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THE abominable riots in New York last week which have once more convinced the citizens of that town that its police-force is an organ for and of evil rather than a useful instrument of civilization, have amongst other things turned attention sharply to the manner in which colored citizens at the North are deprived of their rights even when conditions are peaceful and favorable. Recently the pastor of a colored society, in New Orleans, who was speaking indignantly of the manner in which one of his race had just been treated during the New Orleans riots, said that prejudice against the colored man existed in the North as well as in the South, and asserted that until he moved from the North to the Southern States he never saw a black mason building a wall, or a black carpenter building a house, because if colored men tried to work at those trades in the North the white mechanics would strike against them. How far colored men are really excluded from the practice of the building-trades we do not know, but we happen to know that colored young women capable of practising trades are very cruelly driven out of such employment by the white women amongst whom they seek to work, and are only permitted to earn a living as house-servants, because, as yet, the cooks and the nurses have not formed an effective union. So it seems not unlikely that, in certain towns at least, colored mechanics are excluded from the labor unions, and if to the disability of being a non-union mechanic, the unfortunate seeker for the means of earning an honest living has to add the disadvantage of being born neither in Ireland nor in Italy, but simply a free American citizen whose skin contains only a little darker pigment than in that of the sons of sunny Italy, he has not much hope of raising himself above the grade of the hopelessly unintelligent.

THE Senate of the University of New York has submitted at length a list containing two hundred and thirty-four names from which the jury is to select one hundred names to fill the first quota to be enrolled on the tablets of the Hall of Fame of the University. A list of men famous in divers directions selected with the care that has been devoted to this is very interesting in itself, but we fancy he will be learned indeed in American biography who can prove even a shadowy knowledge of four-fifths of the men named, and yet, as this is the first list submitted to the jury, it probably contains the most obvious names that should be enrolled under the several categories. In the two sections that are devoted to the fine-arts and constructive sciences, which most immediately interest us, we find it rather curious that under the heading "Musicians, Painters and Sculptors," Lowell Mason's is the only one of the seven that stands to the credit of Music. Painting is illustrated by

John Singleton Copley, Gilbert Stuart, and W. M. Hunt in the order named, while Thomas Crawford, Hiram Powers, and W. H. Rinehart stand for Sculpture. In the sixteen names under the heading "Engineers and Architects," it is not surprising to find that architects are represented only by H. H. Richardson, Charles Bulfinch, and B. H. Latrobe. It is curious to note how amongst the engineers named the majority seem to have made their fame in connection with canal-work. The list is catholic, however, as it includes mechanical as well as civil, hydraulic, and sanitary engineers.

THE willingness to spend one's own money for the public good is about as reliable a proof of good-citizenship as could be desired. Such a proof has just been given by the Merchants' Association of New York, who, in the public interest and to prevent the consummation of the Ramapo water steal, have been investigating in a very thorough way the conditions which affect the water-supply of the metropolis, and are now distributing the results of their inquiries in the form of a printed report of over six hundred pages. As the investigations and the preparation of the report have required the expenditure of thirty-three thousand dollars, private money, the good faith of the makers of the investigation, who can derive no individual profit from it, would seem to be sufficiently guaranteed. Contrasting the Ramapo scheme with that of municipal ownership of the water-supply, it shows that in the later case there must be until 1918 an annual deficit which would dwindle from nearly two million dollars in 1906, the year of the opening of the proposed municipal supply, to about three hundred thousand dollars in 1917. The plant would then begin to return an income to the city which between 1918 and 1945—the year which would terminate private ownership under the Ramapo scheme—would amount to the appreciable sum of forty-eight million dollars. It points out how, during the existence of the Ramapo contract, it would almost inevitably happen that all future extensions of the water-supply system would fall into the hands of the Ramapo managers, and as a city supply must be constantly enlarged with the city's growth, this would but perpetuate the hold of the Ramapo people on the public and private purse of the citizens. Finally, it has carefully investigated the possible sources of additional water-supply and decides that the advantages of a pumped and filtered supply from the Hudson River itself above Poughkeepsie outweighs many times the advantages of any other source of supply. Finally, it declares that there is an immediate need that steps should at once be taken to provide for an extension of the city's water-supply.

EVERY one who inhabits a growing town must have become familiar with the fact that one of the most difficult problems in municipal administration is how to keep school-house accommodation on a parity with the increasing supply of school-children, which grows by geometrical rather than arithmetical ratio. Whenever a town has to build a new school-house there is always a party in the town, or in the school-committee, far-sighted enough to advocate building a structure much too large for immediate needs, but the opponents of such a course, who see only the undesirability of paying taxes on property which is for the moment idle, usually carry the day, and the result is that growing towns are perpetually building new school-houses and find that they have to pay the avoidable cost of entire new outer-walls, roofs, and substructure, and perceive too late that a true economy would have been effected by building much larger school-houses in the first place. Boston, New York and Philadelphia, as ports of entry for immigrants, are probably more troubled by the school-house question than other cities. The growth of population in these cities is largely an immigrant growth, and the immigrant is prolific and, moreover, his coming is a matter of uncertainty and cannot be provided for in advance, so that a good immigrant season is pretty sure to cause a great overcrowding of the school-houses. Boston, which in the last decade has spent some twenty-two million dollars on the support alone of its school-system, is just now almost as much troubled because of lack of accommodation as New York is, and as it is hopeless to undertake to provide regulation school-houses in time, it proposes to experiment with the portable school-house, and ten of these one-story buildings,

twenty-five by thirty-five feet, are to be built at once. How the building-law which requires that school-houses shall be "first class" or fireproof buildings is to be evaded we do not know, nor yet how it will be possible to build wooden buildings within the fire-limits, but, doubtless, the City Council has a right to make special exemption for these small and temporary buildings, and the fact that each is intended to accommodate only sixty pupils, and on the ground-floor at that, will not make the breach of the "first class" regulation a very grave risk.

IT is doubtful whether a trade combination could give better proof of the inherent wickedness of its irresponsibility and its wilful ignoring of the ordinary laws that govern supply and demand than by its sudden announcement of a decline in the price of structural steel last week. Finding that this exorbitant rate to which the price of structural metal-work had been advanced by them had practically put a stop to building undertakings throughout the country, the iron and steel magnates, so-called, have been differing amongst themselves for some weeks past and individual concerns have not hesitated to cut rates, with the result that prices have been slowly declining for some time. But there was too much uncertainty about the prices and as to what particular mills would accord them for these early shadings of price to bring much relief to contractors, owners, and architects. The present large cut of eight dollars per ton is a welcome relief, of course, but it is not half as advantageous to the building-community, and probably to the mills themselves, as a decline of four dollars would have been eight or ten weeks ago. In all probability the present favorable situation finds contractors in such shape financially that many of them cannot take advantage of it, their resources being already strained by the endeavor to finish their contracts with material they have already agreed to take at the higher rates. In all probability the prices will be manipulated after the manner of that in vogue in department-stores, where a large lowering of prices is advertised largely for a few days and then, just as the shopping public has learned of this reduction and is coming to the establishment with a rush, the prices are marked up overnight fifty or a hundred per cent. Many architects will now be instructed to again take up abandoned schemes and get them ready for letting the contracts, but it is ten chances to one that before most of them can be made ready the price of structural steel will have been moved up again and the bargain-seeking owners will have to buy at the higher figure or once more disappoint their architects by sending in another stop order. The methods of trade combinations are essentially gambling methods.

WE have so often called attention to the abuses that follow from the skilful extraction of half-truths from so-called experts by the prosecution or the defence in a jury trial, and have so many times urged the advantage of having expert testimony in such trials given by official experts acting as *amici curiæ* that it is particularly pleasant to record the spread of the belief that the latter is the only method proper to follow, and note the steps actually taken to bring about the introduction of the practice. The Pennsylvania Bar Association is the latest body to declare itself in favor of the official expert, but, as it is a conservative body, it is not yet ready to advocate the compulsory employment of official experts, and only goes so far as to advise their employment when both prosecution and defence will consent to such employment. The abuses of the present system, whereby the expert, even if he do not consciously feel that he must give only such evidence as is favorable to the side which employs him, is so questioned by his employer as to extract only favoring answers, are too well known to need description again. As the official expert is to be called as *amicus curiæ*, we suppose the examination-in-chief will be conducted by the court itself, and the opposing counsel will only be allowed to cross-examine, a course which ought to place before the jury the real rights of the case as clearly as imperfect human intelligence is capable of placing them.

THE law presumes that every man is conversant with its precepts and conditions, and will hold no man blameless for its violation, and though this is right and proper, it often visits severe penalties on individually guiltless and irresponsible persons. Perhaps no class suffers more than do owners and improvers of real-estate, whose pocket-books are, by the nature of the case, temporarily entrusted to the guardianship of archi-

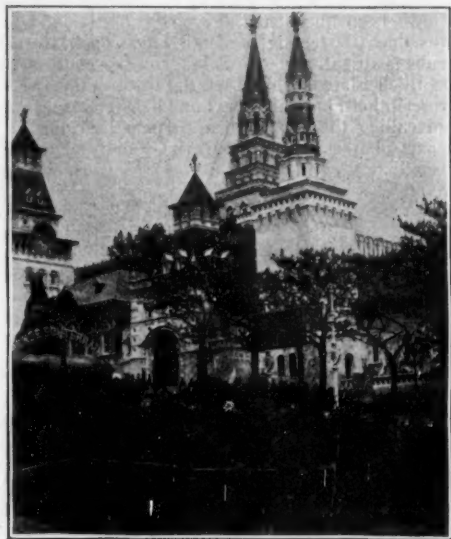
tecs and builders, and as most men do not build many times in a lifetime, the building-owner is obliged to trust to the honor and capacity of men of whose standards in those respects he has no personal knowledge, and yet he stands to be mulcted in pecuniary damages for their failings. One of the latest instances of a severe loss inflicted on a building-owner came about through delay in the delivery of the first-floor beams for a five-story apartment-house on Amsterdam Avenue, New York, which led to the contractor running up his walls in advance of his beams, these being inserted later. The long walls, evidently none too carefully built, and lacking their natural ties, deflected out of the perpendicular, as might have been expected. The attention of an inspector being attracted, the Department of Buildings remonstrated, but, on hearing the explanation, allowed the owner to remedy the defect if he could. The remedy applied, however, did but, in the eyes of the Department, increase the disease, and he was told his building, already enclosed, must be torn down. The owner naturally sought to defend himself by securing an injunction, but its virtues only lasted a day or two against the representations of the Department, and the unfortunate owner must submit to the loss involved in tearing down and rebuilding; a total loss, very possibly, as the bankruptcy court will probably give relief to the builder.

FORCED at this point to retire to the sick-bed, the writer hopes this fact will explain and palliate the short-comings of the present and, perhaps, another issue.

THE PROFITABLE DISPOSAL OF SEWAGE. — In a letter published in the *Times* recently Mr. G. V. Poore gives some particulars of the results obtained in reclaiming some 1,100 acres of Carrington Moss by the deposit thereon of pail-closet refuse from Manchester. The Carrington estate was purchased by the Corporation of Manchester in 1886, and at that date most of it was let at a rental of 1s. per acre for sporting purposes. The land was, in fact, a peat moss having an average depth of 85 feet, and in its then state was useless for agricultural purposes. By dumping there the night-soil and other refuse from the 80,000 houses in the city which are unprovided with water-closets, the value of this land has in thirteen years been so increased that it is now let to good tenants at the average rental of £2 per acre. These tenants further take from the Corporation 25,000 tons of manurial matter, for which they pay the Corporation at the rate of 1s. 3d. per ton. The estate is not a sewage-farm, which experience shows are pretty generally unprofitable, since the ground soon gets so water-logged as to be suited to the raising of but few crops of a special character. The refuse dumped on the Carrington estate has been dry, and has been spread and ploughed in after the usual way. Much of the estate is now in the hands of nurserymen and market-gardeners, and the experiment has proved so successful that the Corporation are extending it to 2,500 acres of Chat Moss. But few towns can boast of running any part of their sewage or garbage disposal works at a profit; but where conditions similar to those in Manchester prevail, it would seem that the results attained at Carrington are well worthy of consideration. The plan, cannot, however, be taken as at all generally applicable. Most progressive towns are provided with water-closets, and repeated failures have shown that it is then impossible to profitably apply the sewage to agricultural purposes. Even in cases where water-closets are the exception, the instances in which suitable land can be cheaply obtained for the repetition of the Manchester experiment must be rare, and probably even in that instance, the balance-sheet would have made a much less favorable showing were it not that by using the ship-canal the cost of transport has been kept down to a very low figure. Even apart from this, it may be a question whether most citizens, if given a choice, would not rather dispose of their sewage at a loss, and have the convenience and security of a water-closet system, rather than put up with the drawbacks attached to all other methods of removing faecal matter, even though these methods might promise a reduction in the rates. — *Engineering*.

GLAZING OIL-PAINTINGS. — What is the life of a picture? A good many years ago a member of the commission who was to study the question of the preservation of pictures, and that member was Disraeli, said: "Are you aware that there was a commission appointed by the French Government during the time of Napoleon to inquire into the duration of pictures, and that they reported to the Emperor Napoleon that no picture would last above 500 years?" In *The Nineteenth Century* the matter of covering a picture with glass is discussed. At first it was universally decried. It was called clapping "a window in front of nature." In 1850 Mr. William Russell advised that the most valuable pictures, the property of the nation, should be covered with glass. Certain scientific men were totally opposed to the use of glass. It was declared that the confined air would become superheated with even an ordinary rise of temperature, and that the paint would crack and the varnish scale off. Artists were at first against glass, believing that the details of a picture would be in a measure lost. Faraday was the strongest advocate of glass. In the Dresden Gallery the use of glass, it was shown, had been found advantageous. Finally the glazing of the English national pictures was decided upon, and there are to-day something like 1,700 pictures under glass. It is likely that the London atmosphere is the worst in the world, as far as the preservation of a picture goes. It is not so much the dampness as the presence of soot. — *N. Y. Times*.

RAPHAEL, MICHAEL ANGELO AND LEONARDO. — I.



Russian-Asia Building, Paris. Meltzer, Architect.

THE idea of enclosing in the same frame figures of the three giants of the Italian Renaissance is not one particularly appropriate to dilettanteism and need not be a simple academic pastime. On the contrary, it is easy to draw from this *rapprochement* useful inferences and hints likely to throw new light on the tendencies which the Renaissance obeyed, on the influences which it underwent, upon the historical causes which rendered it possible, and on the varied paths which it followed; it is equally possible to deduce hitherto unexpressed valuations of the difference of temperaments of these three masters, whose work dominates the century which they made illustrious by their genius.

First let us seek to know what was this Renaissance of which they were the most eloquent interpreters. Above all, it personified the revenge of Classic beauty, of the gay and genial spirit of paganism, and of smiling and joyous Mythology upon the dull and funereal tone of the Middle Ages. Fatigued by the tragic struggle of those sombre centuries which filled the interval between the fall of the Roman Empire and the pontificate of Leo X, centuries of fanaticism and barbarism, glutted with blood, saturated with wealth, the Roman religion, triumphant and arrived at the apogee of its power, at length thinks of enjoying its victory, profiting by its opulence to display its glory in magnificent monuments. In the intoxication of success, in the feeling of security which its acquired power gives it, the Church has not felt the danger of the Reformation, which nevertheless has brought it to the brink of ruin, and it has seen detached from itself, if not without noticing it, at least without too much regretting it, those crowds whom the revolt of Luther have drawn away from the Catholic Communion; and it is only at a later time, when heresy threatens to extend everywhere, that the Inquisition will once more light its fires, and will think of extirpating it by punishment and terror, and that the Court of Rome, in alarm, will call the secular States to the aid of the menaced faith, and will inaugurate the policy which rendered possible the massacre of St. Bartholomew, the revocation of the Edict of Nantes and the "dragonnades." When the noise of the controversies stirred up in Germany by the preachings of the rebellious monk begins to reach Rome, the Pope shrugs his shoulders: these, according to him, are only monkish quarrels which cannot trouble the quiet of the omnipotent theocracy. Meanwhile, the national genius takes its spring, and Art answers with admirable eagerness to the solicitations of the faith which demands an apotheosis; everywhere arise monuments which must bear witness to the grandeur of the victorious religion; nevertheless, so long as it is delivered over to itself, so long as it has not yet found the source of inspiration whence shall jet the true Renaissance, Italian art remains stationary and in vain seeks to find its way. It crystallizes itself in Byzantine formulas imported from decadent Greece, it remains incomplete, like the larva which still awaits the last ray of the sun to effect its metamorphosis. Before the discovery of the remains of Greek antiquity, it exhausts itself in sterile researches, and, even afterwards, it remains everywhere powerless where the gleam of this discovery does not penetrate. Perugino, the master of Raphael, and the chief of the Umbrian school, of which the principal attributes are grace and sweetness, is still cold, and his Madonnas are stiff and lacking in animation: the secret of true beauty is unknown to him.

Italian Renaissance dates from the moment when the Grecian fragments were found at Pisa, and the sap began to ascend only on the day when the germ of pagan beauty became grafted on the branches of budding Italian art. From this moment the influence of paganism will make itself felt everywhere. In sculpture we instantly find traces of it in the "Faune," which was the maiden work of Michael Angelo, the faune being one of the subjects of Greek

mythology most frequently selected by an artist; in painting, also, it sparkles a little everywhere, and especially in the mythological pages which figure in the midst of the religious themes which Michael Angelo and Raphael chose for the ornamenting of the greatest monument of the Catholic world. Sanzio feels his genius in the full volume of its plenitude only after having contemplated the "Three Graces" at Sienna, and this symbol so struck him, he was so vividly impressed by it, that he returns thither often with marked willingness and loves to do so repeatedly. The pagan classicism gains the upper hand: it has such irresistible traits, invincible seductions, mysterious garbs, intoxicating charms, such subjugating perfections. It pierces through every effort. In the full effervescence of religious feeling, in the fervor and ecstasy of triumphant faith, sweet and consoling, even there where the single-hearted artist endeavors to express a feeling of devotion, to paint the smiling goodness of the "Madonna," to represent the tragedy of the "Passion," to describe the tragic terrors of the "Last Judgment," there often starts up the radiant exuberance of pagan beauty, luxury, pomp, nudity, passion, the splendors of pagan art; so much so that Pope Adrian VI, that poor monk from Utrecht, summoned by a strange caprice of the Conclave to succeed Leo X, feels himself completely expatriated on his arrival, finding himself amidst this irruption of worldly figures, this collection of paintings of which the profane style is aggravated by the profuse use of gilding; and, at the sight of these saints with muscles like gladiators, these Virgins whose holy maternity preserves under the too-abundant flesh a penetrating perfume of sensuality, and these prophets who have every appearance of flirting with the sibyls, his monastic simplicity is disconcerted, and he cries out in his fright, "*Sunt idola diabolice!*"

Paganism runs through every vein of the Renaissance, which, born at Pisa with the discovery of the Greek bas-reliefs, exhales, five centuries afterwards, its last breath on the lips of the "Venus" of Canova. Michael Angelo and Raphael drank at this source; Leonardo da Vinci alone passed beside it without wetting his lips in it; he felt its freshness, he admired its purity, but he passed by on the other side. His artistic dream carried him towards another source of inspiration, more fruitful and more human.

Michael Angelo was born in 1475 near Arezzo, in that smiling country of the Casentino which witnessed the birth of so many great men; we will not place much stress upon the question of knowing whether through his connection with the family of the Counts of Canossa he was in very truth a descendant from the royal stem; that would add nothing to his glory. We incline, rather, to take the negative view. We have seen bankers and wool-merchants, like the Medicis, attain to a degree of power that was almost royal; we have rarely seen princes creating *chefs d'œuvre*, unless one is willing to consider as such the verses which Frederic the Great of Prussia sent to Voltaire. The infancy of Buonarrotti flowed easily and happily by, although his father was not rich. He at first studied grammar and poetry, then, his artistic vocation declaring itself in an imperative manner, so to speak, his father, who considered this vocation as a derogation, decided, though against his will, to apprentice him to Domenico Ghirlandajo, the painter of the magnificent frescos in Santa Maria Novella; he was then fourteen years old. In a very short time he knew more than his master, and, shortly after, entered the service of Lorenzo de' Medici, who wished to found a school of sculpture capable of continuing the brilliant traditions of Donatello and Ghiberti, not long dead. To this end, Lorenzo had collected in the gardens of St. Mark's fragments and antique statues. And here it was that Michael Angelo began to live in the familiarity of some of the most beautiful models of Classic beauty. It was at this time that he modelled the famous "Faun's Head."

With Buonarrotti began the third great group of the Renaissance, the first of which was formed by Dante, Giotto and Orcagna. In following out the transformations of art through generations which at a short distance followed one another, we can very clearly detect the influence which the awakening of paganism exercised on Italian genius. The first group, which proceeded directly from the Middle Ages, still preserves the sorrowful and severe character of that epoch. Dante's poem is a sombre tragedy, and the works of Giotto and Orcagna are tragedies of painting, tragedies whose ferocious and primitive naturalness is pushed to the farthest extreme; the second group, formed by Masaccio, Donatello, Brunelleschi, Ghiberti and Petrarca, is already more lovable; its creations have more of grace and less of melancholy. Petrarca is an Epicurean poet who sings deliciously of love on the banks of rivulets and under the shade of laurel trees; Masaccio, in the frescos of Sta. Maria del Carmine, begins to deprive painting of its archaic prejudices, and courageously attacks the nude, rehabilitating the flesh, stigmatized and condemned by the superstitions of the preceding centuries — the human body, which had been stricken with decay by Catholic contrition, and which, under the naves of the churches, reappears triumphant, purified by means of the sublimity of expression given it by the grand interpreters of art.

On his side, Brunelleschi, at Santa Maria del Fiore, was fixing the formula of Italian architecture, in which the Gothic style, imported by the Germans, is no more than the skeleton, the modified framework, embellished, refined, rendered appropriate to the climate, subjected to the laws of a genius of greater delicacy, and upon which Italian art embroiders original creations, causing its own dream to blossom and bloom, thus creating a national style. Michael Angelo

and Raphael were the two chiefs of the last group by which Classicism was to attain its full expansion in Christian art, and after which the mists of the decadence began to appear.

Michael Angelo was treated with the greatest benevolence by Lorenzo de' Medici, who knew how to gild the chains in which he had imprisoned the liberty of the Florentines and desired to surround his absolute power with those amiable and seductive forms which alone could make it endurable by a corrupt democracy. In the midst of his abasement, the democratic Florentine sought to preserve the appearance of his pride, and could only abdicate into the hands of a man capable of impressing on his authority a character of intellectual grandeur and Athenian mildness. A harsh and narrow-minded tyranny, analogous to that of Bentivoglio at Bologna, or to that of the Sforzas at Milan, it was impossible to establish on the ruins of a republic which, like that of Florence, had exercised a real sovereignty and had habituated the people to believe themselves masters of their own destinies, even when they had ceased to be so. It is considered one of the merits of Louis XIV to have once allowed Molière to sit at his table: two centuries before, Michael Angelo, still young, and whose glory was hardly yet born, sat almost every day at Lorenzo's table without being subjected to the rules of ceremony, which placed the guests, in relation to their host, in a position of inferiority, almost servitude, a fashion which was followed at the court of the "great king."

Michael Angelo was a slow worker, but patient and tireless. Everywhere he went he left traces of his laborious fecundity. The real monuments of his genius are the tomb of Julius II—which was the nightmare of his existence, and has remained unfinished—the Sistine chapel, the tomb of the Medici; it is particularly in these works that glows the full power of his imagination and is manifested his knowledge and technical mastery. In the other works which he left we can discover the influence which Classic studies exerted on his mind. Living in an atmosphere whose secret springs conspired to turn to the profit of religion all artistic manifestations, he withdraws himself from these occult forces, and his mind returns with persistence towards subjects which permit him to enter into communion with pagan antiquity; the "Centaur," "Sleeping Cupid," "Bacchus," "Torso of Hercules," "Adonis," "The Fall of Phaeton," are so many acts of revolt which, under pretence of weariness and dilettanteism, he opposes to the tyranny which religious fanaticism sought to exercise over the Renaissance. But it is especially in the works which are the milestones of his glorious career that we can perceive the persistence with which his talent submitted to the charm of Classic reminiscences and forced itself to subjugate allegories and Catholic legends to the rules of antique beauty and mythological conceptions, even though these works were intended to ornament the most beautiful monuments of Catholicism. In the tomb of Julius II, the statue of Moses has an Olympian attitude and the fierce severity of a pagan divinity: one reads in the features the inspiration of the prophet and the rude inflexibility of the law-giver; but one can also see there the serene grandeur of Olympian Zeus.

The artists of the first generation became subject without revolt to the control of that feeling of sadness and discouragement which flowed from the faith such as it was understood in the Middle Ages, simply because contact with Greek antiquity was denied to them. Pre-occupation with the drama beyond the grave rendered their aspirations sombre, and impressed upon their works a frightfully tragic character; see, for example, the Campo Santo at Pisa. Michael Angelo, on the contrary, never separated the feeling of force from that of grace in his subjects which lent themselves to such conjunction; he seeks the beautiful, Greek beauty before all, and it is he who first, in his "Pieta," dares to give to the mother of Jesus Christ the features of a pure and virginal youth. The theological subtleties by the aid of which he was to explain this new conception of the drama of the Cross are pretexts which do not suffice to justify the real motive which impelled him, that is to say, his determination to bestow grace and seductiveness on the mysteries of religion, a determination which could, after all, be in him only an instinct, a tendency, of the secret source of which he was himself ignorant. The Virgin of the "Pieta" at Bruges and that of the "Pieta" in the sacristy of St. Peter's less resemble the Mother of God, who is sacrificing herself for her young son, than a Greek Niobe who has drawn upon her knees the last of her sons stricken down by the arrows of Diana: in the same way the "David" less resembles a biblical personage than an Apollo.

Before the tombs of the Medici at Florence, the effect of which is so grandiose and impressive, one experiences only feelings that are profoundly human. Mysticism has no part in the conception of this mausoleum, in which Michael Angelo knew was buried the last hopes of Florentine patriotism, and from which exhales a feeling of poignant grief and bitter hopelessness which has nothing of religious sentiment about it. The figure of the Virgin, which the master has sculptured in one corner, finds herself there expatriated, as it were, and wears an air as if altogether astonished at finding herself there. She evidently feels that she is out of place. The allegorical females which represent "Night" and the "Aurora" could never have knelt down before an altar, could never have bowed the forehead before a tabernacle, and are ignorant of the transports of prayer; they are not even Italian women, they are Greeks: Greek in the nobility of their features, Greek in their beauty and the healthfulness of their bodies, and in the strength of their muscles. The two Medici are warriors of antiquity; one of them has a bushy beard, and the other

the harsh and energetic features of the Homeric heroes. The whole air of the monument is clearly worldly and profane; when, in the half-light which bathes these statues, in the solitude which surrounds them, they have been questioned, they have been found living, and one perceives that the feeling of death which ought to rule amidst all these tombs is absent, and one thinks, on the contrary, upon the struggles of which Florence has been the theatre, upon the factional wars, on proscriptions, on massacres; one hears, as it were, the noise of the tocsin calling the people to arms, one sees unrolling before him the drama of Florentine history, the short and tragic alternations between liberty and tyranny, at the end of which the republic falls under the domination of the Medici, now corrupt and degenerate, until the tocsin becomes the funeral knell which accompanies the obsequies of democracy wrapped in the rich shroud which Tuscan genius has embellished, and in which, thanks to the deceitful brilliancy which surrounds its mourning, it can still, like the decayed Athenian democracy, be cradled in the illusion of life and liberty. Here we are not in the presence of the Christian sanctuary, out of which should arise the feeling of the triumphs and reparations beyond the grave; the master wished to present a political and human tragedy, from which all hope of revenge and consolation has been banished with cruel intention, and of which the bloody and sorrowful pages could not have been translated by conventional processes and the forcibly limited canons of religious art. To interpret all the sufferings and all the bitterness with which the soul of Michael Angelo was ulcerated, there was necessary this style, freed from all mystic preoccupation, and this is why, out of all the monuments produced by the Renaissance, the tomb of the Medici is perhaps the most pagan and the least pious.

Shall we, by chance, find in the Sistine Chapel the religious feeling which is lacking from the tomb of the Medici? Here, everything should contribute to give free swing to that inspiration, if the genius of Michael Angelo were capable of conceiving it disengaged from the Classic predilection which he so forcibly affirmed elsewhere. This chapel was destined for the celebration of the most august ceremonies of the Christian rite; the *élite* of the clergy was called to be seated here, surrounded by all the magnificence of the cult, and presided over by the spiritual chief of the Catholic confession; it ought to have been the holy of holies, a place designated for bringing the prayer of the high priest as directly as possible into communion with heaven. At the most, it was begun at a time when the soul of the master had not yet been chafed by the triumph of tyranny over liberty, by the irrecoverable defeat of popular right and democratic justice. One understands the feeling of fierce grief which found expression in the tomb of the Medici, when one thinks that this monument was executed by Michael Angelo under the reign of a vulgar and insignificant tyrant, of that Alessandro de' Medici who himself represented the victory of vice and despotism, and of whom he, Michael Angelo, as the very acme of humiliation, was almost a prisoner: he worked upon his task like a slave over whose head is always suspended the master's sword. God had betrayed the cause of the people and of liberty; this can explain the frame of mind of the citizen and the cry of dumb revolt which breathes from this tomb. But the Sistine Chapel was begun by Michael Angelo when his genius was in the fulness of its youth and bloom: the "Last Judgment" is like the last page of a book written too late, when the thought, ripened by harsh tests, broken by the most cruel deceptions, had no longer either spontaneity, simplicity, happy confidence, optimistic abandon, or the joyous and poetic vision of early days. And yet the two parts of the work hold together, one feels that they are the product of the same brain, and that the same spirit conceived them and animated them. One finds, in the "Last Judgment," more force, more sureness, and more sustained effort after the grandiose, more marked and confirmed intention, but one sees at first glance that all the personages are issued from the same mould, which, with time, has become larger and more ample, in such fashion as to give the attitudes and swollen limbs of giants to creations which were, at first, only of colossal proportions. Now, there is not a single morsel of this prodigious work in which one does not always see sparkle, even through a religious theme, the violent desire of reëndowing art with the charm of Classic beauty, a careful regard for realism through the very exaggeration of real forms. This monument no more than the other is a Christian monument and the proof of it is that if Michael Angelo had lived before the birth of the Messiah, he would have conceived and executed it just as it is; it would have been enough to suppress the figure of the Christ, who dominates the scene of the Resurrection, and to change some of the secondary figures, which are, in fact, merely so much filling, for him to be able to assign to it a date earlier by fifteen centuries and to make it live in an epoch when Christianity was still, so far as humanity is concerned, only a grand hope.

This does not mean to say that Michael Angelo imitated the antique; on the contrary, he repudiated its formulas; he only cared for force, for exaggeration, for the terrible, while the Greeks held particularly to the feeling for measure, and grace and beauty. But at the same time that he withdraws himself from them and by the manner in which he interprets form, he withdraws himself from religious art by the energetic turbulence of realism, by the violence with which he sets about expressing his profoundly human ideas, imprisoning religious symbols in the contours of an essentially realistic technique, by the persistence with which he adheres to the practice of imprinting the character of the human tragedy upon all the features of the biblical and Christian legend, just as the Greeks

preferred to lend human feelings and human physiognomies to the Olympian gods; and it is precisely in this way that Michael Angelo, in withdrawing himself from religious art, came nearer again to Greek art, although he pretended not to follow its technique servilely, a technique affected, too delicate, too precise, too amiable to be agreeable to his haughty and headstrong temperament.

Thus, everywhere, in this colossal work, we see the traditions of paganism jumbled in with the mystic imaginings of Christianity; we see the heroes of the fables of mythology rubbing elbows with personages who controlled the Mosaic odyssey and peopled the New Testament; we see the sibyl seated by the side of the prophets, about scenes in which is enclosed the poem of the creation; we see Jeremiah chanting his despair at the side of the Persian woman, wearied out with his search for the inexplicable and unfindable; Ezekiel, vomiting forth his imprecations at the side of the Erythrean, impassive in his wisdom; Joel announcing the final judgment, Zechariah turning over the leaves of his book side by side with the Delphic sibyl, absorbed in strange visions; Isaiah presenting the joys of Redemption, side by side with the Cumæan sibyl, sun-burned and wrinkled, bowed down under the harsh stroke of fatality; Daniel, young and smiling, his spirit haunted by oracles, and Jonas, who reproaches God for having spared Ninevah, Jonas the implacable, side by side with the Libyan woman, whose intellectual forehead, gentle and contemplative eye, and smiling mouth, indicate his predestination for poetry.

From this brutal mixture exhales an impression, rises a feeling which is not Christian; we forget the drama of the Redemption, we are penetrated by the grandeur of all the traditions of humanity, of the legends of the origin of the world, of the poem of life whose pages are unrolled before our eyes, and we regard the most touching episodes, the most terrible and problematic traditions, the most terrifying remembrances, the most poetical hypotheses, all the errors, in a word, all the revelations, all the dreams, all the fictions which the imagination of man has conceived, as explaining life, its source, its reason and its end. All the religions, all the beliefs are here associated to compose the grand book in which are noted down the uncertainties, sufferings, visions, the illusions, the torments, and the searchings through which the spirit of humanity has passed in its endeavor to understand itself.

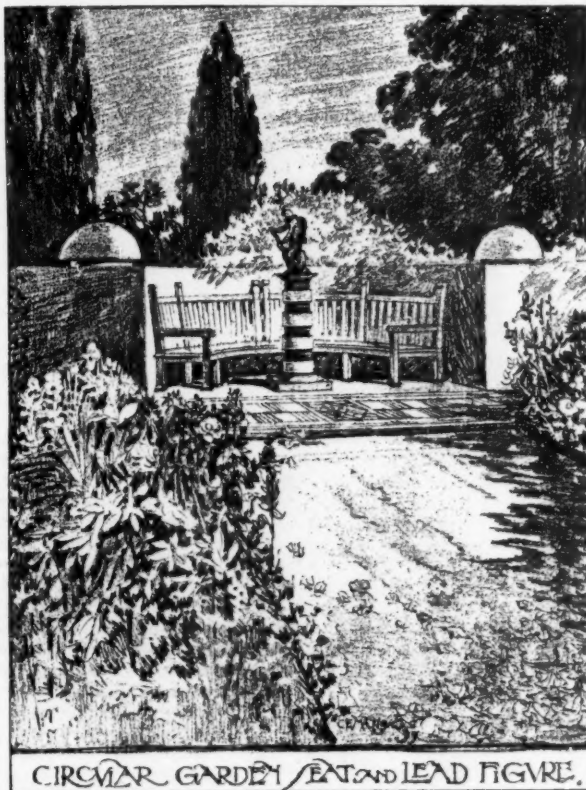
For the rest, an observer whose penetration is beyond question, M. Taine, who must often be cited when one reasons about this subject — for he is the Michael Angelo of the criticism of history and art, to which he brings the same feeling of sorrow, discouragement and cruel disheartenment — has already remarked and noted the spiritual relationship, so to call it, which exists between some of the personages in the Sistine Chapel and the types illustrated by Greek art. And his testimony is all the more convincing since he speaks of it from another point-of-view than ours, and in a manner wholly objective. "The Erythrean woman," he says, "is a Pallas more warlike and more haughty than her Athenian sister." Farther on, he adds: "Nature has produced nothing equal to it; it is in this way that she ought to have treated us; she could find here all the types; by the side of giants and heroes, virgins, adolescent youths, infants; this charming Eve, so bright and beautiful; this beautiful Delphic girl, the equal of a primitive nymph, who gazes out of eyes full of naive astonishment; all boys or girls of a colossal and military race, but in whom their age preserves the smile, the serenity, the simple joy, the grace of the Oceanides of Eschylus and the Nausicaa of Homer." Already, apropos of the symbolical women which ornament the tomb of the Medici, he had remarked that "they are of another blood than ours: a fallen Diana, captive in the hands of the barbarians, would have had such a figure and countenance." And later, before the "Last Judgment," seeing Christ terrible and vengeful, his scowling countenance looking out over the scene of the Resurrection like a breath of malediction, he calls him the "Christ of the thunderbolt, like Jupiter, who, in Homer, overthrows in the plain below, the Trojans and their chariots." Stendhall, long before Taine, had already written, in speaking of the two mothers placed among those whose salvation is assured, one of whom seems to bend towards her daughter to protect her: "There are only these two figures in the painting which are not transported by terror. This mother, in her attitude, somewhat recalls the Niobe." Let us not insist too much on the incident of Saint Blasius, who forgets the instruments of torture which weigh him down while he casts an indiscreet glance towards Saint Catherine, who is quite nude before him, and who turns herself about, startled and vexed. This is a scurrilous bit of by-play which would not be out of place in a Pompeian painting. They say it is the only slip of the sort that Michael Angelo is guilty of. Yes, but all things which issue from his gigantic imagination are violent and *outré*.

The lower regions, which forms one of the most noticeable portions of the "Last Judgment," is not a Christian hell, where the damned perpetually expiate their sins in the midst of flames; it is a pagan hell, where the condemned are called upon to live over again a life of sorrow and suffering. We find Charon, old and avaricious, guiding his bark over the black waves of Acheron, and long files of the condemned unroll themselves along the brink of the river, sombre as a mourning wreath, and so little does one place them that he imagines that, in order to overcome the avarice of the terrible boatman, they are going to offer him the money which charitable relations have slipped into their mouths at the moment

when they were placed in their tombs. One thinks for a moment of the "Last Judgment" by Signorelli, in the Cathedral of Orvieto, where the Styx flows, mournful and sluggish, through the midst of a people blasted by punishment, and we find here figures which we have already seen in Signorelli's fresco, which Michael Angelo had attentively studied. But it is better not to lay stress on certain resemblances or analogies which only prove that Michael Angelo, without plunging into plagiarism, knew how to take his profit where he could find it.

H. MEREU.

XYLOSOTE.



From Building News.

GREAT progress has been made in the past few years in wood impregnation, none of the methods, however, hitherto employed having altogether fulfilled their expectation.

The processes chiefly in use during the past 50 or 60 years — namely, Kyanising, Burnettising and Creosoting — or combinations and variations of these, each possessed some good feature, but all had nevertheless, faults. These faults are and have been well-known for many years, and careful studies were made to overcome them.

The most serious difficulty to master or overcome was to find means thoroughly and evenly to penetrate wood with the preservative agent, and then to keep it there. The slight penetration obtained by processes formerly in use preserved only a thin outer skin of the wood. If this skin was damaged or broken by driving a spike, or otherwise, it exposed the interior or untreated portion to moisture, etc., whilst again preventing its drying out quickly, and this caused rapid decay, as is the case with other systems.

In another process the preserving agent is chloride-of-zinc, mechanically deposited in the cells and sap ducts in the shape of crystals from a water solution. These crystals still remain soluble in water, and so are again as readily washed out by the action of rain or water, leaving the wood unprotected, proved by examinations of many railway-sleepers thus treated in Germany. After a few years, no traces of zinc were found. These are the two greatest faults of the processes that had heretofore given the best satisfaction.

Some 24 years ago a German engineer and architect, Mr. Fritz Hasselmann, undertook to solve this problem, and from all indications and experiment he has successfully done so. The result of his many years of study, experimenting and investigations is a process, patented in all countries, which consists in boiling the wood in a solution of metallic and mineral salts under limited pressure. The impregnating liquid consists of a solution of (about 45lb.) sulphates of copper and iron (crystallized together in the proportion of 20 per cent of copper to 80 per cent of iron) and alumina and "Kanit," a salt mined at Stassfurt, Germany, consisting chiefly of sulphate of potassa and magnesia and the chloride-of-magnesia.

The proportion of these salts used, the temperature to which the liquid is raised, the time of boiling, as well as the pressure generated, vary with the character, age, nature and general condition of the wood to be treated. It is a well-known and conceded fact that the

seen only by reflected light. The theory of Wiener as to the production of colored images with silver compounds does not hold good in regard to these colored images in bichromated gelatine because in this latter there are no silver layers, and Wiener's theory is based on the fact that the superimposed and reflecting layers of silver in the film are the cause of the colors. One must thus conclude that the colors are caused by reflection from fine films of unchanged gelatine.

The basis of the various indirect processes of color-photography is the production of three negatives by means of three different light-filters — three plates sensitive to red, yellow and blue. With these three negatives polychrome prints can be made in various ways.

De Rausonet proposed to make three negatives by means of yellow, blue and red filters, from these three lithographic stones, and to afterwards print in the appropriate colors by lithography. But this process did not give good results, for, though the negatives were taken through colored screens, the plates were not specially sensitive to the different colors. Dr. Hauron's process suffered from the same defect. He printed from his negatives in carbon, and transferred to plates of mica.

When Vogel invented color-sensitive plates, Drs. Albert and Obernetter were the first to succeed with tricolor reproduction.

But there are still many difficulties to overcome. The problem of the selection of the proper blue, yellow and red colors is one; these three colors must be such as shall give every other by admixture, a condition which at present cannot be fulfilled. As a matter of fact, the same three colors should be used both for sensitising and printing, a very practical difficulty, for most sensitisers are useless for printing purposes. Hence recourse must be had to those colors which lend themselves to the printer's art, and hence, although extremely beautiful reproductions are made, fac-simile representations of the originals are, at present, not possible. Still, there is no occasion to despair. Wonderful progress has already been made, thanks to the researches of, amongst others, Dr. Vogel, Baron Hübl, Frisch, Husnik, and Angerer. Before leaving photo-mechanical color processes, mention must be made of the synchromotypes of Turati, which are obtained by means of a press constructed by Turati himself, and with which only a single impression is required to give all the colors.

Amongst non-photo-mechanical processes, that of Ives led the way in viewing three images at one time. His apparatus simply consists of a lens through which the rays of light fall on one plate directly, and on two others by reflection. Each plate is provided with a suitable screen, and the positives thus printed from the negatives thus obtained are viewed against the glasses corresponding to the taking screens.

Vidal projects the three positives onto a screen. Nachet adopts Ives's arrangements, using stereoscopic apparatus. Selle makes three positives on collodion films, which he dyes red, blue and yellow respectively. They are then superimposed and projected.

Joly uses the idea of McDonough, taking a single view through a ruled screen of colored bands, red, green and blue, repeated across the plate. The result is a negative of very fine lines. A positive is made from this and placed in contact with a screen similar to that used in the camera, line to line.

Stockert's process possesses much of interest. From each of the negatives made, as for the tricolor process, a print is taken in gum-bichromate, the first for the yellow, the second for the red, and the third for blue. The three prints are made on the same paper, one on top of the others, sensitising twice more after the first printing.

Lumière similarly uses carbon. Hofmann has a similar process, in which the preparation of the negatives and registration of the prints is assisted by ingeniously devised apparatus.



ARCHITECTURAL LEAGUE OF AMERICA.

THE second monthly meeting of the Executive Board of the Architectural League of America was held August 7, 1900. There were present Joseph C. Llewellyn, *President*; Richard E. Schmidt, *Vice-President*; August C. Wilmanns, *Treasurer*; Emil Lorch, *Corresponding Secretary*; Hugh M. G. Garden, *Recording Secretary*; and Prof. Newton A. Wells and Robert C. Spencer, Jr., *Members of the Board*.

The chief business transacted was the assignment of the Standing Committees of the League as follows:—

Publicity and Promotion, The Chicago Architectural Club; *Ethics and Competition Code*, The Architectural League of New York; *Exhibition Circuit*, The Cleveland Architectural Club; *Foreign Exhibit*, The T-Square Club, Philadelphia; *Current Club Work*, The St. Louis Architectural Club.

The Committee on Education will be appointed at a later date. The monthly meeting of the Executive Board is held the first Tuesday of each month at five o'clock at 1218 Association Building, Chicago.

EMIL LORCH, *Corresponding Secretary*.



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

ADMINISTRATION BUILDING AND CHAPEL, DREW THEOLOGICAL SEMINARY, MADISON, N. J. MESSRS. W. B. BIGELOW & F. E. WALLIS, ARCHITECTS.

DETAILS OF ADMINISTRATION BUILDING: TWO PLATES.

[The following named illustrations may be found by reference to our advertising pages.]

CONVENT OF THE ORDER OF CHRIST, THOMAR, PORTUGAL.

This plate is copied from *Teknisk Tidskrift*.

HOTEL ON THE AVENUE D'JENA, PARIS. M. SCHOELLKOPF, ARCHITECT.

This plate is copied from *La Construction Moderne*.

A CORNER OF ST. MARK'S, VENICE. DRAWN BY W. CURTIS GREEN.

This plate is copied from *The Builder*.

[Additional Illustrations in the International Edition.]

PALATIAL RESIDENCE, BAMBERG, BAVARIA.

[Gelatine Print.]

THE imposing edifice, of which our plate shows the middle axis and two side axes of the central resault, was erected on Atte Judengasse, Bamberg, as a private residence for J. J. J. Boettinger, archivist of the bishopric, a wealthy and art-loving citizen of the old Bavarian city. It was completed in 1680. Johann Leonhard Dientzenhofer, a renowned architect of his age, the designer of Banz and Ebrach Abbeys, Pommersfelde Castle and other noted edifices, drew the plans for this city-residence, which in its richness might have served a princely occupant for his abode. The building shows distinctly the peculiar manner of its designer, who appears to have studied the Barocco structures of the Italian cities, for he imitated them with intelligence, although he would translate their dainty and delicate forms into heavier, sometimes almost clumsy shapes, as will be seen by a glance at the arched entrance and the frontals over the windows of the third story. By the general weightiness of his widely projecting cornices and of his profiles, Dientzenhofer reminds one of the work of another noted master of that epoch, the famous Balthasar Neumann, who created the magnificent staircase of Schloss Bruchl, on the Rhine,¹ the beautiful Schoenborn Mortuary Chapel² attached to the Cathedral, Wuerzburg, as well as numerous other fine structures, although in the general harmony and the well-balanced proportions of its parts to the whole of a façade, Dientzenhofer does not equal the last-named architect.

DESIGN FOR THE NEW SESSIONS HOUSE, OLD BAILEY: PERSPECTIVE VIEW. BY MR. F. T. BAGGALLAY, F. R. I. B. A.

"SHILLINGFORD HILL," BERKSHIRE: STAIRCASE WING. GEORGE HORNBLLOWER, F. R. I. B. A., ARCHITECT.

"SHILLINGFORD HILL," BERKSHIRE: THE LODGE. GEORGE HORNBLLOWER, F. R. I. B. A., ARCHITECT.

INTERIOR VIEW OF CHAPEL: ADMINISTRATION BUILDING, DREW THEOLOGICAL SEMINARY, MADISON, N. J. MESSRS. W. B. BIGELOW & F. E. WALLIS, ARCHITECTS.

DETAILS OF THE SAME.



LARGE POWER-INSTALLATION IN SWEDEN. — A large installation for transmission of power has been constructed at the Trangfors waterfall at Västmanland, Sweden. The Kolböck River there forms a waterfall of about thirty-three feet in height, and the installation comprises six quadruple turbines with horizontal shafts, each of 300 effective horsepower, with 250 revolutions per minute. The shafts are direct-coupled with the electric-generators. The whole river has been dammed, and

¹ See the *American Architect*, No. 1172, June 11, 1898.

² See the *American Architect*, No. 1191, October 22, 1898.

from its north side the water passes through a canal 1,130 feet long, 23 feet broad at bottom, with 8 feet depth of water, and sloping sides to the power-station, which is 113 feet long and 50 feet wide. The floor of the engine-room is 10 feet above the lower surface of the water, and the shafts of the turbines are located 4 feet above the floor. The turbines are radial, each with four wheels of 700 millimetres in diameter. The water is led to the turbines through three pipes of 8 feet in diameter. At the end of each tube is a small turbine for working the exciters, which are common for the two generators. These turbines also have horizontal axes, and are each of 25 effective horse-power with 500 revolutions per minute; they are otherwise of the same construction as the larger ones, and direct-coupled with the exciters. These turbines utilize from 60 to 80 per cent of the natural power. The current from all six generators is collected and afterwards conveyed to 18 transformers, where the tension is raised from 800 to 14,000 volts. The transmitting line consists of three 6.75-millimetre copper-wires, supported by porcelain insulators attached to poles placed at a distance of 106 feet; the poles are of a height making the minimum distance from the lowest wire to the ground 27 feet; lightning dischargers are placed at both ends of the line. On reaching the boundaries up the town of Vesteraas, a distance of some fourteen miles, the tension is again reduced through the same number and size of transformers, and distributed to the various consumers. The Northern Metal Company heads the list of the consumers, their new works requiring no less than nine hundred horse-power, divided among 14 motors, varying from three hundred to four hundred horse-power capacity. The motors are all inductive, and the large ones are principally used for the working of rolling-mills. Special and thoroughly practical appliances have been installed for facilitating the starting of these heavy motors. The works of the General Swedish Electric Company receive 300 horse-power, part of which current is used for direct driving of inductive motors, while another portion is transformed in portable transformers to work a large number of small motors. The power-station belongs to the Transfors Power Company. The water-power and the site of the station have been leased for a period of 50 years from the owners, the Hallstahammar Company, Limited. — *Engineering*.

THE HOTEL DE RAMBOUILLET.—Two blocks of granite in the Musée de Cluny, in Paris, are all that now remain of the famous Hôtel de Rambouillet, which flourished during the early part of the seventeenth century. Historians credit the Marquise de Rambouillet with having founded the first *salon* known in Paris. She had the gift of social organization, and, in addition, was herself an attractive woman, well-bred, talented, beautiful, and rich; above all, she was a good and virtuous woman, which in the days when profligacy and vice held sway at the French court is no small praise. Maître Charles d'Angennes, Marquise de Rambouillet and Pisani, was twenty-three years of age when he married Catherine de Vivonne, eleven years his junior. They had been married eighteen years before the Hôtel de Rambouillet was built. Here gathered the culture and wit of Paris, and serious discussions were carried on regarding all conceivable topics, from literature to war, from poetry and art to grammar and etymology. Besides being the first, it was undoubtedly the best of the many *salons* for which France has grown famous, and for more than forty years it held its place of social supremacy. The original mansion was the property of the Marquise's father, and was known as the Hôtel de Pisani. In 1600 it received the name by which it afterward became famous. The Marquise was her own architect, and made radical changes and improvements in the house from time to time. It was she who first dared to change the position of the staircase, which up to that time had occupied the best position in a house. She banished it to a corner and built it in a graceful and easily ascended curve. She also divided the large and dreary drawing-room into a series of smaller apartments upon the same floor, so that a guest, instead of being lost in a vast and oppressively majestic apartment, made his way to the hostess's presence through a succession of charming antechambers and cabinets. Her particular *salon* was tapestried in blue, and was to become famous both in her time and later as the "blue room," wherein became focussed that type of elegance and refinement which the Marquise and her friends represented. Malherbe, as was the custom of the day, rechristened the Marquise "Arthénice," an anagram of Catherine, and to be received in "the blue room of Arthénice" was an honor which almost conferred distinction. — *N. Y. Times*.

A NEW PROCESS OF WELDING PIPES.—At the congress of the Saxon associations of engineers and architects just held at Leipzig, says the Report of the United States Consul-General at Frankfurt, Max Schiemann, of Dresden, gave a lecture, accompanied by experiments, on "Goldschmidt Process for Obtaining High Temperatures and Its Practical Application." He compared this new process with those hitherto used for heating metals for welding. He showed by experiments the new method of welding cast-iron gas-pipes of from two to four inches in diameter, and demonstrated the very simple application of the process and its result. Briefly stated, it consists in mixing powdered aluminum with oxide-of-iron and adding to it an easily ignitable substance. This powder is put into a clay crucible and then ignited by means of a match. The resulting chemical action renders the mixture liquid, and this liquid is then poured around the place to be welded. The object assumes a white heat, and the welding is done by a very simple apparatus. The welded places show the same firmness as the original piece, and manifold application of the method is possible. In the near future it is proposed to weld the rails of the electric tramway at Dresden, which has already been done in other cities. The speaker welded rails before the audience, and the experiments were pronounced successful, especially on account of the simplicity of the process. It is considered an important discovery, and great hopes are entertained for it. — *Exchange*.

LARGE CHINESE FIGURE OF BUDDHA.—"Up country" from Hong-kong there is a big Buddhist monastery full of monks, or *bonzes*, as

the Chinese call them. And out in the open air before the monastery is its great attraction—an image of Buddha 150 feet in height. The image—it is perhaps not quite right to call it an idol, though to all but the most learned Buddhists the images of Gautama Buddha are practically idols—is what is known as a monolith. That is, it is cut out of a single block of a species of marble. Even the Egyptians seldom made their monolith gods more than half as high as this Chinese Buddha, which, as far as is yet known, holds the record for magnitude among idols. There are many patterns of Buddha images, some of them very ugly and fantastic, but the Chinese giant, notwithstanding its size, is one of the pleasantest and best molded. The face is bland and gentle, even cheerful. On the forehead is a carved ornament of rock-crystal some 3 feet in diameter. The scarf around the neck is remarkably like the stole of an Anglican clergyman. No awful sacrifices are offered upon the (relatively) small altar, which stands before the image—nothing but flowers or fruit. Japan possesses a colossal Buddha, but this is only 50 feet in height and under a temple roof, which apparently adds to its altitude. The Chinese Buddha suffers from being in the open, yet it is able to dwarf completely the figures of the worshippers; placed in Trafalgar Square, it would rival the Nelson column—and astonish the Londoners. — *London Express*.

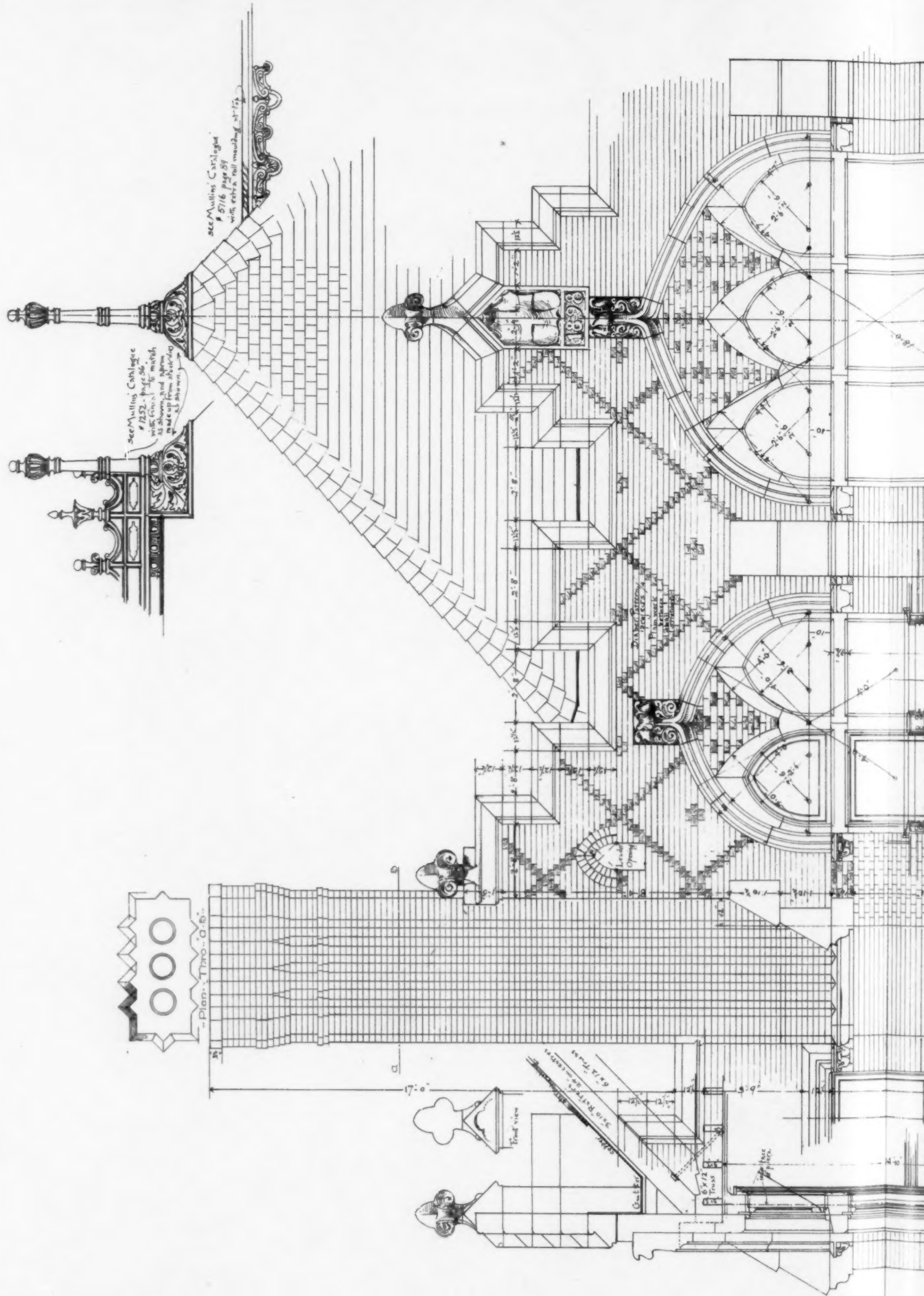
TREE-FELLING BY ELECTRICITY.—In one of the Western cities a large tree was so injured by a recent storm that it was decided to cut it down, and as it was too large to use a cross-cut saw, workmen were about to go at it with an axe, a most laborious process under the circumstances. An electrician proposed to have it cut down by electricity, and the suggestion was adopted. Connection was made with an arc-lamp circuit near the tree, but this was found to give too little current, and the next day a pair of No. 2 weather-proof wires were attached to the nearest underground feeder, and a 20-foot piece of No. 16 seven-strand galvanized-iron wire was inserted in the circuit, three of the strands being taken out to give air-space and allow the products of combustion to pass. The feeder was cut out of the regular circuit, and a small dynamo attached, with a series of signals arranged between the men at work on the tree and the dynamo-tender. The wire was then wound around the tree and the dynamo started. In a few minutes the wire began to get hot, and then the men began moving it back and forth around the tree, so that in an hour the cut was 18 inches deep. At the end of two hours and ten minutes the cut was so deep that the tree fell. The tree was an elm, and was 11 feet in circumference. — *Exchange*.

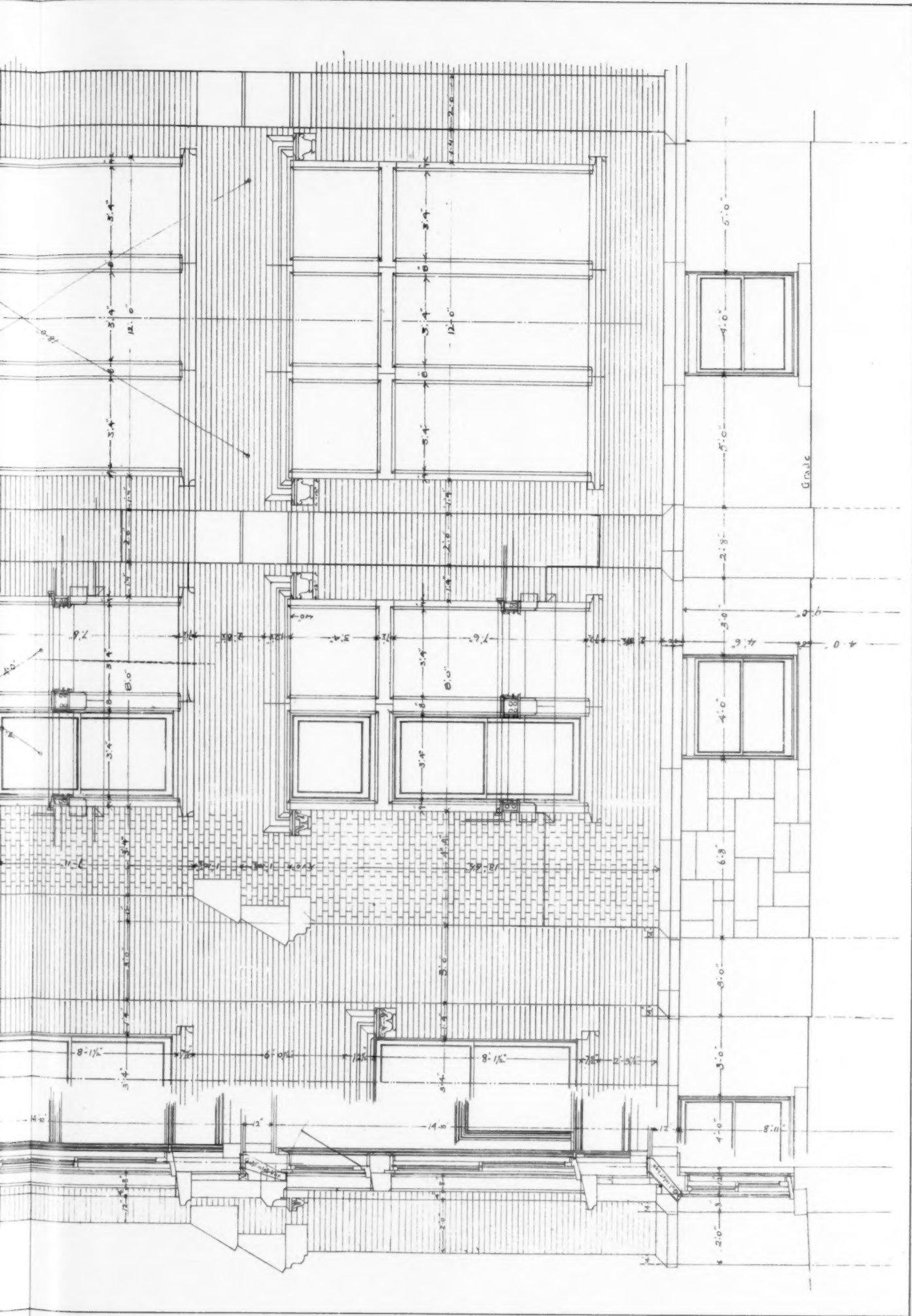
ICE-FORMATION IN HOT WEATHER.—Hundreds of people are visiting a hole in the side of the mountain near Coudersport, in Potter County, which must be a delightful place in hot weather. The hole was dug by a man in search of mineral wealth. The farther he dug the colder became the atmosphere. At the depth of 20 feet he was compelled to quit. The peculiarity of this mine is that about May ice begins to form in it, and continues to freeze until October. There is no ice in the hole in winter. The warmer the day, the more ice there is in the mine. On approaching the opening on a hot day, a strong current of cold air is felt. This air becomes more frigid the closer one goes to the cavern. There is no water in the bottom of the shaft, but the water dripping down from its sides freezes. The ice begins to form less than a foot from the top and coats the sides of the shaft several inches thick. What causes the intense cold and where the air comes from are questions that have not been satisfactorily answered. — *Philadelphia Press*.

ACCURATE TUNNELLING.—The longest separate length of tunnel for the recently opened Central London Railway driven was from the Westbourne shaft to the Marble Arch shaft, the distance being over 1,200 yards, and the work resulted in an error of but five-eighths of an inch at the point where a junction was effected with the tunnel driven by another firm of contractors. In two of the sections bore-holes were put down into the tunnel for the purpose of testing the lines, but generally the lengths were driven through so accurately that no recourse to bore-holes was found necessary. — *The Builder*.

MEMORIAL OF KING ALFRED THE GREAT.—The Mansion-house Committee announce that the contract with Mr. Hamo Thornycroft, R. A., for the colossal statue of King Alfred the Great has been entered into, and the work will be completed by midsummer next. The full-sized model in clay has already been finished. The statue itself measures 14 feet from the crown to the feet. The figure of the king is represented standing with one arm resting on his shield, the other held aloft, the hand grasping his sword so that the cross hilt is held uppermost. The pedestal, of rough-hewn granite, is a single block, will be over 20 feet high, and will weigh close on 40 tons. About £4,448 has already been received or promised towards the memorial, and £2,000 more is required. Subscriptions may be sent to the Lord Mayor at the Mansion-house, to the principal banks, or to Mr. Alfred Bowker, the Honorable Secretary, King Alfred Commemoration Fund, Guildhall, Winchester. — *Journal of the Society of Arts*.

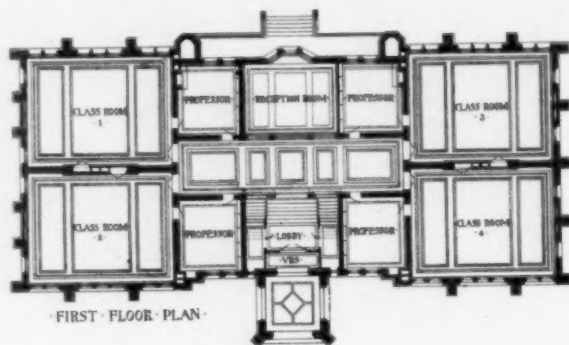
AWARDS FOR PAINTING AND DRAWING AT THE PARIS FAIR.—The Exposition awards for Painting and Drawing are as follows: Grands Prix—Benjamin Constant, Casin, Dagnan-Bouveret, Harpignies, Hebert, Henner, Henri Matet, Morot, Roll, Vollon, France; Lenkach, Germany; Klimt, Austria; Stevens, Struys, Belgium; Kroyer, Denmark; Sorolla, Spain; Sargent, Whistler, United States; Alma-Tadema, Orchardson, Great Britain; Boldini, Italy; Thaulow, Norway; J. Israels, Netherlands; Serov, Russia; Zorn, Sweden; Denezun, Hungary. Gold Medallists—United States, Alexander, Abbey, Miss Cecilia Beaux, Brush, Chase, Homer and Thayer. Silver Medallists—United States, Barrow, Benson, Visibing, Bohm, Bridgman, Clarke, Fro-muth, Gay, Gibson, Childe Hassam, Johnston, Keller, Lockwood, Mac-Ewen, Nourse, Reid, Stock, Tanner, Vinton and Walden.

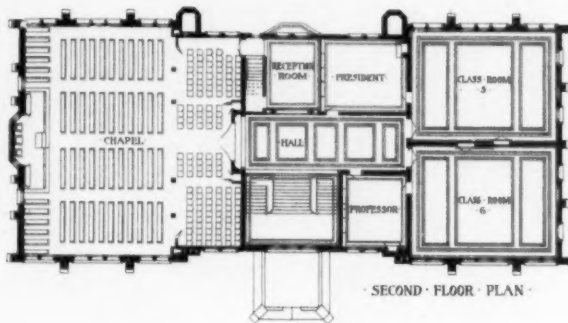




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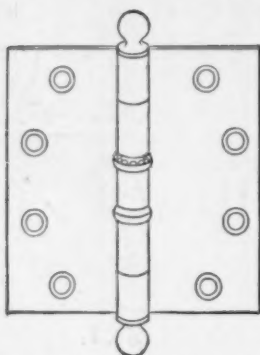


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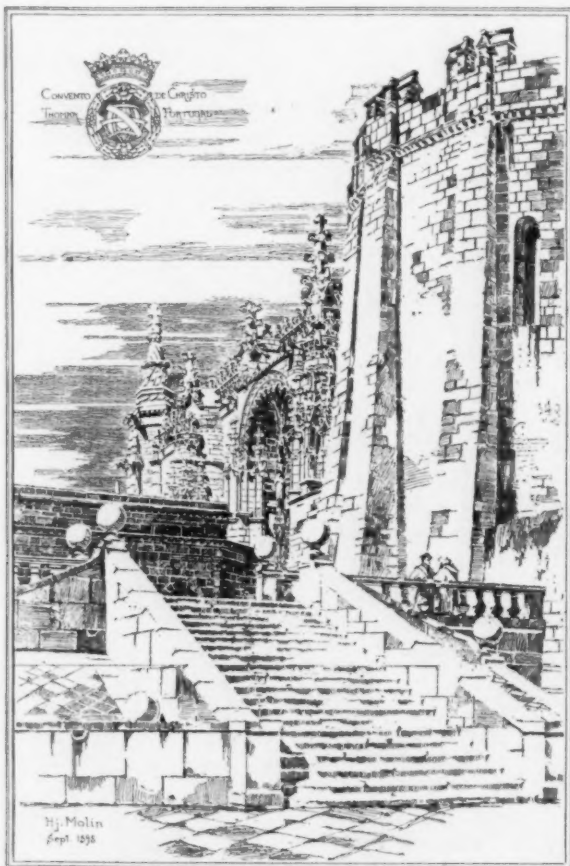
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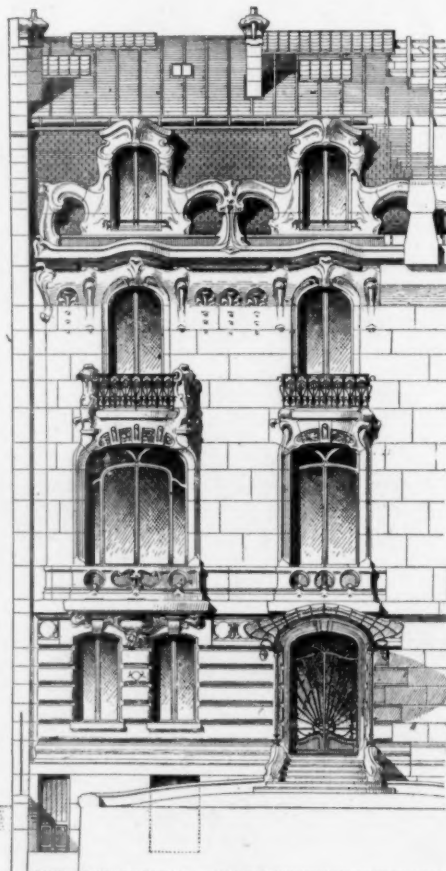
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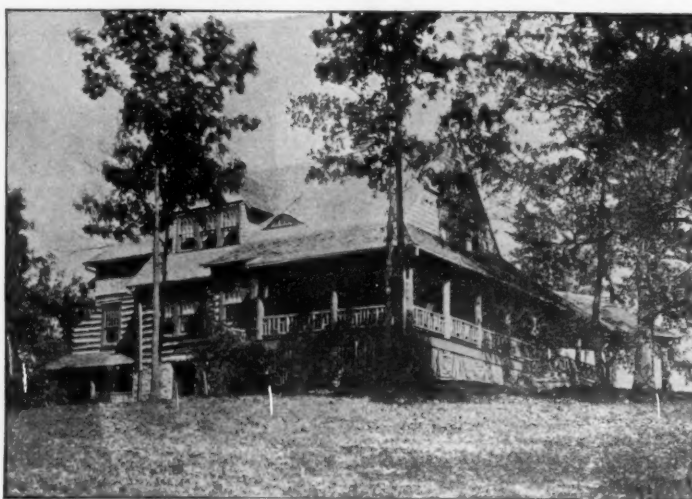
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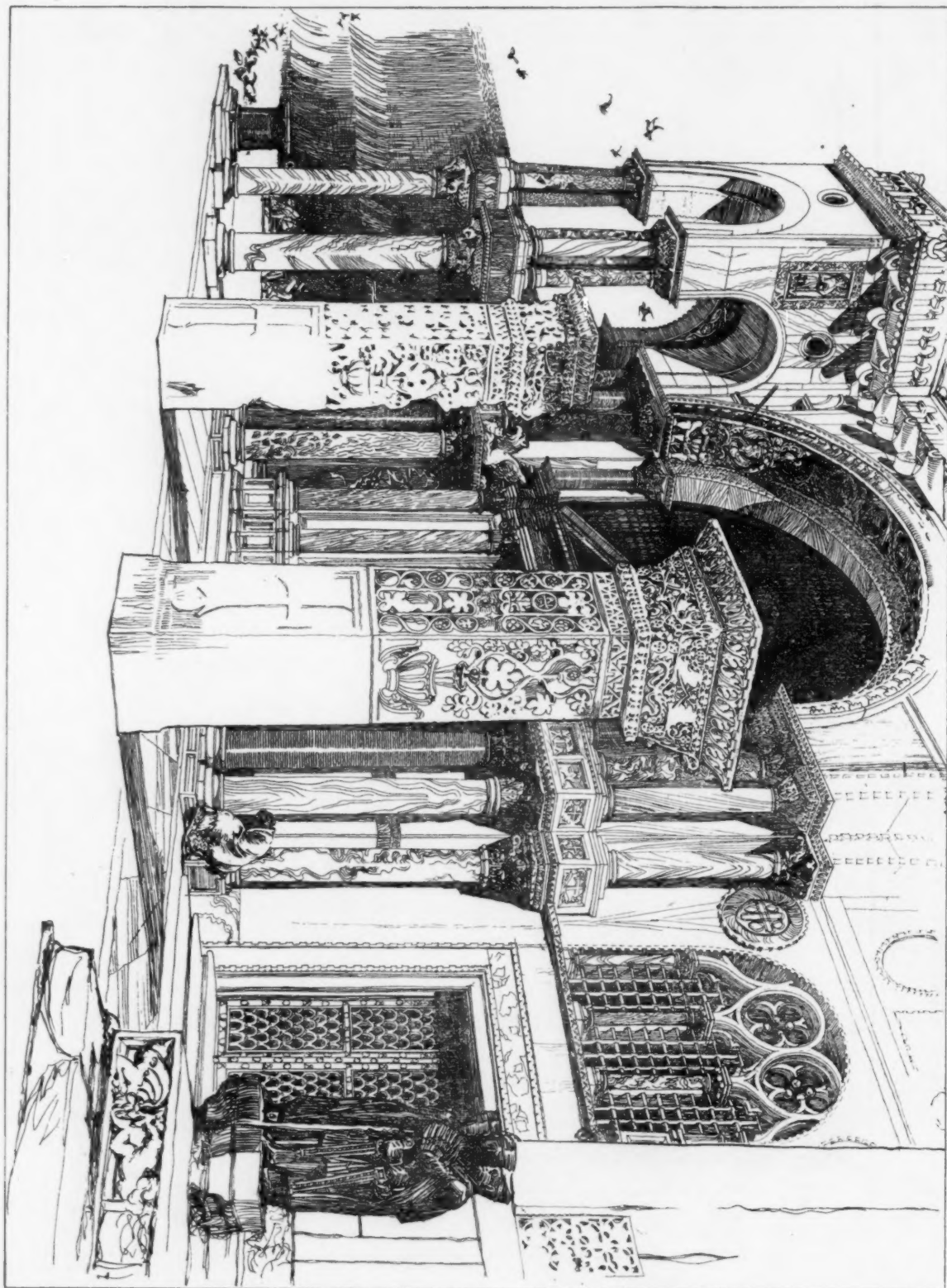
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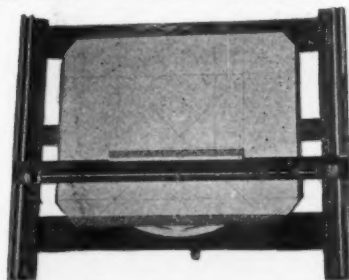
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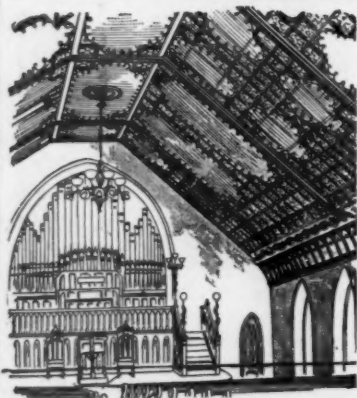
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PUBLIC BUILDINGS

City Hall, New York, N. Y.	Date	1803-12
Old State House, Boston, Mass.	“	1748
Pennsylvania Hospital, Philadelphia, Pa.	“	1755
Carpenters’ Hall, Philadelphia, Pa.	“	1770
Independence Hall, Philadelphia, Pa.	“	1729
Faneuil Hall, Boston, Mass.	“	1741
and others.		

CHURCHES

King’s Chapel, Boston, Mass.	Date	1749
Seventh-day Baptist Church, Newport, R. I.	“	1729
Christ Church, Alexandria, Va.	“	1767
Christ Church, Philadelphia, Pa.	“	1727
St. Paul’s Chapel, New York, N. Y.	“	1764
Old South Church, Boston, Mass.	“	1729
First Church, Hingham, Mass.	“	1681
St. John’s Chapel, New York, N. Y.	“	1803
First Congregational Church, Canandaigua, N. Y.	“	1812
St. Peter’s P. E. Church, Philadelphia, Pa.	“	1758
Gloria Dei Church, Philadelphia, Pa.	“	1700
and others.		

IMPORTANT HOUSES

Fairbanks House, Dedham, Mass.	Date	1636
Royall Mansion, Dedham, Mass.	“	1737
Philipse Manor House, Yonkers, N. Y.	“	1745
Tudor Place, Georgetown, D. C.	“	179-
Mappa House, Trenton, N. Y.	“	1809
Woodlawn, Va.	“	1799
Mount Vernon, Va.	“	1743
and others.		

Incidentally there are shown special measured drawings or large views of the following features and details:

Porches and Doorways	36	Subjects
Staircases	13	“
Mantelpieces	68	“
Pulpits	6	“
Fanlights	60	“

In addition to the subjects enumerated above there is a large quantity of measured and detailed drawings of Cornices, Ironwork, Gateposts, Windows, Interior Finish, Ceiling Decoration, Capitals, etc., together with elevational and sectional views of entire buildings.

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PITTSBURG, PA.

TRENTON, N. J.
WILMINGTON, DEL.
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COLUMBUS, O.
CANTON, O.
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

James H. Record, Minneapolis, Minn., has prepared plans for a \$250,000 grain-elevator to be erected at 87th St. and Ontario Ave. by the Baltimore & Ohio R. R.
Clarkdale, Miss. — Buddemeyer & Co., Memphis, Tenn., have drawn plans for a \$25,000 theatre and office building.
Davenport, Ia. — Col. G. W. French will build a \$12,000 residence after plans by Architect Edward S. Hammatt.
Des Moines, Ia. — The C. E. Eastman Co. has prepared plans for a block of brick flats to be erected on 8th St. for A. E. Clark, at a cost of \$12,000.
Everett, Mass. — Architect William Hart Taylor has prepared new plans for the proposed Prospect St. School-house. The building will be constructed of red brick, with trimmings of Concord granite and Indiana limestone in Classic design of the Doric order; cost, about \$70,000.
Kansas City, Mo. — M. Little will build a brick and stone flat-building at 17th and Charlotte Sts., after plans prepared by Rudolf Markgraf; cost, \$12,000.
Hugh Mathews will erect a four-story, 50' x 100', machine shop, after plans by Van Brunt & Howe; cost, \$20,000.
Lincoln, Neb. — Fisher & Lawrie have had their plans for the new library adopted by the Library Board. It will be one-story high, 88' x 404', and will be constructed of stone.
Lorain, O. — The Dallas Savings Bank will build a

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

three-story brick and stone bank and office building after plans by Architect H. O. Wurmser; cost, \$40,000.
Louisville, Ky. — Daniel Dougherty has plans prepared by Architect J. J. Gaffney for a three-story brick flat building, 60' x 100', to cost \$60,000.
Lynn, Mass. — The People's Society, Rev. A. A. Williams, pastor, will build a church on Eastern Ave., after plans by Architect M. T. Burk. It will be a plain gable structure with an attractive spire and a tower entrance.
Madison, Wis. — Rawson & Pannack have drawn plans for interior alterations to the south wing of the State-house; cost, \$8,000.
Mason City, Ia. — Architects Smith & Gutterson have prepared plans for a residence to cost \$10,000 to be erected for W. E. Brice.
Memphis, Tenn. — Architects Buddemeyer & Co. have drawn plans for a \$25,000 brick, stone and terra-cotta building for the Bayle estate.
Minneapolis, Minn. — The National Brass & Metal Co. have bought a site at 3d St. and 3d Ave. S., on which they will build a manufacturing, office and display building. It will be three stories in height, 66' x 120', and will be constructed of brick.
New York, N. Y. — Reports state that William Waldorf Astor will build a twelve-story hotel to cost, including site, \$3,000,000.
J. M. A. Darrach has prepared plans for a ten-story dormitory to be erected for the Teachers College on Amsterdam Ave. and 126th St.; cost of site and building, \$1,000,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Oakland, Cal. — W. J. Cuthbertson, San Francisco, is preparing plans for a new city-hall. It will be a fireproof structure, five stories high, 120' x 210', and will cost \$300,000.
Pardeeville, Wis. — C. H. Williams, architect, is preparing plans for a two-story modern dwelling to be erected here; cost, \$10,000.
Philadelphia, Pa. — Architect Carl Berger has completed plans for an eleven-story brick, stone and terra-cotta office-building to be erected on S. Penn Sq., for Max Levy.
Architect Isaac Purcell has completed plans for a chapel building for St. Paul's Presbyterian Church at 15th St. and Baltimore Ave. The edifice will be of Gothic design, two stories and basement, 55' x 75', and will have a facing of light Port Deposit or blue banded stone.
Rehoboth, Del. — Jefferson & Lafeland will erect a brick hotel, to cost about \$75,000.
Royalton, Wis. — Waupaca County, A. C. Herrmann, clerk, will build a county insane asylum near here, to cost about \$40,000.
San Diego, Cal. — The bids for the Carnegie Library for which Andrew Carnegie donated \$50,000 will probably all be rejected on account of being too high, the lowest bid received being for \$65,888. The matter is held up for the present in the hope that the gift will be increased to the amount required.
Spokane, Wash. — E. Lewis Clark has awarded the contract to erect the Spokane Club to Peter L. Peterson. The plans by Architect John R. Dow are for a seven-story, 60' x 142', brick and stone building; cost, \$140,000.
Sterling, Kan. — C. W. Squires, Emporia, has made plans for a brick and stone Masonic Temple, to cost about \$10,000.
Toledo, O. — The Cincinnati, Hamilton & Dayton R. R. Co. will rebuild the elevator destroyed by fire last year; cost, \$200,000.
A new city-hall is to be erected here at a cost of about \$200,000. Mayor Jones is Chairman of the Building Commission.
Wheaton, Ill. — E. S. Gary, New York, president of the Federal Steel Co., is to build a Methodist Church as a memorial to his father and mother. The building will cost about \$65,000.

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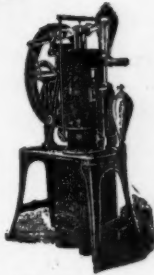
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Williamsett, Mass.—Architect W. B. Reid, of Holyoke, is preparing plans for a brick store and tenement building to be erected by Lawyer Genest on Chicopee St.

York, Pa.—C. C. Frick has had plans prepared by Architect J. A. Dempwolf for a three-story brick and stone colonial residence; cost, \$12,000.

ALTERATIONS AND ADDITIONS.

Philadelphia, Pa.—Twenty-second and Ontario Sts., 2 two-story wings, 28' x 28' each, and an additional story to the public school-house, also a fire-escape to be erected. Contract let to Harry Kuemmerle at \$25,000 by the Board of Education.

APARTMENT-HOUSES.

Boston, Mass.—Dundee, Dalton and Falmouth Sts., three-story bk. aparts., 28' x 44' x 66', flat roof, steam; \$35,000; o., Joseph Green; b., D. W. Thomas; a., J. H. Parker.

Ruggles St., No. 59, three-story bk. aparts., 14' x 21' x 60', flat roof, stoves; \$10,000; o., a. & b., Henry Green.

Brookline, Mass.—Howard and Beals Sts., 4 three-story bk. & st. flats, 55' x 104', flat roof, steam; \$50,000; o., W. H. Tucker, 50 State St.

Chicago, Ill.—Michigan Ave., nr. 40th St., four-story bk. & st. flats, 48' x 70'; \$27,000; o., R. B. Reynolds; a., L. E. Stanhope.

Kimball Ave. and Sixty-fifth St., three-story bk. & st. flats, 50' x 140', comp. roof, steam; \$50,000; o., J. Cormack; a., Thomas McCall.

Cleveland, O.—Central Ave. and Bertram St., three-story bk. store & flats, 60' x 62', flat roof, steam; \$22,000; o., Milton Day; a., S. R. Badgley.

New York, N. Y.—W. Forty-fifth St., No. 57, 94-story bk. & st. apart.; \$100,000; o., L. C. Mosher; a., Harry C. Pelton, 1133 Broadway.

Thirty-ninth St., nr. 2d Ave., six-story bk. & st. flat, 37' 10" x 87' 9"; \$30,000; o. & b., W. Lane; a., Harry T. Howell.

Ninety-ninth St., nr. West End Ave., seven-story bk. & st. flats, 60' x 90'; \$100,000; o., Teichman & Potter, 150 Broadway; a., Geo. F. Pelham.

Pittsburgh, Pa.—Oakland Ave. and Bates St., 2 three-story bk. & st. flats, 20' x 96' each; \$80,000; o., John Dimling; a., F. C. Sauer.

Turtle Creek, Pa.—Grant St., three-story bk. flat; \$14,000; o., Mrs. Elizabeth Mates; a., S. C. Richards, Braddock.

Warren, O.—Two-story bk. store & flat, 30' x 110'; \$10,000; o., Louis Plack; a., Dennison & Miller.

CHURCHES.

Aurora, Ill.—St. & bk. church, 65' x 90'; \$14,000; o., First Presbyterian Society, Edwin L. Lord, pastor; a., Brown, Burton & Davis, Cincinnati.

Boston, Mass.—Washington St., cor. Dakota St., Ward 20, fr. church, 78' x 79', pitch roof, steam; \$30,000; o., Highlands M. E. Church Society; a., Walter J. Paine, 120 Tremont St.

Brooklyn, N. Y.—Seventh Ave., cor. 6th St., bk. church, 39' 9" x 136', slate roof, steam heat; \$65,000; o., Greenwood Baptist Church; a., A. F. Leicht, 21 State St., New York City.

Columbus, O.—Second Ave. and Highland St., bk. church, 60' x 50', slate roof, furnace; \$20,000; o., Cumberland Presbyterian Society, C. G. Watson, pastor; a., Chas. Henry & Son, Akron.

Pittsburgh, Pa.—Ridgman St., bk. & st. church, 65' x 115', slate roof, steam; \$40,000; o., Baptist Society; a., W. A. Thomas, Carnegie Building.

EDUCATIONAL.

Belmont, Mass.—Two-story bk. school, 60' x 80',

BUILDING INTELLIGENCE.

(Educational Continued.)

pitch roof, steam; o., School Board; a., E. B. Homer, Boston.

Boston, Mass.—Arlington St., cor. Arlington Pl., Ward 25, three-story bk. school, 111' x 137', pitch roof, steam; \$100,000; o., Rt. Rev. John J. Williams; b., S. Brennan; a., F. J. Untersee.

Brooklyn, N. Y.—Fort Hamilton Ave., bet. 43d & 44th Sts., three-story & base. bk. public school, 172' x 172', slate roof, steam heat; \$128,000; o., City of New York; a., C. B. J. Snyder.

East St. Louis, Ill.—Two-story bk. & st. school, 53' x 65', slate roof, steam; o., City; a., J. W. Kennedy.

Iron Mountain, Mich.—Two-story bk. school, 33' x 67', shingle roof, steam; \$7,500; o., Board of Education; a., Charlton, Gilbert & Demar, Milwaukee, Wis.

Marine City, Mich.—Two-story & base. bk. school, 75' x 100', slate roof, steam; \$30,000; o., Town; a., E. C. Van Leyen, Detroit.

Morgan Park, Ill.—Two-story bk. & st. gymnasium, 70' x 160', tile roof, steam; \$20,000; o., University Chicago; a., Dwight Heald Perkins.

FACTORIES.

Boston, Mass.—Merrimac St., Nos. 105-119, Ward 8, six-story bk. building for manufacturing purposes, 98' x 122', flat roof, steam; \$45,000; o., Chas. P. Curtis; a., Stephen Codman, 6 Beacon St.

Chicago, Ill.—N. Sheldon St., Nos. 78-98, two-story bk. factory, 98' x 249'; \$35,000; o., Amberg File & Index Co.; a., A. W. Buckley; b., Leafgreen Bros.

Cincinnati, O.—Spring Grove Ave. and Beard St., two-story bk. & st. factory & office building, 160' x 225', comp. roof, steam; \$15,000; o., Queen City Brass & Iron Co.; a., Martin Fisher.

South Boston, Va.—Two-story bk. factory, 50' x 160', flat roof; \$14,000; o., American Tobacco Co.; a., Albert Huntell, Richmond.

HOSPITALS.

Abilene, Tex.—Two-story & base. bk. & st. asylum for epileptics, 40' x 60', tile roof, steam; \$325,000; o., State; a., J. L. O'Connor, Austin.

HOTELS.

Sylacauga, Ala.—Two-story bk. hotel, 51' x 110', sing roof, steam; \$10,000; o., S. J. Matthew; a., J. W. McClain & Co., Birmingham.

HOUSES.

Boston, Mass.—Darling St., nr. Hillside St., three-story fr. dwell., 24' x 50', flat roof, stoves; \$6,000; o., Maria F. Flanagan; a., T. J. Desmond.

Alpha Road, nr. Waldeck St., 24-story fr. dwell., 31' x 33', pitch roof, furnace; \$5,000; o. & b., J. M. E. Merrill; a., A. W. Gould.

Greenwood St., nr. Fowler St., 24-story fr. dwell., 36' x 40', pitch roof, furnace; \$5,000; o., Annie M. Smith; b., James F. Smith; a., G. H. Smith.

Edison Green, Nos. 7-9, 2 three-story fr. dwells., 22' x 44', flat roofs, stoves; \$10,000; o., Geo. V. Watendorf; b., James Flaherty; a., W. H. Smith.

Hamilton St., No. 193, 24-story fr. dwell., 30' x 49', pitch roof, furnace; \$5,000; o. & b., Geo. F. Roberts; a., F. H. Snow.

Chickamauga Park, Nos. 3-15, 6-14, Highland St., Nos. 147-153, Fort Ave., Nos. 4-14, 20 three-story bk. dwells., 22' x 40', flat roofs, stoves; \$75,000; o. & b., Joseph A. McCloskey; a., D. H. Woodbury.

Commonwealth Ave., nr. Fenway, three-story bk. dwell., 25' x 88', flat roof, furnace; \$35,000; o., Loren G. Du Bois; b., James T. Kelley; a., S. Brennan.

Brooklyn, N. Y.—Avenue I, cor. E. 34th St., 3 two-story & base. bk. dwells., 20' x 50'; \$13,500; o., James Graham, 1822 Brooklyn Ave.; a., A. W. Pierce.

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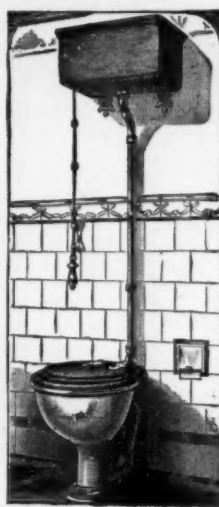
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(Houses Continued.)

Bergen St., nr. Howard Ave., 5 two-story & base. bk. dwells., 20' x 47'; \$20,000; o., Court & Brown, 1890 Bergen St.; a., F. Buchar.

Forty-fifth St., n. s. 160' w 5th Ave., 2 three-story bk. dwells., 20' x 45' 6"; \$5,000; o., J. K. Stockton, 304 Forty-fifth St.; a., H. L. Spicer.

Ocean Parkway, nr. Beverly Road, two-story & attic fr. dwell., 36' x 42', shingle roof, steam heat; \$5,000; o., G. F. E. Etzel, 92 Mangin St., N. Y.; b., J. C. Sawkins, 81 Church Ave.

Hawthorne St., cor. Canarie Road, 17 two & three-story bk. dwells., 20' x 40'; \$76,500; o., Anthony Salodino, 315 Linwood St.; a., F. S. Lowe, 186 Remsen St.

E. Twelfth St., nr. Avenue D, 24-story fr. dwell., 23' x 48' 6", shingle roof; \$5,000; o., O. Strom, 648 Myrtle Ave.; a., G. Hitchings, 1090 Flatbush Ave.

W. Prospect Park and Second St., three-story bk. dwell.; \$25,000; o., W. H. Childs; a., W. B. Tubby & Bro., 81 Fulton St., N. Y.

Canton, Ill.—Two-story bk. & st. dwell.; \$5,000; o., J. H. Whiting; a., William Wolf, Galesburg.

Chicago, Ill.—Douglas Boulevard, nr. Spaulding Ave., two-story & base. bk. & st. dwell., 22' x 72', comp. roof, hot water; \$8,000; o., Thomas White; a., Wm. F. Gubbins, 685 Ogden Ave.

Clinton, Mass.—24-story fr. dwell., 43' x 62', pitch roof, hot water heat; o., Charles H. Laseille; a., John S. Allen.

Columbus, O.—Cleveland Ave., 24-story bk. dwell., 44' x 48', slate roof, hot water; \$12,000; o., John Graney; a., D. Riebel, 328 S. High St.

Detroit, Mich.—Ingois Ave., two-story bk. & fr. dwell., 32' x 45', shingle roof, hot water; \$7,000; o., James F. Buckley, 527 Franklin St.; a., Rogers & McFarlane.

Delaware Ave., two-story bk. dwell., 34' x 50', slate roof, furnace; \$7,000; o., M. J. Manning, 139 Alfred St.; a., F. C. Pollmar.

Duluth, Minn.—E. Superior St. and Eleventh Ave., W., three-story fr. dwell.; \$15,000; o. & b., Louis L. Loeb.

East Orange, N. J.—Munn Ave., 24-story bk., st. & fr. dwell., 38' x 55'; o., Judge J. Franklin Fort; a., Richard K. Mosley, Produce Exchange, New York City.

Hancock, Mich.—Two-story fr. dwell., 36' x 39', shingle roof, hot water; \$5,000; o., Chas. Louis; a., B. H. Lewis; not let.

Highland Park, Mich.—Grand Ave., 24-story bk. & fr. dwell., 35' x 47', shingle roof, steam; \$5,000; a., S. C. Falkenburg.

Jersey City, N. J.—Bentley St. and West Side Ave., four 24-story fr. dwells.; \$11,000; R. W. Appleton, 7 Pine St., New York City; a., John D. Carrigan.

Kansas City, Mo.—Independence and Montgall Aves., 24-story bk. & st. dwell.; \$10,000; o., James Hewson; a., Charles Heinz.

Knoxville, Tenn.—Hill Ave., three-story bk. & st. dwell.; \$10,000; o., Percy Lockett; a., Leon Beaver.

Louisville, Ky.—24-story bk. & st. dwell., 50' x 50'; \$16,000; o., C. R. Menzel; a., J. B. Hutchins.

Malden, Mass.—Bryant St. and Eastern Ave., 24-story fr. dwell., 31' x 44', with ell., 18' 6" x 35', pitch roof, hot air; \$5,000; o. & b., Harvey Hudson; a., Reid & McAlpine, Boston.

Newark, N. J.—Nine 24-story fr. dwells.; \$27,000; o., West End Homestead Co.; a., J. H. & W. C. Ely.

Newton, Mass.—Lave Ave., 24-story fr. dwell., 31' x 54', pitch roof, furnace; \$10,000; o., John C. Spring; b., Wm. Kellar.

Charlesbank Road, 24-story fr. dwell., 34' x 38', furnace; \$5,000; o., Thos. M. Norman; b., Wm. Crowe.

New York, N. Y.—Fifth Ave., nr. 72d St., five-story bk. & st. dwell., 25' x 108'; o., John W. Sterling, 44 Wall St.; a., Bruce Price, 1133 Broadway.

Seventy-eighth St., nr. Madison Ave., four-story bk.

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Devon St., nr. Gowen Ave., Mt. Airy, 4 three-st'y st. dwells., 30' x 37' & 35' 8" x 37'; \$24,000; o., Gowen Estate; b., John Owens.

Baltimore Ave., nr. 15th St., three-st'y bk. dwell., 16' 4" x 150'; o., Wm. S. Thompson; b., Walter S. Pyle.

Pittsburgh, Pa.—Forbes St., three-st'y bk. & st. dwell.; \$75,000; o., Henry G. Brown; a., Peabody & Stearns, Boston.

Mellon St. and Stanton Ave., 2 st'y bk. dwell.; \$40,000; o., James Scott, of the Carnegie Co.; a., Struthers & Hannah.

Somerville, Mass.—Pembroke St., nr. Sycamore St., 2 two-st'y fr. dwells., 26' x 48', pitch roof, furnaces; \$10,000; o. & b., Geo. E. Hutchinson, 202 School St.

Troy, N. Y.—Two-st'y fr. & st. dwell., 54' x 90', shingle roof, hot water; \$25,000; a., Mortimer L. Smith & Son.

West Orange, N. J.—Hutton Park, 2 st'y bk. & st. dwell.; \$20,000; o., Walter D. Osborn, South Orange.

Yonkers, N. Y.—N. Broadway, three-st'y bk. & st. dwell., 35' x 45'; \$7,000; o., Mrs. James Hart; a., Ross & McNeill, 39 E. 42d St., New York City.

LIBRARIES.

Lincoln, Neb.—One-st'y & base, st., bk. & terra-cotta library, 88' x 104', tile roof, hot water; \$75,000; o., Board Trustees Lincoln City Library; a., Fisher & Lawrie, Omaha.

OFFICE BUILDINGS.

Boston, Mass.—Beacon St., Nos. 13-15, Ward 7, bk. & st. office-building, 50' x 58' x 91', flat roof, steam; \$70,000; o., Women's Club Corporation; b., J. W. Bishop & Co., Worcester; a., C. H. Blackall.

Danville, Ill.—Six-st'y & base, st. & bk. steel-fr. construction office-building, 68' x 148' 6", comp. roof, steam; \$100,000; o., Kimbrough & Platt; a., Fred'k G. Brown.

Troy, Kan.—Three-st'y bk. office-building, 50' x 150', tin roof, hot water; \$15,000; o., C. Leland, Jr.; a., H. M. Hadley, Topeka.

PUBLIC BUILDINGS.

Cadillac, Mich.—Two-st'y st. & bk. city-hall, 50' x 100', slate roof, steam; \$75,000; o., City; a., Wm. Williamson and H. E. Crow, Grand Rapids.

Webster City, Ia.—Two-st'y bk. & st. city-hall, 27' x 58', tower 12' x 12'; \$7,000; o., City; a., J. R. White.

STABLES.

Boston, Mass.—Smyrna St., nr. Binney St., Ward 23, two-st'y fr. stable, 20' x 35', pitch roof; \$1,000; o., Home for Intemperate Women; b., M. F. Reynolds, 65 Kent St., Brookline.

New York, N. Y.—One Hundred and Forty-ninth St., two-st'y bk. stable, 54' x 78' for 53 stalls; \$2,000; o., Fred'k Schnaufer, 712 E. 149th St.; a., M. J. Garvin.

Philadelphia, Pa.—Penn St., cor. Boynton St., Germantown, two-st'y bk. stable, 22' x 42'; \$5,000; o., George J. Miller; b., R. M. Peterson.

TENEMENT-HOUSES.

Brooklyn, N. Y.—Johnson St., nr. Adams St., four-st'y bk. flat, 22' x 80'; \$8,500; o., M. J. McLaughlin, 101 Kosciuszko St.; a., W. De Bois.

Woodbine St., nr. Irving Ave., 2 three-st'y bk. flats, 26' x 65'; \$12,000; o., John Softy, 1343 De Kalb Ave.; a., B. Finkenseiper, 93 Broadway.

New York, N. Y.—One Hundred and Twenty-third St., nr. Amsterdam Ave., six-st'y bk. & st. tenement, 50' x 90'; \$65,000; o., Wm. H. Muhler, 3 E. 169th St.; a., Richard R. Davis, 247 W. 125th St.

One Hundred and Fifty-fifth St., nr. Morris Ave., 2 five-st'y bk. & st. tenements, 25' x 85' 6"; \$50,000; o., A. D. Andre, 217 W. 125th St.; a., Henry Andersen, 1181 Broadway.

WAREHOUSES.

Chicago, Ill.—Union and Washington Sts., six-st'y bk. & st. warehouse, 45' x 180', comp. roof, steam heat; \$40,000; o., George Beidler; a., D. E. Postle.

COMPETITIONS.

PROGRAMME FOR SEPTEMBER.

A FOUNTAIN NICHE.

Preamble.—In a suburban district of a city of 250,000 people it is proposed to cut a roadway around the base of a hill which extends in a rapid slope upward from the sea. A wall low enough not to obstruct the view shall separate the driveway from the sea, and the hillside of driveway shall be closed by a perpendicular wall of masonry. This wall is to be capped by a balustrade for the protection of a pedestrian's walk located on the hillside at that height. The

COMPETITIONS.

total height of this wall including the balustrade shall not exceed 25 feet. Thus a broad roadway for vehicles at the lower level nearest the sea, and a narrower way for pedestrians on a higher plane, will run parallel each to each and to the coast-line.

Requirements.—The object of this problem is to design the hillside wall, and particularly a drinking-fountain for horses, in connection with this wall. In addition to the fulfilment of practical requirements this fountain should be architecturally adorned, and since it is imperative that it shall occupy as little of the roadway as possible, the fountain shall be in the form of a grand niche intersecting the hillside wall and extending beneath the pedestrian's walk. The horse trough, however, shall occupy space on the driveway. The water will be supplied by artificial means and the fountain shall be entirely of masonry.

Drawings.—A plan, a section and an elevation showing a portion of the wall on either side, are required, all at the scale of 3-16 inch equals one foot. The rendering will be left to the discretion of the designer, but the paper must be cut to the uniform size of 10" x 18". Send drawings unmounted to the Atelier Fitzwilliam on, or before, September 30th, 1900.

Any deviation from the programme of requirements will debar the candidate from the competition. No further instructions are needed or will be given.

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During the past year many draughtsmen have asked if there was not some way by which they could work at their homes and send or bring their studies to the atelier for criticism, so in accordance with this demand we shall, beginning with the month of September, 1900, inaugurate a special nine months series of sketch problems which are intended to be worked up spontaneously without criticism. One of these problems will be issued each month from September to June each year. Every effort will be made to maintain these programmes of as lively an interest as can be, and the best solutions each month will be awarded prizes as stated below. Send your design and \$1 for entrance into September competition, or send \$8 and become entered for all nine of the competitions from September, 1900, to June, 1901. On October 1st we will remit it to you postage prepaid, with a full and complete critical analysis of its faults and merits, and whatever prize (if any) it has been judged worthy to receive. The names and addresses of prize-winners will be announced each month.

For the month of September, 1900, there will be 25 cash prizes aggregating \$145 divided as follows:—
One first prize of \$30. Two prizes of \$15 each. Three prizes of \$10 each. Four prizes of \$5 each. Five prizes of \$3 each. Ten prizes of \$2 each.

LIBRARY.

Designs for Carnegie Library will be received at the office of W. W. Johnson, city clerk, until September 17. For prospectus giving full information, conditions, etc., address E. G. TRUEHEART, city engineer.

1287

PROPOSALS.

JAIL.

Sealed bids will be received until September 3d for the erection of a jail. HOWARD D. SMART, co. clk.

1287

MASONIC TEMPLE.

Sealed bids will be received until September 1st for the erection and completion of a Masonic Temple. R. R. NOBLIN, chmn. bldg. com.

1287

POLICE-STATION.

Sealed proposals will be received until August 31st for the erection of the 7th precinct police-station. M. F. BARRETT, director of police.

1287

SCHOOL-HOUSE.

Sealed proposals will be received until September 1st for constructing a school-house at Anacostia. H. B. F. MCFARLAND, et al., commrs.

1287

ADMINISTRATION BUILDING.

Sealed proposals will be received until August 28th for the construction of contagious wards and administration building on the grounds of the Newton Hospital. GEO. H. ELDER, pub. bldg. com.

1287

PROPOSALS.

COURT-HOUSE.

Sealed bids will be received until September 4th for rebuilding and remodeling the court-house. W. C. JONES, chmn. bldg. com.

1287

Treasury Department, Office Supervising Architect, Washington, D. C., August 18th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M., on the 10th day of September, 1900, and then opened, for the reconstruction and repairs of plumbing and sanitary system in the U. S. Post-office and Sub-treasury building at Boston, Massachusetts, in accordance with drawings and specification, copies of which may be obtained at this office or the office of the Custodian, Boston, Mass., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

1288

HIGH SCHOOL.

Sealed proposals will be received until September 8th for the construction of a high-school building. F. W. SHIRER, clk. bd. ed.

1288

DAM.

Sealed proposals will be received at the office of the Metropolitan Water Board, 3 Mt. Vernon St., Boston, Mass., until September 28th for building the Wachusett Dam. Bids must be accompanied by check for \$15,000. HENRY H. SPRAGUE, chmn. bd.

1289

CITY-HALL.

Bids will be received until August 31st for the erection of a city-hall. W. L. LITTLE, city clerk.

1287

SCHOOL-HOUSE.

Sealed bids will be received by the Clerk of the Board of Education until September 10th for furnishing labor and material to complete the school-building at Tod and Waterman Sts.

1287

PUBLIC BUILDINGS.

Sealed proposals, in triplicate, will be received at the Depot Quartermaster's office, 170 Summer St., until September 4th for constructing at Fort Strong, Boston Harbor, Mass., one barrack, two double officers' quarters, one stable, one bakery, one storehouse, one double non-commissioned staff quarters, one hospital and one hospital steward's quarters. J. E. SAWYER, Depot Quartermaster, U. S. A., Boston, Mass.

1287

COURT-HOUSE.

Sealed bids will be received until September 3d for the erection of a court-house. COMMISSIONERS MITCHELL COUNTY.

1287

SCHOOL-HOUSE.

Sealed bids will be received by the Board of Education until September 1st for the erection of a school-house. O. F. W. AMBROSE, clerk.

1287

Treasury Department, Office Supervising Architect, Washington, D. C., August 13th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 17th day of September, 1900, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post-office building at Menominee, Michigan, in accordance with the drawings and specification, copies of which may be had at this office, or at the office of the Postmaster at Menominee, Mich., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

1287

Treasury Department, Office Supervising Architect, Washington, D. C., August 9, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 12th day of September, 1900, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post-office and Court-house at Beaumont, Texas, in accordance with the drawings and specifications, copies of which may be had at this office, or at the office of the Postmaster at Beaumont, Texas, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

1287

Treasury Department, Office Supervising Architect, Washington, D. C., August 8, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 19th day of September, 1900, and then opened, for the superstructure, interior finish, plumbing, approaches, etc., for the U. S. Public Building at Cheyenne, Wyoming, in accordance with the drawings and specification, copies of which may be had at this office, or the office of the Postmaster at Cheyenne, Wyoming, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

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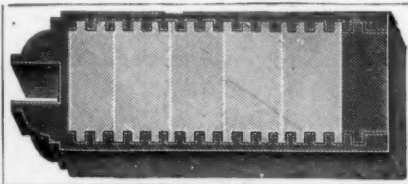
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ADOPTED BY THE SOCIETY, FEBRUARY 1,
. . . 1895. . .

SECTION 1. No Member should enter into partnership, in any form or degree, with any builder, contractor, or manufacturer.

SECTION 2. A Member having any ownership in any building material, device or invention, proposed to be used on work for which he is architect, should inform his employer of the fact of such ownership.

SECTION 3. No Member should be a party to a building contract except as "owner."

SECTION 4. No Member should guarantee an estimate or contract by personal bond.

SECTION 5. It is unprofessional to offer drawings or other services "on approval" and without adequate pecuniary compensation.

SECTION 6. It is unprofessional to advertise in any other way than by a notice giving name, address, profession, and office hours, and special branch (if such) of practice.

SECTION 7. It is unprofessional to make alterations of a building designed by another architect, within ten years of its completion, without ascertaining that the owner refuses to employ the original designer, or, in event of the property having changed hands, without due notice to the said designer.

SECTION 8. It is unprofessional to attempt to supplant an architect after definite steps have been taken toward his employment.

SECTION 9. It is unprofessional for a Member to criticise in the public prints the professional conduct or work of another architect except over his own name or under the authority of a professional journal.

SECTION 10. It is unprofessional to furnish designs in competition for private work or for public work, unless for proper compensation, and unless a competent professional adviser is employed to draw up the "conditions" and assist in the award.

SECTION 11. No Member should submit drawings except as an original contributor in any duly instituted competition, or attempt to secure any work for which such a competition remains undecided.

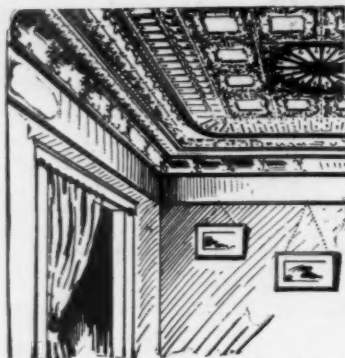
SECTION 12. The American Institute of Architects' "schedule of charges" represents minimum rates for full, faithful and competent service. It is the duty of every architect to charge higher rates whenever the demand for his services will justify the increase, rather than to accept work to which he cannot give proper personal attention.

SECTION 13. No Member shall compete in amount of commission, or offer to work for less than another, in order to secure the work.

SECTION 14. It is unprofessional to enter into competition with or to consult with an architect who has been dishonorably expelled from the "Institute" or "Society."

SECTION 15. The assumption of the title of "Architect" should be held to mean that the bearer has the professional knowledge and natural ability needed for the proper invention, illustration and supervision of all building operations which he may undertake.

SECTION 16. A Member should so conduct his practice as to forward the cause of professional education and render all possible help to juniors, draughtsmen and students.



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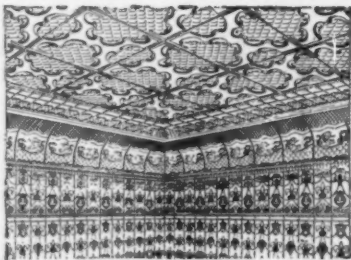
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Moss, Chas. E., Boston.....

Spaulding Print Paper Co., Boston
.....(eow)

BOILERS (Side-Feed).

Gorton & Lidgerwood Co., New York.

BUILDING FELT (Fire and Water Proof).

H. W. Johns Mfg. Co., New York....

CAPITALS.

Seifert, Frank A., St. Louis, Mo.....

CAPITALS (Carved).

C. T. Nelson Co., The, Columbus, Ohio

CASH-CARRIER.

Bostede Package & Cash-Carrier Co.,
New York.....

CEMENT.

Alsen's Cement Works, N. Y....(eow)

Atlas Cement Co., New York.....

E. Thiele, New York.....

CHLORIDE ACCUMULATOR.

Electric Storage Battery Co., Phila-
delphia, Pa.....

COMPOSITION ORNAMENT.

Seifert, Frank A., St. Louis, Mo.....

CONSERVATORIES.

Lord & Burnham Co., Irvington-on-
Hudson, N. Y.....

CONTRACTING.

Flynt Building & Construction Co.,
Palmer, Mass.....

CORDAGE.

Samson Cordage Works, Boston.....(eow)

COURT-HOUSE EQUIPMENT.

Art Metal Construction Co., James-
town, N. Y.....

CREOSOTE STAINS.

S. Cabot, Boston.....

CUTLER PAT. MAILING SYSTEM.

Cusler Mfg. Co., Rochester, N. Y.....

DEAFENING QUILT.

Samuel Cabot, Boston, Mass.....

DECORATORS.

L. Haberstroh & Son, Boston.....

DOOR AND WINDOW SCREENS.

Hartman Sliding Blind Co., Crestlin,
Ohio.....

DOORS (Interior Finish).

Compound Door Co., The.....

DRAINAGE FITTINGS.

Crane Co., Chicago, Ill.....

DRAWING-TABLES.

Alexander Mfg. Co., Grand Rapids,
Mich.....

Laughlin-Hough Co., New York.....

DRAUGHTSMAN.

E. Eldon Deane, New York.....

DRAWING MATERIALS.

Keuffel & Esser, New York.....

DUMB WAITERS.

Kinkade & Liggett Co., Columbus, O

ELEVATORS, ETC.

Dayton Automatic Elevator Co., The,
Dayton, Ohio.....

Morse, Williams & Co., Philadelphia.

Whittier Machine Co., Boston.....

ENGINES (Hot-Air).

Rider-Ericsson Engine Co., New York.

FILING DEVICES.

Art Metal Construction Co., James-
town, N. Y.....

FILTER.

Loomis-Manning Filter Co., Phila., Pa.

Seafie & Sons, Wm. B., Pittsb'g., Pa.

FIREPROOF BUILDING.

Pioneer Fireproof Construction Co.,
Chicago, Ill.....

Baritan Hollow and Porous Brick
Co., New York.....

FIREPROOF LATHING.

Hayes, Geo., New York.....

FLOOR POLISH.

Butcher Polish Co., Boston.....

FOLDING BLINDS.

Hartman Sliding Blind Co., Crestlin,
Ohio.....

GALVANIZED IRON.

American Sheet Steel Co., New York.

GATES.

Wm. R. Pitt, New York.....(mon)

GLASS (Stained and Ornamental).

Flanagan & Biedenweg Co., The
Chicago, Ill.....

GRATES, ETC.

Wm. H. Jackson & Co., New York...