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SUMMARY:—

Our Paper Supplies delayed by the Flood.—The Chicago Building-strike.—The Coming Lowering of Prices.—Tombs Prison Contractors ruined by the late Advance in Prices.—Death of William Butterfield, Architect.—The new Yale School of Forestry.—Annual Report of the Boston Manufacturers' Mutual Fire Insurance Co.—A new Artificial Stone.—The Colossal Size of American Blast-furnaces.—Russian Ice-breaking Steamers. 65

LETTER FROM WASHINGTON. 67

LETTER FROM CANADA. 67

LETTER FROM PARIS. 68

THE ENGLISH LAW AS TO LIGHT AND AIR IN BUILDING CASES. . 69

ILLUSTRATIONS:—

The Homestead Hotel, Hot Springs, Va.—The new Younker Building, Des Moines, Ia.—Details from the Casa Ayuntamiento, Seville, Spain.

Church at Belloy, Seine-et-Oise, France.

Additional: Science Hall: St. John's College, Annapolis, Md.

—University of Pennsylvania Dormitories: Entrance to Quad, Philadelphia, Pa.—House of F. L. Stetson, Esq., No. 4 East 74th St., New York, N. Y.—"Minley Manor," from the Lawn, Fleet, Hants, Eng.—"The Cauliflower," Ilford, Eng.—Screen: Little Stanmore Church, Eng. 71

COMMUNICATION:—

Making Good Defective Work. 71

NOTES AND CLIPPINGS. 71

IF any of our subscribers have been annoyed by delay in the delivery of our issue for last Saturday, we desire them to understand that it was merely one of the incidents attending the late floods in New England which have prevented the paper-mills from filling their orders with customary promptitude. The same mischance obliges us to be somewhat late this week and also to use a different quality of paper.

THE great strike of the building-trades in Chicago has already resulted in an almost complete suspension of building operations, but the union leaders are still defiant and aggressive, and threaten to order strikes on all buildings in New York, Boston and elsewhere in which Chicago contractors are interested. Meanwhile, the contractors, who have no difference with the men as to wages, or length of working day, but who simply claim the right to employ or discharge whomsoever they choose, and refuse to submit to the limitation of the amount of work that a man shall do in a day, or to promise not to use non-union-made material, or to use only such machinery as the unions permit, seem to be equally determined to hold out against an arbitrary tyranny which, as they say, has steadily reduced the total amount of building in Chicago until, last year, it was less than half of what it was in 1890, and much less than one-third of what it was in 1892, while all the other American large cities have shown great gains during the decade; in New York, Cleveland, Cincinnati, Minneapolis and St. Paul the increase in building in 1899 over 1898 being from fifty-four to seventy per cent.

ONE of the straws that indicate the approaching downward tendency of prices of structural iron is, perhaps, to be found in the circulars, several of which have lately found their way into architects' offices, announcing that various contractors for structural ironwork "have in stock" large quantities, amounting in some cases to many thousand tons, of I-beams, channels, angles and other shapes used in construction, which they will sell at prices which will be quoted on application. As these contractors do not themselves manufacture beams and angles, they must have bought them of some rolling-mill; and, as they do not, as a rule, carry on the business of dealers in materials, in addition to their contracting and engineering work, the natural inference is that they must have accumulated, in anticipation of their needs as contractors, a quantity of material which, according to present business prospects, they are not likely to require; and, as prudent persons, their managers wish to take advantage of present prices, which are still high, and get rid of a surplus stock which they think

they can replace later, when it is actually needed, at lower rates. All this is a matter of simple commercial wisdom, for which the stockholders of the corporations concerned have reason to be grateful; but it is also evidence that the ablest men in the business are so sure of being able to buy structural iron for less money in the future than it is worth now that they are willing to sell their present stock, and take the risk of being able to replace it without delay or loss when it comes to be needed in the course of their contracting work. We do not, naturally, suppose that the contractors sell, as yet, at less than the mill prices, for the fact that they can deliver at once would make transactions with them more desirable than contracts with the mills, which generally refuse to set any time for delivery, but the fact that they are selling, instead of buying, the materials that they use in their current business, is extremely significant.

AN illustration of the great advance which has taken place in the cost of certain building materials, and, incidentally, of the troubles which such violent fluctuations in prices bring to contractors, is to be found in the failure of the Armstrong & Bolton Company, which held, until its failure, a contract for the steam-plant, elevators, electric-lighting apparatus and cooking appliances of the new Tombs Prison, in New York. The contract price was something over ninety-three thousand dollars, and a bond of the United States Fidelity and Guaranty Company for seventy-five thousand dollars was given as security for the fulfilment of the contract. After the award of the contract, the prices of materials for this sort of work began to advance, and, by the time the building was ready for its fittings, the cost of some materials had doubled. Before a thousand dollars' worth of work had been put into the building, the contractors made an assignment, and the Fidelity Company, as surety, was called upon to complete the contract. New bids were advertised for by the Company, and the lowest received was nearly seventy-five thousand dollars more than the contract price, while some of them are said to have exceeded it by more than a hundred thousand dollars. The Fidelity Company can only be held for the amount of its bond, but appearances indicate that it will have to lose the whole of its seventy-five thousand dollars as a tribute to the ingenuity of industrial combinations.

THE death of William Butterfield removes from the English architectural world almost the last of the great artists who made the middle of the century illustrious in professional history. Although Butterfield's work seems to us at this day a manifestation of an eccentric fashion, which only survived long enough to produce some of the worst horrors that ever passed under the name of architecture, he was not responsible for the performances of his imitators, and, even now, the professional observer is attracted to his buildings by the pure taste, and artistic feeling, with which he pursued an ideal too high, or, at least, too easily perverted and vulgarized, to hold a permanent place in modern architecture. The best known of his buildings are, probably, Keble College, at Oxford, and All Saints' Church, in Margaret Street, London, both of which, in the days of architectural polychromy, were objects of pious pilgrimage on the part of students, and still afford a suggestion of what might be done with color to heighten artistic expression in architecture; but other buildings in London and Oxford, as well as at Rugby and Salisbury, show the same artistic inspiration, and, we may say, the same inadequacy of the materials used to realize the inspiration.

YALE University has been enabled, by the generosity of four persons, to establish a School of Forestry, the plans for which have already been laid out by President Hadley. The late Prof. O. C. Marsh bequeathed to the University a large estate in the neighborhood, to be used for the purposes of a school of botany. Naturally, the same estate can also be used for instruction in forestry, and it will be so used for the present. To architects, who have seen the white pine of the Northeastern United States, the most valuable timber in the world, almost disappear from the market, the importance of furnishing the community with men trained in the conservation and development of forest property is painfully evident, and there are signs that the owners, even of spruce lands, which it has been the fashion to denude of every stick, are beginning to

understand the advantage of making them moderately, but permanently productive, and, for that purpose, will soon desire the assistance of educated foresters; so that the graduates of this and other university schools of forestry should not lack employment for a time. Meanwhile, it is not impossible that the vast tracts of land extending from Maine to Virginia, which were once covered with an extremely valuable growth of white pine, but are now worthless, may attract the attention of rich families or corporations. If the Single Tax Leagues would give guarantees against attempts to confiscate the money put by land-owners into improvements, no investment would be more steadily profitable, or more advantageous to the local population, as well as to the community at large, than the purchase and scientific utilization, on a large scale, of the almost barren wastes which once formed the wealth of New England, New York, and New Jersey, and which still, properly treated, would be worth more than all the gold-mines of the West.

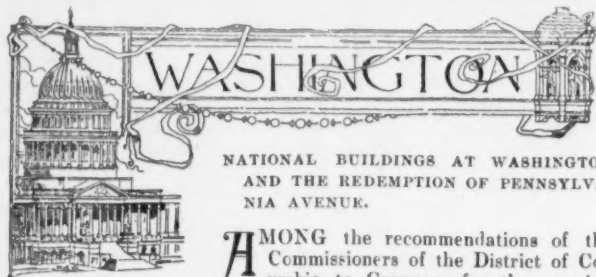
THE Report for the past year of the Boston Manufacturers' Mutual Fire-insurance Company contains a retrospect of the work of this and similar companies for the past fifty years which is of great interest, as showing what can be accomplished by a system of insurance which provides means for lessening the risks against which it insures, instead of betting on the occurrence of casualties which it does nothing to prevent. The result of the application of the new method is truly remarkable. The best risks, probably, that ordinary companies insure are city dwelling-houses. The entire destruction by fire of a city dwelling is almost unknown, and, although fires occasionally occur in them, the loss rarely amounts to more than a year's premium on that particular policy, so that the business is mainly profit. On the other hand, manufactories, particularly cotton and woollen mills, are exposed to enormous dangers. A bit of hoop-iron, or a gravel stone, in a cotton-bale strikes fire readily at the contact of the pickers; a drop or two of oil will produce spontaneous combustion in cotton or cotton goods; many dye-stuffs, like picric acid, for example, are either highly explosive, or may produce spontaneous combustion in cotton or woollen goods; the air in such mills is always full of fibrous dust, which carries flame like lightning over a room, while the same dust settles in heaps on all inaccessible surfaces sufficiently level to hold it; and not only are great quantities of combustible materials necessarily stored in and about the mills, but every mill maintains huge boiler-fires, with heaps of soft coal, very liable to spontaneous combustion, and steam apparatus, usually including drying-rooms heated to a high temperature; yet the cost of insurance of a cotton mill in one of the mutual companies has been for the past four years about one-fourth of the premium on a city dwelling-house, and about one-twentieth of the premiums charged by the ordinary insurance companies on manufactories which are not included in the mutual system, and in which, in consequence, no attempt is made to reduce the hazard. Considering that the fire-losses in this country are more than one hundred million dollars a year, and that the community pays companies, in premiums, about two dollars for every dollar that it receives in the way of indemnity, it is evident enough that a saving of three-fourths, or, still more, nineteen-twentieths, of the premiums paid is quite as much of an object to the owners of insurable property as is the prevention of fires. Business-men are apt to say, in speaking of fire-losses, that they are the concern of the insurance companies, as if the payment of premiums were, like taxes, something inevitable, which no effort on the part of those who paid them could mitigate; and it must be confessed that the conduct of the underwriters has, in times past, encouraged this view. Now, owing, undoubtedly, to the example of the manufacturers' mutual companies, underwriters generally are beginning to adapt the premium to the hazard in a feeble way, and we may hope that, in the future, it will somehow be made the interest of all persons whose property is insured to use efforts to reduce the risk of its loss, and thereby benefit the community as well as themselves.

A NEW sort of artificial stone, which promises to be of value, is made in Belgium, at Uccle, near Brussels. Some one seems to have reflected that natural sandstone has been, probably, compacted by great pressure, combined with heat, and the new process is based on this theory. The actual manufacture is very simple. Eighty parts of rather coarse sand, washed perfectly clean, and well dried, are mixed with twenty parts of hydraulic lime, in fine powder, and also per-

fectly dry. By mechanical means a thorough mixture of the materials is effected, and the mass is then thrown into an iron box, which is immersed in a boiler, full of water, and capable of being hermetically sealed. After putting on the cover of the boiler, heat is applied, and the whole kept for seventy-two hours at a temperature of one hundred and sixty-five degrees Centigrade, which gives a pressure of about ninety pounds to the square inch. The iron box is then removed, cooled and opened, and in it is found a block of artificial sandstone, similar in all respects to natural sandstone, but more uniform, and stronger than any except the very strongest sandstones, of the Potsdam type. When first taken from the box, the stone is so soft that it can be cut with a knife, but it soon acquires its full hardness. Besides being hard, it is very compact, and will not absorb under any circumstances more than six or seven per cent of water, even after long drying. The cost of the new stone, ready for use, is said to be, in Belgium, two cents per cubic foot, and, at such a price, it ought to have a large sale. With us, where distances are great, very little stone fit for use in building can be had for less than seventy-five cents per cubic foot in the great cities, and in all those on the coast, as well as throughout the Gulf States, it should be very profitable to make stone, as required, at the site of any new building, particularly as ashlar blocks and other plain pieces could be moulded in the making, at a great saving of expense.

EVERY one has an idea that the manufacture of iron is carried on in the United States on a very large scale, but few people probably know how colossal are the furnaces that are employed in the American establishments, which now turn out iron at a rate which enables them to undersell the European iron-masters in their own market. The National Steel Company is just completing three blast furnaces at Youngstown, Ohio, each of which is about one hundred and ten feet high, and twenty-two feet in diameter at the bottom. To produce metallic iron from the ore, a blast furnace is filled with pieces of iron-ore, coal or coke, and lime. The coal, charcoal or coke, as the case may be, is lighted at the bottom, and the draught is increased by blowing air into the lower part of the furnace, through "tuyeres." Usually, the air blown in is heated, before it enters the furnace, by the waste heat of the furnace itself; and the result of the operation is to reduce the mixture, a pool of melted iron collecting in the bottom of the furnace, while a "slag," or glassy compound of the lime with the earthy substances of the ore, floats on the top; the melted iron being drawn off from the bottom by "tapping" the furnace. In the Youngstown furnaces, the hole for putting in the ore and coke is ten feet in diameter, and each furnace is equipped with an engine of five thousand horse-power, which forces into it sixty thousand cubic feet of air per minute.

WE have before spoken of the two gigantic ice-breaking steamships which the Russian Government proposes to put in service, one in the harbor of Cronstadt, and the other and larger one on the fresh-water lake Baikal. The Cronstadt steamer is already completed and in use, and the results accomplished by it seem to have surpassed even the expectations of its designer, Admiral Makaroff, of the Russian navy. The total measurement of this powerful ship is nearly fifteen thousand tons, and it is capable of a speed of sixteen knots an hour. Four screws are used, one of which is placed in front, just behind the ice-breaker, so that its motion may throw out of the path of the vessel the pieces of floating ice, which would otherwise collect under and around the hull. The propellers are of great strength, to resist impact on masses of ice, and the entire vessel is very strongly built, the hull containing no less than forty-eight watertight compartments. On its way from the builders' yard to its station at Cronstadt, the steamer ran through solid ice, from nine to ten feet thick, at the rate of two and one-half knots an hour, and in ice thinner, but sufficiently thick to form a solid sheet on the surface of the sea, it moved easily at the rate of seven knots an hour. After reaching Cronstadt, it was sent to the aid of five steamers which were frozen fast in the ice near by, and easily broke its way to them, and towed them through thick and solid ice to their destination. The value of such a craft in waters like the Baltic is shown, as *La Revue Industrielle* points out, by a recent occurrence, where a steamer on its way from Canada to England was caught in the ice in the Gulf of St. Lawrence and kept there for two months, coal and provisions being carried to it only with great difficulty.



NATIONAL BUILDINGS AT WASHINGTON
AND THE REDEMPTION OF PENNSYLVANIA AVENUE.

AMONG the recommendations of the Commissioners of the District of Columbia to Congress for the ensuing year is an urgent appeal for an appropriation to give Washington a municipal building, the District offices now being in rented quarters, which have become, with the growth of the city in late years, too congested for the proper expedition of an ever-increasing business. Naturally the discussion of this matter has brought up the question of available sites.

It has been proposed in committee, and I think a bill has been presented, to provide the necessary room by extensive alterations and additions in the old court-house in Judiciary Square. This arrangement meets with strong opposition from both the executive and judiciary branches of the District government on various grounds, and has developed antagonism on the part of the citizens to further governmental encroachment upon the area of the public reservations of Washington. It is maintained that the District offices should be more centrally located, and on the score of necessary outlay it is urged that a more desirable site may be purchased and a separate building erected at about the estimated cost of the first proposition, and Pennsylvania Avenue, in the neighborhood of the new post-office, is preferred as the most central and convenient location. A very energetic campaign has been conducted by several of the foremost journals in favor of this plan. Interviews with distinguished members of Congress and other people of note, together with much general discussion of the topic, have elicited and developed a consensus of public opinion favoring Pennsylvania Avenue, not only for the proposed new municipal building, but as the right place for all future expansion of governmental building in Washington.

Widespread interest in this broader bearing of the question has been brought to light within the last weeks. The question of the possible redemption of the most important as well as the most beautiful street of Washington from its present squalid unseemliness is again before Congress. Within that body there is evidently a strong party which advocates the immediate acquirement by the United States of the whole south side of the avenue from Fifteenth Street, that is, from the Treasury to the Capitol, or rather, to the Botanical Gardens.

The broader proposition, to include in this sequestration all ground south of the avenue to the Mall, has also a good following. This would extinguish all private ownership between Pennsylvania Avenue and the handsome grounds about the Agricultural Department, the Smithsonian, etc.

A glance at the map will disclose, without further argument, the virtues of this scheme from the point-of-view of beautifying the capital city. On other grounds the idea will commend itself, the quarter in question being vile and unsanitary, a standing menace to the public health and morals.

However the larger question may be determined, there can be no two minds about taking the whole south side of the avenue and eliminating the ridiculously mean structures which now line what should be a stately approach to the Capitol. The ground thus acquired would be gradually occupied by new public buildings as the need for them may arise, and these would be set in broad and stately grounds. The proposed new departments of government would be housed in consonance with their dignity; the older ones would find ample space for the expansion which the nation's growth demands.

Linking the great western group of public buildings, the Treasury, the White House and the State, War and Navy Building, to the noble eastern group of the Capitol and, behind it, the new Library of Congress, which from a commanding eminence overlooks the avenue, there would then stretch a chain of dignified monumental buildings in the adequate setting of generous open spaces. To the adornment of these would be devoted the greatest conceptions of the allied arts of building. Than the creation of great public monuments there can be no nobler expression of a nation's dignity and greatness.

Here is a field for the development of the best we have to offer our own people and the world in art. Here many architects and sculptors and landscape-artists would find freest utterance for the inspirations of their genius, and here, in their turn, the mural painters and the noble army of workers in the applied arts might seize the dreamed-of, longed-for chance to dare and do.

The thing is taking form. It is no mere vision of possibilities. The Senate has directed the Commissioners to ascertain and report upon the approximate cost of acquiring the entire south side of the avenue. The entire cost will be found to be insignificant as compared with the enormous advantages to be gained. The Government, considered as a capitalist in search of a good investment, would find here, it may easily be shown, one of the first class.

In thus grouping the national buildings, the Government becomes the beneficiary of its own improvements, and, as a secondary consid-

eration, the city profits most by that means. By now buying enough land to provide for the needs of the far future, the United States will be practising an incalculably great economy.

The treatment of each national building as part of a well-considered ensemble needs no advocacy with the readers of this journal, and perhaps the people at large have learned much of what this method yields from the results at Chicago in 1893, and from later splendid achievements of combined artistic intelligences.

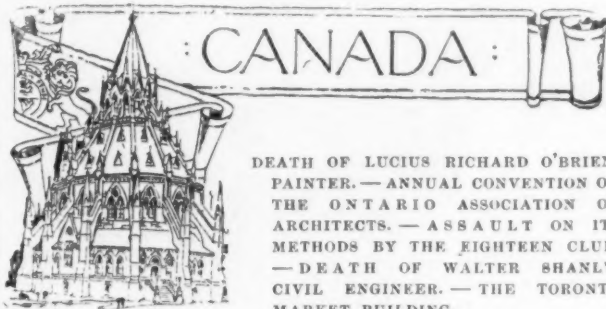
The present project is conceived on broad lines, befitting the national character. In connection with it, the writer of these paragraphs has ventured to suggest, in one of our journals, that Congress would do well now to call to its aid, in consideration of a question of such national importance, the best professional intelligence the country affords, and to invite eminent architects, sculptors and landscape-artists to cooperate in studying a treatment of the ground in question commensurate with the greatness of its intended purpose, a treatment on lines within which from time to time the national buildings might increase as needed.

Homogeneity would be thus ensured. There would be no more aberrations. On the point of style we are already committed, the national public buildings of Washington being all of a more or less well-defined neo-Classic treatment.

The first thing wanted is to determine the general lines of a plan which will ensure consonance and an harmonious ensemble. Within these broad limits there may be ample space for the demonstration of whatever great individuality the womb of time may hold for us.

The map best shows the scope of the project. This massing of the public grounds, to stretch unbroken from the President's house to the Capitol, with the splendid thoroughfare of Pennsylvania Avenue as its northern border, where will stand, each in its broad grounds, great monuments of architecture and sculpture, with its southern limit the beautified banks of the Potomac, whose higher shore is about to be connected by a memorial bridge to the hills of Arlington, where sleep our soldier dead, offers an occasion for study and labor, a field for achievement worthy of the great days of art.

Of this kind was the dream of Washington for the nation and the city whose father he was.



DEATH OF LUCIUS RICHARD O'BRIEN,
PAINTER.—ANNUAL CONVENTION OF
THE ONTARIO ASSOCIATION OF
ARCHITECTS.—ASSAULT ON ITS
METHODS BY THE EIGHTEEN CLUB.
—DEATH OF WALTER SHANLY,
CIVIL ENGINEER.—THE TORONTO
MARKET BUILDING.

THE death of Mr. Lucius Richard O'Brien makes a gap in the art-world of Canada that it will be difficult to fill. An unprejudiced and qualified critic regards the works of the late artist as those of the first painter in Canada. His preference was for landscape rather than figure subjects, and in this it is not saying too much to remark that he was head and shoulders above any other artist in the country. He was a son of the late Lieut.-Col. E. G. O'Brien, and, born in Canada, was educated at Upper Canada College, Toronto. His genius showed itself at an early date and he soon decided to follow art as a profession. He leaves several well-known pictures to attest his skill. Two views of the City of Quebec adorn the walls of Windsor Castle, especially ordered by the Queen. Mr. O'Brien, while enthusiastic about his art, was entirely free from the petty jealousies that characterize so many artists. He was a very genial man, with a kind word for all and always anxious to help deserving aspirants. To his efforts principally are due the establishment of the Royal Canadian Academy, founded in 1880 by the Marquis of Lorne and Princess Louise. He was elected its first president and held the office for ten years.

The Ontario Association of Architects held its Twelfth Annual Convention in Toronto on the 16th and 17th of January. Seventeen members, half of whom were the officers and members of the Council, met at the offices of the Registrar and they were reinforced by eight members of the Eighteen Club. It was felt by all the members of the Association present that the crisis in their affairs had arrived and that this convention would practically settle the question of the existence or extinction of the Society. The President's address was simply a statement of what he would suggest as means towards improving the condition of the Association, and the Report of the Registrar contained little else than a notice that the two or three schemes the Council had had on foot during the year had proved failures. The principal business before the Association was the "Report of the Consulting Committee," which committee had been formed at the last convention to report on suggestions made by one member of the Association for the improvement of the Association. The discussion on this proved most interesting and instructive, but the feature of the proceedings was that a member of

the Eighteen Club (the young architects') was invited to give his opinions, and, by special request, read a report that the Club had prepared, showing wherein, in the opinion of the Club, the Association had failed to interest the younger architects of the Province and wherein it might be made of value to them. Some of the officers of the Association have a decided objection to what they call "destructive" criticism, forgetting that it is often necessary to pull down before you can rebuild; but this report voiced so well the contentions of all those who have objected to the management of the successive councils and the policy they have persistently followed, to the great injury of the Association, that, being made to swallow it, the members of the Council and officers "sat up" as they had never sat up before and declared themselves to be of the opinion that the Eighteen Club was right and they ought to begin to run the Association on entirely different lines from those of the last twelve years. This introduction to the meeting of the representatives of the Eighteen Club has probably saved the life of the Association.

The Eighteen Club felt that the Association had been working too much in the interest of the architect rather than in that of architecture. "A more or less elaborate system of examinations had been instituted" without the provision of means for educating the student to enable him to pass. The charter was a hindrance, because many really qualified men who would like to join the Association would not care to submit to an examination by their equals and fellow-practitioners. At conventions much of the energy that had been expended in preparation of papers to be read was "puerile and wasteful." And one glaring instance where the Association had failed was that it had allowed the Ontario Society of Artists to get up an "Arts and Crafts Exhibition," whereas in other cities it was the architects who were the prime movers in such a matter; but the Ontario Association had remained quiet and allowed the artists to do their work for them. The conventions ought to have included the discussions of such matters rather than useless papers and papers by amateurs, and "if the Association had been in touch with what was going on in the architectural world, it would have made some steps to obtain for Toronto the circulating exhibition of the American Architectural League, rather than leave it solely to the committee of a small club of young architects." The Eighteen Club also found fault in the fact that the Association, since its organization twelve years ago, "had done nothing to improve the attitude of the architects and the public to each other," and this, I may add, is the fundamental error. The representative of the "young architects" then went on to suggest that the energy of the Association be devoted for the present entirely to education—that architects will bind themselves to take as pupils only such as agree to take the course of education laid down by the Association, all thoughts of obtaining legislation being put in the background for some few years to come. Some very sensible remarks followed as to the course of education thought advisable, while the suggestion of giving medals or starting a travelling scholarship was scored as being an addition to the "farfetched side of the Association, to do so before providing the means of education." Certainly nothing could have been more childish or unbusinesslike than the "travelling scholarship" scheme and the way it was carried out. And, as the Registrar reported, "the effort did not meet with success."

The discussion that followed was, as I said, very interesting. The thin-skinned ones objected to the "destructive criticism," but the more manly, at last, acknowledged that they had erred. They had worked very hard, no one knew how hard had been their work, but they had expended their energies in a wrong direction. Of course there were some who could not, or would not, see that there was any mistake made, but this was only to be expected; these trotted out their time-worn notices of motion with regard to the "establishment of a tariff" and "the placing of a mark of distinction upon a certain number of houses approved for excellence," whatever that actually means. A committee was appointed to confer with representatives of the Eighteen Club on practically everything that concerned the Association, an admission that now only by concerting with the younger architects could the Association expect to save its life. The best possible step the Council could have taken would have been gracefully to hand over the Association's affairs to the Eighteen Club and for the Association to elect members of the Eighteen Club only to the new Council, had it been possible. It is to be hoped, however, that the Eighteen Club's hint as to the quality of the papers read at the conventions will be taken into consideration before the next convention and that this meeting will prove to be the last at which "sickly" papers are in evidence. The election of officers and council at a meeting in which every other man was a member of the Council, of course, could not be expected to result in any such radical change as is necessary, but the Association has obtained a new lease of life for one year, and with the shaking up it has received it is just possible some good may be accomplished.

Mr. Walter Shanly, the well-known civil engineer, died at Montreal on December 17, last. His name is well known in the United States, for he was connected with many engineering works there. The Beauharnois and Welland Canals and the Hoosac Tunnel are portions of his work. Besides engineering, Mr. Shanly took a lively interest in politics and was a member of the old Parliament of Canada from 1863 until Convention, and was returned three or four times to Parliament since that event. He was born in Ireland in 1819 and came to Canada about the year 1836.

The new Market Building at Toronto, which is being carried out at a cost of \$156,000, or nearly fifty thousand less than ought to have been provided for it, is just now furnishing matter for official investigation that excites considerable interest. A company that has the contract for the construction of the iron roof refuses to build the roof on the piers provided for it, unless relieved of all responsibility. The company indignantly repudiates the idea that its refusal is a ruse for the purpose of delaying the completion of the contract while the architect stands up for the sufficiency of his piers.

It will be remembered that this Market Building was the subject of a competition, for which only five sets of designs were submitted. The "experts" to whom the plans were submitted wished to reject them all on the ground that none of them could be properly carried out for the money. The competitors were allowed by the City Council to prove, by means of bona-fide tenders, that they could carry out their designs for the sum. And the "experts" were pressed to give an opinion as to which of the designs they would recommend, supposing they could be built for \$150,000. They objected to the specifications submitted, and, refusing to take any responsibility, mentioned the design they thought most suitable. The Council accepted the design and entered into contracts for its execution. The roofing company is now causing this serious annoyance; an investigation is being held but it is to be hoped that the result may sustain the architect. The architects of the city as a body held aloof from the competition, because they knew that success in it could only result in endless worry and trouble. The temptation, however, was too strong for some of the younger firms, and the successful firm is getting its first instalment of worry. It is just another case of the city authorities fixing the amount they will spend and then trying to obtain a more costly article at their own figure.



PAUL SÉDILLE, ARCHITECT.—INCREASED COST OF BUILDING.—STRIKE AT THE EXPOSITION.—HIGH RENTALS DEMANDED FOR THE KIOSKS.—ARCHITECTURAL DRAWINGS IN THE LOUVRE.

WHILE still possessed of the full strength of his talent, at the age of sixty-three, M. Paul Sédille, architect, died on the 6th of January, 1900. The death of this man of delicate perceptions, in love with his art, is a real loss to French architecture. He was a man who knew how to appropriate to himself a very individual style, a style embodying classic elements, but refined by the seeking after a modern note of individuality.

Paul Sédille was born in 1836, and entered the École des Beaux-Arts in 1857. In 1876 he was the laureate of the grand medal of the Société Centrale, awarded for excellence in private architecture, according to the terms of the foundation of MM. Sédille père and Lesoufaché.

He himself in 1878 established a medal intended to recompense the art industries, in which he was always much interested and upon which he had, as writer of the jury's findings, prepared several remarkable reports. Readers of the *American Architect* have been able to appreciate the charm of the criticisms and aesthetic appreciations which he contributed to this journal some fifteen years ago. He was also author of a certain number of publications on modern architecture in England, modern architecture in Vienna, monumental ceramics, etc. The most important of his works at Paris is his construction of the great department-store "au Printemps." He did a large amount of private work—city houses, country villas and châteaux, and was entrusted with the construction of the basilica of Jeanne d'Arc, at Domremy.

In 1878 he drew attention to himself at the Universal Exhibition by his ceramic composition for the entrance of the Beaux-Arts department, and at the Universal Exposition of 1889 he was appointed head of the Service of Installation. At this epoch, having the honor to be under his orders, I was able to appreciate his conscientiousness and his delicacy as an artist. With what care did he purify the lines of his decorative compositions, and what painstaking skill did he not bestow on their smallest detail. A very able draughtsman himself, he astonished us by the sureness of his pencil and the charm of his sketches.

By nature an artist, he turned his extremely refined tastes to all the manifestations of art, poetry, painting, music. The real nature and character of the man is well expressed in the device which he had ingeniously constructed from the initials of his own name, "*Pulchra Sequor*." In fact, he followed the beautiful in everything, and this seeking was made easy for him by the ample means which he possessed, whereby he was allowed the possibility of satisfying his tastes in matters of luxury and elegance. His own house was a very marvel of decoration, rich without being extravagant, wherein

painting, ceramic-work, artistic metal-work and woodwork were ingeniously combined.

In his latter years he allowed himself to be ranged among the candidates for the Institute, but he did not secure election, his great crime being that he had never been a Prix de Rome, and consequently was not included in that ark of the Lord from which the Académie draws its elect.

He was vice-president of the committees on admission and installation in the class of fixed decoration for this year's Universal Exposition; and here once again I have been able to appreciate his sureness of taste and the value of his advice.

For some time past people of affairs and those connected with building have been much concerned with the rise in price of building materials, and with the object of seeking the means of avoiding a crisis which becomes more and more threatening. M. Stanislas Ferrand, architect and deputy, recently took the responsibility of initiating a reunion, to which he summoned the architects, contractors and manufacturers of Paris. At this reunion M. Stanislas Ferrand clearly outlined the situation which confronted the building industry through the rise in the price of metals, notably in structural iron-work, and also through the increase in the cost of coal, which menaces all the industries which use it.

He had, as *Le Bâtiment* tells us, sought out and explained the origin of the crisis, and pointed it out as consisting in the very judicious organization of the syndicate of smelters, the syndicate of iron mill-men, and finally in the understanding between the coal-producers to provoke a rise in combustibles, without which the increase in the price of materials could not be maintained.

The rise in iron was especially marked in March, 1899, at the time when the great contracts had been placed, and at the time when the metallic-work of the Exposition was nearly finished; hence the augmentation was the result of causes which were both normal and artificial.

Iron worth 25 francs the 100 kilogrammes in Belgium, where the syndicates are in operation, is worth 20 to 20½ francs in Switzerland, and 30 in France. These facts show that the Belgian forges could deliver in France iron at 21 francs if the duties were temporarily suspended.

The Chamber of Deputies was troubled and interpellations had been made on the subject of the crisis, but the Minister of Public Works, M. Baudin, argued that the chief cause of the trouble lay in the operations of metallurgy, that it was therefore normal, and that he saw no means of applying a remedy to it. But M. Stanislas Ferrand does not share this point-of-view and proposes as remedies, first, the temporary suspension of the import tariff; second, the intervention of the government to secure from the railroad companies a lowering of their traffic rates; third, official pressure upon the coal and iron syndicates; and, last, the compelling of the mine operators to extract a greater amount of coal from their pits. He is also of the opinion that the "série de prix" needs revision, and he suggested the formation of a commission composed of architects, contractors and manufacturers, who shall be authorized to bring pressure upon the public powers. After discussion it was agreed that this commission should consist of the presidents of the four architectural societies of Paris, and the presidents of the eleven syndical chambers of building materials, with powers to add to their number dealers in building supplies, leading manufacturers and the heads of large industries.

It is to be hoped that this organized resistance against the monopolists will bear fruit and arrive at a practical result.

Paris has just had a real emotion. Just as the opening of the Exposition approaches, and just as the whole world follows with anxious interest the state of advancement of the works, we suddenly learned that the carpenters had gone on a strike. This was disastrous. In several directions matters are rather behindhand, and there is not a day to lose. If the work should be abandoned, official opening on April 14 would be impossible. The carpenters demanded that they should receive the agreed price in the case of extraordinary and dangerous work. They argued that working more than twenty-nine metres above the ground was dangerous; that working on the ground, but below their comrades who were working above, who might drop upon them tools, bolts, etc., was not less dangerous, and that, owing to the confusion of all kinds of work going on at the same time, all workmen ran real danger. In all this, perhaps, they were not altogether in the wrong, for the arbitrators entrusted with examining the question have granted to the workmen their claims on several of these heads, and the work, very happily, has begun again with new energy.

If there are people who doubt of the success of the Exposition, they certainly are not among those who are interested in the apportionment of the kiosks in which refreshments are to be sold. These kiosks, of which the area must not exceed 20 metres, have been put up at prices varying between 12,000 and 20,000 francs, according as their positions are supposed to be more or less advantageous. It results from this that the mere sites for these kiosks bring in about 1,000 francs per square metre. One of them, which measures 4 square metres, has been leased for 20,160 francs, or 5,040 francs per square metre.

When one thinks of the added cost of building, the running expenses and the stock-in-trade, one shudders to think of the number of sausages which this price will make it necessary should be swallowed by visitors before the lessee can derive any profit whatever from his venture. It is true that many people can recall that the

day's takings at such kiosks as these at the Exposition of 1889 reached a total of three, four, six, and even seven hundred francs. Let us hope that it will be the same in 1900, and that the expectations of these brave men of business may not be deceived.

For a long time architects have complained of the absence in the Louvre of a proper hall of architecture. Some years ago a dark and narrow gallery was opened to receive some of the drawings of Percier, Wailly, Louis and some others of less celebrity, but it was small and ill-appointed.

Could not there be re-discovered and classified the drawings of the masters of the seventeenth and eighteenth centuries? This should be so much the more easy because many of these drawings are scattered through the Louvre itself, in portfolios or frames, and lost amidst other drawings altogether foreign to architecture. Moreover, the archives of the Commission of Historical Monuments contain an inexhaustible reserve of drawings of the masters of the nineteenth century. The elements, therefore, are not lacking, and one would have only the embarrassment of choosing. The Société Centrale is concerning itself with this question, and its vice-president, M. Duchâtel, has laid before the Minister of Fine-Arts the expression of the hope of all architects, that architecture, at present scarcely represented in the Museum of the Louvre, may receive an installation worthy of the importance that it occupies in the arts of design. The Minister, impressed with the neglect shown to the works of architects, has expressed the hope that in the approaching reorganization of the museum he may be able to give satisfaction to this legitimate hope which had been presented to him. But, alas! ministers pass away and their projects with them.

THE ENGLISH LAW AS TO LIGHT AND AIR IN BUILDING CASES.



Iron Grille.

THIS was the title of an address delivered January 9, last, before the Sheffield Society of Architects by Mr. Walter Emden, L. C. C. After some preliminary observations, the author said:—

"It is my desire, in the course of this paper, to show how great the necessity for alteration in the law is; and I trust also to show the remedy, and that it would not affect the rights of property. It is possible that an alteration of the law in the direction of simplification, and a quick settlement of actions, would reduce the expenses for professional advice which owners have to obtain in bringing and defending this class of action; but I feel assured that no professional man of standing, either in the legal profession, the architectural profession, or the surveyors, would desire such a consideration to stand in the way of a change which would be beneficial and would avoid delays, and be the means of saving useless expense to his clients.

"With regard to those gentlemen who have no consideration of this kind for their clients, I think I need not trouble myself. It is for the prevention of the abuse (the very great and serious abuse there can be and is under the present law, for purposes which are not legitimate), that we desire to see improved out of existence the present costly and evil system . . .

"There has been considerable attention drawn to the want of High Court Judges to dispose of the actions brought during the current sittings, so that there shall not be arrears left over to the next. I am of opinion that not only could technical cases, such as cases of light and air, etc., be settled more speedily and equitably but with a small portion of the present expense by a Technical Court; and if the High Courts were relieved of this class of case (of which there are considerable numbers every sitting), the necessity for strengthening the Bench would probably be done away with. As I have said, I desire to show what, from a practical point of view, is the effect of the existing state of the law.

"One of the first difficulties is the question of the rights of property. A right to light and air or any other easement, under English law, is acquired by having had an uninterrupted user for a certain number of years, and becomes a right of the property. Now in Scotland, and on the Continent, where Roman law prevails, these questions cannot be made the means of blackmailing as they are in England.

"Now, let me at once say, I do not intend to propose any interference with the acquisition of rights such as are obtained under English law. No right would be lost by the remedy I have suggested. In many, and in fact a very large number of cases, it would be much better to describe many of these acquired rights as a theft of that which rightfully did not belong to the property which acquires it. The present state of the law assumes that everybody knows it, and understands that if a gutter be overhung on to the adjoining premises, if a floor be supported on a wall belonging to an adjoining owner (even though he may never have seen or known that the floor was so supported) for a certain number of years, a right will have been acquired which must be reckoned with, often enough to the tune of very serious amounts, when an owner wishes to deal with or rebuild his property. I have known cases where, through a party-wall, and in more than one case through a wall belonging entirely to an adjoining owner, windows have been cut through above the roof, not only entirely unknown to the freeholder, who had let the

property for a long period of years, but without the consent, as also without the knowledge, of the occupier or leaseholder. A law which allows all this to be done necessarily cannot be very perfect, and it hardly seems to me like a protection of the rights of property; but it is the law, hence its power for evil must be curtailed as far as the law has to be reckoned with.

"To follow one of my illustrations a little farther—a person whom I will call 'A,' owned a house at the corner of the esplanade and a side street in a large seaside town. Some period after, a person whom I will call 'B,' erected a house in the side street adjoining 'A's' property. It was desired many years after by the owner of the corner property to re-erect his premises, carrying them a floor or more higher than they originally were. Provision was made for the light and air of the adjoining owners on the esplanade, but as there was an independent wall belonging to 'A,' between 'A's' and 'B's' premises and the lights in the side street look out only to the back and front, no provision was deemed necessary. On pulling down the property it was discovered that a window had been cut through and put in by 'B' between the two hips of 'A,' the building owner's roof; that is, through the independent wall of 'A.' When 'A' proceeded to pull the independent wall down, it was found, further, that although 'B' had erected a wall from basement to ceiling of the ground floor, that above that height the wall was omitted, and support taken off the existing independent wall of 'A.' There was no record of any right having been given for either window or support, and, so far as an examination of those who owned the property formerly was concerned, no information could be obtained of any notice having been given. The solicitors, in whose hands the property had been for a great number of years, had no information either that any right or permission had ever been asked or given, or notice received. Yet I take it that the side-street owner 'B' was within his right to claim and to prevent the corner owner 'A' raising his building, and he did so, and also claimed and obtained the right to use the independent wall more or less as a party-wall. Now, I would ask any common-sense man upon which side, taking these facts as correct, should the right of property lie? Upon which side had the rights of property been protected?

"This is not a single case. There are scores of similar cases. I think while this case goes to illustrate my point, their numbers will prove the waste there must be by expensive actions, while the delays there must be when owners attempt to build is almost unlimited. There is hardly a building commenced in which some difficulty as to light and air does not crop up.

"I do not, in the remedy, suggest alteration in the manner in which such rights are built up under the law. I hope that the remedy, by preventing wasteful expenditure in lawsuits, if once brought about, would go a long way to prevent not only many of these infringements being sought after, but their being made a source of blackmail where they exist, and also preventing serious delays to the building owner (which delay is, after all, the main reason why large sums are paid), as to be stayed by an action of injunction is in many cases not only serious but often ruinous. I do not by my argument or this illustration put it forward that there are no legitimate claims of light and air, because there are many; and equally, on this side, the interference with rights of owners would be prevented, and no one would be prevented from protecting their rights by the fear that the building owner (who is possibly a wealthy man) will put them to all the expense he can, and at least to the expense of a heavy action. The fact that notice must be given before building is commenced, and that the case would be brought at once before the Technical Court, would, in my opinion, and I think in the opinion of most people, go a long way to prevent illegitimate claims on both sides of the question.

"I will give you a few instances with which I have become acquainted, and which will still further show in themselves the trivial nature of some claims set up, and also the delay and expense which they can cause. One case in London: An old house had been at some period divided into two, and though the division-wall between the two had been carried up right through the house, in the roof no division had been carried through. Both houses had an opening into the roof, and each had repaired its own part. The time came when rebuilding operations were set on foot by the owner of one of the houses. After he had partially pulled down, the owner of the other half set up a claim that the space in the roof belonged to him, and therefore the adjoining owner could not go higher and could not remove the roof. In order to prove the right to space in the roof, it was shown on a plan as a workshop, and some small bundles of material used in the trade carried on, on the plaintiff's side, were put into the roof. The height of the centre part of the roof was only about 4ft. 6in., and the rest of the roof sloping down as it did, there was necessarily very little height anywhere. A man could not have stood up to work in any part of the roof, and, in fact, to walk along in the highest part a man had to stoop. The whole space was small and unlighted, and quite impossible as a workshop, nor did it show evidence of its having ever been so used. Still, upon this claim the building was stayed, and although eventually the claim fell to pieces, there were large expenses incurred in fighting the action, and the defendant, by not being able to go on with his rebuilding, lost a considerable amount of trade to his premises.

"In another case, where considerable improvement had been made to the surrounding property by the building owners, a claim was made by the owner of a small property, which, a year or two before the improvements, would have sold for about 1,000*l* freehold. The

claim of the plaintiff in this case was no doubt right to the extent that his building would be affected as to light, and had he in the first instance put forward his claim, he would have enabled the building owners to arrange the buildings in conformity with any line which had been settled. But the course taken in this case was to allow the building owners to commit themselves thoroughly to the building operation, and to wait until the full height at which any claim for light must be made was attained. Then the claim was made, and all the work done above the height, even before the injunction was obtained, was eventually ordered by the judge to be pulled down. I suppose the costs and expenses were not less than 2,500*l*, and the time occupied by the action eighteen months; but in this case the buildings were pulled down rather than buy the claimant's premises at an exorbitant price, which I am of opinion was the real object in view. That the building owners were allowed to proceed in front of the windows of the plaintiff with their work until the last moment, and to do so in such a manner as showed conclusively the intention was to erect a high building, without a complaint, which, if made, would have stayed the building owners, seems to leave but one obvious conclusion to be drawn. When building owners are thoroughly committed to a building such as this was, it is, of course, highly probable they will pay, and pay high, rather than be stayed in their work; but, in this case, if such was the object, it failed, but, as I have stated, with a waste of 2,500*l* and eighteen months of time.

"Another case of a similar class I remember in which the owner of an adjoining property claimed a right of light and air from a window cut right through a party-wall, but which had been covered up evidently since it had been cut through by the other owner by placing an obstruction in front of it. After the obstruction's removal during the pulling down, the case set up was that light came regularly through this window, and it was of great and serious consequence, and that the obstruction was not there to impede it. Also a general claim was made that the height of the buildings was such as to interfere with the light of other windows. An interim injunction was refused and the building owner allowed to proceed on the usual terms until the trial of the action. The decision eventually given by the judge was that there was no claim for this particular window, but that there was damage to light to some other windows by the height of the buildings, though they were only affected laterally. The damage to these lights was only proved to a trivial extent (covered easily by small monetary damages); but an order was made for pulling down, thus illustrating the risks and uncertainties of the present methods of trial. As a consequence, the object for which the claim was started succeeded, and the building owner, rather than pull down, paid 1,500*l*, and with his own costs expended considerably over 2,000*l*; the whole value of the adjoining property from whence the claim was made was about 3,000*l*. These cases are not singular. There are undoubtedly hundreds of them, and the waste and delay and uncertainty would total up to an enormous sum of money every year.

"Passing from the reasons which influence the bringing of a large portion of these actions, and the uncertainty as to their results, more particularly to the question of delay to building operations, I would impress the serious nature of this point by drawing attention to the course of an action similar to many I have had to deal with.

"There being no means such as I have suggested (there should be under a technical court) by which notice can be given to all adjoining owners, it is usual for these claims to be made only when building operations are observed to be proceeding, at all events where it has not been brought to the knowledge of the adjoining owners by a party-wall notice, or some other means required under the Acts dealing with building operations. When notice is received from the claimant, it is possible it is followed up by some little time being spent in negotiations, then, if these fail, by an application for an injunction, all this probably occurring after the building owner is committed to his contract. Necessarily, in claims such as these, complicated by many drawings and technical questions, the judges cannot give a decision on the application for an interim injunction, and the case goes for trial sometimes with and sometimes without the grant of the interim injunction, and from the date at which notice was first given for an injunction the trial will probably not be less than twelve months, and may not infrequently extend to eighteen months or two years. Building owners and professional men will understand what such a delay means in the midst of a building operation, the difficulty with the contract and contractor, and the loss of rentals and of business, and will be able to estimate pretty accurately what pressure such delay brings to bear on the building owner to come to a settlement even upon terms which may be absolutely outrageous.

"Another and strong incentive to acquiescence in heavy claims to avoid actions-at-law is that in order to try these cases it is necessary to bring a considerable amount of evidence before the judge and jury, all of which is expensive, and all of which must be met on the other side by experts and witnesses equally expensive, and both may fall on one of the litigants.

"I have known cases in which, for the proof of one angle of light (which was only considered a minor portion of the case), something like eight or ten drawings had to be prepared, with all the necessary copies, and what is even still more expensive, models of the building in question prepared also. In cases the decisions of which are so uncertain as these decisions are, it is absolutely necessary to put in evidence of the most minute character, so that it shall be most thoroughly brought home to the jury as well as the judge (the jury, too, composed of men who have no technical knowledge) the exact

value of each claim made. Now, on the other hand, this evidence, of course, would be entirely unnecessary in the event of the case coming before the Technical Court, where the true nature of the claims would be easily and speedily ascertained and dealt with.

"I think what I have said goes a long way to prove what the expense, difficulty, delays and uncertainties are in dealing with cases of light and air, and I think, also, sufficiently proves the necessity there is for some radical alteration in the law, while the advantage to be gained by determining these cases expeditiously and economically are, I think, evident to all. It is not a question of taking away any rights of property, but of protecting those who have rights from having them taken away, and those who desire to build from paying blackmail.

"The suggestion which is made for a remedy is the constitution of a Technical Court, under the London County Council in London, and under the corporation in provincial towns and cities. Every building owner should be compelled to deposit a full set of the plans for any new building or material alteration of an existing building with this authority, paying such fee as will cover the expenses of the Court in dealing with them, or as may be deemed necessary by such authority. The Court should then require the owner to give notice to all the adjoining owners or others who may be affected, and after examining the proposed plans, to ascertain what, if any, interference with rights of light and air or other easements existed, determining, also, at the same time that the plans complied with their by-laws. Then the Court should proceed to hear, if required, the objectors and the building owner, and after such hearing, decide as to what modifications, if any, of the plans were necessary before consenting to the building being erected. The fact that such a decision was given before building operations were commenced, and before the building owner was pledged to his contract with his builder, would of itself be a substantial boon, apart from the greater saving obtained of time and money, from its being an absolute preventive of blackmailing in petty or trumped-up cases, while such decision would effectually protect, on the other hand, those who had legitimate rights from the chances of buildings being run up without notice and their rights improperly interfered with. I fail to see that any proper vested interest could suffer injury, and under these circumstances the good arising from it, as I think I have shown, must undoubtedly prove a valuable help to public and professional alike, and serve thus to encourage building operations. . . . I suggest what seems to me a simple means,—that is, an extension of the powers of the Building Act Tribunal in London, and of the Local Authority for the provinces. The fees charged to establish the necessary tribunal or court to be made to cover all the expenses of such court and its attendant officers, and I suggest they would still be moderate enough to become a mere drop in the ocean compared with the present wasteful process. Future discussion on this subject may devise better means, but, anyway, it is in my opinion (and I trust it will be the opinion of all those to whom I speak) evident that the settlement of this subject is urgent and should not be longer delayed. . . ."—*The Builder*.



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

THE HOMESTEAD HOTEL, HOT SPRINGS, VA. MESSRS. ELZNER & ANDERSON, ARCHITECTS, CINCINNATI, O.

THE NEW YOUNKERS BUILDING, DES MOINES, IA. MESSRS. LIEBKE, NOURSE & RASMUSSEN, ARCHITECTS, DES MOINES, IA.

DETAILS FROM THE CASA AYUNTAMIENTO, SEVILLF, SPAIN.

This illustration is extracted from "*Monumentos arquitectonicos de España*."

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

CHURCH AT BELLOY, SEINE-ET-OISE, FRANCE.

This plate is copied from *La Construction Moderne*.

[Additional Illustrations in the International Edition.]

SCIENCE HALL: ST. JOHN'S COLLEGE, ANNAPOLIS, MD. MR. HENRY RANDALL, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

UNIVERSITY OF PENNSYLVANIA DORMITORIES: ENTRANCE TO QUAD, PHILADELPHIA, PA. MESSRS. COPE & STEWARDSON, ARCHITECTS, PHILADELPHIA, PA.

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HOUSE OF F. L. STETSON, ESQ., NO. 4 EAST 74TH ST., NEW YORK, N. Y. MR. ALEXANDER M. WELCH, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

"MINLEY MANOR," FROM THE LAWN, FLEET, HANTS, ENG. GEORGE DEVEY, ARCHITECT.

"THE CAULIFLOWER," ILFORD, ENG. MESSRS. WATERMAN & LEWIS, ARCHITECTS.

SCREEN: LITTLE STANMORE CHURCH, ENG. MESSRS. BONEY & WAINWRIGHT, ARCHITECTS.



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

MAKING GOOD DEFECTIVE WORK.

ROCHESTER, N. Y., February 23, 1900.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—The following question has arisen for solution and I should very much like to have your opinion with reference to such a case through your columns.

"A contractor plastered a dwelling-house with two-coat work, and, from all appearances while the work was being done, it was a good job. The white finish was applied over the brown and the whole was thoroughly dried. Then the wood-finish was put in the house—the walls and ceilings were kalsomined and everything pushed to completion. When the house was about finished, but before the final certificate was given the contractor, the plaster-work began to flake off in spots, showing bits of unslaked lime in the plaster. This, of course, destroyed the kalsomining in rooms where it flaked off.

"All the masonry, carpentry and the painting work was let to one contractor, who was really a carpenter, but sublet the other portions.

"Is it not proper to withhold enough monies from the contractor to redecorate the rooms affected by this poor plaster, as well as patching up with plaster all the defective places? The contractor holds that he should only do the necessary plaster patching and not pay for the re-kalsomining of the defective rooms. Kindly give any legal references you may have at hand in similar cases." ARCHITECT.

[The answer to this question depends upon the wording of the contract. In general, one would be justified in assuming that the contractor had agreed to deliver everything that he had contracted to do in perfect order, including the painting, if this was a part of his contract; and that, if the painting suffered through defects in another part of the contract work, the contractor was bound to put the whole in the condition demanded by the contract; and that the architect, as entrusted with the duty of seeing the contract properly executed, was bound to reserve in his certificate enough of the contract price to pay for putting the whole of the contract work in the condition agreed upon. This view of the subject will, at least, be sufficient to protect the architect, even if it should not be shared by a court, for the architect is clearly entitled to act upon his own reasonable interpretation of a contract until the courts put a different interpretation on it.

In regard to legal precedents, the difficulty is that all such cases are decided by the interpretation of the actual contract, and, without knowing the exact words of the contract in the present case, it is impossible to say what precedents would fit it. For the benefit of other architects, it is well to observe that the clause in building contracts providing that defective work shall be made good may with advantage stipulate that all work disturbed by such operations shall also be made good at the contractor's expense. This will remove all possible doubt as to how far the necessary repairs should extend.—EDS. AMERICAN ARCHITECT.]



SUSPENDED TRAFFIC OVER A SHIP-CANAL.—It is proposed to build at Duluth a suspended bridge over the ship canal. A bridge of this kind has recently been constructed to cross the Seine at Rouen, and the city-engineer of Duluth has proposed a similar structure to bridge the ship-canal of that city, which would not interfere with the free passage of ships to and from the harbor. The plans provide for trussed girders carried on towers at a height of 152 feet clear above the water. These girders will be mainly supported by cables, and will thus make a stiff suspension-bridge, on which rails will be laid. On these trucks will be run, and a car suspended at the level of the street. The machinery will be driven by electric-motors, and the car or platform will carry both foot-passengers and teams. The city power-house will supply the current to drive the machinery.—*N. Y. Evening Post*.

THE HAWKESBURY (NEW SOUTH WALES) BRIDGE. — The Hawkesbury River, of which the people of New South Wales are as proud as of the famous Sydney Harbor, is spanned by an immense railway bridge, the largest of its kind in the Southern Hemisphere, and, as regards its foundations, one of the most remarkable in the world. The actual length of the bridge between the abutments is 2,900 feet, and it is supported by six piers, each resting on a caisson filled with concrete and forming the most solid foundation possible. The caissons are respectively 101, 155, 146, 147, 144, and 162 feet in depth, these different measurements representing the inequalities in the depth of the river; the last-mentioned caisson being the deepest known foundation for a bridge. The main girders are 410 feet in length from centre to centre of bearings, the height of the principal girder being 58 feet above the surface of the river. The method of construction employed displayed considerable ingenuity. Each span was constructed on a large pontoon, 335 feet long, 61 feet wide, 10 feet deep, and provided with staging sufficiently strong to bear the whole weight of the immense mass of ironwork, and high enough to enable the span, on the pontoon being floated at high water into position, to clear the tops of the opposite piers, on which the girders rested when finally in place. When the pontoon, which was provided with 44 water-tight compartments, was complete with its staging, it was towed over a "gridiron" of piles and sills, in shallow, sheltered water, and sunk, the exterior and interior valves being all left open, so that the water ran freely in and out at all tides. After the span was ready, the valves were closed, the water pumped out, and as the tide rose the pontoon floated and was towed into its destined position between the two piers on which the span was intended to rest. As the tide fell, each end of the span descended into its proper place, and the pontoon and staging, released from the ponderous load, floated back to the gridiron. The bridge was formally opened for traffic on May 1, 1889. — *Exchange.*

RUSKIN AT OXFORD. — There is an authentic story told of his undergraduate days that illustrates his instinctive courtesy and its effect. He was, as we have said, a retiring youth, shy, and more given to talking over Turner with Mr. Wyatt, the print-seller, than to such subjects as would interest his brother "gentlemen commoners" of Christ Church. So one night a dozen of those lively persons and their friends determined to "draw" the genius. It was a habit of his to go to bed early, mindful of the precepts and the practice of Denmark Hill, so at 11 the invaders broke down his "oak" and rushed into his room. He was there to receive them, in his dressing-gown. "Gentlemen," he said, with a sweet smile and with his exquisite voice, "I am sorry I cannot now entertain you as I should wish; but my father, who is engaged in the sherry trade, has put it into my power to invite you all to wine tomorrow evening. Will you come?" The rioters were overcome, and withdrew with "three cheers for Ruskin." So throughout his life he possessed this power of disarming all opponents with whom he was brought into personal contact; only, if it were a question not of speech, but of the pen, his urbanity seemed to leave him and his eloquence was speedily steeped in gall. But over sensitive and enthusiastic natures, especially over ladies and very young men, his influence, when he chose to exert it, was extraordinary. Courteous as he was to persons who differed from him in talk, he was never, in later life at least, persuaded by them or turned one hair's breadth from his own predetermined way. The prophetic temper grew upon him. The more opposition he saw in the world around him the more absolutely persuaded he was that he was right and the world was wrong; while at the same time he could never see that what he pronounced right to-day he had just as fervidly pronounced wrong a month or a year or twenty years before. But this is of the essence of the prophetic disposition." Mr. Ruskin resigned the Slade Professorship at Oxford in consequence of, and as a protest against, a vote of convocation endowing a physiological laboratory wherein the vivisection of animals was intended to be practised. He loved his work there, for he was a true son of Oxford, proud of his boyish training there and glorying in his professorship. "He had been," says Mr. A. B. Walkley, "a gentleman commoner of Christ Church — one of the last of the gentlemen commoners, I think — and he never forgot it. He retained the velvet cap and silk gown which distinguished his class — and a velvet cap in my time at Oxford, a quarter of a century ago, was almost as unexpected a sight as a helmet. There was only one other such cap in the Oxford of those days, and that was worn by Prince Leopold. The pair, by the way, were great friends, constantly to be met driving together in the Prince's little pony phaeton along the Woodstock Road. At the professor's lectures the Prince — familiarly known among irreverent undergraduates as 'Luppy' — was a regular attendant. Ruskin had just been appointed Slade Professor, and at the same time an Honorary Fellow of Corpus, where he occupied rooms in the little garden Quad at the back, looking on Christ Church meadows, frequently dined 'in hall,' and gave occasional breakfasts to parties of undergraduates." — *London Times.*

BRANDING LOGS. — No part of the work done by the wood-choppers in the Maine forests is more interesting than the marking of the logs with the "brand" of the individual or firm to whom they belong. Every log, like every animal on a cattle-range, must be marked before it starts out in the world. Log marking is something of an art. Each mark must be cut distinctly, so there can be no chance for dispute as to the mark, and the mark must be cut deep enough to withstand the scrubbing and grinding the log gets in going down the long and rocky river drive from the forest to the mills. The only instrument used in marking logs is the common wood-chopper's axe. As some of the marks are difficult to make, the markers must be expert in handling their axes on this kind of work, or they cannot get a job at marking. All the marking is done at the "landing," on the border of a stream, river or lake, where the logs are assembled during the winter, when hauled out from the woods where they were cut. The landing is in charge of a "head man," who is an acknowledged expert at marking. He has with him a small crew, whom he instructs at first in the art of

marking. This crew sorts the logs, generally into three divisions — the mill logs, which are the largest, and are to be sawed into lumber; the cedar, for shingles, railroad-ties and fence-posts, and the pulp logs, that are sold to the great pulp-mill corporations, which grind them into material for making paper. Each grade of logs has its mark. The mill logs take that of the firm by whose gang they were cut and for whose mill they are intended. The cedar takes another mark of the same concern, or, if they are to be sold to another firm, the mark of the firm buying them. The pulp logs take the mark of the pulp-mill company. When the ice goes out in the spring all the logs are rolled into the water together, to be driven to the sorting-booms, which are necessarily above the first mill having logs in the drive. In some cases the distance from the region where the logs are cut to the sorting-room is from 150 to 200 miles, through crooked and rocky streams, over falls and rips, across lakes and down rivers. The driving is done by crews employed by a log-driving association composed of all the firms cutting lumber in the region from which the lumber comes. The Penobscot Operators' Association has headquarters at Bangor, while the Kennebec operators make their headquarters at Augusta. Log marks are registered with the log-driving associations, in order that there may be no duplications. Some of the marks are devised in the woods, but most of them are got in the lumber firm's office. Nearly all the lumbermen on the Penobscot drive carry in their memory the marks of the operators in this part of the Maine woods. They know the marks as they know their alphabet, and can tell the ownership of a marked log at a glance, although there are several dozens of different marks used in these parts. Logs that are broken off in the drive or lose their marks before reaching the sorting-boom are known as prizes, and are sold at auction for the benefit of the log-driving association. — *Boston Globe.*

NINETEENTH-CENTURY CROSSES ON ITALIAN MOUNTAINS. — Colossal crosses are to be erected in this last year of the nineteenth century on nineteen mountain peaks of Italy to commemorate each century. The Rome branch of the international committee of homage to Jesus the Redeemer have taken the work in hand, and these are the summits chosen: Saluzzo and Ivrea, in Piedmont; Brescia, in Lombardy; Udine, in Venetia; Genoa, in Liguria; Faenza, in the Romagna; Pistoia and Grosseto, in Tuscany; Norcia, in Umbria; Aquila and Sulmona, in the Abruzzi; Fossombrone, in the Marche; Cimino, at Viterbo; Montorella, or San Gennaro, near Tivoli and Rome; Maranola, near Gateta; Otranto, Reggio di Calabria, Caltanissetta and Nuora. Two crosses already rise on heights near Rome — the English college having erected one on Tusculum and the Irish college one at Tivoli. Those to be raised this year will be of varied designs, cut from granite, marble, or whatever stone characterizes each region, and each will bear the inscription: "Jesus Christus Deus Homo Vivit Regnat Imperat." — *Boston Transcript.*

SUBSOIL WATER AND DISEASE. — The decoration by the German Emperor of Dr. Max von Pettenkofer, of Munich, with the Prussian Order Pour le Mérite will have a significance for sanitarians beyond the honoring of a veteran in scientific research. It is a signal and official recognition of the lasting value of those principles of sanitation which are associated with the name of Von Pettenkofer in his own country, if not to the same extent in England. The engrossing interest shown of recent years in the study of minute organisms, as the causes of so many maladies, has had the apparent effect of altering the point-of-view in preventive medicine. In our glib talk about the microbe of this and the microbe of that we purport to be using the language of scientific precision. But the whole of our sanitary practice is indifferent to this neatness of theory and smartness of phrase. At first empirically, and afterward by the light of Von Pettenkofer's teaching, practical sanitation has always been directed to the medium or soil in which these minute organisms live and thrive. If there were nothing to attract them, they would not be there; or, being there, they would not be noxious to man. The lesson was taught clearly enough in this country by the cholera of 1832, and was yet more strongly enforced by the more severe outbreak in 1849 — the Health of Towns Commission, which was appointed in the interval between the two visitations, having marshalled the evidence in scientific form. It was shown that our best security against diseases of a certain kind was to live upon a clean soil, and drink only pure water. To call the distinguished Munich professor the apostle of this doctrine would be going too far; its value was perceived, after a fashion, in this country, and was even acted upon before his researches were well begun. But scientific inquiry serves the useful purpose of driving home the suggestions of commonsense, as well as of refining them and extending them to new applications. The special point of Von Pettenkofer's teaching has been the part played by the ground water in making the soil poisons active at one time and less active at another. Technical as it may seem, his law of miasmatic infective diseases following inversely the rise and fall of the subsoil water, according to season or other circumstances, would be of immense practical importance if it did no more than enable us to understand what we could not alter. The mysterious pestilence is more dreadful than one of which we have discovered the law. But all sanitarians know that it is of more than curious interest to understand the connection between epidemic outbreaks of disease and fluctuations in the subsoil water. The practical applications of a true scientific principle are as boundless in this as in other cases, and there are many of them still to be made. It is only within the last ten years that a writer here or there has been directing attention — or, rather, redirecting, for it is an old idea — to plague as a soil poison, subject to Von Pettenkofer's law of subsoil water. — *The London Standard.*

REMOVING BOOKS FROM THE DOGE'S LIBRARY, VENICE. — The weight of the 200,000 volumes which have been in the Doge's Palace at Venice since 1812 is endangering that old building, wherefore the Government has voted 75,000 francs for their transference to the Zecca building. — *N. Y. Evening Post.*

THE AMERICAN ARCHITECT AND BUILDING NEWS

ADVERTISERS' TRADE SUPPLEMENT.

No. 214.

SATURDAY, MARCH 3, 1900.

VOLUME LXVII.
No. 1202.

THE INTERNATIONAL AUTOMATIC FIRE-SPRINKLER.



Automatic Fire-sprinkler.

THE International Sprinkler Company of Philadelphia, whose president is Clarke Merchant, of Merchant & Co., are manufacturing and installing a new type of automatic pipe-sprinkler, as shown by the engraving.

The links controlling the operation of the sprinklers are made of corrugated-brass, the solder used in fastening them being prepared to withstand heat of different temperatures, normal being 165 degrees, medium-hot rooms 286 degrees, excessively hot rooms (dry-kilns, etc.), 400 degrees. These links have been tested under dead-loads of 100 pounds and more without showing any signs of giving way, yet an ordinary match-flame quickly melts the fastenings and brings the sprinkler into operation. The normal pressure on the links when the sprinklers are set up for service is 14 pounds. Each sprinkler is tested under an hydraulic pressure of 250 pounds, in order to make sure that they are perfectly tight.

When installing this system the sprinklers are placed an average distance of 8 to 10 feet apart, according to the construction of the building, open joist-work requiring closer spacing. Under construction of this character sprinklers are "staggered" and so arranged that one sprinkler does not parallel the other; therefore, when in use the water is distributed over the entire area, instead of in spots or sections. When the sprinklers are in exposed places (near belting, etc.) they are furnished with guards to protect them from accidental injury. All exposed or outside pipes in connection with the International system are protected by tar-paper and 1-inch felt covering, two thicknesses of each, and boxed.

A thorough electric-alarm system is included in all installations by this Company, together with electric-indicator for the roof-tank, showing high and low water-mark.

The eave-sprinkler made by the Company is designed for outdoor use exclusively, being arranged in such a way that when in operation the entire front of the building from roof to pavement is enveloped in a blanket of water. This sprinkler has no connection with

the regular sprinkler system, being entirely independent of it. The valve used in connection with the dry-pipe system has an anti-locking device which holds it open after operation and prevents the sealing of the valve through excessive back pressure. In the riser supplying sprinklers there is a priming connection to prime the valve. This is designed in such a manner as to permit the water column to be renewed if necessary without allowing the air to escape.

The following tests of the sprinkler were made upon open joist-work construction in a room 15' x 16': The first test was with five pounds' pressure, the entire floor-surface being rapidly flooded, the overhead joist-work and walls being also wet effectively. The strength of precipitation and area of distribution were greatly increased with additional water pressure. One thing brought out by the demonstration was the fact that while the sprinkler thoroughly covered the walls and floor, the ceiling was wet equally as well.

GOOD INCOMES MAY BE EARNED.

LARGE salaries and many chances of progress are always to be had by expert mechanical engineers. One of the most delightful occupations, as well as a very remunerative one, is that of the skilled mechanical engineer, whose services are in demand, who earns a good salary, and who has unbounded opportunities for increasing his income and rising in his chosen profession. Formerly it was necessary for a young man to leave home and attend regularly at some college or technical school in order to equip himself for the work of a mechanical engineer, and in order to do this he ought to have money enough to live without earning his daily wages. This is one of the reasons why so many thousands of intelligent, ambitious men were prevented from becoming skilled and noted mechanical engineers. All but a comparatively few have to support themselves, and it is simply out of the question, especially if they have families depending on them, to leave home and go to a college. Fortunately, however, the problem has been solved by The United Correspondence Schools of New York City, which have developed a system of practical education by mail, whereby any man or woman within reach of a post-office, may have equal advantages in pursuing a course of study.

The pupil who enrolls with The United Correspondence Schools receives printed in-

struction papers which have been specially written by skilled instructors for this particular purpose, and which are copyrighted, so that they cannot be used by any other institution. He studies these instruction papers in his leisure hours, so as not to interfere with his regular work, and answers the examination questions by mail, also asking explanation of any particular points which occur to his mind. His answers are corrected and returned to him, so that he can see where he was right and where he was wrong, and all of his inquiries are replied to promptly. It will be seen that the great advantage in this system of education is that it enables any one to fit himself for a higher position in order to earn a larger and larger income.

The mechanical engineering course includes a study of such subjects as mathematics, geometrical and mechanical drawing, elementary chemistry, designing of machines, steam-boilers and steam-engines, the properties and strength of materials, steam, gas and oil-engines, principles and measurements of electricity, dynamos and motors and their management, etc. Full information as to this course of study will be cheerfully given to all who write to us at 154-156-158 Fifth Avenue, New York City. The tuition fees are moderate, and pupils may arrange for a system of small monthly payments, so that they will not feel the expense.

THE UNITED CORRESPONDENCE SCHOOLS,
NEW YORK, N. Y.

I. P. FRINK has just completed the installation of his Special Patent Window-reflectors in the store of Rogers, Peet & Co., Warren Street, New York, N. Y., built to replace the one destroyed by fire about a year ago. These reflectors were some time ago installed in their Thirty-third-street store, and as "once used, always used," is the rule with these window-reflectors, it is only natural that they should have been put in the new store.

THE demand for water-filters capable of supplying the entire household requirements seems to be rapidly increasing. We are advised that Wm. B. Scaife & Sons, Pittsburgh, Pa., have recently received a large number of orders from almost every section of the country for their Scaife Filters varying in capacity from 100 to 800 gallons per hour. No chemicals or coagulant of any description are used in these filters.

REDWOOD.

BOSTON, MASS., February 23, 1900.

TO THE PUBLISHERS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Manufacturers of other woods which have heretofore been used for finish in the construction of buildings are getting concerned because Redwood is coming into general use so rapidly, and to overcome the popularity of Redwood they try to cry it down and tell how long it has been kept by the dealers without being called for. Some of our best dealers say that they have kept it in stock from five to fifteen years, and became disgusted because the trade did not call for it. These same dealers now acknowledge that they have had more calls for and sold more Redwood within the last two months than for the last five years, and are loath to believe that anything could have been done to bring the wood into general use so quickly. To such we will say that the first thing to be done in the introduction of any article is to satisfy the consumers as to its true merits—not by crying down competing articles, or trying to palm off other articles which the customer calls for, but by showing up the true merits of the article to be introduced. On the introduction of Redwood into this market for building purposes, we first informed ourselves as to its true merits, the source of supply and the methods of manufacturing. After satisfying ourselves on these points, we proceeded to inform the consumers of lumber as to the advantages Redwood possessed over other woods. We have endeavored to give this information through the columns of your valuable paper, and we are satisfied with the results. We have endeavored to give the users of Redwood such information as is needed to enlighten them and satisfy them of its merits over other woods, and they have shown their appreciation by using Redwood where they have heretofore used other woods.

Redwood is fast taking the place of Quartered White Oak, Cherry, Cypress, White wood, White Pine and some expensive fancy hardwoods, such as Walnut Burl and Rosewood. Curly and Burl Redwood are acknowledged to make a better finish than either of the other woods, at a less cost. Tests which have been made with Redwood by careful men have shown that information which we have given through your columns was correct, much to our satisfaction. Redwood being unknown in this market, and having grown in a climate so entirely different from this, its true merits can only be shown up by those who have had experience with it, or by persons who have received their information from such people. Having grown in a damp atmosphere, adapts it particularly for structures in which there is to be more or less dampness, such as dye-houses, laundries, bleacheries, tanks and vats, stables, piazzas, fence-posts and cellar work, and on account of its resistance to rot and fire for the exterior of all buildings on which wood is used. On account of its resistance to insects, it is particularly adapted for kitchens, cupboards, pantries and clothes-closets, as it is found that no insects which are household pests, such as moths, water-bugs, bed-bugs, ants and such, will stay where they come in contact with unpainted Redwood. This merit alone gives Redwood a great advantage over other woods. Redwood can now be bought at retail from a large portion of dealers in finishing lumber, as is shown by our advertisement on page xi in your paper.

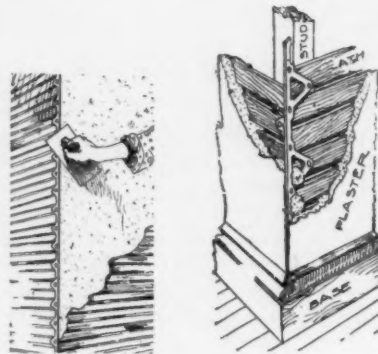
Again thanking you and the architects for the interest taken in Redwood, we remain

Very respectfully,

BARTLETT LUMBER CO.,
O. H. SMITH, Manager.

PLASTER CORNER PROTECTION.

METAL corner-beads have recently sprung up as an improvement over the old wooden bead, and prominent among these is the Wood's Steel Corner. It is unique in design and possesses many meritorious points, chief of which is its low price. Heretofore, cost has been the only drawback to the general use of metal corners, but Wood's Steel Corner has offset this. It has been used within the last



twelve months very extensively in all classes of structures. In public buildings, churches, schools, hotels, etc., where the wear is severe, its use is almost imperative. The accompanying engravings illustrate its practical application. It not only is serviceable after the corner is made, but assists in the making. It makes the grounds and enables the plasterer to work more rapidly than in making the corner the old way with a straight-edge. The manufacturers issue descriptive printed matter, and will send sample if requested.

GARA, MCGINLEY & CO.,
23 SOUTH 17TH ST., PHILADELPHIA, PA.

HOT WATER.

WHEN you want hot water you want it in a jiffy—and you want it hot.

One of the miracles of modern times, along with the telephone, wireless telegraphy, horseless carriages, etc., is the Ruud Instantaneous Water-heater.

The heater that furnishes the housewife all the water she can possibly use, scalding hot, and without the slightest bother to herself. She turns the faucet—the heater does the rest.

There is no hot, unsightly boiler in the kitchen, no water-backs to make heat and run up the gas-bill—nothing but unlimited hot water at any time of the day or night. The Ruud Instantaneous Automatic Water-heater is simply a series of copper coils enclosed in an insulating jacket, under which is placed a set of powerful, yet economical, gas-burners.

The opening of a hot-water faucet in any part of the house turns on the gas, which is ignited by a small pilot-light, and less than ten seconds later the water is flowing, scalding hot. It will continue to flow just as long as the faucet is left open—and the water will be scalding hot all the time. It matters not whether you want one gallon or fifty gallons, the supply is inexhaustible. The reverse act of closing the faucet causes the gas to be closed off from the main burners, and only one small flame, the pilot-light, is left burning.

How does it do it? Simplest thing in the world. The "Ruud Thermostat" is the key to the whole thing. It is the practical application of the unalterable law of contraction and expansion of metals under change of temperature, and is absolutely unfailing.

Now as to the expense. "It must take a tremendous amount of gas to heat water as rapidly as it can be drawn," people may say. But they forget that the gas is burning only during the actual time that the water is running. The Ruud Heater will produce fifty gallons of hot water as drawn from faucet for one cent. Practical experience of users of our heaters has shown conclusively that with gas at 25 cents per thousand, the cost of heating sixty to eighty gallons of water a day will average not over eighty cents a month. We don't guess at these figures—we guarantee them.

The Ruud Instantaneous Automatic Heater is no mere theory. It is the result of ten years' development and experience, and is a practical, finished machine, unfailing in its reliability. Over two thousand "Ruud" Heaters are now in use in Western Pennsylvania, all of which have been sold during the past three years, and not one is failing to do its duty in any respect.

The Ruud Heater has been a pronounced success from the first, because it is absolutely sure in its operation. The water is hot, not sometimes, but always, when it is wanted.

It is economical—the Thermostat is a gas-regulator in its action, and allows only the right amount of gas to be used to heat the amount of water being drawn at faucet.

It is reliable—built on strict scientific principles, and of the very best of material and workmanship, it can always be depended upon to do its work and to not get out of order.

It is sold under an absolute guaranty. If it is not satisfactory in every respect as claimed in our catalogue, after a fair sixty days' trial, your money will be refunded without a word.

Abundance of hot water at any moment of the day or night is one of the greatest of home comforts. There is no investment in home comfort and convenience that can equal the purchase of a "Ruud" Heater. Economy in fuel urges its use. Love of comfort and a desire for health both plead its cause.

But there's a big difference in automatic water-heaters—there's a "good" kind and a "poor" kind. The "Ruud" is the "good" kind, and its superiority is gained through the use of a better and more reliable system of automatic control—the "Ruud Thermostat."

Constructed of brass, and in continuous use since 1889, the "Ruud Thermostat" has proved itself vastly superior to the various "pressure-valve" devices used in all other instantaneous coil water-heaters. Simple and accurate, it acts in response to the unalterable law of contraction and expansion of metal under change of temperature, and exerts a positive and accurate control over the heater that is truly wonderful.

The Thermostat is very simple in construction and is entirely free from springs or complicated mechanism of any sort.

With our system of "Thermostatic Control" the temperature of the hot water coming from the heater is automatically regulated to a uniform degree of heat by the Thermostat, and by simply turning the "temperature regulating screw," any desired temperature

Atlas PORTLAND CEMENT

Guaranteed to be Superior to any Imported or Domestic Cement.

Used Exclusively in the Following New York Buildings:

HAVEMEYER BUILDING

ST. PAUL BUILDING

AMERICAN SURETY BLDG.

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N. Y. LIFE INS. BLDG.

STANDARD OIL BLDG.

JOHNSTON and PRESBYTERIAN BLDGS.

Atlas Portland Cement Company

143 LIBERTY STREET
NEW YORK

from 90° to 200° Fahr. may be had, but the usual adjustment is 130° Fahr. and the capacities of the different sizes of Ruud Heaters are based on heating water to this temperature.

"Pressure-valve" heaters cannot be adjusted for temperature and do not possess the power of automatically controlling the temperature of the hot water, especially when the conditions are changed from normal.

For instance, if the gas-supply should become excessive, or the water-pressure below the average, these heaters, not being able to adapt themselves to the changed conditions, would make the water hotter and hotter until steam would be generated and the plumbing work endangered, with the consequent trouble and expense. Or in case the valve-stem "sticks" or the valve itself becomes clogged with sediment and refuses to close in response to closing of hot-water faucet, the same conditions would prevail.

Besides, "pressure-valve" heaters turn on just as much gas in summer as in winter, when there is an extreme difference in the temperature of the cold water entering heater of 43° Fahr. This means a waste of gas, in addition to danger from the water becoming overheated and causing damage. On the other hand, the "Ruud," with its accurate all-metal Thermostat, instantly adjusts itself to changed conditions, as it does not depend on the pressure of water for its control, but on the temperature of the water, which is the only true principle.

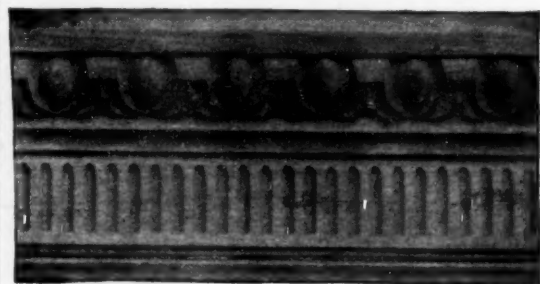
"Water-valve" heaters heat the water blindly, with the result that the water is generally either too hot or not hot enough, while in the "Ruud" the temperature of the hot water is maintained uniform and is always just right, which in practice means much to the user of an automatic water-heater.

The "Ruud" is the only automatic coil heater in the world fitted with an automatic safety-device whereby in the event of the pilot-light going out from any cause whatever, all gas is automatically shut off from main burners, thus rendering the heater safe and reliable.

RUUD MANUFACTURING CO., INC.,
PITTSBURGH, PA.

"QUILT."

SAMUEL CABOT has added greatly to the value of his "Quilt" by using in place of the ordinary sheathing-paper, between sheets of which eel-grass is enclosed, heavy sheets of asbestos paper. This simple and not too expensive substitution converts the material from a merely good insulating and deafening lining to one which has in addition equally good fireproofing qualities.



CARVED WOOD MOULDINGS...

For Interior Finish

AS CORNICES,
CHAIR AND
PICTURE RAILS,
CEILINGS, ETC.

..... New Catalogue just out.

GRAND RAPIDS CARVED MOULDING CO.

9 and 11 Myrtle Street,

GRAND RAPIDS, MICH.

There is hardly any class of building in which the acoustic isolation of each room is of more importance than the school-house, and the manufacturer of this valuable deafening material is quite right in pushing its use for school-house floors and partitions. His latest move in this direction is a well-illustrated octavo pamphlet showing some of the many school-buildings in which "Quilt" in one or another of its forms has been used.

As Mr. Cabot says,

"If a class is constantly interrupted by the singing, marching, or reciting of the scholars in the next room, it is impossible for them to apply themselves and accomplish the best results in study, and they are continually wrought up to a state of nervous excitement, which is injurious to their health and a perfect torment to their teacher.

"The necessity of preventing the sounds of one room from penetrating into another is now generally recognized, and has led to exhaustive inquiry into the various methods and materials to be employed for the accomplishment of this result. It is known that the ordinary plaster-and-timber construction forms a very imperfect barrier to the conduction of sound, plaster being at all times a poor non-conductor, and the timbers, so far from helping matters, often increase the difficulties, each one forming a telephone to convey the sound. It is, therefore, necessary to line the floors and walls with some materials that will break up and absorb the sound waves, and which will also at the same time meet the other requirements, such as durability, reasonable expense, hygienic properties, etc.

"The materials and construction of this Quilt were carefully chosen to form an article which would meet all the requirements, not only in the isolation of sound—although that was the first consideration—but also in permanence, hygienic qualities (freedom from decay, or the attraction or harboring of insects), etc.

"It is composed of a peculiarly laminated matting of cured eel-grass (*Zostera Marina*), held in place between two layers of tough manila paper by 'quilting,' whence its name, 'Quilt,' which is the registered trade-mark of the material. Eel-grass was selected for the filling, after exhaustive tests of that and other materials, for four very important reasons,

namely: (1) because the blades are long and flat, and when felted as they are in the Quilt they form innumerable minute dead-air spaces, making the absorbent cushion which is necessary to break up and dissipate the sound waves, and which is impossible with a round fibre; (2) because eel-grass, being a sea plant, contains silicon to a large extent in place of the carbon of plants that grow in the air, and, therefore, is very unflammable, it being impossible to make it burn at all unless direct flame is applied, and such slight combustion as then takes place ceases instantly when the flame is withdrawn; (3) because it is indestructible by decay, as is well known to every dweller on the seashore, while the iodine, which is always present in sea-plants, repels insects or vermin; (4) because it is very tough, and never loses the elasticity which is so necessary for non-conducting purposes. It will, therefore, be seen that Quilt is constructed upon rational and scientific principles in every particular, and the result is the most efficient and nearly perfect deafener on the market, and at as low a price as any that has any value worth mentioning for this purpose."

AN unusual departure in the way of show-window advertising is that of the May Co., of Cleveland, O., who have probably the most remarkable store-front in the world. They have utilized the plate-glass front of their building, the whole six stories in height, and have lighted this enormous expanse of window-display with Frink's Special Patent Window-reflectors, which had been previously used in the stores of this syndicate in St. Louis and Denver. Quite a number of Cleveland stores owe their attractive show-windows to this system of lighting, among them being Kent, Hoyt & Sefton Co.; Browning, King & Co.; Brynet & Fish; J. G. Meekes; Fries & Schuele, and Nathan & Skall.

¹The walls of the old Pierce House, Dorchester, Mass., built in 1635, are stuffed, between the studding, with eel-grass. This fact was discovered in 1893, while making some repairs, and it was found that the eel-grass was in a perfect state of preservation. Mr. Cabot has a sample of this 260-year old eel-grass in his office.

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THE U. S. NAVAL OBSERVATORY, WASHINGTON, D. C.

ELECTRIC R.R. SUBWAY, BOSTON.
METROPOLITAN SEWERAGE WORKS, BOSTON.
SEA WALL, LAKE FRONT, CHICAGO.
BRIDGES OVER HARLEM RIVER, N.Y.

Alsen's Portland Cement Works, New York Office, 143 Liberty Street.

AGENTS AT BOSTON: WALDO BROS., 102 Milk Street.

BRADSHAW AUTOMATIC WINDOW-OPENER.

THE Bradshaw Automatic Window-opener illustrated in our advertisement on page xi, is a simple device consisting of four small plates



The old way.

so constructed as to form an automatic hinge when fitted to the window.

It does not in any way interfere with the sliding of the sashes, nor is it necessary to make any alteration in the windows when applying it. The fixture is of a neat design, highly polished and ornamental in appearance.

In its use every window is equipped with an independent set of hinges, which are permanent, avoiding the necessity of applying and removing them each time the window is opened and closed, enabling the operator to swing every window in the building inwardly at the same time if desired.

In the household the safety, convenience and comfort derived from the use of this



The old way.

hinge are well worthy of consideration. Where applied it is unnecessary to remove fly-screens, storm-sash or take out the entire window to clean the latter.

The Automatic Window-opener is particu-

larly adapted to use in public buildings, such as hospitals, asylums, public schools, etc. It is especially convenient where the windows of buildings are covered with bars or heavy grating which make it impossible to clean them without removing the entire window. For the purpose of ventilation in warm weather the entire window may be opened like a door if desired.

Statistics show that the loss of life caused by falls from windows of persons employed to clean them is enormous. This device does away with all danger and makes it possible to clean windows more thoroughly, more conveniently and in less than one-half the time that is required by the old method.

The opener is sold at a very moderate price and when its many advantages are considered its first-cost is a matter of small importance, the hinge being well made of the best of tempered steel, and it cannot wear out or get out of order.

The makers invite investigation into its merits and will be pleased to mail circulars and quote prices on application to

THE BRADSHAW WINDOW-OPENER CO.,
BUFFALO, N. Y.

IMPERIAL PORCELAIN LAVATORIES.

IMPERIAL Porcelain Lavatories are super-seeding marble; they are more desirable in every respect. The slab and basin are in one piece. The back joins the slab 1 inch above the level of the latter; in the marble lavatory the joint is directly on the slab and soon becomes black and objectionable. Above all is the beautiful china-white glaze of the Imperial Porcelain which renders it non-absorbent and unstainable, qualities not possessed by marble.

The Class A represents the highest grade of perfection obtainable with large pieces of porcelain, while the Class B are really fine goods; where cost is a consideration, the Class C (when in stock) can be used to advantage, as they have only slight marks or lines that do not detract from their durability or usefulness.

In most modern apartment-houses, hotels and private dwellings, the bath-rooms are tiled. This is as it should be. The tiled walls are sanitary and add to the desirability and renting capacity of the building. The Imperial Porcelain All-open Lavatory is particularly adapted for use where the walls are tiled, and will recommend itself to many.

Among the notable buildings in which the Imperial Porcelain Lavatories have been used are the Iroquois Hotel, Buffalo; Herald Square Hotel, New York; The Flagler Hotels,

Florida; Hotel Reynolds, Boston; Westminster Apartments, Boston, etc.

All our Imperial Porcelain Lavatories have a very large basin compared with the full size of the slab; thus, a small lavatory may be used and still provide a large basin; this is not the case with a marble slab.

The desirable features of the Imperial Porcelain Corner Lavatory are, that the back is in one piece with the slab, the lavatory presenting a compact, beautiful all-white surface, and being infinitely superior to marble. Although the lavatory occupies a minimum of space, the basin is amply large.

Our Imperial Porcelain Roll-rim Kitchen Sinks are in appearance and from a sanitary and practical standpoint superior to all others. They are glazed a beautiful white, inside and outside. Strength and durability are assured by the substantial thickness of 2 inches; moreover, they are made in one piece, without the joints, so objectionable in a soapstone or slate sink.

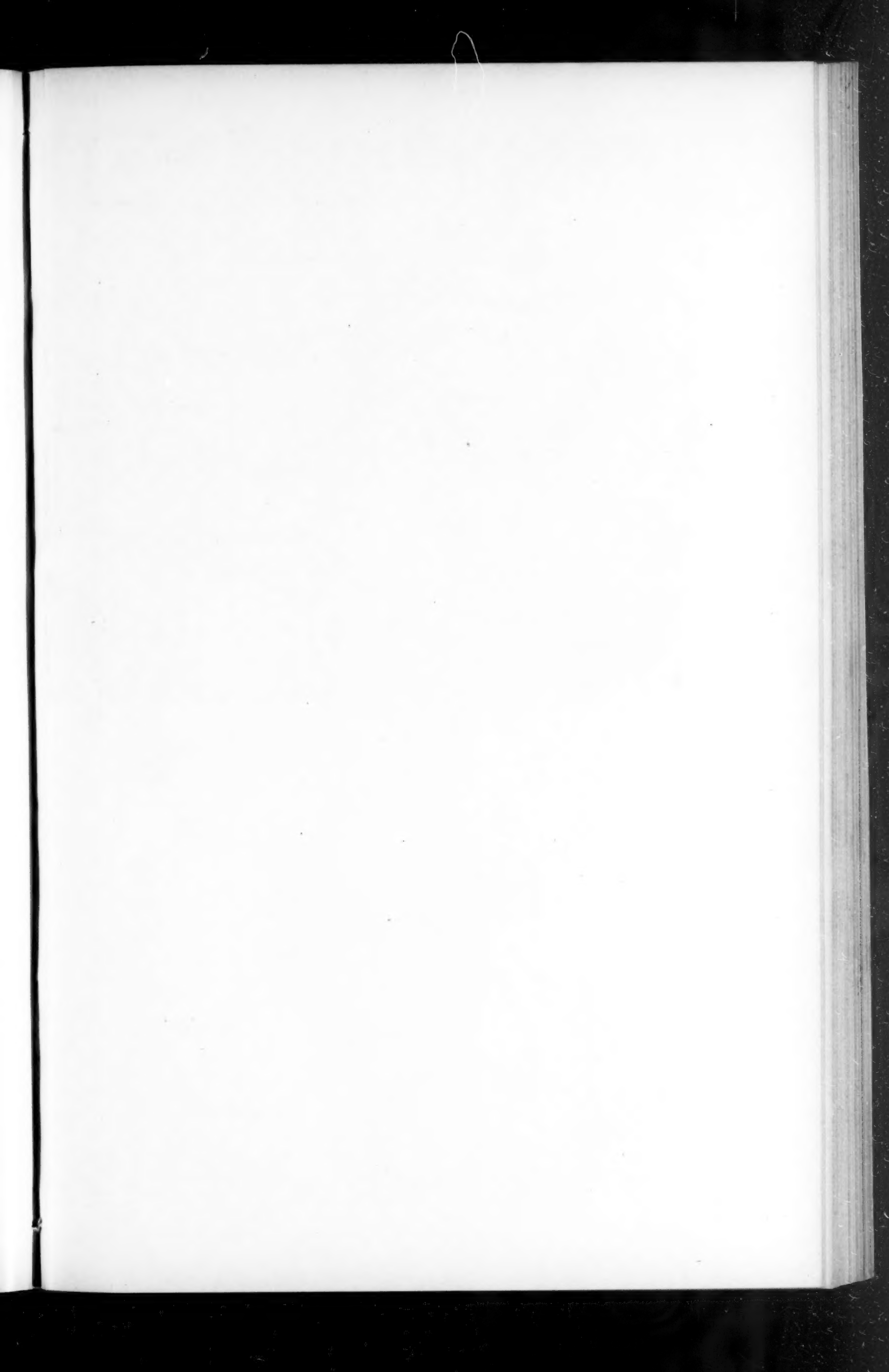
THE J. L. MOTT IRON WORKS,
NEW YORK, N. Y.

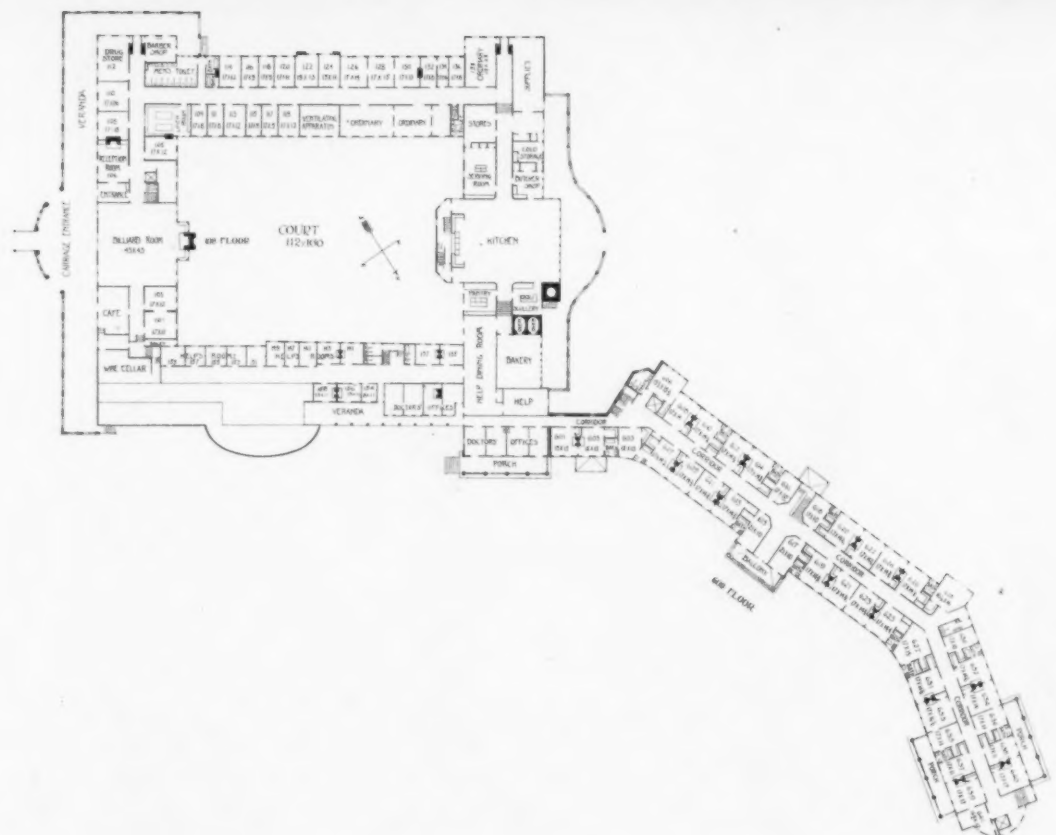
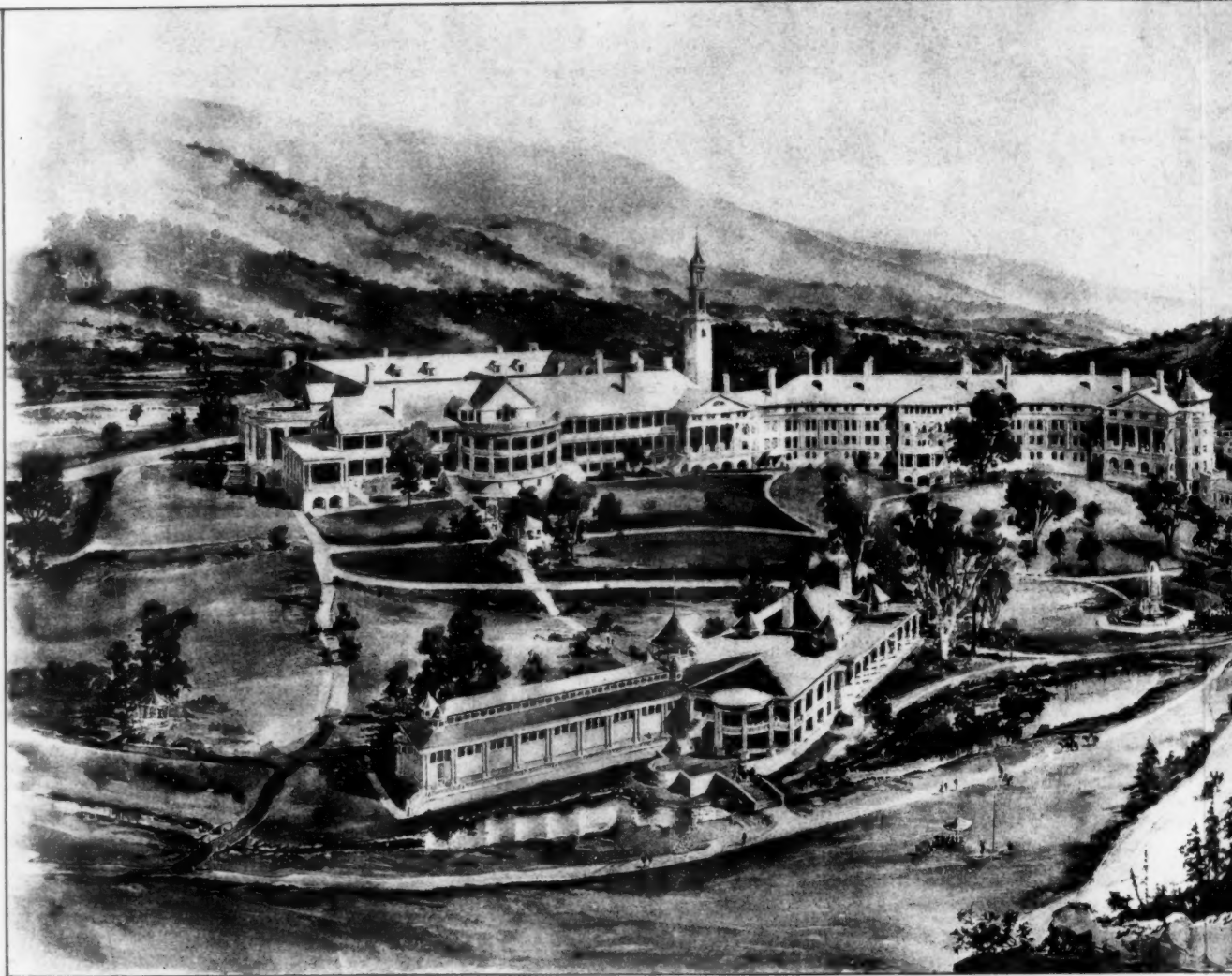
NOTES.

THE Berlin Iron Bridge Co., of East Berlin, Conn., have just completed two large highway bridges at Long Lake, N. Y., and are now putting up a 200-foot span at Stuyvesant Falls, N. Y., and a large highway bridge at Hillsborough, N. H., and a two-span trolley bridge across the Naugatuck River at Waterbury, Conn.

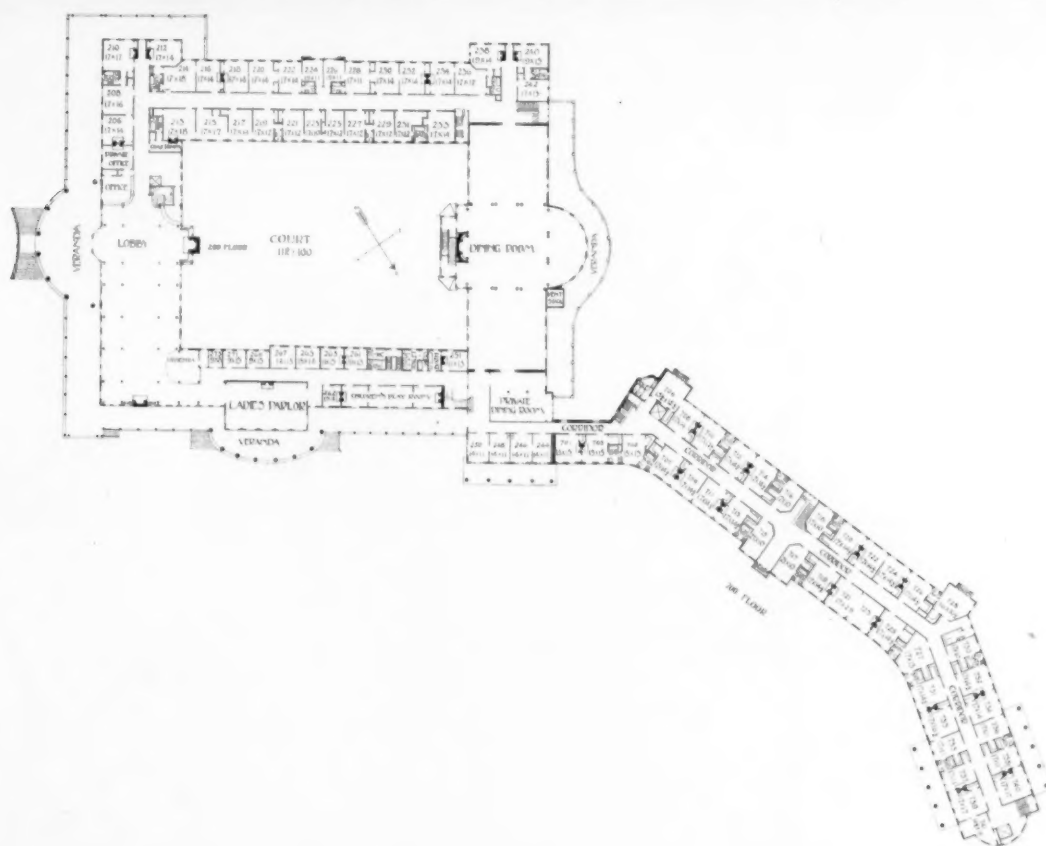
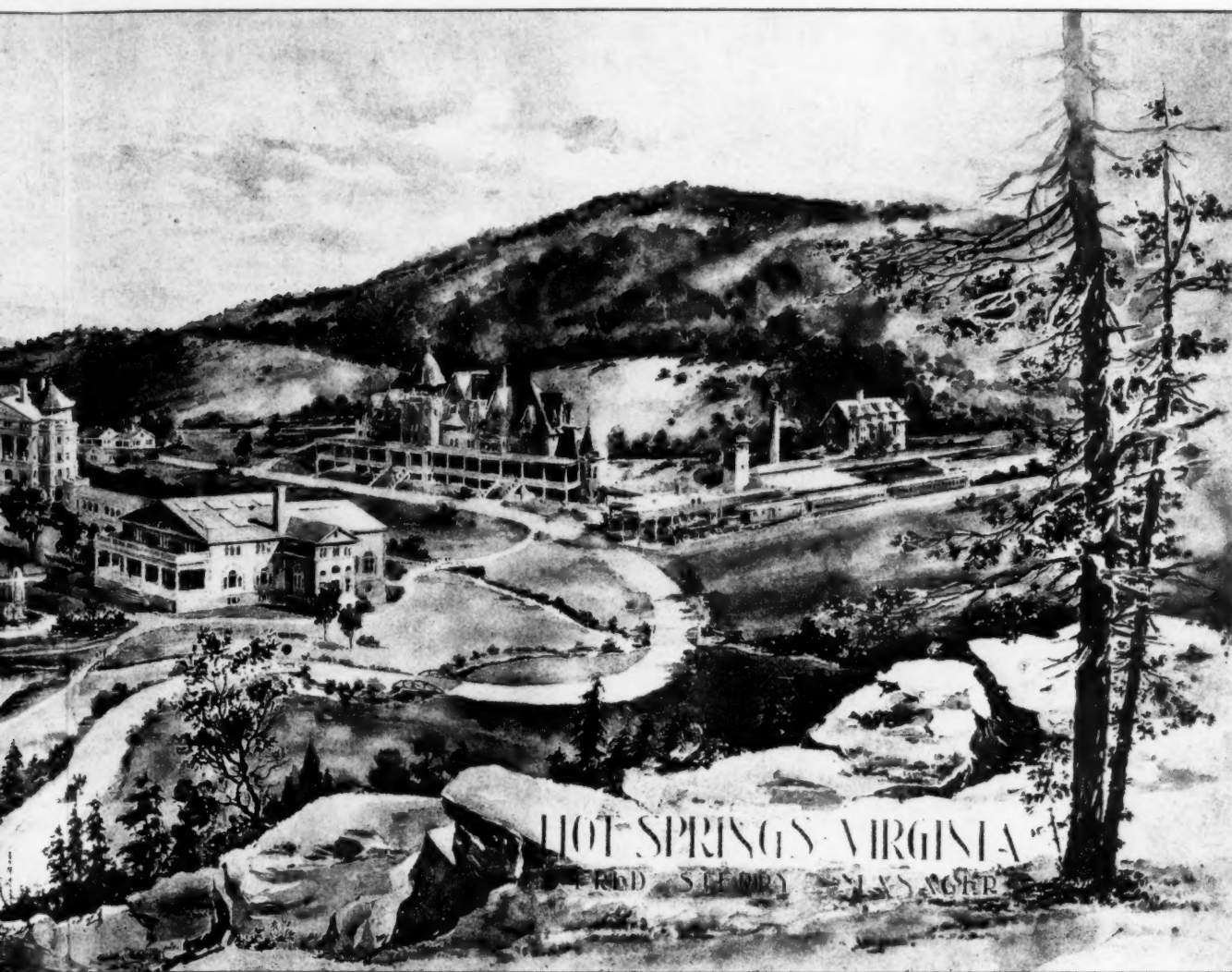
The Albany & Hudson Railway & Power Company have placed the contract with the Berlin Iron Bridge Company, of East Berlin, Conn., for their power-house, and the several bridges required for the extension of their line from Albany to Hudson, N. Y. The line will require nine spans of plate-girder bridges, varying in length from 30 feet to 65 feet, with a viaduct over the tracks of the Boston & Albany Railroad and the New York Central & Hudson River Railroad. This viaduct will require something over one thousand tons, it being 2,000 feet in length, the span over the Boston & Albany Railroad being 175 feet pin-connected, and that over the New York Central & Hudson Railroad being over two hundred feet in length. The work is to be completed in the early spring.

A STEEL-FRAME trestle, tipple and two tipple houses, covered with corrugated-iron, are being erected for the Rose and Morgan Coal Co., at Bellaire, by O. Wm. B. Scaife & Sons, of Pittsburgh, Pa. The latter firm have recently constructed a large steel-frame trestle and tipple for the Raton Coal and Coke Co., Raton, New Mexico.





THE HOMESTEAD HOTEL,
ELZNER & ANDERSON,





Pilastra 2ª de la derecha.



Ventana 1ª de la izquierda.



Balcon 1ª de la izquierda.



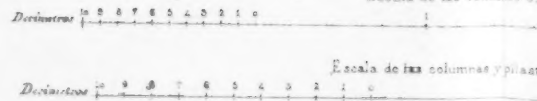
Columna 1ª de la derecha.



Columna del 2º balcon



Pilastra del 1º balcon





a del 2º balcón de la izquierda.



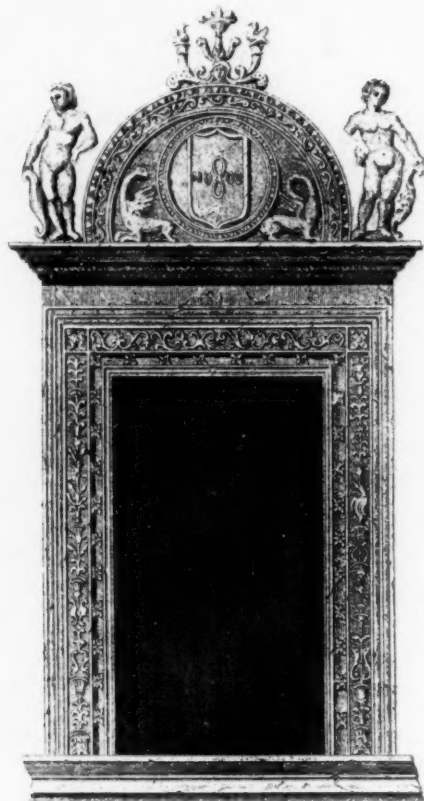
Columna 2ª de la derecha.



al con de la izquierda.

de las ventanas 07035 por metro.

columnas y pilastras 07036 por metro.



Ventana 2ª de la derecha.



Balcón 2º de la izquierda.



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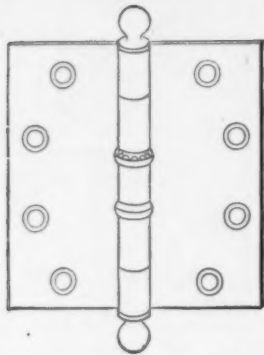
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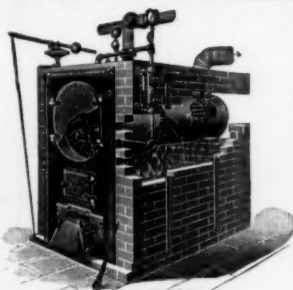
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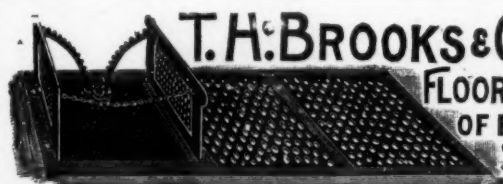
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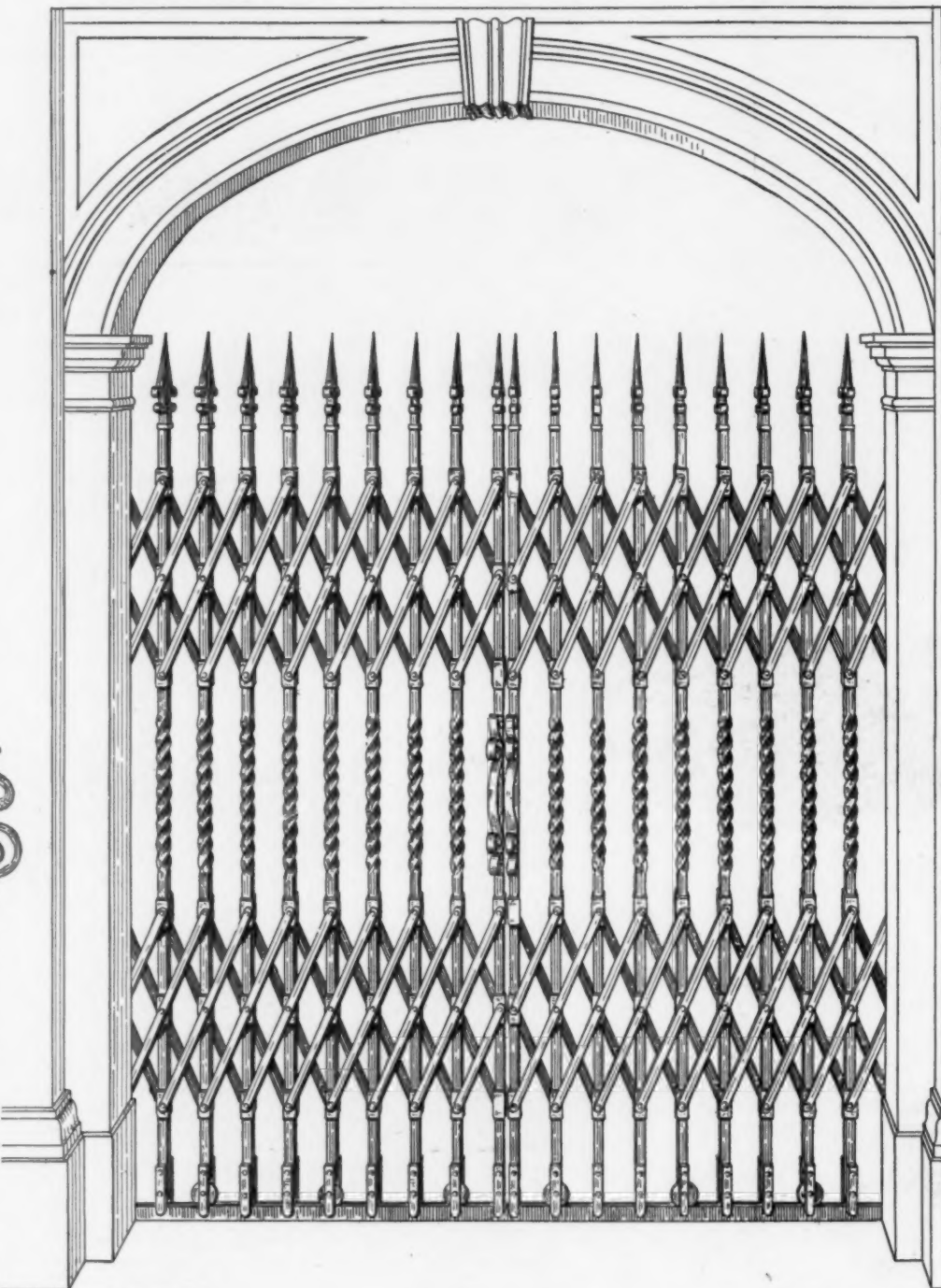
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" Moulded.....		Imported	11 00 @ 13 00
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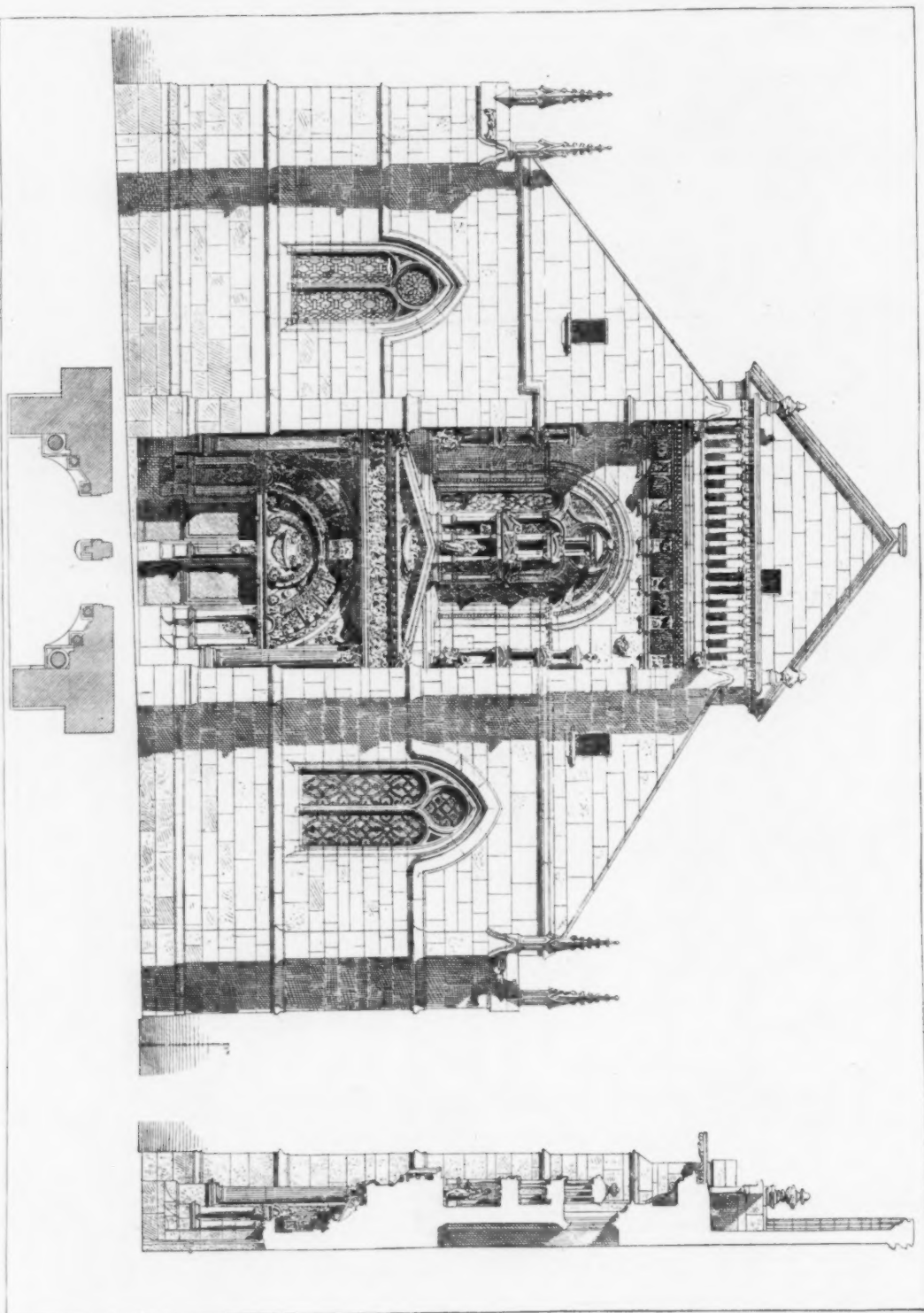
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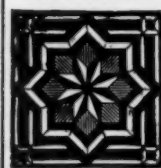
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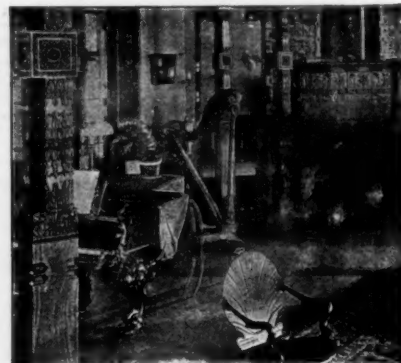
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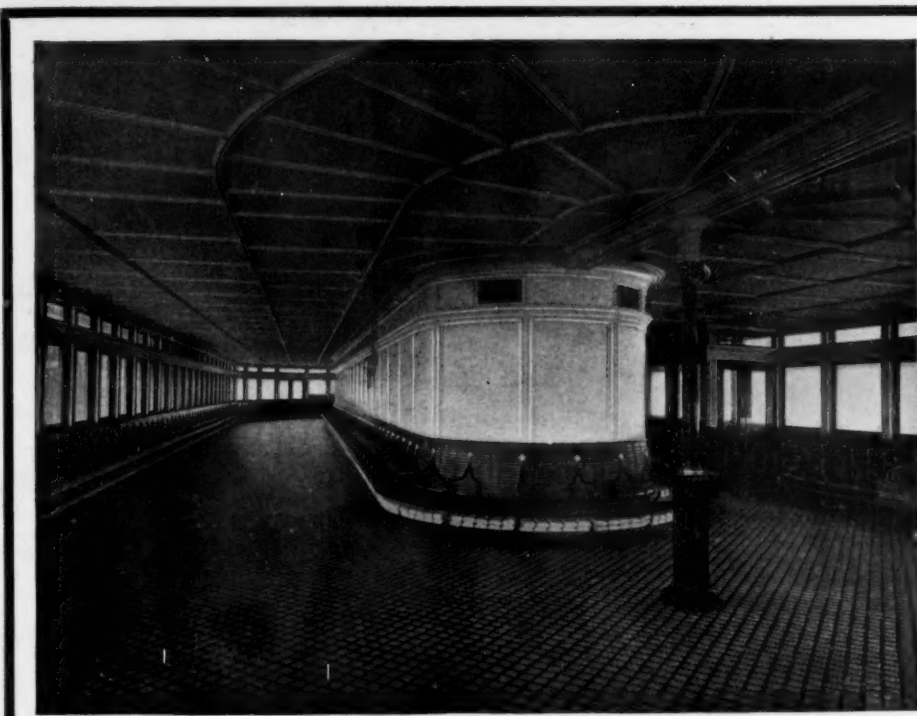
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Co. for a seven-story brick addition, 50' x 90', to its factory, to cost about \$40,000.

Cleveland, O.—A. E. Sprackling, architect, 204 Superior St., has prepared plans for a five-story hotel building, 125' x 175', to be of brick and terra-cotta trimmings. It will have all modern hotel conveniences, including ice machine and complete electric plant for light and power; cost, \$200,000.

Local reports state that Architects Steffens, Searles & Hirsh, New England Building, have been commissioned to prepare plans for a twenty-four-story office building, to cost about \$600,000.

It is reported that the Citizens Savings and Loan Association have had preliminary plans prepared for an eighteen-story banking building, to be erected on the present site of the public library, and which will cost about \$750,000.

Colorado Springs, Col.—It is stated that about \$25,000 will be expended in improvements to the First Congregational Church.

Connellsville, Pa.—Plans have just been completed by J. T. Steen, of Pittsburgh, for a five-story building to be erected at Pittsburgh and Main Sts., for the Title and Trust Co.; cost, about \$60,000.

Crookston, Minn.—St. Ann's French Catholic Society contemplates erecting a \$20,000 church.

Denver, Col.—Mary L. Wilson has had W. E. Fisher, McPhee Building, prepare plans for a two-story brick and stone dwelling to be built at High and 13th Sts.; cost, about \$10,000.

Detroit, Mich.—Spier & Rohns have prepared plans for the railroad branch of the Y. M. C. A. for a new building to be erected on Livernois Ave.; cost, \$16,000.

Wells D. Butterfield & Co. have prepared plans for a new church for the Fort St. Congregational Society; estimated cost, \$18,000.

Geo. D. Mason has prepared plans for a four-story warehouse for Leonard Bros., to be built on Alexandrine Ave.; cost, \$5,000.

N. Wardrop has prepared plans for remodeling the residence of Geo. A. Beaton, 68 Davenport St.

Stratton & Baldwin are preparing the plans for the Riverside Storage and Cartage Co., to be erected corner Cass and Congress Sts.

St. Andrew Society will build a new home on a new lot, E. Congress, near Beaubien St.

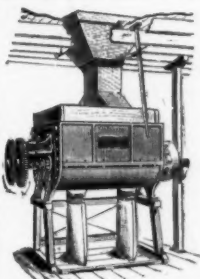
Spier & Rohns have been appointed architects for the new Science Hall to be erected by the University of Michigan; cost, about \$250,000.

Gordon W. Lloyd is preparing plans for the fitting up of an elegant suite of five offices for D. M. Ferry & Co.

Dickson City, Pa.—Lewis Hancock, Jr., Scranton, has prepared plans for a four-story and basement brick and stone town-hall, to cost about \$20,000.

Elwood, Ind.—The Elwood Trades Council will erect a labor temple on S. Anderson St., to cost about \$25,000.

Everett, Mass.—The United States Steel Co. will build a 120' x 120' steel foundry, for which the plans are being made by E. G. Spillsbury, 45 Broadway, New York City. An electric power plant will also be built.



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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Findlay, O.—The plans of Kramer & Harpeter are stated to have been accepted for a \$35,000 school.

Fonda, Ia.—Liebbe, Nourse & Rasmussen, of Des Moines, are making plans for a 12-room residence for George Fairburn. It will be a two-story frame, 60' x 70', shingle roof; cost, \$15,000.

Foxboro, Mass.—Plans are being prepared for a gymnasium and chapel to be erected at the Dipso-manias's Hospital; cost, about \$20,000.

Freeport, L. I., N. Y.—The Rev. Walter E. Kirwin, of Brooklyn, has purchased a plot of ground, 100' x 160', on the east side of Bergen Pl., near the Merrick Road, and on it will be erected a Catholic Church.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Galveston, Ind.—Architect J. E. Crain, Logansport, has prepared plans for a \$9,000 pressed brick and stone bank building for F. H. Thomas.

Geneva, O.—A fund is being gathered to build a Public Library as a memorial to Platt Rogers Spencer, the teacher of penmanship, who was a native of this town. It is desired to have the building ready for dedication in 1901, the centenary of Spencer's birth.

Great Falls, Mont.—It is stated that the Catholic congregation are considering the matter of erecting a \$25,000 church.

Bell & Kent, architects, of Helena, have prepared plans for a brick and stone building, two-story, 50' x 150', to be erected for M. H. Luther; cost, \$25,000.

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Foundry and Shops, East 28th and East 29th Sts. Office, 315 East 28th St., New York.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Hannibal, O.—W. B. O'Neill Co., architects, Marietta, have drawn plans for a church to cost \$6,000 for the German Lutheran Society.

Hempstead, L. I., N. Y.—The Little Sisters of the Poor, whose headquarters are at De Kalb Ave., Brooklyn, have purchased the Carman Estate here, covering an area of 25 acres, upon which they will erect a convent, chapel and home. The buildings will be the largest of the kind on Long Island. The Sisters propose to establish a refuge for aged women.

Henderson, N. C.—Mr. D. Y. Cooper is about to apply for a charter for the Harriet Cotton Mills, with capital stock of \$150,000, to build a plant of 7,500 spindles.

Homestead, Pa.—Architect J. P. Bailey, 6th Ave., Pittsburgh, is preparing plans for two 10-room frame dwellings, to cost \$7,000.

Indianola, Ia.—Proudfoot & Bird, Des Moines, are drawing plans for a new church for the Presbyterian Society. The exterior walls will be of pressed brick and the heating will be with steam; cost, about \$12,000.

Indianapolis, Ind.—The National Automobile & Electric Co. have been incorporated with a capital stock of \$250,000. L. S. Dow, president and general manager. A new plant will be erected on 22d St., plans for which are being prepared by Clarence Martindale, Indiana Trust Building. The main building will be two stories high, 75' x 350'. The Daniel Stewart Drug Co. will probably erect a four-story storage house at South and Delaware Sts., to cost about \$30,000.

Kansas City, Mo.—Geo. Mathews, Lyceum Building, has prepared plans for \$60,000 brick flats to be built by Felix La Force on 10th and Pennsylvania Aves.

Knoxville, Tenn.—A \$300,000 cotton factory is projected by leading business men, among whom are Messrs Col. C. M. McGhee, R. P. Gettys, Col. L. D. Tyson.

The Tennessee Mineral Co. have been organized with a capital stock to erect and operate a concentrating plant, to cost \$500,000. M. T. Frankenthal, general manager, Brooklyn.

Laconia, N. H.—Reports state that the Laconia Car Co. will expend about \$25,000 in improving its plant.

Lagrange, Ga.—A \$200,000 cotton factory will be built here by the Lagrange Cotton Mill Co., which organized recently with capital stock at \$200,000. A mill of 10,000 spindles will be contracted for to be completed this year. John C. Spreckel, pres.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

La Grange, N. C.—A canning factory is to be built at once by the Oceola Manufacturing Co. Capital \$5,000, with privilege of increasing to \$20,000.

Laurel, Miss.—Contract will be let soon for constructing two buildings, 50' x 500', for the Laurel Cotton Mills. The plant will cost about \$120,000. George S. Gardner, president; John Hopkinson, superintendent.

Lincoln, Neb.—Plans have been prepared for a new \$40,000 church for the St. Paul M. E. Society.

Logansport, Ind.—Architect J. E. Crain has prepared plans for a \$6,000 brick and stone dwelling for Elizabeth Brinkhurst.

Architect J. H. Rhodes is preparing plans for a three-story brick store, office and hall building to be erected on Market St., for Dennis Uhl and Dr. J. W. Ballard; cost, \$25,000.

Long Island City, L. I., N. Y.—The Astoria Glass Works will soon erect a factory at the corner of Blackwell St. and Riker Ave., Steinway, 50' x 200'. It is expected to have the works in operation by April 15.

Lorain, O.—A \$100,000 hotel will be built in this city next spring by a stock company composed of W. G. Sharp, Henry Wurst, J. C. Hill and others of Elyria.

Louisville, Ky.—W. L. McDougall, 506 W. Jefferson St., has prepared plans for a \$20,000 church, to be built on Frankford and Bellaire Aves. W. E. Foster, pastor.

Madison, Wis.—Architect Pond, of Chicago, Ill., has been asked to submit plans for a \$75,000 Y. M. C. A. Building to be erected at the State University.

Manville, R. I.—The Manville Co., Supt. A. T. White, has plans made for a weave shed addition and has contractors figuring on the job. The new structure will be 540 feet long, 240 feet wide, one story high, and will contain 3,000 looms. The cost of the building will be about \$100,000.

Marietta, O.—W. B. O'Neill Co., architects, have prepared plans for a high-school building, cost, \$40,000; a business building for L. L. & C. N. Peddinghouse; cost, \$10,000; a flat building for M. F. Noll; cost, \$7,500; a store and flat building for August Weber; cost, \$6,000; a residence for J. D. Strauss; cost, \$4,000; all to be erected here.

Marquette, Wis.—Ex-Representative Isaac Stephenson has announced his intention to give to the city a public library building, to cost \$50,000.

Marion, O.—Reports say that Benjamin Waddell will build a \$25,000 children's home in Marion County.

McKeesport, Pa.—Reports state that the National

PASSAIC ROLLING MILL CO.,
PATERSON, N. J.

Steel Beams

4 inches
to
20 inches
deep.

ALL STRUCTURAL SHAPES.

NEW YORK OFFICE . . . 45 BROADWAY.
Boston Office, No. 31 State Street.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Tube Co. will erect a new plant near this place, at an estimated cost of about \$300,000.

Melrose, Mass.—The Congregational Society is taking preliminary steps toward the erection of a new church, to cost \$16,000.

Milwaukee, Wis.—Adam Kuntz will erect a three-story building on 3d St. and North Ave., at a cost of \$22,000.

Minneapolis, Minn.—Reports state that a large livery stable will be erected on S. 3d Ave., near 16th St. It will be two stories and basement, pressed brick front, with gravel roof, costing about \$10,000.

Monroe, Ga.—Stockholders of the Guano Co. have decided to add a cotton factory to their plant, and will increase their capital stock from \$100,000 to \$200,000. C. F. Moulton, manager.

Nashua, N. H.—The Jackson Manufacturing Co. is to make extensive improvements and additions to its plant this spring. These improvements will cost upwards of \$50,000 and will be completed probably in the summer.

Nevada, Ia.—Liebbe, Nourse & Rasmussen, architects, of Des Moines, have prepared plans for the new library building. It will be two-story, 32' x 60', of brick with stone trimmings, tar and gravel roof, steam heat, oak finish, etc.; cost, \$10,000.

New Haven, Conn.—Announcement has been made by the committee in charge that the class of 1896, Yale, will shortly erect a memorial gateway on the Yale campus to Gerard Brayton Ives of New York City, a "Rough Rider" who died in New York after a long illness at Tampa, Fla., of typhoid fever, and Lieut. Ward Cheney, of Hartford.

New York, N. Y.—Plans drawn by Architect A. W. Brunner for the new Mt. Sinai Hospital to occupy the block between 100th and 101st Sts. and 5th and Madison Aves. have been made public. The proposed hospital will consist of a series of eight buildings connected by corridors. The construction material will be light brick with white marble trimmings; cost may exceed \$1,000,000. It is estimated that two years will be required to complete it.

Hill & Turner, 150 Fifth Ave., are preparing plans for a seven-story apartment-house to be erected on Broadway, between 85th and 86th Sts. The basement, first and second stories will be fireproof, and the building will be connected with the rapid transit tunnel station by an underground passage; cost, about \$400,000.

Governor Roosevelt has signed the Elsborg Bill authorizing the city to expend \$200,000 for equipping and furnishing the east extension of the Metropolitan Museum of Art Building in Central Park.

James J. Coogan, President of the Borough of Manhattan, is to build a hotel on the old Revere House property, at Broadway and Houston St. The present building will be remodelled and three stories will be added to its height. The structure will be fitted with all modern improvements, and will be especially adapted to the trade of commercial travellers.

Oakland, Cal.—The question of erecting a city hall, at a cost of about \$300,000, is reported to be under consideration.

Orange, N. J.—Willard Smith, general secretary of the Orange Y. M. C. A., has prepared plans for the new association building that is to be erected here through the liberality of Joseph W. Stickler. The proposed structure will be built of pressed brick with stone trimmings. The ground plan is 60' x 70', and there will be four stories. A feature of the facade is a tower 16 feet in diameter on the southeasterly corner; cost, about \$65,000.

Oswego, N. Y.—The Board of Education contemplates the erection of a \$40,000 high-school building.

Palmer, Mass.—The trustees of the epileptic hospital are making preliminary arrangements for the construction of five new buildings, for which the Legislature of last year appropriated \$85,000. The work is to be completed within the year. There is to be an infirmary, 50' x 110', two stories; two infirmary cottages, one for men and one for women, each 40' x 72'; a cottage to accommodate 20 women, 50' x 60', two stories. In the fifth building will be a kitchen and dining-room and a workshop. This building will be 60' x 100', two stories. All of the buildings are to be of brick.

Peabody, Mass.—A tract of land fronting on Endicott St. Extension has been conveyed to the town for the purpose of establishing a hospital.

Petersburg, Ind.—The Board of Education will probably erect a \$30,000 school-building.

Philadelphia, Pa.—Addison Hutter has prepared plans for a large three-story warehouse which it is proposed to build at 812-822 Race St., for Strawberry & Clothier. The building will be of brick and iron, and will occupy the site of a group of old buildings which will be torn down.

Pittsburgh, Pa.—F. W. Hanitch is having plans prepared for 150 frame dwellings to be erected in Sheraden Borough, to cost about \$250,000. Work will begin early in the spring.

Architect J. P. Bailey, 6th Ave., is preparing plans for a 14-room dwelling, to be erected on Washington Ave., for Dr. E. E. Riggs; cost, \$9,000.

Alden & Harlow are preparing plans for a bank building to be erected at the corner of 4th and Smithfield Sts., for the Pittsburgh Bank for Savings; cost, about \$250,000.

The Sisters of the Sacred Heart have purchased a site on Lincoln Ave., and will establish a home for girls, to cost about \$50,000.

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No. 585,275, May 25, 1897
No. 583,276, May 25, 1897
No. 591,588, Oct. 12, 1897

No. 620,388, Mar. 14, 1899
No. 611,425, Mar. 29, 1898
No. 608,240, Aug. 2, 1898
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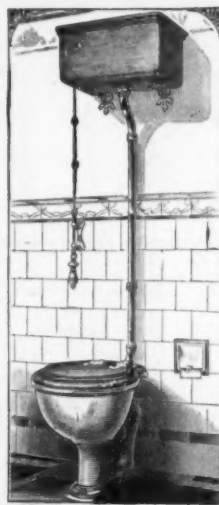
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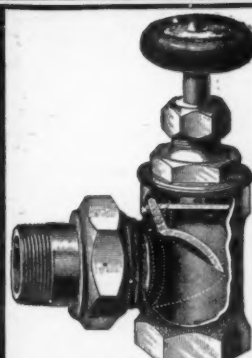
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PROPOSALS.

CHURCH.

[At Gray, Me.]
Sealed proposals will be received until noon, March 12, 1900, for furnishing all the materials and labor required in the erection of a Congregational Church. JAMES T. HANCOCK et al., Bldg. Com. 1263

ASSEMBLY HALL.

[At Washington, D. C.]
Sealed proposals will be received at the office of the commissioners until March 7, for constructing an assembly hall on the grounds of the boy's reform school, Bladensburg Road. JOHN B. WIGHT, et al., commissioners. 1262

CHURCH.

[At Brazil, Ind.]
Bids will be received until March 15, for the erection and construction of a new church for the M. E. Society. REV. L. C. BENTLEY, pastor 13 N. Meridian St. 1263

HOSPITAL.

[At Palmer, Mass.]
Sealed proposals will be received at Room 34, 87 Milk St., Boston, Mass., by the trustees of the Massachusetts Hospital for Epileptics, until March 8, 1900, for the construction and completion of five buildings for said hospital at Monson, Mass. WM. N. BULLARD, chairman. 1262

NORMAL SCHOOL.

[At Duluth, Minn.]
Bids are wanted March 10 for building a State Normal School. WM. F. PHELPS, Chmn. Bldg. Com. State Normal School Bd. 1263

HIGH SCHOOL.

[At Macon, Miss.]
Bids will be received March 6, for the erection of a high school. MAYOR AND BOARD OF ALDERMEN. 1262

PRISON.

[At Wilmington, Del.]
Bids will be received by the Trustees of New Castle County Workhouse until March 6, for a prison with workhouse and appurtenances, also a power-house and underground passageway at Greenbank. J. N. GAWTHROP, pres. 1262

JAIL.

[At Aberdeen, S. D.]
Bids are wanted March 9, for the county jail and sheriff's residence for Brown County; separate bids will be received for cells and iron work. CHAS. EYGBROAD, Co. Aud. 1262

CHURCH.

[At Wawaka, Ind.]
Sealed bids will be received until April 2, for an edifice for the Baptist Church. SIDNEY J. OSGOOD, Grand Rapids, Mich. 1262

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

The School Board of Rankin Borough contemplates building a \$40,000 school-building on Hill Ave.

Pittsfield, Mass. — W. B. Baldwin will build a residence to cost \$10,000, after plans by George C. Harding.

Plainfield, N. J. — The Central Railroad of New Jersey contemplates erecting a passenger-station at Wirth Ave. and making other improvements to cost about \$75,000.

Pottsville, Pa. — C. T. Mould has plans after which the Schuylkill Silk Plush Mill Co. will erect a brick and stone boiler and engine house; also a new weaving mill; cost, \$14,000.

Providence, R. I. — Hoppin & Ely have drawn plans for a residence to be erected at the corner of Hope and Manning Sts., for Pres. Faunce of Brown University. The proposed building will be constructed of brick with white marble trimmings, and will be of the Colonial type of architecture.

Brown University has formally accepted a gift of \$45,000, a bequest of the late Augustus Van Winckle, and with this fund will build a gate and administration building. Work will probably begin early in the spring.

Pueblo, Col. — R. L. Nardini will erect a store and flat building at the corner of B St. and Victoria Ave.; cost, about \$15,000.

Reading, Pa. — William H. Luden, 6th and Washington Sts., is having plans prepared for a four-story brick factory, 110' x 160', to cost \$40,000.

Rhineland, Wis. — The Catholic Society will erect a brick parochial school next summer, to cost \$10,000.

Richmond, Va. — The Senate has passed a bill appropriating \$175,000 for the enlargement of the penitentiary.

Ringgold, Ga. — A \$60,000 cotton-thread factory will be built here by Rev. John T. Richardson and associates of Dalton.

Rochester, N. Y. — The St. Bernard's Seminary Society is stated to have decided to erect a \$25,000 library. Rev. J. J. Hartley, recorder.

Rush City, Minn. — A. F. Gauger, of St. Paul, architect, is preparing plans for rebuilding the S. C. Johnson building lately burned. It will be 50' x 110', two stories; cost, \$8,000.

Sac City, Ia. — Murphy & Ralston, architects, of Waterloo, have prepared plans for a brick canning factory here, to cost \$25,000.

San Marcos, Tex. — A project is under way for a \$75,000 cotton-mill company, the leading business men being interested.

Scranton, Pa. — The Trustees of the City Guard at a recent meeting decided to build a new armory for the 13th Regiment, at a cost of about \$140,000.

Seattle, Wash. — Stimson Bros. will erect a three-story brick flat building on the corner of 1st Ave. and Pine St.; cost, \$30,000.

Shenandoah, Ia. — Fisher & Lowrie, Paxton Building, Omaha, Neb., have prepared plans for a \$7,000 two-story pressed brick business building, 25' x 120', for Rankin Bros.

Sistersville, W. Va. — W. B. O'Neill Co., architects, Marietta, O., have prepared plans for an addition to hotel; cost, \$12,000; and a store building; cost, \$10,000; both for Ephraim Wells; a dwelling-house and a stone residence; total cost, \$8,500; both for G. W. Stocking.

Slayton, Minn. — Architect Joseph Schwarz, Sioux Falls, S. D., has prepared plans for a two-story bank building, 28' x 53', for James Garrison; cost, \$5,000.

Spencer, Ia. — It is stated that Clay County will erect a new court-house, to cost about \$50,000.

Spencer, Mass. — The congregation of St. Mary's Church has decided to erect a new church building, to cost \$100,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

St. Paul, Minn. — Clarence H. Johnston, architect, has plans for a residence to be erected on Lincoln and Avon Sts., for Oliver P. Crosby. It will be 46' x 59', two stories, attic and basement, of yellow limestone, with blue Bedford limestone; cost, \$14,000.

Streator, Ill. — Reeves & Baillie have prepared plans for a two-story brick school-house, 80' x 130', to be erected here at a cost of \$30,000.

Sweetair, Md. — The Presbyterian Society will build a \$10,000 church after plans prepared by A. H. Bieler, Builders' Exchange, Baltimore.

Terre Haute, Ind. — Plans are being prepared by W. H. Floyd for a brick addition to cost about \$15,000, to be built to the Union Hospital.

Toledo, O. — Frank B. Harrison will erect a \$5,000 brick dwelling and store building on Summit Ave.

Topeka, Kan. — The Wolff Packing Co. will begin work at once on the erection of a brick slaughter-house and cold-storage plant. It will be five stories high, 80' x 150', and cost \$30,000.

Troy, N. Y. — Architect H. L. Warren, of Boston, Mass., has completed plans for a chapel for the Troy Orphan Asylum, on Spring Ave., costing about \$35,000.

Washington, D. C. — Plans have been completed for a new church building for the Enon Baptist congregation, O St., between 6th and 7th Sts., southeast, and work is expected to be begun in the early spring. The edifice will cost about \$15,000 and will front 40 feet on C St. and have a depth of 60 or 65 feet. The front will be built of pressed brick and it will have two towers. Rev. J. I. Loving, pastor.

Washington, Ga. — Messrs. R. A. Almand and J. R. Dyson have formed a partnership for the erection of a knitting mill. They will invest upwards of \$25,000, and expect to erect a 50' x 150' brick building.

Washington, N. C. — Dr. S. T. Nicholson and Wm. Bargaw are organizing a \$50,000 stock company for the erection of a cotton-mill.

Waterloo, Ia. — St. Joseph's Catholic Society contemplates erecting a church, to cost \$30,000 to \$35,000.

Waukesha, Wis. — T. W. Haight and J. K. Anderson are having plans made for a sanitarium to be built near Arcadian Springs. The building and general improvements will cost about \$150,000.

Westfield, Mass. — The directors of the Y. M. C. A. have accepted plans for an association building, submitted by Architect A. W. Holton, but work on the structure will not be begun just yet. The proposed building will be three stories high, and 37' x 117'. It will be constructed of brick with brownstone trimmings, and will cost about \$30,000.

Winchester, Va. — Reports state that the Governor has signed a bill authorizing the city to issue \$30,000 bonds to build a city-hall.

Youngstown, O. — Patrick Ryan, of New York City, has received the contract to build the new St. Columbus Church in this city, at a cost of \$100,000.

OFFICE-BUILDINGS.

Long Island City, N. Y. — Jackson Ave., No. 57, three-story bk. & st. post-office, lodge-rooms & offices, 25' x 136'; \$20,000; o., Wm. Richenstein; a., J. M. Baker.

New York, N. Y. — William St., cor. Liberty St., twelve-story bk. & st. office-building, 10' x 121' 7"; \$300,000; o., David W. Bishop, 11 Madison Ave.; a., Clinton & Russell, 32 Nassau St.

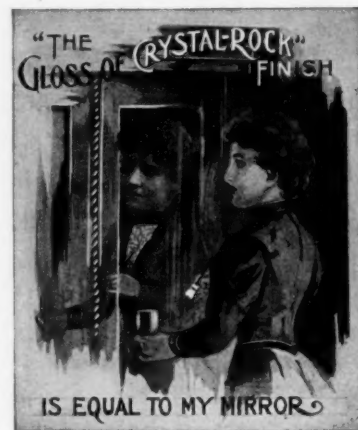
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Boston, Mass. — N. Grove St., No. 8, bk. morgues, 22' x 42', flat roof, steam; \$9,000; o., City of Boston; b., H. P. Cummings & Co.; a., Maguinness, Sullivan & Walsh.

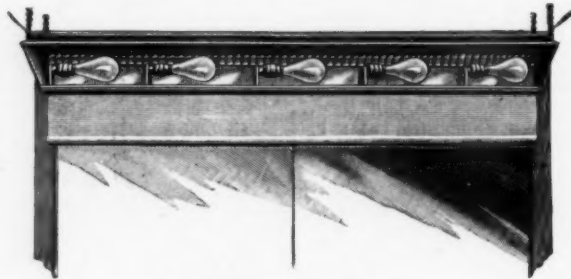
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COMPETITIONS.

The John Stewardson Memorial Scholarship in Architecture.

FOURTH COMPETITION, 1900.

THE Managing Committee of the John Stewardson Memorial Scholarship in Architecture announces by authority of the Trustees of the University of Pennsylvania, who act as trustees of the Memorial Fund, a competition for a scholarship of the value of \$1,000, the holder of which is to spend one year in travel and in the study of architecture in Europe under the direction of the Committee.

Candidates must be under thirty years of age, and must have studied or practised architecture in the State of Pennsylvania for the period of at least one year preceding the 14th day of March, 1900.

Candidates are required to pass the following:—

PRELIMINARY EXAMINATIONS.

Freehand Drawing.—A five hours' study of an architectural subject from the east will be required at the time of the examination, either in pencil, charcoal or crayon, as the candidate may elect.

In addition each candidate will be required to show the examiners six examples of his work in pencil, color and pen and ink, all these mediums to be represented.

History of Architecture.—Written Examination. A knowledge of the subjects treated in "Smith and Slater's Classic Architecture" and "T. Roger Smith's Gothic and Renaissance Architecture."

Construction.—Written Examination. A knowledge of "Clark's Building Superintendence," and familiarity with the use of Kidder's and Trautwine's Hand-books.

French or Italian.—Ability to translate at sight any passage in "Laloux's Architecture Grecque," or an equivalent work in French or Italian as the candidate may elect.

The preliminary examinations will take place at the School of Architecture of the University of Pennsylvania, on Wednesday, Thursday and Friday, March 14th, 15th and 16th, 1900.

No candidate will be admitted to the final examination who receives less than 60 per cent of the marks in Construction, History, and French or Italian, and less than 75 in Drawing.

Graduates of any of the recognized Schools of Architecture (as approved by the Committee) will be exempt from the preliminary Examinations. Any candidate who, in a previous year, has passed any preliminary examination of the John Stewardson Memorial Scholarship in Architecture or of the Travelling-scholarship in Architecture of the University of Pennsylvania, will also be exempt from such examination in this competition.

FINAL EXAMINATION.

There will be required in the final examination a design for "The Improvement of the Entrance to Fairmount Park, Philadelphia, by a proper treatment of a plot of ground, bounded by Spring Garden St., 25th St. and Pennsylvania Ave. and of the bank of the reservoir opposite the plot.

The specific requirements of the problem, the number, kind and scale of drawings, and other conditions will be made known on Saturday, March 17th, when each candidate will make a preliminary sketch at the School of Architecture, in the twelve hours between 10 A. M. and 10 P. M.

The final drawings will also be made at the School, which will be open to the competitors every weekday from 8 A. M. to 11 P. M. They are to be handed in, on, or before 10 P. M. on Saturday, April 7th.

The award will be made by a jury of architects, none of whom will be members of the Managing Committee.

The Scholarship will be awarded on the result of the examination in Design; but the marks in the preliminary examinations may be taken into account in case of doubt on the part of the jury as to the relative merits of competitors in design.

The successful competitor will be required to sail for Europe not later than April 21st, 1900.

Inquiries may be addressed to Prof. Warren P. Laird, School of Architecture, University of Pennsylvania, Philadelphia.

Managing Committee.

JOHN C. SIMS,
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Philadelphia, February 20, 1900.

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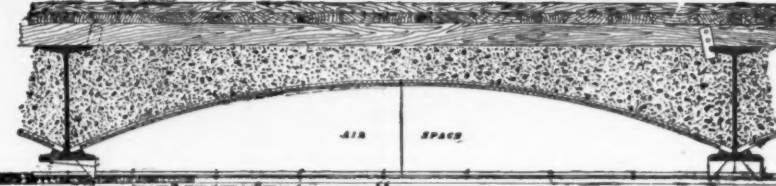
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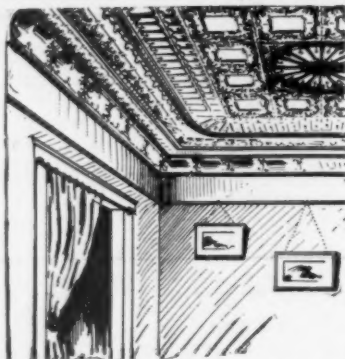
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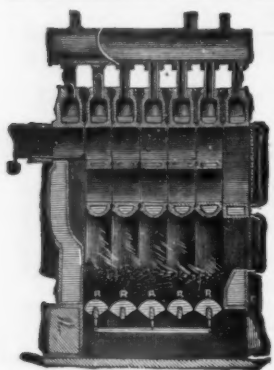
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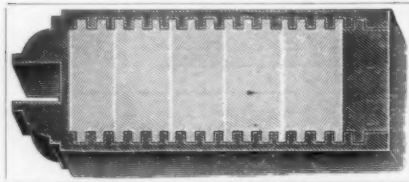
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