



THE NEW YORK ARCHITECT

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THE ALLIED FINE ARTS.

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DONN BARBER, Editor

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THE HOTEL RECTOR.

On December 27th last, the Hotel Rector, Messrs. D. H. Burnham & Co., architects opened its doors to the public. The rapidity of its construction has been the wonder and marvel of the passer-by. The contract for its erection was awarded to the Thompson-Starrett Co., on February 1st, 1910. For five and one-half months the work of demolishing the old structure and excavating for the foundations of the new building went on incessantly. Early in July, work on the steel frame was well advanced. Meanwhile the stone work was creeping up along the steel columns and the pace of the stoneworkers gathered momentum as the

first two stories were cleared. This work progressed so rapidly that at one stage of the operation the stone work was set at the rate of a story a day.

Early in September the superstructure was closed in from cellar to roof, having taken exactly forty-eight working days.

On December 15th, the date set for its completion, the building was turned over to its owner and proprietor, Mr. Charles E. Rector. A new record had been established in the annals of building construction.

The hotel was designed after the architecture of the French Renaissance. It is sixteen stories in height, built of limestone and brick. Its facade is divided into a solid base, a main shaft and an ornamental crown supporting a curved Mansard roof. The entrance on Broadway does not lead, as one would suppose, into the lobby, but into the restaurant, which is the main feature of the hotel, having a seating capacity of over seven hundred. This room is decorated in the lavish style so common to the modern hotel, the predominating colors being gold and gray. The room is lofty and well proportioned, its area being broken only by the skilful placing of four massive piers. An orchestra balcony is at the south end of the room.

Two doors lead from the restaurant to the hotel proper. The white plaster work of the lobby is especially good. The side walls supporting the barrel-vaulted ceiling are interestingly treated with pilasters. The office is at the end of the foyer facing the main entrance on Forty-fourth Street. On the left are the elevators, and on the right, on either side of the main staircase, are two doors leading to the restaurant. The first floor is devoted to private dining and banquet rooms. The decorations here are more subdued than those on the main floor, white being the predominating tone. The floors above are devoted to apartments, the arrangement of which can be seen by reference to the plans published in this issue. The thoroughly modern kitchen is located in the basement. The space beneath the street was utilized on this level as well as in the sub-basement.

Architecturally the Hotel Rector in color, treatment and scale harmonizes with the Hotel Astor and the Knickerbocker Hotel, which are also located on Times Square.

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THE NEW WHITEHALL BUILDING.

The completion of the New Whitehall Building, towering thirty-two stories above the ground, adds another giant to the already long list of skyscrapers in lower New York.

The new building is really an addition to the old Whitehall Building, which faces the Battery, and was built to meet the ever increasing demand on the owners for additional office space.

Work was begun on the plans for the new building by Messrs. Clinton & Russell, architects, in August, 1909. The contract was awarded shortly afterward to the George A. Fuller Company and work was begun at once. The building was completed and ready for occupancy in January, 1911.

The dimensions of the building are 238.5 feet on the west and 109.8 feet on the south, the height, including foundations, being 421 feet.

The style of the architecture is adapted Renaissance. It is hard for the architect to tear himself away from the well beaten path in planning an office or loft building and the architects in this case are to be congratulated on the results obtained both from the artistic and utilitarian standpoint.

The New Whitehall will be used strictly as an office building, with the exception of the three top floors, which are occupied by the Whitehall Club. The club uses one entire floor as a gymnasium, and devotes the two remaining floors to its restaurant and club rooms. The roof will be used as a roof garden during the summer. The mezzanine floor, between the main club quarters, has an exceptionally high ceiling and contains the women's retiring rooms and several private dining rooms.

The elevator equipment consists of twenty-nine Otis cars.

The decision of the owners of the building to park the remaining portion of the plot, on the east side of the building to Washington Street, was commendable. This plot, 72 x 200 feet, will have a fountain, grass plots, and walks, and will be surrounded by an iron fence. The tenants on the lower floors, therefore, will be afforded as much light and air as those on the higher floors.

Messrs. Clinton and George, of the firm of Clinton & Russell, were the architects who had actual charge of the architectural department of the work.

Mr. James Dougan, who in this issue tells so interestingly of some of the problems he had to overcome, was the engineer representing Messrs. Clinton & Russell on this building.

ENGINEERING PROBLEMS IN THE CONSTRUCTION OF THE WHITEHALL BUILDING.

Chronologically, it may be said that the New Whitehall Building is an addition to the original building, which stood facing the Battery, but the final result will be one building operated from the plant and elevators which have been installed in the new building.

With this object in view the design of the new building required careful consideration. One of the important points was the question of foundations and their relation to the proposed enlarged power plant which was to be installed.

The site of the building is within two hundred feet of the bulkhead line of the river, and up to recent times was part of the river bed, which has since been filled in. With these conditions, caissons similar to those used in the old building were the only type of foundations which could be used. The ground was very mucky and porous, and in sinking the caissons old docking, piling and timbers were encountered, some of the timbers being 24 x 24 inch yellow pine, which had to be sawed off to allow the caissons to be sunk.

Various plans were considered for the layout of the machinery and its relation to the foundations, but as the average water level was only about five feet below the curb, and as the ground floor could not be raised a sufficient height to give headroom for the same without affecting its renting value, some method of a waterproof basement below water level was made necessary.

A portion of the area was therefore carried down 32 feet 6 inches below the curb and entirely surrounded with a concrete dam with interlocking joints and the whole made waterproof; the basement floor for the rest of the lot was finished at about the water level and a heavy floor system carried over the deep cellar at the same level. This arrangement allowed the coal bunkers, boilers and other apparatus to be installed in the deep cellar and the engines and generators, pumps, fans, ice machines, etc., to be set on the floor directly over the boilers. The engine room floor is a 3 foot concrete slab between I beams and girder framing, and to prevent any vibration from the machinery being transmitted to the building, it is not supported by the building columns but has a separate system of columns for itself. The floor is designed to carry the loads of the engines, etc., with a minimum allowance of 600 pounds per square foot. All steam, exhaust and other piping is carried on the boiler room ceiling and supported from the underside of the engine room floor, and connections to the various engines are made through the floor, so that the engine room proper is clear of all pipes; valves on the vari-

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ous lines are controlled by means of floor stands.

The boiler room is ventilated on the Plenum method—that is, the air is taken from the court at about the second floor level and forced into the boiler room from which it escapes through the boiler furnaces or in the space around the boiler flue.

The engine room has a separate system of ventilation, the fresh air being taken from an area in the court, passes through an air-washer to remove dust and dirt which would affect the engines and generators, and is then forced into the engine room through a system of ducts; there is also a system of ducts to remove all vitiated air, which is discharged by blower into a vertical shaft, said shaft being carried to the roof of the building.

The following is a brief summary of the main points of the building:

Height, 32 stories; 390 feet.

Depth of boiler room floor, 32 feet 4 inches.

Boilers, 5, water-tube type, 2,100-h.p.

Engines, 3 480-h.p., and 1 240-h.p.

Generators, 3 300-k.w. and 1 150-k.w.

Storage battery of 2,000 Ampere hours capacity.

Twenty-ton ice machine, compression type.

Twelve sweeper vacuum cleaning plant.

Heating surface, about 61,000 square feet.

Twenty-nine passenger elevators, of overhead traction type; 10 local to 12th floor; 10 expresses and local from 12th to 20th floors; 9 expresses and local from 20th to 32d floors.

JAMES DOUGAN, C. E.

THE ARCHITECT AND THE ENGINEER.

A discussion of the relations of the engineer to the architect was held under the auspices of the Architectural League of New York in the galleries of the American Fine Arts Society on the evening of February 8th. This was the second of a series of three lectures conducted by the league during the annual exhibition just closed.

The discussion was opened by Mr. William Barclay Parsons who spoke from the viewpoint of the engineer. Mr. Parsons was followed by Mr. C. Grant La Farge, who made the principal argument for the architectural profession. Mr. John F. O'Rourke made some pithy, extemporaneous comments from his standpoint—that of the engineer. He in turn was followed by Mr. Walter Cook, who spoke in rebuttal for the architects.

Mr. Owen Brainard, of Carrere & Hastings, closed the evening with an able summing up in behalf of the engineering profession.

Mr. William Barclay Parsons spoke as follows:

"This question has been debated often before and, in spite of to-night, will be often debated again. It is usually, if not always, considered from a sort of 'brothers-all,' 'hands-across-the-sea' point of view, as if we were all one, working harmoniously together as two closely allied divisions of a common vocation. Perhaps we should be, but if that is the desired end and any progress is to be made toward it, it seems to me that we should open our eyes and recognize the actual facts that exist and not be influenced by sentiment. If we do we are forced to admit that regardless of what they should do and should be, architects and engineers are very far from working harmoniously together, nor even are the relations between them that sweet bliss that is euphemistically but so erroneously, called 'brotherly love.' What the architects think of engineers collectively each one of you in his own part knows quite well and needs no telling. What the engineers think of the architects—ladies being present, I would not dare repeat.

"Between the two branches of the profession there is a great gulf fixed that as yet no engineer has been found capable of bridging, but if that gulf is to be filled (as I hope and believe will be done) it is evidently necessary that the difference between the architect and the engineer should be recognized and be clearly understood and the way opened by which the two groups can be made, not only to inspire each other, but to produce something greater and better in the way of construction than either group can possibly hope to obtain alone.

"To do this, let us for a moment forget our modern condition and go back to first principles, back to those times when structures were less varied and less complex, but certainly not less beautiful.

"The art of construction is the oldest art there is. The most uncivilized peoples practised it before they recognized any other. Before they had any appreciation of religion, law, medicine or business they must have a house. They must learn to lean trees against others like rafters or to place stone upon stone for walls. In such cases the architect and the engineer are one, and one they remained from such humble beginnings down through those great periods of Levantine and Roman construction, and on, at least, through that period that we call the Middle Ages.

"The title 'architect' meaning a chief builder, was generally applied to all men who had charge of construction, regardless of what the construction was, whether a building or an aqueduct. When the equivalent of the word 'engineer' first came in I do not know, but its

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original meaning was not a man of engines, but a man of character or genius, and the first meaning of the word 'engine' in Latin was 'an instrument of war' such as a battering ram or a catapult.

"So catholic was the designation of 'architect,' and I believe also 'engineer,' and so interwoven the practice, that it is not surprising that Leonardo da Vinci was an engineer (and a great one) before he became an artist; while Michael Angelo, artist, painter, sculptor, poet and architect, was both before, and always, an engineer. As the development of war engines increased and there arose the necessity for special means of fortification other than castellated towers, the engineer gradually began to be distinguished from the man who built houses, churches and bridges. Then when machinery began to have wider application and there arose lighthouses, waterworks, drainage systems and similar undertakings, the necessity for the designation of a man who devoted himself to the study was felt; a necessity that was finally solved by John Smeaton (of Eddystone Lighthouse fame) who, in the eighteenth century styled himself a civil engineer in contradistinction to a military engineer.

"Telford, in founding the 'Institution of Civil Engineers' in the early part of the nineteenth century, defined engineering as 'the art of directing the forces of nature for the use and convenience of man.' It is a pity that this particularly simple, all embracing, meaning of the words 'engineering' and 'civil engineer' could not have been retained, but we, as engineers, have gone on getting further and further away from Telford and Smeaton and da Vinci by sub-dividing and splitting up ourselves into engineers, civil, sanitary, mining, mechanical and electrical, and engineers, good, bad and otherwise.

"Fortunately, you architects have, as yet, resisted the temptation and you have refrained from founding the 'United Association of Sky-Scraper Designers' in which so many of you are getting rich, or the 'American Institute of Hotel Architects' with Whitney Warren as president.

"In spite of the common origin of the two professions there is no doubt we have drifted far apart. The engineer has become an extreme utilitarian to whom economy, not necessarily of money, is his measuring standard, while the architect has so welded himself to ancient models and rules evolved from conditions which do not now exist, that he has lost the power of invention.

"As an illustration of the former you will recall the Monadnock Building, of Chicago, the pioneer big building, with its absolutely flat walls unbroken by even a sill or lintel, finishing

off at the top with a quarter curve cornice, and these same flat walls built of deadly monochrome bricks, even the joints of which have been obliterated by the softening touch of Chicago's smoke. A few years ago my dear friend, the late George Morison, one of the greatest engineering minds this country has produced, was in Chicago walking with a friend. They came in sight of the Monadnock. Now, George Morison was a man who always referred to architecture as 'millinery' and to Messrs. McKim, Mead and White as the 'boss milliners.' The friend, knowing Morison's peculiarities, said, pointing to the Monadnock, 'Morison, that is a handsome building.' 'No,' said Morison, looking at it, 'it is not. It came near being handsome, but the cornice spoiled it.' That, unfortunately, is too often the engineer's view of the work done by you architects.

"You charge us, and the charge is probably true, that we lack certain liberal-mindedness and resent suggestions whereby our structures may be made more pleasing to the eye and resent them especially if economy is affected. But do not you architects commit a similar error? Do you not shut your eyes to possibilities, the path of which has been opened by new material of construction, by new theories of design, improved tools to carry them into execution? The engineer may, at least, claim to have made extraordinary advances in the way of construction, or as Telford put it 'in the art of directing the forces of nature'; but let me ask you in all seriousness, what have you architects done in the same period?

"Since the days of the Renaissance, 300 or 400 years ago, not a single new style have you produced. As the name of that style indicates, it was not really new then, it was but a re-borning of the old. Perhaps, therefore, the claim might be made that nothing new in the way of a style has been produced since the Gothic swept over Europe in the thirteenth and fourteenth centuries.

"If the engineer declines to accept your lines of beauty, so you decline to avail yourselves of what he may offer. That was not the practice of the past; in those days, when Michael Angelo lived, a man could be not only an architect and engineer, but an artist. Greece was not satisfied to adhere to the rules laid down by the Egyptians, but went ahead and developed not only designs that were extraordinarily beautiful but carried the art of construction, as represented by the beam and the column, to the final point of development. When Rome followed Greece another advance was made. They added to the Grecian orders their own order—an order of lightness of high decoration which the Grecian orders lacked, and then they developed, surprising as it appears to be, that which the Greeks never knew, the arch,

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and gave to the world arch architecture in all its fulness. Rome fell, and with it went its great civilization and the world then passed through that period of blackness during which nothing was produced, but out of it finally came that combination of Roman, Byzantine and other styles that finally took shape in what we now call the Gothic.

"I have told the story of Morison; let me illustrate my point by a story on the other side. A little while ago I was called in by a large city to advise on certain questions of transportation. A very eminent architect was at the same time making plans for a 'city beautiful' and I called on him to see how far my plans could be made to conform with his. He then laid down to me the proposition that a city's streets should be circular and produced map after map of European cities, each one of which had circular streets and all of which cities and streets were beautiful, and he argued in-as-much as these cities were beautiful, that any city which had circular streets would also be beautiful. I tried to show him that these streets were made circular, not because they were beautiful when circular, but because in the days when these cities were built they all had walls, and as the walls were necessarily circular the streets had to be more or less parallel with the walls; and, moreover, what was fit for a city in the tenth, eleventh or twelfth century, with a population of perhaps thirty, forty or fifty thousand people at the most, could hardly meet the conditions of a city of the twentieth century with a population ranging from three to ten millions. He lost sight not only of the necessities of construction of today, but also of the principles of construction of that by-gone day quite as much as Morison lost sight of what constituted the good in architecture.

"I stated that architecture has done nothing since the Renaissance. So far as you gentlemen whom I have the honor to address are concerned, you have done two things: First, you have materially bettered the standard of taste in this country, for which we are all indebted; and, second, you have erected the mammoth buildings that are the wonder of the age, but for this latter you are wholly indebted to the engineer. Without the engineer giving you the deep foundations, the steel frame and the elevator, you would still be constructing office buildings five and six stories in height. Yet, though you put up handsome buildings, which is true, they are simply variants you are playing on old styles and old models. You copy here a tower, transform there a church and make railroad stations look like pagan temples.

"Even under the very shadow of the Beaux Arts, within calling distance of your beloved

'Quartier,' you have constructed two buildings on identically similar lines—one for the house of God in the Madeleine and the other for the house of Mammon in the Bourse. It is only this week that the papers have published a project of a London architect for a memorial to the late king consisting of a bridge across the Thames. The arches and the piers are modeled on the lines of Waterloo Bridge, while at the ends, as the principal feature, there is a copy of the great circular staircase of the Chateau de Blois.

"Imagine the architect of Francois I proposing to erect for his master a copy of something that somebody else had done a few hundred years before.

"I have already taken up too much time in my prelude and I now come to what I intended to make my text of the evening.

"I remember some years ago reading in Viollet le Duc a bemoaning that the world had produced of late years no new style and since Rome no new order, and adding that there was no reason why another order should not be added to the series as Rome had added to the Grecians, and there was certainly every reason why a new style should be produced. He pointed out that the only hope he could see for a new style was through the use of iron in construction and a frank and honest expression of such use. Since the time of Viollet le Duc the whole art of construction not in cast-iron, but in steel, has grown to a point far beyond what he dreamed was possible.

"I was sufficiently rash once to suggest to an architect that a great Gothic cathedral might be constructed of dimensions exceeding those possessed by any Gothic cathedral ever built, if a large building were desired, with all the internal convenience and beauty of line and color, but it would have to be done with steel members so designed as to be able to take up bending and avoid the necessity for the flying buttress. I was informed that such would be impossible as it would violate every canon of the Gothic art.

"A few years ago I recall one afternoon when motoring across northern England I came to York and I hurried over before it was too late to take another look at that wonderful structure—Yorkminster. The shadows were already beginning to form on the floor, though the great window at the west was still ablaze with color and high up above the crossing came that wonderful flood of light down the central shaft. Then as the shadows below slowly deepened and the reds and pinks and the blues and greens in the glass faded into a common gray somebody in the organ loft began to play upon the organ a slow requiem for the dying day, and yet, high above all, that square tower was still aglow,

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catching the last rays of the long English twilight. At length the organ stopped and the verger came and touched me and said he must really close and I looked at my watch and saw it was half-past nine—mundane things like dinner had been forgotten.

"Do you suppose that the architect of Yorkminster, when he conceived that effect of the vaulting, of the tower, and of those windows, thought anything about flying buttresses, except as necessities forced upon him by construction? Surely not. His idea was to produce out of form and sound and color something that would delight his fellow man in the succeeding centuries, to make a house of God worthy of its name, and he would take for construction whatever means there were at hand to achieve his end. He had but two materials with which to work—wood and stone. Do you mean to say that if he had had steel, if he had had modern methods of mathematical analysis, that he would not have made use of them to the fullest extent, if thereby he could have added to the richness of his design? Neither he, nor his Roman, nor his Grecian predecessor, was hampered or bound by any such restrictions as the architect of the twentieth century has imposed upon himself.

"Our trouble to-day is that the engineer admitting that he is not an architect, unfortunately goes further and says he does not want to be one. The architect, on the other hand, thinks himself a constructor and is not. The consequence is that we have the two lines of thought—science of construction on one side and the art of construction on the other, separated, as I said at the outset, by a great wide gulf, and no progress in architectural construction will take place until this difference of point of view is recognized by both sides, until the architect is willing to lay aside the rules which governed his predecessors centuries ago and not only take up but take up fearlessly the science of the twentieth century, be willing to cease to copy and have that same real desire to create that has produced the monuments of antiquity.

"Gradually this will come about, every free discussion such as we are having to-night, I believe advances us one step nearer the end. It probably will not come in your day or mine, but surely I believe that the day will come when the prophecy of Viollet le Duc will be realized, when the engineer, learning from the architect and appreciating his art, will teach the architect his science and his methods and between them they will evolve a new style, perhaps a new order."

After Mr. Parsons had concluded his able plea, Mr. C. Grant La Farge took the floor in behalf of the architectural profession, present-

ing his views of the subject in the following words:

"The very subject of this discussion is in itself evidence that something is out of joint. But that we should discuss it shows that at least we are conscious of the dislocation, that it produces in us some proper uneasiness, so that we wish to reduce it. As matters stand to-day, we have on the one hand the architect, and on the other hand the engineer; there, stated in the briefest and baldest possible way, is the dislocation. For I take it that under nearly perfect conditions there should be no essential separation between them. Is that, or anything like it, attainable?

"This is a hard question to answer, for the two paths have trended very far apart, and the infinite complexity of modern work takes us more and more into necessary specialization, no one man being able really to cover the entire field. He who tries to is pretty sure to spread himself out so thin that through his tenuous substance there will appear little but defects.

"If we may grant, then, that the utmost unity is worth striving for—and I think there will be no serious dissent from that proposition—we must ask whether it will best be reached by a reform in administrative methods, by some clearer definition of relative functions, some closer linking together of those functions, or if it should perhaps come from a better understanding of the ultimate possibilities that may conceivably be developed in the two regions—in that of the architect as well as in that of the engineer.

"When I have spoken of dislocation, of the trending apart of paths, I would not be supposed to mean that the engineer and the architect are divided, either in spirit, in interest, or in the complete necessity of their coöperation. Some thirty years ago that was practically the case, but to-day their coöperation is essential to the success of every great work of construction.

"I mean, rather, that notwithstanding their necessary collaboration—and usually it is most cordial—we must still be conscious that there is some lack of that amalgamation of their respective endeavors, which if supplied would surely enhance the splendor of the artistic result.

"Suppose then, we take a look at the way in which our work to-day is done, and consider the question of our marshaling of the forces which together produce it.

"Of a great part of the engineer's work I shall not attempt to speak—he himself is so much better able than I to do that—I mean all that vast and necessary work, with its huge load of responsibility, upon which the development of our modern civilization depends, which we rely upon for our comfort, our convenience,

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our inter-communication, our safety. For these are in such large measure works with which the architect has not, and perhaps cannot well have any very direct or essential connection—or if he has any, then it is clear that the directing hand must be that of the engineer, the architect being subsidiary. Perhaps we can designate these generally as works of pure utility.

"We may, therefore, turn our attention to the cases in which the architect is by right the controlling force, and see what we can learn from them. For greater convenience, and not to range over too wide a field in a period limited by the patience of my audience, we will assume that what we commonly designate as a 'modern building' will serve to point our moral and adorn our tale, even if it rather too frequently fails to adorn its own surroundings.

"It is here that we shall perhaps, find the most complete evidences of our progress in the mechanical arts, and from this point of view the relative duties and opportunities of those who design and construct them become a question of interest and import.

"It has been said that a really well equipped and well educated man should know something about everything, and everything about something. While modesty forbids that I should claim for my confreres this degree of excellence, it may be truthfully asserted that the public demands of the architect almost such a state of perfection. Does he build an Hotel—he must know, if not how to cook mashed potatoes and broiled squabs, at least the manner of their cooking, and the implements by which all the delicacies of the table are produced. The beauties of the marble foyer are no more important than the kind of flooring which prevents the waiter from getting flat feet. If it be a bank or a public building, the comfort and efficiency of the clerical force are as much dependent upon his skill and knowledge as the successful harmonious design of the sculpture in the pediment.

"But an architect is and must be primarily an artist. It is this which differentiates him from all other constructors. It is his duty not only to build well and permanently, but to make his construction beautiful.

"About this it is his duty—as far as he is able—to know everything. About everything else he should know something. In this broader field what he does not know himself he must supplement by the employment or coöperation of specialists.

"The use of steel brought about skeleton construction, the perfection of small isolated power plants made the elevator a possibility, and the skyscraper was the logical result.

"The great weights of these high buildings necessitate specially designed foundations, the use of caissons and elaborate systems of water-

proofing against heavy pressures. The problems encountered in this work require the services of civil engineers of special experience.

"The designing of the steel skeleton with its cantilevers, its wind bracing, its innumerable problems of trusses and girders necessitates the services of a structural engineer.

"To design the boilers and engines, the elaborate systems of heating and ventilating, the pumps and blowers, a mechanical engineer must be called in. For the electric lighting, electric power for elevators, and all that, an electrical engineer is an absolute necessity; and the drainage and water supply of a high building, involve problems which require the skill of a specialist.

"The tendency to-day is not to combine the duties of these various branches, but still further to specialize and subdivide.

"As to which of these, the civil, the structural, the mechanical, the electrical or the sanitary engineer is the most important in the final result, perhaps we had better not try to decide, though it seems pretty clear that the relation of the structural engineer to the architect's policy of construction—which means as well his scheme of design—is of an intimate and vital character. But let it not be forgotten that in the mind of the owner, the public, or the occupant of the building, any fault in construction or any hitch in operation, from the sticking of a pantry drawer to the collapse of the building itself is laid at the door of the architect. Not only is he supposed to design a building whose aspect from within and without must have that element of beauty which is the peculiar province of his profession, but he must make a plan and arrangement which is workable, convenient and adapted to the purpose of the building. He must lay out the general lines of the construction, determine the type of foundation, locate the columns with a view to economy and strength; fix the kind, position, speed, number and capacity of elevators, boilers, engines, machines, and all the other appliances, and must bring all the different engineers and specialists into harmonious coöperation, fit their works together, find the proper space and location for all the innumerable tanks, pumps, pipes, ducts, conduits, machinery and the like—and finally he must house all this intricate mass under an appropriate covering of artistic decoration.

"In the final and completed result the building should be beautiful within and without and must be one great well-oiled and perfectly adjusted machine.

"To attain this result the owner and the public look to the architect. His is the sole responsibility, and therefore, his authority must be absolute.

"It seems proper then to make the claim that for such work the architects must, indeed,

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be the master builder. So, therefore, we have determined the question of priority; we have accomplished that marshaling of our forces of which I spoke.

"But how about the aesthetic side of it all? We have worked out our administration in a way to produce great material results, but have we so ordered our coöperating energies that each of them makes its utmost possible contribution to beauty? I do not think so. I doubt if reliance upon order and system can lead us any further in that direction. I think it is to a fuller development of our respective capacities that we must look and to that view I now address myself.

"We have said that the architect must be the master builder. How does he go about it to-day?

"We call him a designer of buildings. He makes on paper, with his sometimes extraordinarily skilful pencil, elaborate pictorial illustrations, the object of which is to show what he intends to do. These pictures are not infrequently of great beauty, as such. And I cannot fairly be accused of exaggeration if I further claim for them that they do sometimes bear a recognizable resemblance to the final result.

"Now I am not going to enter upon an account of all the multitudinous drawings and explanatory diagrams that we of this day are obliged to make—it would be wearisome. Suffice it to say that they are necessary, because of all the conditions under which we live, social and economic, and the complexity of our building, to which I have already referred.

"But it is my own conviction that they tend to produce in our minds a deplorable lack of connection between our final output and the means through which we accomplish it. The drawing itself becomes the important thing; we are too much preoccupied with it; instead of illustrating it obscures. It may be that I can make my meaning clearer if I exhibit the architect of the past in contrast with ourselves. Mr. Parsons is all for breaking loose from what he takes to be the restrictions imposed upon us by our following of that past, but there I have to disagree with him. If we borrow from the use of what we can find of tradition, availing past, one view is that we are wisely making ourselves of all the long experience of our predecessors. Another is that we are mere copyists; those who hold it often tell us, in a derogatory way, that we had much better copy and be slaves, for that we are not capable of original production. How densely, how grossly ignorant and yet, how true! Because who ever was otherwise? We see the great panorama of architectural achievement unfold before our eyes, from solemn Egypt, through the wondrous days of Greece and Rome, the mysterious pic-

turesqueness of the Romanesque, the amazing fertility and resource, the inexorable logic of mediaeval time, to the gracious elegance, the sweet humanity of the Renaissance, and we wonder whether these men, *all* these men, were giants—a race apart—or if they could have been of common clay like ourselves, even if we are architects. And we know, of course, that they must have been just that. Then, how did they do it?

"Well, if we want to know, we must, it seems to me, construct some sort of bounds within which they would work, some frame to concentrate their energies, some platform, as it were, for them to stand upon with feet secure, but which they should not overstep. These very things are not so far to seek. For the remote past we must reason by analogy, but of later times we do know, and the analogy is close enough to be more than mere conjecture. We know that they worked in manners and methods—what we rather inaptly term styles—that were local and peculiar to their own time and people. We know that tradition was a living thing and ever in the making; that in the form of rules of all sorts, of receipts designed to meet all known contingencies, it was handed on from father to son, from one man to another, from master to apprentice, from generation to generation. We know that the architect—the master of the work, as he was called—had at his command large bodies of skilled craftsmen, well able and ready to give vitality to every least detail of the work which he had planned. And we know too, that in that planning, it was as the master builder that he worked, the man to whom building was an intimately familiar thing, who thought in terms of structural materials and their use, and not in terms of paper and pencil, with all the doubt and self-distrust that we, of the drawing-board, know so much too well. For him there were laws—call them what you please; rules, formulae, receipts, customs, conventions, prejudices if you choose; but by those laws he was guided, and upon them he stood. Now, what did all this do for him? Did it limit him unduly, hinder his freedom of expression, cramp and repress him? Look at his work.

"Did it not rather mean that, secure in knowledge, the master of his art, equipped by his own apprenticeship to rule those who must carry out his purpose, that very freedom was indeed his? That he need not go a-groping discursively throughout all sorts of alien and unrelated expressions, but that the field was close, compact, familiar, and that within its safe and reasonable bounds, whatever he possessed of fancy and invention might play at will. He was not set the task—stupendous and not to be accomplished—that in his own person he should discover, invent, reduce to order and

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principle those fundamentals which it had taken thousands of years before him so to find and reduce.

"Let us remember always that just as we of to-day copy, and in our copying vary, so he copied—daily and forever he copied. He must have copied, according to where and when he lived, the remains of former eras as well as that which the other fellow had done around the corner last week. And out of his perpetual copying, his ceaseless repetition, came those universally accepted elements of architecture which to-day, in whatever style we work, are our gospel. Always the same and ever varied, with bewildering, infinite variety, to contemplate them is to know what tradition means as a light for our feet along the path of free expression.

"I cannot possibly reconcile myself to any notion of discarding any part of this, nor do I feel that there is any need of our doing so in order that we may, to the fullest possible extent, avail ourselves of new methods. Of the old traditions there is but pitifully little left to us, but that little is precious. To it we must not only cling, but from it we must learn what are the fundamental principles, eternal and immutable, which guided the men of the past and must guide us. We must learn to be, first of all, *builders*. Whoso is a paper designer is a theoretical designer; he is afraid of the blank spaces on his paper because it is as paper that he sees them and not as brick or stone, which they will be. Or conversely he trusts them when the materials of which he will build them, either because of their kind or of the manner of their use, will not look well.

"What then, you may ask, does all this mean to the engineer? Well, if we may say to ourselves that it behooves us to learn how always to see past our drawings, to let our imaginations and our invention work freely in the practical use of those very practical materials with which we must express ourselves and our time, then it seems to me that something not dissimilar points the way for the engineer. Let him widen his structural vision; let him learn that he, too, must equip himself with knowledge of all that man has done; let him realize that the principles of construction and the qualities of materials—and hence their appearance—are everlasting and do not change with the changing years. Let him cast himself free from thralldom to his quantitative methods and learn the value of the qualitative. Let him lay hold not only of the need for beauty in all construction, but of the fact that he himself may as well be a maker of it, if only he will open his mind to what men before him have done through the past ages and to how beauty grew inevitably upon their work, as do the leaves upon the tree. In short, he must be the broadly cul-

tured man, trained in the knowledge of art, as of the humanities, and no longer the product of our narrow, time-serving, get-rich-quick vocational education, against which, thank God, revolt is spreading daily.

"When all this happens—and let me say here that the more we have of such men as Barclay Parsons, notwithstanding his heresies, the more certain we may be that it will come—and when we, too, have learned our lesson, then will the architect and the engineer more nearly approach each other in mutual sympathy and understanding and in the ability to work together effectively toward one great end. Let us fear no trespass; there is room and to spare for all. And when we are all using it, we or our children, under that full development of our knowledge and understanding for which we are entitled to hope, we may then expect to do such work as will give us the right to call ourselves the brothers of those men who crowned with undying grandeur the Athenian rock; who, through the long procession of the centuries set their great monuments upon the hills of eternal Rome; who raised those shrines, marvel and delight of the Western world, complex as any of our vaunted 'modern buildings', vastly more astonishing in their wealth of invention, their overflowing freshness and vitality, the Cathedrals of France, which like the jewels in a diadem, mark the top of man's endeavor to make the divine soul within him sing in stone."

Major O'Rourke and Mr. Cook then spoke briefly.

Mr. Owen Brainerd, of Carrere & Hastings, concluded the discussion with the following earnest plea for a closer understanding and union between the professions:

"This discussion has apparently been carried on with a view of demonstrating a lack of relation between the architect and the engineer, and I desire to express to you a radically different view, which is, in brief that, assuming the engineer to be the structural engineer, the relation between him and the architect is the intimate relation of collaboration, as the two individuals are engaged in doing the same thing, and there cannot, I believe, be any distinct separation of the two functions. It is the relation of the two hands on the same body; and I cannot conceive that a thoroughly successful architectural design involving important structural questions, could be accomplished except by the simultaneous consideration of the problem by the architect and the engineer, working together. To be sure, a degree of success can be attained by the very usual practice of developing the architectural plan and scheme, and then turning it over to the engineer for his consideration, and for the introduction of the purely structural features, and then ensues the cruel necessity of modifying, and perhaps

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distorting the architectural scheme to meet structural conditions, and a similar wrenching of the structural fabric to meet the architectural conditions finally determined upon. This is not collaboration, nor is it logical development.

"Leonardo da Vinci has been cited by one of the gentlemen who preceded me, as an example of an all-around artist and engineer, and it would hardly be possible to make a happier selection. His reputation as an artist is very great. His accomplishments as an engineer were equally great. He dealt with simpler problems than we are now called upon to solve, and this complication of the present day situation has led to the division of the functions formerly exercised by a single individual. This separation is a necessary one, because no man other than a prodigy, could successfully cope with our larger problems. Christopher Wren was a later example, and he was certainly an expert engineer, as well as an accomplished artist. I know of no one who to-day could combine both duties meeting the present requirements in the use of to-day's methods and to-day's materials. Christopher Wren to-day, would be two men, and I think it is not important as to whether we called one of them, Christopher and one Wren, or vice versa.

"I am basing my view upon my own experience. I have been associated for many years with two members of this League who are, I believe, highly regarded as artists, and my work as an engineer with them, has been carried on in the most intimate and immediate relation. We collaborate to the extent of working at the same time on the same drawing-board, so that the structural design proceeds with the esthetic development, and while being subordinated to it, nevertheless, receives its due consideration, and we thereby avoid any divergence between the logic of the design and the logic of the structure. This, I believe to be the only possible way of producing a structural scheme which is not at variance with the artists's conception, and which need not be reconciled to the esthetic requirements by the exercise of questionable ingenuity.

"I believe that the erroneous conception which we have gradually formed of the relation of the two individuals is due to an erroneous conception of the scope of the term of engineer. This has now come to mean and include many sorts of operation. We have in the broad arc, at the extreme of which may be the architect, and the other extreme a mechanical engineer, many fields of specializing, including mechanical engineers, electrical engineers, sanitary engineers, heating and ventilating engineers, structural engineers—and at the extreme end of the line, architects. If I were called upon to differentiate broadly between the people

in this wide grouping, I would draw the line, not between engineers and architects, but I would so indicate that line as to bring the structural engineer and the architect together on one side of it, and all of the other engineers on the other side. I believe that you would concede, after consideration of the matter, that the relation between the sanitary engineer or the mechanical engineer, and the structural engineer, was a much less intimate one than between the structural engineer and the architect. Narrowing then the discussion to this last proposition, I conclude that we are considering a somewhat superfluous proposition, because the two functions are absolutely united, and we are discussing the relations of two individuals who are doing the same thing."

FIREPROOF TENEMENTS AND THE BUILDING LAW.

To the Editor of THE NEW YORK ARCHITECT:
New York City,

Sir: I want to call attention to a matter which, seems to me, may be of great importance to the welfare of the city.

This is nothing less than a practical demonstration now being made that it is possible to build fireproof tenements, which will yield a better return on the investment than those of the ordinary inflammable type.

After a great deal of experience in planning both kinds, I became convinced that the economies in space which the fireproof method of construction permits, more than offsets its greater cost. To test the correctness of this theory, a company was formed, called the Model Fireproof Tenement Co., a plot of land one hundred feet square was bought in Forty-seventh Street, near Tenth Avenue, and a building erected thereon. Although this building is not yet ready for occupancy, all contracts for its completion have been let, its exact cost is known and the correctness of my estimate has been fully verified.

If this is true, it would seem that there is no longer any reason why the building of inflammable tenements should not be prohibited in Manhattan, for such a regulation would inflict no hardship either on landlord or tenant, but on the contrary both would be benefited and the city would receive much additional fire protection, which it sorely needs.

The economy in space which I speak of is obtained by using thinner floors and partitions than wooden construction permits. The partitions in this building are one and one-half inches thick and the floors are six inches thick, as against six and fifteen inches, respectively,

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for partitions and floors in ordinary wood construction.

The enactment of the present tenement law was opposed by many who thought its drastic requirements for light and air would prove burdensome both for those who build and those who live in tenements. It was contended that the large courts and yards called for would cause a great loss of floor space and would involve either less income to the owner or increased rent for the tenant.

The practical working of the law during the ten years in which it has been in force has shown that while there is a considerable loss in the number of rooms of legal size, which are obtained to the lot, there is such an improvement in their quality that the loss in space is about offset by the higher rent per room which the tenant is willing to pay. People who formerly occupied four rooms, three of which were dark, are willing to pay an equal rent for three rooms, all of which are light. So also, two light rooms are found to be almost the equivalent of three rooms, two of which were dark. This, of course, tends toward greater congestion.

Under the old law it was the custom to obtain fourteen rooms to the twenty-five-foot lot on each story. The apartments generally consisted of two suites of four rooms and two suites of three rooms to the floor; one room in each suite being lighted either from the street in front, or the yard in the rear. The other rooms were practically dark.

Under the new law it is no longer profitable to build houses on the single lot of twenty-five feet by one hundred feet, but using the lot as a unit, the average number of rooms to the floor which is obtained has fallen from fourteen under the old law, to about eleven under the new law. In some cases twelve rooms to the lot to the floor have been secured, but these are few.

Now in this new building, of which I speak, there is no falling off in the number of rooms as compared with old law tenements. It has as many rooms to the lot to the floor as could be had before the new law went into effect.

Here then, we have fourteen rooms of legal size, to the lot to the floor, for the first time since the new law was passed.

Here we have the large courts and yards, which the new law calls for, with no loss of space inside the building.

Here we have all the benefits of light, air and privacy which the new law secured, together with as many rooms as were ever obtained under the old law. Moreover, the building is fireproof and vermin-proof; each apartment has its own private toilet and is in other respects more conveniently arranged than were the old tenements.

The gain of from two to three rooms to the lot to the floor may seem a small matter to the layman; but it makes a vast difference in the earning power of the building; nor is this the only gain. The law requires that all stories shall be at least nine feet high in the clear; also, if the building exceeds sixty feet in height, all courts and yards must be enlarged and all walls made thicker. It is, therefore, important that the ordinary tenement should not exceed this limit of sixty feet, for if it does, increased cost and a further loss of floor space occur.

With wooden floor construction of the usual kind, it is not possible to obtain six stories of nine feet each within a height of sixty feet, while with fireproof construction the floors may be made so thin that it can be done, and it has been done in the new building I speak of. This building is, therefore, several feet lower than it could have been if not fireproof, yet there is no loss in the clear story heights.

Exclusive of the cost of the land, a six-story tenement house of the ordinary kind would cost to build, approximately, \$27,500 per lot. It would contain at the utmost sixty-eight rooms to the lot.

The fireproof building for the Model Fireproof Tenement Co., will cost \$32,500 per lot to build and will contain eighty-three rooms to the lot. This sum includes taxes and interest on the capital invested during the time of erection, architect's fees and every other necessary expense.

Assuming that both buildings occupy lots costing \$15,000, then each room in the house of the inflammable type will cost \$625, and each room in the fireproof house will cost \$572.

Thus the rooms in the superior building will cost over eight per cent. less than those of the inferior one. Moreover, the annual cost for repairs for the fireproof building would be considerably less than for the other and its life longer.

If all this is true, why should we continue to use wood in the construction of tenements? It would certainly be to the interest of all concerned to have fireproof buildings, even if their cost was somewhat greater; but when it can be shown that foot for foot the floor space they contain can be had for less than in buildings of the combustible kind, what excuse is there for the use of wood in tenement construction?

This favorable showing for fireproof tenements could be greatly improved if it were not for our absurd building law.

As the law now stands it places a premium on the use of wood and a heavy and unnecessary handicap on the use of non-inflammable materials.

The true interests of the city require that fireproof construction be made easy, and dangerous construction difficult. Our law accom-

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plishes the reverse of this.

All sorts of burdensome requirements are imposed on the builder of fireproof tenements, while a highly dangerous license is allowed to the builder of inflammable ones.

The user of steel and iron must protect his material at all points with a covering of brick, terra cotta or other similar substance, while the user of wood may leave his more dangerous material exposed.

Even metal columns used to support floors in non-fireproof buildings may be left exposed. Thus in buildings where there is much to burn the law provides no protection for the metal, but in fireproof buildings, where there is presumably little to burn, it imposes a protective covering.

Many of our so-called fireproof buildings contain such quantities of wood that they should really be classed as only semi-fireproof; but the law makes no distinction between such buildings and others, which contain no wood at all. In both alike all structural metal must be covered. At least three-fifths of the wood used in what we generally call fireproof buildings lies in the double wooden floors and the wooden sleepers, to which they are fastened. In buildings which do not have wooden floors there is no reason why the iron work should be protected, except in special cases.

It stands to reason that where wooden beams are used, which can burn, the brick walls which support them should be thicker than where metal beams are used, which cannot burn; but the law makes no such distinction.

What can be said for a wall fifty feet high and only one foot thick, having wooden beams at each story, built four inches into it, often on both sides, and still further weakened by chases, flues, windows and doors. Walls of this sort could hardly stand alone for a moment and are only held upright by the inflammable beams, which they support.

This is bad enough, but under certain conditions the law allows walls, supporting wooden beams, which are only eight inches thick, for a height of forty feet.

It goes without saying that walls of this sort can offer but a feeble resistance to the spread of fire.

Is it any wonder that with such laws in force in our principal city, the yearly fire loss in this country equals one half the cost of new construction?

It is perfectly safe to say that for an additional cost of ten per cent. spent on thicker walls and more solid construction in other parts, our yearly fire loss might have been reduced by one-half and even then, it would be far greater than is usual in other countries.

One who compares our building law with the

building laws of other cities can hardly escape the conclusion that it was drawn for the express purpose of discouraging the use of fireproof construction, so burdensome are its requirements.

I shall not trespass on your space further than to mention a few glaring instances of this sort.

In this city cross binding stresses of only five hundred pounds are allowed on concrete as against six hundred and seven hundred and fifty pounds, which are used elsewhere. Sixteen thousand pounds is assumed as the safe tensile strength for steel, as against eighteen thousand to twenty thousands pounds, which are used in other places. Concrete columns are increased in cost by about fifty-eight per cent more than is necessary because only three hundred and fifty pounds are allowed as against six hundred pounds, which are used in other places. Concrete floor slabs are increased in cost from twenty to twenty-five per cent. because only five hundred pounds extreme fibre stress is allowed, as against seven hundred to seven hundred and fifty, which it is the practice to use elsewhere. Reinforced concrete girders are increased in cost by about twenty-five per cent more than is necessary because no credit is given for continuity over points of support.

Even in Brooklyn, concrete construction is about twenty-five per cent cheaper than it is in Manhattan, because the requirements in that borough are not so rigorous as they are here, though just why stresses which are considered safe in Brooklyn should not be considered safe by the same government on this side of the river, does not appear.

In calculating the strength of floors there are taken into consideration, first, the so-called dead load, that is the weight of the construction itself, and second, the live load, which is the weight of the occupants and objects of all sorts which may be placed upon the floors.

By the excessive requirements of our law, the dead load is rendered about seventeen per cent heavier than necessary and all this waste of material has to be held up by the same extravagant formulæ I have quoted. The live load is assumed as sixty pounds per square foot on every foot all the time. This is at least twice as much as is necessary and adds to the cost about ten per cent.

I might greatly prolong this list, but enough has been said, I should think, to show under what great disadvantages the person who wants to build in this city is placed.

Who benefits by all this useless waste of material? The money it costs is worse than thrown away. It serves no other purpose than to check the use of fireproof material and to increase the fire risks of the city.

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If I were consulted in the drawing of a building law for New York, I should recommend the reduction of stresses required for fireproof material in buildings of moderate height to the utmost limit of safety.

Is it better to have a few fireproof buildings which are excessively strong, and all the rest of the inflammable kind, or to have the great majority of buildings fireproof, but only as strong as is necessary?

If, under the present adverse conditions, fireproof tenements can be built, as this building in Forty-seventh Street undoubtedly shows they can, to compete commercially with non-fireproof ones, I do not think I am wrong in saying that it is a matter of great importance and one which ought to be of interest to every one who has the welfare of the city at heart, for nothing is more sure than that every piece of wood which can be eliminated from our buildings is a distinct gain to the safety of the city.

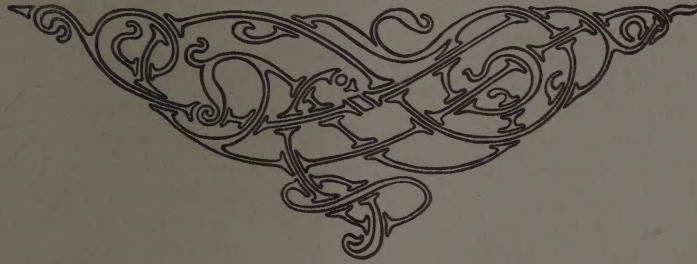
We labor under the disadvantage of what is probably the worst building law on earth, be-

cause it is the most extravagant and wasteful. Its stringent requirements in one direction are many times offset by its laxity in another direction. Its burdensome requirements relating to fireproof construction, especially as they apply to buildings of moderate height and particularly to tenements, serve only to defeat the very object they were doubtless intended to secure, that is, safety, for except in a few cases, they act simply as an encouragement to the use of wood. Buildings of moderate height make up the great bulk of the city, and these will never become fireproof under the present law.

Every day this law remains in force adds to the chances of a general conflagration. As matters now stand we have nothing but the fire department between us and the probability of a disaster too dreadful to think of. With the use of even a little common sense applied to our building regulations, this danger would gradually disappear.

Yours truly,

ERNEST FLAGG.



THE FORUM

The twenty-sixth annual exhibition of the Architectural League of New York was opened in the Vanderbilt galleries of the Fine Arts Building, January 28th, and continued through February 18th.

The arrangement of the exhibits was a distinct and pleasing departure from the style of grouping used at previous exhibitions, in that where it was formerly the custom to group the works of the mural painter and decorator at the entrance, to the detriment of the less showy exhibits of the architect, they were interspersed throughout the three galleries used in the exhibition. This departure is due to the members of the Hanging Committee, who are to be complimented on the good judgment and taste shown in the arrangement.

It would, as a matter of fact, be a great injustice to withhold commendation from the other committees, as the exhibition reflected credit not only on the officials, but on every individual connected with it.

While the majority of exhibits were, as they have been in the past, the work of architects, the contribution of the mural painter, the sculptor and the craftsman increased greatly over preceding years, thereby showing the enlarged interest and attention given in this country to these phases of architectural art.

Among the more prominent architectural features, strictly speaking, were the drawings and photographs of the Rice Institute, Houston, Tex., by Cram, Goodhue & Ferguson; the West Point Chapel, by same firm; the new Pennsylvania Railroad Station, by McKim, Mead & White; the Bryant Memorial, by Carrere & Hastings; the Forest Hills village, Sage Foundation, by Grosvenor Atterbury; the University of Minnesota, by Cass Gilbert; the Robert Fulton Memorial, by H. Van Buren Magonigle; the Havana Railroad Station, by Kenneth M. Murchison, and many others of timely interest and great architectural value.

Among the exhibits in the department of sculpture were the two tigers, by A. Phimister Proctor, which were presented, by the class of 1879, to Princeton University; the statute of James Oglethorpe, by D. C. French; a model of the McMillen Memorial Fountain, by Herbert Adams, and a figure for the Soldiers' Memorial, Allegheny county, by Charles Keck.

In the department of decoration were drawings for the pendentives in the Court House at Youngstown, Ohio, by Edwin H. Blashfield; a decoration for the Pittsburgh Athletic Club, by Albert Herter; a Canterbury frieze, by Robert

V. V. Sewall; decorative panel for the Paulist Church, by William S. Harris, and many others of interest.

A special prize of \$300 was awarded by the League to Lawrence M. Loeb, architect, Henry Kruger, Jr., painter, and George Lober, sculptor, for their collaborative work on a mural fountain, designed for the intersection of two streets.

One of the most interesting features of the exhibition was a series of three lectures, held under the auspices of the League. The first was given by the Honorable Calvin Tompkins, on "The Water Front of New York"; the second by Mr. William Barclay Parsons, on "The Architect and the Engineer," to which further reference is made in this issue, and the third on "The Architecture of Yucatan," by Henry Hornbostel.

The American Institute of Architects held its forty-fourth annual convention in the Fairmount Hotel, San Francisco, during the week of January 16th last. This was the first time the Institute ever assembled west of Chicago.

The convention was largely attended and the sessions were teeming with questions of timely interest to the profession, according to the reports of returning delegates. President Irving K. Pond was *ex-officio* the presiding officer.

The exercises were opened with an address of welcome by the Honorable John A. Kelly, acting Mayor of San Francisco.

One of the most important and interesting reports to the convention was one prepared by Frank Miles Day, of Philadelphia, chairman of the Committee on Competition, and read by R. Clipston Sturgis, of Boston, sustaining the new rule of the Institute, to the effect that "it shall be held unprofessional for any member to take part in any competition the program of which has not received the full approval of the Institute."

Two new chapters were admitted to membership in the Institute—one at New Orleans and the other in the state of Indiana.

The treasurer's report showed the Institute to be in good financial condition.

The San Francisco Architectural Club held an exhibition of representative works of San Francisco architects in their new club rooms, 126 Post street, during the same week. This was largely attended by members of the Institute.

The following officers were elected to serve during the current year: Irving K. Pond, pres-

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ident; Walter Cook, first vice-president; E. M. Wheelwright, second vice-president; Glenn Brown, secretary and treasurer. Messrs. Thomas R. Kimball, Milton M. Medary and A. F. Rosenheim were elected directors for a term of three years.

A banquet, given in honor of the visiting delegates, at the Fairmont Hotel on the evening of January 20th, was the concluding feature of the convention. Covers were laid for 350. Mr. William Mooser, president of the San Francisco Chapter of the Institute, presided. The speakers were former Governor Gillette of California, C. Grant La Farge, Judge William H. Beatty, Irving K. Pond, James D. Phelan, Rt. Rev. William Ford Nichols, D.D., Dr. Benjamin Ide Wheeler, Ralph Adams Cram, Professor C. B. Wing, Charles W. Hornick, Frank D. Hudson and Frank T. Shea.

The bill creating an Art Commission for the city of Pittsburgh has been completed. It provides for a body of nine members to be appointed by the Mayor and to serve without compensation. The commission is given jurisdiction over the erection of all public buildings costing fifty thousand dollars or over and bridges costing over twenty-five thousand dollars. Structures erected on public property, such as monuments and memorials, are also to receive the approval of the commission.

The daily press of Pittsburgh has found considerable fault with the plan on the ground that "the commission's powers are too restricted and that it has no authority to prevent the erection of architectural monstrosities—other than those promoted by public funds. . . . It is apparent that if a municipal art commission is to accomplish anything worth while, it must be given broader powers than these."

While the plan is generally conceded by the profession and press to be a step in the right direction, the people of Pittsburgh do not propose to rest on their oars. A movement has been inaugurated to enlarge the powers of the commission so as to include not only municipal but all other architectural and art works to be erected in the future.

In this way alone can those who have hoped and worked for a more beautiful city obtain the results so long desired.

Mr. I. N. Phelps-Stokes, of the firm of Howells & Stokes, architects, 100 William street, New York, has succeeded Mr. Arnold W. Brunner, who resigned recently, as a member of the Municipal Art Commission.

The eighth annual convention of the National Cut Stone Contractors Association was held in the Hotel Astor, New York, on January 18th and 19th last. The attendance was

the largest in the history of the organization.

The convention unanimously adopted a resolution incorporating the association.

The following officers were elected for the coming year:

President, P. B. Parker, New York; vice-president, Chas. G. Fanning, Chicago, Ill.; secretary and treasurer, Henry Struble, Chicago, Ill.

Trustees for One Year—Gilbert C. Brown, Newark, N. J.; Jas. Hastings, Jr., Philadelphia, Pa.; Thos. J. Vernia, Chicago, Ill.

Trustees for Two Years—A. D. Baird, Brooklyn, N. Y.; Ralph Reed, Bedford, Ind.; A. E. Dickinson, Chicago, Ill.

Trustees for Three Years—Geo. Oakley, Jr., Toronto, Canada; J. P. Falt, Springfield, Mass.; C. W. McCormick, Cleveland, O.

The annual meeting of the American Institute of Consulting Engineers was held at the Engineers Club, New York City, on January 17th last.

The Institute, which is now national in scope, is the outgrowth of the Association of Consulting Engineers, which was organized locally in 1905.

The main object of the Institute is to promote the business interests of the consulting engineer; by advocating a code of ethics, professional practice and schedule of charges; by acting in pertinent legislative matters, and by urging the separation of the contractor from the designing engineer. The membership is limited to those actively engaged in the independent practice of the profession of engineering, in any of its branches. Included in the membership are some of the foremost engineers of America, representatives of the different branches of the profession and many with international reputations.

The following officers were elected for the current year:

President, Alfred P. Boller; vice-president, Gustav Lindenthal; secretary and treasurer, Eugene W. Stern.

Members of Council—Gustav Lindenthal, New York; Ralph Modjeski, Chicago; John F. Wallace, New York; Gen. T. A. Bingham, New York; Rudolph Hering, New York; C. O. Mailoux, New York; Alfred P. Boller, New York; J. E. Greiner, Baltimore, and C. C. Schneider, Philadelphia.

Mr. Ely J. Kahn, of New York, who is a student in the atelier of M. Redon, the architect of the Palais de Fontainebleau, won first place in the competition for the Lebarre Prize in architecture at the Paris Beaux Arts. This is the first time that this honor has been awarded to an American, or, for that matter, to anyone other than a Frenchman.

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The Lebarre competition is very severe in that only three days are allowed for its completion from the time of announcement of the subject, which in this instance was an immigration station. There were seven hundred and fifty students in the competition.

The silver service for the Hotel Rector was manufactured by the R. Wallace & Sons Manufacturing Company, of Wallingford, Conn., and sold through their New York office, No. 11 West Thirty-second street.

The complete service comprises about sixteen thousand pieces. The design selected is simple and chaste, the lines being extremely graceful and the general effect in keeping with the decorative scheme of the building.

A few pieces of note include one hundred and fifty flower vases of handsome design, pastry trays, café D'iabolique and glass water pitchers effectively mounted. The buffet service, exceptional in beauty and magnitude, includes large urns for coffee and bouillon, croquette stands, large tureens, kettles, punch bowls and sandwich trays of special sizes and designs.

The special banquet service is very elaborate and rich, consisting of about five hundred and fifty pieces in heavy gold plate. The design of this is exceedingly ornate, being an elaborate treatment in the Italian Renaissance style.

Professor Thomas Nolan, of the University of Pennsylvania Department of Architecture, has been appointed a director of the Pennsylvania Association of Architects.

According to the daily press, Mrs. Russell Sage has offered to expend \$25,000 in the restoration of the rotunda of the New York City Hall to its original condition.

Messrs. McKim, Mead & White, architects, will superintend the work for Mrs. Sage. It is proposed to follow the lines adopted in the restoration of the Governor's Room, which was accomplished through the generosity of Mrs. Sage over a year ago.

Mr. Herbert R. Mainzer, architect, has removed his offices from 150 Fifth avenue to the Tilden Building, 105 West Fortieth street, New York.

It is announced that Mr. Henry F. Hornbostle, of 63 William street, New York, has been selected as the architect for the half-million dollar municipal building to be built for the city of Hartford, Conn.

The building, colonial in style, was planned to harmonize with the general outline of the Morgan Memorial Building, which was erected in Hartford by Mr. J. Pierpont Morgan as a memorial to his father.

The firm of Davis & Brooks, of Hartford, is associated with Mr. Hornbostle in this work.

The sixth annual exhibition of the Pittsburgh Architectural Club will be held on Wednesday, March 1, 1911, in the Carnegie Institute Gallery, Pittsburgh, Pa.

All the interior decorations and furnishings of the Whitehall Club, which occupies the three top floors of the new Whitehall Building, were furnished through the New York office of the Tobey Furniture Company, of Chicago, who make a specialty of manufacturing from special designs of architects and individuals.

These furnishings are composed entirely of Tobey creations, being copies of modern English models. The scheme of the decorations is in keeping with the general style of the building.

The entire credit, for the tasteful selection, arrangement and equipment of the club, is due to Secretary Henry J. Davidson, of the club, and Mr. S. F. Douglas, the manager of the New York branch of the Tobey Furniture Company, whose offices and show rooms are located at 11 West Thirty-second Street.

Plans for the new graduate college of Princeton University have been prepared by Cram, Goodhue & Ferguson, architects, and approved by the Board of Trustees of the university, according to the recent announcement made by Dean Andrew T. West.

The contracts call for the completion of the buildings, which include the Thompson Graduate College, the Proctor Memorial Dining Hall and the Cleveland Tower, by September, 1912. Ground will be broken in the early spring.

Dean West stated that over three million dollars would be expended on the erection and equipment of the institution.

The architecture of the building will be pure Gothic. The main building, Thompson College, will be constructed around a quadrangle. Proctor Hall will be erected near the southwest corner of the quadrangle. The Grover Cleveland Memorial Tower will stand at the southeastern corner of Thompson College. It will be 165 feet in height and will be placed so that it will be easily visible to the many travelers who daily pass Princeton Junction.

The buildings will be constructed of Princeton graystone, which is quarried in the vicinity.