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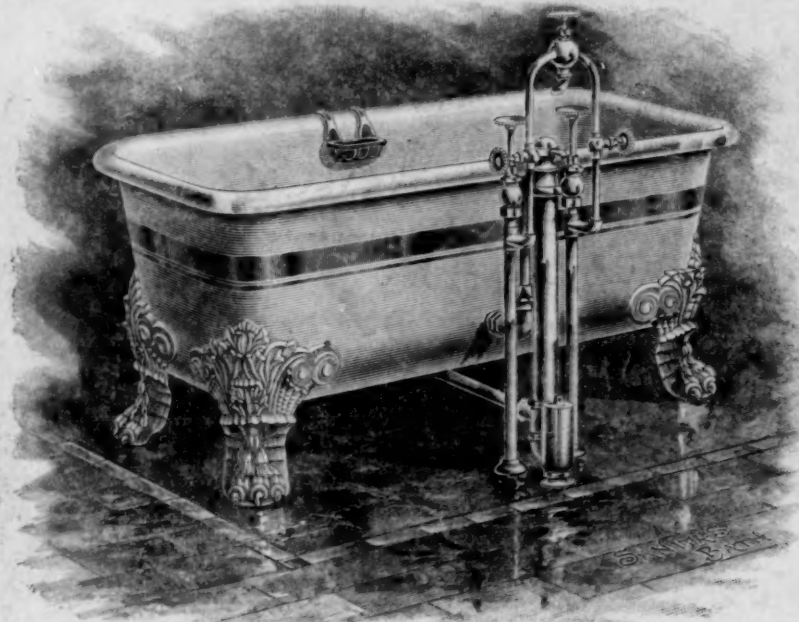
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THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. XLII.

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DECEMBER 9, 1893.



SUMMARY:—

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IT is gratifying to see with what unanimity the public is now clamoring for the preservation of the World's Fair buildings, which have certainly made an artistic impression on the country such as has never been felt before. Until within a few days, no proposition which seemed practicable has been made for keeping them, but a company has been formed which proposes to take in hand the buildings around the Court of Honor, replace the perishable staff with Portland cement on iron lath, keeping all the forms of the original, and paint the new material white. This will insure the preservation of the superstructure for many years, and it is proposed to strengthen the foundations, so as to prevent settlement and distortion. The company offers to do all this work, and to keep the buildings, grounds and waterways in order, for twenty years, in return for a concession for that period, entitling it to fence in the group of buildings, and charge a small admission fee. Independent of the question whether the company would find the enterprise profitable, there is no doubt that the city of Chicago would be benefited by the perpetuation of an attraction which may claim to have brought millions of strangers already to the city, and every artist would rejoice to see a little longer life accorded to the most renowned work that American architecture has yet produced.

A CORRESPONDENT of the *Deutsche Bauzeitung*, Herr Spies, of Ratisbon, who has made an extended tour in this country, writes an intelligent and appreciative description of the peculiarities of American building, dwelling less on the eccentricities of construction, such as the twenty-story office-buildings of the great cities, than on the details of execution and the novelties in material which he observed in watching actual work. After mentioning that American building is passing, so far as materials are concerned, from the wood, once almost universal, to brick and stone, he expresses his satisfaction at the sincerity with which these materials are used. In all his travels, which extended through fourteen States, he did not see a single building with a stucco front. He attributes this to the severe climate of the great Northern cities, which, he says, is very unfavorable to the use of stucco, and, as these cities set the fashion to the rest of the country, he thinks that stucco architecture is not likely to gain a foothold. Whether the climate of Washington, which he cites as an example, is more unfavorable to stucco than that of Berlin, where it is in universal use, may well be doubted, but it is certain that the stucco architecture of the last half-century, many specimens of which remain in the Northern cities, has com-

pletely lost favor here, and the fashion will, we hope, never be revived. Apart from this, Herr Spies found more gratification in observing the "thoroughly solid and skilful" masonry prevalent here. "In reading," he says, "of the extraordinarily short time in which the fabulously tall houses are built, one is tempted to suppose that this rapidity is gained at the expense of solidity and precision of workmanship. . . . One's astonishment is, therefore, greater in observing the minute care with which masonry, particularly brickwork, is carried out, not only in the facings, but also in the backing and the partition walls." "We must," he adds, "frankly confess, with a feeling of shame, that in this respect we have something to learn from the so-called land of humbug." The precision and perfect bond of the American brickwork is, he thinks, rendered easier by the excellence of the materials available, and he expresses his admiration of the regular shape and size, and uniformity of burning, even of the bricks used in interior walls. Two things about our brick buildings seemed to him curious. One was the flat arching now in universal use between iron beams. As he says, "it springs to the eyes" that the flat arches are very far from forming a theoretically correct construction, and he thinks it partly due to the regularity of shape of the blocks and the consequent thinness of the mortar joints, that they stay in place so well. The other curiosity of construction consisted in the furring of brick walls with wooden straps, on which laths are nailed. This practice he was unable to account for. He observed that, our brickwork being laid with closer joints than is usual in Germany, the back of the wall was much freer from the lumps and projections of mortar which the German plasterers depend upon to hold their work, and, in default of these, he reflects that, to make the plastering stick, it would be necessary to wet the wall thoroughly, and use good, sharp sand in the plastering mortar, and, as sharp sand is, he explains, rare in America, he supposes that it is found necessary to provide extraneous means of holding the plastering. Even under these circumstances, however, he thinks that it would be easier to find some other way than to go to the expense of furring and lathing, and he supposes that this is rather a "reminiscence from the time of wooden building," than a rational method of construction. The idea of the use of the furring to prevent the dampness of the wall from affecting the plastering does not seem to have occurred to him at all, yet wooden strap-furring is used on the Continent exactly as we use it, and for the same purpose, and its workmen's name in France, "*fouurrure*," corresponding precisely to our term, indicates that it is regarded as a warm and dry covering for a wall disposed to be damp.

IT is, however, the wooden construction that interests Herr Spies most, and in nearly every part of this he finds something totally different from the German methods of building. Our floor-beams and other timbers, he says would be called planks (*Bohlen*) in Germany, as, indeed, they are here, but he acknowledges that, with a given quantity of timber, our thin beams, placed near together, give a stronger and stiffer floor than the German beams, which are nearly square in section, and placed much farther apart. He observes, however, very justly, that the most economical conversion of logs into beams is obtained, on the whole, by making the breadth about five-sevenths of the height, so that our thin beams are more wasteful of lumber than thick ones would be. There are a good many things to be taken into consideration, in this matter, one of the most important being the disposition of thick beams of spruce, our common framing timber, to twist and crack, but the principle is worth remembering. The way in which our flashing is done, with zinc turned up, and a lead cap, although not unknown in Germany, is, he says, unfortunately not so common there as in America, and the curb-gutter so much used south of Philadelphia seemed to him ingenious and simple. It surprised him to find doors, windows, frames and sashes, and other objects of what we call "mill-work," ready-made, of such good quality, and in such variety. Swedish doors are much used in Europe, but there is in the foreign markets nothing like the complete assortment of such goods that is to be found here. He attributes this in part to the disposition of our builders to follow uniform patterns in their houses, but the design of the outside of the house has little to do with the shape and size of the doors, and probably the American passion for

doing everything by machinery has more to do with it. Meanwhile, however, as our machine-made doors, blinds, sashes and so on are not only very good, but very cheap, it might possibly be worth while for some of our mills to send a consignment abroad for a market.

MANY American readers will regret to learn of the death of M. Racinet, the author of several books well known in this country. His first important work was the "*Ornement Polychrome*," which is familiar to every student of decoration. Coming after Owen Jones's "*Grammar of Ornament*," it immediately attracted attention by the beauty of its plates, and had a large sale, although, as the beauty of its coloring is obtained by shaded tints, it is hardly so valuable, in practice, as its predecessor, in which flat tints only are employed. His next work, the "*Costume Historique*," although extremely pretty, and containing some charming restorations, in color, of antique and mediæval interiors, is less generally known, and the later ones, such as the "*Céramique Japonaise*," although beautiful, do not appeal particularly to students of architecture. M. Racinet not only drew the illustrations of his books, but wrote the text, which, particularly in the "*Costume Historique*," is learned and valuable.

M. RAOUL PICTET has been making some curious experiments on the physiological effects of extreme cold. With the aid of various freezing mixtures, he has arranged what he calls "wells of cold," the air in which is cooled to various degrees. So far, the temperature in the coldest of these wells is only reduced to one hundred and sixty-six degrees below the Fahrenheit zero, but much lower temperatures are easily reached by other means. It is calculated by modern physicists that at about four hundred and sixty degrees below zero will be reached what is called the "temperature of death," or "absolute cold," at which all substances are solid, and at their extreme limit of contraction. M. Pictet has, of course, not yet attained this condition, but he has approached near enough to it to give some singular indications of what may be discovered later. In one of his experiments, a dog was introduced into a "well of cold," at a temperature of one hundred and thirty degrees below the Fahrenheit zero. For ten minutes the animal's vitality struggled successfully against the cold, and even raised, to the extent of half a Centigrade degree, the temperature of the well. At the end of this time, the dog's extremities began to freeze, but the heart and vital organs remained warm, and it was not until the end of an hour and a half that the temperature of this part of the animal was found to have been reduced one Centigrade degree. After this point was reached, however, the vital powers seemed to give way, the temperature suddenly fell, and nothing could revive the poor beast.

M. PICTET himself had the courage to try how such terrible cold felt. He plunged his bare arm into the well, at the same temperature which had proved fatal to the dog, and held it there for five or six minutes. At the end of three or four minutes, he felt a violent pain, proceeding apparently from the periosteum, or sensitive covering of the bone. After about two minutes of this, he withdrew his arm, and a sharp burning pain came on, caused, as he supposed, by the sudden reaction in the tissues. In experimenting on other animals, he found that the lower the organism, the better it seemed to resist cold. Fishes could be frozen hard, without losing vitality. If the temperature to which they were exposed did not sink below the Fahrenheit zero, and if the experiment did not last too long, they could be thawed out, apparently without injury. Frogs could be kept for a time in a temperature twenty degrees below the Fahrenheit zero, without harm, but they succumbed to a temperature of thirty degrees below. Snakes bore about the same degree of cold; and centipedes did not seem to be inconvenienced by a temperature of sixty degrees below. Snails were still more hardy, suffering no loss of vitality in a well at a temperature one hundred and eighty-four degrees below zero. This astonishing fortitude was, however, far surpassed by that of certain microbes, which M. Pictet froze up in a block of solidified atmospheric air, at a temperature three hundred and fifty degrees below the Fahrenheit zero. In this block, hard and solid as crystal, he kept them for some time, and then thawed them out gently, upon which they exhibited their usual activity. What can be the nature of a circulation which is indifferent to this awful cold,

or of an organism in which circulation can be entirely stopped without injury, we can only conjecture, but M. Pictet's experiments, for the account of which we are indebted to *Le Génie Civil*, have certainly added another mystery to that standing enigma of science known as vitality.

It will probably surprise a good many people to learn that the spot where Washington was born, although it has been perfectly well known ever since the event took place, has never yet been marked by anything to indicate it to a stranger. As all readers of the life of the greatest personage of the eighteenth century know, Washington's birthplace was in Westmoreland County, Virginia, on a plantation now called Wakefield, which borders for half a mile or so on the Potomac River, sixty-five miles below Washington City. For the last forty years the plantation has been occupied by Mr. John E. Wilson, who received it from his wife, Bettie Washington, the grand-daughter of William Augustine Washington, the half-nephew of the great President, but it is now owned by the Government, which has purchased it from Mr. Wilson. Washington's father, grandfather and great-grandfather spent all, or nearly all, their lives on the plantation, and his own infancy and boyhood were passed there. The house in which he was born was a plain, square, wooden building, with four rooms on the lower floor, and several chambers, but the frame has long since decayed, leaving only the brickwork of the foundations and chimney. Until within a few years, the chimney was still standing, but it has recently fallen. On the plantation is a family burial-ground, in which lie many of the Washington race. A spot more sacred in the eyes of Americans could hardly be found, and, for the present, at least, it has a charm that the much-visited Mount Vernon has rather lost; but it has been totally neglected, and it is only within a few weeks that a contract has been made, in the name of the Government, for the construction of a wharf, by means of which the place can be reached by boats on the river. The expense of this will be paid out of an appropriation of thirty thousand dollars, made by Congress for the general purpose of acquiring and commemorating the place. The purchase price of the plantation, which contains twelve hundred acres, was only a little over five thousand dollars, showing that sentimental interest does not count for much in the value of land in this country. The landing-pier will cost about ten thousand dollars, and there will be incidental expenses, so that the residuum available for commemorating the actual birthplace of the Father of his Country will be only about thirteen thousand dollars. It is hardly necessary to say that this would not go far in providing a monument, or other similar memorial, large enough not to look ridiculous in the middle of so extensive a tract, and, unless the appropriation could be considerably increased, we would suggest, with due modesty, that an effective way of using the small sum available would be to spend it, under Mr. Olmsted's direction, in beautifying the plantation by purely natural means. The remains of the house, and the family graves, should be secured from further decay by proper shelter, but, beyond this, our idea is that the object in view should be to secure, using trees, shrubs and grass as the medium, the utmost possible effect of appropriate sentiment. So far as we know, such an experiment has never been tried on anything but a very small scale. In fact, there are very few men in the world who could handle trees and shrubs, as a painter does his colors, with a knowledge of the effects produced on the mind by their combination, but Mr. Olmsted is one of them, and it is hardly too much to say that an entirely new field of art might be opened by such an essay. The circumstances would be particularly favorable. There is land enough to carry out an idea without having it spoiled by the intrusion of discordant neighboring objects: the Virginia atmosphere has naturally a tender haziness which lends itself to sentiment, and Mr. Olmsted knows the form, color, mode of growth, and, one may say, the expression, of every plant indigenous to that region. There would be no need of changing the topography, or in any way altering the general appearance of the plantation from what it was when Washington's childish eyes looked over it; everything would be done by planting, and a great deal of planting could be done with thirteen thousand dollars, with the additional advantage, that, when the time came for spending a hundred thousand or so on a more artificial memorial, what had already been done would be so much additional attraction to the place, while an insignificant monument would be only fit to be dug up and thrown away.



THE PRESENT ASPECT OF THE WORLD'S FAIR GROUNDS.—SALES AND FINAL DISPOSITION OF SOME OF THE BUILDINGS.—THE NEW MAYOR AND THE BUILDING-INSPECTORS.—THE ART INSTITUTE MOVING TO ITS NEW BUILDING.—EXHIBITION OF WATER-COLORS.—THE COLUMBIAN MUSEUM.—NEW OFFICE-BUILDINGS.

WHOEVER visits the World's Fair grounds now does so chiefly from a sense of duty, and if by any chance some stray wanderer may turn his steps that way with a hope of finding some bit of pleasure, he soon realizes his mistake and comes away disheartened and saddened by this impressive object-lesson on the perishability of all earthly things, especially of those which are made of staff, substantial as they may have appeared. Of all dreary places, this once gay and beautiful one is certainly the most dreary of all, and the present season of the year only adds to its hopeless aspect. With the foliage of the trees shapeless and frost-bitten, with the plants in a similar condition and with the wet snow and mud which has been present during the last week, there could be found on the grounds none of the beauties of winter and all of its discomforts.

As the fate of the large buildings has not been decided absolutely, of course nothing has been done to them. Tracks have been laid to their doors, and the roads have been torn up. One of the electric fountains has been removed and nothing remains but a hole and a pile of staff. The MacMonie's fountain still stands, though no water falls around it, no gondolas or launches brighten the waters of the lagoon, even the ducks and swans have been disposed of, as no longer being required for a picturesque feature. The Intramural road has long since ceased to run, the stations have all been removed and the work of demolition has begun on the tracks.

Inside of the buildings the aspect is quite changed, and it is hoped by the first of January all exhibits will have been disposed of. The Horticulture and Fishery Buildings have been nearly emptied, and almost one-half of the Government exhibits have gone, a hole having been cut in the side of the building to permit the entrance of the cars which receive the boxes. In the big Liberal Arts Building all the decorations have been taken down, and cars run directly through the centre of the structure, though naturally the work of removal progresses more slowly in this place than in any other. The Electricity is quite bare of interesting features, the Mines and Mining has but little to show, in the Agriculture the pavilions are fast being pulled down, while, naturally, Machinery Hall empties more slowly. The Forestry Building is less changed than many of the others, as much of its contents has been given to the Columbian Museum, as is also the case with the Anthropological collection. The work of destruction on the Cliff Dweller's homes has begun and the curious structure is fast disappearing.

The question of what to do with the buildings has been an absorbing one all through the past month, and in the suggestions for their final disposal, impracticability struggles with the practical for the mastery. A few of the smaller buildings have been sold. The beautiful Cingalese structure, as well as the Cingalese booth in the Women's Building have been sold at auction and at such figures as to entirely discourage those most interested in them. The Cingalese structure as before stated in these letters, is rich in carving on the exterior as well as in the interior. The beautiful columns before spoken of are reproduced from historical ruins, which two thousand years ago were proud and mighty temples. The edifice, which is composed of twenty of the hard woods of Ceylon, was first constructed in that island and then, like several of the other buildings, was taken apart to be reconstructed here. This building with all its wealth of carving and rare wood was sold to a Chicago buyer to be used as a country or summer house, for twenty-eight hundred dollars, while it is reported it could not be duplicated for eighty thousand. The booth in the Woman's Building brought only one hundred and ninety dollars, which so disgusted the Cingalese that the sale of the remaining booths was declared off. Many of the carvings in the Ceylon Building have a deep religious significance, and would be especially interesting for closer study and investigation when they could be taken more leisurely than at the Fair.

It has been reported that the Maine Building has been bought by the North Western University to be removed to Evanston, there to be used as the headquarters of the Art-guild of that institution. It is known, also, that the Ohio Building has been sold for three hundred dollars and will be removed to Cincinnati, while the "jewels" which in front of it assumed the forms of Grant, Sheridan, Sherman, Chase, Garfield and Stanton, will be shipped off to Columbus to grace the grounds of the Capitol. The Wisconsin Building has been knocked down under the hammer, while the Colorado structure will meet the same fate, with Nebraska, North Dakota and West Virginia probably for companions. On December twenty-fifth, Christmas or no Christmas, the Illinois Building will go to the highest bidder. The New Jersey structure will be utilized as

a residence for the Governor of the State at Trenton, while the Virginia Building has already been purchased and will be removed to Seventieth Street near Jackson Park. The Montana Building will eventually be transformed into a mountain hotel in West Virginia. Mr. Potter Palmer's gift of two hundred thousand dollars for the purpose of erecting a Woman's Memorial Building has made the offer of the New York State Building to this association not a desirable one to accept, and throws back this structure on the hands of the Commissioners. Mr. Palmer's plan is to erect this Memorial Building on the Lake Front, if legally he can obtain the right to do so, but wherever it is built, it is devoutly to be hoped that it will be more of an architectural success than most of his other buildings have been. If everything is placed on the Lake Front that there is talk of, there will remain but a few inches of ground uncovered, where now the Columbus of unpleasant notoriety looks down on the weary tramp in his noonday siesta.

The most appalling project has been that of removing the great Liberal Arts Building to this same site, there to make of it a "People's Palace." Some of our leading philanthropists, together with sundry unphilanthropic people, have been interested in this scheme, and one delightful solution of the query as to how to eat one's cake and still have it, has been suggested by one of the people interested in this plan. It is asserted by several of them that the structural ironwork of this building "can be removed without in any way detracting from the architectural beauty of the plan, whose walls are independent of these giant trusses and arches, and will remain intact after the removal of the latter. With these no longer in the way an unobstructed area of thirty acres could be gained to be utilized as a complete park in itself, improved with trees and shrubbery, flowers and fountains." Suggestions have run riot, and in the desire to save the buildings their absolutely perishable nature seems to have entirely vanished from the minds of many, and the papers teem with communications rich in such phrases as "preserve for ages those grand monuments of architectural beauty," etc. It has been suggested, as above stated, that the Liberal Arts Building should become the People's Palace, Machinery Hall become the Woman's Memorial Building on this same Lake Front, and the Fine Arts Building brought hither shall be transformed into the Columbian Museum. These visionaries do not state whether their plan would be to replace the staff with a more substantial exterior or not. If the entire outside shell of the building is removed and a new one substituted, it is hard to understand how there could be much sentiment about preserving the buildings. Surely the interior plans, though most suitable for what they were intended, are totally inappropriate for any other use. The matter of plumbing, heating and foundations alone would almost make new buildings of them, and if there is to be this kind of a "resurrection of the body" it would seem nearly as well to start out with an entirely new one, many and tender though the associations may be which cluster around the old shells. These are all very natural and very proper sentiments, but it is rather surprising to see practical business men giving themselves up to them. The World's Fair Directors come in with an occasional fact which slides away powerless before the enthusiasts of this removing party. The General Manager has figured out that to repaint the twelve buildings would cost thirty-six thousand dollars. Then the roofs would have to be looked after and there would be necessarily fire and police service. The mere matter of shovelling snow from the roofs last winter cost twelve thousand dollars. If the façades around the Court of Honor only are retained the cost would be of course much less. But with battered roofs, broken windows, heavy wind and rain storms, it would take but a short time to wreck all that might be left. The weather for the past six months has been most exceptional and that we may ever again have long seasons of rain seems to have been quite forgotten by the majority of people.

Absolutely as a matter-of-fact it looks now, however, as if no removal of the buildings would be attempted, but as if the Court of Honor and the surrounding structures would be turned over to the Park Commissioners and would be allowed to stand as long as their conditions warranted it, or at least until the repairs necessary for the preservation of their beauty became so extensive as to be impracticable for the Park Commissioners to attend to. Each day the conferences between the Directors and Commissioners assume a more definite and settled character, and it looks now as if by the time of the publishing of this letter it would be finally settled that this much of the Fair setting would be permanent, for a while at least.

The chief activity in building circles, outside of the immediate centre, lies in the remodelling of many of the buildings in the near vicinity of the Fair Grounds. Many of the hotels of last summer are being remodelled into flats and stores, and it has been estimated that twenty thousand families could find apartments of various kinds, in this quarter. Unfortunately for the neighborhood in which they are erected, many of those buildings are of the cheapest possible character that could be put up without violating the building ordinance of that time, and very naturally cheapen and harm the neighborhood in which they are situated. Of course, some of the hotels were of a better character and are being remodelled into a more desirable class of apartments: still the fate of this part of the city, as to its future character is far from being decided.

After the assassination of Chicago's Mayor a new official has stepped into his place, who certainly is beginning well. The matter of building-inspectors is being rapidly changed by his attitude, and the affair which at one time promised to be a long and tedious one

is being brought rapidly to an issue. Soon after the new mayor was installed in his office he was informed that a committee made up of a representative from the Builders' and Traders' Exchange, the Building and Trades Council, the Fire Underwriters' Association and the Illinois Chapter of the American Institute of Architects, would call upon him in regard to the inspectors of buildings. The committee had word sent it, however, that no visit was necessary, as the building ordinance would now be enforced in all respects. He said, "The order I have issued to the Commissioner refers to the past, present and future. If he has any inspectors who did not pass an examination as required by the ordinance, he must discharge them and fill their places by men selected in accordance with the provisions of the ordinance. Hereafter, as long as I am in this office, when a vacancy occurs it must be filled according to the provision of the ordinance. The order passed by the Council, under which inspectors have been appointed without an examination, is illegal. An order cannot become effective as against an ordinance." As will be remembered, perhaps, the ordinance as passed last spring required that all inspectors should pass a satisfactory examination before a board composed of representatives of the four associations above mentioned. The candidates sent in were only those who had first been approved of by Mayor Harrison and one of his minions, and their chief qualification was that they were all Democrats. Four were saloon-keepers. The examinations were conducted most conscientiously, and but few candidates were found qualified for the office. This course of things was naturally unpleasant to the "gang," and the examinations were ordered stopped. Finally an order went to the Council in June, providing that the Commissioner, with the consent of the mayor, might appoint such persons to the position of inspectors as had passed an examination to his satisfaction. This order was smuggled through the Council and many of the Aldermen knew nothing of it. The examining-board, as soon as offices of inspectors were filled with men that it knew nothing of, tried to sift the matter to its foundation, but were in every way harassed and hampered by the friends of the mayor and the Commissioner, who were in all places of trust around them and ready to promote their schemes. The ex-Corporation Counsel expressed the opinion that the order was ineffectual as against the ordinance, because the order was passed by a *visa voce* vote. Thus the matter, though supported by the right looked rather uncertain, till the advent of Mayor Swift gave a more encouraging aspect to the affair. It is to be hoped that such a good beginning will develop into something better than a mere assertion.

The Art Institute is again in a state of chaos, and is practically indulging in another moving, which its officers, doubtless, hope will be the last for many a long year, after the repeated attacks of similar catastrophes in the past. The great halls of Washington and Columbus are being torn down. These, it will be remembered, were temporary structures built in the court of the building for the accommodation of the men and women who gathered there in the Congresses, whose interests reached from psychical research to agriculture and real estate. According to agreement, these edifices have been demolished, the entire building which has been at the mercy of the invading hosts is being cleaned and renovated, and many of the museum's treasures, which have been stored through the summer because of lack of room, are fast being put in place. The French Government has made a gift to the Institute of the wall-decorations with which it embellished the walls of its rooms in the Fine Art, French and Manufactures Buildings. This work, as before mentioned in these letters, was especially well carried out and carefully designed, and doubtless will, if possible, be used in some of the rooms and galleries of the Institute. The time when the beautiful Trocadero casts will be finally placed is being awaited with impatience by those interested in such matters. The opportunity to carefully study them will be much greater when they are removed from the manifold attractions with which they were surrounded at the Fair. That part of the Institute's possessions known as the Eldridge G. Hall collection has been enriched by a goodly number of works from the French sculptural department. The list is as follows:

"First Burial" by Barrias; "Mozart as a Child" by Barrias; "Rhinoceros and Tigers" by Cain; "Jeanne d'Arc" by Chapu; "Security" by Delaplanche; "Man of the Stone Age" by Frémiet; "An Ancestor" by Massoule; "The Wounded Dog" by Frémiet; "Lion and Crocodile" by Cain; Four figures from the tomb of General Lamoricière by Dubois; "Salamambo" by Idrac; "Guardian Spirit" by St. Marceaux; "David the Victor" by Mercié; "Even So" by Mercié; "Citizens of Calais" by Rodin.

The only oil-painting that comes as a gift to the Institute is William M. Chase's "Alice," though several of the pictures in the loan collection will hang for the first time on its walls, though given to the institution last spring. These are:

"Bringing Home the New-born Calf" by J. F. Millet; "The Song of the Lark" by Jules Breton; "The Potato Field" by Ludwig Knaus; "Women of Sahara" by Eugène Fromentin; "Going Home" by Constant Troyon; "The Lock" by John Constable.

There has also been presented by other friends a full fac-simile collection of the Naples bronzes from Pompeii and Herculaneum; from the Swedish section the statue called "Snowdrop" by Hasselberg, as well as the relief "Linnaeus" by Christian Eriksson; from the French, the statuette "Anacreon;" while from the English comes

a bust of the archbishop of Canterbury. As part of the library of the Institute, there has lately been secured a complete series of Braun & Co.'s carbon photographs and autotypes of famous works of the European museums.

The Chicago Society of Artists has just been holding its annual water-color exhibition. The club has this year two prizes to offer to its exhibitors, established by friends, patrons outside the society, and does not in its exhibition, confine itself exclusively to the works of its own members. The prizes go to no artist who is not an actual resident of Chicago. The exhibition, though not large, contains some very charming things and several that are marked by decided cleverness. As usual when there are awards, there arises to those outside of the jury, the question, why the honorary ribbon should be pinned onto such an one, rather than on, say, your modest favorite in the corner yonder. Chicago does not seem to have reached the period "when art is still religion," when she can gracefully and gratefully support an artist population, and the path of genius and talent, it is to be regretted, is far from being strewn with roses here.

The gifts which are constantly pouring into the proposed Columbian Museum bid fair to make of its contents a World's Fair on a small scale. The following list as published in one of our daily papers seems to be an average specimen of the variety of the nature of the gifts: Sharks' jaws and mounted specimens of fish. Model of a packing-house and dock, illustrating the receiving and packing of lobsters in New England. Three oil-paintings of fish, sturgeons' sounds and isinglass. Spoon bats, including first ever made in America. Two hundred oil-paintings from photographs of the tribes on the Amazon. Classifications in such a collection will be no small undertaking, though probably much of interest will be found in it, taken as a whole. The general fund seems to be growing and since last writing has been augmented by numerous large gifts from wealthy citizens.

As above stated, much of the work in architects' offices is now repair jobs. Prominent in new work, however, will be the large office-building which is to stand on the site of the old Honoré Block. This was a very good five or six story office-building, which is now being torn down to make room for a modern sky-scraper. A similar fate has been dealt out to the old building on the corner of State and Madison Streets, a very good structure in itself, but like the Honoré Block, not able to compete with the luxurious modern office-building, well-lighted, well-ventilated and well-heated.

The Post-office addition is fast nearing completion. As it was considered absolutely necessary that this structure should be enlarged to accommodate the rush of business which would come at the World's Fair times, it is a noticeable example of the swiftness of Governmental movements, inasmuch as it is only just now finished, when all is again quiet. The extra room, however, is needed for the ordinary postal business of the city. In appearance, the addition taken in connection with the original building realizes the worst hopes of the most pessimistical.



MONSEIGNEUR DUPANLOUP, formerly Bishop of Orleans, opened, in 1878, a subscription for filling with artistic stained-glass the great pointed bays of his cathedral. In a short time he collected the sum of one hundred thousand francs, but, just as he was on the point of making use of it, he died. His successor, M. Coullié, wishing to follow out the work already begun, in 1879 opened a public competition, which produced fairly happy results; but following a decision, which roused up violent protest, the State intervened and caused the competition to be annulled by the Administration of Religious Bodies. And now it was the bishop's turn to protest, and there was no longer talk of competition. But this year, in spite of ill-will, the aforesaid Administration has succeeded in organizing a regular competition, and from the 8th to the 19th of October last, the artistic world hastened to the École des Beaux-Arts to admire the results of it.

The programme, very clearly expressed, provided for the execution of ten windows illustrating the following subjects, including within their leading lines the principal episodes of the history of Jeanne d'Arc:

First Window.—Dorémy. Jeanne hears the voice from Heaven. Valley of the Meuse. House of Jeanne d'Arc. The Church (1425).

Second Window.—Vaucouleurs. Jeanne on horseback, setting out to join Charles VII at Chinon (February 25, 1429).

Third Window.—Chinon. Jeanne is presented to the Court of Charles VII (March 8, 1429).

Fourth Window.—Orleans. Jeanne on horseback enters by the Burgundy Gate about 8 in the evening by torchlight, preceded by her standard (April 29, 1429).

Fifth Window.—Orleans. Jeanne at the assault on the boulevard and the Fortresse des Tourelles (May 7, 1429).

Sixth Window.—Orleans. Jeanne, after the freeing of the city, renders thanks to God in the Cathedral of the Holy Cross (May 8, 1429).

Seventh Window.—Rheims. Jeanne at the Consecration of Charles VII in the Cathedral (July 14, 1429).

Eighth Window.—Compiègne. Jeanne is made prisoner in front of the city (May 23, 1430).

Ninth Window.—Rouen. Jeanne a prisoner in the tower of the Château (1430-1431).

Tenth Window.—Rouen. Jeanne on the funeral pile in the Place du Vieux Marché (May 30, 1431).

The competitors were required to prepare a sketch at a tenth scale of these ten windows, a full-size design for one of them, and a fragment of the glasswork itself. The statement indicates the importance of the competition, the effort which it demanded and the studies which were required. Assisted in the composition for the greater part by well-known artists, twelve glass-stainers took part in this artistic struggle, which in a lively degree interested the Parisian public. These men were MM. Denis, E. Hirsch, Charles Champigneulle, fils, H. Carot, J. B. Anglade, Vantillard, Felix Gaudin and L. J. Galland, all of Paris; M. Florence Lobin of Tours, M. Bulteau of Rheims, M. St. Blancat of Toulouse, and M. Latteux-Bazin of Le Mesnil-St-Firmin (Oise).

In spite of the really good qualities which the majority of these offerings exhibited, there were three which made the greatest impression. First, that of M. Felix Gaudin, made with the collaboration of M. E. Grasset; second, that of M. Champigneulle, with the assistance of M. Albert Maignan; and third, that of M. L. J. Galland, who had for his associate M. Gibelin. The others were not distinguished by any marked originality, and seemed to have taken little care to make a design which could be carried into execution; and this alone was enough to condemn them.

The windows which were to be decorated being fourteenth-century work, it was not uninteresting to find inspiration drawn from the masters of that epoch, and to see that their methods of composition had been consulted. The wisdom of doing this was very well appreciated by M. Grasset. His sketches were marvellous pieces of archaeological research, expressed with the same sentiment that exhales from the old missals, with perhaps a little less of naïveté. His window, very compact in its design, though his sketches indicated a confusion which would be minimized probably in the execution, evidenced a long and serious study of the art of working in stained-glass, reinforced by his ability as a designer, which only heightened the charm of the work. The framework and the clerestories of the upper parts of the pointed windows were ornamented with motives in which allegorical figures, shrewdly selected to accompany each of the subjects, were treated themselves with great knowledge from the point-of-view of types, costumes and decoration. Unfortunately the simple drawing in outline for the full-size glasswork (six metres in height by three and one-half metres in width) gave to the *ensemble* an air of confusion and exaggeration of detail. The stuffs of the costumes, which in execution would have furnished great uniform spaces in spite of the drawing with which they were covered, merged themselves one in the other through the absence of all color. This mistake in presentation was carefully and skilfully avoided by MM. Galland and Gibelin, who had the wit to present their full-sized window in color. By this means they enabled the jury to obtain a more definite idea of the decorative effect of the stained-glass, where the color plays the principal and brilliant part. Their composition, moreover, without perhaps being as learned as that of M. Grasset, had much character, and one easily perceived in it the study of, and inspiration drawn from, the old masters.

The jury, which was composed of MM. Bonnat, Bouguereau, Pavis de Chavannes, Paul Dubois, Didron, De Baudot, Danjoy, Vaudremer, Corroyer, Boeswilwald and four delegates from the County of Orleans, appointed by the diocesan authority, awarded the prize to the design of MM. Galland and Gibelin.

The sketches of M. Albert Maignan for M. Champigneulle were very prettily handled in a charmingly poetic feeling. They suggested a ravishing piece of water-color work worthy to hold a place in a museum, but hardly one to be executed in glass and lead by artisans.

It is well known that for several years it has been sought to give an important place to *objets d'art* at the annual exhibitions. The same effort is making at the Louvre, thanks to the appointment of M. Molinier as *conservateur des objets d'art*. The halls devoted to this part of the museum have been completely revamped, and the objects have been arranged after a definite method, and the models and plaquettes begin to constitute a collection of real value. These have been arranged in order, and the French, the German and the Italian works have been placed by themselves. All the wealth of our museum is exhibited in separate showcases, logically grouped and arranged, which makes the collection ten times more valuable than it was in its former unmethodical and disordered condition.

In the hall devoted to pastels have now been placed miniatures, snuff-boxes, bon-bon boxes, and "*boîtes à portraits*," the collection of M. Ph. Lenoir. All these objects, a great part of which belong to the

thirteenth century, add life to and form a setting for the charming elegance of the pastels of Latour and Perronneau.

Since we are at the Louvre, let us point out in the Garden of the Infanta a monument which has just been erected to the memory of Raffet. Raffet was a pupil of Charlet, and was born at Paris in 1804. He was quite young when his father was assassinated. He was then obliged to begin an apprenticeship with a wood-turner, and it was only in his leisure hours that he could study drawing. Charlet interested himself in him, and offered to give him lessons. Raffet devoted himself entirely to lithography and engraving, and his work, while having strong analogy with that of Charlet, was yet distinguished from it by a more heroic character. The lithographs in which he depicted certain episodes of the battle of Waterloo and the celebrated plate "*Reveil*" are real poems. It is the chief figure in this last work which has inspired the motive of the monument just inaugurated. A drummer of the Guard, moustached and wearing a shako surmounted by a lofty plume, is vigorously beating the charge, and wakening about him the dead and dying. One feels in this simple design the warlike breath of that grand epoch. We find the same drummer at the foot of the column, upon which has been placed a bust of the artist. The column of stone rests upon a broad pedestal, which forms a platform over which marches the legendary grenadier, while accessories, arms, bucklers and palms are fastened against the column, forming attributes. Like the grenadier, full life-size, they are all bronze and so stand out vigorously against the color of the stonework—too vigorously, even, so that they do not form an ensemble with the column. The grenadier, entirely independent, and planted upon the large socle like an ordinary personage, makes one fear that he may start off and leave it. The socle is not very high, and with a single step he could descend from it. Nowadays this adaptation of the human figure is a little too much abused in our monuments, from which it might at any moment be separated so as to give place to another. This is altogether wrong, as such a loss might take away all of the original character of a work, since it might be transformed or lose one of its elements without being absolutely destroyed at one stroke. There is no longer cohesion between all the portions of a monument which is composed of different elements fastened together haphazard, and easily transposable. For instance, why should this grenadier on Raffet's monument be at the right rather than at the left or in front? His place is not properly one point rather than another, and if it were desirable he could be made to step forward from time to time, and finally make a complete circuit of the column, after the manner in which children play with their mechanical toys. This gives life to the work, explain the defenders of this fashion, but is it reasonable that a work should have life in this acceptance of the word? It would better content itself with having sentiment and inspiring sentiment.

THE "ARTS AND CRAFTS" EXHIBITION, LONDON.

THE Society of Arts and Crafts is generally commended for its wisdom, in having allowed an interval of two years to elapse before again inviting the disciples of the Dante-Rosetti-Burne-Jones cult and the Philistine public to an exhibition in the new gallery of its ideal of furniture, fittings and decoration, for our churches and our homes. The homes, however, to be adorned by the specimens now, and hitherto exhibited, would need to be the abodes of wealth and luxury, since the expense would preclude the man of moderate income from becoming their happy possessor.

As was to be expected, the present exhibition bears a close resemblance to those of previous years, consisting of designs for all kinds of decorative objects, such as stained-glass, frescoes, wall-papers, tapestries and other hangings; some of these latter being ornamented by or composed of exquisitely dainty embroidery on silk or linen. The hammered metalwork in the form of sconces, dishes and shields, in copper and brass, display no novelty, though some hammered-silver brooches, etc., remind us of old Italian jewelry in their quaintness.

It is gratifying to note a decided improvement in the style of the furniture shown, and also that there is less of the cabinet-makers' show-room element about it, on which we animadverted on a previous occasion.

It may probably savor of carping, to say that there are too many cartoons for stained-glass windows, but, without doubt, until the design is fully completed, and *in situ*, it is quite impossible to form a just estimate of its value as a work of art. Occupying, as they do, the first place among the cartoons, special mention must be made of a set of six, designed in 1862 by Mr. D. G. Rosetti, to illustrate the story of St. George and the Dragon. They are all treated somewhat unconventionally, from the ordinary sort of hamper, containing the skulls of the victims, to the present-day family-carriage in which the Princess returns with her deliverer; while we need scarcely remark that St. George, instead of being in such a position as to be almost certainly killed himself, is on foot, and hewing at the monster in a most workmanlike fashion. One of the set—"the Princess Drawing the Lot"—is in water-color, and, though the color is subdued in tone, as befits the subject, the beauty of the design, and its well-balanced figures and proportions are considerably enhanced.

There is a charming naturalness and absence of crowding in "Christ Blessing Little Children" by Mr. Burne-Jones; but to five

other cartoons by the same artist, we can, by no means, give unqualified praise. "The Stoning of Stephen" is badly drawn: instead of an infuriated mob casting stones, we seem to see slightly excited lay-figures, throwing snow-balls. In "Paul Preaching at Athens" the artist has portrayed the divided opinions of the Apostle's hearers. "The Burning Bush" is treated rather poetically, but in the remaining three drawings there is nothing noteworthy.

Remembering that the grave has scarcely closed over the remains of the late Mr. Ford Madox Brown, whose lamented death occurred quite suddenly, about the time this exhibition was opened, criticism would be unseemly. We merely name his designs for stained-glass; "The Nativity" and "The Crucifixion"; and for Durham, a set, illustrating the story of St. Oswald.

In domestic stained-glass, the designs by Mr. Selwyn Image, Mr. Louis Day and Mrs. Newill are about the most suitable: "Brownies" by the former being capital, and the "Babes in the Wood" by the latter most charming.

Among the more noteworthy exhibits in the West Gallery, are Mr. Richmond's sketches of his designs for the decoration of the choir of St. Paul's Cathedral; indeed, in these few drawings, is foreshadowed one of the most important schemes of decorative art on a great scale, which has ever been undertaken in England. Mr. Richmond is now engaged in carrying out the decoration of the apse and the choir; and the work has made such good progress, that the first portion of it will probably be finished by next Easter. The choir comprises an arcade of three bays, besides the apse farther eastward; and the decoration, of which the sketches give a fair general idea, embraces the whole of the wall-surfaces above the springing of the arches, the vaulting, and the domes formed by the latter. Moreover, glass, for the clerestory and apse windows is also included in the complete scheme. It will thus be seen that this is a work of the first importance, and of great magnitude; not only in what is here shown, as being actually in progress, but in that it must form the keynote, both as regards style and color, of any future decorations. The Cathedral is now committed to the style of a particular school or period of mosaic, and it must be said at once, it is not that of the Renaissance, of which St. Paul's is such a striking example. In the completed spandrels of the great dome, the style of the Renaissance has been taken for granted, as most suitable to the architectural surroundings; Mr. Richmond goes back centuries before it and seemingly founds his work on the mosaics of Ravenna and other early work; and when it is completed westward, as far as the dome, we shall have the two distinct styles and their characteristic treatment brought into juxtaposition. Apart altogether from the success or otherwise of the scheme itself, one cannot help questioning the wisdom of the choice of style, and its appropriateness to a seventeenth-century church. The decoration as such, may be, and doubtless is, very noble in design and color; but that it is the most suitable for St. Paul's is quite another matter. When we come to the glass as an integral part of it, there can be no question, that if it is being carried out as indicated by the sketches, it will be entirely out of place in such a church. In the mosaics, Mr. Richmond has, by his great skill, to some extent succeeded in harmonizing the treatment of the early work and the later architecture: but in the glass, no attempt seems to have been made in this direction; so much so, that, judging from the sketches, it is simply everything that the windows should not be, in such a building.

The subjects comprised in the sketches, are thus apportioned: in the spandrels of the choir arcade—"The Angels of the Passion," "The Creation of Planets," "Eden," "The Expulsion from Paradise," and "The Annunciation." In the spandrels of the clerestory windows, "The Sybils and the Prophets," of which the cartoons for the Persian and Delphic sybils are shown full size. In the three domes, "The Creation of Birds, Beasts and Fishes" and in the pendentives of these domes, a series of angles. All these are designed in a broad, dignified and masterly manner. They are in color on a gold ground, but of their ultimate effect, it is impossible to judge till we see the completed work *in situ*. Suffice it now to say, that if the result may be judged from these general sketches of its conception, we may with no small confidence look forward to a great success.

There is a sketch for one of the Manchester Town-hall series of frescoes by the late Mr. F. Madox Brown, "The Expulsion of the Danes from Manchester," most vigorously treated throughout. The derisive laugh on the face of the mail-clad warrior is splendid, as he turns back to shake his spear at the townspeople; while, notwithstanding the general *saucy qui peut*, a wounded officer is being most tenderly borne over the drawbridge by his anxious men; the very dogs barking at the retreating foe, and old men and children throwing missiles at their heads. With regard to these fine frescoes, with which many of our readers are doubtless acquainted, we regret to hear that they are not receiving the care they merit. Mr. Pooley, Deputy Chairman of the Manchester Art Gallery Committee, going into the Town-hall one day, observed marks of deterioration, such as cracks caused by visitors knocking them. He once found the descriptive cards leaning against them; while smears across the pictures showed that the stone-cleaners were in the habit of wiping them over with their dusters. All this manifests disgraceful carelessness on some one's part; and it is time, as Mr. Pooley wisely says, that the people of Manchester bestir themselves, to save "the

glory of Manchester." He prophesies that as people now go to Venice to see the great works of Tintoretto and Veronese, so will they in future years come to Manchester to see the works of Ford Madox Brown.

"Angels in Adoration," the subject of a design by Mr. William Morris for a fresco in a church, is both pleasing and devotional in style of treatment; but surely Mr. Morris might occasionally vary his foreground, and not give us those perennial flowers.

On entering the West Room the attention is at once arrested by the very fine piece of Arras tapestry "Sir Galahad and the Holy Grail," a portion of the San Grail series, designed by Mr. Burne-Jones and executed by Morris & Co. This truly beautiful work would alone amply repay a visit to the New Gallery. In the background of the design is a leafless wood, on the left a lake, while in the centre of the tapestry two armor-clad knights earnestly entreat some glorious angels who stand there with out-spread crimson wings. Sir Galahad, however, has pressed on to the Tabernacle of the wood and while kneeling there, his enraptured gaze falls on the sacred object of his quest. The expression depicted on the various countenances displays marvellous skill, as does the harmonious blending of the varied hues. "Love," a nearly full-size design in water-color for needlework, is by the same artist and lent by Mrs. Muir Mackenzie. Here again we see both majesty and beauty: the goddess, holding an unstrung bow, stands before us, her splendid double wings of a rich crimson color, in which doves are nestling, being finely set off by the deep blue sky which forms the background. No needlework could add to the charm of this example of pure decorative work.

We must not leave the tapestries without a notice of one from the pencil of Mr. William Morris, and executed at his establishment. A quartette of girls stand in graceful attitudes in an orchard, well shielded by a thicket, and "high overarched" by vines and fig trees; while behind them and on either hand, are apple and plum trees, all richly laden. With these fruits, and the inevitable foreground of flowers, the girls' dresses combine to form a rich harmony of color. The whole is in illustration of the following lines in form of a legend worded over the tapestry.

"Midst bitten mead and acre shorn,
The world without is waste and worn;
But here within our orchard close
The guerdon of our labors shows.
O valiant earth, O happy year
That mocks the threat of winter near,
And hangs aloft from tree to tree
The banners of the spring to be."

ARCHITECTS' CHARGES.

WITH the consent of both parties, the *Builder* publishes the following letters between Mr. Edwin T. Hall, F. R. I. B. A., and the Lord Chief Justice of England:

57 MOORGATE STREET, LONDON, E. C., August 9, 1893.

TO THE LORD CHIEF JUSTICE OF ENGLAND:

My Lord,—

Re Architects' Charges.

I am sure the vast majority of architects desire not only to avoid disputes with their clients, but still more to avoid even the suspicion of making inequitable charges for services rendered.

The general principles enunciated from time to time by your lordship in regard to architectural charges, reaffirmed in the recent judgment in *Farthing vs. Tomkins*, naturally place all such architects, of whom I have the honor to be one, in a dilemma. May I venture to ask your patient consideration of the following statement, in the hope that you may appreciate the difficulty and delicacy of our position, and may see on what basis charges may in our opinion be fairly made when there has been no express agreement, and when the actual building is not erected.

In order to arrive at a clear understanding of our position, I desire first to say that the services which an architect renders may be thus sub-divided:—(a) The thinking out of a design, i. e., the application to the problem set by the employer of the architect's creative faculty developed by study, training and experience. The first expression or result of this design is the preliminary sketch. (b) The maturing of the design by most careful study of every detail, not only of artistic expression, but of convenience of arrangement, providing adequate light and aëration for all parts of the building, the scientific construction for stability, the drainage, heating, lighting, etc. This is expressed by the working-drawings and specification, and, as doubtless your lordship knows, working-drawings not only comprise general plans, sections and elevations of a building, but drawings to a large scale of many parts, and full-sized drawings of every moulding, of the brickwork and masonry, of all skirtings, architraves, door and wall panels, staircase (newels, balusters, strings), plaster and wooden cornices, etc., while the specification is a mass of detail. (c) The necessary explanation of all these to the quantity-surveyor, and to the competing builders so as to obtain estimates. (d) The general superintendence of the building while in progress, giving directions to clerk-of-works, builder and specialists of all kinds, and the certifying of payments. Incidental to all these are constant interviews and correspondence with the client.

I think, where no special arrangement exists, that a charge of five per cent on cost for all these services, on other than small or special works, may be assumed to be modest, fair and reasonable, from the fact that it is accepted by a larger percentage of clients than that of people who adopt a generally accepted view on almost any subject, and your lordship has judicially given effect to this view.

Considering the many thousands of works carried out, I think your lordship will recognize that the disputes on charges which come before the courts are very few.

If, therefore, five per cent be reasonable for all the services enumerated, it may with fairness be affirmed that the more important of the functions of an architect are embraced under the division *a*, *b* and *c*; for, given the completeness of the work therein comprised, it is evident that the supervision of the execution will require less close application and attention on the part of the architect. Further than that, the actual outlay by the architect in the payment of staff, etc., is almost exclusively confined within the headings *a*, *b* and *c*. It is not, therefore, illiberal to allocate two-fifths of the remuneration to division *d*, leaving the three-fifths for the earlier divisions, and that is a general practice which is broadly admitted by the great body of clients to be reasonable and fair, as evidenced by the rare occasions on which it is questioned. Indeed, I think in many cases when it is questioned, the real reason is that the client who has abandoned a scheme is annoyed that he has, so to speak, to throw away money on services no longer of value to him. I would, with submission, suggest that the translation of the architect's design from the abstract or pictorial building into the concrete or material cannot in equity affect the value of the services rendered previously to reaching the stage of translation; nay, it is possible that an architect's services may be dispensed with previously to that stage, and the building be carried out without his supervision. This is certainly sometimes done when the building has to be executed abroad, a long distance from London, where the work may have been designed. In either case the services for the stages *a*, *b* and *c* are complete, and if the basis of charge for the whole of the four stages, *a*, *b*, *c*, *d*, be a percentage, then with equal equity that for the first three stages may be a percentage, or, in other words, may be treated as a fixed proportion of the whole.

There are, of course, exceptional cases where a percentage charge cannot be made with justice to the architect. To cite only one, for example, say an alteration where the outlay may be little, but the ingenuity of the architect may be great to compass the desired end, and the supervision may be relatively excessive.

In this relation it is pertinent to note the recent case of *Watson vs. Lewis*, tried before an Official Referee, judgment being given for the full amount of the architect's claim, and on appeal this judgment was upheld. In this case the charges (often for work not carried out) were largely in excess of any that an ordinary charge by percentage would cover.

Discarding exceptional cases, it must be manifestly to the interest of client and architect to know approximately what the total remuneration payable is to be, whether the works are carried out or are designed, but subsequently abandoned for the convenience of the client. If no general scale is adopted, the alternative for the rank and file has been suggested of charging according to time employed. In that case, the man of more ready creative faculty, and possessing more ability, resulting from wide experience, who is able to grasp his subject at once, and get through his work quicker, would be entitled to receive less remuneration than the man who is of slower apprehension and less experience, but who, by the patient devotion of more time, may, for the sake of argument, produce the same result. Injustice is done, either in the former case to the architect, or, in the latter, to the client, whereas — the result being the same — a uniform remuneration in either case is, at all events, not unjust to the client.

Again, a difficulty would arise as to remuneration, if one architect did all the work with his own hands while another had draughtsmen to do the more mechanical work. The late Mr. G. E. Street, R. A., said he made every drawing for a very large building with his own hand. If so, judged by the standard of his position, his time was entitled to a high rate of remuneration, but, as much of the mechanical drawing could perhaps have been done equally well for practical purposes by paid assistants, the client would have suffered had he been charged on the basis of time occupied by the architect priced at its legitimate value, whereas by a percentage charge no injustice would have arisen.

Another question also comes in. Who is to fix the value of the architect's or his assistant's time? It is also possible to conceive that disputes could easily arise as to whether or not an architect had spent an excessive amount of time on any given work. This alone opens up a wide vista of litigation.

A further difficulty arises if time occupied is a basis for charge, as to how the architect is to charge for the sometimes long period of incubation which goes on in his mind by day and often by night, rendered sleepless by the difficulty of the problem. I am sure it is the experience of almost all architects that on important work this incubation runs through all one's time for days or weeks, until at last the design begins to take shape in the brain and is then transmitted to paper. It is practically impossible to say how much time is thus daily solely occupied on any given work, for the thread is running through all other work and occupation.

The fact is, that payment by time occupied in drawing fails as a basis, because it does not and cannot take into account that which is due to the higher creative faculties of the artist antecedently brought into play. It is for the benefit from these that the architect is employed.

It is sometimes said that the payment by percentage tends to make an architect spend more money than he would do otherwise. I do not believe the allegation to be true of any appreciable percentage of architects — first, because I believe architects as a class are honorable men; and, secondly, because nothing is more inimical to an architect's interest than to get known as an extravagant man. If he satisfies a client he may fairly expect that the client will both commend and recommend him. He then gains a friend, and his *clientèle* is increased. The policy, therefore, of uselessly spending a lot of money to gain a small extra remuneration on one's work would be so foolish that none but the shortest-sighted man would adopt it; and a man possessed of such a defect as short-sightedness would hardly be likely to succeed in his profession of architect, which eminently requires a man to look ahead.

If the result of charging by time be so variable and, as above shown, be unsound in principle, and if the basis of a proportionate charge be discarded, there appears to be no other way open than to bring each individual case to the arbitrament of a learned judge (as in the case cited) or of some other able expert. But it appears to me that such a method of settling the ordinary transactions of life is contrary to the universal principle of barter, is impracticable, and imposes too great a tax to make it a course which your lordship's views of justice and common-sense would commend.

I have no authority to speak for or on behalf of the Royal Institute of British Architects, but it may remove a misapprehension if I state that the scale (i. e., the rate) of charges was not created by the Royal Institute. Great pains were taken by that body to ascertain what the usual practice was as to charges, and the printed form merely crystallizes and codifies the undoubted facts so ascertained. It is not improbable that the percentage system was by general consent adopted because the large body of merchants, brokers and others who form the bulk of employers were so familiar with that system in their regular business.

I think it may fairly be contended that it was well within the province of the chartered body of architects, not only to ascertain the facts, but to publish the result for the information not only of its members, but of all whom it might concern. The Institute does not impose its scale, even on its own members. The most that it does is to urge the desirability in the interests of employers and architects of following the *usual* scale (where no special agreement is made) so as (a) to prevent the pernicious habit of underbidding, which must lead to unscrupulous curtailment of the services properly due to the client, and (b) to insure uniformity of practice; and this is a principle sanctioned by the legislature in the remuneration of solicitors.

It shows but the loyalty of architects to the principle of just and equal treatment of clients, that in cases where a basis of payment has not been explicitly agreed on, and where an individual may have views legitimately differing in his favor from the recorded general practice, he is willing to waive his own opinion and to base his charges on those in the printed document. This is not always to his interest, for the scale sometimes gives a remuneration equal to that payable to a junior clerk, while on the average, even architects who have good practices only enjoy a modest competence, and the number of them of the widest practice who reap large incomes may almost be counted on the fingers, and is certainly far less than that in either the legal or medical professions.

I trust that in the foregoing I have been able to show that the balance of convenience to client and architect alike is in favor of the practice of proportional charging, and if I have, I trust your lordship may acknowledge that there is both wisdom and equity in the system, whether it be applied to buildings erected or to buildings only designed.

Apologizing for the length of this letter, I have the honor to be,
Yours truly, (Signed) EDWIN T. HALL.

JUDGES' LODGING, LEEDS, August 11, 1893.

Dear Sir, — I thank you for your full and elaborate paper on the subject of architects' charges which I have received here this morning. You will not expect me to do more than say that it has received, as it deserves, a very careful and attentive perusal.

I cannot pretend to enter into a full discussion of the subject with you; but I will repeat what I have already said, that I have never doubted the honor and integrity of architects, amongst whom I have the pleasure of numbering some of my oldest and most valued personal friends.

I have the honor to be,

Your faithful servant,
(Signed) COLERIDGE.

EDWIN T. HALL, Esq.

A RUSSIAN BELL FOR NOTRE DAME DE PARIS. — A bell bigger than any now existing in France is to be cast in Russia for the Cathedral of Notre Dame de Paris. The cost of the gift will, it is said, be covered by a public subscription among the Muscovites, and Cardinal Richard has been asked, and has signified his willingness, to send an estimate of the weight which one of the towers of the cathedral will be able to bear. — *Invention*.

OLD SUBURBAN LONDON.

LAMBETH PALACE.



Niche on the Lollard's Tower formerly containing a Statue of Thomas à Becket.

FEW of the relics of the past in or about London are more interesting than the old archiepiscopal palace of Lambeth. The parish, whose name seems to be a corruption of *Lamb-hythe*, forms part of the Hundred of Brixton, which in its turn was derived from *Brizi*, a Saxon thane whose estates stretched along the river and some distance inland. In the year 1042 these lands belonged to Goda, sister of Edward the Confessor, wife of Eustace, Earl of Boulogne, who presented them to the church of Rochester; with this commenced the connection of Lambeth with the ecclesiastical history of England. There can be no doubt of a Saxon residence having stood on this spot, and there is a local tradition that Hardicanute died here. A charter of Edward the Confessor in 1062 speaks of "Lambe-hithe with all fields, pastures, meadows, woods and waters thereto belonging."

In the year 1197, Glanville, Bishop of Rochester, exchanged this manor for some lands in Kent, with Archbishop Hubert Walter. It then passed into the possession of the see of Canterbury, with the exception of a small part upon which a house was built for the use of the bishops of Rochester when they came to town to attend the meeting of Parliament or of Convocations; for many years this bore the name of Rochester Place.

The Saxon manor-house, or the greater part of it, was pulled down by Archbishop Boniface who, it is thought, began the present palace in the year 1244, but of his work there are few remains except the chapels. It was Archbishop Chicheley (or Chichele) who raised the characteristic pile known as the Lollard's Tower; the stone-built part nearest to St. Thomas's Hospital, also the old Banqueting Hall; he began his work in 1424 and expended large sums upon it. To this princely and munificent prelate, Oxford, it will be remembered, owes All Souls' College. His building operations were perhaps in some measure necessitated by the injuries inflicted upon the house some time before by the rebels under Wat Tyler, who plundered it, burnt many of the records and murdered Archbishop Sudbury.

Late in the fifteenth century and after the Wars of the Roses, the chair of Canterbury was filled by the famous Cardinal Morton, a great builder. He constructed the present Gate-house, one of the finest in England, and a very early example of that red brick-work which has played so large a part in our national architecture: its date is about 1490. In the troubles of the seventeenth century the great house fared badly. Under the Commonwealth it passed into the hands of Scott and Harding who utilized it as a prison for their opponents, pulled down Chichele's hall and sold the materials.

At the Restoration, Juxon, who succeeded to the archbishopric, found the entire fabric almost in ruins. He at once set himself to the task of restoration and to him London owes one of its most beautiful buildings, the great hall now used as the library. This noble room has been attributed to Wren, but the point is uncertain. It is 93 feet long by 38 feet wide, and, according to Allen, the historian of Lambeth, 50 feet high; to our eyes when we visited it, it seemed much higher, nearer to 60 or even 65 feet. It is a well-marked object from the river and is a beautiful example of what



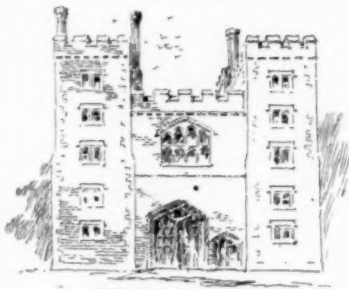
Juxon's Hall, now Library.

has been called Oxford Gothic, that blending of mediæval with Renaissance forms of which there are so many charming examples at the old university city, with results which purists may criticise but which delight the visitors. It presents the appearance of a college-hall at Oxford and is not unlike that of the Middle Temple, com-

pared to which it may be said that it is more beautiful externally though not quite so large. Red brick is the material employed, but with the addition of much white Portland stone which greatly enlivens it. Five great windows on either side are divided by bold buttresses terminating in stone balls; besides these at each end is an immense bay. The high-pitched roof is broken by a very large lantern surmounted by a beautiful vane composed of the arms of the see of Canterbury "impaling" Juxon. Internally, the first effect upon entering is exceedingly fine, though not in this aspect, equal to its neighbor at the Temple. The screen which once stood here has been removed and the conversion of the place into a library has marred, and that not a little, the sense of width and spaciousness. This, when it was used as a banquetting hall, must have been very apparent. One of those fine openwork roofs of timber which are unknown out of England—though it is singular that so beautiful an expedient never commended itself to the Continental builders—fills the vast dim space above the windows and may be sufficiently heavy to account for the external buttresses. Those who enter this lofty, admirably-proportioned room will remember that it was designed for the stately hospitality of the primates: the word "Hall" being synonymous at the Universities with dinner; the custom of publicly dining together which there prevails still surviving at the Temple and the other Inns of Court, with a "high table" across the upper end for the Benchers. At Lambeth the entertainments were on a great scale; two long tables ran down the length of the room; that on the right, headed by the steward was for the gentry; on the left, the almoner presided over the table allotted to the clergy; noblemen and privy councillors only sat at the archbishop's own table. After dinner alms and broken meat were distributed to the poor at the gate.

Juxon's Hall, the most important feature of the place, is now devoted to the library, a fine collection, both in print and manuscript, of books bearing upon ecclesiastical history and antiquities.

Londoners do not go to see their own "lions" and very few of those who pass this picturesque building are aware that the library is always open to the public from ten till four except on Saturdays, Tuesday afternoons and for a few weeks in September and October. It was founded by Archbishop Bancroft, who in 1610 left his books



Archbishop Morton's Gate-house, 15th Century.



Vane with Arms of Canterbury impaling Juxon.

for the purpose. During the civil wars they were in great danger but owed their preservation to no less a man than Selden who managed to get them conveyed to Cambridge where they were taken charge of by the University and remained until the Restoration, when they were restored to Lambeth. The collection was much increased by subsequent primates.

The books are arranged on shelves projecting at right angles to the walls, forming a series of bays, in the manner advocated by Mr. Gladstone as the most convenient, besides being more economical of space than the usual arrangement along the wall only.

Under glass cases are many precious remains of the past, of which we may mention, "*The Dictes and Sayings of the Philosophers*," translated from the French by Anthony Woodville (often written Wydville), Earl Rivers. It contains a fine illumination of an author presenting a book to King Edward IV; among the figures is that of the young prince, afterwards Edward V, who with his brother was barbarously murdered in the tower. It is asserted that this is the only likeness of him extant. According to Allen the author here represented is Caxton, but this is considered doubtful by Mr. Kershaw, the present Lambeth Librarian, the learned and judicious custodian of these treasures. One of Caxton's earliest books, however, printed in Westminster Abbey, is here, its date 1480; also the "*Chronicle of St. Alban's*" with beautiful illustrations, and many interesting mediæval books, those extraordinary examples of patient penmanship and brilliant illumination.

The bay-window at the northwestern end contains some interesting painted-glass, including a portrait of "Archbishop Chicheley."

Passing through a Jacobean doorway exactly opposite this window a small hall and staircase lead to the "Guard Chamber," a stately room 56 feet long by 27 feet wide, with a fine roof; it is panelled up to a certain height; above this hang the famous portraits of the archbishops. The oldest is that of "Arundel" painted, as an inscription upon it tells us, in the tenth year of the reign of Henry IV; the red rose of Lancaster is depicted in one corner. Next comes "Chicheley," on wood and represented in a kind of niche, its date 1414. The most celebrated is that of "Warham,"

the contemporary of Wolsey, who was archbishop of York: it is by Holbein and represents a rugged, singular and powerful face. The painter of Pole's likeness is unknown; it is a soft face with full brown beard. "The gentle Reginald Pole" as Macaulay calls him, is drawn in the red robe of a cardinal.

The able and excellent "Matthew Parker" does not shine in his portrait though it is the work of Richard Lyne, a man of some eminence in his day. From him we pass to "Laud," a most vigorous piece of painting by Vandyck and thence to the beautiful face of "Juxon," a wonderful portrait, but strange to say its artist is unknown. These are the best. Amongst the others may be mentioned "Archbishop Tenison" by Simon Dubois; "Herring" by Hogarth; "Hutton" by Hudson, the teacher of Sir Joshua Reynolds; "Seeker" by Reynolds himself; "Moore" by Romney; "Manners-Sutton" by Sir Thomas Lawrence and "Howley" by Sir Martin Shee. It was this primate who christened Queen Victoria; crowned her uncle William IV; announced to her—at four o'clock in the morning of the 20th of June, 1837—that she was Queen; crowned her in Westminster Abbey and married her to Prince Albert. The simple dignity of "Longley" will not be recalled by Richmond's portrait, which is as hard, uninteresting and expressionless as all his other works, and looking at its cold, pasty tones we are tempted to think that portraiture is a lost art, but our hopes are revived by Mr. Herkomer's likeness of the present archbishop, which is vigorous but has scarcely caught the expression.

Cardinal Pole's Gallery was originally a long corridor or succession of corridors running round a small court-yard and used as a library for many years, until in 1830, Archbishop Howley finding the house much in want of repair, pulled down a large part and rebuilt it. Two sides only were rebuilt of Pole's gallery and rebuilt in what can only be called "churchwarden's Gothic," the books at the same time being removed to their present position in the great hall. There are more portraits of archbishops here and an old view of London, but the only thing to remember is a small portrait of "Dr. Christopher Wren," father of the architect. He was Dean of Windsor and registrar of the order of the Garter and is represented, holding his own book with the names of the knights.

From this we pass into the most interesting part of the building: the Water-tower which is virtually the western part of the Lollard's tower; its name recalling the fact that the Thames once washed the walls of Lambeth Palace—the old, wide, shallow Thames of history with its one bridge and its far-spread marshes scarcely distinguishable from the river in times of flood or very high tides.

The chamber we now enter is called the "Post Room" from a wooden stanchion or pillar in the centre; it is of moderate size with a panelled ceiling. Small Gothic windows look upon the Thames; opposite them is a beautiful, deeply-moulded doorway, which seems to have been constructed during the transition from the Round to the Pointed style, the latter, however, predominating and divided vertically by a shaft of dark Purbeck marble. This is the entrance to the Chapel, but before visiting it a small low archway to the right claims our attention. It leads to the crypt and is associated with a terrible tragedy, for here Queen Anne Boleyn was brought and landing at the stairs at the foot of the tower and passing through a door in this room, long since built up, was taken down the little, dark, stone staircase into the crypt where the King's commissioners awaited her. With his usual craft Henry VIII endeavored to extort from her a confession that before her marriage with him she had entered into some kind of contract or betrothal to her cousin, Lord Percy. By a mixture of force and fraud, by terrorism and a promise that her life should be spared, the unhappy lady was driven into a statement that such a contract had existed. This was all that the packed court wanted. It enabled Henry to declare that his marriage with Anne had been invalid from the first. She was at once taken back to the tower and not many hours afterwards beheaded; her corpse was not yet cold before Henry married Jane Seymour. On a winter's day as we stand in the old Gothic room we catch through one opened casement a glimpse of the same wide rolling river that poor Anne Boleyn looked upon; it is only a glimpse and no modern object intrudes itself; entering this chamber we seem to have gone back into the past and Lambeth Palace is peopled once more with the men and women of English history.

Passing into the Chapel the first object that meets the eye is the stone sarcophagus in which reposed for many years the body of Matthew Parker. The chapel is 72 feet long by 25 feet wide and perhaps 35 feet high. It is a beautiful example in its details of a blending of periods and illustrates the principles upon which, in the great days of architecture, our ancestors invariably proceeded; each age building (or rebuilding when required) in its own style, and thus leaving an unmistakable record of itself; all the periods, too, being carefully harmonized with one another. Here the thirteenth-century windows of Boniface of Savoy seem in no way out of place with the rich Jacobean screen and simple but very pretty panelling of Laud. When he first came to Lambeth he found these windows "all diversely patched like a poor beggar's coat" and proceeded to repair them. "Lambeth" was destined to be fatal to him. The portrait we have mentioned fell down one day as he entered his room, an evil omen in the opinion of those times. His diary has been preserved at St. John's College, Oxford, and in it he tells us that on the day when he started for his trial, "As I went to my barge hundreds of my poor neighbours stood there and prayed for my safety and return to my house. For which I bless God and them."

The Chapel is curiously worked into the building and the organ-loft is really Archbishop Cranmer's *parloir* or sitting-room, a word still used in ecclesiastical buildings in France; there is also, high over the western end, a very curious arrangement, formerly a "hagiscope." The roof is vaulted and richly colored; this vaulting, however, dates only from Archbishop Howley and the color was applied in Archbishop Tait's time; Howley, therefore, removed Laud's ceiling as Laud had removed Boniface's. But Laud introduced a ceiling in the style of his own day—the late Jacobean; Howley, in 1830, acting under the influence of the Gothic revival, introduced vaulting which will suggest nothing to the traveller in future ages of the time in which it was built. It is possible that Boniface's work may have been vaulted; Howley's roof in that case representing the modern theory of restoration in accordance with the supposed original design, which has worked such disastrous results at St. Alban's Abbey. When an ancient building is taken in hand by people holding this view and "restored," all the landmarks of its history written upon its walls disappear and a dull, literal uniformity takes their place. It is fortunate that so much of Laud's beautiful work was allowed to remain and that the interior should be as effective as it is; amongst other features may be mentioned the floor, paved in alternate diamonds of black-and-white marble. There are other points of interest in Lambeth Palace; the Lollard's Tower, the gardens and the new buildings designed by Blore in 1830 and used as the modern residence of the archbishops, but we cannot speak of them to-day. In the middle of the Chapel some Latin words are cut in one of the slabs of the pavements; they cover the mortal remains of the man to whom England owes the "Bishops' Bible."

Under the Commonwealth the sarcophagus which contained the body of Parker was broken open and "opening the leaden coffin and cutting away the cerecloths of which there were many folds, the flesh seemed very fresh." His corpse thus stripped was thrown on a dust heap. At the Restoration, Juxon caused the body to be reinterred in the Chapel with the simple words above it that "Here the body of Matthew the Archbishop at length rests in peace."

J. C. PAGET.

THE TEACHING OF THE INDUSTRIAL ARTS IN ITALY.

AN architect from the United States, who did me the honor to visit me in Milan, and whom I conducted through the Scuola Superiore d'Arte Applicata, remained quite impressed with this institution, not only on account of the manner in which it carried on its work, but from the picture which it gave him of the artistic movement in Italy; and he encouraged me to make all this the subject of an article in the *American Architect*. "Nothing exists in America," said my distinguished colleague, "like the School of Milan, and the manner in which such schools are graded among you is important to study." I have, therefore, to redeem a promise to him.

In truth, the system of education prevailing in the United States differs from European systems, and particularly from that of Italy. In America, where all institutions are founded by the people, for the people, there is no school or college in which are not found the sons or daughters of the working-classes. For these and other reasons the Americans have the preëminence in certain branches of mechanical industry, and occupy a high position in the arts and manufactures in which ability, invention and applied science are essential. Among you everywhere the positive and practical note prevails, and I recall with pleasure and admiration the "Workingmen's School" of New York, an institution unique in its way, which has a distant resemblance to our workshop schools, now condemned by the official director of artistico-industrial education.

Briefly, so far as I know, your industrial schools turn, generally speaking, rather to mechanical than artistic industries, and in their own sort are among the best in the world, both in their practical and well-directed teaching, and the richness of their material of instruction. I may cite the Spring Gardens Institute and the Girard College, of Philadelphia, the Massachusetts Institute of Technology, of which we in Italy have not even the idea, any more than we have of the Lowell School of Art, destined for the free teaching of design applied specially to textile industries. Among us, at present, exists an absolute division between the schools of "Arte e Mestieri," that is, those devoted to technical instruction, and those of applied art, which are restricted to industrial design. We have some of both kinds, and, curious to say, both sorts are of recent institution.

Until about 1870, Italy, in the field of industrial instruction, had done very little, and had obtained practically no good results, appearing to have falsified her own traditions. It is not necessary to be very learned in the history of the arts to know that in the period uniting the Middle Ages and the Renaissance, and more especially in the Renaissance period itself, Italy had over the other nations that superiority in artistic industries which, later, passed to France, England and Germany. At that time, the industrial products of Italy attracted the admiration of all European courts, and the most eminent artists did not disdain to become goldsmiths, makers of pottery or woodworkers; and the industrial arts were, for our fathers, the fountain of considerable gains.

Florence then traded with almost the entire world, exporting its silks, woollens and carved furniture; Siena, from the thirteenth

century was the cradle of Italian carving; Venice reflected in her productions the marvels of color and richness which belong specially to the character of the Oriental races, with whom she was in frequent contact; Genoa, "la Superba," the rival of Venice, disputed with her the commerce of the seas, and gained renown for her ornamented velvets; Murano monopolized the glass-maker's art, and its elegant blown wares rivalled the Oriental work; Gubbio, Faenza, Urbino and Pesaro filled the world with their marvellous pottery, and artists like Cellini, Caradosso, Maderno and Fontana worked in bronze, in a manner well known to you.

Italy, therefore, appeared to have given the lie to all this greatness, and to have become indifferent to the special aptitudes of her people. In this indifference and neglect the principal, and only too conspicuous part was played by the State; and he who knows how, among us, the State pushes itself to the head of every public undertaking, while the people, in consequence, grudges its coöperation, knows how to give its just importance to this fact, against which a general discontent was not slow to manifest itself. This is the reason that, previous to 1870, a few institutions for the teaching of the arts and industries arose in Italy through the initiative of industrial associations and private persons, who paid the expense of maintaining them. At last, in 1869, the Congress of Chambers of Commerce held in Genoa, recognizing the necessity for a more intimate union of science with labor, recorded its opinion that, by degrees, schools of industrial art should be established. Other expressions of opinion followed, in the same sense, and from these originated a movement, more direct and really effective, of the State in favor of such institutions. The Universal Exhibition at London, in 1851, which had opened the eyes of English industrialists, and led to the foundation of the splendid Museum at Kensington, had not the influence over Italy that was exercised by the Paris Exposition of 1878, although the exhibition of 1851 did not leave the Italians entirely indifferent. But Italy had then its head full of the political movement which gave independence to the Peninsula, and its industries, after the great war of 1851, rested for a time as they were. The Paris Exposition, more even than the votes referred to above, made clear to the State the need of improving the instruction of workmen, at the same time that it showed the benefits which had already been derived from some of our existing industrial schools.

It was then that the Ministry of Commerce began to devote particular attention to the instruction of the working-classes—and in 1879, it invited Municipalities, Provinces and Chambers of Commerce to take steps toward the establishment of schools especially devoted to arts and manufactures, and to the arts applied to industry, promising the assistance of the State in founding and maintaining them. The amount of the subsidy to be paid was even fixed at two-fifths of the cost of scientific material and of maintenance.

To this invitation of the Government a praiseworthy response was given by Municipalities, Provinces, Chambers of Commerce, and Industrial Associations. Having always the Parliament standing with its favoring care ready to supply the necessary means, the schools grew rapidly in number and importance, until we now have more than one hundred and sixty institutions for teaching arts and manufactures, and applied art, whose purpose it is to furnish to working-people, including children and adults, notions of science and industrial design applicable to the professions which they exercise or to which they aspire.

But, within these general lines there is great variety, as much with respect to the materials of teaching as to the importance of the schools. There is no doubt of the practical propriety of the general principle governing all of them—that they ought to look before everything else, to the needs of the laboring and industrial classes of their respective districts, and adapt their instruction to this end. In this principle resides the opportunity for promoting the revival of those local industries to which the natural disposition of the several districts in which the schools are situated has shown itself best adapted.

The instruction in all these schools has taken an extension more or less great, and in some of them has assumed the character of a superior course, as, for example, in Rome, Florence, Milan and Naples, which either have museums attached to the schools, or enjoy the advantages of the museums and galleries of the respective cities. The schools of Milan and Naples have their own museums annexed; those of Rome and Florence do not. It is noteworthy that the union of the museum with the school of industrial art is, among us, considered not only useful, but indispensable, and, as we have seen, in Milan and Naples they form an indivisible whole, while as much attention is given to increasing the artistic collection as to improving the apparatus or library, if not more.

The actual workshop-practice being considered in Italy of little value in schools, such as exist at Rome or Naples, limiting myself to the principal schools devoted exclusively to artistic industry, it seems to me that the school of Milan unites, better than any other, the intellectual with the manual training. The Milan school is of the higher grade, and has an administration formed, as in other institutions, jointly, that is by the coöperation of the various contributory bodies, such as the State, the Province, the Municipality and the Chamber of Commerce. Its associated character comes from the fact that the school is an evening-school, and receives those who work by day in the factories, often applying directly what they learn in the school. Moreover the pupils are mostly adults,

who, instead of being taken at random, have a definite profession in which they already possess considerable skill, as well as power of design, before they are admitted to the courses.

The school is divided into three sections—those of Architecture, Ornament and Sculpture (limited to decorative sculpture). From a most humble beginning, it has now an average of two hundred pupils, divided among the three sections, each of which has two courses; that of the copy, and that of the composition. The pupils are divided according to their regular professions, and are all working decorators, fresco-painters, stucco-workers, marble-workers, joiners, bronze-workers, designers of wall-papers or woven fabrics, blacksmiths or metal-workers, who complete the scholastic course indicated in from two to four years, according to individual aptitude. The school is free, and the pupils enjoy from the commencement of their course, with reasonable freedom, the use of the library and the very rich collection of photographs, which, like the books, may be consulted by any pupil, without special request, submitting only to certain precautions, necessary for the proper preservation of the scholastic patrimony.

This free use of the apparatus of instruction has given the results expected, and is therefore maintained, as is also the use of the collections of the Museum, any object in which, upon occasion, may be removed from the halls of public exhibition to the school-rooms.

I insist upon these particulars, because they seem to me characteristic, and useful to be known. The instruction, divided in the manner indicated, is rigorous, in that no pupil, either in the copying or the composition class, does any work not adapted to the profession which he exercises, and to his own preference.

Sometimes he selects for himself the subject of his copy or composition, which, after being approved by the instructor, who usually assists the pupil in his choice, and begins by making a sketch, for the purpose of training his eye and hand by that most useful exercise, freehand drawing. Quite frequently the subject is a photograph. Then the pupil makes both a sketch and a geometrical drawing. This cultivates his feeling for proportion, and initiates him into composition, the details being at the same time carefully studied. In the school it is not attempted to give a strict chronological instruction in the decorative styles, nor is any style excluded. Therefore one will find some pupils treating a mediæval subject, while others study a Pompeian design, and others again take pleasure in the Japanese eccentricities now so much the fashion. In these matters the greatest liberty is given, as well as in the manner in which the drawings or compositions shall be rendered. As a rule, however, the Renaissance is preferred, partly as being the style most in vogue among us, and partly because it seems to be the style most felt by Italian artists; but, I repeat, if the Renaissance style prevails most in the Milan school, no style is excluded—not even the so-called "baroque."

The pupils pay no fees, and are provided gratuitously with paper and colors. They have the benefit of an unheard-of quantity of premiums and small travelling purses. They have no diploma (you know that we are not lavish of diplomas—that is, of privileges) and they are taken by their instructors to small places of artistic interest, from which, as it appears, they derive singular profit. They enjoy liberty and practical application in every part of their course, and it is perhaps for this reason that the Superior School of Milan made a very good impression upon one of your compatriots, whom I know to be an assiduous reader of the *American Architect*.

Perhaps another time I may write you of those Italian industrial schools where the scientific element is the principal one, as, for example, of the school for foremen masons of Milan, a school unique in Italy, and of some other institutions of the class of the School of Technology, of Boston.

ALFREDO MELANI.

ALPHEUS CAREY MORSE, F. A. I. A.

PROVIDENCE, R. I., November 29, 1893.

ALPHÉUS CAREY MORSE, F. A. I. A., born in Boston, Mass., June 3, 1818, died at his home in this city, Saturday, November 25, after such a brief illness that many had not missed him from his accustomed paths, and only learned of his death by the unlooked-for announcement in the public prints, at the ripe old age of three-score years and fifteen.

His gradually decreasing strength and the loss of elasticity in his step, together with the growing knowledge of his enfeebled health had given rise to anxiety on the part of his family and the large circle of attached and affectionate friends who, by these outward physical signs, alone, saw evidence of increasing age and a near approach to the border-land, and for that reason there was hesitation on our part in writing the word "old" in connection with his name.

Blessed with deep and strong affections, with a highly attuned and sensitive nature, overlying an artistic instinct that saturated his whole being, his gentle spirit found expression in conversation that reflected these lovely traits of his character and gave evidence of the breadth of his culture and the kindness of his heart. Through the medium of the crayon in portraiture, and the pencil in architectural drawings executed with rare skill, he gave a further and more subtle expression of his artistic genius.

Mr. Morse, before coming to Providence, had prepared himself for the practice of architecture by service in the office of Alexander

Parish in Boston, and by study in Europe, where he resided for several years, a part of which time, at least, as companion and fellow student of the late Seth Cheney, who is remembered personally by but a few, but whose reputation is familiar to many. Under the influence of Mr. Cheney's advice and through his fellowship with artists in Italy, Mr. Morse was induced to devote much of his time to painting and to portraiture in crayon, and upon his return from Europe, devoted himself for a while to this work, but by the earnest wish of personal friends he was persuaded to move to Providence and was commissioned to undertake, as his first architectural work in Providence, the designing and superintending the erection of the residence of the late Thomas F. Hoppin, on the corner of Benefit and John Streets, to take the place of the Jenkins Mansion which was burned to the ground a few years before. This house stands to-day as an example of the very best work in Italian Renaissance, — a style in which Mr. Morse delighted to work, and in which he felt more at home than in any other, and from which he was seldom lured, no matter what style might, by passing fashion, prevail and obtain possession of the community.

The Rhode Island Hospital and Sayles Memorial Hall, both in a different style of architecture, and both of them designs of marked strength and purity, show that his power to design well was not limited to that style in which he felt most at home, and which appealed most strongly to his refined and cultivated taste.

Mr. Morse's high artistic ability and delicate appreciation of color made him much sought after as a designer of monumental work, as a director of decorations in color, and as a counsellor and adviser in many directions, by persons who had difficult problems to solve requiring the highest expression of art. He was also, in the latter years of his life, very frequently called upon by committees having large public projects in hand, as architectural adviser, and, at the suggestion and by the request of his fellows in the profession of architecture, he was often selected to act as judge in architectural competitions, both because of their high appreciation of his professional skill and because of the universal recognition of the eminent impartiality and fairness of his decisions.

Before coming to Providence Mr. Morse was associated with the late George Snell in designing the Boston Music Hall, and the color-scheme of the building, upon its completion, was, I believe, worked out by Mr. Morse and executed under his direct and almost constant personal supervision.

Mr. Morse's professional life in Providence covered about forty years of active service as an architect, and in all that period there has never been a time when he has not had some important private or public commission to execute, and we believe it will be difficult to find anywhere an instance where one has left behind him work of its kind of higher average excellence, and where can be found fewer examples than one might wish to change.

This slight sketch of Mr. Morse I hope to supplement at a later date with a more complete account of his life and his work, wherein I can do fuller justice to one whose death has deprived many of such a dear, warm and personal friend that one dare not trust himself to say all that he would of a life so pure and lovable.

He leaves a widow and two daughters to mourn him, but the sacredness of the family tie does not warrant us in drawing aside the veil and disclosing the charm of his life in its domestic relations.

A. S.

THE OPEN FIREPLACE AS A VENTILATOR.

UNIVERSALLY, the open fireplace is considered a good ventilator. General Morin says that in a room of twenty feet square and twelve feet high, with an open grate and "a good fire, the air would be removed four or five times an hour with a moderate draught of the chimney, and six or eight times with a blazing fire." Surely no better ventilation could be wished.

On the other hand, the *Encyclopædia Britannica* states: "An open fireplace, unless the air enters from the ceiling, often produces little or no ventilation above the level of the chimney-piece, and, even then, it does not afford the best and purest atmosphere. The air above may be comparatively stagnant, and offensive in the extreme from the products of combustion and respiration, while a fresh current moves along the floor to the fireplace."

For ventilation, three things are necessary — the introduction of pure air; the circulation of the air introduced; and the removal of the impure air. Each grate does the latter to some extent, but what of the former two? It is sometimes called the "lungs of the house" — but does it do all the required work? Whence comes the thirty thousand cubic feet of air General Morin says the grate removes each hour? When no other heating apparatus is used, this supply is "sucked in" from outdoors, or from adjoining rooms, through cracks around doors and windows. A common grate fire cannot burn in an air-tight room, and many fires smoke, because the air-supply is not sufficient. But usually poor workmanship leaves openings enough and to spare. And so air enters, directly or indirectly, from outdoors, cold if direct, impure if through other rooms. Being cooler than that of the room to which it is drawn, the air falls to the floor, and this is that which the grate removes. The pure air is withdrawn, and the impure air remains nearly undisturbed, above and at the breathing line. This is not ventilation.

Suppose we have a furnace, sending warm pure air to the room in

which the grate burns. Cold draughts are no longer necessary nor possible, and the heat is more evenly distributed, and, with all due respect to the *Encyclopædia Britannica*, perfect ventilation is secured. Entering at a higher temperature than the air in any part of the room, the fresh air will be at the ceiling, until by gradual cooling, and by pressure from the continuous incoming stream, it falls to the floor. It is breathed but once, as the downward motion is seen in all parts, but is strongest near the outer walls. Now the fire withdraws the impure air. When used in combination with an indirect heating-apparatus, or better still, when an attachment is made to the grate itself for indirect heating, the open fire is a most valuable and perfect apparatus for ventilation. In its original form, it, unaided, has no virtues other than the cheer of its blazing fire, and the beauty of trimmings.

J.



ENGINEERS' CLUB OF PHILADELPHIA.

AT the business meeting, November 18, 1893, President John Birkinbine in the chair, fifty-six members and visitors were present.

In opening the general discussion announced for the evening, on the subject of riveting, Mr. Wilfred Lewis referred to a number of letters received expressing interest in the subject, and read a letter from Mr. David Townsend stating that he was prepared for the manufacture of rivets to be driven cold, a number of which were exhibited.

In regard to the pressure required for driving such rivets, Mr. Lewis recalled some experiments made by William Sellers & Co., incorporated, between the compression platforms of their testing-machine. A number of $\frac{3}{4}$ -inch rivets were subjected to pressures between 10,000 and 60,000 pounds. At 10,000 pounds the rivet swelled and filled the hole without forming a head. At 20,000 pounds the head was formed and the plates were slightly pinched. At 30,000 pounds the rivet was well set. At 40,000 pounds the metal in the plate surrounding the rivet began to stretch, and the stretching became more and more apparent as the pressure was increased to 50,000 and 60,000 pounds. From these experiments the conclusion might be drawn that the pressure required for cold riveting was about 300,000 pounds per square inch of rivet section. In regard to the pressure for hot riveting, he said that until quite recently, within the last decade, there was never any call for a pressure exceeding 60,000 pounds, but that now pressures as high as 150,000 pounds were not uncommon, and even 300,000 pounds had been contemplated as desirable.

A letter from Mr. Henry G. Morse, President of the Edge Moor Bridge Works, was also read apropos of the discussion at the previous meeting on the strength of bolts as developed by long or short nuts.

Mr. F. H. Lewis. — I have never seen a riveter of any kind that can always be relied upon to drive the rivets tight. Even those having pressures of 75 tons sometimes drive rivets that are loose, and this is probably due to the buckling of the plates.

Mr. Henry G. Morris. — I have here an old sample which is intended to show that even the old toggle-joint riveter, if properly worked, will drive rivets that fill the holes even when they are badly matched.

Mr. Henry J. Hartley. — This is a question which is occupying a great deal of attention at present among bridge and boiler men, and I know that some series of tests to get at the facts are now being carried on. The necessary pressure must, of course, be enough to upset the bolt and form a head upon it; but this will vary with the fitting of the holes, the temperature and several other conditions. Books give little data on the subject, but I think the matter is of great importance, and would like to see it continued at another meeting, with the hope that more positive facts can be given. I, for one, will try to have something a little more definite. My personal opinion now is that machine-driven riveters do better work, and that the fault lies in the way that they are used, the riveter being generally run at one pressure, no matter what the diameter of the bolt and the thickness of the plates.

Mr. James Christie. — I remember many years ago in the West they used to drive boiler-rivets cold, but afterwards abandoned it on account of the deterioration in quality of the rivet iron.

Since critical systems of inspection and testing material have become common, the importance of having rivets solidly driven has been more thoroughly appreciated than formerly. Hand-work is avoided where possible, and higher pressures are used than before. Machines are preferred that will deliver the maximum pressure to the rivet with certainty. The direct hydraulic ram has the advantage of compactness, and when its fluid is stored in an accumulator there is a sudden impact or elevation of static pressure on the rivet at the termination of each stroke — a circumstance highly favorable to the riveting operation.

It has been found in girder-work, that for red-hot rivets of iron or soft steel, with length of grip not exceeding three diameters, a pressure of 50 tons per square inch of rivet section has been sufficient to completely fill the hole. Longer rivets require higher pressure, and

in extreme cases this pressure must be doubled to secure solidity. The shape of the head can be modified to a form favorable for the flow of metal into the body. The results of some experiments are submitted on the board, illustrating the advantage of high pressure on the riveted joint.

Upon motion, it was resolved to continue this discussion at the next meeting.

SKETCH-CLUB OF NEW YORK.

THE regular monthly meeting of the Club was held in the club-rooms on Saturday evening, December 2, about fifty members sitting down to dinner. Mr. Frank N. Doubleday, the speaker of the evening, gave an interesting address on French Illustrators, and distributed some photographs of the artists mentioned and a large number of excellent proofs of their work. Mr. John Galen Howard was also present as a guest of the club and criticised the designs submitted for last month's competition in rendering from a poetical quotation. First mention was awarded E. A. Josselyn, third to Emery Roth. Second mention unclaimed. During the business meeting that followed the addresses, an amendment was made to the constitution admitting women to Associate membership, with the privilege of entering the competitions and exhibitions. The second annual exhibition of the Club opened on this evening. This exhibition consisted principally of club competitive designs, class studies and club outing sketches from nature. About 275 drawings were hung, representing about 50 members. The exhibition remained open one week, with a ladies' reception Monday evening and a "smoke night" on Saturday, when the Kit-Kat Club of New York are received as guests.

EDGAR A. JOSSELYN, Recording Secretary.



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

HOUSE OF W. ALBERT SWASEY, ARCHITECT, ST. LOUIS, MO.

[Gelatin Print issued with the International and Imperial Editions only.]

DESIGN FOR A VILLAGE CHURCH. MR. CLARENCE R. WILLARD, ARCHITECT, HARVARD, MASS.

MATERIAL of structure is wood; the estimated cost, \$12,000. In plan the auditorium is octagonal, with seating-capacity of about two hundred and fifty. Opening into the church is a Sunday-school room. There is also a library, pastor's room, ladies' parlor, and kitchen in basement, all heated by furnace.

THE THOMPSON LABORATORIES FOR WILLIAMS COLLEGE, WILLIAMSTOWN, MASS. MR. FRANCIS R. ALLEN, ARCHITECT, BOSTON, MASS.

SCRANTON ROW, ELMWOOD, PHILADELPHIA, PA. SKETCHED BY MR. FRANK A. HAYS, ARCHITECT, PHILADELPHIA, PA.

REFECTORY BUILDING, FRANKLIN PARK, BOSTON, MASS. MESSRS. HARTWELL & RICHARDSON, ARCHITECTS, BOSTON, MASS.

[Additional Illustrations in the International Edition.]

THE BASE OF THE OBELISK AND THE SOUTHWESTERN PAVILION OF THE AGRICULTURE BUILDING, WORLD'S COLUMBIAN EXHIBITION, JACKSON PARK, CHICAGO, ILL.

[Gelatin Print.]

HOUSES OF MESSRS. HENRY C. HULBERT AND JOSEPH H. SUTPHIN, NINTH AVENUE, BROOKLYN, N. Y. MR. MONTROSE W. MORRIS, ARCHITECT, NEW YORK, N. Y.

[Copper-plate Photogravure.]

ENTRANCE-HALL, ROLLESTON HALL, BURTON-ON-TRENT, STAFFORDSHIRE, ENG.

CONVENT OF SAN MARCOS, LEON — DETAIL OF FACADE.

THIS illustration is a reproduction from a drawing by Mr. A. N. Prentice, and corresponds with the fifth plate in his "Renaissance Architecture and Ornament in Spain," which Mr. Batsford has just published.

According to Mr. Prentice, the greater portion of the façade, which is the masterpiece of Juan de Badajos, was built between 1514 and 1549. It is constructed of a rich yellow stone with a red tiled roof. The sculpture of the façade is supposed to be the work of Guillermo Doucel. The pilasters are varied in design, and no

two capitals are alike. The large busts under the ground-floor windows represent emperors, knights of Santiago, etc., and, although now much mutilated, they might well be attributed to Berruguete.

DRESDEN, AFTER A DRAWING BY SAMUEL PROUT.



[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.]

CIRCULAR VS. ADVERTISEMENT.

BOSTON, MASS., November 29, 1893.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—A few weeks ago I received a circular, showing what seemed to me some admirable radiators for direct-indirect steam-heating—just what I have wanted many times within the last few years. The circular went at once into the waste-basket, where about half a bushel of similar ones go every day, not because they are not valuable, but because, even if I had room to store them, it would be utterly impossible to find any given one when wanted. Now I have an urgent demand for a good direct-indirect radiator, and cannot recall where to find the best that has yet come to my notice. Could you put me immediately on the track of these, if you recognize them from the description, and very much oblige,

Yours very truly, BOSTON.

[We are human enough to rejoice mildly that this particular manufacturer seems likely to lose a customer by reason of his own irrational business methods.—EDS. AMERICAN ARCHITECT.]



FIRE-RESISTING GLASS.—An interesting test of fire-resisting materials and construction was recently carried out in Berlin, under the auspices of the fire brigade and the insurance companies of the city. The idea of the tests was mooted as far back as 1889; but there was considerable difficulty in arranging for a series of "fires," which were intended to be as "natural" as possible, and yet should not be dangerous. Finally, the municipality gave the experimenters the use of an old warehouse for their purpose; and this building, having been fitted up to represent various types of fire-resisting structures, was duly set on fire. Care was taken to subject the exhibits to the temperatures, irregularities of heating, sudden shocks by falling weights or jets of water, etc., which generally occur at conflagrations; and it was found possible to take fairly exact observations. Among the most satisfactory results obtained were with the fire-resisting glass made by Messrs. Siemens, of Dresden. The assessors declare it to be most suitable for any skylight or window necessary in a division between separate risks, as it will resist a temperature of 1,300° C. for half an hour and more, bearing all manner of shocks and strains without suffering appreciable damage. Care is required in fixing this glass, however, as the iron frames generally used for the purpose buckle under heat, and show, between the glass and iron, openings through which flame can pass. Some of the so-called fireproof floors made of iron girders and concrete came to speedy grief in these tests; while iron and brick floors stood very well, as did the "Monier" construction (as to which reference has been already made in the *Journal*). As regards fireproof doors, nothing stood better than double oak covered with thin sheet-iron, between which and the wood there should be a layer of asbestos cloth. Seeing how many warehouse fires are propagated through windows, the assessors attach great importance to their demonstration of the capability of Siemens glass for withstanding flame.—*Scientific American*.

ELEVATING THE SAINTS IN ST. PAUL'S.—A curious sight may be witnessed any day in St. Paul's Cathedral just now, namely, the preparations for hoisting into position the colossal statues of saints and fathers of the church which are being placed in the eight niches round the drum of the dome in the interior of the church. To raise a block of stone weighing over a ton to a height of 135 feet above the pavement is no easy matter. Perilous-looking platforms resting on strong joists and supported by scaffolding poles at daring angles, which are marvels of skilful construction, are erected across a narrow segment of the dome alongside the niche to be filled. The saint, divided into three pieces, each weighing over a ton, and carefully padded round to guard against any injury to the walls or railing of the Whispering Gallery as he ascends, is attached to a pulley composed of several thicknesses of rope, which, passing through a window high up in the dome, is raised or lowered by a windlass worked by four men in the stone gallery outside. St. Chrysostom was safely landed in his aerial niche about a year ago. St. Basil is already in position, but awaits the finishing touches of the sculptor, Mr. Woodington. St. Augustine of Hippo is now going up in sections, and a fourth father or doctor of the church is expected aloft before Christmas. The saints are riveted into the wall behind by iron clamps or stanchions, so that, as Canon Scott Holland told the workers and voluntary assistants of St. Paul's at their annual dinner on St. Paul's Day, nothing short of an earthquake could dislodge them.—*Westminster Gazette*.

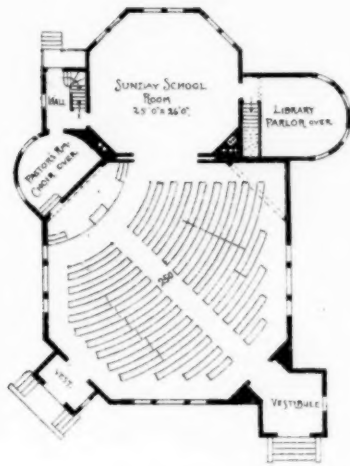


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