

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. LXVI.

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No. 1248.

Entered at the Post-Office at Boston as second-class matter.

NOVEMBER 25, 1899.



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EVERY architect will be interested in the decision of the American Institute of Architects to require candidates for admission to its ranks, after January, 1901, to pass an examination. The Royal Institute of British Architects adopted this course some years ago, amid loud predictions of evil consequences, but has since prospered satisfactorily, while membership in it has become more than ever a guarantee of professional skill and ability. There is no reason why the examination of candidates should not have similar results in this country. In fact, the American public has for several years even demanded some sort of test by which capable architects could be distinguished from incapable ones, and the licensing statutes now in force in several States have been the result of this popular feeling. While the license statutes have been undoubtedly beneficial, they have put serious obstacles in the way of the employment of architects out of their own States, and the successful passage of the test for membership in the Institute would give all the guarantees to the public that are afforded by the license laws, much more conveniently for the architect, and, practically, without expense, since membership in the Institute is, simply as a business investment, well worth the trifling dues that it involves.

THE armed expedition sent by the Mexican Government against the rebellious Mayas is likely to result in opening to science a most interesting country. Without committing ourselves to any opinion on the correctness of the theories which find in Yucatan the birthplace and favorite residence of Osiris, and trace an intimate connection between the Mayas and the ancient Egyptians, or which identify the Maya hieroglyphics with early Chinese writing, it is, at least, certain that the peninsula presents some very curious problems in archaeology and ethnology, the solution of which may throw light on the history of the old as well as the new world. In general, the ancient Maya civilization seems to have been essentially similar to that of Mexico, as it was found by the Spanish conquerors, but more highly developed. Whether this signifies that the Mayas had been longest in possession of their knowledge, and had imparted it to the ruder tribes around them, or whether the seeds of civilization, received by them through the Aztecs, had found among them a congenial soil, no one can now say. Both races still preserve legends of the arrival of strangers, bringing the rudiments of art and letters to their brutish ancestors, but whether these strangers were Egyptians or Chinese, or whether there were really any strangers at all, remains to be ascertained. While the Mayas are being disciplined into

submission, it is to be hoped that the race of dwarfs, which shares the country with them, will be tenderly treated. These gentle and timid little people, perhaps the most interesting, as well as the least known, race on the continent, must have a history of their own, and seem to have had also a tolerably well-developed art. One explorer tells a story of having seen the ruins of a city of the dwarfs, containing, among other things, what seemed to be a stone triumphal arch. Such a construction as this would indicate high æsthetic development, and the great dissimilarity of physical and mental character between the dwarfs and any other known American race makes the history of the former all the more interesting.

A REMARKABLE experiment, of which we await with interest the particulars, is reported by telegraph from Paris. Two members of the Automobile Club are said to have started in a cigar-shaped balloon from a place near Paris, and to have sailed in a circle around the Eiffel Tower, returning then to the place from which they started. The balloon is reported to have been propelled by a naphtha engine, and to have been so easily controlled that one of its owners has made a bet that he can use the roof of the Automobile Club, on the Place de la Concorde, for a landing-place. With all due allowance for newspaper exaggeration, this seems to have been the most successful attempt yet made at navigating the air. The famous military balloon of Renard and Krebs could manoeuvre only in very calm weather, and it was far from being able to sail safely in a circle around an iron tower, and nothing else that we know of has even approached the achievement of these two young officers.

IT is a little strange that the Americans, the richest, and most ingenious and enterprising, of all the people of the world, should let foreigners outstrip them in the art of navigating the air, an art which will surely occupy a large share of the attention of the world in the next century. It is only a few months since two amateurs from England crossed the Channel safely in a balloon, and the German and Russian army engineers, who are permanently detailed to study the matter, have not been idle, although the public is kept, as far as possible, in ignorance of what they accomplish. The great difficulty in this country seems to be that every one is too busy to devote himself to the matter, or, if he is not busy, has no money to invest in it, and the Government does nothing, although a moment's consideration will show that the sum spent out of the public treasury in one day for military purposes, including pensions, would, in all probability, be enough to solve the problem completely, with credit to the American name greater than could be gained by assaults on all the weaker nations in the world put together. Moreover, it ought not to be forgotten, in considering the propriety of Government aid to the new art of navigating the air, that wars, and with them most of the expenditure for military and naval establishments throughout the world, will cease from the day that a balloon, capable of carrying a load of a ton or two, is successfully navigated in moderate weather over a course of a few miles, for the reason that any community, except one of absolute barbarians, will then have the means of dropping boxes of explosive gelatine, or lyddite, or other deleterious substances, upon hostile vessels, or among invading armies, before the arrival of either upon the scene of their intended activity, and even of destroying in a single night the capital city of any other country which fails in its duty of international politeness. To brave this terrific means of destruction, which will be available for the smallest nation as well as the largest, would be such madness that no one, after the first experiment, would dream of it, and, just as gunpowder put an end to the beneficent rule of the nobility over the serfs, the navigable balloon will surely terminate all attempts to spread the Gospel, or Anglo-Saxon civilization, or trade, or anything else, at the point of the bayonet among communities that do not want it, and the strenuous life will, apparently, be obliged to content itself with private, rather than public, adventures against other people's property.

IT is gratifying to learn that a building which is "destined to be the glory of New York and the pride of the United States" has been designed by Mr. Post, for a site at present indefinite, but intended to be in the neighborhood of the Riverside Drive. This remarkable structure is to be of "marble

and gray granite," and its ground-plan is to be "that of a cross superimposed on a circle." The circular part is to be eight hundred feet in diameter, and contains some "concentric circular galleries," which "hold a width of one hundred and twenty-five feet." These concentric circular galleries are "diametrically intersected" by "four wings at right angles to each other, each eight hundred feet long, two hundred feet wide, and thirty-five feet high." A dome is shown in the published sketches over the centre of the building, which would presumably have the same diameter as the width of the intersecting wings, so that we have a total length and breadth of eighteen hundred feet, or nearly eight city blocks each way, for this somewhat ambitious composition. The four wings are, we are told, to be named respectively the "Hall of Literature," the "Hall of Religion," the "Donors' Hall," and the "Hall of Gifts," and it is difficult, in view of the choice of the last two appellations, to avoid a suspicion that the cash for the purchase of the land and the erection of the building is not all at present in hand, and that New York may perhaps have to wait for its "pride" until a sufficient number of "donors" have interested themselves in the enterprise.

THE Philadelphia *Record* has a description, which may, we imagine, be taken with some reserve, of a building which is said to be in course of erection in the Exposition grounds in Paris, representing a country-house, or rather, a mediæval château, inverted, so that it stands on the tops of its towers, its roof hanging between, just off the ground, while its front door is in the air. Entrance is obtained through a hole in one of the towers, and the visitor ascends thence through the bedrooms to the drawing-rooms, ending his journey at the front door at the summit, from which he can look out, as we are informed, on "a terraced garden hanging in the air." Except for the inverted garden, there is nothing very impracticable about the building as so far described, but the *Record* adds some details which seem to have been supplied by the distinguished Baron Munchausen. For example, we are told that the visitor after ascending a "chimney" to the bath-room, will find a marble tub "suspended over his head," and supplied by a "steaming jet of hot water spouting upward" into it. What is done with the overflow is not mentioned, but such trifles would hardly present any difficulty to the talented designer of an inverted bath-tub holding water suspended in it. Leaving this uncomfortable place, and climbing to the drawing-room, the stranger may, as we are informed, "listen to the strains of 'La Tzigane,' or the latest tune from the Folies-Bergères, played on the piano by some gay Parisienne, head downwards." This illusion could, of course, be managed by means of mirrors, but a moral, rather than a physical, explanation seems to be requisite for the assertion that "on looking through the windows into the grounds of the Exhibition, the latter will appear to the observer in an inverted position, at the same time conveying to himself the strange idea, shared, moreover, by the people outside, that he is, in truth, standing head downwards." The inventor of this structure, which is known as the "Manoir à l'Envers," is said to be M. Kotin, a Russian engineer, who is probably not responsible for the newspaper descriptions of it.

THE tunnel through the Simplon Mountain, which is to connect the French and Italian railway systems, is rapidly advancing. Provision has been made for two parallel tunnels, but only one is now in process of construction. This is being excavated from both ends, water-power being used in each case to drive the drilling-machines, which are of the Brandt type, already used for many other tunnels. The machines have, however, been much improved of late. The drills, instead of being hollow, have now only a small perforation, for carrying water for cooling and washing into the drill-hole. In this way the time formerly used in taking out the drills and clearing the bore is saved, as the water-tube is too small to admit the stone chips. From eight to twelve holes are drilled at once, to a depth of five or six feet, and the rock then removed by blasting. Explosive gelatine, made with ninety-two per cent of nitroglycerine and eight per cent of gun-cotton, is used for this purpose, and it is the practice to fire two or three charges first, to loosen the rock, and then to fire the rest. Many experiments have been made, using mixtures of charcoal, petroleum and other combustible substances with liquid air, as explosives, but no satisfactory results have yet been obtained; and Professor Linde, under whose charge the experiments have

been made, considers that liquid air is too uncertain in its action to be utilized with good results in engineering work. Operations at the tunnel began exactly a year ago, and the contract requires its completion in five years from the time of beginning. About two miles have already been excavated, and the work is now going on at the rate of nearly forty feet a day, so that the total length, of about eleven miles, ought easily to be completed within the contract time.

WE would like to call the attention of owners of steam-boilers, architects, builders and owners generally to what, judging from the claims made for it, is the most remarkable fuel yet discovered. The ingredients do not seem to be particularly difficult to obtain, consisting, as we are told, of ninety-three per cent of "pit coal-dust," and seven per cent of a mixture of "Stockholm tar and caustic lime"; but either the Stockholm tar or the caustic lime, or the mixture of the two, must impart to the compound strange chemical qualities, for we are informed that, when pressed into briquettes, the new fuel burns like "an extraordinary brilliant coke fire with tongues of white and blue flames." That "the heat produced is intense" may well be believed, after learning that "a test made produced the effect of the evaporation of fourteen pounds of water to one pound of the coal." As the theoretical evaporation from the boiling-point, with the purest anthracite coal, is only fourteen and four-tenths pounds of water to the pound of coal, and as the average evaporation, with English coal, is less than nine pounds of water to the pound of coal, in the best boilers, it is, to say the least, difficult to believe that the mixing of a little tar and lime with it would add more than one-half to its efficiency, particularly as the dust-coal, which contains more or less fine *débris*, is usually inferior in efficiency, weight for weight, to the more salable products of the mine. Another assertion which casts a doubt on the whole description of the new fuel is the ridiculous one that "the ashes do not exceed three per cent." As coal itself contains, on an average, at least ten per cent of ash, while dust-coal contains still more, and as the addition of caustic lime would increase the ash by an amount equal to that of the lime, it is obvious that the ash, instead of three per cent, must be from ten to fifteen per cent. If any less proportion of ash is found under the grate, the inference can only be that the remainder has been scattered over the room in the form of dust.

WHAT it is desirable to utilize coal-dust for domestic and industrial use, by cementing it into blocks, capable of easy handling, which will not melt in the fire, and will be of such shape as to allow air to pass between them, has been understood for a century at least, and for many years such blocks have been made and used on the Continent, both in boiler furnaces and in domestic fireplaces, with satisfactory results. In all these blocks, as we believe, tar is used, and in most of them, we think, lime also, so that the composition described is very far from new. As coals vary greatly, however, in their structure and behavior, it is found that a cementing addition which will do for one sort will not answer for another, and it is quite possible that some unusual success may have been met with recently in adjusting the proportions of lime and cement to certain English coals. If so, it may be hoped that similar success will attend, before long, the experiments which have for several years been in progress with American coals; for there are many evidences that the days of cheap coal are over for the present, even in the Eastern States, while in California, and some parts of the West, an economical substitute for soft coal would bring relief to the purse of many an anxious householder.

ONE of the most interesting exhibits in the United States section at the Paris Exposition is to be a typical American machine-shop, with all the labor-saving appliances so familiar in this country, and so little known anywhere else. Space has been allotted in the Exposition grounds for a building three hundred and forty-three feet long, and seventy-four feet wide, for this purpose, and the building itself, as well as its fittings and furnishings, will represent American materials and methods, the frame having already been shipped from the works of the Berlin Bridge Company. A large part, if not the whole, of the structure is to be devoted to iron and wood-working machinery, but it is said that a complete American shoe-factory is to be shown in operation at the Exposition, and this may possibly find accommodation in the building.

THE THIRTY-THIRD CONVENTION, A. I. A.

AN annual meeting of the American Institute of Architects without the usual Donnybrook-Fair attachment, that is, without the seemingly-perennial discussion of the constitution and by-laws, that needless oiling of very rarely used machinery that always has caused such a fatuous flow of words, such needless and unmeaning quibbling, such uncoverings of the naked egoism of the disputants — and how very, very naked it has often been seen to be! — must seem a hardly credible phenomenon to many a regular attendant at these annual gatherings who by an untoward chance happened not to be in Pittsburgh last week. The proceedings this year took on a gratefully unfamiliar air which seemed to be relished by all, even by the most active-tongued debaters of amendment and exception; but whether the relish was due to the mere novelty of the situation and would be less apparent at a similar meeting another year, or whether it was because they enjoyed the sensation of the discovery that the ear was quite as mighty an instrument of education as the tongue, could not be determined by the onlooker, and the question must be left to be solved by the aid of future evidence. But with no by-laws to debate and very little in the nature of general business brought before the meeting, there was very little for the official stenographer to do, so he went comfortably to sleep, while the reporters for the daily papers, finding that there was nothing exciting to be worked up for morning or evening editions, transferred their attention to the larger convention of hardware men that was being held in the same building on the same day. It happens, by the way, that the only things in the nature of *contretemps* can be laid at the door of these same hardware men. In the first place, their large numbers caused all the hotels to be more than full, not only the Monongahela House, which promised to take in the architects and kept its word in a very sinister sense, but all others in the city; the consequence being that most of the architects had to go to two or three hotels before room or bed or cot could be found. But the worst fate seemed to fall upon some of the extra-professional guests of the Institute who had been invited to read papers. One of them had to be escorted to seven hotels before he could be housed, while another was finally disposed of in a Turkish bath and reported next day that even then one of his two towels had been filched by some other sufferer a little short in bed-clothing.

But the greatest injury inflicted by the hardware men was their rape of the meeting-room which the Institute had engaged, but which the hotel-keepers unblushingly deprived it of rather than lose the custom of the larger body of men. The result was that the architects were forced to hold their meetings in the hotel billiard-room, dirty, dark and above all noisy, for being on the ground-floor, with many windows on the street, each wagon that clattered by completely drowned the speaker's voice for a term and in a degree that varied with the nature of the load and the rate of locomotion.

But in spite of these drawbacks, and although there was less than the usual chance for each attendant to become a performer and secure the meed of applause that his particular clique of admirers has always been ready to shower upon him, there has never been a convention that so held together during the three days of its session as has this. There was hardly any variation in the number in the room between one session and another and comparatively few men straggled away after the first day, either returning to their own homes or finding for themselves other occupations and amusements in the city. All realized that a change had come about and explained it according to their several predilections. Those who had never felt that squabbling over by-laws which were never used was the end and aim of the Institute's being, but that its proper function was the discussion and digestion of serious papers, rubbed their hands with an I-told-you-so air and were satisfied that the cause of the change was to be found here. Others who long have advocated the delegate system felt the change was due to the fact that this year the delegate system was in operation at last. These men felt that, even if it could not be alleged that the delegates were of a higher or different type of member from those who had attended voluntarily in the past, they yet had come with the feeling that they represented their several Chapters, that they had had a duty imposed on them, and that they must, like honorable and dutiful beings, perform that duty and sit things out. Then, too, the local Chapter, of course, felt that the change was due to the nature of the programme for entertainment they had prepared and the great shrewdness with which it had been mapped out, so that the reward for duty performed followed immediately upon the performance of that duty. Lastly, we feel that sheer curiosity had something to do with the matter and that a goodly number came very largely and only to learn whether the new order of things was likely to be more to their taste than the old. To judge by expressions of opinion heard from many men of many minds, their natural feeling of curiosity has been affirmatively satisfied. But as to the other matters, a single trial does not afford data enough for a trustworthy solution.

As for the papers, the reading and discussion of which formed the backbone of the Convention's proceedings, it seems hardly worth while to speak further than to say that, while some were very good and others were rather indifferent in value and interest, the average of quality was far above the average of previous performances of the kind at these meetings. As there was practically little business discussed on the floor, the editing of the *Proceedings* will take less time than usual and the published report will be in the hands of members

much earlier than usual. Moreover, we shall, as usual, publish a number of these papers, even in advance of their appearance in the *Proceedings*, and a discussion of their good or bad points seems hardly needed. As to our practice of publishing the Institute's papers, we have always felt some misgivings: it seems so to forestall and almost make unnecessary their publication in the *Proceedings*, and at all events it certainly dulls the edge of interest in that publication so far as the Institute's own members go. But the officials of that body feel that our course is far from mischievous, since it brings to bear upon others than its own membership those educational utterances which it is an important part of its functions to promulgate and for which it seeks the widest publicity.

If, however, it were worth while to discuss these papers, we should be tempted to begin by taking issues with some of Mr. Brockway's statements and inferences, though we realize that not only practices but principles have changed at the Ecole des Beaux-Arts in the last twenty years. We will say, however, that we think that he belittled his argument by following the politician's method in matters of dispute and "claiming everything in sight." Mr. Andrews's brief comment on the paper on the "Influence of French Art, etc.," — which, by the way, was almost the only contribution which could properly be defined as *discussing* the matter before the meeting — was particularly pat, and was skilfully diverted into a little dissertation showing how futile is this striving after a "distinctively American style" which regularly obsesses each generation of young architects, who, in the delights of emancipation from directed studies, seem fatally drawn to this matter as the first of the Herculean labors they must overcome. Like many another, Mr. Andrews believes that an American style, sufficiently distinctive, already exists, and that it exists as much as anything through the negation of accepted styles in work executed according to the acknowledged rules of those styles. For, just as the accomplished citizen of one locality is known by the style of that locality when first he sets out on his travels, yet, after having imitatively and unconsciously adopted one after the other the distinctive styles of the several countries he sojourned in, each negating in some particular the distinctive characteristics of some earlier acquirement, when at length he returns home after a long absence a thorough cosmopolitan, with no distinctive style belonging to him while yet distinctly having style, so American architecture is becoming distinctly a thing which has, not a "distinctive American style" but purely and simply style.

In this matter of the discussion of the papers, we feel that the method adopted at this Convention was hardly a success. It was proper enough for the men who were invited to discuss the papers to send in formally prepared papers when, as Mr. Elzner did, they found they could not attend the Convention in person. Moreover, Mr. Elzner's paper was a distinct and proper contribution to the discussion as he took exception to Mr. Garnsey's thesis and joined issue with him over it. But for those invited to take part in a discussion to, one after the other, each draw from his pocket an essay on the main subject — for, as a rule, the references to the paper under discussion were extremely tenuous — was rather dreary, and turned what was expected to be one of the most enlivening features of the occasion into really the least satisfactory one, since to the audience a full half of the enjoyment of a discussion lies in the evidence it gives of the intellectual readiness of those who, without warning, speak on the subject, either in support of or in contradiction of the fundamental statements contained in the paper so discussed.

Short as was the actual business transacted by the Convention, and confined as its efforts were to two or three heads, there was never a meeting of the Institute that accomplished so much that was worth the doing.

Acting, we believe, quite without concert on the part of those who advanced the recommendations, the attention of the members was kept directed toward the important matter of professional education, first by Mr. Van Brunt's suggestions in the Annual Address; next by Mr. Gibson's report for the Committee on Foreign Correspondence, which was confined entirely to explaining how the examination system actually worked in the Royal Institute of British Architects; next, and most naturally, by the report of the Committee on Education itself, and finally by Professor Ware's delicately humorous after-dinner remarks at the closing banquet.

The acceptance of the report of the Committee on Education and the instant and unanimous adoption of its two important and wholly unexpected recommendations was easily the most important piece of business ever transacted by the Institute. The suggestion that a conference, by committee, between the Institute and the newly-formed Architectural League of America (the association of student clubs) with a view to determining how far it may be possible for the latter to assume toward the Institute the same functions performed by the Architectural Association toward the Royal Institute of British Architects, was so natural and so obviously wise that opposition would have been almost impossible. But that the second suggestion should also have met instant and unanimous adoption was really remarkable. As a consequence, the Institute is now pledged to the examination system as the only means by which it will allow itself to recruit new blood — after January 1, 1905. The step now taken was not presented as a novelty: it has often been discussed, and we ourselves have often urged it as the wisest step the Institute could take. But until now it has always met with opposition from the floor, and has been discountenanced by such overwhelming votes that those who have brought into being the new delegate

system are disposed to maintain that the adoption of the examination system is the first fruit of delegate action, and could not have been plucked through any other agency. This is as may be; but the fruit has been ripening for some time past and possibly it might have dropped from the bough this year at any rate.

The recommendation was obviously fair and the next five years are none too much within which to draw into the Institute those desirable members who need not be subjected to the annoyances of examination. These men—and, as the Institute numbers a scant ten per cent of practising architects at present in this country, there should be a good many of them—can enter the Institute under the existing laws, and, as after 1905 membership will "mean" more than it does now, probably many desirable additions to the membership-roll will be made during these next five years. But in view of the change of procedure now announced, the Institute wisely reserves to its Board of Directors the right, during this premonitory period, to require those of whose attainments they may entertain misgivings to undergo examination. After 1905, then, applicants for admission to the Institute, beside adducing the usual evidences of honorable and capable practice during the required number of years, must either produce the diploma of graduation at a recognized school of architecture, or must pass such examination as may be prescribed. This pronouncement does more for the Institute and more for the profession at large than anything the Institute has done in its career of thirty-three years, and it largely makes unnecessary any further agitation of the matter of the licensing of architects in accordance with statute requirements.

Next in positive importance to these suggestions of the Committee on Education was Professor Ware's paper on Competitions, a subject upon which his long and large acquaintance with their workings better qualifies him to speak than any man in the profession. This paper was not only very long but very exhaustive and presented the subject from points of view very generally neglected by practising architects smarting under the acknowledged evils of the system. If in place of being the very last number on the programme this paper had chanced to be the first, it contained so much of suggestion that the discussion of the points raised would have left no time for other business. The reasonableness of the deductions advanced by Professor Ware was evidenced by the fact that, on Mr. Stone's motion, the Board of Directors was instructed to suspend the issue of a competition code, which was at that moment in the hands of the printers, so that the whole matter might be reconsidered in the light of the arguments just presented.

As Mr. Van Brunt in his address announced that his impending lengthy trip abroad would prevent his accepting the customary reelection, it became necessary to elect a full new ticket and the polling of the vote showed the election of Mr. R. S. Peabody, of Boston, as *President*; Mr. W. S. Eames, of St. Louis, as *First Vice-President*; Mr. Frank Miles Day, of Philadelphia, as *Second Vice-President*; Mr. Glenn Brown, of Washington, as *Secretary and Treasurer*; while the three vacancies in the Directorate were filled by Mr. Henry Van Brunt, of Kansas City; Mr. James G. Hill, of Washington; and Mr. Norman S. Patton, of Chicago. A final excellent determination was that next year and on alternate years thereafter, the Convention shall be held in Washington.

THE PRESIDENT'S ADDRESS, CONVENTION OF 1899.¹

IT is my province and my privilege to welcome you to this Thirty-third Annual Convention of the American Institute of Architects, to congratulate you on the national prosperity and progress which it is your high function to symbolize in works of architecture; to refer briefly to the main incidents in the history of American architecture during the past year; and more especially, to point out how the work which we are organized to perform may be more effectually carried out and how the beneficent influence of the Institute may be more widely extended.

If architecture during the past year has made a sufficiently definite advance in structural ingenuity or artistic beauty and fitness to be noted in the official review which it is my duty to lay before you—if in this interval it has earned and is receiving from the public and the nation a more intelligent and appreciative recognition as a fine art, we may justly attribute these results to two causes: first, to the American Institute of Architects, through the cordial affiliations of its members and its organized and persistent efforts during the more than fifty years of its existence; and, second, to the schools of architecture, which are now considered so essential to the generous culture of the youth of our country that they form a part of the systems of technical instruction in many of the principal institutions of learning in the United States. The splendid hospitality of the *École des Beaux-Arts* is no longer essential to the complete equipment of the American architects. During the past year the results of the special training obtained in our own schools have become very evident. The graduates are beginning to make good their place in the ranks of the profession, and the older members find that they are stimulated by a fine emulation of new blood and fresh inspiration. Almost daily new names become prominent, and new reputations are beginning to struggle with old for preëminence. The impulse of this new and healthy dispensation is already felt in the remotest parts of

the country, and the vulgar architectural vernacular which has there prevailed is giving place to coherent and disciplined style.

The Institute should take immediate measures to refresh itself from this influx of new and abounding life. It is most evident that these two powerful influences, the Institute and the schools, which are thus working for the advancement of architecture, should work, not apart in rivalry, but together, in closer and more effective coöperation than heretofore.

To this end, I venture to suggest that, by a single amendment of the By-laws, the Committee on Education should include, *ex-officio*, all those professors and instructors of the architectural schools who are members of the Institute, and, if there are any who are not members, that they should be brought within our fold, so that this committee may act not only as a bond of union between the Institute and the schools, but between the schools themselves; that the annual report of the committee should embrace a general statement of the work and methods of the schools, the number of pupils enrolled, and the names of those especially distinguished; and that the practical interest of the Institute in the welfare of the students should be made evident to them by the establishment of a system of Institute prizes, and, if possible, of one or more travelling-scholarships, open to the students of all the schools.

There are nearly five thousand persons practising as architects in this country, and it cannot be denied that the professional practice and standing of this large body of men is made more secure, more honorable, more respected and more remunerative by the fact that one-tenth of their number is organized and united in a national Institute, which for many years has labored successfully to promote the artistic, scientific and practical efficiency of the profession. It is true that the influence of the Institute is in proportion rather to the wisdom than the number of its members. It is no less true that the Institute is organized for a far larger and a far more widely distributed membership than it at present enjoys, and that, until it has such a national membership, it cannot have its full and proper effect as an instrument for the advancement of our profession, and cannot adequately represent its dignity before the world.

The question how our strength and resources can be best enlarged is, therefore, of the first importance. The men whom the Institute most needs are the men who most need the Institute. A late earnest appeal to the Chapters has in several localities been fruitful in securing many valuable members, as will be explained in the report of the Board of Directors. The Kansas City Chapter has been rehabilitated and will be restored to full affiliation with the Institute under the new By-laws. But the strengthening of the Institute requires measures much more far-reaching. We need new chapters in every part of our wide domain, and, within them, more members, and a much more active and efficient adjustment of their machinery to the needs of young men. No effort should be spared by the chapters to make their meetings so attractive and so essential to the younger men that the necessity for the existence of junior societies and leagues in their neighborhood would be less apparent, and there should be no occasion for rivalry. The Institute should be especially hospitable to the graduates of the schools, and I am persuaded that, if the connection between the schools and the Institute should be established on some such basis of mutual interest as has been outlined, the professors would prove the most effective recruiting agents, and that their pupils on graduation would be made to consider that junior membership in a Chapter of the Institute is essential to their proper and regular advancement in the profession and a necessary preliminary step in their career as architects. The Institute should not only be the guardian of professional purity and dignity in practice, should not only advance the interests of our art and act as the fountain of professional honor, but should aim to secure a more effective unity of effort between old and young, so as to inspire our work with the strenuous spirit of our national life, and in this service to make our art distinctively stronger, truer, and more beautiful. Therefore the Institute needs in its membership, not only the wisdom of age and experience, but the enthusiasm and zeal of youth if it would keep in closer touch with the most healthy aspirations of the profession and avoid becoming the slave of its own traditions. To this end the junior members of the Chapters, recruited from draughtsmen and graduates of the schools, should be made to feel that they are wards of the Institute and essential parts of its organization, and to anticipate their advancement in due time to the successive grades of Associate membership and full Fellowship as assurances of honorable professional positions before the world. It seems to me that the Institute, under its present improved organization, would, by some such process as I have suggested, be brought into closer and more effective sympathy with the young men just entering the profession, and through such sympathy, would receive at least as many benefits and advantages as it would confer.

I commend these propositions to your careful consideration, and would further propose that the Board of Directors be requested to examine into the work and methods of the most successful of the junior architectural societies or leagues with the object of formulating from their experience a scheme of exercises and duties to be recommended in a circular to the Chapters, so that they may learn how to give greater interest and a more abundant life to their proceedings, and become more active and efficient agents in the practical work which this Institute is organized to perform. Thus may be established a propaganda in the interests of a warmer comradeship, a purer practice, and a nobler art.

¹ Annual address delivered at the Thirty-third Annual Convention of the American Institute of Architects held at Pittsburgh, Pa., November 14, 1899, by Mr. Henry Van Brunt, President.

In considering what has been actually accomplished by our efforts during the past year, it is with especial pleasure that I refer to the fact that, under the operations of the Tarsney Act, public buildings at Norfolk, Va., Camden, N. J., and Ellis Island, New York City, are now erecting from the designs and under the care of private architects; that the new Custom-house in New York and the Judiciary Building in Washington have, after fair competition, been assigned to architects capable of expressing the genius of the nation in monumental architecture; and that the Baltimore Custom-house and the National Building at Cleveland, O., will probably soon be the subjects of competitive design. The work on the buildings for the Naval Academy at Annapolis and on the Government Building at Chicago is in the hands of private architects. It is probable that other public monuments, especially in the West, will be open to the profession as soon as the sites shall have been vested in the United States. The office of the Supervising Architect at Washington is thus gratefully relieved from a labor which no individual genius, however strong, and no official organization, however skilful, can be sufficient adequately to perform. But while the efforts of the Institute have thus far succeeded in opening to fair and honorable competition the designing and building of the national monuments, and have made an encouraging beginning in rendering them more worthy to represent our higher civilization in terms of art, it must not be forgotten that these opportunities have been opened to us only through the intelligent sympathy of the present honorable Secretary of the Treasury, operating under the provisions of the Tarsney Act; and that, without the accident of this intelligent and exceptional sympathy on the part of that official, the public buildings of our country would still be manufactured by the architectural machine in the Treasury Department, with its subdivided professional responsibilities, its baleful political affiliations, and its deliberate and extravagant methods of administration. Our attempt to formulate and obtain the enactment of a law sufficient to secure for us a truly national architecture fit to represent our highest standards in art, should not for a moment be relaxed, and our legislative committee on Government architecture should be continued, maintained, and encouraged to use every honorable means to bring about this result at the earliest possible day.

I am glad to bear witness to the fact that, in the conduct of competitions in general, the dignity and the highest interests of our profession have, during the past year, received more adequate and respectful consideration than heretofore. But it must be admitted that in many parts of our country, especially in those more remote from the great centres of activity and intelligence, the loose professional habits of many practitioners of our art still encourage the publication of "Invitations to Architects," while, competitions in which the contestants are arbitrarily deprived of every proper safeguard, and are asked to submit themselves to conditions insulting to their self-respect and devised to secure their service at the smallest possible cost, meet with ready and humiliating acceptance. Near every such locality the Institute should maintain a missionary chapter to teach the primary principles of honorable practice, for the benefit, not of the architects alone, but of the public.

Among the competitions of the year which have been managed in a manner creditable to the projectors, the contestants, and the judges, by far the most conspicuous and memorable is that for the laying out of the buildings and grounds of the University of California, under the "Phoebe Hearst Architectural Plan." Though the highest award in this international competition fell to a French architect, the brilliant part borne especially by some of the younger American contestants is a cause for congratulation. I should like to see this Institute, by formal resolution, recognize our indebtedness not only to the munificent and public-spirited woman through whom this important architectural event was made possible, but to the managing committee for furnishing an example so conspicuous of a fairly-conducted competition on a great scale, and for the courage and intelligence with which they have conceived a scheme of architecture which in extent and importance has not been exceeded, if it has been equalled, in modern times.

Another cause for congratulation resides in the cordial and effective alliance between painting, sculpture, and architecture as exhibited in several works of monumental importance which have reached completion during the past year. It is only by such harmonious and fruitful coöperation that the highest civilization of our times may at length begin to receive competent expression in art. The public is beginning to understand that the highest and noblest expressions of art, not only in permanent monuments, but in public pageants of merely temporary significance, are possible only through such a concert of effort, and architecture is glad to restore to her sisters of the brush and chisel the field of high endeavor in which the old masters found their greatest opportunities. We especially recognize and admire the splendid service rendered by the sculptors in the decoration of the triumphal arch erected in New York in honor of the Navy and the victor of Manila.

I have looked forward, gentlemen of the Institute, with especial solicitude and interest to this, your Thirty-third Convention, as it is the first in which, under our finally amended laws, the experiment of authorized delegations from the Chapters is to be tried; the first in which the remodelling of the Constitution and By-laws has not presented itself as the paramount and absorbing topic of report and discussion; and practically the first in which the Institute has given to it the privilege and opportunity of considering at peace and with-

out fear of interruption subjects related to the highest interests of the profession.

If, after those many years of experiment, we have at length reached an era of tranquil and prosperous development, let us realize that the best use we can make of this peace is to comprehend and to assume all the grave responsibilities which belong to the undisputed position of the Institute as the national representative and protector of a great profession and a greater art.

You may be sure that the civilized world will receive with peculiar interest all that we have to give forth in the elucidations of the strange and unprecedented conditions under which a rich and prosperous nation, unembarrassed by patriotic traditions of art, is developing style; that it will eagerly hear all that we may have to say on the practical applications of science to architecture, on the progress of invention in respect to building, on the discovery of new materials and new methods and their effect upon our art, and on the incidents of our unimaginable progress in the future. We alone are in position to influence the expression of the immense energies of our nation in architecture. Let us endeavor adequately to fulfil these duties.

I hope I may be permitted to close the address with a brief personal statement. When at the last Convention you saw fit to make me President of the Institute, I received the unexpected honor as an expression of consideration and respect for one whose connection with the Institute began at its first conception, forty-seven years ago. Recalling the brilliant services of my old friends and predecessors in this office, I undertook its responsibilities with doubt and sincere misgivings. But as the culmination of a professional year is now, in the course of nature, drawing towards its close, and as a more precious testimonial of the good will and kindly feeling of my professional fellows, the honor was very grateful to me, and I now resign it with a deep appreciation of your generous confidence. If, possibly, it may be the purpose of my friends to propose my name for an election to a second term, as permitted by the By-laws and as customary in your practice, I must with gratitude, decline the compliment, as I have in contemplation a long visit of study and observation in Europe.

I sincerely trust that in choosing my successor, you may be wisely guided and that he will receive the office with the consciousness that its responsibilities have increased, and are increasing with time, and that a merely perfunctory administration of it will delay the development of the great future of the Institute.

THE INFLUENCE OF THE FRENCH SCHOOL OF DESIGN UPON ARCHITECTURE IN AMERICA.¹

THERE are two interpretations of the subject of this paper that at once suggest themselves to the mind. Of these two, I will endeavor to discuss in detail those manifestations resulting from the influence of the French School of Fine-Arts at Paris, or l'École des Beaux-Arts, upon our architecture. If there be any doubt in the popular and professional mind as to the character or nature of the influence of the "French School" as a general term, it probably relates more to the École than to that historical French school as distinguished from the Italian school or German school. Of the nature of the influence from this source, there would seem to be little room for doubt, as so much of our work which is of merit and interest is drawn largely from that source, and barring the dismal period of the Mansard roof applied to frame-houses in suburban and city outskirts work, is genuinely valuable as a source of inspiration and in its influence. In addition, there are many of us who think there is no doubt as to the nature of the influence of the École, and having this belief, and with the desire to have this belief become general, I have undertaken to write these few pages.

Given "an influence," the questions arise, How is it manifested? Are the results good or bad? In this case the influence is exerted through the work of (1) French architects in active practice—many of them "patrons" in the École, (2) through the work of the Frenchmen in the school, (3) and through the training and work of Americans who have studied at the École. The first two media are important, but it is really as to the value of the third that we, as a people, are vitally interested. If the influence be a good one, we want it, and therefore we want our young architects to study at Paris in the École. This, then, is the proposition, which follows logically from any demonstration that the influence of the École is a broad, noble, artistic, healthy, and good one, viz., the training of American architects at the École des Beaux-Arts is a thing to be very much desired in every sense of the word and most unqualifiedly. I shall therefore endeavor to demonstrate that the influence of the École is broad, noble, artistic, healthy, and good; that, having these qualities, it is most important and vital to us. The fact that American work shows in a markedly increasing amount the impress of this influence is in itself a thing in favor of my demonstration. I have endeavored to approach the subject with a mind and heart open to learn as near the truth as can be, from whatever source, and with the desire to see whatever there is of good in every cult, and to scan the entire horizon fairly, rather than to accumulate only one line of data to prove a point that has been assumed beforehand.

¹ A paper by Mr. A. L. Brookway, of New York, read at the Thirty-third Annual Convention of the American Institute of Architects at Pittsburgh, November 14, 1899.

The effect of any thought, any idea, any system of ideas, of any resulting system of training to inculcate ideas, is manifested in various ways and degrees of merit according to the character of the mental, moral, and spiritual development of the individual. Consequently, we see many results which those who are opposed to the training at Paris point as showing that this training is fruitful in *bad* results and influence. It is almost unnecessary to remind you that there never has been a time in any line of art, science, or industry when such was not the case. It proves nothing against, nor for, any school. It simply demonstrates the infinite variety of the human make-up. We do not purpose, however, to disregard even these so-called harmful results. We hope to prove that the influence of this training is good, and not bad. Now, to show these good results, let us consider the exact nature of the training at Paris, and then the character and nature of conditions here, at home, in America, in order that we may come to a just conclusion. Before doing this, however, there is another thing to consider. Many will say, "but if we can give as good or the same training here in America," why is not that better? Some day it may be as good. We all hope it will be. That is what we are striving for, and that is why we say now, Go to Paris. But even at the period of "some day" I think we will still say, Go to X. That raises the much-mooted question of our political life, "America for the Americans," and the endeavor to put our art life upon the same plane and to prove that an American training alone is the thing for American art. That is as unsound in art as it is ethnologically and in politics. The Chinese wall of exclusion is getting badly worn out. We can draw in unstinted measure from universal history and from the countless manifestations of nature to prove not only that that is an unsound, unhealthy, and false attitude, but that the obverse proposition is founded upon the truest principles of art and nature, and has been and is productive of the greatest and most invaluable results. To state it briefly, we should not, from any sense of national pride, object to going outside to be trained to study, to acquire ideas and experience, to develop. For instance, begin with the earliest of architectural creations and follow chronologically through history and note the constant interchange of forms and the persistence of some forms, the borrowing of ideas, and the developments frequently of the borrowed ideas into still more beautiful and refined forms; in fact, re-creation. What of the Greeks did get the idea of their anthemion or honeysuckle ornament from Assyria. That did not prevent their practically re-creating it into the exquisite form that we know it to-day. What if the prototype of the Doric column is found at Beni-Hassan, in Egypt, and the idea more or less borrowed? That does not account for the slow development of the Doric order and final sensitive and refined proportions of the columns of the Parthenon. And the Romans! Borrowing here and there ideas and forms, what do they create out of them? A line of structures of far more kinds than we find before, on a larger scale, creating types of construction that stand as models and marvels to-day; in fact, the architecture of cosmopolitans. Ideas picked up from others you might say, but applied to the different conditions of their public and private life in a masterly way; and how diverse were their conditions of life. With them we find the prototypes of many kinds of buildings that to-day are in our everyday life. Then the so-called Romanesque period, still borrowing forms, interpreting in accordance with their intellectual and artistic development, and applying to their conditions of life and thought. And so on. From the most minute examination of history we can find nothing inharmonious, or detrimental, or obstructive, industrially, politically, or artistically, in the free interchange between nations. And, curious as it may seem, this interchange in art has been known to take place when the ethnographical divisions of the human race, known as nations, were at war with one another; and also, the periods of great development do not seem to be correlated with the moral standing of the people. Nature herself shows us many instances to prove the soundness of our position. Sometimes acting alone, sometimes using man as an agent. The rotation of crops in the fields through succeeding years, the method of seed or pollen scattering on to new fields, the different character of a second growth of timber when the old growth is cut down, the many and diversified results of fruit-tree grafting,—all are but material manifestations of the great value of interchange, of borrowing, of re-creating under new conditions, and of merit in these creations. We observe all these phenomena. It is only by classifying and analyzing that we discern the truth and profit by it in the guidance of our own lives and actions. After this rough and incomplete demonstration, I think you will agree that there is not only no risk run in our architectural development by studying elsewhere, but that, on the contrary, the recognition of universal brotherhood is an art as well as an industrial and political necessity in the march of civilization.

"Thou knowest not what argument
Thy life to thy neighbor's creed hath lent."

But, granted the truth of all this, why necessarily Paris, and the École? Because the École stands to-day the peer of all others, and superior to many of them. Comparison will show this. Then, too, in the character of the modern French work, many find the worthy successor of the great Italian period of the fifteenth century. Certain it is that the French, of all nations, have fostered and cherished the sources of inspiration of that great period, have inculcated the love for it, and have striven to discern and apply to their art life of

to-day the fundamental and underlying principles which made that period the great one it was. They maintain it at Rome, in the Villa Medici or Académie de France, in connection with the École at Paris, where the Prix de Rome men of the painters, sculptors, and architects pursue their four years of research and study. The Envois de Rome are to-day the most accurate documents on the art of the past that we have. The result of this is an atmosphere of art at the École, which, being breathed by the students in architecture, infuses them with higher ideals of their art, a seriousness of purpose, and a devotion which stops at nothing. Given a training in such an atmosphere, and some good fruit must be borne. When that training is what it is and is *known* to be, and not what it is *thought* to be by some who make capital out of opposition to it, results cannot help being tremendously beneficial.

We return now to the first part of our proposition, viz, the character and nature of the training at the École. Now, of what does that training consist? At the risk of being tedious, I will briefly state an outline of the course. In the first place, the entrance examinations are in themselves very comprehensive. To be received at the École and to become in a position to start in the course itself one must give evidence of a knowledge of the Classic orders in detail and express this knowledge in the design of some kind of structure, drawn in plan, section, and elevation, and with the shadows accurately cast and washed in. A limited time is allowed for this, from 9 A. M. to 9 P. M. Then a charcoal drawing must be made, in a limited time also, from some plaster model. Then a piece of ornament must be modelled in clay. These three examinations take place on different days and under close surveillance. These are called the "admissibles," and one must pass these in order to be eligible for the mathematics and history. These latter comprise an oral and written examination in universal history. An oral and written examination in arithmetic, algebra, plane and solid geometry, trigonometry, and descriptive geometry. They are severe examinations. Rarely do more than 25 per cent of those taking the examinations get received at any one time. We are now ready for work. The entire work to be done to receive a diploma is divided into a first and a second class.

We begin in the second class and must complete the following: at least four *projets* and two "elements analytiques" must be honored with mentions in architecture, i. e., must be considered by a jury of the patrons or professors of the school as of sufficient merit to be mentioned, or, as we say, "passed." The *elements analytiques* are careful studies at one-fifth the size of execution in detail of two of the Classic orders, and mentions must be obtained in them before the student is eligible for a regular *projet*. The *projets* are judged from three points: first, as an idea, a solution of the programme given; second, as to the ability with which the first *esquisse* or study has been developed or studied out in the character and spirit of the first sketch; third, as to the merit of the draughtsmanship. Now, the first study or *esquisse* is made in a total of twelve hours, *en loge* under surveillance but with a certain amount of liberty, but no access to any helpful documents. It is an invaluable training in itself alone. It leads to concentration of thought, it develops versatility of thought, it trains the memory, it matures the judgment, develops the use of the pencil in rapid and valuable sketching and expressing of the mind's ideas. The work of the two months following is won on that twelve hours' effort, for your patron may say your sketch, your conception or solution is worthy or unworthy of being developed. In the one case, your next two months is devoted to elaborating, developing and perfecting your sketch, or else, in case it be unworthy, of studying old programmes and making sketches, studying the photographs of all the successful *projets* of the school and inspiring from the many works at your disposal on the different periods of architecture. During these two months, or, in fact, at your option, there are also other matters to be attended to. To enter the first class you must be mentioned in a drawing from the antique—a drawing in ornament—one from the nude figure, a rendered drawing in archaeology. These often mean, and usually do mean, a goodly number of drawings before one of sufficient merit is produced.

To further develop the idea of the *esquisse* from the *projets*, there take place every two months, alternating with the *projets*, twelve hours' *concours* for *esquisse-esquisse*, in which the entire work is finished in twelve hours, and the judgment is based on the character of the idea and the manner of drawing or rendering. There is not time to dwell upon the inestimable value of these *concours*.

Then, there are courses and examinations in higher mathematics and mechanics, descriptive geometry, and shades and shadows, physics, chemistry and geology, stereotomy, perspective, building legislation, theory of architecture, and general history, and also a course in construction with several minor and one principal *projet* in construction with a view to the determination of the construction on scientific and mathematical principles. The beauty of this curriculum is the absolute freedom within the well-defined limits. I mean one arranges one's own work. Some men do the second class in a little less than three years; some are four years, some five years in covering all the work.

So much for the mere outline of the required work. In addition thereto, one has an opportunity of very great value—and that is, working on the studies and rendered drawings of the *projets* in the first class. By this means, ideas are fostered and cultivated, the solution of difficulties is observed, and one's general information is

largely increased. I think that too much stress cannot be laid upon the value of this work, which does not score a credit mark for you on the records of the school, but which does in the matter of your general training. The men in the first class are a body of architects each of whom has had from three to five years' experience, and their knowledge, judgment, developed and inherent taste are veritable bulwarks for the new men of the second class. Moreover, this influence is always present in the *atelier* and is an invaluable part of the curriculum. Many of these men, in addition to the school-work, are earning their livings in the offices of various Government architects; some, even, are the sons of famous and prominent architects. During my period of study there, there were four men in our *atelier* (Ginain) who were sons of Government architects of prominence. Years of office practice here at home could not equal a year or two under such influences. When you add to this the surroundings of the school buildings, the books, photographs, casts, drawings, etc., the ever recurring *concours* of the painters and sculptors, the exhibitions of which are held in the Salle Melpomene right at your door, so to speak, the result in the mind and heart of the student is an uplifting one, a loftier conception of architecture results, a devotion to one's chosen work is aroused, a sincerity of purpose, an increase of thoughtfulness, and the memory is stored with experiences to be drawn upon later. One realizes that architecture is a fine art. Besides the outline of the work in the course, there are various prize *concours* open to the students of both second and first classes, and once each year are the various examinations or *concours* for the Grand Prix de Rome, which are open to all Frenchmen and which are participated in very generally and are valuable to the foreigner in showing the various solutions made of the different problems. Then there is the work of the first class on a more difficult set of programmes involving all the experience of the second class and the training of one's native ability to prepare the student to grasp them.

These first-class *projets* are of a very high order, requiring wide knowledge, experience, and ability in their solution. They possess all the dignity of the veritable problems of actual practice. By them one is taught the essence of the fine art of architecture. Objection is made that the programmes are visionary and impractical. The international exhibitions of the French Government alone would refute this assertion, say nothing of other countries. The recent competitions of our own National Government for the Department of Justice Building at Washington, the Custom-house at New York, the Ellis Island buildings, the New York City Public Library, are all of the class to design which the training I am outlining qualifies one for.

Then, too, are the *concours* each year, outside of the regular *projets*, involving work in the decorative arts, such as the Rougevin and Godebœuf. The *esquisse-esquisse* of the first class are also more comprehensive in the subjects given, and the judgment is more rigorous on the rendering. The object of the *esquisse-esquisse* is to develop rapidity and accuracy of thought, mature and educate the taste and ripen the judgment. And, as a means of showing this development and maturity, educating the hand of the draughtsman to express on paper rapidly and effectively the idea finally selected as the most superior. The beneficial influence of such training upon men studying to be architects cannot be expressed in a few words. I believe no one questions its value. It has not been my purpose to give, as in a catalogue, a list of the requirements of the work or course at the École des Beaux-Arts. I have aimed rather to outline only the system or method of training by which the student proceeds, and this outline has been all too brief to satisfactorily portray it. I have purposely left, as a culmination, the point as to who directs the workings of the school and as to who furnishes the instruction. Under the Minister of Fine-Arts, who is a member of the Government—the school being a national institution—there is provided a director of the school proper. He and his subordinates attend to the general direction of the business part and keeping of the records. The question of administering discipline is detailed to a force of "guardians," or really a miniature "police," who look after the matters of order throughout the *ateliers*, *musées*, the *concours en loge*, etc. It might be said that the professors, as we call them, or "patrons," or *professeurs*, have no active part to take in the question of discipline, and quite right, for the patrons and *professeurs* are among the greatest men, in their various professions, in France. They are the leading Government architects, sculptors, painters, etc. They come at stated times to the *ateliers* to look over and criticize for each individual the work done. A few words, a few strokes of the pencil, a word of commendation or disapproval, a reference to documents from men of such education, experience, training and high standing, is the finishing touch of the system of education and training of the École des Beaux-Arts. From whom can one learn better than from the masters? Is that not world-wide in application? Has it not always been so? How much more the word from such a man means than from one who has little or nothing to show as his real creative work. The professor of Theory—M. Guillaume, when I was there, an architect of high standing, member of the Institute, etc.,—delivers lectures on the "Theory of Architecture." At the regular intervals he proposes programmes for the two classes. The student makes his *esquisses*. He then develops his *esquisse* under his patron—again a man of the highest attainments. The drawings are exhibited for the examination and the jury is a group of the leading men in art, selected for ability. Such instruction and training cannot but be considered the soundest in principle, and most beneficial and wide-reaching in results. And

further, not content with the best, they want *all* of the best. Therefore, one has the choice of working under any one of three patrons in architecture in the school proper, and, in addition thereto, there are a number of leading architects who for many years have maintained *ateliers*, and under whom students who have been admitted to the school may study, if they so elect. Consequently, if one thinks M. X's reputation and work greater than M. Y's, he is privileged to study with M. X. With such men to guide, one can expect the training to be superior, to be thorough, to be great. One is shown how to take a comprehensive grasp of a problem with varying requirements. The features of most importance are sifted out, those of lesser importance arranged and grouped by themselves, so as to lead up to the most important. One is taught to analyze and to make a logical, and synthetical and artistic solution. To grasp in its entirety first, every problem, is the start. Relative proportion, character, simplicity, openness and circulation, organism, vitalized and rational symmetry, mass, are the first considerations. Then, when once the general scheme is adopted, the details are worked out with due regard to convenience, construction, etc. Then, too, think of the draughtsmanship. The stress laid upon that is very great, because the French are a very artistic people and draw almost instinctively.

The freedom and publicity of all schools and museums has also done for them a great deal that that same training for our architects is now doing for our people. But even while the grade of draughtsmanship is very high—I will not antagonize by saying highest—it is always the idea that the patron and jury are insistent upon. Good or fine draughtsmanship may win extra commendation for a good idea, but it never carries through to success an ordinary or poor one. Nevertheless, the training does produce great, facile and versatile draughtsmen. (To the American student this is of course a great training.) If draughting is our means of expressing our ideas, certainly beauty and eloquence are as valuable in that case as in any other. A man with great ideas is going to do more good if he can express them well and beautifully than if the expression is clumsy, or involved, or ambiguous. The hand is trained to work with the mind, and to respond accurately and effectively. Plan, section, and elevation are the usual and customary means of presenting the *projets*. Perspective is taught thoroughly, and sometimes *projets* are required in perspective, but the problems are studied in place, elevation and section almost entirely. To the advocates of perspective, here is, of course, a thing to object to. I cannot enter into a protracted discussion on this point. The great work of the Beaux-Arts does not depend upon it by any means, and the great value of studying in elevation is exhibited on too many sides. I consider, however, the rendered scale elevation more truthful, and hence a more valuable document or means, than the perspective, which is true only from one point-of-view. "Doctoring" perspectives is too familiar to the office man to ever allow of a dignified or scientific standing for it in establishing a system or a means of educating or training. What is their usually estimated value? That of presenting intelligibly something to the lay mind. (I mean to consider this point later.) It is assumed that the architect will understand an elevation. For the rendered elevation, there is a great deal to be said; in fact, everything. While mathematically an orthographic projection, it is, owing to our limited powers to conceive infinite distance, practically true from points-of-view at a very limited distance, and consequently is of more general accuracy than the perspective on this account.

Further, the question of proportions is more readily handled in elevation. (Perspective study is valuable as an adjunct to study in elevation.) The general composition and proportioning of masses is also faithfully expressed in elevation by means of accurately cast shadows and rendering so that the various planes of the composition are truthfully presented. Perspective is entirely inadequate to express in many cases. Furthermore there is a long history back of the elevation as a means of expressing the idea of a façade. It is, furthermore, the universally accepted means of expressing vertical proportions. And one thing is certain, that, at the École, the student is most thoroughly trained in all the possibilities and capabilities of the rendered elevation and rendered plan, with all the surroundings, accompaniments and embellishments of landscape gardening and architecture, sculpture, etc. A due and careful regard is always given to the "setting," so to speak, of every building. No one will deny the great importance of such education and training; and most will affirm that it is not only absolutely essential, but that we Americans are inclined to pay too little attention to it and do not fully realize its importance. Before leaving this brief outline of what the work at the school consists of, and under the influence of which the student works, I want to refer to one other matter. The spirit of the school is most liberal or catholic in its work. The work is done under the bright influence of valuable traditions. Centuries of history go to make up the material which it analyzes and studies to see how certain problems were solved. Recognizing that the spirit of Renaissance is still a vital force in the art, industrial, and scientific thought of to-day in greater measure perhaps than ever before, it endeavors to create its work in harmony with that spirit. It does not disdain the style of any period nor the lessons from any style or period. "European traditions" are held up by many as things to be avoided. They are held to stunt and cramp our growth and development. On the contrary, they are as valuable to us, or should be, as to Europe. Who are we? Are we not of European stock? Not so far removed, either. Do we decline to accept the traditions of European scientific

or industrial discovery or thoughts? No. We absorb it and mold and shape and adapt it to our purposes and special conditions, and make conform with our ideas. The work of the world in science, art and industry is to-day the property of every country and people, and is the foundation on which we must base the structure we are to rear. The telegraph, telephone, steam and electricity have to-day created a universality of conditions. Does the fact that Faraday or Galvani or Holtz were discoverers and pioneers embarrass the value of our electrical progress and creative ability? That attitude which disparages the value of "European art traditions," and the necessity for acquaintance and familiarity with and intimate knowledge of them, is an unsound and unhealthy one and unworthy of a sincere seeker and worker in the field of art. The gift of the artist is God-given. That gift has to be trained. Sometimes it runs away from its training when the measure of the gift is so large as to amount to genius. A sound and proper training produces better results than none at all, and for the average worker is essential to valuable creative work. Originality is not stunted or killed or cramped by training. It is guided. Average minds and abilities are developed. Better intelligent work than unintelligent. Richardson was not hampered by his many years at the École.

What, then, is the influence of this training on architecture in America. In the first place, it has helped to raise the standard of value in planning, in composition, in design, in style, in quality of workmanship. And one of the most important ways in which it has done this is in the influence on the public at large, where it has been a large factor. The public must be appreciative in order to make great works possible. That is one great difference between here and abroad, and always has been — a difference which many unselfish, high-minded and devoted men are struggling to obliterate. This influence upon the public has been brought about in many ways, but there it is, as witness the many evidences of the last decade. The condition, too, is riper than it ever has been, for many reasons; but the value and importance of it is not to be overestimated, and it is a sacred duty of each and every one of us to do all we can to further it for the good of our art, for the public must be made to realize that architecture is a fine-art, and that the architect is an artist-constructor primarily, and not a purely business man. Each returning student is a centre from which radiates in constantly widening waves the lofty conception and position of architecture as he has been taught it at Paris. His influence on his family is naturally strong. From there it spreads, too, in the curious and devious ways of social intercourse. Then, too, we have a double manifestation of the influence of the French school. Very many of our college courses in architecture have been remodelled more or less radically as influenced by the work at Paris, and in the strongest of our Eastern colleges this influence of the Paris school, — because it is found to be in the right direction, sound, high-minded, true and sincere, — is very strong indeed. This alone is also a great influence on the public mind, and as the constantly increasing number of students goes out, each one of them spreads the cultivation and training, and influences the taste of those he comes in contact with. The value of the training at Paris is recognized in this remodeling of courses; in appointment of men trained at Paris to positions of instruction. Our colleges are progressive, and in doing this doubtless recognize that it is a true and valuable system, and one to be desired for the inculcation of the true appreciation of architecture as a fine art. The influence of the school is also shown in the character of all important recent competitions. Aside from the important and leading part in these competitions that men trained in the École at Paris have played — and I respectfully call attention to their constantly increasing number — the character of drawings required has become almost general in being modeled after those of the École. They have come to be accepted as a type for that purpose. And this is of inestimable value, from the point of view of art as well as morals and honesty. The influence of the French school is essentially an educating and uplifting one. It promulgates positive tenets, ideas, methods. It gives you something as a guide upon which to base judgment, cultivate and train taste, and create work of high art value. It teaches you the rudiments. This becomes also a vital force in those who have studied there. There is an association here of architects who have studied there, and as a society they have been and are doing active, serious, and thoughtful educational work, in holding a regular series of *concours* among the great body of draughtsmen throughout the country in offices and in some of the colleges. They have done very much already to raise the standard of draughtsmanship, in broadening the view, of developing the taste, in encouraging serious, thoughtful work, and the results have been most gratifying and beneficial. Is this not the way to do? What other society of architects is trying to establish positive thought and methods? It will not do to criticise after the thing has been done, and ignorantly done. What the student wants is "how should it be done," by what guides? Some of the sketch-clubs throughout the country have been doing the best they could on certain lines, and they have co-operated with the Beaux-Arts Society in this respect. Is this not a legitimate field for the American Institute to enter? Would not its work become more vital, more lasting, more beneficial? Would it not be doing what it should do for the cause of art and architecture? I believe it would. Another important influence of the French school is to show the importance of a National Art School for our people as well as our artists.

It shows that the development of the artistic qualities is of national concern, whereas with us it has been due entirely to private enterprise, of art patrons and devoted artists who have banded together for the purpose. This is bound to come, and is but a logical outcome of our political institutions when once we have men in power who can see beyond an election district, or the present day. I know what will be claimed as to the opening of our public buildings to competition of our leading architects and the work of the Institute, but I also claim that this, again, is body and soul of what is taught at Paris. And why is it taught at Paris? Because it is sound, and rational and true.

The influence of the French school is, further, to give a loftier conception of the art position of architecture. It is truly a fine art, and that position is always held before one as an ideal. With our strong practical and common-sense traits, education in this line is what we need. The standard of art value of our buildings has been raised by it, I believe. I know that many critics contend that the buildings of many of those architects trained at Paris are copies of French buildings, and, to quote a recent criticism I read, "unworthy of serious notice" — an expression of criticism based purely on the façade and totally disregarding the value of the plan. But suppose French influence be plainly shown. Because a thing is French does not mean we must avoid it. Listen to this philosopher historian: —

"Our means of intellectual intercourse unite the remotest parts of the earth; and men cannot remain strangers to each other or be ignorant of what is taking place in any corner of the globe. The consequence is, that there is less difference at the present day between the Europeans and their descendants in the New World, in spite of the ocean which divides them, than there was between certain towns in the thirteenth century which were separated by a river. If this tendency to assimilation brings foreign nations closer to each other, it must a *fortiori* prevent the descendants of the same people from becoming aliens to each other."

And this was written by De Tocqueville in 1832.

Steam and electricity — the railroad, ocean-steamer, telegraph, telephone — have brought the remotest portions of the earth into close relationship. The conditions of life are becoming more uniform. It would seem, therefore, that an excellent French idea might not be so out of place, or inappropriate, or lacking in originality here with us. The plan is the point of most vital consideration as taught at Paris, and certainly that should appeal to our minds. To make a useful and convenient thing beautiful is certainly right and desirable. And that is one of the most important results of the influence of the school; it has turned us away from the sole consideration of flashy perspectives and set us to considering the plan. And yet, if a façade shows French tendencies or influence, we get criticisms as above. The critics do not froth at the mouth, however, if the design is "copied" from the Italian, and generous praise is given to some who make appreciative use of English Gothic, and also censure to those who attempt the Gothic and miss its spirit. But a man who appreciates Gothic then tries his hand at Classic. The result is dry and archæological. That is one thing the school does, — it trains one to use any style understandingly and intelligently. And there, again, is another influence of the school. It trains to get at the essence and spirit of every style. The curious thing is that our critics take exception if one's results show the adoption of French influences, but do not if other influences are apparent. It seems to be accepted that the French school is antagonistic to the Gothic style. The position, if I understand it aright, is that the Gothic buildings are not adapted to our requirements of to-day, and were built to meet other ends. The logical construction and sound artistic merit of the Gothic style are not denied, but simply the same principles of plan and design as in Gothic lead to other results when the present complex conditions of life are taken into consideration. I feel that we are all so sincere and earnest in our desire to work out the best we can that controversy over the merits of this design or that will not be time so valuably spent as to consider this other phase of it; that even where disagreement arises as to façade, agreement exists as to the merit of plan, composition, or grouping of masses. Now, I believe we are in a formative period, and that in developing our planning ability we are laying the foundations for a true style. The training of the school results in this. This consideration, too, is now a fundamental matter in all important competitions, and in these competitions the number of men trained at Paris who reach the front and are among the winners and near them is steadily increasing. Why? Because they are trained to grasp a subject thoroughly and comprehensively and present it intelligently. That is a result we want and we welcome that influence. And, now, one more consideration. Are not the conditions of life in civilized countries getting more and more to an absolute level and similarity?

All modern developments, inventions, etc., have worked to this end. The government of society, while differing in detail, is mapped out along the same lines. Government buildings, places of assembly and amusement, living apartments and dwellings, have come to be of a nature to afford about the same accommodations everywhere. Why, then, is a French apartment-house or city-hall, or theatre or opera-house, so out of place in America or England? I claim it is not. If, therefore, the influence of the French school is shown in French ways and means on façades, it does not decrease its artistic merit so long as the purpose and character of the application be apparent. We copied freely from the Romanesque at one period. That seemed to be heralded as a new style. But, certainly, the

adaptation of a monastic style of a period of dire general ignorance to buildings of our complex requirements cannot obtain the artistic justification that much that is condemned as French undoubtedly does obtain. It was merely the external form of that style that was taken, too. Its inherent and necessary construction was not taken. It was a style conceived in a spirit and under conditions out of harmony with the spirit of our age. It was picturesque, awe-inspiring, impressive, but our use of it was purely superficial, and cloaking an office-building or department-store or private house in its forms could not make those buildings Romanesque. The impulse died with the genius of the man who first used it so successfully, and we find it was the great personality of that man, and not sound art principles, upon which the use of the style was adopted.

I have endeavored to avoid the mention, for purposes of demonstration, of any particular building, because I did not wish to have the personal element brought into the discussion of the principles of our art. I could cite very many buildings, however, designed by men trained at the French school, which, to my mind, show the elevation of the standard of design in our architecture that has taken place and which is directly due to the influence of the French school. We are all striving along the same lines, and truth is acceptable no matter from whence nor by whom it is made plain to us. We want all the truth. Some of us find it in one way and some in another. Neither precludes nor excludes the other. Then, I say, all hail to any school or cult which will teach us, ennoble us, and help to develop the divine gift.

THE INFLUENCE OF THE FRENCH SCHOOL ON AMERICAN ARCHITECTURE.¹

WHEN a Consistory of the Roman Catholic Church decides on the canonization of some holy man, before his formal sainthood is proclaimed, one is appointed to attack the pious memory of the subject for sainthood. This is the *Advocatus Diaboli*. When I was asked to prepare a paper on the Influence of the French School on American Architecture, I was reminded of the ancient Roman practice. Am I then the devil's advocate? Am I to assail the prospective saint with scorn and accusation? That would be an ungracious task, for undoubtedly the canonization will take place, however the devil's advocate may protest. There seems no alternative, however; I must do my duty; I must find fault, pick flaws, offer protests; and the best way to do that is to begin with praise.

Even before indulging in this crafty procedure, however, let me enter a caveat. I cannot admit that we are considering a matter of absolutely revolutionary importance—the coming of the architectural revelation to an hungry and waiting world. We have had several new dispensations before; even I remember three of them very distinctly. There was the Queen Anne affair, and a few years later the episode of Romanesque, and still later the Colonial excitement. Each was hailed with an enthusiasm that rivalled that which acclaims the advent of the Parisian Renaissance. Each passed, and the drawing-boards that once knew them now know them no more. Is this to be the fate of the latest fashion that we have imported with our champagne and Easter millinery? Even the devil's advocate cannot claim that. There was much good accrued to us from each of the three architectural events of the post-centennial. The Queen Anne craze served the part of the swallow of salt water in the case of sea-sickness—it prepared the system. Romanesque gave us some idea of what vigor and power and honesty meant in our work. Colonial suggested to us the value of historical association—of ethnical continuity. And the Parisian Renaissance? I honestly think it will do more good than any of the others.

But is it the last word in our architectural development? Is it the revelation of all truth, of the final and perfect style? I have seen the rise and fall of Queen Anne, of Romanesque, of Colonial; I have lost my illusions; I hold it only an episode.

Yet it is an episode that has only begun—let us grant that. Thus far it has done much good and more harm; when its work is finished the good will have outweighed the evil. In time we shall come to discriminate between what is permanent and what is evanescent in the movement. At present we take both; we do not regard the thing judicially; we accept all that is offered and on its own valuation. For my own part I believe that we can cut the whole thing in halves, and that we shall do so. On the one side we shall put the underlying principles of modern classicism—these are the lasting qualities; on the other side we shall put the style itself—this is the accident, the matter without vitality or moment. In a word, the motive is good, the style bad.

The advantage that thus far has accrued to us, and it is very great, is the sense of fundamental law, of a certain self-restraint, of the subordination of personality in radical things to something that is larger than the individual. With us architecture for a quarter of a century has been another name for aesthetic anarchy. Every man for himself and the client take the hindmost. We have planned in the happy-go-lucky fashion that prevails in England, and with almost as unhappy results. We have had as little idea of the sanctity of style as the German designers of churches. Our architectural education has been primary, not even rudimentary.

Now a reform has begun and, like all reforms, it has overshot the mark. It tends to curb our frontier originality, to make us something but self-satisfied units, but in the flush of its popularity it tries to force the style with which it is associated, purely by accident, as the one and only style that righteous men can employ.

This is the phase of the new *régime* that I must protest against, not the big principles of planning, composition, and design, not even the methods of teaching these, but the narrow enthusiasm that confuses a cheap and facile style with principles that are really fundamental. If the advocates of the new school would only take their stand on the really unassailable principles that drive them, instead of on the casual style that happens to be associated with them for the moment, there could be no chance for a quarrel.

Only too often they do not do this, as is proved by the fact that the public believes that the style of the Parisian boulevards is the end and aim of the whole movement. I hope I am more just than to believe this. One position is impregnable, the other I conceive to be indefensible.

It is unfortunate, in a way, that this most salutary movement should be linked with a style so limited, and so, shall I say, superficial. Still, it is hard to see how else it could have come except in this company. France is the only European country where there is a logical system of training, and France has preserved the style of the Renaissance with more vitality than it has been elsewhere. In England, Germany, America, it was quite dead, though unfortunately unburied. The new scholasticism has made it thoroughly living in France, and already it has been galvanized into life in this country. But was it really worth this? Living it is, but is not it the fictitious vitality of a style that has steadily degenerated since the sixteenth century?

M. Taine once said: "There are but two orders of architecture—Greek and Gothic—all else is imitation," and certainly no one claims that the developments of the Classic style from the days of the Parthenon down to those of M. Garnier's Opera-house have added anything of essential value to the primal type; it has been imitation and—degradation, so far as the great principles of building are concerned.

By "degradation" I do not necessarily imply a reproach to the style; indeed, the word is a measure of praise, for it shows that architecture has performed its just function and has adapted itself delicately to the changing conditions of civilization. The Parthenon would be grotesque in Paris, the Opera is admirable. Architecture is good if it expresses the time and the people and the spirit that made it possible; it is bad if it is an affectation. Really, I suppose we have less concern with the relative perfection of the style itself than we have with its fitness. The Parisian Renaissance of the boulevards is better architecture than would be the Doric of Greece were it restored on the Champs Elysées, or the Gothic of Isle de France on the Rue de Rivoli, and yet, in the abstract, as they will appear in the architectural histories of a century hence, the Greek and the Gothic are good, the Renaissance bad.

So, after all, it is worse than useless to dispute as to whether Parisian Renaissance is really a good style or a bad—for France. It is inevitable, it expresses the time and the people and the thing they are pleased to call civilization, therefore it is a thousand times more respectable than the archæological Gothic of the thirteenth century pasted over the outside of English law-courts or the barbaric solemnities of the Auvergne when they try to express nineteenth-century Protestantism.

Let us grant this; let us confess that architecture in France is living, and that the style is just as appropriate to the time as was Doric to that of Pericles; what then? Is there any reason why we should seize upon it and force it on our own civilization? Are we a province of France, are we in harmony with her ideals and her methods, are we French by instinct and sympathy? If not, wherein is the cult of the École any less affected than we who borrow a style for church-building from another land? Are they not dealing with an alien style? Are they not trying to express Anglo-Saxon ideas through the medium of a Gallic language? Or have we something in this country, some phase of life, some method of thought, that demands the architectural language of republican France for its fullest expression? Yes, we have, and that very fact justifies Parisian Renaissance—just so far, but not an inch farther.

Here is where I humbly conceive the S. B. A. A. makes its fatal mistake. Impressed by the force of the solid principles that must underlie any living style, charmed by the facility of the very plausible style itself, aware of the similarity between certain phases of American life and that which is rampant in France, it leaps to the conclusion that what fits one case must fit all, and that the golden days of the past, when one style expressed all life, may be restored.

I have already referred to the great principles of design that underlie modern architecture in France; it is unnecessary to specify them or to urge their acceptance. We all admit them. By this I do not mean that we admit all the *methods* used in France to inculcate them; but that is another story and one not to be touched on here. The principles themselves we are all anxious to adopt; they are exactly as operative in the planning of a Gothic cathedral as they are in the laying out of a scheme of a palace for the President of the French Republic. These principles are independent of style. But the style itself? Here is the ground of contest. Why in heaven's name should we take it if we do not want it and if it does not fit our case? It is not particularly beautiful, and it is thoroughly French;

¹ A paper by Mr. Ralph Adams Cram, of Boston, read at the Thirty-third Annual Convention of the American Institute of Architects at Pittsburgh, November 14, 1899.

besides, it is about as narrow and as limited as any. There are certain things it cannot express, certain places where it would be an egregious offense, just as fifteenth-century Gothic would be an offense in a fire-engine house or a Turkish bath.

We read history and we realize that always in the past one style has been enough for any given time and people, and recognizing the implied reproach on our own epoch, when this condition does not seem to hold, we hunger for some one style which shall be for us the one, inevitable thing. This I believe to be absolutely, though not necessarily forever, impossible. Architecture, if it is real, must be accurately expressive of the impulses that create it. Well, we have now not one impulse, but a hundred. Once life was a thing of unity; church and state, industry and commerce, society and recreation were united in a whole that seemed insoluble. This condition exists no longer. Life is coming to be as various almost as the units that compose society; there is no longer unity or identity; we range from Christian Science and Tammany Hall to Browning societies and the Meadowbrook Hunt and Trappist monasteries. Can we conceive of an architectural style that should express all these things? Certainly not; any attempt to evolve or import one is vain; any style that tries to perform this function is affected and in the end ridiculous. I do not apply this criticism to the latest fashion alone; it is quite as valid in the case of Gothic or Romanesque or Colonial or any other style of history. When society was a unit, art was instinctive; it was the language of a people—not, as now, the thousand dialects of antagonistic cliques. Whoever tries to establish a universal style, or delude himself into the belief that such can be achieved, looks at architecture as a thing, not as a condition. Self-conscious we must be; it is our destiny, the penalty we pay for the peculiar kind of civilization that pleases us for the moment. We are utterly unable to create art instinctively, and the sooner we recognize this the better for art and ourselves.

Just here lies, I firmly believe, the vital error of the advocates of Parisian Renaissance. They try to force an alien style on us for all our uses, when really it fits only a few of them. On second thoughts, this is not quite just; they realize that where churches are concerned their style is quite absurd; therefore, since the style must be right and sufficient, churches are an anomaly and must be ignored. They are wiser in the home of the style; churches are built there, and the limitations of nineteenth-century Renaissance are recognized; but Gothic would be shocking, so the architects fall back on—what? The primitive and ignorant style evolved by the builders of the south of France, who, after their own dark ages, fell back on the Roman fragments scattered over the south and piled them up into curious patchworks of museum specimens, or, later, assimilated them into a powerful and solemn style that spoke eloquently of the stern and rugged civilization of a nascent epoch. And inconceivably ludicrous are the results where the hyper-cultivated professors of the École try to turn barbarians. Witness the church on Montmartre! artificial, affected, anomalous, it has not even the qualities of good composition and effective scale that are the pride of the school when some form of Classic is in question. Unless it be the collection of designs submitted for the Cathedral of St. John in New York, those offered for the Church of the Sacré Cœur on Montmartre were quite as ridiculous and childish as any that can be conceived. Possibly the plan selected was the least bad, but all were hopeless; there was not a touch of religious feeling, of Christian imagination, even of knowledge of the essence of the styles affected, in any one of them.

There is something wrong here. The frivolous Renaissance of the ateliers was recognized as impossible, therefore it could not possibly be a vital, national universal style; a return to historic periods was necessary, but then what became of all the boasted fundamental laws that should make good work inevitable, whatever the chosen style? The system had been tested and it had failed.

For the leaders and followers of the Parisian Renaissance cannot, ostrich-like, thrust their heads in the sand and so obliterate religion. The Church is, and must be, counted with. Personally, I believe it can be demonstrated that there is no single subject for design that calls out so much imagination, that demands such a use of architectural power, that makes possible such enduring and honorable monuments as a Christian church. It is also certain that with the exception of medium-cost dwellings there is no opportunity more common. But the French school of American architects is driven to the curious position of having to deny both these things for the simple reason that the style they affect is not cognizant of Christianity. This is a pretty severe indictment to bring against any man, but I do not see how it is to be escaped.

And if it is true that the new fashion is powerless before the church, so is it true that it has little excuse in some other places. As I understand it, it is a style purely French, or, rather, purely Parisian; it fits Gallic civilization like a glove and so it is good—in France. But we are English by blood and we do not think in French ways, neither do we altogether act in them. Why, then, in heaven's name, is it any less affected for us to import a style from Paris than from England? Why is Parisian Renaissance a more logical form of architecture than English Gothic? Because it is nineteenth century? So is English Gothic—now. The classic of Napoleon's time was pretty dead, as dead as Gothic in England under the Hanoverian Georges. It is vital now; so is Gothic; just exactly as living and spontaneous and contemporary as Parisian Renaissance. It is not a case of living styles, one of which is French, one English. With which race have we been the more in common?

Do not think that I advocate either the one or the other exclusively. If we are English by blood and sympathy, we are French by perversity, and all must be expressed. There is much in our society that can better be expressed through the French style than any other; there is much in our civil life, our political life, that might as well use this form of expression as any; all are too good for it, even modern German or English commercial architectures, but there is a lot, and that the very best we have, that has no more kinship with the pleasing conceits of the boulevards than it has with Norman Romanesque or the Buddhist architecture of Japan. First of all, our religious life, with all its churches, schools, colleges; then our erudition, our education, our learning, with its libraries, schools, institutions; our private life, the life of country residence, with all its English qualities of health and vigor and informality; our commercial work, where sky-scrapers demand an utterly new architectural revelation. In all these directions, I humbly submit, Parisian Renaissance, as a style, meets with the sign "*rue barrée*."

And what shall assume its place? Just whatever style seems best to fit the power that gives the impulse. Is it the Church? There the answer is the splendid Gothic that Bodley and Sedding, and Austin and Paley, and their scores of associates have restored to life and vigor. Is it higher education, the education of colleges and universities? The answer is the same. We are English; neither French nor Italian; therefore, let us not sell our birthright for a mess of—*potage du jour*!

As for our commercial work, we are working that out all right as it is; it demands a new style and we are achieving it, but not by way of the École; rather by obeying the dictates of common sense.

For our civil architecture I cannot feel that any very clear way is opened as yet. What may be called our national style, the State-house order of architecture, has advanced from the horrors of the unspeakable Mullett to the dignity that characterizes our contemporary work. It is not very original and not at all spontaneous; it is self-respecting, and that is much. Already the French school has given it a certain vitality, and if this does not become the flagrant copying, several examples of which we have wondered at lately—if we do not make ourselves ridiculous by building *mairies d'arrondissements* in Skaneateles and Kalamazoo, we may yet achieve something that will be well worth recording; only it must be American Renaissance, not Parisian of that ilk.

For we might as well admit, one time as another, that all hopes of a single style are vain. What our civilization is, that must our art be also, and our civilization is as various as our population.

To recapitulate, then, the influence of the French school is good just so long as it is the influence of solid and lasting principles of planning, of composition, of design; so long as it insists on vitality and modernism instead of archaeological erudition; so long as it demands subservience to law and order; so long, in a word, as it deals with fundamentals. It is evil when it confuses an accident of fashion and *locale* with the things that really matter; when it binds itself to the latest vagary of French fancy; when it affects to despise the Church and her architecture and to look on Gothic as a barbaric episode; when it tries to force on a branch of the Anglo-Saxon race for all its purposes, a style that is Gallic in its impulse, evanescent in its nature.

It is this ill-advised and, I am convinced, unjustified fanaticism for a certain accidental mode against which I continually protest; it is the mistaken view of a great system of education which I regret to see introduced into our architectural schools, not the fundamental system itself. Ruskin was a bigot, and he made himself absurd by his frantic advocacy of certain forms of architecture; frankly, I think some of these who now most strenuously uphold exactly what he with equal vigor denied are laying themselves open to the same condemnation.

Above all things, let us have—in architecture—no bigotry. Let us look at the thing sensibly and in cold blood, allowing ourselves to be led away by no tempests of fanaticism. We want architecture that will be logical and national, and expressive of the agency that calls it into being. We cannot create a style, for we have not finished creating a civilization as yet, and that must come first, but we have various powers or agencies that exist more or less independently of national civilization and are not consequent upon it. The Church is one of these, and we, as architects, have a vast privilege extended us in being called into her service. Her nature is fixed, her history clear, her racial succession for us a matter of record. If we reject her opportunities or trifle with them at all, we harm ourselves and her also. Her architectural quality is inevitable; if we refuse to recognize it we stultify ourselves.

Domestic life is another of these agencies, and this also rests above the vicissitudes of civilization. Our ethnic and historical connections are here equally clear. Except in "high society" we are not French at all, but thoroughly and wholesomely British, modified and developed by our own vigorous Americanism. As in the case of the Church, we have here a very great field for sensible work, though, unlike the case of the Church, it is one we have taken advantage of and have developed on sane and logical lines.

These are two examples of what I mean by the agencies for creditable architectural work that demand their own diverse means of expression—means that have nothing in common with the accident of the French scheme, though much with its fundamentals. For the rest? Well, we must do the best we can.

THE INFLUENCE OF FRANCE UPON AMERICAN ARCHITECTURE.¹

THE consideration of the influence of French architecture upon that of America is too large a subject to be properly handled in the compass of a brief paper. From the days of the Revolution, when the support of Lafayette and his followers brought the two countries into close relations of friendship, this influence has been a factor in our architectural development—or in the changes from which until lately we may be said to have suffered. To discuss it fully would require us to consider the story of our architecture during the present century, as well as that of France. It is, nevertheless, only within the past thirty years, or thereabouts, that French influence upon American architecture has counted for much, and it is a still briefer period since it has anywhere in the country shown signs of predominance. What it at present concerns us to enquire is rather, how far the strong French influence which has lately shown itself (in some quarters amounting to an organized propaganda) is wholesome, and how far it is a source of dangers to be avoided—how far its results seem to be beneficial and how far they are to be deplored; and especially it behooves us to consider in this regard the present state of architecture in France as compared with its condition, say, for instance, twenty or thirty years ago, and the kind of influence which, at this moment, it seems to be exerting upon us.

Even when we have thus limited our enquiry we shall, in order to approach the subject intelligently, be obliged briefly to recall the main facts in the history of the influence we are to discuss.

At the beginning of the century the architecture of this country was still for the most part in the hands of simple craftsmen who were carrying on the traditions of the Colonial period. But the loss of traditional skill among the craftsmen themselves and the rival and confusing claims of Greek and Gothic revivals rapidly produced that condition of chaos and entire absence of wholesome tradition which made the advent of the educated and professionally trained architect the only way out.

American architecture suffered grievously during more than the first half of this century through the want of properly trained practitioners. There were few men able to design even respectable buildings, while the public, more and more surrounded by and accustomed to ugly buildings, and without the guidance of competent leaders of taste, lost all ability to distinguish between the good and the bad. Under these circumstances, with our shifting population and the sudden acquirement of wealth by new families, the ravages of shoddy commercialism, of vulgar and meretricious shams, were greater here than anywhere else in the world. All architects will probably readily admit that we are even yet not entirely free from this contagion, which makes showiness and novelty, not real excellence or beauty, the standard. During the early years of the century a few names stand out brightly; notably, Jefferson, Bulfinch, Thornton, and Isaiah Rogers, and for some time good traditional work continued occasionally to be done. In the main, after about 1820, the succession of architectural fashions showed a gasty parody of the work going on at the same time in England—work, some of it, weak enough in itself. During this period appear the names of a few French architects. At the beginning of the century their work did not differ essentially from that of the English architects who found their way hither or from the few educated Americans, for at this time Roman classicism (variously understood) reigned everywhere, and as long as it continued exercised a wholesome restraining influence. In the chaotic days of the forties, fifties, and sixties French names very rarely appear, and the only marked evidence of French influence was in the advent of the so-called French roofs, which appeared for the first time, we believe, in the Deacon House, in Boston, built about 1850, the work of a French architect named Le Moulner. The American builders of those days were sure to make ridiculous even their attempt to imitate good things; but this somewhat unreasonable contrivance, aided by the jig-saw, became in their hands the source of more ugliness than even America has otherwise seen.

Into this chaos gradually and in increasing numbers came, during the sixties and seventies the educated architects. They came from two main sources. On the one hand from England, or under more or less direct English influence, partly by the immigration of Englishmen trained in the ideals of the English Gothic revival, partly they were Americans who in English offices or through travel had received a similar training. The second source was France, and this influence was brought to us directly at this time by Mr. Richard M. Hunt, who, as we all know, received his education at the École des Beaux-Arts, and who, apart from his powerful personality, owed his great prestige in the profession mainly to his having been the first American architect who had received a systematic academic training for the art he professed. A number of architects, among them several who, as we all know, are still leaders in the profession, were trained in Mr. Hunt's atelier in New York or went to Paris to study for longer or shorter periods in the École. In 1867 the department of architecture at the Massachusetts Institute of Technology was opened under the direction of Professor Ware, and the scheme of instruction was frankly based on that of the Paris school, adapted to meet the very different circumstances and requirements. In 1871 M. Eugène Létang came from Paris to take charge, under Mr. Ware,

of the work in design. Since then every important school of architecture that has been founded in America has sooner or later followed, more or less closely, the same model. Indeed it may be said to be all but universally acknowledged that the French system of instruction in architecture is the best in the world. Meanwhile an ever increasing number of Americans have been educated in the French school itself, some of them receiving there their whole training, others going to Paris after completing the course at one of the schools of architecture at home. Not a few have graduated from the École des Beaux-Arts, until now there are very few trained American architects who do not owe much, directly or indirectly, to that world-famous school.

When we consider the formless and chaotic condition in which American architecture for the most part found itself even twenty years ago, and the part which architects of French training have played in the striking improvements which have taken place since, it is perfectly obvious that America owes an enormous debt to France in this respect, a debt which was appropriately recognized a few years ago in the foundation at the École des Beaux-Arts of the Prix de Reconnaissance Americaine, a prize which is open only to Frenchmen. But this recognition does not by any means involve the conclusion that French influence has been an unmitigated blessing.

During the period in question great changes have taken place in France itself, changes of which it is essential we should take account in forming an opinion as to the value of French influence at this moment.

In spite of its fine qualities, almost unrivalled in the modern world, there has been constantly apparent in French architecture, since the time of Louis XIV, a note of extravagance, of theatrical display, of redundant, and sometimes tasteless, ornament, which has frequently injured some of its finest productions; but there have nearly always been men like Labrousse, Daumet, Vaudremer, who have, by precept and example, set their faces against this extravagance. But the wave of indiscriminate admiration of the vagaries and vulgarities of Rocco architecture, which has of late swept over the civilized world like a plague, has made itself felt nowhere more strongly than in Paris, and the mad craze for novelty for the sake of novelty has run riot in an extravagance of *hautes nouveautés* which is enough to make Labrousse and even André turn in their graves. This phase of *fin-de-siècle* decadence has made itself especially felt in the designs for the forthcoming Paris Exposition, which, magnificent as it is in conception and general composition, is producing structures almost delirious in their unreasonable and wanton ugliness. There are, of course, men still doing superb work, like Nénot, for instance, in his New Sorbonne, and the sound traditions of French training still make themselves felt amid all the extravagance and vulgar search for the merely novel—miscalled originality. But the main tone of French work at this moment, the main trend of taste at the École, has sadly changed since the ateliers of André and of Vaudremer, at opposite ends of the scale, were typical. This change, like every phase of human development, is expressive of the condition of the community that produced it. This decadence of taste, which must be evident (one would think) to every unprejudiced and competent observer, is of a piece with the social depravity which has produced the salacious French novel and the corruption that shows itself in Panama scandals and Dreyfus affairs. The want of sane, wholesome life, of high and pure and sweet ideals, which the best of Frenchmen themselves openly deplore, has its inevitable effect on taste in the fine-arts. The jaded and sated palate calls for some new sensation, and the result is all the more deplorable because of evident ability and training prostituted.

Let us now briefly consider some of the fine qualities which have been, and still to some extent are, apparent in French architecture, and then let us look somewhat more narrowly at the present French ideals and see whither they are tending.

The training of the École des Beaux-Arts, shaken, though it had been, by the Neo-Grec movement of the middle of the century, and, in spite of extravagance, which already showed itself, was still, even twenty years ago, synonymous with the somewhat rigid traditional Classicism which had been so powerfully inveighed against by Viollet-le-Duc. Cold and unsympathetic as it sometimes was, it had, at any rate, this advantage: that it tended to curb the growing tendency to license, and that it was a safe medium for instruction in the fundamental principles of architecture. New forms and modifications were looked at somewhat askance and were only gradually admitted, as it were, to recognized standing. It was somewhat unyielding and its notion of correctness of style was still mainly a matter of tradition. But what then, as now, constituted the strength of French training and practice was its insistence on composition, its excellence of proportion and mass, and, above all, its splendid mastery of monumental planning. It taught careful consideration of fenestration, the study of light and shade, the effective placing of ornament, and showed that rhythmic proportion has relation to all these. It insisted that a building must tell its story; that it must be expressive of its purpose, and that the exterior must be expressive of the interior arrangement, of the plan, which is the key to the whole composition. Interior and exterior, plan and elevation, must work together to produce one organic and rhythmically connected whole. In insisting upon these things, it was teaching that architectural design depends, not upon caprice, but upon principle, and it gave, up to a certain point, some understanding of what these principles are. In doing all this it inculcated, though perhaps not always

¹ A paper by H. Langford Warren, of Boston, read at the Thirty-third Annual Convention, A. I. A., at Pittsburgh, Pa., November 14, 1899.

clearly, the fundamental laws upon which good architecture, upon which fine-art of every description, has always depended and always will depend. And it taught and still teaches, what, perhaps after all, is for the impatient American the most important lesson, that good results in the fine-arts are only to be attained, in the first place, by long and patient and severe training; and, in the next, by equally patient and painstaking study and restudy of each problem as it arises. On the other hand, the principles taught seemed to stop at the ornament, as if the smallest part of any work of art could be subject to any other laws than those that must govern the whole, or as if one part must be a matter of principle while another could be a matter of mere tradition or of caprice. The ornament — most of the detail, in fact — though often carefully studied and always delicately executed, was apt to be either meaningless and extravagant or coldly traditional in its form.

Moreover, the training of the École, while thorough along its chosen lines, was narrow, so that those brought up exclusively under its influence were generally strangely ignorant of all forms of architecture except those which were traditional within the school. They had made no adequate study of the historic styles and so had no understanding or appreciation of the way in which the immutable principles of design expressed themselves in other forms and under other conditions. Their experience was so narrow that the laws of design could not be thoroughly appreciated as the result of principle, and these laws thus became, in their hands, little more than a set of academic formulae. The designs produced and the judgment formed were alike too apt to be the mere conventional result of conventional rules the reasons for which were but dimly apprehended.

The inevitable revolt against this rigidity grew apace, and the reaction under existing conditions in France has led to that license of design which we have already characterized, and which has gone so far that the use of any traditional form seems now to be regarded in some quarters as a sign of slavish devotion to precedent, an indication of want of thought, an evidence of complete lack of originality. The fundamental laws of composition are still taught as before; but originality, so called, mere capricious novelty, has become the standard rather than beauty and reasonableness. The changes brought about have not been the result of organic growth and development, but have been produced (to use the apt phrase of Professor Hamlin in his history of architecture) by "the striving for originality and the effort to discard traditional forms." Its ideals are no longer those of purity and expressiveness of architectural form, but of novelty. Expressiveness of a kind is indeed aimed at, but it takes the unimaginative form of, for instance, ornamenting the exterior of an army and navy building with cannon-balls, gun cartridges and conning towers, put on without the slightest regard to the architectural purpose of the parts to which they are applied.

If there is one thing that the American public has needed for the improvement of its taste in art, it is to be taught that there is something better than novelty and change; that what is beautiful and reasonable is the ideal to be aimed at, not to be "up-to-date" or "in fashion." It needs to be taught that the finest things in art are usually the simplest, — those things which at first sight seem easiest, most obvious, most natural — not those things which by their overloaded ornament, their *bizarrie*, their theatrical posturing cry out for attention. We need to appreciate that those qualities which make fine manners also make fine art — restraint, repose, naturalness, graciousness.

We have been learning these things; but are not helped forward by indiscriminate admiration of this latest and least admirable phase of French art.

It is curious that those who are loudest in its praise are those who least of all show signs of putting one of the chief precepts of its doctrine into practice in this country. This doctrine teaches, and rightly teaches, that a country can have a vital art only in so far as it solves its own problems in its own way, expressing freely its own ideals in meeting its own wants. The art of France is held up to admiration as being such a vital art. This is to a degree true, and that art expresses French ideals, French taste — and also French depravity. Now we do not take a single step toward producing an art of our own by a direct importation in all its details of the forms of French architecture, which have nothing whatever to do with the principles taught in the French school, but are the mere accidents of environment. On the contrary, whatever beginnings of vital work are found in our midst are strangled by such direct imitation, and it is worth noting that the most successful and characteristic developments of American architecture, the commercial building and the country-house, do not depend in the least on direct French precedent. Indeed, the country-house is a problem which modern French architecture seems incapable of solving in an interesting way. But it is argued that we must make a beginning somewhere and that the best we can do is to take the best style of modern times as a point of departure. The French style meets our wants most nearly, it is argued, because it is the most modern. This is a manifest *non-sequitur*. Moreover, as we have noted, we had made beginnings to which this direct French importation comes as an interruption, which, if successful, would make us architecturally a mere province of France. Town-halls which look like French *mairies* are manifestly un-American and are felt to be exotic, out of place. Buildings which precisely recall the Parisian boulevards are obvious indications of lack of ideas and lack of vitality in our own art, and this would be true were French art far finer than it is.

The road to reasonable independent development does not lie this way. The love of extravagance and the desire for mere novelty on the one hand, and the close and unreasoning imitation and copying of the work of others, ancient or modern, on the other are the Scylla and Charybdis of American art. It seems to me that the recent French propagandism contains both dangers.

What we need is to understand more and more fully those fundamental principles of our art which underlie the best work of all times and all styles: to understand and know thoroughly the architectural forms of the past and appreciate how in them these principles were expressed: to use these forms in our own work freely, varying from them not capriciously, but according to principle, as changed conditions, changed modes of construction, changed ideals seem to require. Working in this way, the modifications which come will not be forced, but natural, and will have that quality of inevitableness which is inseparable from vital work and is one of its greatest charms.

We have learned much from France, and yet have much to learn; but let us not take from her indiscriminately.

In so far as the French influence helps us to sound methods of education; in so far as it teaches us composition, monumental planning, the importance of balance and proportion in plan and mass; as it leads us to regard our buildings as organic unities, and to make exterior and interior hold together as rhythmical component parts of one whole; as it leads to careful consideration of fenestration, of light and shade, of scale relations; as it discourages hasty and slipshod and ill-studied work; in so far, in short, as it helps us to principles and to devoted and painstaking study, its influence has been, and will be, helpful and wholesome.

But in so far as it leads us to mere copyism of the externals of recent French buildings; in so far as it leads us to seek novelty in place of excellence; in so far as it encourages a taste for extravagant and overloaded ornamentation, and tends to destroy delight in simple and quiet work, — in so far as it does these things, the French influence is deeply to be deplored.

But I have little fear for the result. We have in this country made great strides, and, I believe, shall continue to progress. The pendulum swings back and forth, but the fingers move onward. The evil that we have suffered (and it seems to me we have suffered from an overadmiration of a style that has grave defects as well as great qualities) will, I venture to think, prove temporary, while the gain will be permanent. The French copyism is a mere passing fad. The principles that have been learned we may hope to keep.

Those who have been educated exclusively under French influences and have imbibed French ideals so completely that they have failed to see clearly the limitations of French work, will inevitably in time be influenced by their environment and by the work of those of other training. Already we may discern signs that this is the case. Both sides will gain from both, and the resultant will be different from anything we can now foresee.

By way of conclusion, and speaking now merely of the training in the French School, these two considerations may be suggested: That, since discrimination needs to be exercised with regard to French work, it is best that impressionable students should not come under its direct and exclusive influence until they have had such training as may enable them to discriminate, until they have been taught to think and reason for themselves with regard to their art, and that the schools we now have in this country afford ample opportunity for such training; and, secondly, that if we are to have an architecture in any true sense national, if we are to be architecturally anything more than a mere province of France, we must shortly cease to be dependent to the extent we now are on the French School.

REPORT OF THE BOARD OF DIRECTORS.

THE Board of Directors elected at the Convention held in Washington, D. C., November 1, 2 and 3, 1898, held their first meeting at the Octagon, January 5, 1899. The Executive and Judiciary Committees were elected by the Board of Directors and the President appointed the Standing Committees for the year 1899, as published in the last *Proceedings*.

Forty-four new members have been elected during the year and twenty applications are now pending.

Two Fellows of the American Institute of Architects have died since the last Convention. Mr. William Crawford Smith, born November 26, 1837. He served with distinction in the Confederate Army. After the Civil War he resumed the practice of architecture in Nashville, where he took a high standing professionally, socially and as a man. He was prominently connected with the Nashville Exposition, designing the reproduction of the Parthenon. Mr. Smith joined the Institution in 1881. He was elected a member of the Board of Directors of the Institute in 1892-1896, and again in 1898. In 1895 he was elected Second Vice-President.

He had endeared himself to the profession with whom he came in contact, by his courtesy, high sense of honor and genial manners.

At the breaking-out of the Spanish-American War, he was made Colonel of Volunteers in a Tennessee Regiment, and was on his way to Manila at the time of his last election as a Director of the Institute. He died from an attack of apoplexy while at the head of his command on the firing line, February 5, 1899.

Mr. John R. Church, of Rochester, N. Y., who joined the Institute

in 1888, died February 7, 1899, being in his forty-fourth year. Mr. Church was in active practice for many years in Rochester, designing the new auditorium and the Central Presbyterian Church of that city.

Mr. Hackney, of Kansas City, Mo., who was elected as Associate Member in June, 1899, died May 25, 1899, while his application was pending.

The location of the permanent headquarters of the Institute in the Octagon House, gives room and opportunity for a collection of material that may be valuable in the future history of the Institute, and of the profession of architecture in this country.

The Institute has received oil-portraits of William Thornton, Benjamin H. Latrobe, large photographs of Thomas U. Walter, and Edward Clark, all of whom were architects of the United States Capitol, presented by Mr. Edward Clark; an oil-portrait of Mr. Richard Upjohn, presented by his daughter, Mrs. Charles Babcock, and a model of the Hunt Memorial, presented by Mr. Bruce Price, who has also donated a sufficient amount to put the model in repair. Drawings of Patent Office Extension and German Parliament Building have been presented by Mr. Adolf Cluss, and 100 photographs of the old Capitol Building, presented by Mr. Glenn Brown.

The exchange list of the Institute has been small, the Royal Institute of British Architects and the American Society of Civil Engineers being the only Associations which have sent their publications in exchange with regularity. Correspondence with American and Foreign Societies, of which the Secretary could obtain information, and with periodicals relating to architecture and allied subjects, has resulted in obtaining agreements to exchange publications with the Hellenic Polytechnical Society, Athens, Greece; Royal Commission of Art and Archaeology, Brussels, Belgium; Society of Berlin Architects, Berlin, Germany; Society of Engineers and Architects, Vienna, Austria; Society of Italian Engineers and Architects, Rome, Italy; Architectural Association, Berlin, Germany; Swedish Society of Architects and Engineers, Stockholm, Sweden; Society for the Propagation of Architecture, Amsterdam, Holland; Society of Japanese Architects, Tokio, Japan; Royal Society of Architects, Antwerp, Belgium; Architectural and Social Society, Amsterdam, Holland; and eleven of the architectural clubs and similar societies in the United States.

Sixteen periodicals have agreed to exchange with the American Institute of Architects.

A complete list of books, pamphlets, periodicals and Society exchanges will be given in the Report of the House and Library Committee.

The Institute has received 43 books, consisting of 63 volumes.

Pamphlets on 42 subjects, consisting of 108 volumes, 16 periodicals, containing 259 numbers, 41 Society publications, containing 180 numbers — total, 142 titles and 610 volumes, or numbers.

In the future the Board of Directors think it desirable to publish a Quarterly Bulletin, giving an index of the periodicals and Society literature which is received in the way of exchange; and in the same bulletin, to give the titles, size and contents, with a short review of current books on architecture and allied arts.

The repairs on the Octagon House, which were not completed when the Convention was held in Washington, November 1, 2 and 3, 1899, have been completed by the Committee in charge at that time, and the House Committee which took charge of the Octagon after January 1, 1899.

The repairs have consisted in a thorough cleaning and painting of all the walls, ceilings and woodwork in the halls and the principal rooms on first floor, together with the offices of the Secretary of the American Institute of Architects on the second floor.

The Washington Chapter and the Washington Architectural Club have both fitted up their rooms thoroughly and comfortably, leaving the only portion of the house that was not repainted and repaired, the third-story rooms, which at present are rented by artists. The old mantels and cornices on the first floor were found in a remarkably well-preserved condition; all portions that were missing were duplicated and replaced. The old stone steps and wrought-iron railing have been replaced by new steps and portions of new railings. Parts of the old wrought-iron work were still in existence; these were used, and their features duplicated.

A modern toilet-room and furnace have been installed in the house, and the necessary furniture for the Secretary, consisting of a typewriter, safe, desk, chairs, letter-press, etc., have been purchased. The old garden has been planted with box, firs and old-fashioned flowers, so as to be in keeping with the house, giving the whole quite an interesting appearance. All of the books, models, pamphlets, paintings and photographs mentioned as having been contributed have been installed in the Octagon House, and are already of sufficient importance to make a very interesting exhibit.

Under the Tarsney Act, and its influence, a result of the work of the Institute in previous years, some noted competitions have been very satisfactorily conducted by the United States Government. The New York Custom House; the Carnegie Library, Washington, and the New Department of Justice, have all been let out under competitions, more or less model in their form. The results obtained have been very satisfactory. The work of the Legislative Committee will be given more fully in their Report to the American Institute of Architects.

The office of the Institute has been kept open from 9 o'clock in the morning until 6 o'clock in the afternoon, and members of the

Institute visiting Washington are received, and all possible courtesies extended to them by the Secretary or his assistant.

THE SOCIETY OF ARTS.



THE *Journal* contains the following abstract of the history of one of the most useful of English societies: The Society of Arts is one of the three oldest of the learned and scientific societies in the country, for when it was founded in 1754 only the Royal Society and the Society of Antiquaries were in existence. As it had a large field to itself it was comprehensive in the scope of its work. For a long time it alone filled the place which is now occupied by the many societies which have since been founded for the promotion of special branches of science, industry and art. It was—as indeed it still is—at once scientific, technical, industrial, commercial and artistic. Before the foundation of the Royal Academy it held exhibitions of pictures, and assisted in the education of art students by prizes and examinations. Until the Royal Agricultural Society was established it was the principal institution in the country for the promotion of agriculture and the application to agriculture of scientific principles. It anticipated the Institution of Civil Engineers, and the other engineering institutions, in the encouragement of civil and mechanical engineering. It encouraged chemical research, and the application of chemistry to industry, before the Chemical Society and the other chemical institutions which in later years have dealt with various branches of that great science. And it promoted arts and industries in the colonies more than a century before the Royal Colonial Institute or the Imperial Institute.

During the first half-century of its existence the objects of the Society were principally attained by the award of premiums for useful discoveries and inventions. In this way it distributed 28,434, between the years 1754 and 1783. There was probably at the time no better way of discovering meritorious inventions and bringing them to public notice, though it was liable to the obvious imperfection that the prizes could be awarded only in accordance with the best knowledge of the time, whereas the objects to be rewarded were, or ought to have been, in advance of such knowledge.

In the department of fine-arts it had a share in assisting the education and encouraging the youthful efforts of many of the most eminent artists from the time of Reynolds to our own days. On its prize-lists are found the names of Richard Cosway, Joseph Nollekens, George Romney, Sir Thomas Lawrence, P. R. A., Sir William Ross, William Mulready, Thomas Bewick, Aloys Senefelder (the inventor of lithography), John Flaxman, W. Wyon (the medalist), Sir Edwin Landseer, Sir Charles Eastlake, P. R. A., W. P. Frith, J. C. Hook, Sir J. E. Millais, P. R. A. One of the first, if not the first public exhibition of pictures in London was that held in 1760 at the Society's rooms in the Strand, near Beaufort Buildings, an exhibition which really led to the foundation of the Royal Academy in 1768.

The improvement of agriculture was one of the very earliest objects of the Society, and the first volumes of its transactions are devoted in large measure to this subject. Indeed, so important a branch was it of the Society's operations that the publication which practically served as the Society's transactions for the first few years of its existence was known as "*Dossie's Memoirs of Agriculture*." It would take too long to record even a selection of the improvements it effected, or tried to effect. Some of the more important may be merely mentioned. The want of timber for ship-building and other purposes was one of the great needs of the country at the time of the Society's foundation. The country was to a large extent deforested, and some organization was required to prevent the spread of the evil. An earnest effort was made by the Society to attract public attention to the need for renewing the stock of timber. Between the years 1775 and 1781 twenty-two gold medals and a few smaller prizes were presented to landed proprietors in various parts of the country. About three-quarters of a million trees were planted under these awards. The attempt was entirely successful, thousands of acres were planted, and as a practical result the supply of timber was renewed. Many of the woods throughout the country owe their present existence to the initiative of the Society of Arts.

The encouragement of the arts and industries of the colonies was another of the first objects to which the Society devoted itself. The colonies of the country, it is to be remembered, were then all situated in North America (now the United States) and the West Indies. Prizes were given for new colonial industries, for the introduction of machinery into the colonies, for the importation into this country of colonial products. Contemporary records show how greatly the Society's efforts were appreciated in the West Indies and in the American colonies. Many valuable plants were introduced abroad, and many valuable products brought home through the agency of the Society.

A special division of the Society was devoted to mechanics and manufactures, and another to minerals and chemistry. By means of the two committees which dealt with these divisions, large sums were distributed in prizes and donations to meritorious inventors. The range of work of these two committees was so wide that it is difficult to give even a summarized account of what they did in the first sixty

or seventy years of the Society's life; but it may safely be said that there was hardly a single branch of industry at the time which was not helped forward by their efforts. The manufacture of iron, textile manufactures, chemical manufactures, and in later times all the various applications of science to manufacturing purposes, received a share of the Society's attention. Perhaps some of the prizes were ill-bestowed, and many deserving inventions were refused awards. Looking back through the old records of the Society it is not difficult to discover occasional instances in which rewards were refused to inventions in which present knowledge can perceive the promise of future discovery. But on the whole the premiums were judiciously bestowed, and were of much value in stimulating and rewarding invention. But for the unwise prejudice which prevented the recognition of any patented object, the premiums would have been more useful still.

As time went on it was found that the award of prizes for meritorious inventions was not the most advantageous way of attracting public attention to them. The opinion of a committee on a new and untried invention is very liable to error. The more novel the invention, the more varied from previous ideas, the less likely is it to commend itself. This was even truer at the beginning of the century than now, when the great and startling developments of science have rendered public opinion less intolerant of novelty.

It was found that the best test of merit was practice, and the best service that could be rendered to an inventor was to give him the opportunity of publicity. In the industrial, as in the material, world, the rule of the survival of the fittest holds good. Hence the practice was instituted of holding meetings, at which new scientific discoveries and their applications were described and discussed. This idea seems to have been mainly due to Mr. William Aikin, the distinguished chemist, who was secretary to the Society in the early part of the century; and he introduced the practice of delivering lectures on various branches of industry and improvements connected with them. In 1842 the practice was reduced to a system, and from that time to the present day one of the most useful portions of the Society's work has been the holding of such meetings for the reading of papers and the delivery of lectures.

The recorded reports of these meetings for many years past form a continuous chronicle of the progress of the applications of science and of art to practical purposes, and there have been few of the prominent technical scientific discoveries of recent years whose introduction to public use has not been assisted by the Society of Arts. The long series of "Cantor Lectures" delivered before the Society form almost a full industrial cyclopædia. In their delivery their special educational value was very great, and their published reports form a useful contribution to the industrial history of the country.

While referring to the Society's meetings special reference should be made to those of the Indian section, the value of which in promoting a knowledge in this country of subjects relating to the Empire of India has long been and is still constantly recognized by the Government of India and by the India Office. If the work of the foreign and colonial (originally the African) section has been less important, that is only because its special field of labor has for some years been occupied by the Colonial Institute, and more recently still by the Imperial Institute, a body whose very existence is a high testimony to the work of the Society of Arts, founded as it was by H. R. H. the President of the Society on lines similar to the older body, and to carry out, under more influential auspices and on a larger scale, precisely the same work.

As special institutions came to be established to deal with various branches of science and industry, the Society gradually abandoned some of its older fields of work, but it has still remained the one unspecialized Society, always ready to afford an arena for the discussion of any prominent subject coming within its rather wide scope. There are now some fifty scientific societies meeting in London, dealing with different branches of science. It is not too much to say that the greater number of them deal with subjects at one time or other included in the Society of Arts programme. Many of them originated, more or less, directly from the Society of Arts. Some originated at meetings held at the Society of Arts' rooms, others were promoted by the more active members of the Society at the time. It may, however, be said that as each relieved the Society of some of its work, it left behind more than sufficient new material to occupy the energies of an institution dealing not with special departments of science, but with the practical application of all departments.

For it may be said that the only way in which the Society has differentiated itself from other institutions of a similar nature is that it devotes itself principally to the application of science and of art to practical purposes. Its value in this direction was recognized by the Prince Consort, who found it a most useful instrument for carrying out his own ideas and impressed upon it much of the character it now bears.

Apart from its regular work, holding meetings for the advancement of knowledge and the dissemination of useful information, the Society has devoted itself to a vast number of definite public objects, to the promotion of which its organization has been in various ways applied. Some of them may at least be mentioned. Perhaps the most important service ever rendered by the Society was the establishment of international exhibitions. The first Exhibition of 1851, as is well known, was originated and its organization carried on till it could be handed over to a Royal Commission by the Society. In

the same way the Exhibition of 1862 was started, and to a large extent carried out by the efforts of the Society.

Another great branch of the Society's work is that dealing with education. Through its efforts was originated the system of carrying out local examinations from a common centre, which soon after received such full development through the agency of the Science and Art Department. The Society's examinations, founded in 1856, though its example has been followed by other agencies, amongst whom must be specially mentioned the Local Examinations of the Universities, still continue to be the only examinations of an important character dealing with commercial education.

It was the Society of Arts that first drew public attention to the need for technical education, and, by the holding of conferences and discussions on the subject, aroused the public feeling which led to the appointment of the Royal Commission of 1881, with all the vast developments of that branch of education which have followed the report of that Commission. Among the many institutions whose establishment was fostered by the Society may certainly be mentioned the City and Guilds Institute for the promotion of technical education, which at its origin was greatly assisted by the Society, and has of late years developed into a most important educational agency, the system of technical examinations founded and carried on by the Society on a small scale for some years, in spite of opposition and indifference.

The great improvement in decorative art which has marked the last half of the present century may be said to have had its birth in the Society of Arts. Chiefly owing to the strenuous efforts of the late Sir Henry Cole, the Society originated a campaign against the ugliness and ignorance in artistic matters which was certainly prevalent in England about the end of the first half of the century. Its efforts were for a long time met with ridicule, but public opinion was gradually converted, and the value of beautiful and artistic surroundings in daily life, instead of being a matter to be sneered and laughed at, is now regarded as a matter of course.

It would perhaps be too much to say that the attention which matters of public health now receive was entirely, or even in the main, due to the efforts of the Society, but it did a most valuable public service in popularizing a knowledge of the subject, and disseminating accurate information on sanitary matters by means of the conferences it held on sanitary subjects from the years 1876 to 1879.

Many other public objects have been initiated or promoted by the Society. It took an active part in the improvement of the Patent Law, since the first improvements in 1852 down to the last Patent Act of 1883. It was the action of the Society that first secured protection for copyright in works of art. Its food-committee was one of the earliest agencies to draw attention to the necessity of providing means by which meat and other foreign food-products could be successfully imported. One of its committees for a long time urged on the Post-office the necessity for a Parcel Post (suggested in 1858), and worked up public opinion until it was granted. Another for a long time urged the necessity of cheaper telegraphic communication, and suggested to successive Postmasters-General the desirability of shilling telegrams long before they were granted.

The Royal College of Music was founded as the National Training School for Music by the exertions of the Society. As far back as 1839 the Society dealt with the question of uniform musical pitch, and established a pitch of its own, which was only recently formally abandoned in favor of the better-known French *diapason normal*.

The introduction of moderate-priced scientific apparatus was initiated by the Society of Arts' microscope in 1855. Thousands of these instruments were sold for three guineas, at a time when it was believed that no microscope of any practical value could be produced for four or five times that amount.

The idea of marking by distinctive tablets houses associated with the names of distinguished men originated with this Society, and has in London been carried successfully into effect. Such historical houses are fast vanishing, and the attempt to rescue them from forgetfulness has been very popular and, it is hoped, useful.

The whole of the work of the Society of Arts has been carried out without any Government aid, or indeed without any endowment. It is practically dependent entirely upon the annual subscriptions of its members. Its present income is about 10,000*l.* a year, and this is expended annually. It has in past years received a certain amount of money by way of legacies, and it possesses trust funds amounting in all to 14,000*l.* Most of these trusts are chargeable with the award of various prizes. It has about 17,000*l.* of its own, unaffected by trusts of any kind, mainly accumulated during the past twenty-five years out of surplus revenue.

The buildings in the Adelphi, which it has occupied since 1775, are not freehold. The original lease expired in 1867. It was renewed for a period of thirty years, which expired in 1897, and the lease was further renewed for a period of seven years, ending in 1904. The accommodation is now hardly sufficient for the needs of the Society. It is especially deficient as regards the requirements of a library, and the want of convenient library accommodation has for many years past been a serious drawback. There is every reason to believe that with ampler premises the operations of the Society might be extended, a greatly increased number of members attained, and consequently larger funds provided, which might be expended in objects of public usefulness. The Society's meeting-room has been largely used by other societies, to whom it has been readily

lent, and for public meetings for objects cognate to the work and purposes of the Society. — *The Architect and Contract Reporter.*

BOOKS AND PAPERS

THERE are few architects who have not read the first edition of Professor Moore's book on "*Gothic Architecture*,"¹ and concerned themselves more or less with the discussions which it has called out in the profession; and every one who has read the first edition will be interested in the second, which is, in fact, almost a new book, so completely has it been rewritten, and so greatly has its importance been increased by the addition of new matter, mostly the record of recent personal study, and illustrated by a large number of new drawings. No one could say that the first edition did not show learning and conscientiousness enough; but, as the author was not a practising architect, it was often assumed by his professional critics that he could not possibly know as much about the subject as they, and that his science was probably drawn at second-hand from Viollet-le-Duc or other writers of acknowledged authority. The second edition will certainly silence this sort of criticism, for the new parts of the book, and the revised treatment of the portions already familiar, show a precision and certainty of knowledge of the principles of vaulting in stone, and a familiarity with most of the buildings in which those principles are illustrated, to which few architects can pretend. Even Viollet-le-Duc, notwithstanding his cleverness in divining the intentions of the mediæval builders, and his thorough familiarity with the examples of mediæval work which had come under his care, was far from possessing the knowledge of mediæval construction in England and Italy which Professor Moore has acquired by earnest personal study. We have always thought that Professor Moore went too far in saying that Gothic architecture, according to his definition of the term, was never practised elsewhere than in France. Of course, he is at liberty to define Gothic architecture as something unknown outside of France, if he likes; but, even conceding, as we very willingly do, the merit of the French architects in developing the Gothic system of construction, and even in being the first to devise a system of decoration suited to it, one can hardly say that Cologne, or Exeter, or Gloucester are so devoid of artistic beauty, or of skill, and even originality, in construction, that they should be put outside the pale of a classification which is, in its accepted use, so comprehensive. It is dangerous to argue that everything must be Gothic that is not something else; but it would be hard to give a really satisfactory reason for assigning to any other style such buildings as those just mentioned, together with Westminster, Salisbury, Strasburg, Freiburg, Ulm and many others, which do not all have flying-buttresses, or the lofty clear-stories which made them necessary, but which show in other respects, as, for example, in the construction of spires, which have remained upright where French ones have fallen, a skill and inventiveness very little inferior to those of the French architects of their own time; and it would be still more difficult to justify the exclusion from Gothic architecture of buildings which are known to have been carried out in Spain by French architects during the Gothic period.

However, there is no need of quarrelling with Professor Moore over his definition of names; what we have to learn from him is the development of the particular construction to which he confines his attention, and this he traces in the most interesting and satisfactory manner. The present edition of his work contains a new chapter, on the Sources of Gothic, in which the various forms of Romanesque which preceded Gothic are compared with great learning, and with the skill of one who knows thoroughly the lesson to be derived from the comparison; and the matter added to that contained in the first edition consists to a great extent of confirmations, illustrated by striking and often little-known examples, of the views previously explained. How interesting these views are to the professional architect we need not say. The reader of Viollet-le-Duc will understand how absorbing is the story of the transformation of the Romanesque construction, under the pressure of the necessity for large, light and unencumbered churches, into a system such as no one had ever dreamed of before, surpassingly beautiful, and adorned with sculptured decoration of a type completely novel; and those who have traced it through the great Frenchman's pages will find Professor Moore's version of it not less interesting because of their previous knowledge. Like Viollet-le-Duc, Professor Moore completes his book by a study of Gothic sculpture and colored decoration, treating, however, of German and English work as well as French. Short as they necessarily are, in order to bring them within the compass of a single volume, these chapters are among the most valuable portions of the book. Professor Moore is an accomplished artist, as well as a lifelong student of all forms of art, and what he has to say of Gothic ornament is condensed from great knowledge.

In general appearance, the second edition is a great improvement on the first. The woodcuts of the earlier edition have all been replaced by process-blocks from the drawings of the author or his

daughter, giving greater uniformity to the appearance of the pages, and many new ones have been added; while, to show general effects which could not be rendered in small sketches, ten photogravure plates have been bound into the volume.

We once had a French professor who was accustomed to compliment his classes on the admirable opportunity for improvement which their work showed; and a small, — a very small, merit of this kind might be added to the excellences of what is in some respects the most important architectural work yet published in the United States. It is, naturally, not the author's fault that the proof-reading is not perfect, and, in fact, it is so in regard to English words, but we find the name of the river Aisne, in France, appearing twice as "Ainse," and Hildesheim converted into "Hildersheim"; while we have "Angellico," "Massaccio," and "Niccolò" Pisano, forms of familiar Italian names which may, however, have some authority unknown to us.

THE third edition of Professor Melani's scholarly and convenient little manual of Italian architecture² appears in one volume, instead of two, but improved by many new illustrations and with the text almost completely rewritten. A little space has been gained by leaving out the former matter about the rude and mysterious monuments of Corsica and Sardinia, which have, after all, no architectural character, and this space has been more than filled with new matter of great interest. Professor Melani says that he writes particularly for those outside of the profession, but he does not put them off with information appropriated from ancient text-books; on the contrary, the most recent discoveries are constantly made use of, and he must be a very well-read architect who would not find something in this little book that he did not know before. Taking, for example, the time-honored legend about the connection of Giotto with the Campanile of the Cathedral of Florence, in regard to which we have been told so many pretty tales, how Giotto devoted his life to what should be ever after known as his tower; how he made a wooden model of it, drawing and coloring every block of marble in the facing, and so on, Professor Melani tells us that, according to the unimpeachable testimony of contemporary documents, Giotto was chosen architect of the cathedral works in the year 1334; and in the same year the foundations of the Campanile were laid, undoubtedly from his plans. Two years afterwards, Giotto died, and was succeeded as architect by Andrea da Pontedera, who directed the work on the Campanile from 1337 to 1348. In 1348 the plague devastated Florence, and it is not known whether the Cathedral work was suspended, or whether an architect whose name has not come down to us was employed for a short time; but about 1350 a certain Francesco Talenti, a native of Nipozzano, near Pontassieve, who had formerly worked as a sculptor on the Cathedral of Orvieto, was elected architect of the Cathedral of Florence and the buildings connected with it. Under Francesco Talenti, the Campanile and the exterior of the Cathedral were given the forms in which we now see them, and he had a very important part, if not the principal one, in designing them. Francesco had a son, Simone Talenti, who, after a short interval, in which the supreme direction was assumed by Giovanni di Lapo Ghini, who had been associated with Francesco Talenti in the work on the Cathedral, succeeded his father as architect. He was assisted by Benci di Cione, and these two, as Professor Melani tells us, designed and carried out the Loggia della Signoria, or the Loggia dei Lanzi, to call it by its later name, which is generally attributed to Orcagna, but was not begun until eight years after Orcagna's death.

It will be seen that our author is too conscientious, and respects too much art and artists, to allow even non-professional readers to continue in errors which he has the means of correcting, and the same conscientiousness and knowledge is very advantageously displayed in his choice of subjects, and the number and excellence of the illustrations by which they are explained. Even architects who do not read Italian will find in the illustrations of the little book, which, it may be observed, can be imported, free of duty, by mail, at a very trifling expense, a useful compendium of examples of Italian architecture, ancient and modern, while those who can understand its text will find it full of interesting history and judicious comment.

SOCIETIES

PHILADELPHIA T-SQUARE CLUB.

RESOLUTIONS adopted by the T-Square Club of Philadelphia at a special meeting held Saturday, November 18, 1899.

Whereas, God in His wisdom has taken from us our respected and beloved associate, Adolfo C. Muñoz; therefore

Be it resolved, That the members of the T-Square Club express to his family their heartfelt sympathy in this affliction.

We deeply mourn his loss as officer of the Club, as one of its active supporters and as a man of marked ability in his profession. His steady adherence to the highest ideals and his fidelity of purpose stand as a permanent inspiration to us and for him as a noble memorial, and further

Be it resolved, That a copy of these resolutions be sent to his family and to the architectural publications of the country.

¹"Development and Character of Gothic Architecture." By Charles Horbert Moore. Second Edition, rewritten and enlarged. New York: The Macmillan Company. 1899. \$4.50.

²"Manuale di Architettura Italiana Antica e Moderna." Di Alfredo Melani. Terza Edizione rifatta, con 131 incisioni e 70 tavole. Published by U. Hoepli, Milan. 6 francs.

ILLUSTRATIONS

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

THE NORTH SIDE: HOUSE OF GIRAUD FOSTER, ESQ., LENOX, MASS. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

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HOUSE OF ARTHUR REITH, ESQ., WASHINGTON, D. C. MR. WADDY B. WOOD, ARCHITECT, WASHINGTON, D. C.

This house, which cost \$10,000, is built of a dark-red "Colonial" brick laid in Flemish bond, with terra-cotta window arches. The porch is of wood, however.

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

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ST. KATHERINE'S CHURCH, LÜBECK, GERMANY.

NOTES AND CLIPPINGS

COUNSEL FOR BOTH SIDES.—Writing from conviction and writing for cash produce different results in the case of the same writer. This was strikingly exemplified in years gone by when the first water-works system was put in at Bangor, Me. There was a fierce political fight over its installation, and when it was at its height the paper opposing the project published an article attacking the company. It was written in a very caustic vein; it handled the subject skillfully and without gloves; and, what was very telling, brought a bristling array of facts into play in opposition to the company's main contentions, and played the mischief generally with the company's prospects of carrying the bill through. It was a very damaging article, and the water-company looked about for some one to reply to it. They finally decided on an exceedingly clever lawyer of pronounced Bohemian proclivities. He accepted and turned in an article in reply, for which he received \$100. It was very well done, but after it had been published the president of the water-company sent for the writer and said: "Mr. — I don't want you to think I am finding fault with your article, but I do not think it reads quite as well or is as strong as the one it was written to answer." "No," replied the truthful lawyer, "I don't think it does myself. I did my best, but, you see, I wrote one from conviction and the other for cash!" — *Fire and Water.*

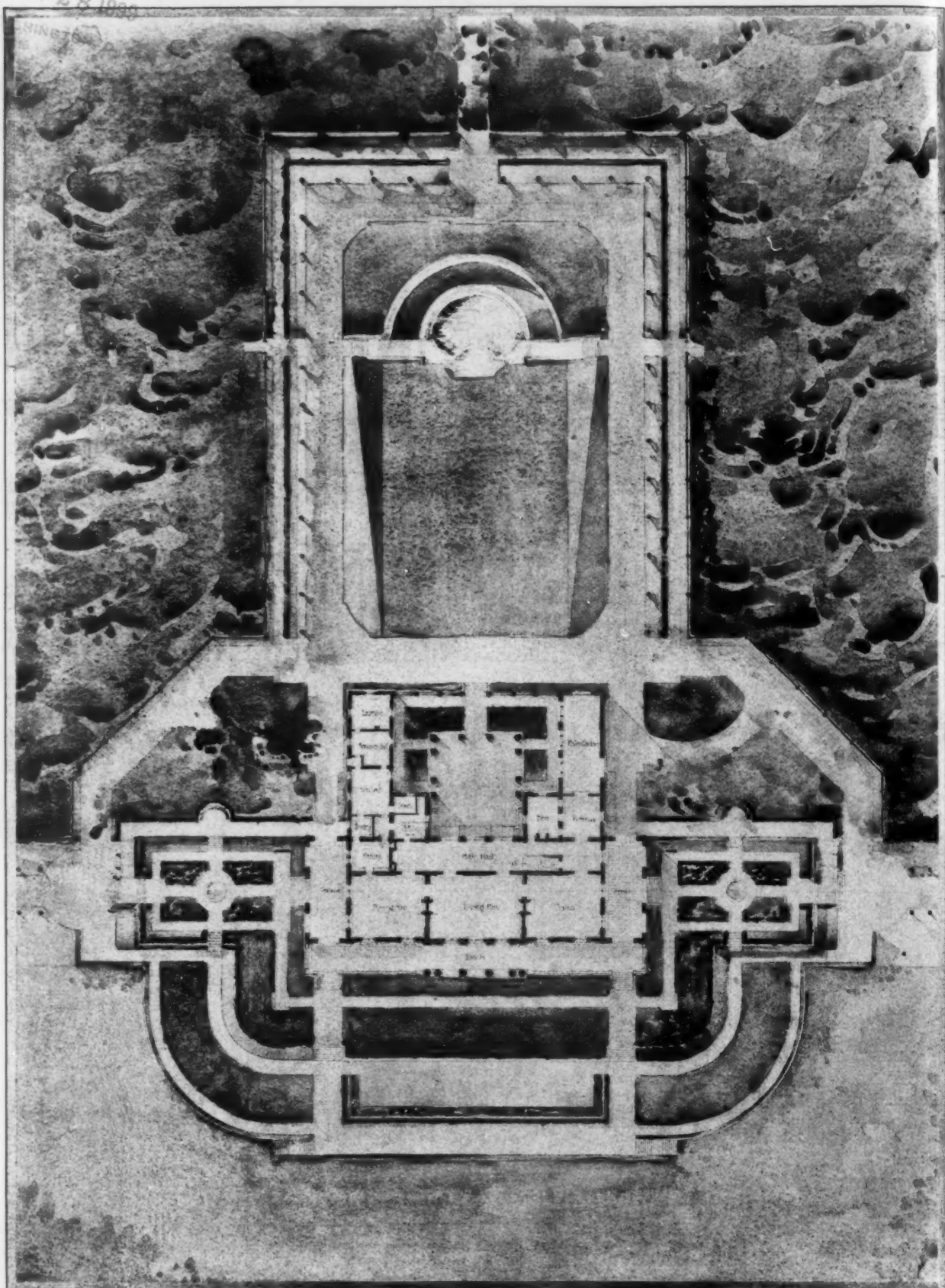
A CHURCH BARREL-ORGAN.—F. G. Edwards has unearthed a church barrel organ, still in full working order, at Trottercliffe, near Rochester, a church mentioned in Domesday, and possibly dating back to Offa, King of Mercia. Barrel-organs were in common use in English churches sixty years ago, and it is likely that the present machine, which Mr. Edwards describes in the forthcoming issue of *The Musical Times*, is not quite unique. It has six stops and six barrels, grinding sixty tunes in all, among them such archaic specimens as "Job" and "Old 11th," and it is operated by the sexton. — *London News.*

A PHENOMENON OF LAKE TITICACA.—A curious phenomenon is that metal never rusts in the waters of Lake Titicaca. You can throw in a chain or an anchor or any article of ordinary iron, and let it lie for weeks, and when you haul it up, it will be as clean and bright as when it came from the foundry. And, what is stranger still, rust that has been formed upon metallic objects elsewhere will peel off when immersed in its waters. This is frequently noticed by railway and steamship men. Rusty car-wheels and rails, and even machinery, can be brightened by soaking them in the waters of Lake Titicaca. — *Bolivia Correspondence Chicago Record.*

A GRAVEYARD OF PREHISTORIC DWARFS.—Workmen terracing King Hill, an old landmark of Northwestern Missouri, which is to be converted into a residence suburb of St. Joseph, have unearthed a prehistoric cemetery. The remains of a race of dwarfs, not allied with any tribe known to have inhabited this territory and unaccounted for by Indian legendary, repose on the summit of King Hill. A feature remarkable in itself and especially marked in connection with the dwarfish remnants of prehistoric man found in this summit is the discovery of human bones, evidently those of a giant, probably more than seven feet tall, and big-boned. Low, flat heads, with small intelligence and marked animal propensities, characterized this people. Heavy jaws and strong, well-preserved teeth carry the records of their lives forward. Brutes, human but inhumane, self-reliant, they were savages of a lower order than any we know to-day. Yet they honored their dead. Shells such as are found on the banks of many inland streams, plentiful on the sand-bars of the Missouri, overlooked by King Hill, and stones of unusual hues, worthless in the commercial marts of to-day, the playthings of children, were deposited in the graves. — *Correspondence Chicago Record, October 17.*

THE SOLIDIFICATION OF HYDROGEN.—A paper on this subject by Professor Dewar, F. R. S., was read by Sir William Crookes, before the Chemical Section at the last annual meeting of the British Association. Professor Dewar has experimented on the solidification of hydrogen since last autumn, when he was able to produce the liquid gas on a scale of 100 or 200 cubic centimetres. The hydrogen was placed in a small vacuum-jacketed test-tube, surrounded by a wider similar tube. But even with evaporation under a pressure of 10 millimetres of mercury, no solidification was realized—owing to over-cooling, as was afterwards recognized. During this year various electric-resistance thermometers and thermo-couples of platinum-rhodium were experimented with, and it was observed that the exhaustion of the liquid hydrogen lowered the temperature only by 1.5 degree centigrade, and indicated a boiling-point of —245 degrees, while the temperature reduction by evaporation ought to have amounted to 5 degrees, and the boiling-point to be —252 or —253 degrees centigrade. The reason was that a slight leak of air could not be avoided with the silk-covered wires passing through the rubber stoppers, which turn stone-hard at the low temperatures, while the cement cracks in all directions. The incoming air was apparently frozen into a frothy foam when the pressure fell below 60 millimetres. This mass was first believed to be a sponge of solid air containing liquid hydrogen, just as solid air is a magma of solid nitrogen and liquid oxygen; but it was really solid hydrogen. The solidification was then accomplished in the following apparatus. From a glass bulb, capacity one litre, containing pure dry hydrogen, a bent tube, calibrated at its lower end, passes down into a vacuum-jacketed tube. When the pressure was reduced in the latter, liquid hydrogen began to collect, until at a pressure of 30 or 40 millimetres the hydrogen suddenly turned into a white foam-like mass. It was attempted to let any still liquid part run out from the frothy ice by inverting the whole apparatus, but it was all solid. The electric thermometers fail at these temperatures. By means of two constant-volume hydrogen thermometers, containing hydrogen under pressures of 269.8 and 127 millimetres, the melting-point of hydrogen has been fixed at 16 or 17 degrees absolute, and the critical temperature at 30 or 32 degrees; so that, as in the case of nitrogen, the melting-point temperature is about half the critical temperature. The frothy appearance is due to constant ebullition of the liquid. From optical observations, the maximum density of the liquid would be .086, and the density of liquid hydrogen at its boiling-point, .07. The paper concludes: "The last doubt as to the possibility of solid hydrogen having a metallic character has been removed, and for the future hydrogen must be classed among the non-metallic elements." Apart from the fundamental importance of low-temperature research, on which Professor Dewar did not dilate in this paper, the non-metallic character of hydrogen is the most significant feature. In the discussion, which took more the shape of a vote of thanks to the absent author, Dr. L. Mond and Dr. Gladstone emphasized the dangerous character of this work, which apparently brings us within 16 degrees of the absolute zero of temperature. The danger, as Sir William Crookes further explained, comes in with the air leakage, which clogs up the tube with solid air, and forms a highly explosive vapor. As the dry hydrogen, which is generated from the purest sulphuric-acid and zinc, rushes down the narrow tube, electric sparks are produced, and extremely violent explosions have occurred, about which Professor Dewar did not say a word. Dr. Horace Brown added that Professor Dewar had just succeeded in liquefying helium, so that all our gases have succumbed to pressure or cold. — *Engineering.*

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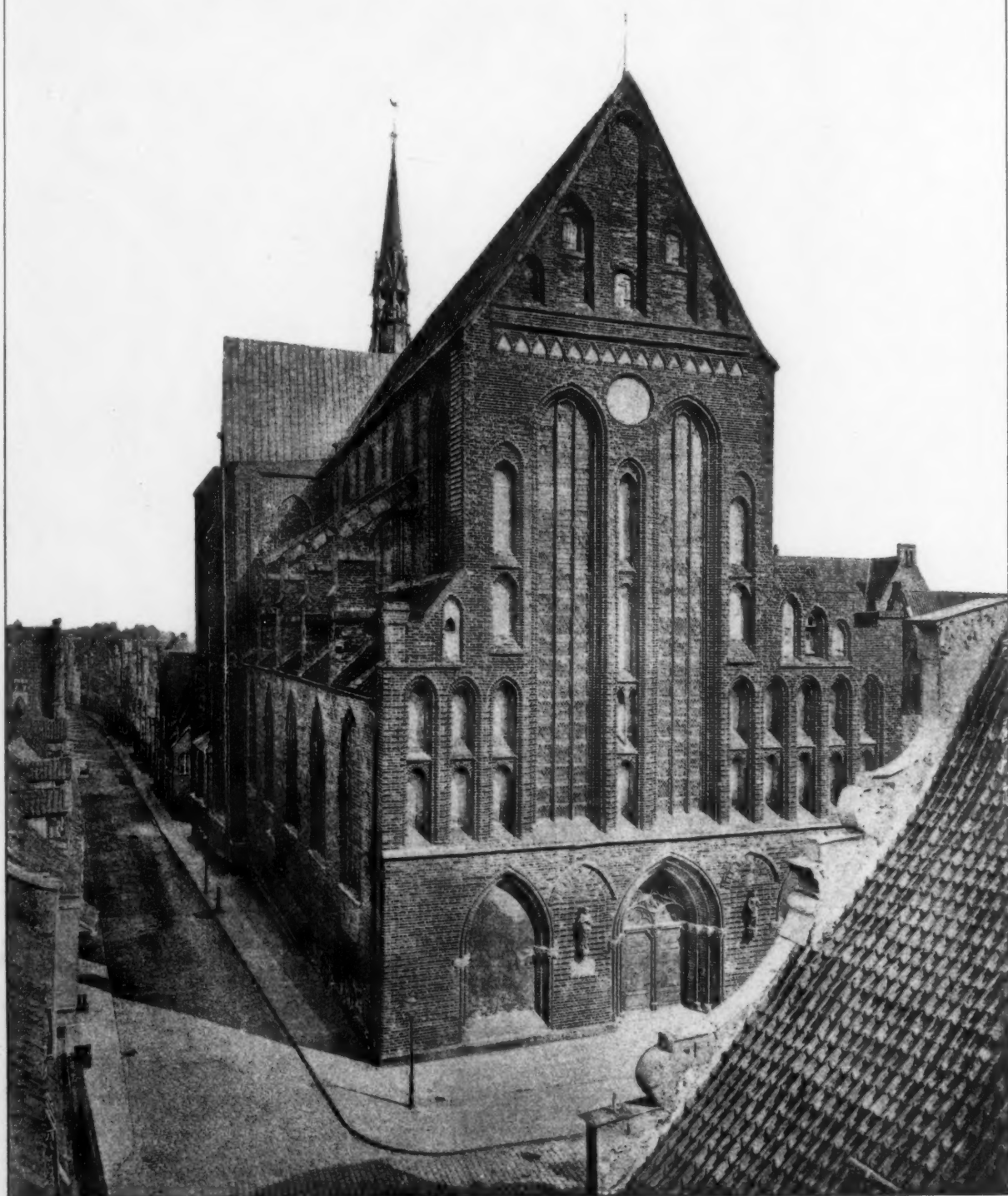
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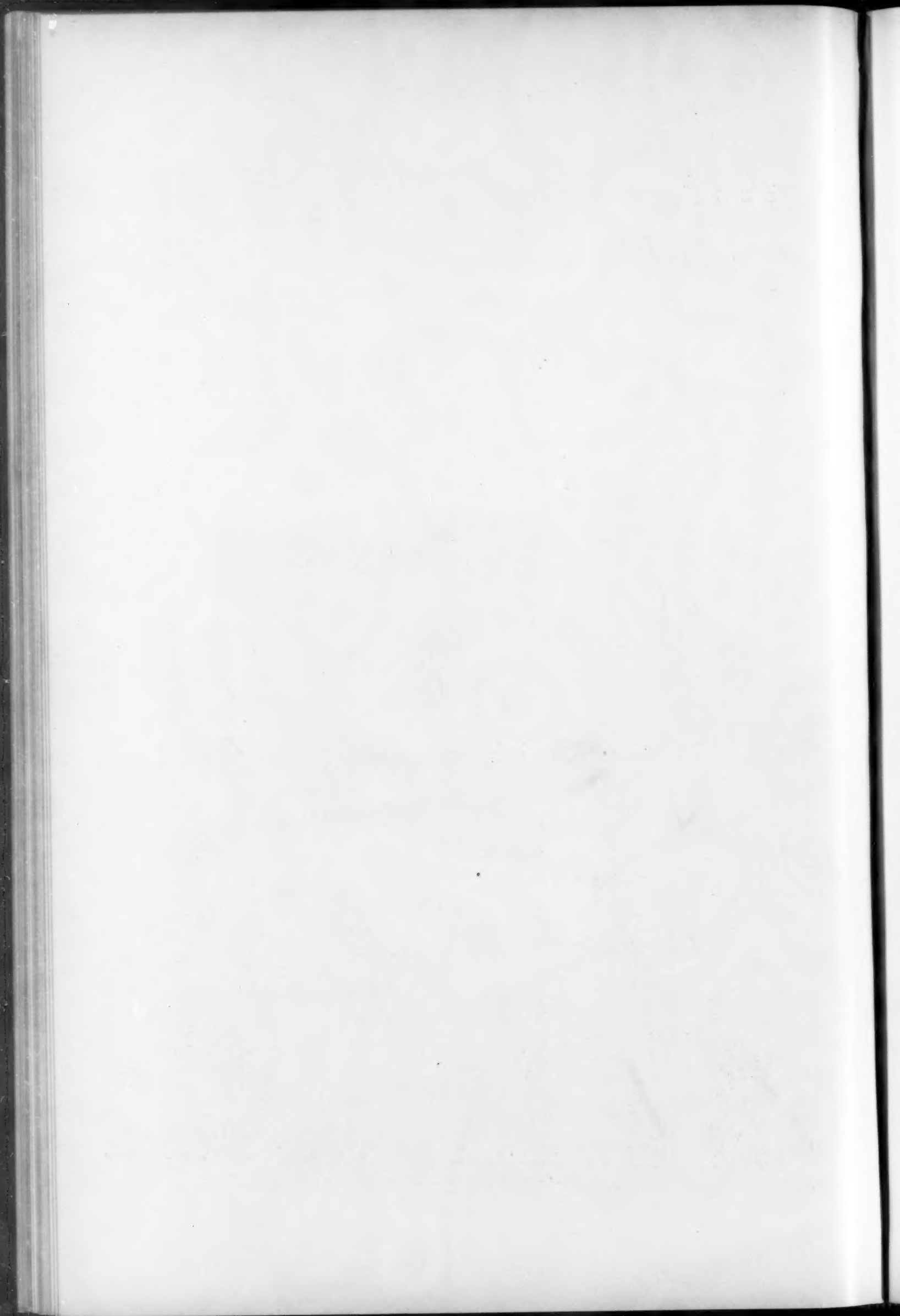
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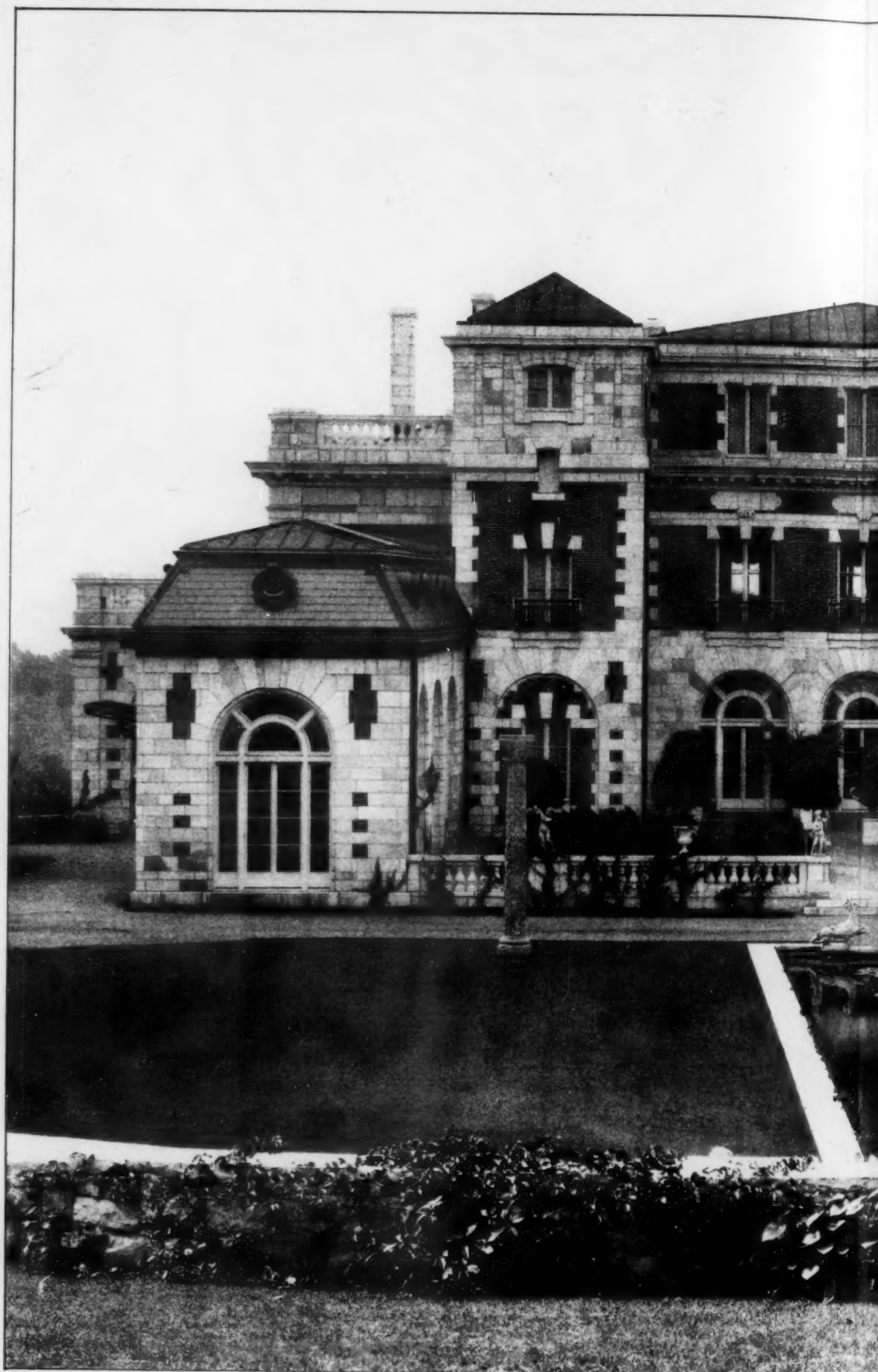
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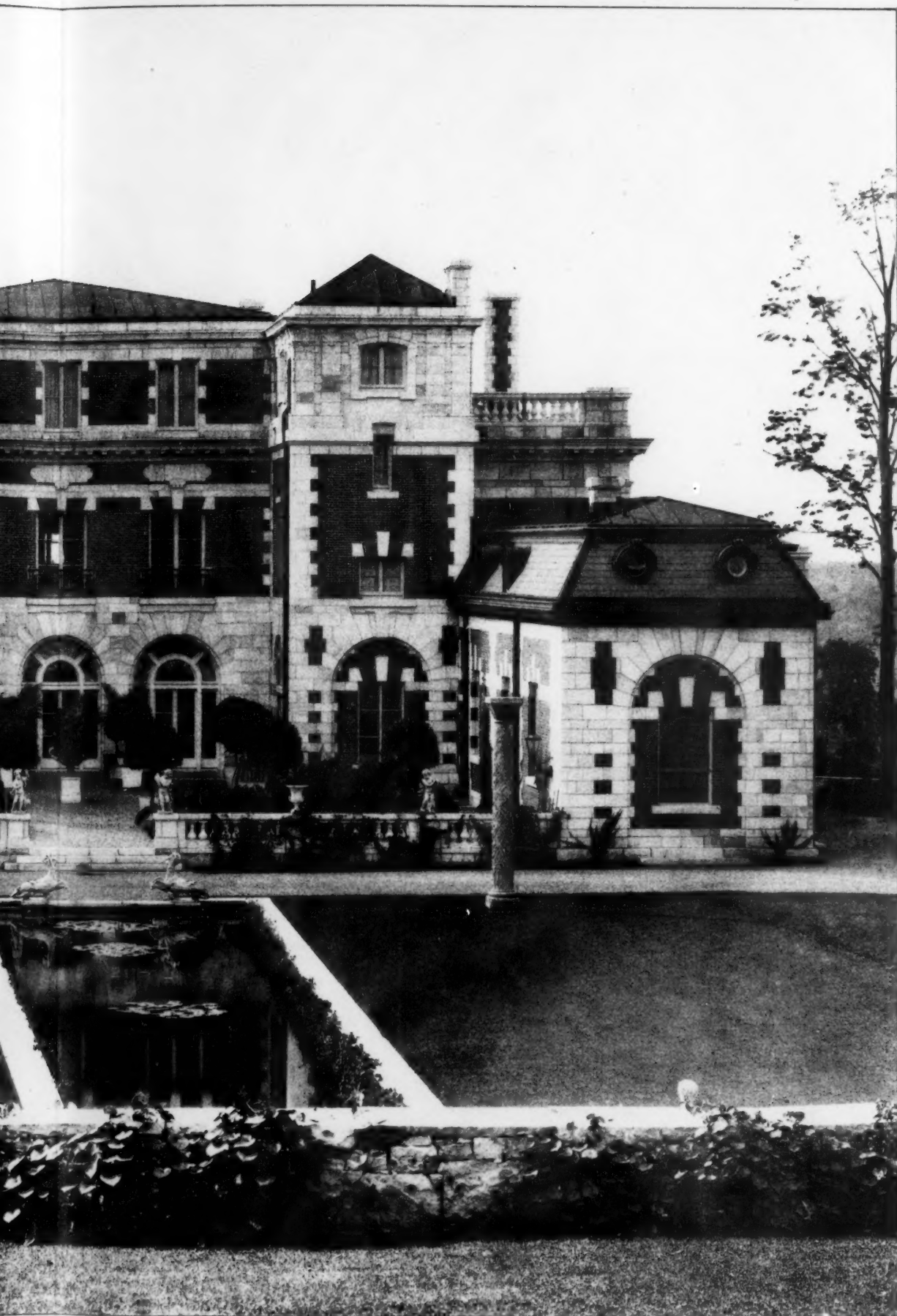
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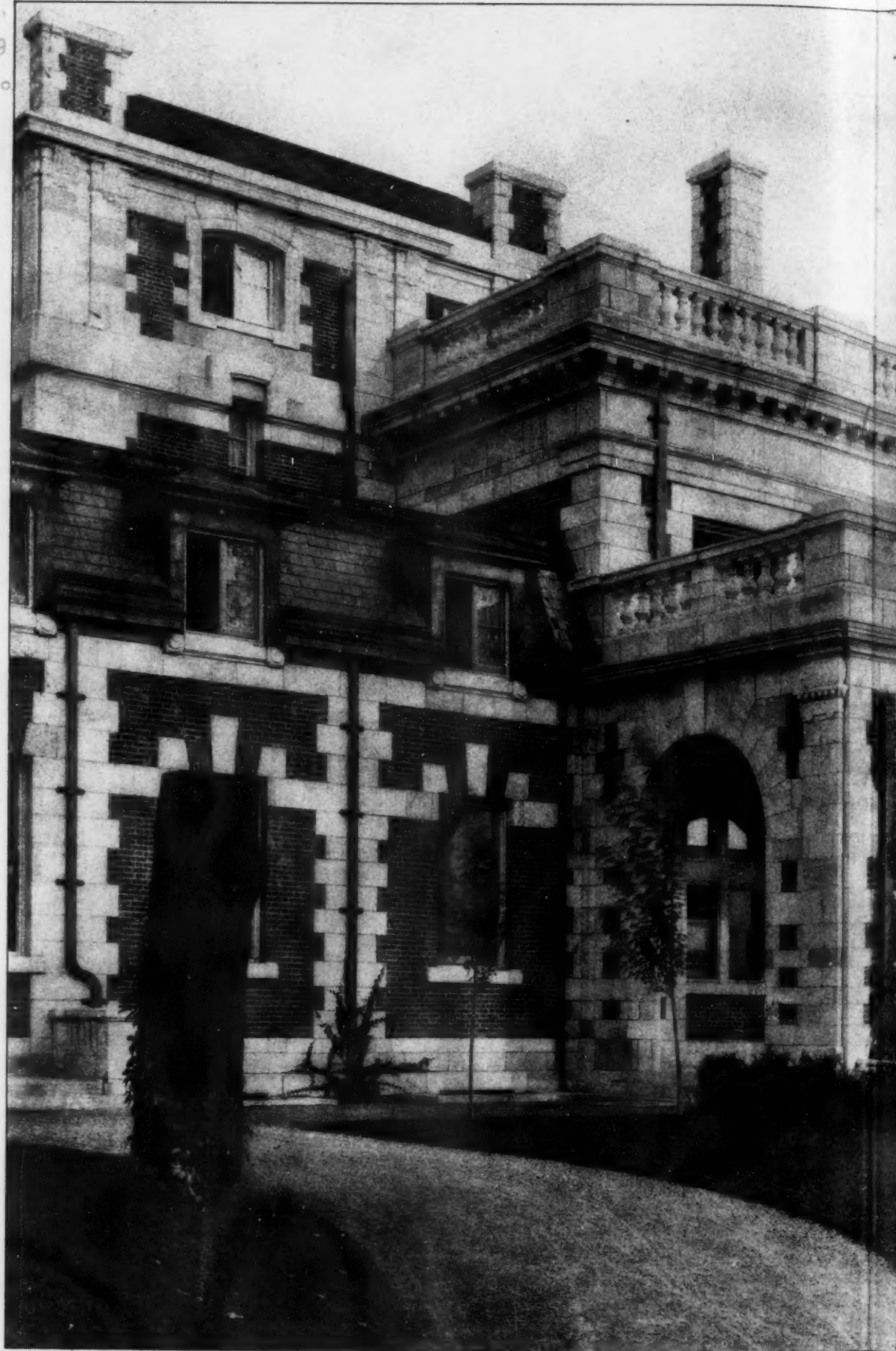
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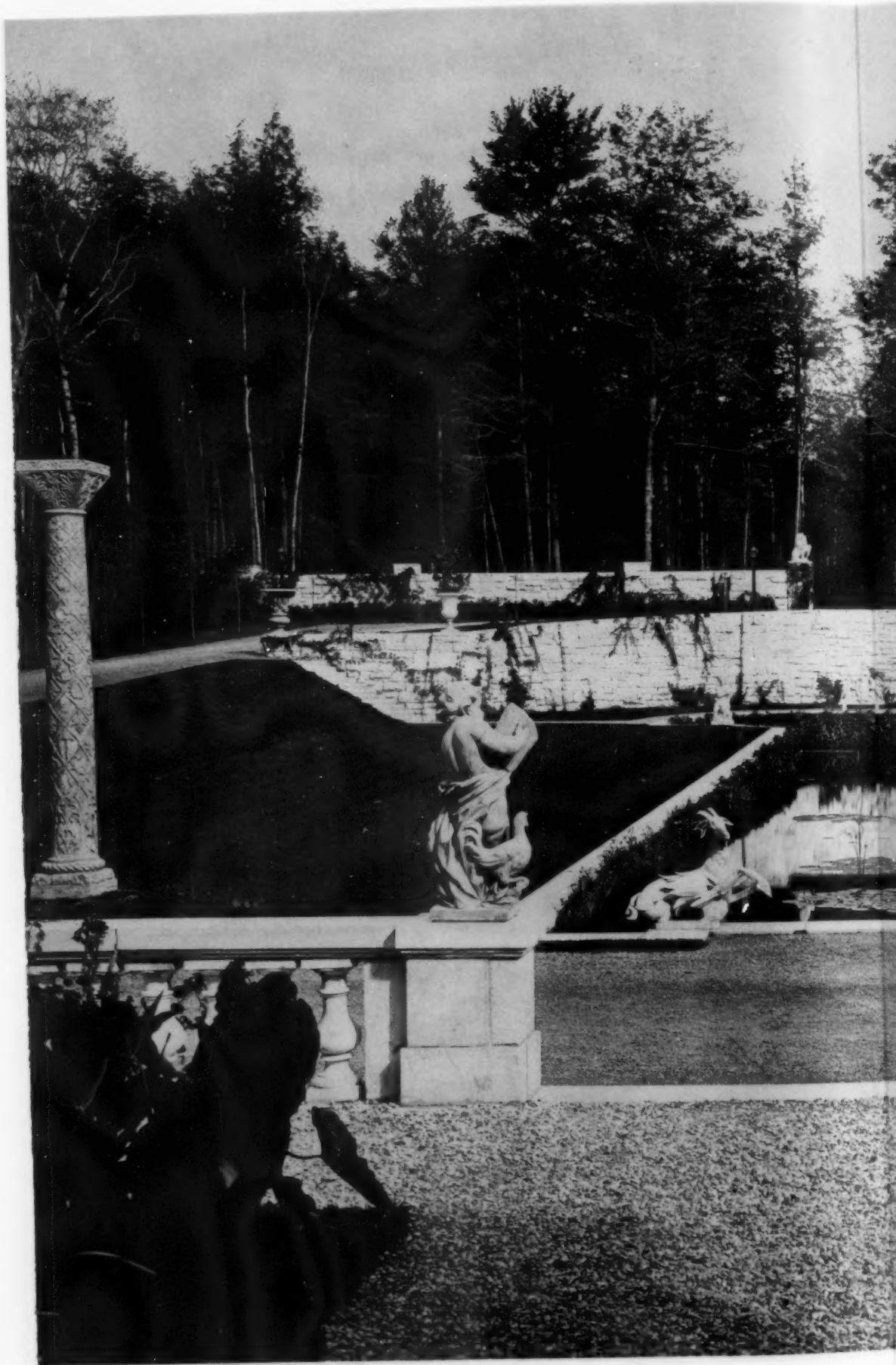


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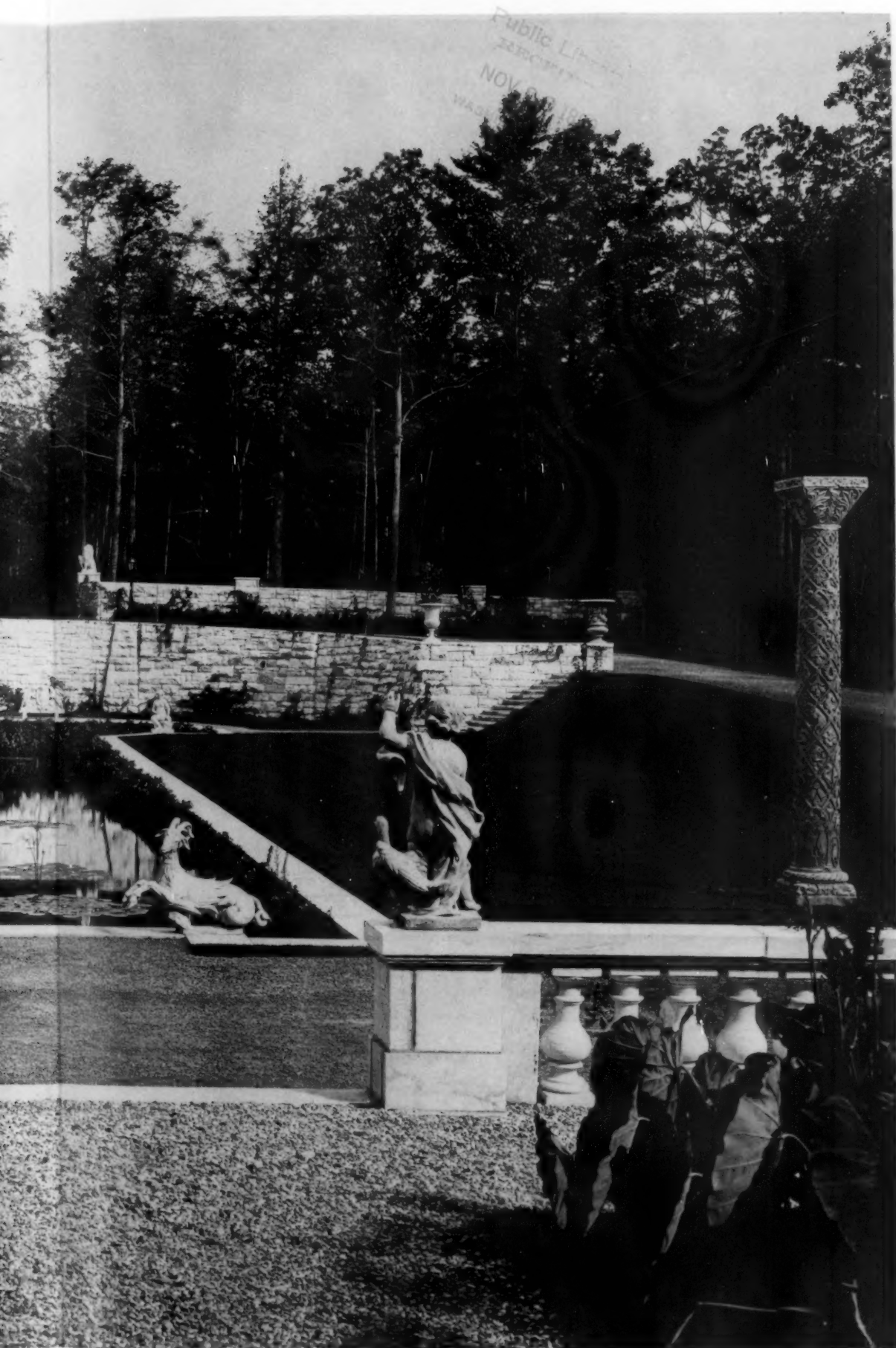
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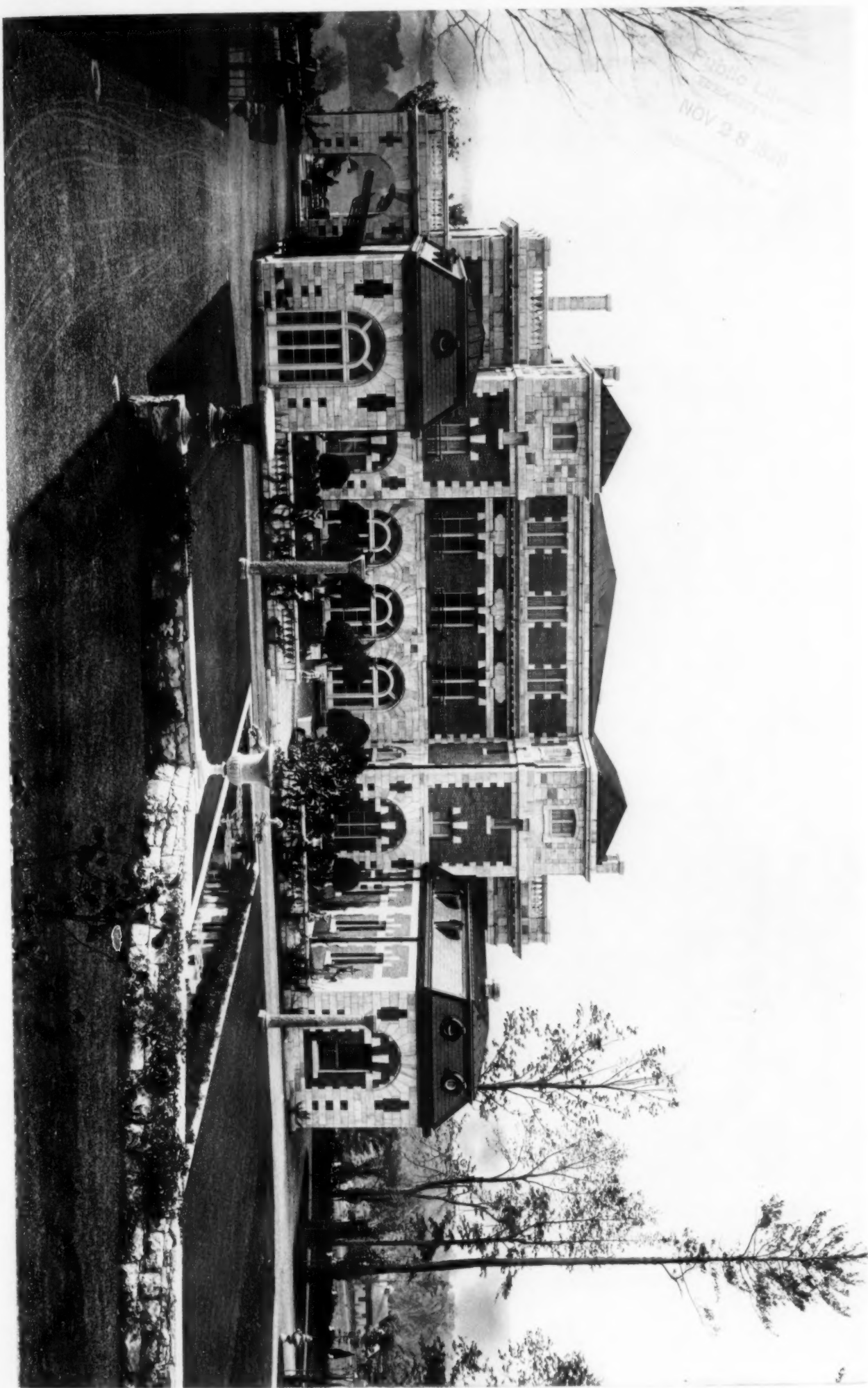
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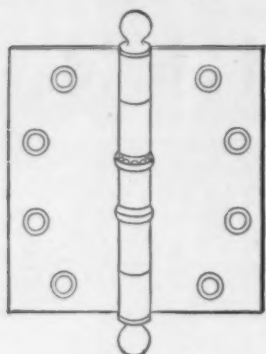
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Dimension.....	0	5 00 per ton.	0 500
Block.....	0	4 00 per ch.	Consolidation
Rubble.....	0	1 25 1 50	1 45 2 50
Sandstone:			
Longmeadow.....	0 80	80 00 90	
Kibbe.....	0 90	90 00 1 10	95 00 1 05
Brown (Connecticut).....	1 00 00 1 30	1 00 00 1 30	1 05 00 1 25
Amherst Ohio.....	80 00 95	80 00 1 00	85 00 95
Berea.....	75 00 1 00	85 00 90	55 00 75
Berlin.....	75 00 1 00	80 00 90	85 00 95
Belleville.....	80 00 1 25	25 00 1 35	1 00 00 1 10
New Brunswick (Dorchester).....	0 100	75 00 90	1 05 00 1 15
Potsdam Red.....	0 130	0 140	0 140
Oaen.....	0 200	0 200	1 25 00 1 35
Carlisle. English.....	0 105	0 105	85 00 1 05
Coarse Hill (Scotch).....	0 105	0 105	85 00 1 05
Granite: (Maine)			
Bedford.....	45 00 1 25	95 00 1 00	75 00 85
Joliet.....	1 00		75 00 1 50
Lemont.....			Perch 4 50 5 50
Serpentine.....			1 in. th. 10 00 25
Bluestone: (Per sq. ft.)			37 00 50
Sidewalk.....	30 00 5 00	40 00 1 75	
Planed.....	50 00 6 00	0 75	
Marble: (Per cu. ft.)			
Leo, Mass.....	0	1 75 00 2 50	2 00 00 2 50
Rutland, white and blue.....	0	0 300	2 00 00 3 00
Sutherland Falls.....	1 25 00 1 75	0 200	1 70 00 3 00
Glens Falls, black.....	0	0	4 00 00 4 50
Italian, blue-veined.....	0	0	2 50 00 2 75
"Sienna.....	0	0	0 500
Tennessee, red.....	0	0	4 00 00 6 00
"Knockville.....	0	0	3 00 00 4 00
Pennsylvania, blue.....	0	0	2 00 00 3 00
Vermont, white.....	0	0	2 25 00 3 00
Slate: Roofing (Per square).			
Green.....	5 00 00 6 00	4 75 00 5 25	2 90 00 3 80
"unfading.....	5 00 00 6 00	5 50 00 6 50	4 25 00 5 00
Purple.....	5 00 00 6 00	5 50 00 6 50	4 50 00 5 50
Red.....	0 10 00	10 00 00 11 00	11 50 00 13 00
Black, Lehigh.....	4 25 00 4 75	0	4 00 00 4 35
"Chapmans.....	0	0	4 50 00 5 00
Genuine Bangor.....	4 35 00 5 50	4 75 00 5 90	4 35 00 5 50
Unfading black.....	6 00 00 8 50	6 00 00 8 50	6 50 00 9 00
".....	5 50 00 8 00	5 50 00 8 00	6 50 00 9 00
Tile, Am. - P. M.			
N. Peach Bottom, war. unfading	0	0	0 28 00
Fire Clay Roof Tile on cars at fac.	8 00 00	8 00 00	5 75 00 6 25
LUMBER. - P. M.			
Boards: (Ordinary dimensions.)			
Pine, 1st quality, clear.....	65 00 00 75 00	70 00 00 80 00	47 50 00 60 00
"2d quality.....	55 00 00 60 00	65 00 00 70 00	38 00 00 45 00
"3d quality.....	18 00 00 22 00	55 00 00 60 00	27 50 00 36 50
Spruce.....	0 25 00	19 00 00 23 00	15 00 00 31 50
Hemlock.....	0 13 00 14	15 00 00 19 00	11 50 00 13 75
Yellow pine.....	20 00 00 40	25 00 00 35 00	14 00 00 29 00
Cypress.....	0	35 00 00 55 00	30 00 00 38 00
Clapboards:			
Pine.....	0	35 00 00 55 00	14 00 00 25 00
Spruce.....	0	30 00 00 36 00	Not sold.
Framing Timber:			
Pine.....	14 00 00 16 00	20 00 00 23 00	25 00 00 37 50
Spruce.....	12 00 00 16 00	15 00 00 18 00	15 00 00 21 50
Hemlock.....	18 00 00 21 00	26 00 00 55 00	14 00 00 20 00
Yellow pine.....	0	0	22 50 00 30 00
Laths:			
Pine.....Round Wood	0	2 25 00 2 50	2 75 00 3 00
Spruce.....Slab.....	3 25 00 3 50	3 00 00 3 25	2 30 00 2 35
Shingles:			
Pine, shaved.....P. M.	5 00 00 6 00	0	0
Pine, sawed....."	4 00 00 5 00	0 450	0
Spruce, sawed....."	1 50 00 2 00	1 50 00 2 00	0
Redwood.....P. M.	1 40 00 1 60	3 50 00 4 00	0
Cedar split.....P. M.	0	0 600	0
Cedar sawed.....7 x 24 "	18 00 00 20 00	3 00 00 4 00	0
Cypress, split.....	0	5 00 00 6 50	0

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24" 8 31
30" 8 31 14
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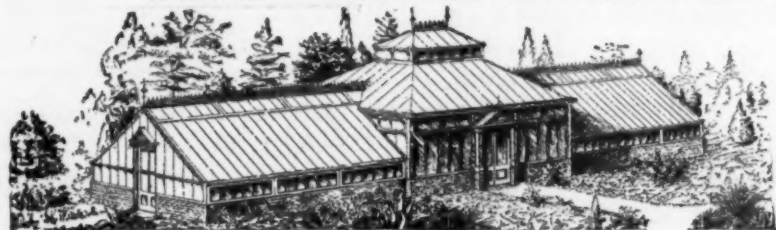
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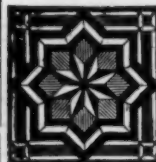
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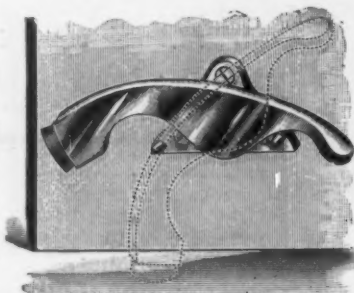
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637,187. VENTILATING ATTACHMENT FOR WINDOWS.—George M. Wagner, Philadelphia, Pa.
637,218. SPRING-HINGE.—Abraham L. Stump and Francis Brucker, Shelby, O.

BUILDING INTELLIGENCE.

Reported for the American Architect & Building News

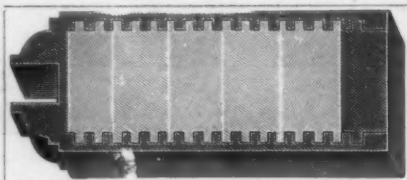
ADVANCE RUMORS.

Baltimore, Md.—Press reports state that the Maryland Brewing Co., of this city, intend soon to erect four large breweries in the South. Lynchburg, Va., Newport News, Va., Atlanta, Ga., and Chattanooga, Tenn., will each probably get one.
Boston, Mass.—Plans are being drawn for three new buildings to be erected at the Massachusetts General Hospital. Chief among them will be the operating building. The other two buildings will be the domestic building, four stories in height, terra-cotta, brick and stone, and an addition to the Thayer Building to be used as a nurses' dormitory.
Buffalo, N. Y.—The Sisters of the Good Shepherd have filed plans at the Bureau of Buildings for a two-story stone and brick laundry at 458 Best St.; cost, \$10,500.
A club-house to cost \$5,000 is to be erected soon at Fort Erie, for the Fort Erie Golf Club.
Sidney Shepherd & Co. will erect a four-story

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

brick factory on Clinton St. Henry Schaefer's Sons, contractors.
Butler, Mo.—H. M. Hadley, of Topeka, Kan., has prepared plans for a \$12,000 brick school. W. W. Root, Secy.
Cleveland, O.—The Building Committee of the West Side Turnverein has adopted the plans of Frank Baird for a \$50,000 building to be erected at 852 Lorain St.
Clinton, Ia.—The managers of the Agatha Hospital will erect a new building on their grounds, at a cost of \$30,000. Foundation work has been started and the superstructure will be put up in the spring.
Des Moines, Ia.—The Chamberlin Medicine Co. has purchased property on 6th Ave., between Park and Centre Sts., on which will be erected a laboratory, about 125' x 198', three-story and basement; cost, \$75,000.
Detroit, Mich.—The citizens have voted to issue \$150,000 bonds for a horticultural building and aquarium on Belle Isle.
Elgin, Ill.—The city has passed an ordinance to build a bridge at Chicago St.
Emporia, Kan.—The citizens have voted to erect a court-house.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Hackettstown, N. J.—The buildings of the Centenary Institute of the Methodist Church recently burned will be rebuilt at a cost of \$300,000.
Hawkinsville, Ga.—The plans of A. J. Bryan & Co., of Atlanta, have been accepted for the jail for Pulaski County; estimated cost, \$15,000.
Homestead, Pa.—The Oscan Co., of Chicago, Ill., are preparing plans for a brewery to be built here soon; cost, \$100,000.
Louisville, Ky.—It is reported that Andrew Carnegie has offered to donate to Louisville Polytechnic Library Society \$125,000 for a library, under certain conditions.
Mason City, Ia.—It was voted November 10 to issue \$75,000 bonds for a court-house.
Manchester, Mass.—C. H. Blackall, of Boston, is preparing plans for a \$30,000 cottage, to be built by Oliver W. Mink, 80 Ames Building, Boston.
Millford, Conn.—H. G. Taylor, of N. Y. City, is about to build an \$18,000 stone and frame dwelling. Joseph W. Northrop, of Bridgeport, architect.
Milwaukee, Wis.—The Trustees of the Milwaukee-Dowder College have decided to erect a \$20,000 dormitory.
The Council has decided to issue \$35,000 bonds for a school for the deaf.

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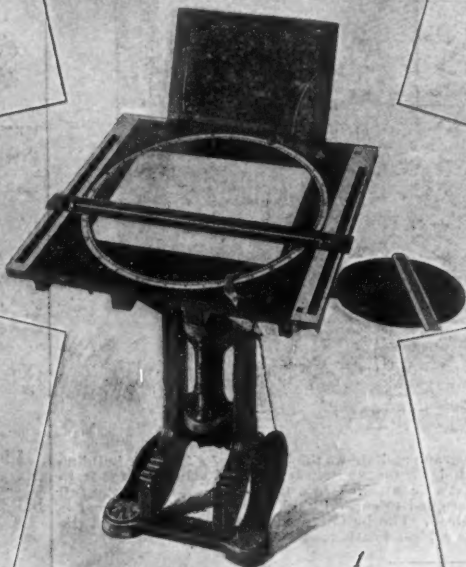
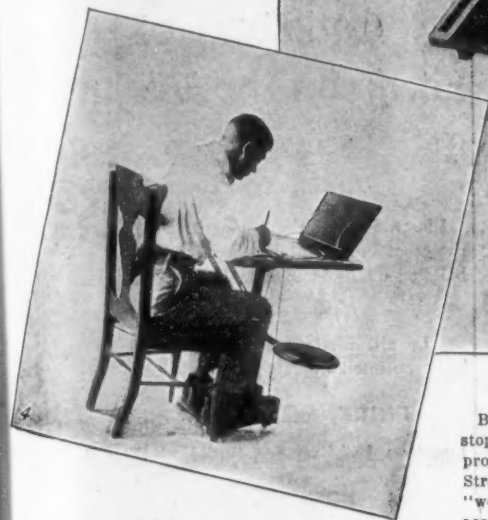
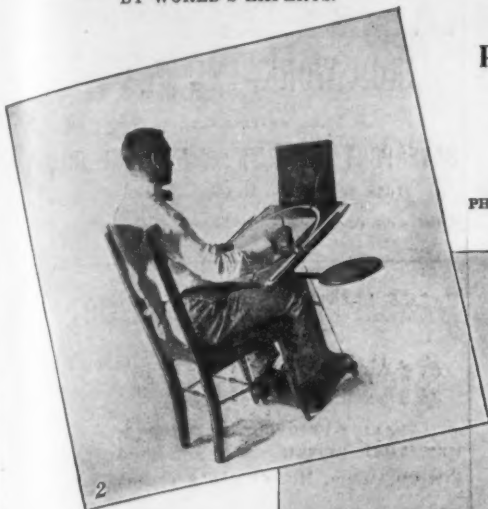
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Minnewaukon, N. D.—It was voted on November 7 to issue \$20,000 bonds for a new court-house. A. A. Lindahl, Co. Aud.

New York, N. Y.—New repair shops will be erected for the Fire Department on 56th St. and 12th Ave., to cost about \$200,000.

Philadelphia, Pa.—Architects J. Franklin Stuckert & Co. are preparing plans for the proposed new police and patrol station and fire-engine house that are to be built at 26th and York Sts. and at 16th St. and Snyder Ave.

J. E. & A. L. Pennock will erect an office and factory at the corner of 9th and Dudley Sts., for the United Gas Improvement Co.

The Atlantic City Steel Pier Co. will build a two-story ornamental store-building of brick, stone and limestone, 65' x 150', at Virginia Ave. and the Boardwalk.

Pittsburgh, Pa.—Edw. Stotz, National Bank Building, will prepare plans for the new East End High School.

Richmond, Va.—Plans and specifications are being prepared by Wilson Brothers & Co., of Philadelphia, for a new railroad station for the Chesapeake & Ohio and the Seaboard Air Line Railroads. The station will be four stories high and of the Spanish Renaissance style of architecture.

Rockford, Ill.—It is stated that \$45,000 will be expended for new schools.

Sandusky, O.—Report states that Andrew Carnegie has donated \$50,000 for a public library.

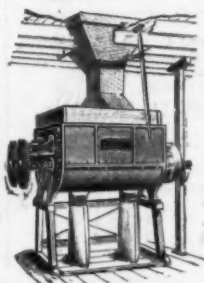
Sault Ste. Marie, Mich.—Charlton, Gilbert & Demar, of Marquette, have prepared plans for a church for St. James Protestant Episcopal congregation, to cost \$15,000.

Spencer, Ia.—The citizens have voted to issue \$50,000 bonds for a court-house.

Tucson, Ariz.—Andrew Carnegie is stated to have offered to donate \$25,000 to the city for a public library.

Walsenburg, Col.—The citizens have voted to erect a high school.

Washington, D. C.—The Virginia Hotel Co., Jos. E. Willard, Wyatt Building, president, proposes to erect a fireproof hotel building on the site of the present Willard Hotel, corner of 14th St. and Pennsylvania Ave. The approximate entire cost of the building will be about \$2,000,000, exclusive of the ground; architect, H. J. Hardenbergh, N. Y.



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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Waukegan, Ill.—It is reported in press reports from Worcester, Mass., that Philip W. Moen, Fourth Vice-president of the American Steel & Wire Co., states that the mills of the company here recently destroyed by fire will be rebuilt immediately.

Webster City, Ia.—Liebbe, Nourse & Rasmussen, of Des Moines, have completed plans for a \$25,000 R. C. Church.

Winchester, Va.—R. T. Barton, Chairman of the Building Commission, is receiving plans for a brick and stone city-hall, to cost \$35,000.

Worcester, Mass.—Barker & Nourse are preparing plans for a convent to be built on Bradley St., for Notre Dame parish. The plans call for a four-story structure, 40' x 70', of red brick and brown-stone trimmings. Rev. Joseph Brouillet has the contracts in charge.

Architect Geo. H. Clemence is preparing plans for alterations to the Walker Building. All the stores in the building will be remodelled and up to date store-fronts put in; cost, \$12,000. Owner, J. H. Walker.

ALTERATIONS AND ADDITIONS.

Philadelphia, Pa.—Bainbridge St., nr. 22d St., alterations, improvements & additions to Bethany Presbyterian Church: \$27,000; o., Bethany Church; b., Chas. P. Nesbitt; a., Thomas P. Lonsdale.

APARTMENT-HOUSES.

Boston, Mass.—Commonwealth Ave., No. 297,

BUILDING INTELLIGENCE.

(Apartment-Houses Continued.)

three-st'y bk. apart., 35' x 45' x 88', flat roof, hot water; \$70,000; o., Jessie P. Draper; b., Woodbury & Leighton; a., Peabody & Stearns.

Chicago, Ill.—Dakin St., Nos. 1530-34, three-st'y bk. apart., 69' x 70'; \$27,000; o., W. Kirk; a., Huehl & Schmid, Metropolitan Block; b., Philip Lotz, 60 Wabash Ave.

S. Wood St., Nos. 458-464, three-st'y bk. store & apart., 50' x 96'; \$30,000; o., John S. Ketcham; a., George J. Harvey, 115 Monroe St.; b., Arthur Mesgher, 6543 Drevel Ave.

Lincoln St., cor. Fullerton Ave., three-st'y pressed-bk. & st. apart., 50' x 75', comp. roof, steam; \$18,000; o., J. S. Ketcham; a., G. L. Harvey.

Monroe Ave., nr. Midway, three-st'y st. front apart., 40' x 83', steam; \$22,000; a., S. M. Seaton, 34 Clark St.

New York, N. Y.—Broome St., Nos. 149-151, six-st'y & base. bk. flat, 37' 6" x 83' 10"; \$45,000; o., L. Bachrach, 31 Nassau St.; a., M. Bernstein, 245 Broadway.

Seventh Ave., cor. 113th St., seven-st'y bk. & st. apart., 90' x 100', flat roof, steam; \$150,000; o., Emil Black, 2667 Broadway; a., G. A. Schellenger, 130 Fulton St.

One Hundred and Twenty-fourth St., nr. Amsterdam Ave., 2 six-st'y bk. & st. apart., 50' x 80'; \$150,000; o., Neville & Bagge, 217 W. 125th St.

One Hundred and Twentieth St., bet. 5th & Madison Aves., five-st'y limest. & terra cotta apart., 20' x 89'; \$20,000; o., Lida A. Brown; a., Harry T. Howell, 748 E. 138th St.

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(Apartment Houses Continued.)

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Ave., 2 five-st'y bk. aparts., 25' x 87' & 25' x 75', flat
roofs; \$40,000; o., Chas. Bogan, 1127 Washington
Ave.

W. Forty-fifth St., Nos. 137-139, six-st'y bk.
bachelor aparts., 31' 7" x 87' 6"; \$130,000; o., Wm.
H. Stearns, 156 Fifth Ave.; a., Chas. A. Rich, 35
Nassau St.

Fourth Ave., No. 431, seven-st'y bk. bachelor
apart., 31' 7" x 87' 6"; \$50,000; o., Thos. H. Bell,
145 W. 96th St.; a., Moore & Landsiedel, 148th St.
& Willie Ave.

First Ave., nr. 91st St., 2 five-st'y bk. flats &
stores, 25' 8" x 89', 79' 1"; \$54,000; o., F. J.

BUILDING INTELLIGENCE.

(Apartment-houses Continued.)

Schnugg, 78 E. 96th St.; a., John Hauser, 1441
Third Ave.

E. Fifty-eighth St., Nos. 422-424, six-st'y bk. & st.
apart., flat roof; \$38,000; o., A. C. East, 280 Broad-
way; a., G. F. Pelham, 503 Fifth Ave.

Lexington Ave., nr. 95th St., seven-st'y & base.
bk. flat, 55' 8" x 90'; \$100,000; o., Sam Glass, 182 E.
95th St.

Eagle Ave., e s 190' n 161st St., 2 four-st'y bk.
flats, 30' x 103'; \$52,000; o., Jos. Sherwood, Has-
brook Heights, N. J.

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roof, steam; \$50,000; o., Barton Bros.; a., Stroch,
Brown & German.

Norwood, O. — Five-st'y factory buildings, 60' x
160' & 26' x 35', comp. roof, steam; \$40,000; o.,
Brass Washing Mach. Co., W. 2d St., Cincinnati;
b., D. I. Shepherd.

Seymour, Ind. — Three-st'y bk. cap & cloak factory,
86' x 147', asphaltum roof, steam; \$20,000; o., Bear
& Co.; a., Wm. H. Mayer.

HOUSES.

Boston, Mass. — Montebello Road, nr. Washington
St., 2½-st'y fr. dwell., 34' x 36', pitch roof, furnace;
\$6,000; o., Cheever Newhall; b., Oscar Johnson;
a., G. A. Fuller.

Park St., nr. Centre St., 2½-st'y fr. dwell., 29' x
40', pitch roof, hot water; \$6,500; o., Henry E.
Richmond; b., Richard Duffie; a., W. W. Din-
more.

Zamora St., nr. Perkins St., three-st'y fr. dwell.,
32' x 40', pitch roof, furnace; \$6,000; o., Mrs. H. F.
Daly; a. & b., William Tobin.

Ruggles St., bk. dwell., 22' x 53', flat roof, fur-
nace; \$8,000; o., Joseph Green; b., J. J. Galvin; a.,
J. H. Parker.

Ruggles St., 3 three-st'y bk. dwells., 21' x 61', 22'
x 62', 21' x 61', flat roofs, furnaces; \$24,000; o., Jos.
Green; b., J. J. Galvin; a., J. H. Parker.

Rutven St., 2 three-st'y bk. dwells., 23' x 50', flat
roofs, furnaces; \$10,000; o. & b., John F. Dempsey,
40 Highland Park St.; a., R. A. Watson.

Corry Road, nr. Summit Ave., bk. dwell., 28' x
33', pitch roof, hot water; \$6,000; o. & b., E. J.
Barker; a., J. A. Leslie.

Nixon St., No. 17, 2½-st'y fr. dwell., 21' x 29' x 45',
pitch roof, furnace; \$5,500; o., Sarah Eaves; a. &
b., H. A. Black.

Monterey Ave., nr. Washington St., three-st'y fr.
dwell., 34' x 36', pitch roof, stoves; \$5,000; o., John
Anderson; a. & b., H. J. Eklund.

Chicago, Ill. — N. Washington Ave., Nos. 1624-36,
six 1½-st'y fr. dwells., each 20' x 42'; \$8,400; o. & b.,
M. Bauerle; a., William Schultze, 1608 Milwaukee
Ave.

Kenmore Ave., Nos. 2768-70, two-st'y bk. dwell.,
32' x 46'; \$7,000; o., M. Hodge; a., Charles A.
Strandell, 84 La Salle St.; b., S. E. Ockerlund, 2771
N. Seeley Ave.

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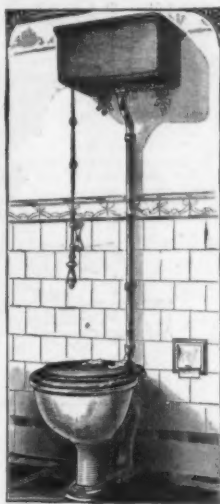
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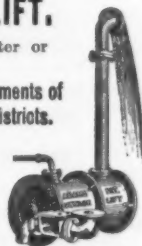
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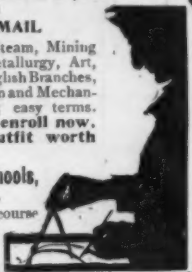
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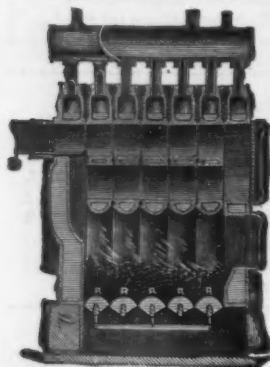
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