Chronicle*.



PLAS MAWR CONWAY. Old Plaster Ceiling.

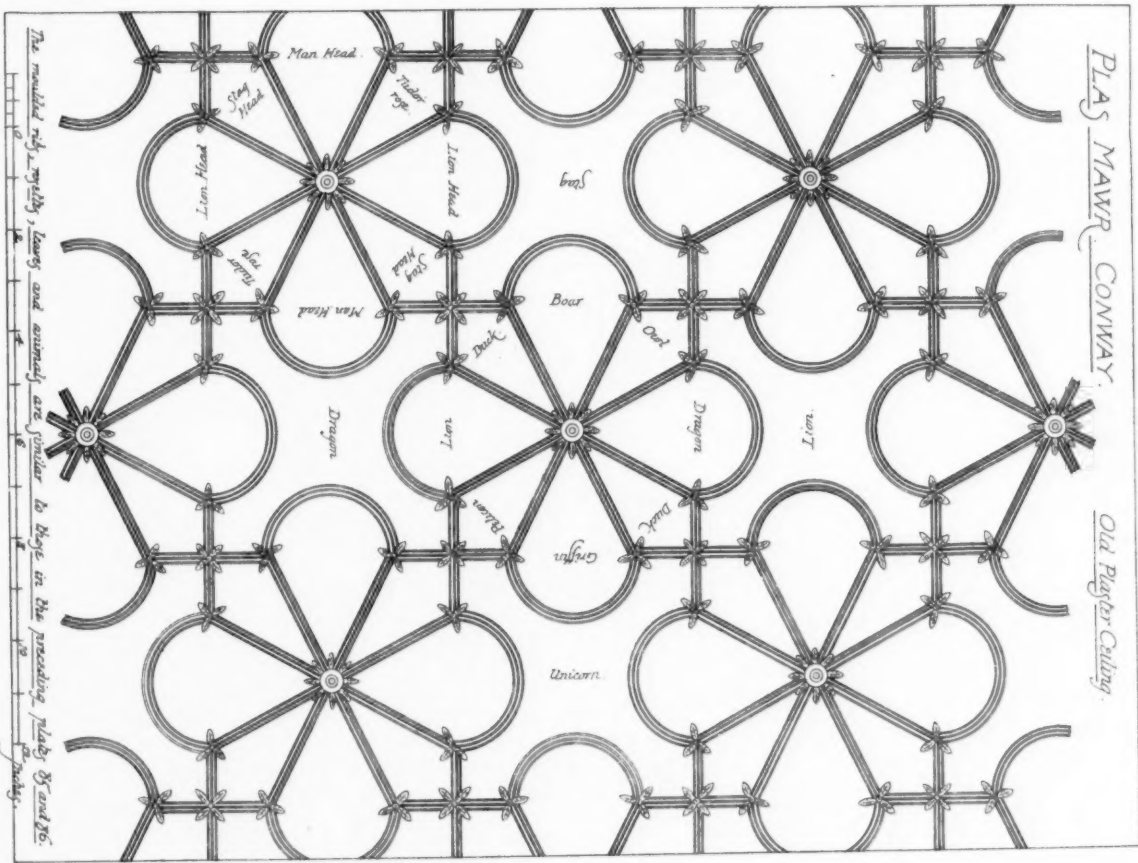
Plate 86



The pattern of the moulded ceiling rib and the leaves at the intersections of the ribs are the same as those appearing in plate 85. The reptiles and birds are also similar.

PLAS MAWR CONWAY. Old Plaster Ceiling.

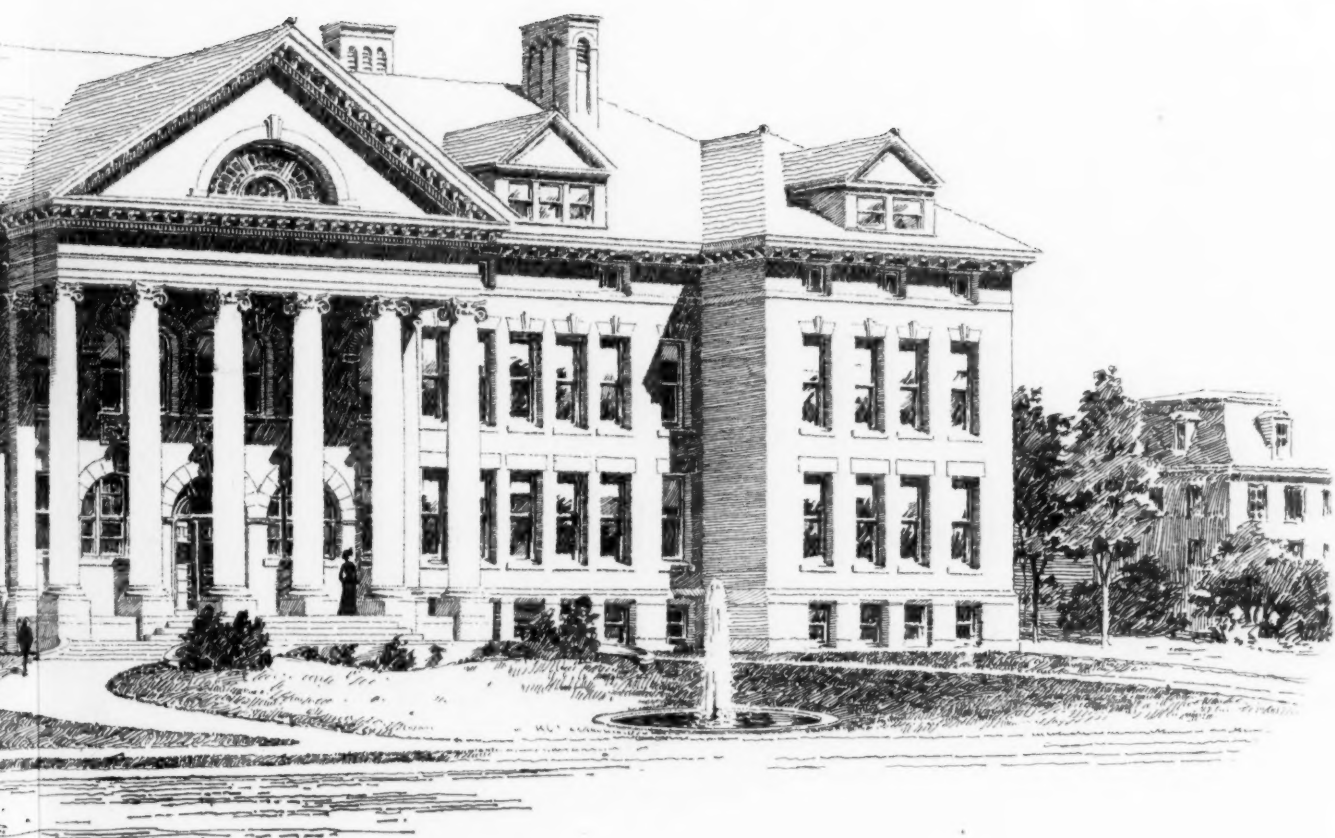
Plate 87



The moulded rib, reptiles, leaves and animals are similar to those in the preceding plates 85 and 86.



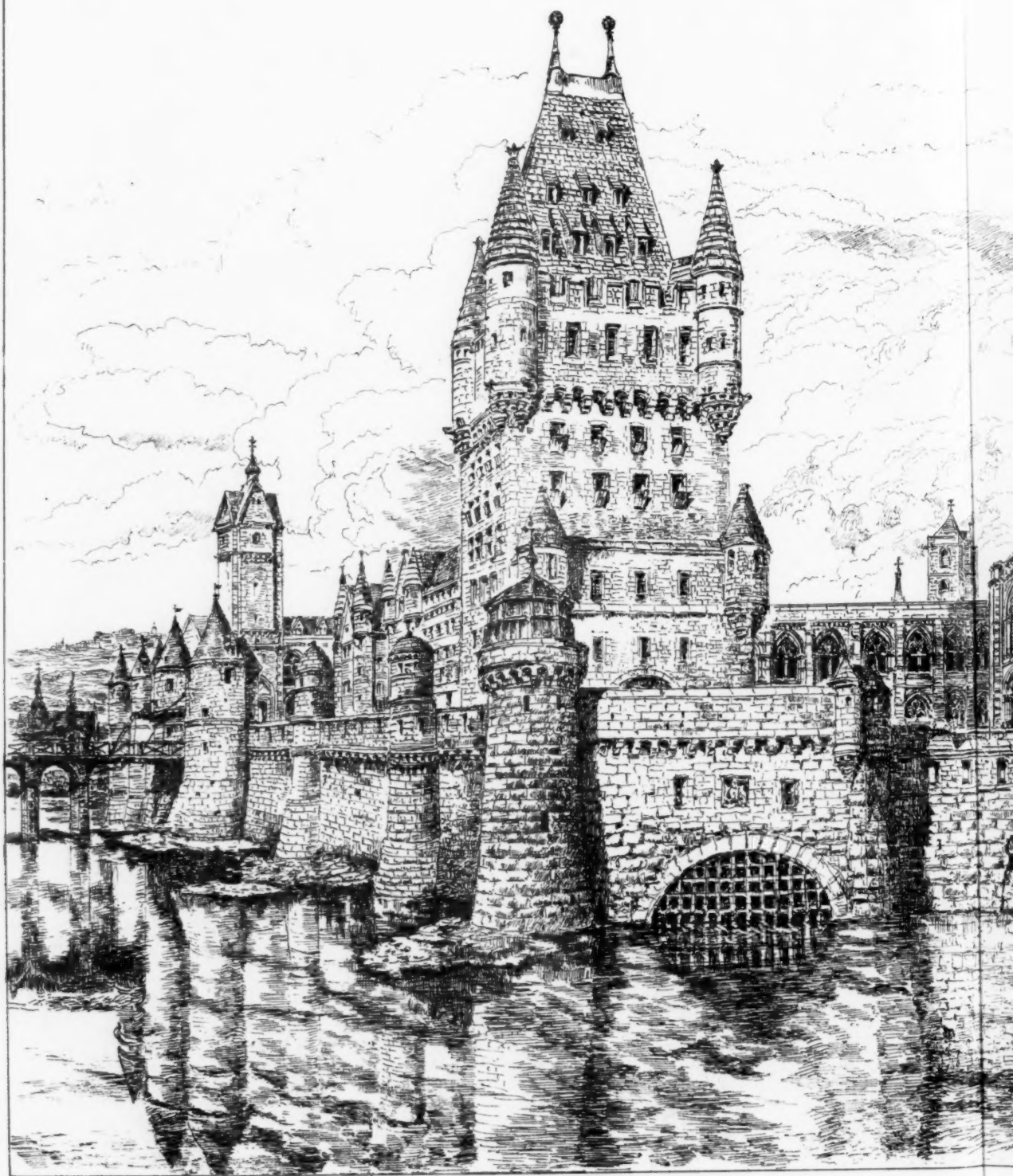
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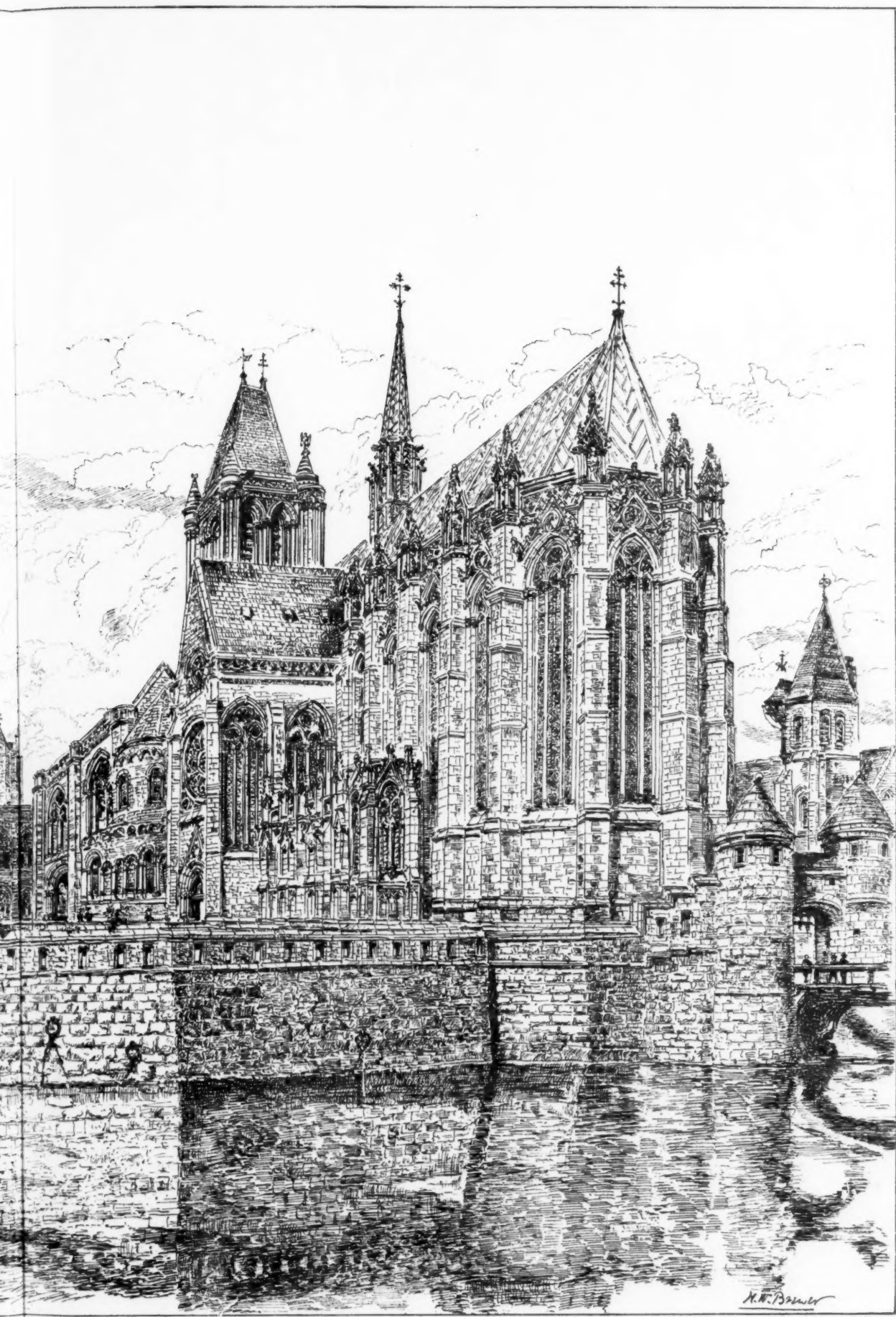
HELIO TYPE CO., BOSTON.

The American Architect
Nov. 7, 1903.
No. 1454.



From the Builder.

THE "TEMPLE," PARIS: SCENE OF THE IMPRISONMENT
FROM A DRAWING BY THE LATE



HELIO TYPE CO., BOSTON.

MONUMENT OF LOUIS XVI AND XVII. (NOW DESTROYED).
 BY THE LATE H. W. BREWER.

The American Architect
 Nov. 7, 1903.
 No. 1454.

THE AMERICAN ARCHITECT AND BUILDING NEWS

ADVERTISERS' TRADE SUPPLEMENT

No. 258

SATURDAY, NOVEMBER 7, 1903

VOLUME LXXXII
No. 144

LEADED GLASS AS AN ADJUNCT TO THE MODERN RETAIL STORE.

ONE of the most encouraging tendencies of the present time, from the standpoint of those interested in the architectural development of our cities, is the growing realization among the business men of to-day of the practical value, in its relation to their success, of the harmonious decoration of their stores and offices. This is particularly true of men who conduct retail businesses, catering to the more fastidious and intelligent, but it is by no means confined to any one class of trade, and while much of the effort in this direction has been misdirected, there has been a steady upward movement, with the result that many of our modern retail stores are models of simple elegance, that reflect equal credit on the good taste of the public, and the intelligence of the men who endeavor to gratify it.

This is particularly the case in regard to the fronts of stores, where the problem of producing an effect that is at once striking and harmonious, without interfering with the primary purpose of the store window, which is to display the goods contained therein, has only recently been satisfactorily solved.

In this connection, some of the installations of the Larrabee-Roscoe Co., of this city, who have furnished the leaded glass for most of the recent work of this kind here, are especially interesting. Of these, three which have been completed during the past summer, are particularly noteworthy examples of what a store front should be. These are the shoe store of Jones, Peterson & Newhall on Temple Place, the building in which Hall & Hancock, the Washington Street hatters, have just located, and the new shoe store of Hanan & Son on Summer Street, of which last we reproduce a photograph.

The principal difference between the leaded-glass work in these stores and that formerly employed for similar purposes lies in the fact that in the past the aim has been chiefly to create an effect that will be noticeable and

striking from the outside. For this purpose opalescent glass has been used almost entirely, the originators of this work losing sight of the fact that outside windows are openings, and for the sake of exterior effect, should be subordinated to the other details of the building. In this latter work, on the other hand, the background which forms the greater portion of the lights is worked in clear glasses, relieved by an ornament of colored opalescents in small surfaces, the effect being obtained principally by the use of leads of varying sizes. Further description is unnecessary,

especially noteworthy from the fact that it is dependent throughout on the application of artistic principles to the problem of effective store decoration, and particularly to the designing and carrying out of store fronts that are both beautiful and appropriate, and in which, at the same time, the decoration is subservient to the practical purpose of the windows. This is a branch of the leaded-glass maker's art that has been neglected. The leading workers in stained glass have either passed it by altogether, or have failed to carry out the work they have undertaken,

with that conscientiousness that they have devoted to ecclesiastical work, and the decoration of house interiors. But the gentlemen at the head of this concern, while primarily makers of church windows, which is and always will be the highest form of expression of the art, realized some time ago that there was a field for sincere artistic work in store decoration, and have devoted considerable time and thought to it. That they were justified in this assumption, the store fronts mentioned previously, which are a source of pride to their owners, and elicit favorable comment from every architect who sees them, are abundant proof.

It would not be proper to close this article with-

out mentioning one especially noteworthy piece of work which may be seen in this city. It is in the Tabard Inn Library on Boylston Street, and was produced by Mr. Nicola D'Ascenzo, of Philadelphia. The work is absolutely unique, and in the place, possesses through its antique English character an appropriateness that cannot be surpassed. It is a fine example of absolute fitness in the adaptation of leaded glass to the place in which it is to be used.

NOTE.

THE New York Carved Moulding Co. justly lay claim to being the oldest manufacturers of Machine Embossed Mouldings in America and rightly believe that their long



Leaded Glass Store Front executed by the Larrabee-Roscoe Co.

the accompanying illustration giving an idea of the general style of this work.

Other examples of the work of this company in the decoration of places of business may be seen throughout the city, the more recent ones which have not been previously mentioned being in the stores of the Sorosis Shoe Co., on Temple Place and Boylston Street, D. S. McDonald's restaurant on Tremont Street, and also in the R. H. White Co.'s building, A. Shuman & Co.'s store and the new store of Andrew J. Lloyd on Washington Street. The prismatic-glass front of the latter store was furnished by George K. Maltby & Co., and does very effective work, illustrating the successful treatment of another phase of the store-front problem.

The work of the Larrabee-Roscoe Co. is

experience and careful attention to the details of the business, has made them competent to judge intelligently of the requirements of all consumers of decorated mouldings. They claim to be the largest manufacturers in America and their agents in all the large business centres of the world have built up for them an exceedingly large and profitable export business. Many architects have already received their late catalogue, which is very complete, and any not fortunate enough to have received one, can obtain it by sending such a request with their address to the home office, 1st Ave. and 44th St., New York.

SHEET-METAL RADIATORS.

In another portion of our publication will be found the advertisement of the Kinnear-Hood Steel Co., calling attention to their product of sheet-steel, brass and copper radiators, and along this line it, perhaps, is not

years there came along the vertical 1-inch pipe radiator, which was made with 1-inch vertical tubes and cast-iron base and top. Some makes for pressure used the welded end tube with diaphragm or screwed cast-iron return bend, others used the cast-iron return bend pressed on the tops of the tubes. The next to appear was the cast tube screwed into a cast base. Its tube was made hexagonal and of loop form, and from this conception came the present line of cast-iron radiators, made in single, two, three and four column, and of different heights and patterns; and still, if the question of weight is considered or the question of space occupied, the general method even at this date is to revert to the pipe coils or a wall radiator made of cast-iron of modern design that occupies less space than the ordinary rectangular cast-iron radiator, but still weighs the same per square foot. Interspersed along the years of evolu-

from them particularly in the matter of design, weight, efficiency and the susceptibility of the surfaces to decoration, as the tones or colors of these radiators can be made to harmonize with their surroundings, and another great feature of the finish is the fact that it will not require renewing. Owing to its being electrically plated it will last indefinitely and removes that extremely objectionable feature of repainting and bronzing ever-present with the cast type.

In the tubular form the outside and inside surface of each section is nearly double that contained in cast radiators of the same floor space, and it has been most thoroughly demonstrated that the flue radiation is the most efficient of all radiating surfaces. This pattern also allows of its use for semi-direct heating, which is coming more and more into use for public buildings as well as residences, etc.

The single-tube patterns are made with a view to filling the demand for narrow radiators, for halls, bathrooms, lavatories and under-window spaces, where wider patterns cannot be used. This entire product being made of sheet-metal, the thickness of metal exposed to the heating medium and to the air is uniform, and the expansions and contractions, therefore, are equable, with no danger of cracking by unequal strains; and in contents has steam spaces or water spaces less than the cast types, ensuring quicker circulation of water through same, less volume of water for the boiler to turn over for the same amount of heating-surface, therefore, more satisfactory for quick changes from cold to heat and *vice versa* than radiators containing a large volume with no more exposed surface.

In considering this radiator for water circulation it might be well to say that its contents per square foot of heating-surface is, in comparison with 1-inch pipe surface, as 11.5 to 13.

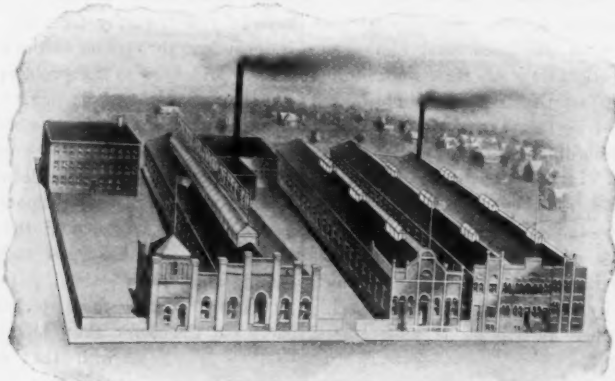
Another feature of these radiators, and one of great importance, is its uniform thickness of metal and uniform steam and water spaces, thus ensuring an equable distribution and equable temperature at all parts of the radiator, and also the fact that all surface is "prime" surface—the core, or inside, being the same at all points, which cannot be said of cast radiation; owing to the unequal flow of iron in the mould it is almost impossible to obtain a cast of even thickness, and absolutely nothing is known of the thickness or integrity of the different portions of cast radiators unless it is broken, while with the sheet-steel radiator the material is uniform as rolled, and there is no possibility of weakness showing after use.

KINNEAR-HOOD STEEL CO.,
141 BROADWAY, NEW YORK, N. Y.

PROGRESS IN PLUMBING.

THE evolution in sanitation and the improvements in sanitary appliances in the last twenty years have brought about new conditions in the plumbing business, which require that an up-to-date show-room, and inviting the attention of the public to the goods displayed in it, are as necessary to the plumber as to the successful merchant in any other line of trade.

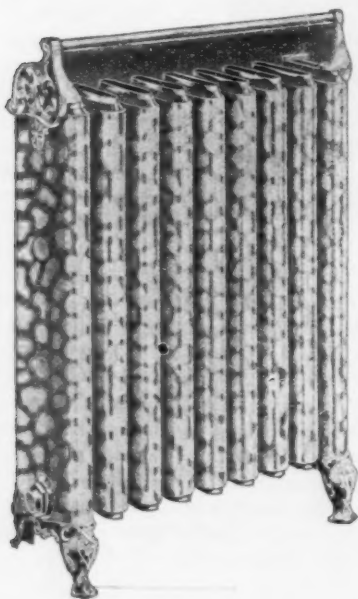
Having had over a quarter-century's experience in manufacturing, advertising and selling "STANDARD" Porcelain Enamelled Baths and Sanitary Ware, we can unhesitatingly state that the plumber who will adopt up-to-date methods of displaying the well-known "STANDARD" Porcelain Enamelled Ware and the "STANDARD" Portable Shower will



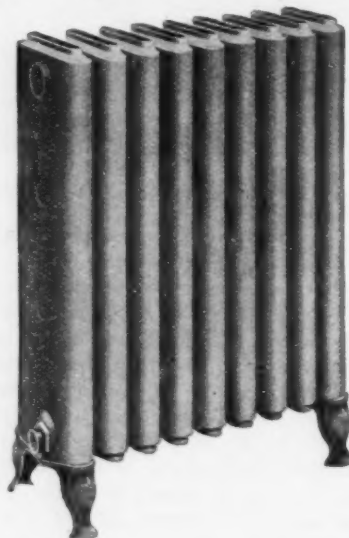
Plant of the Kinnear-Hood Steel Co. at Newark, N. J.

out of place to refer to the advances made in the designing and manufacture of these goods. Nothing in the line of mechanical production for heating has improved so slowly as the steam and hot water radiator; neither is there any product used for residences or public buildings for which the demand for artistic improvement has been so great, and, although seemingly great exertions have been made, the development has been carried out under the fear of increasing the cost to an extent that would be a benefit to a competitor.

tion of the cast radiator there have been a few sheet-metal radiators. Some of these, though plain and crude of design and manufacture, are still in existence after giving satisfactory service during a period of twenty-five to thirty years; and there are designs similar to the old flat type that are still very largely used abroad, but up to the present the product, though small, has been kept to the old patterns; therefore, it will be readily seen that the evolution has been slow, for in the matter of twenty-five years there has been no material change except in the design, and the cast-iron radiation of to-day weighs as much, if not more than it did at its birth.



The first radiator used for steam or water to any extent consisted entirely of wrought-iron surfaces of $\frac{3}{4}$, 1-inch and 1 $\frac{1}{4}$ -inch pipe, except in greenhouses, where 4-inch cast-iron pipe was once universally used. After a few



The Kinnear-Hood Steel Co.'s sheet-metal radiators are an entirely new departure, in that they in no way resemble the older patterns of sheet-metal radiators, and while, perhaps, similar in shape to the cast types differ

Atlas PORTLAND CEMENT

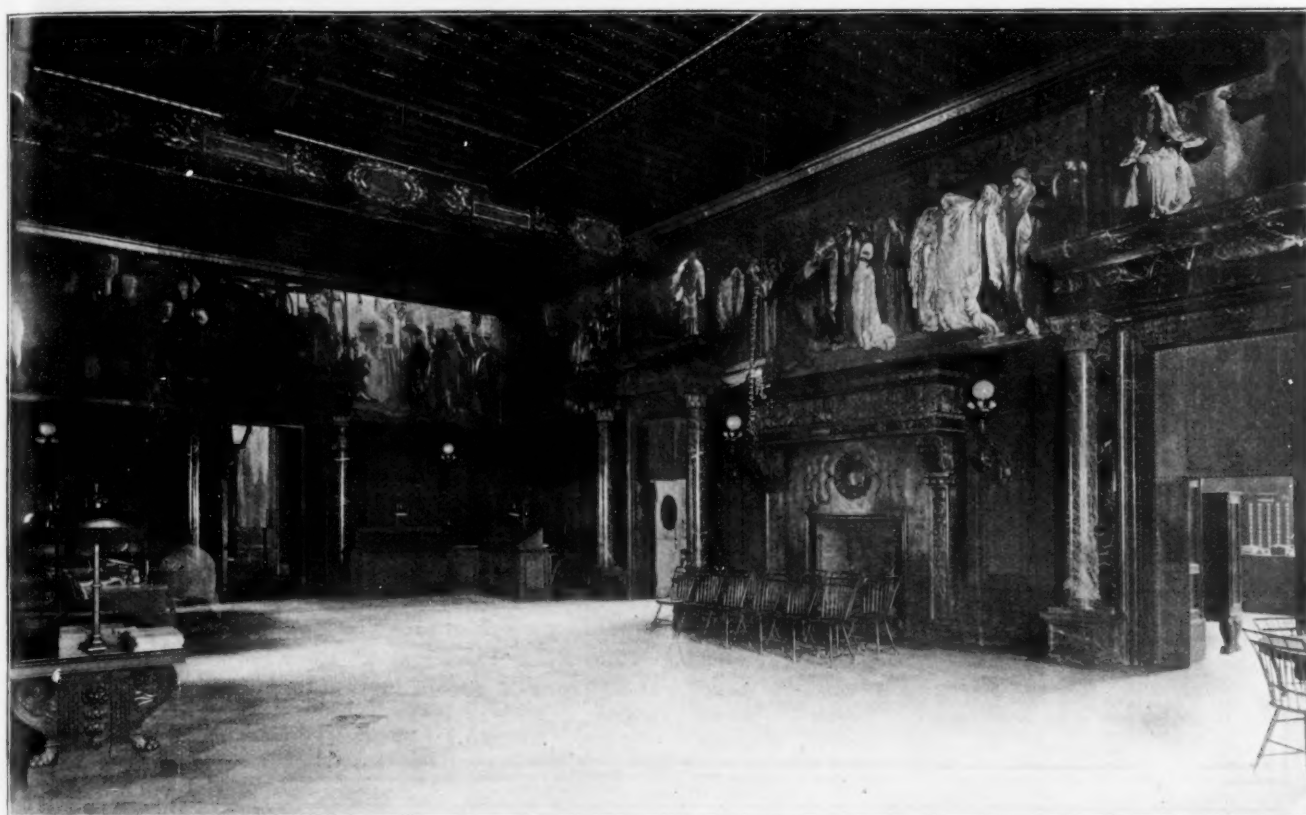
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Delivery Room, Boston Public Library, showing Edwin A. Abbey's Decorative Paintings

These paintings, the subject of which is "The Quest of the Holy Grail," have recently been lighted by I. P. FRINK of New York, who has lighted nearly every public and private art gallery in the United States, as well as a great many decorated ceilings, friezes, mosaics, etc. He invites correspondence concerning special effects of all kinds in electric lighting.

be greatly benefited by thus coöperating with our methods to make "STANDARD" a household word the world over, and letting the magazine-readers know that our product can be seen and bought in their immediate vicinity.

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THE AMERICAN ARCHITECT AND BUILDING NEWS

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART

VOL. LXXXII.—No. 1454.] SATURDAY, NOVEMBER 7, 1903. PRICE, { INTERNATIONAL ISSUE, 50 CTS
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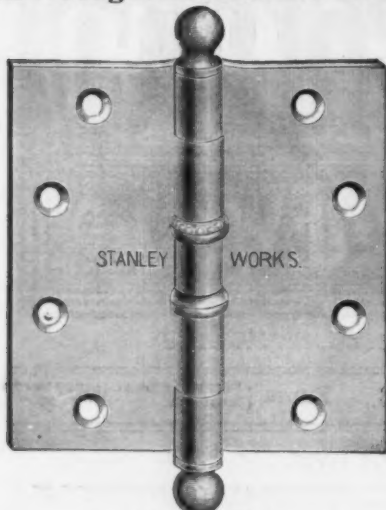
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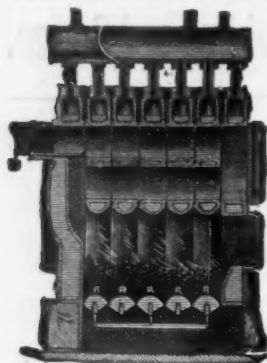
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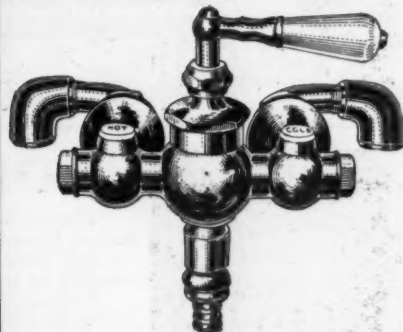
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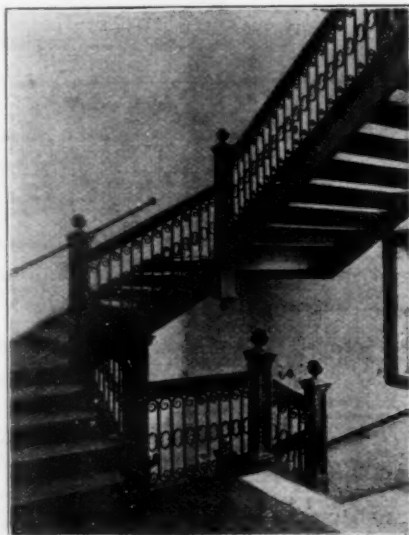
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ARTICLE I.

Obligation of Principal Contractor to Sub- Contractor.

A principal contractor is under obligation to treat upon an equal basis all estimates which he "receives" prior to putting in his own bid. Estimates must be considered as "received" when they come into a principal contractor's possession, either by his direct solicitation or by being accepted by him. The opening of a bid, knowing it to be such, constitutes receipt of the same.

A principal contractor is under no obligation to use a bid which he has not solicited, accepted, or received, but if he does not wish to use the estimate of a sub-bidder he should decline it, if proffered personally, or should return it unopened if sent to him by mail or otherwise. The retention of a bid should be construed as a receipt of the same.

A principal contractor, when making up his estimate, is not entitled to receive bids from sub-contractors if he is at the same time making himself their competitor by figuring their portion of the contemplated work. It is legitimate for a principal contractor to figure all portions of work, depending upon no one for what are usually known as sub-estimates, but it is not legitimate for him to receive bids from others for sub-work if he is himself figuring those portions independently.

ARTICLE II.

Award of Sub-Contracts.

The principal contractor having been awarded a general contract should immediately award the sub-contracts to the lowest bidder in each branch.

ARTICLE III.

Penalty for not Awarding Contract to Lowest Sub-Bidder.

A principal contractor failing to award a sub-contract to the lowest sub-bidder to whom he is under obligation as previously provided should be liable to pay damages to the said lowest bidder, in amount not less than ten per cent of the amount of the estimate.

Payment of such damages will not relieve the principal contractor from liability to discipline under provisions of Article X of the By-Laws of this Association.

ARTICLE V.

Payments to Sub-Contractors.

Unless the contracts made with sub-contractors otherwise provide, payments during the progress of the work should be made by the principal contractor to the sub-contractors upon the same basis of payment, in relation to amount of work performed, as is prescribed in the contract made by the principal contractor with the owner.

Final payment to a sub-contractor should be considered as due at the expiration of thirty days after the completion of his work and its approval by the architect or owner, unless otherwise provided by the sub-contract or agreement.

ARTICLE VII.

Obligation of Sub-Contractor to Principal Contractor.

Should a sub-contractor refuse to contract at the amount of the estimate he has given to a principal contractor who has used the said estimate in good faith, he then should be liable to the said principal contractor for damages in amount not less than the difference between the amount of the estimate which was submitted by him and the amount at which the principal contractor may be obliged to contract the work.

Payment of such damages will not relieve the sub-contractor from liability to discipline under provisions of Article X of the By-Laws of this Association.

ARTICLE X.

Bids to Architects or Owners.

When bids for separate departments of work on a building are solicited by the architect or the owner, they should be submitted with the understanding that they are direct estimates, for which direct contracts are to be made by the owner with the lowest bidder, and no other disposition of such bids should be permitted without consent of the bidder submitting the same.

Sub-bids should be given only to the principal contractors who are estimating the work in question, and should not be left with architects or owners for the inspection and information of principal contractors. Sub-contractors must understand that bids thus left with architects or owners are in great danger of losing their confidential character, and that if they so leave them they cannot claim protection or redress under the first article of this Code.

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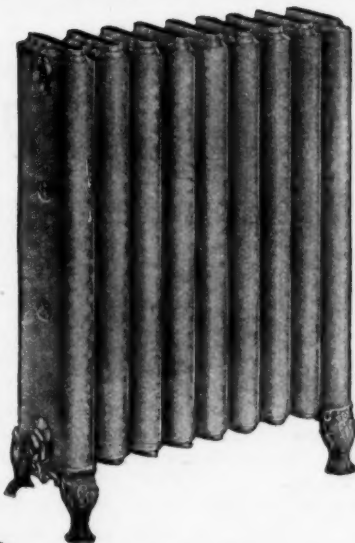
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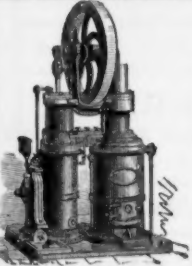
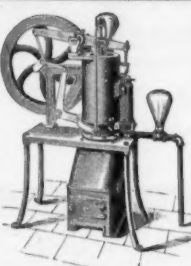
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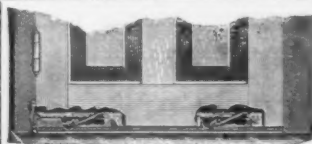
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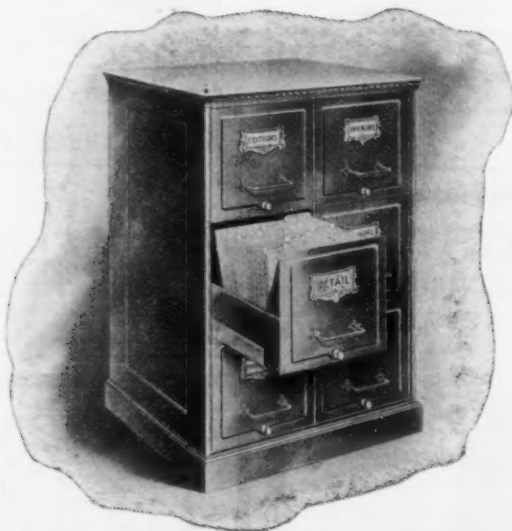
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New Advertisements.

KINNEAR-HOOD STEEL CO. (New York, N. Y.), Radiators. Page v.

EDISON LIGHT (Boston, Mass.), Electric Apparatus. Page v.

SIMPSON BROS. CORPORATION (Boston, Mass.), Asbestos and Concrete-steel Construction. Page xv.

I. P. FRINK (New York, N. Y.), Reflectors. Page 3.

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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.]

ADVANCE RUMORS.

Allendale, Ont.—A London, Ont., firm has just secured an important contract, having been awarded the task of erecting an immense new round-house and machine shop for the Grand Trunk at this place. The round-house will be of 28 stalls, and both buildings will be of cement construction throughout. The total cost will be over \$40,000.

Baltimore, Md.—An ordinance has been introduced in the First Branch providing for the tearing down of Public School-house No. 43, on High St., near

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Fayette, and the erection on the same lot of a building more suitable for public school purposes. The appropriation is placed at \$65,000, to be taken from any of the Western Maryland Railroad surplus that might become available for public improvements. The ordinance was referred to the Committee on Education.

An ordinance has been introduced for the purchase of a lot of ground near Alsquith and Oliver Sts. and the erection of a truck-house thereon. Appropriation, \$25,000.

Arrangements for the purchase of the lot at the corner of 27th St. and Huntington Ave. have been completed by Rev. John Gardner Murray, rector of St. Michael and All Angels' Protestant Episcopal Church. The little tract will be used as a site for a new stone chapel which will cost \$10,000.

Bay City, Mich.—The matter of erecting a new county court-house, costing in the neighborhood of \$250,000, is being considered.

Brighton, Mass.—Plans for a \$40,000 apartment block to be erected for Dana Estes have been drawn by J. M. Parks, of Brookline. They show a brick building, 60' x 118', three stories high, to contain suites of two and three rooms each. It will be erected in Englewood Ave., near the corner of Beacon St.

Brookton, Mass.—Mrs. Lois K. Wales, of Quincy, has put in the hands of the executive committee of the Brookton Hospital \$5,000 with which to build a memorial ward in honor of her husband, the late William H. Wales.

Chelsea, Mass.—Plans have been approved for the Young Men's Christian Association Building which the Chelsea branch will erect in Hawthorn St., near Bellingham Sq., in this city. The structure will be five stories high and 50' x 100' in dimensions. The materials will be buff brick, with limestone trimmings. The building is estimated to cost \$45,000 above the land. The lot cost \$10,000. The entire building will be for the exclusive use of the Association.

Chicago, Ill.—John Zelewsky will build a three-story apartment-house on the east side of Woodlawn Ave., near 61st St., at a cost of \$50,000.

A. G. Ferree has made plans for a three-story flat building, 90' x 160', which is to be built at the intersection of Vincennes and Bryant Aves., at a cost of \$65,000.

The southeast corner of Berkeley Ave. and 59th St. is to be improved with 2 three-story buildings, 76' x 71' and 40' x 60' respectively. The plans are by L. M. Mitchell, and the cost is estimated at \$50,000.

At the southeast corner of Washington Ave. and 52d St. W. P. Doerr will build a three-story apartment-house, 150' x 150', after plans by J. F. and J. P. Doerr, at a cost of \$90,000.

The Francis Nygren Foundry Co. will build a one-story foundry, 100' x 140', on Fillmore St., near Rockwell, after plans by H. W. Tomlinson, at a cost of \$30,000.

The new Edgewater Presbyterian Church, the ground for which was broken recently will be a handsome stone structure and will stand at the southwest corner of Kenmore and Bryn Mawr Aves. The cost will be \$50,000, and the building will be ready for the congregation May next. George W. Maher is the architect.

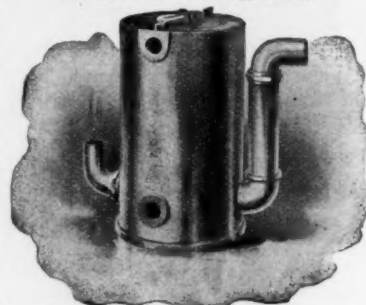
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Denison, Ia.—Marxen & Rubahr, of Avoca, have secured the contract to erect the court-house, at \$75,000. The first story will be of brown sandstone and the remainder of Bedford. George A. Berlinghoff, architect, of Beatrice, Neb.

East Northfield, Mass.—Two new buildings will soon be under way for the Northfield schools. One of these, a new dining-hall, is to be located at Mount Hermon; the other, a science hall, at Northfield Seminary. Already \$55,000 has been subscribed for the purpose.

Fall River, Mass.—The plans for the new Watuppa Cotton Mills have been prepared by Lockwood, Greene & Co., of Boston. The capital of \$250,000 has been subscribed and it is hoped to have all bids in within two weeks, and to get the foundation in and the walls erected this year.

Granville, Ill.—The Chicago, Milwaukee and St. Paul Road contemplates the erection of 50 dwellings in connection with its new shops at a total cost of \$60,000. Fifteen of these houses have just been given in contract. Each will be one-story and a half, 24' x 36', of frame construction on brick base.

Greenwich, Conn.—A despatch from New Haven states that President Hall, of the Consolidated Road, has authorized the construction of a new passenger station and the enlargement of the station grounds on the east-bound track at this place. The work will be begun immediately.

Indianapolis, Ind.—It is probable that the erection of the new Board of Trade Building will not be begun before early spring. The Board will expend about \$165,000 for its new building. The organization has assets that can be turned into cash amounting to about \$40,000. The remainder of the money will have to be borrowed.

Ithaca, N. Y.—Ground will be broken in the spring for the new Rockefeller Hall of Physics and the new Goldwin Smith Hall of Languages for Cornell University. Each building will cost \$250,000. Rockefeller Hall will be located on East Ave., just north of President White's residence, and Goldwin Smith Hall will be placed in the quadrangle between Lincoln Hall and Stimson Hall.

Lawrence, Kan.—The building committee of the Fraternal Aid Association has let the contract for the new building and it will be erected as soon as the work can be done. The contract was let to Henry McLaughlin, of Leavenworth, for \$28,400.

Louisville, Ky.—A proposition now advanced is to form an association with the alumni of the medical and law departments of Louisville University as its principal members, for the purpose of raising a fund by subscription to extend the active departments of the university with direct reference to the establishment of an academic department. It is desired to raise \$110,000 to expend in the equipment of the present schools and erect halls for the instruction of the academic department.

Montreal, P. Q.—At the quarterly meeting of the Board of Governors of the Western General Hospital, it was stated that a new hospital would probably be erected in the spring, and that it would provide accommodation for at least 100 patients. The building would cost in the neighborhood of \$100,000.

New Castle, Pa.—Ground has been broken for the

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

erection of the new Highland Ave. United Presbyterian Church. The structure will cost at least \$50,000 and will be located at the corner of Highland and Park Aves., upon a site partially donated by Geo. V. Boyles, a retired millionaire oil producer.

New Haven, Conn.—A new Italian church is soon to be erected on the corner of Washington Ave. and Gold St. Several buildings which stood on the chosen site have been removed and work on the excavations has already begun. The new church will be of the Italian Renaissance style of architecture with a projecting roof supported by light stone columns. It will be 110 feet in length by 52 feet in width, and will be constructed of red brick with red iron and terra-cotta trimmings. It will cost in the neighborhood of \$25,000.

New York, N. Y.—The construction plans for the group of new buildings for the College of the City of New York have been filed with Building Superintendent Thompson by Geo. B. Post, the architect selected by the city. The buildings are to be five in number, partly connected by a subway, and will cover an area extending from Amsterdam Ave. to St. Nicholas Terrace and from 138th to 140th Sts. Cost, \$2,500,000.

Plans have been filed at the Bureau of Buildings, Manhattan, by A. S. Macgregor, an architect of the Rapid Transit Subway Commission, for the rebuilding of the billiard academy at the northeast corner of Broadway and 42d St. The Astor Estate is the owner. Cost, \$20,000.

At a recent meeting of the Board of Trustees of the Cathedral of St. John the Divine at Bishop Potter's office, 113 W. 40th St., J. Roosevelt Roosevelt, the Rev. Dr. Peters and the Rev. Dr. Dix were appointed a committee to perfect arrangements for the erection of the episcopal residence, costing about \$90,000, to be built at Amsterdam Ave. and 110th St., on the cathedral grounds.

Pawtucket, R. I.—A number of architects throughout New England have sent in plans for a new Y. M. C. A. building in this city. All have entered the contest which the Y. M. C. A. building com-

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

mittee inaugurated some time ago to architects. Prof. A. D. F. Hamlin, instructor of architecture of Columbia University of New York, will assist and advise the committee in its work.

Philadelphia, Pa.—Charles Gilpin and Shoemaker & Co. are bidding for the new club-house of the Philadelphia & Reading Athletic Association, which will soon be erected at Tabor Station. It will be a two-story frame building, 24' x 98', and will contain two bowling-alleys, shower baths and full athletic equipment.

Plans have been finished by T. Mitchell Hastings for a five-story addition to the Rush Hospital for Consumptives, 33d St. and Lancaster Ave. The improvements consist of the demolition of the present main building and the erection of the new five-story structure in its place. It will be of brick, trimmed with stone, and will be surrounded with wide porches. The improvements will cost about \$180,000.

The Midvale Steel Co. will erect a plant to cost about \$2,000,000. It is said that an entirely new process will be used in making the armor plate for the navy.

W. E. Dougherty has the contract to build the extension to the University dormitories at 39th and Spruce Sts. The addition will measure 39' x 75', three stories high. The work will cost about \$40,000.

A new \$50,000 edifice is to be erected for the negro Baptist Church on the lot at the southwest corner of 16th and Christian Sts. It will be a two-story and gallery structure, of stone, with terra-cotta trimmings and a peaked tile roof. The dimensions will be 67' x 130'. Plans by E. F. Bertollette.

Pittsburgh, Pa.—In the near future ground will be broken on Diamond St. for Pittsburgh's first arcade building. The contract has been let and the building already leased. The building will not be more than three stories high and the stairs will line all sides of it.

E. J. Carlisle & Co. are receiving bids for the erection of a three-story fireproof school-building

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

for Sheraden Borough. It is estimated to cost about \$17,000. The same architects have let a contract to James E. Dykemann for a \$10,000 brick and stone residence, to be built at Forbes St. and Murray Ave., Squirrel Hill, for M. L. Martin.

Providence, R. I.—The North Providence Town Council, in special meeting, voted to exempt from taxation from a period of ten years a plant proposed to be established on the old Greystone Mill property. The property includes not only the mill property at Greystone, but also a portion of a farm belonging to James C. Collins, which will be purchased by the firm of Joseph Benn & Sons, Incorporated, an English firm engaged in the manufacture of fancy worsted weaves, principally dress goods, in Yorkshire, Eng. The new plant will be a large affair.

Application for a building permit has been filed at the City hall by Irons & Russell, manufacturers of emblems, for a new brick building for manufacturing purposes, to be erected at the corner of Chestnut and Clifford Sts. The structure will be of brick construction, five stories in height, 75' x 130' in dimensions and will be equipped with two passenger and freight elevators. The architects are Martin & Hall, who have nearly completed the plans.

St. Boniface, Can.—A movement is on foot here, and throughout the diocese generally, to build a new cathedral. Plans have been received from Montreal for this new building and they are now at the Archbishop's Palace, where they are being inspected by Archbishop Langevin. This cathedral will be one of the finest of its kind in the Dominion and will cost \$300,000.

St. Louis, Mo.—W. L. Dow & Son have completed plans for the South Dakota building at the Louisiana Purchase Exposition. The building will be two stories in height and will occupy a ground space of 44' x 68'.

Valley Forge, Pa.—The contract for the foundation of the Washington Memorial Chapel here has been awarded by Field & Medary, of Philadelphia,



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(Advance Rumors Continued.)

to a local contracting firm, and work will start in a few days. The memorial will cost about \$20,000. It will be several weeks before the contract for the superstructure will be let.

Washington, D. C.—The magnificent new Union Station to be erected here, the cost of which will be \$4,250,000, may be ready for the business of the next Presidential inauguration, a year from next March. The building, exclusive of the train floor, will cover an area of 250' x 750', while the train shed will be 135' x 800'.

Bids were opened at the District Building on October 27 for the construction of the new N. P. Gage school-building in Le Droit Park. The specifications call for hand-made red brick as the material to be used in the building and the style of architecture will be Colonial. The plans provide for eight class-rooms, an office, library and a teacher's room. The appropriation for the building amounts to \$45,000.

Whitman, Mass.—The Regal Shoe Co. has just secured the large field owned by the William H. Dunbar estate, just east of the Regal factory. On this six-acre lot 2 four-story additions to the present plant will be erected.

Youngstown, O.—The cost of the new Erie Railroad station to be erected at this place will be \$200,000. The plans have been made and the company is about ready to begin work.

CHURCHES.

Brookings, S. D.—Two-st'y bk. & st. church, 68' x 92', furnace; \$15,000; o., M. E. Society; a., Sedgwick & Saxton.

EDUCATIONAL.

New York, N. Y.—Hester St., bet. Essex & Norfolk Sts., six-st'y bk. school, 200' 4" x 200' 4"; \$500,000; o., City; a., C. B. J. Snyder, 500 Park Ave.

HOUSES.

Minneapolis, Minn.—Tenth Ave., No. 1512, two-st'y fr. dwell., 45' x 47', steam; \$7,500; o., W. H. Fletcher; c., A. A. Swan, 2218 Irving Ave. N.

New York, N. Y.—Franklin Ave., nr. Jefferson St., 24-st'y fr. dwell., 22' x 58' 6"; \$5,000; o., Mrs. L. Wolff; a., John C. Wolff.

OFFICE BUILDINGS.

New York, N. Y.—E. Twenty-first St., Nos. 23 25, ten-st'y & base, bk. stores, offices & lofts, 44' x 90'; \$100,000; o., Merrick Con. Co., 1 Broadway; a., Jardine, Kent & Jardine, 1262 Broadway.

STABLES.

New York, N. Y.—W. Forty-fourth St., No. 548, two-st'y bk. stable, 25' x 39'; \$7,000; o., J. T. Brook, 498 Eleventh Ave.; a., J. H. Knobel, 318 W. 42d St. Union Ave., No. 815, three-st'y fr. stable, 24' 5" x 38' 10"; \$5,000; o., Charles Dellinder; a., James H. Tully.

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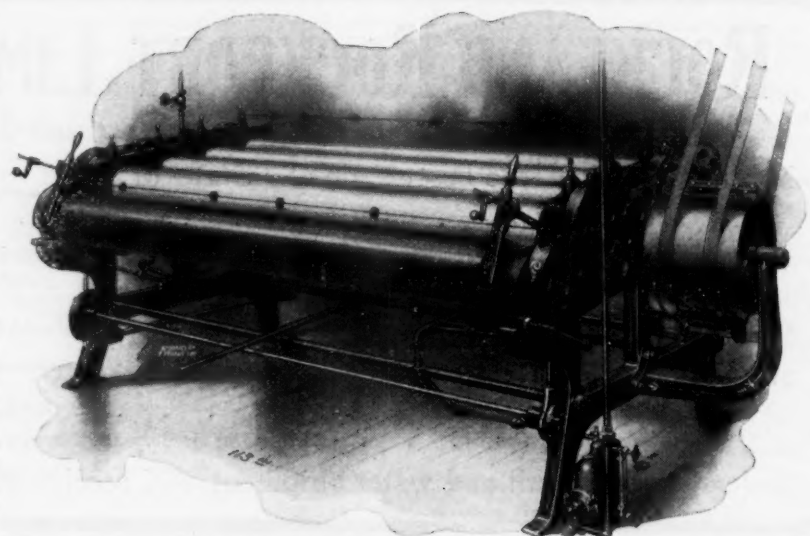
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PROPOSALS.

STATE HOSPITAL.

[At Buffalo, N. Y.]

Sealed proposals suitably endorsed on envelope for superintendent's residence; construction, heating, plumbing and electric work at Buffalo State Hospital, Buffalo, N. Y., may be sent by mail or delivered in person until the 11th day of November, 1903, to the State Commission in Lunacy, at the Capitol, Albany, N. Y., when the bids will be opened and read publicly. Drawings and specifications may be consulted and blank forms of proposal obtained at the Hospital, Buffalo, N. Y., or by application to G. L. Heins, State Architect, in the Capitol at Albany, N. Y. T. E. MCGARR, Secretary State Commission in Lunacy. 1454

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 29, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 9th day of December, 1903, and then opened, for the construction including plumbing, heating apparatus, electric wiring and conduits of the U. S. Post-office at Iowa City, Ia., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Iowa City, Ia., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1455

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 29, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 24th day of November, 1903, and then opened, for the installation of an electric passenger elevator in the U. S. Post-office, Custom-house and Court-house building at Tampa, Florida, in accordance with the drawings and specification, copies of which may be obtained at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1455

PROPOSALS.

WALKS.

[At Fort Worden, Wash.]

Bids are wanted November 14 for constructing road, granolithic walk, etc., at this post. Address GEO. H. PENROSE, Q. M., U. S. A., Fort Townsend. 1454

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 29, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 25th day of November, 1903, and then opened, for extending and changing plumbing system at the U. S. Post-office building at Kalamazoo, Michigan, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Custodian, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1455

STEEL TANK.

[At Fort Brown, Tex.]

Bids are wanted November 19 for erecting a 50,000-gallon steel tank on 50-foot trestle at this post. T. E. TRUE, Ch. Q. M., San Antonio. 1455

LAUNDRY.

[At Johnson City, Tenn.]

Bids are wanted November 24 for furnishing material and erecting laundry building and equipment at the Mountain Branch, N. H. D. V. S., near Johnson City. J. H. Freedlander, architect, 244 Fifth Ave., N. Y. City. MOSES HARRIS, Gen. Treas., 346 Broadway, N. Y. City. 1455

CHURCH.

[At Warrensburg, Mo.]

Bids are wanted November 20 for erecting a church for the First Baptist Society. Address JOHN THRAILKILL. 1455

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PROPOSALS.

SCHOOL.

[At Lakepark, Ia.]
Bids will be received December 1 by D. C. May for erecting a school, including a heating plant and plumbing. Murphy & Ralston, architects, Waterloo. 1456

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 24, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 17th day of November, 1903, and then opened, for the low pressure steam heating apparatus, complete in place, for the U. S. Post-office at Lockport, N. Y., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Lockport, N. Y., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1454

HOSPITAL.

[At Camp Eagle Pass, Tex.]
Office of Chief Quartermaster, Department of Texas, San Antonio, Tex. Sealed proposals will be received at this office and office of post quartermaster, Camp Eagle Pass, Tex., until November 19, 1903, for the construction of an 8-bed hospital, brick, including installation of plumbing, gaspiping and hot water heating at Camp Eagle Pass, Tex., according to plans and specifications to be seen at this office and office of post quartermaster, Camp Eagle Pass, Tex. Information furnished on application. T. E. TRUE, D. Q. M. G., U. S. A., C. Q. M. 1454

ROAD WORK.

[At Fort Worden, Wash.]
Constructing Quartermaster's Office, Fort Worden, Wash. Sealed proposals will be received here until November 14, 1903, for constructing road, granolithic walk, etc., at Fort Worden, Wash. Full information will be furnished at this office. GEO. H. PENROSE, Q. M., U. S. A. 1454

HOSPITAL.

[At Fort Mackenzie, Wyo.]
Office Constructing Quartermaster, Sheridan, Wyo. Sealed proposals will be received here until November 20, 1903, for construction of a 12-bed hospital at Fort Mackenzie, Wyo. Work on building shall commence not later than March 1, 1904. Plans, specifications, instructions to bidders, proposal blanks and other information may be obtained at offices of depot quartermasters at Omaha, St. Paul, Denver and Chicago, and at this office. CAPT. THOS. SWOBE, Q. M. 1454

STOREHOUSES.

[At Fort Slocum, N. Y.]
Office of the Quartermaster, Fort Slocum, N. Y. Sealed proposals for the construction of subsistence and quartermaster storehouses at Fort Slocum, N. Y., will be received at the office of the undersigned until November 14, 1903, at which time and place they will be opened in the presence of bidders. Plans and specifications can be seen at the office of the undersigned on any day except Sundays, between the hours of 9 A. M. and 4 P. M. R. W. KINGMAN, 2d Lieut., 16th Inf., Q. M. 1454

STOREHOUSE.

[At Omaha, Neb.]
Office of Chief Quartermaster, Omaha, Neb. Sealed proposals, subject to the usual conditions, will be received here until November 10, 1903, for the construction of a new quartermaster's storehouse at Omaha, Neb. Full information furnished on application to this office, where plans and specifications may be seen. WM. E. HORTON, acting chief Q. M. 1454

BREAKWATER.

[At Biscayne Bay, Fla.]
U. S. Engineer Office, Jacksonville, Fla. Sealed proposals for dredging and for constructing a stone breakwater, Biscayne Bay, Fla., will be received here until November 19, 1903. Information furnished on application. FRANCIS R. SHUNK, Captain, Engineers. 1454

PROPOSALS.

PRISON.

[At Portsmouth, N. H.]
Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until November 21, 1903, for constructing a naval prison with appurtenances at the navy yard, Portsmouth, N. H. Appropriation, \$125,000. Plans and specifications will be furnished by the bureau upon deposit of \$25 as security for their return. MORDECAI T. ENDICOTT, Chief of Bureau. 1455

BUILDING.

[At Fort Myer, Va.]
Fort Myer, Va. Sealed proposals for constructing blacksmith shop, guard-house and extension to riding hall, will be received until November 31, 1903. Information on application. W. F. CLARK, Q. M. 1455

COALING PLANT.

[At New London, Conn.]
Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., until November 28, 1903, for constructing an extension of the coaling plant at the naval station, New London, Conn. Funds available, \$24,700. MORDECAI T. ENDICOTT, Chief of Bureau. 1455

HEATING.

[At Portsmouth, N. H.]
Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until November 21, 1903, for a heating system for the new naval prison, navy yard, Portsmouth, N. H. Plans and specifications will be furnished by the bureau upon deposit of \$5 as security for their return. MORDECAI T. ENDICOTT, Chief of Bureau. 1454

PROPOSALS.

CHURCH.

[At Dutton, Ont.]
Proposals will be received until November 15 for erecting a Presbyterian Church. F. W. DRAKE, Secretary. 1454

CEMENT, STONE, ETC.

[At Fort Monroe, Va.]
Engineer Office, U. S. Army, Room 2, Custom-house, Norfolk, Va. Sealed proposals for furnishing and delivering Portland cement, broken stone and lumber at Fort Monroe, Va., will be received here until November 23, 1903. Information furnished on application. E. EVELETH WINSLOW, Capt., Engrs. 1454

BUILDING.

[At New Orleans, La.]
Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until November 28, 1903, for constructing a brick and steel building for shops and offices at the naval station, New Orleans, La. Appropriation, \$70,000. Plans and specifications can be seen at the Bureau, or will be furnished by the commandant of the navy yard named upon deposit of \$10 as security for their return. MORDECAI T. ENDICOTT, Chief of Bureau. 1454

PLUMBING.

[At Portsmouth, N. H.]
Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until November 21, 1903, for a plumbing system for the new naval prison, navy yard, Portsmouth, N. H. Plans and specifications will be furnished by the bureau upon deposit of \$5 as security for their return. MORDECAI T. ENDICOTT, Chief of Bureau. 1454



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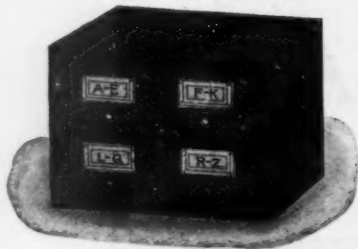
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Herszog Telesme Co., New York.

ENGINEERS.
Jager Co., Charles J., Boston.
ENGINES (Hot-Air).
Rider-Eriessson Engine Co., New York.
FAN SYSTEM.
Sturtevant Co., B. F., Boston, Mass.
FAUCETS (Combination).
Union Brass Works Co., Boston.
FILING DEVICES.
Art Metal Construction Co., Jamestown, N. Y.
FILTER.
Loomis-Manning Filter Co., Phila., Pa.
FIRE-ESCAPES.
Standard Fire-escape & Mfg. Co., Boston.
FIREPROOFING.
Associated Expanded Metal Co., New York.
Brown Hoisting Machinery Co., The, New York.
National Fireproofing Co., Pittsburg, Pa.
FIREPROOF LATHING.
Hayes, Geo., New York.
FIREPROOF SHUTTERS.
Kinneer Mfg. Co., The, Columbus, O.
FLOOR POLISH.
Bateher Polish Co., Boston.
FOUNDRY EQUIPMENT.
Northern Engineering Works, Detroit, Mich.