

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. LXIII.

Copyright, 1899, by the AMERICAN ARCHITECT AND BUILDING NEWS COMPANY, Boston, Mass.

No. 1210.

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

MARCH 4, 1899.



SUMMARY:—

The Vanished White Pine Supply.—The Disappearance of the harder Southern Pines causing Climatic Changes.—How corrupt Municipal Officials rid themselves of honest Fellow Officials.—Elevator Accident in the Boston City-hall.—The Magnetic Qualities of the Common Brick.—The Examination for the Lazarus Scholarship.—The American Engineer and the Twenty-four-hour Day.—Wool alleged to be made from Limestone.—The Work of the British Fire-prevention Committee.	65
A HALF-CENTURY OF SANITATION.—II.	67
WINTER EXHIBITION AT THE NEW GALLERY.—I.	69
THE T-SQUARE CLUB EXHIBITION AND ITS PURPOSE.	70
SOCIETIES.	71

ILLUSTRATIONS:—

Present State of the R. M. Hunt Memorial, Fifth Ave., New York, N. Y.—A Competitive Design for the "Shattuck Prize" for Artisans' Homes [Open Competition]: Mr. J. E. Walker, Architect.—Plans of the Same.—House at Detroit, Mich.—U. S. Court-house, Norfolk, Va.	71
XV-Century Church and XVI-Century Farm Buildings, Boury, Oise, France.	
Additional: The Doorway: House of Julius Melchers, Esq., Detroit, Mich.—The Porch: House of Mrs. C. E. Mason, Detroit, Mich.—Dining-room in the Same House.—The Dining and Drawing Rooms: "Langley," West Hill, Putney Heath, Eng.—The Dining-room: "The Dene," New Forest, Eng.—Amberley House, Norfolk Street, London, Eng.	71

COMMUNICATIONS:—

The Longfellow Monument at Portland, Me.—"The Face-Bonding of Broken Ashlar."—Wire Shingle Nails.—The Home Life Insurance Building.	72
---	----

NOTES AND CLIPPINGS.

TWENTY years ago the favorite building timber of this country was the white pine. For two centuries, the people of New England and the Middle States had used it for framing, flooring, finishing, outside and inside, and for all kinds of fine moulded and carved work. No wood known was equal to it for uniformity of texture, cleanness of working, and freedom from tendency to warp and split in drying, and it could be had of almost any dimensions. We have ourselves put timbers sixteen by twenty inches into a building, and pine plank two feet wide could easily be had. A little after that time, pine, which had been growing scarce in the Boston market, disappeared, as framing timber, and was replaced by the very inferior spruce. It could still be had for flooring, but only in the second quality, the clear pine being too valuable, as a foundation for veneering hard woods, to be used for floors. A few years later, even second-quality pine flooring was no longer to be had, and white pine is now hardly to be obtained at any price in Boston, which a hundred years ago was on the verge of vast forests of it, extending from the end of Cape Cod, through Maine, New Hampshire, Vermont and New York, to the Canada line. In New York City pine was used for framing and flooring five or six years after it had disappeared from the Boston yards, for a remnant of the Pennsylvania forests continued to furnish it; but the exhaustion of these was not long delayed, and Michigan and Wisconsin were next ravaged. A few years sufficed to despoil them, and, although a little pine is still left in Minnesota, it has practically ceased to be one of our timber-trees.

AFTER the white pine was gone, the Southern pine came into request, and enterprising lumbermen penetrated the forests of Georgia and Florida in every direction. Mills were established, competition brought down prices, and immense quantities of timber were shipped North. The movement has continued until now; but already the end of the supply of Southern pine is in sight, and the people of Georgia find that they have exchanged their splendid heritage of timber for great tracts of bare and barren ground, on which nothing is likely to grow again for centuries, if at all. Meanwhile, the climate of the South has undergone an extraordinary change. As the covering of trees, which preserved the warmth of the ground in winter, maintained humidity, and moderated the force of the north winds, has been swept away, the changes of tem-

perature have become more and more violent all over the country. The South, which has kept its protection longest, has felt the change last; but, now that the change has come, it is only the more severe. Every one knows of the repeated freezing of the orange-orchards in Florida within the last five years, and the consequent destruction of one of the most valuable industries of the South, but every one does not know that not Florida alone, but Georgia and Louisiana had, until within a short time, a climate well fitted for growing oranges. On one of the coast islands, according to the New York *Evening Post*, an olive grove had existed for a hundred years, until the great frost of a few years ago, when every tree in it was killed, together with all the orange and lemon trees in the vicinity. Since that time, another frost, nearly as disastrous, has swept over the South, and within a few weeks another, the severest ever known, has apparently destroyed what remained of the Southern orchards.

IT is a good thing to call public attention occasionally to the meanness, to call it by no worse name, of municipal officials, as the *Engineering Record* does in the case of the city engineer of a certain large town. This engineer had performed his duties with faithfulness, and with signal success in a professional way, for several years. Happening to discover that the city was purchasing, or intending to purchase, cement from a firm in which a member of the City Council was interested, he pointed out that such a transaction was illegal, and would expose those concerned in it to serious consequences. The councilman conceived a grudge against the engineer, which he nursed until an opportunity presented itself for revenge. No exception could be taken to his personal or professional conduct; so the majority of the Council adopted the familiar stratagem of reducing his salary from two thousand dollars a year to twelve hundred. It is, fortunately, not probable that so accomplished an engineer will wait long before finding his services in demand at a salary more adequate than that which he has hitherto received; but we hope that he will utilize the interval in revealing, for the public good, some of the secrets of municipal contracting. If half the stories that are privately related among contractors, engineers and architects are true, the conduct of town magnates in this country is a disgrace to civilization. In Europe, the universal idea of Americans, particularly official Americans, is that they are all dishonest and corrupt, and the honest ones, who are really in the majority, suffer from the actions of their dishonest fellows, whose schemes they are too indifferent, or too timid, to interfere with. To put the matter plainly, bribery, continual, and almost open, is the way in which municipal contracts are, in thousands of cases, particularly in the smaller towns, secured. It is not necessary to offer bribes to all, or even the larger part of the town council. A few men, experienced in the work, and willing to devote much of their time to it, can easily push through any measure short of barefaced robbery, and it is to these men that experienced contractors offer inducements to exert themselves in their behalf. In a few cities the mayor, who must approve contracts, is intelligent and honest enough to defend the taxpayers against robbery, but in most cases he is either too popular and good-natured to question very closely the proceedings of his associates, or is ambitious for further political preferment, and does not like to make influential enemies; and if, occasionally, some disclosure shocks public sentiment, the affair is soon forgotten by all except the best friends, and the worst enemies, of American institutions.

APASSENGER-ELEVATOR in the Boston City-hall fell a few days ago, with seven persons, all of whom were injured, one very seriously. The cause of the accident is as yet unknown. The elevator had been recently inspected and reported as in good condition, and the fall, which was comparatively slow, does not indicate the sudden breaking of a rope. One peculiarity of the case is that the city cannot be held responsible for the injury done to the persons in the car, the law regarding the running of the elevator as a part of the administration of the City Government, and as coming under the rule that public officials are always supposed to be doing the best that they can, and that the people who put them in office cannot call them to account for the consequence of any of their official acts in which there is no criminal or fraudulent intent.

PROFESSOR LAURENCE, of the University of Rochester, N. Y., has made some important observations on an unsuspected property of bricks. Some two years ago, he noticed certain unaccountable movements of a sensitive magnetometer, which he had placed, for steadiness, on a brick pier in the basement of the University laboratory. Last year, while visiting at Ann Arbor, he was told that a similar phenomenon had been noticed there, and his informant, half jokingly, said that the bricks in the walls must have affected the needle. Professor Laurence, remembering that, in his own experiment, the instrument rested on a brick pier, thought more seriously of the matter, and, on his return to his own laboratory, began a series of experiments, to determine whether bricks could really be magnetic. Collecting a large number of samples of bricks of different kinds, and testing them with a delicate magnetometer, he found that nearly all red bricks, and some white ones, were appreciably magnetic, a brick of the strongest sort, a brownish variety made near Rochester, giving a power equal to that of a wire as large as a knitting-needle, and an inch long, completely saturated with magnetism. The only brick which was absolutely free from magnetic power was a white one, also made near Rochester, but a yellowish one, from some place not specified, was also nearly free from it, while another white one, from Washington, was very nearly as magnetic as the Rochester brown one. A brick from the laboratory of Harvard University, which was built without the use of iron or steel, with the express object of avoiding anything that might influence delicate magnetic instruments, was found to be strongly magnetic, and it is said that certain instruments in this laboratory have shown strange variations, which may, most probably, be accounted for in this way.

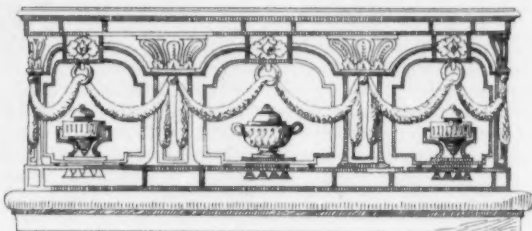
THERE is no more interesting or useful American traveling studentship than the Lazarus Scholarship for the study of mural painting, which offers a three years' residence in Europe with an income of a thousand dollars a year. This scholarship is open to all unmarried male citizens of the United States. The examinations this year will be held in the autumn, beginning on Monday, October 30. A preliminary examination is held in perspective and artistic anatomy, and each candidate must submit a painted nude figure. Those who pass this examination satisfactorily are further examined in the history of architecture, using Rosengarten's, Hamlin's, or some similar work as a text-book; in freehand drawing from memory of Classical and Renaissance ornament; in freehand drawing from memory of the architectural orders; and in elementary French and Italian. Each candidate then paints a sketch for a mural figure-composition, with ornamental accessories, and is allowed a certain time to develop his sketch into a finished composition. These compositions are judged on Thursday, November 23, and the award made immediately. Those who wish to enter their names as candidates for the scholarship must give notice of their intention to Mr. F. B. Clark, 215 West Fifty-seventh Street, New York, on or before October 2.

AN interesting discussion took place at the recent Annual Meeting of the American Society of Civil Engineers, on the notation of time. It is well known that the Society, in the hope of advancing what is considered by many engineers an important movement, has long used the so-called "twenty-four-hour" notation, numbering the hours continuously from midnight to the next midnight, so that one o'clock in the afternoon is known as thirteen o'clock, and so on up to twenty-four o'clock. The discussion was called up by the request of the Special Committee on Standard Time, which has been in existence for eighteen years, to be discharged, and the motion was made that, at the same time, the twenty-four-hour notation should no longer be used in the proceedings of the Society. This motion was earnestly opposed by members who were enthusiastic for the reform, and favored with equal earnestness by those who see no advantage in further efforts to lead the way in a movement of doubtful value, which has, according to some of them, no prospect of success in this country. Mr. Henry S. Haines, who was for nine years president of the American Railway Association, and certainly speaks with authority, said that the matter had often come before the Association, but that American railway managers believed it impracticable to use the twenty-four-hour system in operating railroads here. Mr. Haines's conclusions were opposed by

certain members, who believed that most railway accidents were due to the confusion caused by the old notation; but he certainly had the advantage of actual experience. Meanwhile, it may not be amiss to observe that the twenty-four-hour notation is not so free from possibility of mistake as to make it probable that railway accidents would be done away with by its adoption. All Italian railways have for some years been compelled by law to use the new notation; and, while it is scientifically satisfactory to read in the *Indicatore Ufficiale* that the train leaving Genoa at zero-twenty-five arrives at Naples at twenty-three-ten, it is by no means impossible for people with imperfect eyesight to make serious mistakes in reading such time-tables, or for train-hands to misunderstand verbal orders given in such notation; and we would like to know whether the new system has really done anything to diminish the frequency of accidents on Italian roads. Besides the Italian railways, those of Belgium use the twenty-four-hour notation, and it is adopted on certain Government roads in Canada.

A STORY is circulating through the newspapers about a discovery by which an Indiana chemist has succeeded in making wool out of limestone. Stripped of the ornaments added by imaginative reporters, the facts seem to be that this chemist, Mr. Hall, has been able to melt limestone, with the addition of a suitable flux, into a sort of lava, which he converts into fibre, in the same way that silicious slags are made into the so-called "slag-wool," or "mineral wool." The limestone fibre is said to be free from sulphur, which gives it an important advantage over most slag-wools, but that it will be used for making "durable clothing," as the reporters think, no one need believe. That glass is spun into a fibre like silk every one knows, but every one who has had much to do with articles woven of this glass silk knows also that they are capable of giving much trouble, from the bits of glass fibre, which cannot be prevented from breaking off, and which penetrate the skin like needles. The silicate fibre, in inexperienced hands, produces similar effects, and death is said to have resulted from breathing the air of a room in which a quantity of it was carelessly handled. Of course, this fact does not diminish the great value of slag-wool used in a proper way for suitable purposes; and the limestone wool may be even better than the other sort; but it will only discredit it to claim for it at the outset properties which no mineral fibre has ever possessed, or will, most probably, ever possess.

MR. EDWIN O. SACHS, an architect of distinction in London, deserves the grateful remembrance of the profession, and still more of the public, for his unselfish and intelligent efforts in the investigation of methods for preventing the destruction of life and property by fire. His papers on the subject of fire-protection, read before various learned societies, are probably somewhat familiar to our readers, and he has been able to interest so many persons that, with the assistance of architects and other people of similar ideas, he has been mainly instrumental in forming a British Fire-Prevention Committee, which maintains a library of technical publication, including files of about fifty technical journals, besides copies of building laws and regulations from all civilized countries, and, besides, carries on a testing-station, where fire-resisting materials and appliances are thoroughly and impartially tried, and the results recorded. The Council of the Committee includes Professor Aitchison, Sir Arthur Blomfield, Mr. Arthur Cates, Mr. Thomas Blashill and Mr. Alfred Darbyshire, among the architects, Sir Norman Lockyer and Mr. W. H. Preece, among scientific men, and Sir Arthur Sullivan, Mr. Beerbohm Tree, and Sir Henry Irving, who is well known to be greatly interested in all details applicable to theatre-construction, as representatives of the dramatic and musical world. The office of the Committee is at No. 1 Waterloo Place, Pall Mall, very near to Trafalgar Square, and the testing-station is not far from the Zoological Garden, two houses near Regent's Park, standing in gardens extending to the Regent's Canal, having been acquired for the purpose. Several important tests have already been made, and reports of them published, and it is to be hoped that the documents issued by the Committee, which appear in rapid succession, as its work is pushed by an energetic board of directors, may come regularly into the hands of the many private individuals and public officials who, in this country, are deeply interested in the subject.

A HALF-CENTURY OF SANITATION.¹—II.

A Louis XVI Balcony.

PROGRESS in sewerage-works has been much slower than in works of water-supply. This can be, in a measure, explained by the fact that tax-payers are nearly always willing to pay a small annual tax for water, and hence the financial success of such a scheme is rarely in doubt, whereas a sewerage system does not yield an annual revenue, but, on the contrary, causes sometimes large operating expenses, as, for instance, in cases where the sewage must be treated before discharged into a water-course. It is, therefore, a much more difficult matter to induce communities to introduce a sewer system; but, on the other hand, it is a well-known fact that the introduction of a public water-supply has generally been a stimulus to sewer-construction.

Sewers were built originally with a view of removing storm-water from the street surfaces; the introduction of liquid household wastes followed only incidentally, and the removal of human excreta by water carriage is of still more recent origin. While the construction of sewers by civil engineers dates from the beginning of this century, and even from earlier times, the sanitary features and functions of a sewer system and the benefits to public health derived therefrom have been but recently studied and recognized. Prior to the year 1850, few, if any, cities had a regular system of sewerage, built in accordance with a well-studied general improvement plan, though we do find in the older cities underground conduits, built by unskilful mechanics in a haphazard manner, without any attempt to make them water-tight or to construct them properly, as conduits for the removal of foul water and excrements should be built. Before the year 1815 the introduction of fecal matters into the sewers of London was prohibited; it was there made compulsory only in 1847; in St. Louis the former rule existed up to 1842, while in Baltimore and Paris this is the case even at the present day. The use of modern pipe-sewers was advocated first by Edwin Chadwick, in 1842, and they were actually used first in modern times by John Roe and Sir Robert Rawlinson in England.

Since 1850 the organized efforts of City Boards of Health have been directed nearly everywhere against the continuance of cesspools and privy vaults in cities, and, as the best sanitary substitute, the construction of sewers for the removal of household wastes and excreta was urged.

After the great conflagration in 1842 Hamburg was the first city of Germany to introduce a well-designed sewerage system, which was built under the direction of the elder Lindley. Dantzic was sewered by Wiebe, assisted by Baldwin Latham, in the years 1869-71. Then followed Berlin in 1870-80, under plans by Hobrecht, and more recently Frankfurt-on-Main, the well-built sewer system of which was planned by W. H. Lindley, the son of the above-mentioned English engineer. The first modern main sewer was built in Paris in the Rue de Rivoli, in 1851, and in 1856 the new sewer system, planned by Belgrand, was adopted, which comprised several large intercepting sewers. A well-known feature of many of the Paris sewers is their construction as general subways for water and compressed-air pipes, and telegraph and telephone wires. After the great cholera epidemic in 1884 the city of Naples, Italy, introduced a general scheme of sewerage; and though Rome had the ancient *cloaca maxima*, which still performs its functions as a drain, modern sewers were not introduced until the year 1871. In London the old lines of sewers discharged directly into the Thames at low-water level. Many serious evils resulted; owing to the sewers being tide-locked deposits occurred in them and the basements of buildings were flooded. The sewage emptied into the river was carried upstream with the rising tide and oscillated to and fro, causing the river to become extremely polluted and offensive. It was in the years 1850-1875 that Sir Joseph Bazalgette carried out the main sewerage scheme of London, consisting in a series of high and low level intercepting-sewers, which conveyed the sewage partly by gravitation, partly by pumping, to a distance of fourteen miles below London Bridge. On the northern and southern banks of the river two sewage-reservoirs were located to hold back the sewage, and from these it was discharged through the two outfalls during only a brief period of time after high water. But even this did not mitigate the evil of the growing pollution of the Lower Thames, and a chemical treatment of the sewage, assisted quite recently by bacterial treatment, was carried out with favorable results. The annual cost of the chemical treatment and the removal of the resulting sludge to the

ocean alone costs London about seven hundred and fifty thousand dollars annually.

In the United States the majority of city sewerage systems were introduced after the year 1850. In 1857 Mr. James P. Kirkwood, then water-works engineer, appointed Mr. Julius W. Adams to prepare plans for the sewerage of Brooklyn. Mr. E. S. Chesbrough planned and designed the sewerage of Chicago, his first report being issued in 1858,² and Mr. J. Herbert Shedd laid down the guiding principles for the sewerage of Providence, R. I., in his report for 1874,³ while Mr. Samuel M. Gray designed a scheme for the ultimate disposal of the sewage of that city in 1884.⁴

Within the past fifteen years our best sewerage engineers have been kept engaged in preparing or carrying out plans of sewer systems. In many cases, the American engineers were in consultation with European engineers, like Thos. Hawksley, Wm. Haywood, Sir Robt. Rawlinson, W. H. Lindley, Wiebe and others, or else, like Colonel Waring, Rudolph Hering, E. Kuichling, Samuel M. Gray and others, derived benefit from personal visits and inspections of recent European sewerage systems.

The main sewerage of Boston was planned in 1876-77,⁵ and executed in the following years by Jos. P. Davis and Eliot C. Clarke, and a larger scheme for the drainage of the Metropolitan district, including outlying towns, is now being carried out. I confine myself to the mention of some of the older plans and reports on sewerage, and must assume that many of you are familiar with more recent plans and reports. When we are informed that no less an engineering authority than Sir Benjamin Baker declared in a report in 1891 that "the existing mass of literature on sewerage and sewage disposal was of quite unmanageable bulk" you will understand how impossible it is to give even a general outline of the subject.

Quite an impetus to sewer construction in this country was given shortly after the late Colonel Waring constructed in 1880, following the yellow-fever epidemic of 1878, a small pipe-sewer system for the City of Memphis, Tenn., which resulted in making that town healthful and stamping-out, possibly forever, the fever. The introduction of the "separate system" of sewerage, so ably advocated by Colonel Waring,⁶ created quite a spirited discussion in engineering circles, and owing, probably, to the fact that Colonel Waring had taken out a patent on certain details of the system, the debate was not always free from personal features. The fact, however, remains undisputed that a very large number of smaller cities, towns and even villages took advantage of the lower cost of a system of "sanitary" sewers advocated by Colonel Waring to introduce a sewerage system, and thus were enabled to derive the sanitary benefits from the measure, which they probably could or would not have done had not the experience of Memphis proved conclusively the feasibility of the scheme.

The name of the late Colonel Waring and that of the Memphis sewer system are closely associated together, and perhaps I may be permitted to pause here for a moment to pay a tribute to the memory of Col. George E. Waring. To my mind, no other American engineer has done more for the cause of public sanitation in this country than he. Having been for several years his principal assistant, I have had unusual opportunities to become acquainted with his life-work, as well as with his personality. Like others, I could not at all times agree with his conclusions, but his noble enthusiasm for sanitation, his keen knowledge of the subject, his untiring efforts towards the attainment of better sanitary conditions in our dwellings, in our streets, in our towns and cities, and last, though not least, his able literary style, have always commanded my highest admiration. His masterful organization, and his honest and efficient administration of the street-cleaning department of our metropolis, and the creditable results attained are matters of so recent event that I need not dwell upon them further than to express the sincere hope that the time may soon come when the reforms begun by him may be again carried out in the spirit with which he imbued the cause. And as his whole life-work was devoted to public sanitation, so his pathetic and almost sudden death, on October 29, 1898, from a fever, which he had done so much to eliminate, occurred in the midst of his studies of the problem how to design measures to make Cuba healthful, and to prevent for the future any danger to health to our shores from this neighboring island. Colonel Waring rendered to his country the same invaluable services which men like Sir Edwin Chadwick and Sir Robert Rawlinson gave to England. Those of us who remain to carry on, wherever it may be required, the good work commenced by him, should never lose sight of the fact that he was the "pioneer of sanitary engineering" in this country.

Passing, now, on to the question of the pollution of rivers by sewage, we find this to be another sanitary problem, which has only arisen during the past fifty years.

From the earliest time it had become the custom, in the United States as well as in Europe, to consider the water-courses flowing

² See report of the results of examinations made in relation to sewerage in several European cities, in the winter of 1856-1857, Chicago, 1858.

³ See J. Herbert Shedd's Report on the Sewerage of the City of Providence, R. I., 1874.

⁴ See "Proposed Plan for a Sewerage System and for the Disposal of the Sewage of the City of Providence," by Samuel M. Gray, City Engineer, Providence, 1884.

⁵ See Report by a Commission, consisting of E. S. Chesbrough, Moses Lane and Chas. F. Folsom, M. D., 1876, and Report on Sewerage by Jos. P. Davis and Eliot C. Clarke, 1877.

⁶ See Geo. E. Waring, Jr., "Sewering and Draining of Cities," 1879; "Sewerage of Village-Cities," 1879.

¹ A paper by Wm. Paul Gerhard, Consulting Engineer for Sanitary Works, read at the meeting of the Brooklyn Engineers' Club, held on February 9, 1899. Continued from No. 1209, page 63.

through, or adjacent to, towns as the natural receptacles for the liquid and solid refuse. When town-sewers were first constructed their principal lines were accordingly laid out on the shortest available course to the river. This unsanitary practice soon led to the pollution of the water-courses, and with increasing population the resulting evil became of such magnitude as to call for urgent relief measures. While it was contended at first that rivers and streams possessed the power of self-purification, it soon became a matter of observation that the purification thus obtained was quite insufficient in the case of the majority of streams. This problem was thoroughly studied in England, where a Royal Rivers' Pollution Commission was appointed in 1868. The results of the labors of the Commission were given in several voluminous reports, and in 1876 a Rivers' Pollution Act was passed in Great Britain which made it illegal to discharge crude sewage into any water-course, and entrusted Government Boards, like the Thames Conservancy Board, with the duty of preserving the purity of streams. France appointed a similar Commission in 1874 to investigate the growing pollution of the River Seine. In Germany, an Imperial Health Board has more recently issued very stringent laws excluding crude city sewage from rivers and streams. In the United States the same question came up first in the State of Massachusetts, where rivers have for some time been grossly polluted with city sewage and manufacturing wastes. The investigations of the Massachusetts State Board of Health, and of the Rivers' Pollution Committee of the American Public Health Association, which are not yet concluded, give promise of a satisfactory solution of this troublesome problem. Our present knowledge of the matter may be summed up as follows: sewage discharged into a river will sometimes become purified by dilution, by oxidation, by subsidence and also by the aid of aquatic plants, of small animalculæ and of some fishes, where sewage is in a fresh condition when discharged. To secure a sufficient dilution there must be a certain proportion between the average volume of dry-weather flow of the stream and the maximum volume of sewage, and to secure oxidation there must be a certain minimum limit of current. The degree of permissible pollution depends chiefly upon whether the water-course is to be used by populations farther downstream as a source of water-supply. The problem becomes still more complicated when the discharge takes place into a tidal river.

As a result of the enactment of laws against river pollution, the question of sewage purification has during the last twenty-five years forged to the front. At first the problem was taken up from the point-of-view of sewage utilization, either in an agricultural way, by land irrigation and application of town sewage to vegetation, or else by subjecting the sewage to various chemical treatments intended to convert it into a solid manure. Many costly experiments in chemical precipitation were made, numerous patents taken out and companies formed in the expectation of realizing handsome profits from the sale of the product of chemical treatment. The lesson derived from the many instances of failures is that sewage treatment will not yield any financial profit, and that the expenditures required for purification works must be considered as necessary and legitimate in the interest of the health of a community.

Many large cities, like London, New York, Boston and others, seek solution of the question by a discharge of their sewage into the sea. The city of Chicago is constructing, at a cost of many millions of dollars, a drainage canal to get rid of its sewage, and to preserve the purity of its water-supply derived from Lake Michigan. A similar gigantic drainage scheme was proposed for Manchester, England, by which the sewage was to be carried a distance of 15½ miles, partly through an underground conduit, to empty into the estuary of the River Mersey. Other cities, like Paris, Dantzic and Berlin, and a great many small towns in England, have since 1870 established sewage-farms where sewage is purified by irrigation on land. It is of historical interest in this connection to note that Bunzlau, a small town in the eastern part of Germany, offers the first example of sewage irrigation, dating as far back as 1531, and in Scotland sewage irrigation has been practised on the Craigentinnny meadows, near Edinburgh, since the year 1750. Many towns in Europe and a few in the United States purify their sewage by a process of filtration similar to that adopted for water purification, but differing from it in that the filtration is carried on intermittently instead of continuously.

Our knowledge of the subject of sewage purification by filtration through natural soil, or through artificial filter-beds, has been greatly advanced by the results of studies, made under the direction of the Massachusetts State Board of Health at the Lawrence Experimental Station, which was established in 1888. In this department of sanitary engineering great progress has been made since the recent researches of biologists have increased our knowledge of the functions of the bacteria. We now know that the sewage purification by filtration through land is not merely a chemical or mechanical process but principally a biological one, and that the action of bacteria is required to break up the putrefying organic matter into harmless elements, which in turn become food for plant life. Valuable experiments confirming these observations were carried out on one of the London outfall sewers in 1895 by W. J. Dibdin. The most recent experiments in sewage treatment as carried out on a moderate scale at Exeter and Sutton in England, and which were described in a paper read before this club a year ago by Mr. Albert S. Crane, are being watched with considerable interest, chiefly owing to the fact that both processes, although diametrically opposed to

one another, appear to give encouraging results regarding the solution of the sludge problem. In the septic tank air and light are carefully excluded, whereas in the coarse bacterial filters air is very freely admitted, yet by both processes the production of sewage-sludge appears to be avoided. As to the value of either method, professional opinions are not by any means unanimous. Quite recently a bacterial process based upon the theories of Dibdin has been tried at Gross-Lichterfelde, near Berlin, by Schweder, with a part of the sewage from the City of Berlin, and the report of a commission of experts who investigated the process expresses doubts as to the successful application of the system, and as to its economy in first cost when carried out for the purification of sewage from larger cities. Therefore, while much progress has been made in the scientific treatment of sewage, the ultimate solution, owing to the difficulties involved in the problem, must be left to the scientific minds of the coming century.

The removal and disposal of solid refuse and garbage form part of a well-arranged sanitary system of a city. Until recently removal of garbage was usually accomplished by contract, and its disposal in the case of cities located on a stream or at the seashore was accomplished by discharging the refuse into the water-course, or by carrying it far out to sea. Both methods have in many cases proved to be objectionable.

It is scarcely more than ten years since it began to be recognized that the problem is one intimately connected with town sanitation, that it belongs to the province of the municipal engineer, and that it is one of the most important problems with which municipalities have to deal. Many cities of Europe have distinguished themselves by systematic efforts directed by engineers, and more recently our American engineers are paying considerable attention to the subject. Its solution is now sought for in two methods, namely, first, by the cremation of the garbage in furnaces or destructors, and, second, by its reduction by steam-heat, whereby marketable products such as grease and powdered manures are obtained, the sale of which is expected partly to cover the larger cost of the process. Garbage-cremating furnaces were introduced in England about the year 1880, and in this country about 1885, since which time dates the increased attention paid to the problem. In both processes the generation of offensive odors must be avoided, and much mechanical skill has been brought to bear upon the construction of furnaces which would consume the garbage without creating a nuisance to the neighborhood. Experiments in this direction were undertaken first by inland American cities, for which no other method of disposal seemed available, as the spreading of city garbage on fields in the country was found to be objectionable. It seems a matter of regret that the late Colonel Waring, in his position of Street-cleaning Commissioner of New York, was not allowed to continue in office, to complete the work so well begun, for he had just commenced to introduce plans concerning city garbage, and no one appeared better qualified than he was to find a solution of the problem which would be at once practical, economical and sanitary.

The paving of city streets and the maintenance of cleanliness on the same is another problem of municipal sanitation which has an important bearing upon the health-rate of a city. We may note in this connection that in the last twenty years many cities of Europe and of this country have made vast progress by laying a large number of pavements with durable foundations and with water-tight surfaces. The sanitary and other requirements of city pavements have formed the subject of two important and highly interesting papers read before this club by Mr. Geo. W. Tillson, and by Mr. N. P. Lewis, both of whom went so fully into the details of the entire question as to make it unnecessary for me to make more than this passing reference to the subject.

A few words regarding street-cleaning may, however, not be amiss, particularly because it is only within a very few years that this problem has been considered worthy of being placed in the hands of engineers. The capitals and larger cities of Europe have for years distinguished themselves by efforts to maintain their principal traffic thoroughfares in a sanitary condition, and the reduction in the annual death-rate of many European cities has, without doubt, been effected partly by the well-organized efforts to clean the streets, the gutters and the sewer catch-basins. Leaving aside a few isolated instances of good work accomplished in the United States in this direction, I am within the limits of truth when I state that Colonel Waring's well-known recent efforts in this cause set a standard which many of the smaller cities are now following. Some improvement in the condition of city streets has already been effected by the substitution on street-car lines of electric motive-power in place of horses, and a further reduction in the amount of street dirt and dust may doubtless be looked for in the near future with the more general introduction of automobile vehicles. I believe that the beginning of the new century will be distinguished by many important reforms in street-cleaning. Whether such work be undertaken by contract, or be carried out by the municipal government, vigilant engineering superintendence is required. Judging from the poor results of the system of street-cleaning by contract as now exhibited in Brooklyn, and comparing same with the splendid achievements of the New York system under Colonel Waring, one is forced to the conclusion that street-cleaning should not, at least in American cities, be given out to contractors. Be this as it may, however, one of the lessons which we have learned, and which may with advantage be applied to other branches of municipal engineering and sanitary work, is that no

work upon which the health and welfare of a city is depending should be in any way associated with politics, or be directed by politicians.

Another municipal sanitary problem, which I must briefly review, relates to the provision of healthful food-supplies, and a proper and efficient food-inspection. In the beginning of our century open markets were replaced by large covered structures. This innovation was inaugurated in Paris by Napoleon I. In 1811 the planning of the now famous Halles Centrales was commenced, but they were only completed in 1878. In the past thirty years many of the larger cities of Europe and a few in the United States have erected imposing architectural structures in which the sale of food-provisions takes place. Their chief advantages are the protection which they offer to the market-people and to the public against the weather, the fact that the provisions are not damaged by rain, snow, heat, cold or street-dust, that fresh market products are obtainable daily, and that the control of the food-supply is facilitated. Market-houses require well-arranged traffic connections with the railroads, rivers, canals, harbor-docks, and good roads into the country districts, and thus offer sanitary, architectural and engineering problems. In recent years much attention has also been devoted, particularly in England, to the sanitation of bakeries, which have been brought under the supervision of the health boards.

Intimately connected with the public markets are the slaughter-houses or municipal abattoirs, which do away with the nuisance of private slaughtering, and facilitate the important inspection of the meat. In Europe municipal abattoirs were inaugurated first by the great Napoleon, who by his decree of 1810 prohibited all private slaughtering and thus did away with a formidable sanitary evil in cities. Since the middle of this century nearly all large European and many American cities have built centralized abattoirs located remote from the crowded city districts. Many architectural and engineering questions are involved in the planning and construction of such structures. Their sanitary and mechanical equipment, the provision for water-supply, ventilation, purification of the waste water and blood, the installation of cold-storage plants, hoisting machinery and other labor-saving devices, the paving and drainage of roadways and yards, and the provision of suitable rail and water connections must be judiciously considered. The trades connected incidentally with the slaughtering of animals, such as rendering, fat-melting and bone-boiling establishments, are now likewise brought under sanitary control. The most modern abattoirs are also fitted up with complete bacteriological laboratories for the microscopical inspection of diseased or suspected meat. With the system formerly in vogue of having small slaughtering establishments scattered over a city no efficient inspection was possible. In the last twenty-five years American cities have profited much in this branch of municipal sanitary administration by the experience of the older cities of Europe.

Since 1850 another very important municipal problem has arisen in many of the older towns of Europe. I refer to the enlargement of the cities and the partial reconstruction of their system of streets and thoroughfares. The progress of modern industries, the extension of commerce, the movement of populations from the rural districts into the cities, and the doing away with many of the old fortifications and walls, which protected but also hemmed-in the cities and prevented their growth, have created new and important municipal problems. Since 1850 many cities and towns of Europe have undertaken magnificent and comprehensive works for the transformation of their street traffic, for the building-up of new urban districts, for the laying-out of parks and squares. The instance of Paris, under the era of Baron Haussman, is probably familiar to you. In the period from 1852 to 1871 many new boulevards and grand avenues of communication were laid out with rows of shade-trees, parkways and garden strips, while M. Belgrand, the distinguished engineer of Paris, planned and executed its now famous underground works. In Vienna the old fortifications were destroyed after the year 1857, and the famous Ring-Strasse, or belt street, a magnificent boulevard lined with costly palaces, museums, theatres and other public buildings, became the principal feature of the city-improvement plan.

In Germany the recent transfiguration of many of the historical and mediæval towns has been even more remarkable. The old, narrow and crooked streets with dark dwellings and warehouses have disappeared, and given way to widened and straightened avenues with modern residences or stores; new suburbs have been laid out with engineering skill and provided with water and sewerage facilities; towns situated on the banks of rivers have had their water-frontages improved for commercial purposes or for the embellishment of the city, and wherever one goes one finds municipal sanitary improvements, such as sewer systems, works for the purification of both water and sewage, city hospitals, magnificent public schools, market buildings, cattle-markets and abattoirs.¹

In our own country the next fifty years will, doubtless, see a large amount of similar work done, and if the past has not been distinguished by works for the enlargement and embellishment of cities, this is entirely due to the fact that with very few exceptions all our cities are comparatively young and in the process of development.²

¹ See Chapter on "The Laying-out of Cities and Towns," in Wm. Paul Gerhard's "Sanitary Engineering," 1898.

² In this connection I am glad to notice that this subject has recently been taken up by the Architectural League of New York, a progressive body of ar-

In those few American cities which are more than one hundred years old the question of providing decent and sanitary homes for the poorer population in crowded city districts has arisen, just as it did in Europe. In England interest in this problem was first aroused by the report of Sir Edwin Chadwick, "on the Condition of the Laboring Population," published in 1842. In 1856 the first committee was appointed by the State of New York to inquire into the condition of the tenements, and its report was issued in March, 1857. The tenement-house question has ever since remained one of the municipal problems of large cities. About twenty-five years ago the well-known Peabody workingmen's buildings were erected in London, likewise the improved industrial dwellings of Sir Sidney Waterloo. On a large scale, the problem was successfully solved in Brooklyn in 1877 by Mr. Alfred T. White, the esteemed honorary member of our club, who erected the Riverside apartments and other model tenements. In New York the Improved Dwellings Association, the Tenement-house Building Company, and other similar organizations of more recent date attempted the solution. The City of New York proper offers, largely owing to the unfortunate and arbitrary limit of the ordinary city lot, the best example for the study of the evil effects of the tenement-house system. From time to time citizens' associations and legislative tenement-house commissions have devoted study to the inspection and to suggestions for the improvement of tenement-houses. In this connection the "Model-tenement-house Competition," organized in 1878 by the *Sanitary Engineer* (now the *Engineering Record*), a journal for municipal engineering, under coöperation of several public-spirited citizens, deserves special mention. Many of the plans submitted by architects in this competition showed great improvements, but still the conclusion of the competition committee was that it was impossible to secure sanitary results in the erection of a tenement on a narrow lot. The progress of recent years is due to the passing of the Tenement-house Act, in May, 1879, which limited the space of the lot to be built upon, required all bedrooms to have windows for direct admission of light and air, and gave to the Board of Health increased powers to regulate the question. A vast improvement in the character of the plans for tenement-houses submitted to the city departments has been noticeable since this act became law, and further progress followed the labors of the Tenement-house Commission of 1894.

The last fifty years have witnessed such vast improvements in the construction and sanitary features of dwelling-houses that it seems impossible, in the limited time at my disposal, to even give a general outline.³ One important result of the efforts in the interest of sanitation is that the details of drainage, ventilation, water-supply, lighting and general sanitation, and the installation of sanitary appliances are now in many cases entrusted to sanitary engineers, who make a specialty of domestic engineering. The field of their practice is a large one, and the progress made in the past fifty years has been far-reaching. As an example of what has been accomplished in our era of sanitation I will mention that, while water-closets were invented a hundred years ago, all really sanitary types were introduced within the last twenty-five years. At the middle of our century the much-condemned pan-closet was universal. Prior to the year 1850 there was not a house fitted with plumbing conveniences which had any kind of vent-pipe carried up to the roof for ventilation. At the close of our century the fundamental principles of house-drainage and sanitation are well and firmly established and in nearly all cities and towns the installation of plumbing is regulated by Health or Building Department rules and regulations, and the work is inspected by more or less skilled inspectors.

[To be continued.]

WINTER EXHIBITION AT THE NEW GALLERY.—I.



HE ever-increasing number of admirers and connoisseurs of the late Sir Edward Burne-Jones have never before had such an opportunity of appreciating his life-work as is afforded by the 225 paintings, drawings and studies, now gathered together at the New Gallery, forming an exhibition more brilliant and comprehensive than was that of 1892, and much better arranged. Every visitor to this splendid and popular collection ought to be grateful to those generous owners who have lent their treasures to prove how great an exponent of high art has been lost to the world. Not only are there nearly all his paintings—except panels impossible to remove—but also the six magnificent Arras tapestries, designed by Burne-Jones and executed by William Morris, depicting the incidents in "The Quest of the Holy Grail," have been taken down from the walls of Stanmore Hall by their owner, Mr.

chitects. In three special public meetings they propose discussing the following subjects, viz: The Reconstruction of the City's Plan below and above 59th Street, and the Water-fronts of the City, Plans for Bridge Approaches, Driveways, Subways, Docks, etc.

In Brooklyn, the Department of Architecture of the Institute of Arts and Sciences has now a movement on foot for interesting the general public in such broad questions as the public aspect of our cities, the location and arrangement of our parks and gardens, the adornment of our streets and squares, the better housing of the people, town sanitation, etc.

³ See Wm. Paul Gerhard's "Sanitary Engineering of Buildings," 2 vols., Vol. I, 1899.

D'Arcy, and exhibited for the first time. These tapestries, exquisite both in color and design, hang from the balcony around the Central Hall and greet the eye of the visitor on his entrance, recalling the glories of the Venetian Exhibition of a few years back, the more so as the three large red and richly gilded lamps, formerly belonging to the Doge's Barge but now the property of the New Gallery, are hanging from the ceiling.

Beneath the tapestries are screens on which are placed some of those countless studies which demonstrate with what untiring industry Burne-Jones devoted himself to whatever task he set himself to accomplish, and in which few men of his time equalled him.

Prefixed to the catalogue is an essay by Mr. Comyns Carr, analyzing his friend's art, in which the sentences of greatest interest are probably those giving an extract from a letter written twenty-six years ago by the painter. "I think Morris's friendship began everything for me, everything that I afterwards cared for; we were freshmen together at Exeter. When I left Oxford I got to know Rossetti. He taught me practically all I ever learnt; afterwards I made a method for myself to suit my nature. He gave me courage to commit myself to imagination without shame, — a thing both bad and good for me. It was Watts, much later, who compelled me to try and draw better. If I could travel backwards I think my heart's desire would take me to Florence in the time of Botticelli."

While Burne-Jones thus pays grateful tribute to Rossetti, he, on his part, fully recognized the genius of his former disciple. "If, as I hold," he said to Mr. Comyns Carr, in those round and ringing tones that seemed to invite and defy contradiction, "the noblest picture is a painted poem, then I say that in the whole history of art there has never been a painter more greatly gifted than Burne-Jones with the highest qualities of poetical invention."

The subject of Sir Edward's ideals is so attractive that one would fain dwell on it; but as a paper on these lines appeared in your journal on the occasion of his death it is unnecessary, even granting that within the limits of an article one could do justice to it.

While having little in common with the Pre-Raphaelites of the first school, Burne-Jones was undisputed chief of the second or later development of it, which to him owes, to a great extent, its archaistic character.

Probably no name among modern painters calls up more varied criticism. One example apropos of this exhibition we quote: —

"The vast amount of serious endeavor he leaves is worthy of the highest praise. When we consider the adverse conditions of English life and artistic knowledge (both being gradually improved), the lover of beauty in days to come will have a mingled sentiment of surprise and gratitude. That the work of Burne-Jones will entitle him to a place among the epoch-making masters cannot for a moment be believed. He takes his place with many other men whose performance has not equalled their ambition. Certainly the Victorian age is not reflected by his work, the student of the future would be surprised to hear that the creator of these puny dreamers belonged to the most powerful country of the world."

Turning now to the painter's work, it is not known when he began to use the pencil, but among the sketches first shown to Rossetti the earliest is dated 1854, and is characterized by him as "Düreresque," which quality indeed attaches to many of his works.

In 1857, after some years of hard study, Burne-Jones and other disciples accompanied Rossetti to Oxford to undertake those unfortunate frescos for the Union Debating Club — described in a previous paper on Rossetti — which are now almost obliterated. "They were all of them lightheartedly ignorant of even so much as the fitting materials for wall-painting — these young men with the vine-leaves in their hair." "Rossetti with his glowing enthusiasm, 'four-square' Morris with his bludgeon wit, Burne-Jones with a gentle strain of never-lacking humor, with the others who are still with us, and with Swinburne for a constant inmate of the workroom, must have made up a company difficult to match at any time."

A visit of some months to Italy, chiefly spent at Siena, enabled Burne-Jones to acquire, though slowly, an independent style. After his return, in 1860, he was hard at work for Dalziel at pen-and-ink drawings for *Good Words*, etc., besides making a prodigious number of cartoons for stained-glass for the newly formed firm of Morris & Co., "which alone would be sufficient to rank him among the highest of masters." He also found time to produce some charming little gems in water-color, hung in the first room, which contains mostly works of 1860-1870, among which may be named: "The Blessed Damsel," with a most unblest expression; "The Backgammon Players," "Sir Tristram," "Clara von Bork" and "Sidonia von Bork," the two last used later to illustrate that favorite romance of the Brotherhood, Meinhold's "*Sidonia the Sorceress*," published in later years by the Kelmecott Press. All these might easily be mistaken for Rossetti's work, by the rich colors, the minuteness of detail, and even by the models. Hung with these early works, but undated, is a lovely water-color on vellum, "Pyramus and Thisbe," a triptych, of which the outer panels are 14" x 11", and the centre 14" x 5"; both design and color are marked by great delicacy and beauty. To this period belongs the triptych in oils lent by Mr. Bodley, A. R. A., for whom it was painted as an altar-piece for St. Paul's Church, Brighton, and never, we believe, exhibited before. The two side-panels represent "The Annunciation." The gorgeous background, formed by a screen or curtain in each, covered with brown and golden foliage, and a golden sunset beyond, is quite archaic in style. On the left side is Gabriel, and on the right the Virgin, who wears a

dress of dark green velvet with white sleeves, pots of roses and lilies being at her feet. "The Adoration of the Magi" forms the centre of this triptych; and in the heads of the Three Kings we have the portraits of William Morris, Algernon C. Swinburne, and Burne-Jones.

In 1862 Burne-Jones paid his second visit to Italy. Mr. Ruskin, feeling seriously depressed at the time, accompanied him, giving him the benefit of his advice, one part of which was to study Tintoretto. The young artist adhered to his own choice of Carpaccio, and in after years Ruskin wrote to "Dear old Ned" acknowledging that "this Carpaccio is a new world to me."

One result of this visit was "The Merciful Knight," a water-color 40" x 27". The knight has laid aside his helmet and sword, and kneels before a crucifix, the figure on which bends forward and kisses him on the brow; in the distant landscape the enemy whom the knight had spared is seen riding away. This fine, though extraordinary picture, is full of pathos — a "painted poem."

The small water-color "Annunciation," lent by Mr. Coltart, is a lovely study in rose, pure red, and crimson, with which is exquisitely contrasted the ivory white of the Virgin's simple dress. She is kneeling beside a couch with a small book before her, on the opposite side stands Gabriel, who holds a lily towards her. His vast plumes, reaching nearly to the ceiling of the small room, is in the style and typical of Dürer and other Germans of his time. A ray of light from behind the angel embraces both figures in its glory. There is an air of mysticism about the picture, and, withal, a touch of homeliness in the pair of slippers on the floor.

Leaving to a second paper a description of the later and more famous works, it may not be out of place to quote Swinburne's lines in dedicating his "*Poems and Ballads*" to "Burne-Jones, Painter," which describe with a touch many of the artist's works.

Is there place in the land of your labour,
Is there room in your world of delight,
Where change has not sorrow for neighbour,
And day has not night?

In their wings though the sea-wind yet quivers,
Will you spare not a space for them there,
Made green with the running of rivers
And gracious with temperate air;
In the fields of the turreted cities,
That cover from sunshine and rain
Fair passions and beautiful pities,
And loves without stain?

In a land of clear colours and stories,
In a region of shadowless hours,
Where earth has a garment of glories
And a murmur of musical flowers;
In woods where the Spring half uncovers
The flush of her amorous face,
By the waters that listen for lovers,
For these is there place.

Though the world of your hands be more gracious,
And lovelier in lordship of things
Clothed round by sweet Art with the spacious
Warm heaven of her imminent wings,
Let them enter, unfledged and nigh fainting,
For the love of old loves and lost times;
And receive in your palace of painting
This revel of rhymes.

[To be continued.]

THE T-SQUARE CLUB EXHIBITION AND ITS PURPOSE.

THIS season architectural exhibitions are so numerous that it is difficult to decide whither to send one's designs.

This state of affairs not only bewilders the individual exhibitor, but is even a more perplexing problem for each and every exhibition-committee throughout the land.

With the T-Square Club Exhibition just over, after but two weeks' duration to make way for the exhibition of the Architectural League, the contributors to these contemporary collections are now overwhelmed with circulars and entry-blanks from the Chicago Architectural Club, the Brooklyn Chapter of the American Institute of Architects, and the St. Louis Architectural Club, while intimations that the Boston Architectural Club, the Cleveland Architectural Club and the Pittsburgh Architectural Club contemplate similar displays in the early spring, are already abroad.

It is indeed unfortunate that dates conflict, and equally to be regretted that no understanding exists for the mutual sharing of individual advantages.

But this multiplicity of exhibitions is not without reciprocal advantages, as it once more exemplifies the old saying that "Competition is the life of trade." So much so, in fact, that each year the T-Square Club, which holds the first of the series, adds some innovation or new department, by way of setting a pace for the season.

One year it was only the introduction of a colored frontispiece in the catalogue, another year it was the addition of a foreign exhibit, and last year it was increased by a collective exhibit from both France and England, besides a special display of drawings illustrating

each step through the École des Beaux-Arts, from an entrance-examination sketch to a full set of enlarged photographs of the current Grand Prix de Rome.

The last Grand Prix was this year represented in the same manner: two color plates illustrated the catalogue, and although the foreign section was smaller, and consisted largely of photographs, yet as a whole the exhibition compared favorably with those of former years.

The 1898-99 catalogue for the first time took the form of an annual review and catalogue combined. It is a broad-leaved octavo volume of 224 pages, containing abundant illustrations, an extensive letter-press interspersed with grotesque sculptural ornaments (which, we are told in the preface, were reduced from working-drawings by the firm of Cope & Stewardson and designed by Mr. George B. Page), names of American graduates from the French National School of Fine-Arts, and the winners of the various scholarships. The words prefacing these classified lists are here quoted to give an idea of the spirit in which the volume was compiled. They read:—

"This work is intended not so much for the veteran in the profession, whose success is already assured, as for the younger members, from all parts of the United States, whose constantly increasing numbers indicate the keenest competition in the future and survival of the fittest.

"It, therefore, may be of interest to submit a list of the names of those who have gained recognition in consequence of individual proficiency from the highest educational institutions at home and abroad."

Before, however, referring to individual designs, mention should be made of the letter-press, which is made up of several pages of architectural notes, illustrated by portraits of the late Charles Garnier and Richard Morris Hunt, a list of the members of the Club, the index to the exhibition, and last, but by no means least, of a symposium conducted by the following gentlemen: Mr. Louis H. Sullivan, Mr. John M. Carrère, Mr. Ralph Adams Cram, Mr. Daniel H. Burnham, Mr. Ernest Flagg, Mr. Russell Sturgis, Mr. Cass Gilbert, Prof. Wm. R. Ware, of Columbia University, Prof. Charles Eliot Norton, of Harvard University, Prof. Warren P. Laird, of the University of Pennsylvania, Prof. John V. Van Pelt, of Cornell University.

In reply to the question, "An unaffected school of modern architecture in America—Will it come?"—the answers vary. But those who have read Mr. Sullivan's enthusiastic letter and Mr. Flagg's painstaking and thoughtful review must feel convinced that it is surprising there are not more signs of an indigenous architecture in America. In summing up the symposium the *New York Mail and Express* concluded by saying "the practising architects seem more hopeful of an unaffected American style than the college professors and writers on art."

The exhibition occupied the front half of the main aisle or nave of the Academy, and the north and south transepts, and, like most similar collections, it was devoid of any prevailing style or purpose. There were commercially plain designs, logical and ugly, and aesthetically beautiful designs, contorted and alien. A few were unaffected in their directness of expression; and there were also two or three that had the possible making of modern indigenous types.

Of these "a Small Counting-house," by Wilson Eyre, Jr., and "Randall Hall for Harvard University," by Wheelwright & Haven, were the most noteworthy examples. To be sure, neither shows the slightest spark of modernity. Yet as they have an indigenous expression, they need only a little modifying to transform an air of Puritan reserve into one of *fin-de-siècle* repose.

Indeed, by leaving the walls as they are, and by only changing the treatment of the voids from quaint plank front-window frames and muntinned sash, to light bronze frames and unframed double-hung plate-glass sash, either might be held up as an example of the lines upon which a modern and unaffected architecture in America could be evolved.

An original drawing by Charles F. McKim was as interesting a contribution as it was unusual. Too frequently members of large firms are supposed to be entirely dependent upon their draughtsmen for exhibition-drawings, and in this connection I might say that it is, perhaps, because Mr. Eyre always makes his own perspectives that they are in such great demand. And of course, besides this, his magic touch gives all drawings a poetry no one else can duplicate. This year he showed a lot of detail-drawings from his own hand, and several water-colors.

Cope & Stewardson sent a graded wash-drawing of the Law School of the University of Pennsylvania and a new section of the dormitory system for this institution. Frank Miles Day was represented by several careful perspectives, rendered in Mr. Frank E. Newman's best style. Brite & Bacon showed several pen-and-ink perspectives drawn by Mr. Bacon, and two photographs of plaster-casts entered into a competition for a sun-dial.

David Knickerbacker Boyd was represented by drawings for a large country-house and a city church, and Kennedy, Hays & Kelsey had several country-houses, rendered by Mr. Frank A. Hays.

Frederick M. Man's successful design in the Overbrook Church Competition was well hung, and illustrated by three cuts in the catalogue.

J. H. Freedlander and Ernest Flagg sent over several very French designs for monumental structures, and Donn Barber was very fully represented by many excellent École des Beaux-Arts sketches and *projets*. The Chicago and St. Louis Clubs made collective ex-

hibits, but by far the largest and most important display of this kind was the work of Louis Herman Duhring—first holder of the John Stewardson Memorial Fellowship in Architecture: his measured rendered drawings compare favorably with the *envoi* drawings of students who have been the holders of scholarships from older foundations.

D. H. Burnham for the first time exhibited in Philadelphia, as did Ferry & Clas, of Milwaukee, and Eames & Young, of St. Louis.

Rankin & Kellogg showed their design for the Newark Public Library and some unsuccessful competitive drawings.

Photographs of the accepted designs for the Paris Exposition Buildings were reproduced in the catalogue. These were taken direct from the elevations and plans at the different architects' ateliers in Paris. The reproductions, however, are too small to give an idea of the full meaning of each problem. In fact, except to an architect, they seem very uninteresting. The Transportation Building has a frieze several hundred feet long representing all manner of locomotion, from the moving of an obelisk on rollers, to the automobile and bicycle "scorcher" with a "quartette-wind-breaker" ahead, and thus illustrates the modern spirit in which it was designed. The Army and Navy Building to be built on the curving banks of the Seine is no less up-to-date. Apparently sailing-in at one end of the structure, a high-pooped galleon, with mediæval fighting-top, and rows of port-holes in her sides, represents one of the earliest vessels of the French Navy, while seeming to emerge from the other end, the most modern and heaviest line-of-battle-ship of this century protrudes.

There was much food for thought in this exhibition and the symposium alone has stimulated a new desire.

U. S. A.



AMERICAN INSTITUTE OF ARCHITECTS.

THE repairs made to the Octagon House, corner of 18th Street and New York Avenue, have been completed, and the offices of the Institute have been established in the building. Documents, books, and other matter which the Institute has in its possession have been placed in the Secretary's office.

The Octagon House should be the actual headquarters of the Institute, as well as an interesting and instructive place for the profession. With this end in view a collection will be made of American architectural literature, including books, pamphlets, periodicals, and detached articles, in fact all that relates to the history, design or construction of American architecture, or the history of individual architects. A collection of this kind would include all building-laws both of cities, counties and States, pamphlets and circulars in reference to competitions, newspaper clippings relating to architects or architecture, and models and photographs of structures which have already been erected. The material in the Octagon House will, it is hoped, eventually furnish data for a history of architecture in America.

We would be pleased to have complimentary copies of books and pamphlets which have been written by members of the Institute, as we desire to have a complete collection of such works.

As soon as the contributions from members have been received at the Octagon House the Secretary will arrange, classify, and catalogue them, so that they will be available for the use of architects who visit Washington. The Secretary, with such material, will also have data for reference in answering questions through correspondence.

Each member of the Institute is requested by the Executive Committee to take an active interest in this collection and to send books, pamphlets, articles and other material that they may feel able or inclined to present to the Institute. Members of the Institute may make bequests and induce others who are interested in the art to give or bequeath to the Institute interesting and valuable material when it is made known that our association is making a determined effort to obtain all such matter relating to our profession. The Board reserves the right to dispose of any article received in the way they think most advantageous. All gifts will be properly credited to the donor on the books of the Institute, enumerated in the year's "Proceedings," and the name of the donor will be marked clearly on the gift itself.

GLENN BROWN, Secretary.



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

PRESENT STATE OF THE R. M. HUNT MEMORIAL, FIFTH AVE., NEW YORK, N. Y. MR. BRUCE PRICE, ARCHITECT; MR. DANIEL C. FRENCH, SCULPTOR, NEW YORK, N. Y.

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

A COMPETITIVE DESIGN FOR THE "SHATTUCK PRIZE" FOR ARTISANS' HOMES [OPEN COMPETITION.] MR. J. E. WALKER, 238 WEST 24TH STREET, ARCHITECT, NEW YORK, N. Y.

THE author begs to offer the accompanying plans as a solution to the problem.

The general layout of the plan fully appears with the programme.

NOTE. — Separate passages for every house leading from front to rear. Front and side entrances to every house. Driveways running around the rear of all houses by which supplies can be delivered and refuse collected. Four playgrounds. Four public parks with drinking-fountain in each.

ESTIMATE OF COST AND DESCRIPTION OF MATERIALS.

Foundation to be stone to grade, brick underpinning and first story 8-inch brick wall. Second story, frame, covered with boarding and shingles, with plaster, half-timber work on front, roof shingles. Finish throughout, pine. Roadways, brick on edge; walks, concrete.

Cost per sq. ft. :—	
870 sq. ft., average for each house, at \$2.28 per sq. ft.	\$1,983.60
Cost per cubic ft. :—	
25,200 cubic ft., average for each house, at 7½ cents per cubic ft.	1,984.50
50 houses, at \$1,984, average for each.....	\$99,200.00
Roadways, paths, etc.....	8,800.00
Total.....	\$108,000.00
Average rental for each house.....	\$18 per month.
Total rental.....	\$10,800 per year.
Computed percentage of profit.....	10 per cent per annum.

PLANS OF THE SAME.

HOUSE OF JULIUS MELCHERS, ESQ., DETROIT, MICH. MR. PERCY GRIFFIN, ARCHITECT, NEW YORK, N. Y.

U. S. COURT-HOUSE, NORFOLK, VA. MESSRS. WYATT & NÖLTING, ARCHITECTS, BALTIMORE, MD.

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

XV-CENTURY CHURCH AND XVI-CENTURY FARM BUILDINGS, BOURY, OISE, FRANCE.

[Additional Illustrations in the International Edition.]

THE DOORWAY: HOUSE OF JULIUS MELCHERS, ESQ., DETROIT, MICH. MR. PERCY GRIFFIN, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

THE PORCH: HOUSE OF MRS. C. E. MASON, DETROIT, MICH. MESSRS. DONALDSON & MEIER, ARCHITECTS, DETROIT, MICH.

[Gelatine Print.]

DINING-ROOM IN THE SAME HOUSE.

[Gelatine Print.]

THE DINING AND DRAWING ROOMS: "LANGLEY," WEST HILL, PUTNEY HEATH, ENG. MR. WALTER E. HEWITT, ARCHITECT.

THE DINING-ROOM: "THE DENE," NEW FOREST, ENG. MR. R. M. O. LUCAS, ARCHITECT.

AMBERLEY HOUSE, NORFOLK STREET, LONDON, ENG. MR. JOHN DUNN, ARCHITECT.



[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.]

THE LONGFELLOW MONUMENT AT PORTLAND, ME.

LOWELL, MASS., February 25, 1899.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In your issue of February 11th, page 42, I noticed this statement, "Nothing in the shape of a public monument in his [Longfellow's] honor exists in his own country."

That is a mistake that ought to be corrected, for there is a beautiful monument at Portland, Me., representing the poet seated on a chair. As Portland was the city of his birth, it seems a very fitting place for such a testimonial of his worth.

Respectfully yours, EVERETT M. GARDNER, Architect.

"THE FACE-BONDING OF BROKEN ASHLAR."

3 LINWOOD PARK, ROCHESTER, N. Y., February 18, 1899.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I noticed in the February number of the *American Architect* an article on "Broken Ashlar," and there seemed to be no attempt at any system in placing the stones shown in the figures although the rules given were all right. It is a fact that all workmen who fully understand this style of laying stone follow a regular system when they can. Figure 1 shows one style used. It will be



Fig. 1.



Fig. 2.

seen that the stones are placed in regular order. Different technical terms are used by workmen for the large and small stones; usually the large ones are called "Blocks" and the small ones "Closures" (marked "A"). It will be seen that no two closures touch each other, and a regular bond is carried right through, but when an opening is placed in the wall, or something else interrupts the bond, the workman has to use some skill to get his bond right again. Only four stones

at most should form each vertical joint, but this rule must sometimes be deviated from. Figure 2 is another style in use and differs from the other in that only three stones form each vertical joint at most, both sides included; but there is less regular system to this style than the other, and a mason who has not much experience at it will be apt to give it a bad appearance, by getting too many small closures adjacent to each other. It has the advantage of not showing such high vertical joints as the other, but the horizontal joints must necessarily be made longer.

Yours respectfully, THOS. MCMORROW.

WIRE SHINGLE NAILS.

BOSTON, MASS., February 28, 1899.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—If the fact that wire-nails were not suitable to use with cedar shingles was made known through the columns of your paper to the public it would seem to me to be of great benefit. In my own experience, a church shingled less than one year ago, the nails have rotted entirely away at the heads, as this piece shows. On inquiry at the hardware stores I am told that it is a well-known fact to the trade, and that customers are warned about this defect when they ask for wire-nails for shingling purposes.

Very respectfully, G.

[ALTHOUGH we have several times made known this defect of the wire-nail, it will do no harm, as the matter is an important one, to repeat the warning as above.—EDS. AMERICAN ARCHITECT.]

THE HOME LIFE INSURANCE BUILDING.

1 MADISON AVENUE, NEW YORK, N. Y., February 28, 1899.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—From the wording of an editorial in your last issue on the repairing of fire damage at the Home Life Insurance Building, it might be inferred that the terra-cotta partitions in that building rested on the wooden sleepers and flooring. This is an error. With the exception of a few subordinate partitions put in to suit tenants some time after our completion of the building, all the partitions were built directly upon the floor-arches before the sleepers were laid and fire-stops placed under sills of all communicating doors.

The omitting of windows along the corridors, which you mention as applying to one story, applies to all above the seventh story.

Very truly yours, N. LE BRUN & SONS.



THE HEIGHT-LIMIT IN NEW YORK.—The bill to limit the height of buildings as favored by the New York Board of Trade and Transportation provides that no building shall be more than 200 feet high, and no hotel or apartment-house shall be over 165 feet high. All buildings of 137 feet and over shall contain two separate staircases from basement to roof, one of which shall be remote from the elevator-shaft. — *Boston Transcript*.

THE PROPOSED STRIKE OF ENGLISH PLASTERERS.—The plasterers' plebiscite has resulted in a big majority for common-sense, and the friends of trade-unionism can now breathe freely. The incident ought to warn trade-unionists of the danger of wreckers within the camp, and of the risk of trying to carry things with a high hand. Every man who values the power of combination ought to set his face against a legitimate power being exercised in ways that will not bear the light. — *Engineering*.

THE AMERICAN ARCHITECT

AND BUILDING NEWS

ADVERTISERS' TRADE SUPPLEMENT.

No. 202.

SATURDAY, MARCH 4, 1899.

VOLUME LXXIII.
No. 1210.

THE ADAMS PATENT SEWAGE LIFT.

This lift is actuated by air, compressed by a column of sewage or water at a higher level than that to which the low-level sewage is to be raised. In effect it is an automatic engine, compressor and pump combined; but as the result of the careful application of certain fixed laws, it requires only one moving part — an ordinary flap-valve.

Low-level sewage gravitates through a flap-valve into the forcing-cylinder, from which it is forced through rising main to outfall-sewer by air compressed in air-cylinder, by head of sewage passing from flush-tank through the pressure-pipe. The air returns from forcing-cylinder to air-cylinder after forcing-cylinder is discharged, and the pressure-sewage is withdrawn to outfall by syphon. The low-level sewage again gravitates into forcing-cylinder, and the operation is repeated. The flap-valve is the only moving part.

In level districts all that is necessary for the use of this system is to pump water (which can be used over and over again) to the flush-tank, which may be placed at any convenient location, and, if necessary, at a long distance from the forcing-cylinder. The sewage is lifted steadily, not forced up under excessive pressure.

As used in buildings the method of operation is the same as that previously described, with this difference, namely, that the city supply is connected to flush-tank for pressure-water, which passes into storage-tank to supply sanitary fixtures both above and below ground-level, and also for steam-boilers, and other purposes, in which case there is no cost incurred for operating the lift. Usually, a controlling valve is fixed, so that water is not used unless the forcing-cylinder is sufficiently filled to require to be discharged.

The Adams Patent Sewage Lift is most reliable because of its simplicity and absence of moving parts; is most economical, as it incurs no cost for maintenance; is most satisfactory in being a closed system which treats both liquids and solids; enables city engineers to treat low-lying districts without cost for pumping-stations; allows architects to save valuable space on ground-floor of buildings and makes it possible for owners of real-estate to develop low-level areas into building-sites. Reference to users on application. Every installation guaranteed.

ADAMS PATENT SEWAGE LIFT CO.,
PHILADELPHIA, PA.

NO MORE SLIPPERY STAIRS.

ONE year ago the *American Architect* referred to the rapid growth in public favor of

the Mason Safety Tread, an ingenious device to prevent slipping on stairs. Since that time the business has very largely increased, and the Company which manufactures the goods has been obliged to build and is soon to occupy a large factory at Lowell with improved machinery to handle the orders which are coming from nearly every large city in the country, where the Company has agents bringing the merits of the Safety Tread to the attention of architects, public officials, trustees and owners of property.

The most prominent architects and engineers in Boston long since adopted the Mason Tread, and it is specified by them for use in nearly every school-building, railroad-station, and mercantile building planned by them during the past year. Architects in other cities have been quick to see its merits, and many have used it in school-houses and similar work where the traffic is so constant as to render it desirable to protect the stairs from wear and avert the danger of slipping.

It is well known that iron, whether with plain surface or checked, in a short time acquires a polish which is extremely dangerous. Wood and slate not only become smooth but wear off at the edge and hollow in the centre. The non-slipping quality of the Mason Tread is not affected by wear, and the heavy body of steel renders the tread extremely durable. The V groove in the steel between the strands of lead is an important feature, giving additional holding-power and collecting particles of lead which would act as a lubricant on a plane surface.

The great South Terminal Station in this city has been fully equipped with the Mason Tread, as well as the Union Stations at Omaha and Kansas City, and this material has been specified for several similar buildings. Between thirty and forty school-houses have been equipped, besides other public buildings, hospitals, and mercantile and office buildings almost without number.

Architects who have not been supplied with catalogues, blue-prints and descriptive matter can obtain the same by addressing the
AMERICAN MASON SAFETY TREAD CO.,
40 WATER STREET, BOSTON, MASS.

A VALUABLE INVENTION.

ATTENTION is called to the advertisement of the Opalite Tile Company, of Pittsburgh, which appears elsewhere. The product of this concern embodies an invention which must prove of special merit in the estimation of architects who aim to include in their work that which confers exceptional benefits upon the occupants of all buildings, domestic or otherwise.

Opalite is a vitreous glaze, of a highly polished surface, applied as a tile to external or internal wall-surfaces, or ceilings, and either upon new or old work. It is an ideal surface for the interior of bath-rooms, lavatories, kitchens, larders, etc., while its use must vastly enhance the beauty and healthfulness of hospitals, hotels, surgeries, sanitariums, restaurants, and the like. It is greatly superior to the ordinary glazed tile or brick, being unperishable and of a beautiful polished surface. Among the special merits of Opalite is that it will not "craze" or become "patchy." It is made in many charming colors and tints, and its sanitary traits are exceptional. In reflecting power it is far superior to any other material, making it particularly desirable for use in subways, basements, corridors, etc., where borrowed light only is available. By a special process, the adhering surface of Opalite makes possible the closest bond with the backing. In fact, Opalite possesses so many excellent qualities that to know them all, correspondence with the makers should be opened by all interested.

THE OPALITE TILE CO.,
PITTSBURGH, PA.

NOTES.

MESSRS. HARRISON BROTHERS & Co., of Philadelphia, are sending to architects and engineers with their compliments a 2-foot folding-rule, graduated in 8th, 16th and 32d and 10th, 20th and 40th of 1 inch, in the hope that it will be found a convenient and serviceable measure, suitable for carrying in the pocket.

The primary purpose of the rule is, of course, to remind the recipient and user constantly of the fact that they sell paint of all classes and grades, and for all purposes. They have had greater experience in making paint than any other house, and believe that they have profited by it enough to produce high-grade paints at prices relatively the lowest.

THE Flexible Door & Shutter Co. have acquired by purchase the entire wood-working equipment of Clemence & Searles, Worcester, Mass., where their various flexifold specialties will in future be manufactured, with offices in New York and Chicago. Mr. Chas. R. Clemence, who has had an extensive architectural, as well as mill, experience, will manage the business, the products of which, we understand, are growing rapidly in public favor. With largely increased facilities for the complete installation of the Flexifold Partitions (wood and steel), school wardrobes and builders' finish, to new or old construction, we bespeak them success.

(Continued on page 4.)

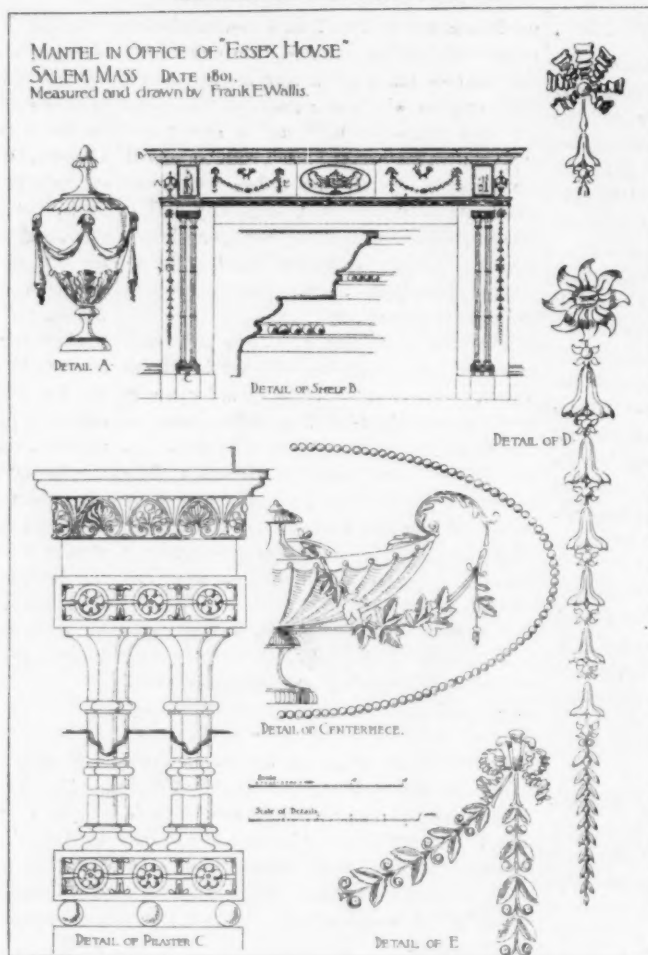
[EACH PART COMPLETE IN ITSELF.]

PART III

"THE GEORGIAN PERIOD"

Part III, though it contains only the same number of plates as does Part I, includes *seven more* Gelatine Plates than did that one.

REDUCED SAMPLE FROM PART III



WE RECOGNIZE the rights and interests of our subscribers by adopting the following sliding scale of prices for this new Part and the others already issued:—

PART III [in press.]

Retail price per single copy	\$3.00
Price to non-subscribers to the <i>American Architect</i> who have already subscribed for Parts I and II	2.00
Price to subscribers to the <i>American Architect</i> for 1899	1.50

: :: PARTS I, II and III :: :
[121 plates, 10 x 14½ inches.]

Price per set to non-subscribers to the <i>American Architect</i>	\$9.00
Price per set to subscribers to the <i>American Architect</i>	6.50

PART IV [in contemplation.]

American Architect and Building News Co.,
211 Tremont Street, Boston, Mass.

Atlas PORTLAND CEMENT

Guaranteed to be
Superior to any
Imported Cement.

Used Exclusively in the Following New York Buildings:

HAVEMEYER STORES

ST. PAUL BLDG.

AMERICAN SURETY BLDG.

BANK OF COMMERCE

SINGER BLDG.

UNIVERSITY CLUB

N. Y. LIFE INS. BLDG.

STANDARD OIL BLDG.

JOHNSTON and PRESBYTERIAN BLDGS.

Atlas Cement
Company

143 LIBERTY STREET
NEW YORK

Removal Sale!

:

As our landlords' lease of these premises expires on MAY 1 next and is not to be renewed, we, as sub-tenants, find ourselves called on to vacate the offices we have occupied since 1880.

We shall take advantage of this opportunity to reduce the bulk of our

Surplus Stock of Back Issues,

and until the day of removal orders for FIFTY COPIES or more, if in stock, can be filled at

HALF PRICE.

During the period of this clearance sale, orders for a lesser number of copies will be filled from our reserve stock at the usual rates.

This sale offers a good opportunity not only to students and draughtsmen, but should cause all subscribers to collate their files and attempt to secure, before it may be too late, any numbers that have been lost or destroyed.

If there be any former subscriber who would like to take up his subscription at the point where he dropped it, it might be worth his while to communicate with us, as the opportunity is such as to allow us the unusual enjoyment of taking part in a "dicker."

American Architect and Building News Co.,

211 TREMONT STREET, BOSTON.

ALSEN'S PORTLAND CEMENT

Highest Quality, Most Reliable, Best Color, Most Enduring Surface, Greatest Bulk to the Barrel.

NOTABLE INSTANCES WHERE ALSEN'S CEMENT HAS BEEN USED BECAUSE OF ITS SUPERIOR QUALITY.

CATHEDRAL OF ST. JOHN THE DIVINE, N.Y.
WASHINGTON LIFE INSURANCE CO.'S BUILDING, N.Y.
MANHATTAN LIFE INSURANCE CO.'S BUILDING, N.Y.
AMERICAN SURETY CO.'S BUILDING, N.Y.

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.

"At the Fountain of
St. George."

A Copperplate photo-
gravure reproduction
of * * * * *

The Famous Etching by Axel H. Haig.

JAPAN PAPER 18" x 24"

SUITABLE FOR FRAMING.

* * Price, \$1.25 * *

American Architect and Building News Co., - Boston, Mass.

THE ARCHITECTURE OF CLASSICAL ANTIQUITY — AND THE — RENAISSANCE,

BY I. BUEHLMANN.

Seventy-five steel engravings and photo-lithographic plates in portfolio, with descriptive text translated by G. A. Greene.

For Sale by American Architect and Building News Co.

ONE of the cleverest and most artistic devices for lighting large rooms is found in the ball-rooms of the Waldorf-Astoria and Sherry's and in the dining-room of the Democratic Club, and which has attracted the attention and caused favorable comment of almost every visitor. It is a unique scheme to light the arched ceilings brilliantly while concealing the light source. This is done by a device originated by the Frink Company, which have also introduced this method in private residences, and which is especially valuable where ceilings are richly decorated.

I understand that a music room ceiling decoration now being painted by a well-known Washington artist will be lighted in this way.

Of course the technical details cannot enter into a reference to this successful illuminating scheme, except to mark that sunk back of the cornice there is a trench, so to speak, in which the electric-lights burn, with a series of reflectors behind them, each on its own individual angle, which so graduate the light that every part of the ceiling is evenly lighted. A beautiful result is obtained. — *The Art Collector.*

Drawing-Office.

Drawings rendered in line or color with reasonable despatch.

ADDRESS

Editors of the American Architect.

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

1897

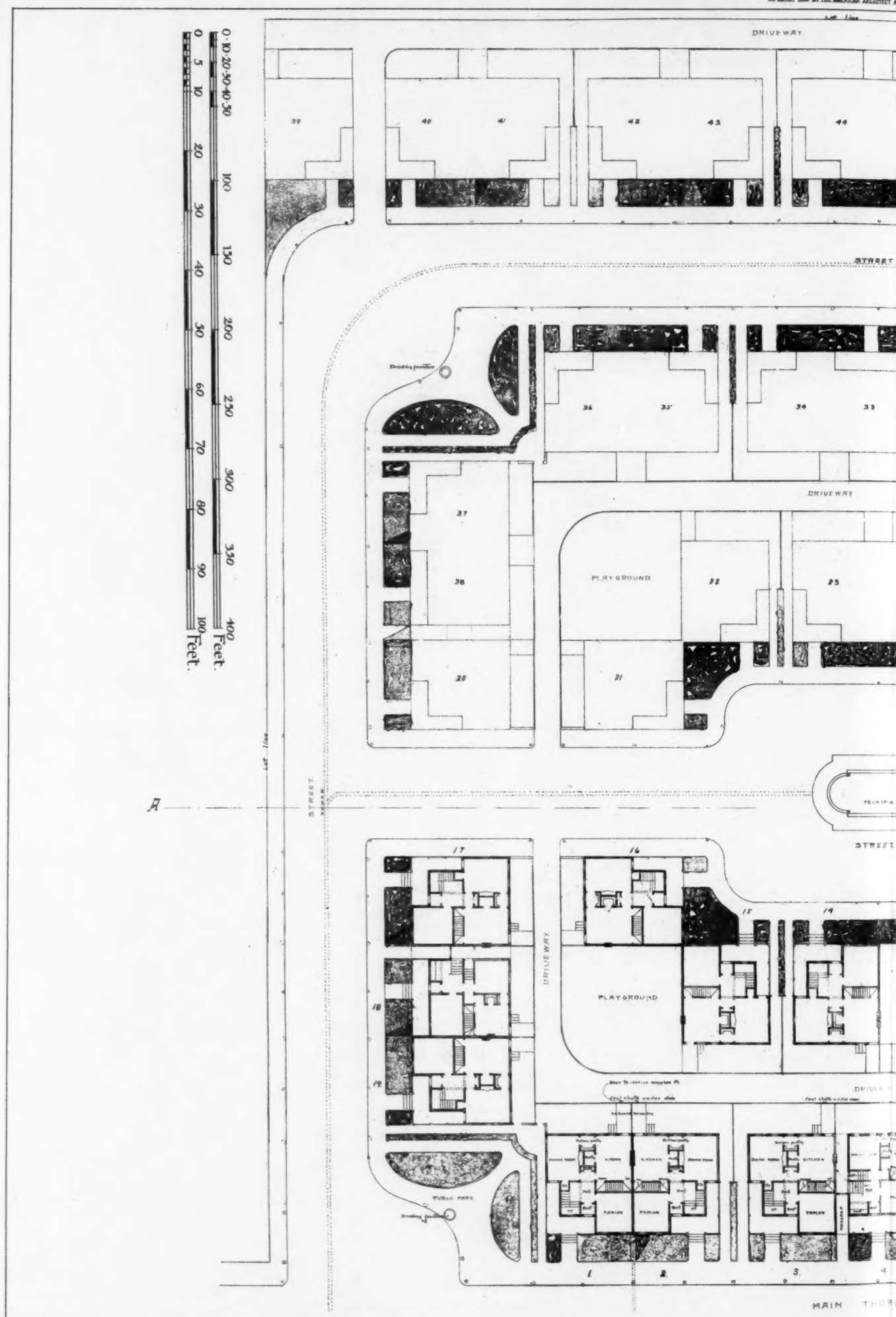
1897

1897

1897

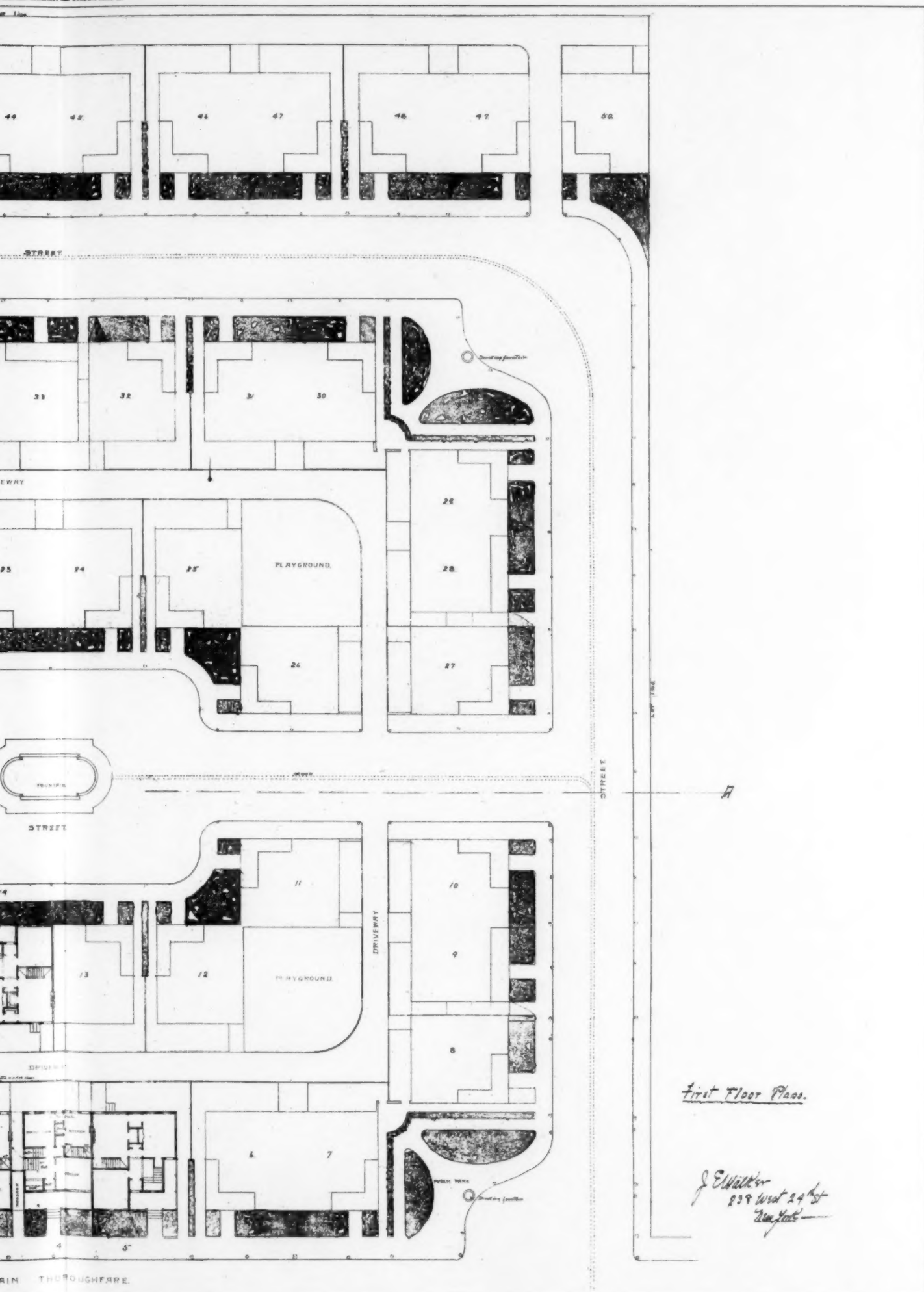
1897

1897



SHATTUCK PRIZE FOR COMPETITIVE DESIGNS

J. E. WALKER, ARCHT





SHATTUCK PRIZE FOR COMPETITIVE DESIGN

J. E. WALKER, ARCHITECT



SHATTUCK PRIZE FOR
COMPETITIVE DESIGNS FOR
ARTISANS HOMES

J. E. Walker
233 West 14th St
New York

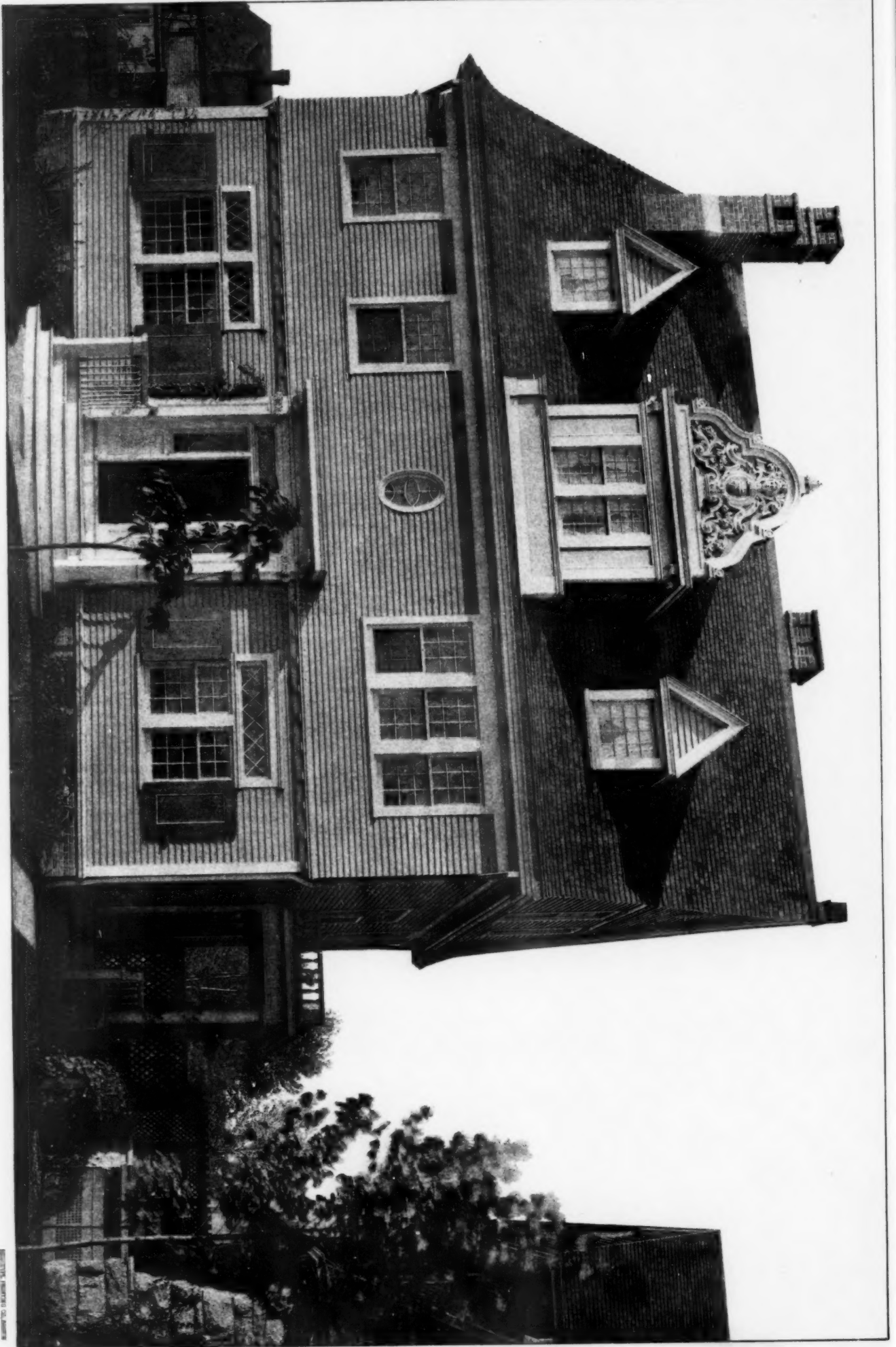
DESIGNS FOR ARTISANS' HOMES (LIMITED COMPETITION).

ER, ARCHITECT, NEW YORK, N. Y.

Public Library,
WASHINGTON, D. C.
RECEIVED
MAR 5 - 1899
Furnished by the
Henry Foster
Memorial Fund.

HELIOTYPE PRINTING CO., BOSTON

COPYRIGHT 1899 BY THE AMERICAN ARCHITECT AND BUILDING NEWS CO.



HOUSE OF JULIUS MELCHERS, ESQ., DETROIT, MICH.
DONALDSON & MEIER, ARCHITECTS.

REUTERS' DRAWING BY J. J. HARRIS

REPRODUCED FROM THE AMERICAN ARCHITECT AND BUILDING NEWS CO.



Public Library,
WASHINGTON, D. C.
RECEIVED
MAR 8 - 1899
Furnishings of
Henry P. Jones
Memorial Fund

POST-OFFICE AND COURT-HOUSE, NORFOLK, VA.

WYATT & NOLTING, ARCHITECTS.

REPRODUCED FROM THE AMERICAN ARCHITECT AND BUILDING NEWS CO.

THE AMERICAN ARCHITECT AND BUILDING NEWS

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART.

VOL. LXIII. — No. 1210.]

SATURDAY, MARCH 4, 1899.

PRICE, { REGULAR ISSUE, 15 CENTS.
IMPERIAL " 25 "

ARCHITECTURAL INSTRUCTION.

THE ATELIER MASQUERAY,

123 EAST 234 STREET, NEW YORK CITY.

..... SIXTH YEAR

Instruction in Architectural Design
and Rendering.

SPECIAL ATELIER FOR WOMEN STUDENTS

HARVARD UNIVERSITY.

LAWRENCE SCIENTIFIC SCHOOL.

ENGINEERING,
ARCHITECTURE, Etc., Etc.

For Descriptive Pamphlet apply to

M. CHAMBERLAIN, Secretary,
N. S. SHALER, Dean. Cambridge, Mass.

BOSTON, MASS.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

DEPARTMENT OF ARCHITECTURE.

Professor: F. W. Chandler.

BROOKLYN, N. Y.

PRATT INSTITUTE.

W. S. Perry.

CAMBRIDGE, MASS.

HARVARD UNIVERSITY.

LAWRENCE SCIENTIFIC SCHOOL.

Professor H. Langford Warren.

CHAMPAIGN, ILL.

UNIVERSITY OF ILLINOIS.

SCHOOL OF ARCHITECTURE.

Professor: N. Clifford Rickert.

ITHACA, N. Y.

CORNELL UNIVERSITY.

DEPARTMENT OF ARCHITECTURE.

Professor: Charles Babcock.

CHICAGO, ILL.

ART INSTITUTE.

SCHOOL OF ARCHITECTURE.

Louis J. Millet.

LA FAYETTE IND.

PURDUE UNIVERSITY.

ARCHITECTURAL DEPARTMENT.

Professor: Fred. Morley.

NEW ORLEANS, LA.

TULANE UNIVERSITY.

Professor: Wm. Woodward.

PROVIDENCE, R. I.

BROWN UNIVERSITY.

DEPARTMENT OF ARCHITECTURE.

N. M. Isbam.

WHITTIER MACHINE CO.,

PASSENGER AND FREIGHT
ELEVATORS.

53 STATE STREET - - - BOSTON.

LOOMIS FILTERS.

IMPROVED SYSTEM.

RESULTS GUARANTEED.

Main Office, 402 Chestnut St., PHILADELPHIA.

NEW YORK OFFICE,

33 Church St., Havemeyer Building.

NOW COMPLETE:

THE ARCHITECTURE OF

CLASSICAL ANTIQUITY

and the

RENAISSANCE,

By I. BUEHLMANN.

Seventy-five steel engravings and photo-lithographic plates in portfolio, with descriptive text translated by G. A. Greene, \$18.

The work is divided in three parts, which can be bought separate.

Part I. The Orders of Columns (Vignola)
28 plates with text, \$6.50.

Part II. Facades, Arches, Doors and
Windows, 25 plates with text,
\$6.

Part III. Development and Decoration of
Rooms, \$7.50.

To purchasers of two of the three parts the remaining part will be sold at a reduced figure, so that the total amount for the three parts will not exceed \$18—the price of the complete work—if purchased at once.

American Architect and Building News Co.

MAITLAND ARMSTRONG & CO.,

STAINED GLASS & DECORATIVE WORK.

Interior Decorations and work in American Mosaic Glass from the designs of Mr. Armstrong. English Painted Glass from the designs of Messrs. Clayton & Bell.

Sole Agents for

CLAYTON & BELL, GLASS STAINERS, LONDON
61 Washington Square, South, New York, N. Y.

FLYNT

BUILDING AND CONSTRUCTION CO.

GENERAL OFFICE, PALMER, MASS.

We contract to perform all labor and furnish all material of the different classes required to build complete

CHURCHES, HOTELS, MILLS, PUBLIC
BUILDINGS AND RESIDENCES.

Also for the construction of
RAILROADS, DAMS AND BRIDGES.

We solicit correspondence with those wishing to place the construction of any proposed new work under ONE CONTRACT, which shall include all branches connected with the work. To such parties we will furnish satisfactory references from those for whom we have performed similar work.



PUBLISHED JANUARY 28,

PART III.

"GEORGIAN PERIOD"

Containing Eight Gelatine Plates and Twenty-

four Plates of Measured Drawings

of Colonial Work.

PRICE \$8.00.

Subscribers to AMERICAN ARCHITECT who have settled for their current subscription can procure this part for \$1.50.



ROBERT C. FISHER & CO.

Successors to Fisher & Bird,

MARBLE AND GRANITE WORKS,

97, 99, 101 and 103 EAST HOUSTON STREET,

Established 1830.

NEW YORK.

Specify Three Coats

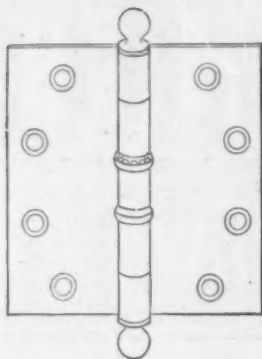
I. X. L. No. 1,

If you want to get the most elastic and durable finish for hard woods, stained or grained work on the exterior trim of public and private buildings, etc. It is free working, dries with a full and brilliant surface, and can be rubbed to a dead finish in from three to four days. This article produces the best possible waterproof coating for bath-rooms and the like. In color it is sufficiently pale for almost all requirements.

Other varnishes for other purposes. Booklet on request.

EDWARD SMITH & CO., Varnish Makers and Color Grinders, 45 Broadway, New York.

STANLEY'S BALL-BEARING STEEL ... BUTTS



are heavily electro-plated and highly polished, and compare favorably in appearance and durability with solid metal butts.

It is impossible to wear them down, and they never creak.

Samples and literature free to architects.

THE STANLEY WORKS, Dept. "C."
NEW BRITAIN, CONN.
79 CHAMBERS ST., N. Y.



FITCH
SASH LOCKS
LOCK THE WINDOW.
RATTLE, COLD OUT
AND DUST
SIMPLE, DURABLE, SAFE.
SOLD BY HARDWARE DEALERS EVERYWHERE
TRIAL SAMPLE FREE
THE W. & E. FITCH CO. NEW HAVEN, CONN.



THE
"BOLLE'S"

THE MODERN SAFETY SASH.
Slide Easier,
Revolve Completely and Separately,
Ventilate to Perfection,
Simple and Practicable.

150 Nassau Street, New York City.

FOR INFORMATION ABOUT

U. S. MAIL CHUTES

WHICH ARE
A necessity in Office Buildings and Hotels,
write to the sole makers.
THE CUTLER MFG. CO., ROCHESTER, N. Y.
PATENTED. AUTHORIZED.

Satisfaction guaranteed.
There's no hanger like it
Outlasts any Door.
Well made and strong.
Easy to adjust.
Lasts a lifetime.
Liked by architects.

STOWELL Mfg. &
Fdry. Co.

50, MILWAUKEE, WIS.



CLINTON WIRE-CLOTH

Sole Proprietors and Manufacturers of

WIRE LATH DOUBLE TWIST WARP
STIFFENED (Iron Furred)
CLINTON CORRUGAT'D

Plain, Tapped or Galvanized.

The Most Perfect and Economic System of FIREPROOF Construction.

SEND FOR CIRCULAR.

BOSTON,
199 Washington St.

NEW YORK,
76 Beckman St.

CHICAGO,
137 Lake St.

FACTORY,
CLINTON, MASS.

KEUFFEL & ESSER CO.
NEW YORK.
127 FULTON ST.
Branches { 111 Madison St., Chicago.
708 Locust St., St. Louis.
Drawing Materials and Surveying Instruments.
We make and carry the most complete and best
assorted stock in America. Our goods are recognized
as the standard of quality. They all bear our trade-
mark and are warranted by us. Our prices are reason-
able. Our lavishly illustrated catalogue minutely
and correctly describes our goods. It contains much
valuable information. Sent gratis on application.

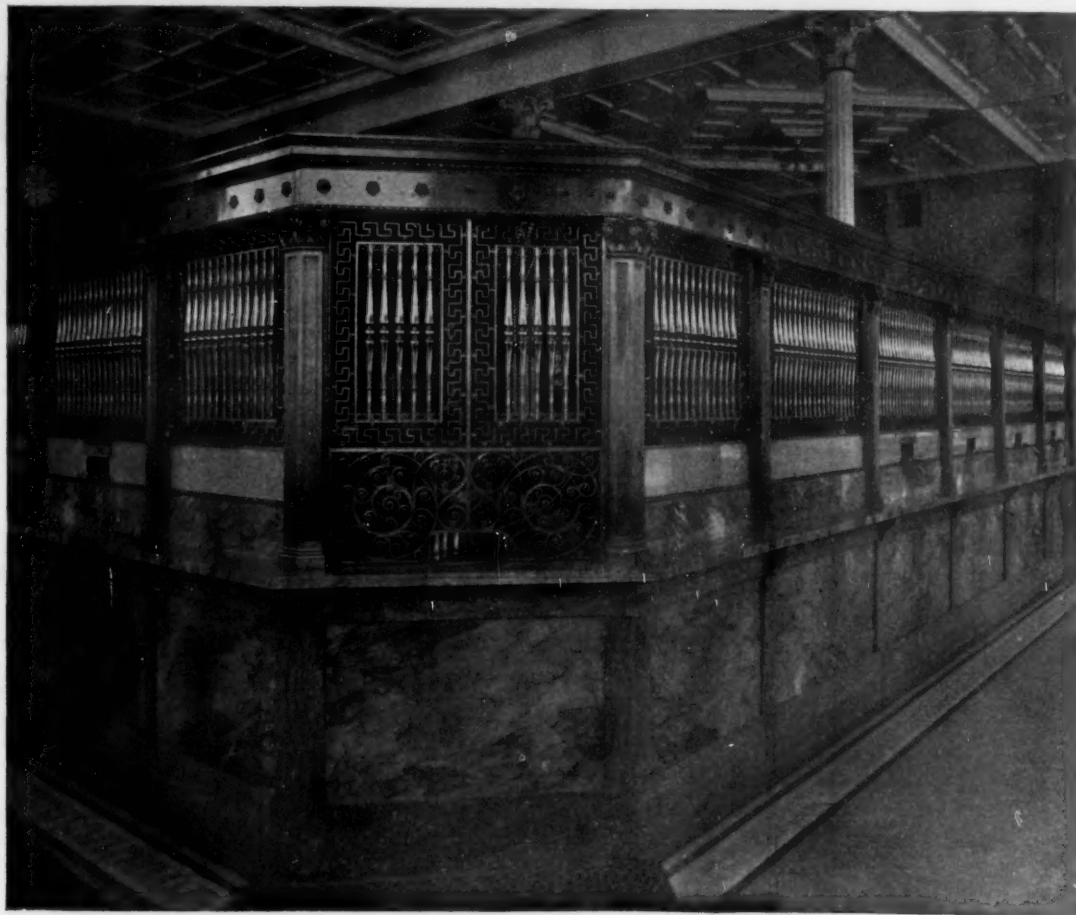
BUILDING MATERIALS.

Reported for the American Architect and Building News.

BUILDING MATERIALS New York. Boston. Chicago. Philadelphia.

STONE. (Per cubic foot, rough.)	(Wholesale Prices.)	(Prices to Builders and Contractors.)	
Foundation:			
Dimension.....	5 00 per ton.	20 @ foot	Conshohocken
Block.....	4 00 per ch.	10 00 @ cord	1 45 @ 2 50
Rubble.....	1 25 @ 1 50	9 00 @ "	
Sandstone:			
Longmeadow.....	80 @ 90		
Kibbe.....	80 @ 1 10		
Brown (Connecticut).....	1 00 @ 1 30	1 50 @ cub. ft.	95 @ 1 05
Amherst Ohio.....	90 @ 95	45 @ 55	1 05 @ 1 25
Berea.....	75 @ 1 00	45 @ 55	85 @ 95
Berlin.....	75 @ 1 00	45 @ 55	85 @ 95
Belleville.....	80 @ 1 25	@ 1 25	1 00 @ 1 10
New Brunswick (Dorchester).....	1 00 @ 1 30	Not sold.	1 05 @ 1 15
Potdam Red.....	@ 1 40	@ 1 55	@ 1 40
Olsen.....	@ 2 00		1 25 @ 1 35
Carlisle. English.....	@ 1 05	@	95 @ 1 05
Corse Hill (Scotch).....	@ 1 05	@	95 @ 1 05
Granite: (Maine)	@ 60	80 @ 1 50	55 @ 65
Limestone:			
Bedford.....	45 @ 1 25	95 @ 1 00	75 @ 85
Joliet.....	1 00		Richmond
Lemont.....			75 @ 1 50
Serpentine.....		10 50 per ton.	Perch 4 50 @ 5 50
Bluestone: (Per sq. ft.)			
Sidewalk.....	30 @ 5 00	40 @ 1 75	1 in. th. 10 @ 25
Planned.....	50 @ 6 00	@ 75	37 @ 50
Marble: (Per cu. ft.)			
Lee, Mass.....	@	1 75 @ 2 50	2 00 @ 2 50
Rutland, white and blue.....	1 25 @ 1 75	@ 3 00	2 00 @ 3 00
Sutherland Falls.....	@	@ 2 00	1 70 @ 3 00
Glens Falls, black.....	@	@	4 00 @ 4 50
Italian, blue-veined.....	@	@	2 50 @ 2 75
" Sienna.....	@	@	@ 5 00
Tennessee, red.....	@	@	4 00 @ 6 00
" Knoxville.....	@	@	3 00 @ 4 00
Pennsylvania, blue.....	@	@	2 00 @ 3 00
Vermont, white.....	@	@	2 25 @ 3 00
Slate: Roofing (Per square)			
Green.....	5 00 @ 6 00	4 75 @ 5 25	3 75 @ 5 00
" unfading.....	5 00 @ 6 00	5 50 @ 6 50	5 25 @ 6 00
Purple.....	5 00 @ 6 00	5 50 @ 6 50	5 25 @ 6 00
Red.....	@ 10 00	10 00 @ 11 00	10 50 @ 12 50
Black, Lehigh.....	4 25 @ 4 75	@	4 50 @ 5 50
" Chapman.....	@	@	5 30 @ 6 15
Genuine Bangor.....	4 35 @ 5 50	4 75 @ 5 90	5 25 @ 6 50
Unfading black.....	6 00 @ 8 50	6 00 @ 8 50	4 25 @ 8 95
".....	5 50 @ 8 00	5 50 @ 8 00	5 50 @ 9 20
Tiles, Am..... Per M.	@	@	Salt-glazed tiles
N. Peach Bottom, war. unfading	@	@	per sq. ft.
Fire Clay Roof Tile on eave at fac.	8 00 @	8 00 @	6 00 @ 6 50
LUMBER.—Per M.			
Boards: (Ordinary dimensions.)			
Pine, 1st quality, clear.....	65 00 @ 75 00	55 00 @ 70 00	50 00 @ 60 00
" 2d quality.....	55 00 @ 60 00	42 00 @ 50 00	42 00 @ 50 00
" 3d quality.....	18 00 @ 22 00	30 00 @ 40 00	20 00 @ 28 00
Spruce.....	@ 25 00	12 00 @ 18 00	Not sold.
Hemlock.....	en13 @ 14	12 50 @ 14 00	10 00 @ 12 00
Yellow pine.....	20 @ 40	19 00 @ 35 00	18 00 @ 25 00
Cypress.....	@	26 00 @ 40 00	30 00 @ 35 00
Clapboards:			
Pine.....	@	35 00 @ 55 00	25 00 @ 30 00
Spruce.....	@	24 00 @ 35 00	Not sold.
Framing Timber:			
Pine.....	14 00 @ 16 00	14 00 @ 16 00	15 00 @ 25 00
Spruce.....	12 00 @ 16 00	12 00 @ 15 00	Not sold.
Hemlock.....	18 00 @ 21 00	19 00 @ 25 00	10 00 @ 15 00
Yellow pine.....	@	@	16 00 @ 25 00
Laths:			
Pine..... Round Wood	@	2 00 @ 2 50	1 90 @ 2 00
Spruce..... Slab.....	2 10 @ 2 25	1 80 @ 2 25	Not sold.
Shingles:			
Pine, shaved..... Per M.	5 00 @ 6 00	@	Not sold.
Pine, sawed.....	4 00 @ 5 00	@ 4 50	2 60 @ 2 75
Spruce, sawed.....	1 50 @ 2 00	1 50 @ 1 75	Not sold.
Redwood.....	1 40 @ 1 60	3 00 @ 3 75	4 60 @ 6 00
Cedar split..... Per M.	@	@ 6 00	Not sold.
Cedar sawed.....	@	2 00 @ 3 25	2 50 @ 2 90
Cypress. Split..... 7 x 24 ..	18 00 @ 20 00	5 00 @ 6 00	@

{ 30" \$35 @ 40
34" 8 @ 21
30" 26 @ 14
11 00 @ 14



THE W. S. TYLER WIRE WORKS CO., CLEVELAND, OHIO,

..... Manufacturers and Designers of

Ornamental Iron Work, * Stairs, * Elevator Cars, * Enclosures and Bank Interiors.

S. J. PARKHILL & CO. PRINTERS

226 Franklin St., Boston, Mass.

BOOK AND MISCELLANEOUS PRINTING
ILLUSTRATED TRADE CATALOGUES
TOWN HISTORIES AND GENEALOGIES

Electrotyping and Stereotyping
Mercantile and Commercial Printing

With all the most approved modern machinery and material in each department, the excellence of the work at fair prices is assured.

Works on Architecture a Specialty

Information regarding work in any department will at all times be cheerfully and promptly furnished, either personally or by correspondence.

USE THE NEW MODEL . . .

FOLSOM'S Patent Snow Guards,

BECAUSE THEY DO NOT INJURE ROOFS.

This is very important. Imitations that strain the slates are frequently substituted.

What do you think of the Shull's Patent Overhead Sash Pulley? Our catalogue describes it.

FOLSOM SNOW GUARD COMPANY

178 Devonshire St. - - BOSTON.
100 Park Place - - NEW YORK.

Hardware Appropriate to its Surroundings



For Yacht or Club House.

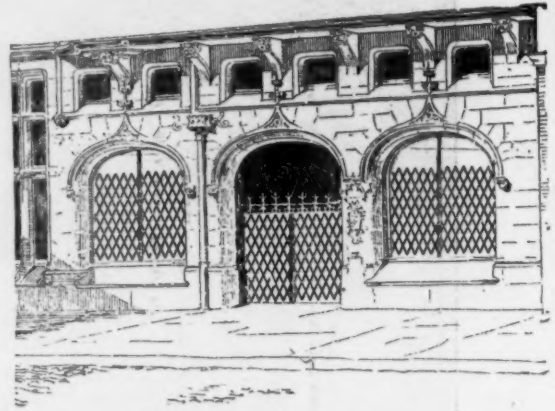
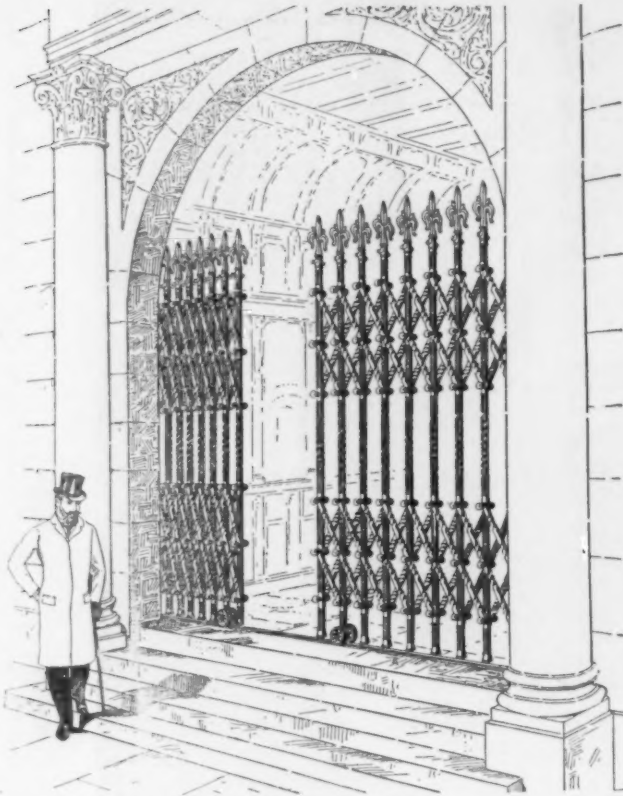
has been a study with us. We have complete lines of Door and Window Trim in every School. We also produce in metal Architect's own designs, and will furnish Special or Proprietary Hardware in any School or for any purpose.

Our No. 16 Catalogue is devoted to Art Metal Work, and will be sent, on request, to all Architects who may not already have received it.

The Yale & Towne Mfg. Co.

GENERAL OFFICES:

9, 11, 13 MURRAY ST., NEW YORK.



NOTICE.

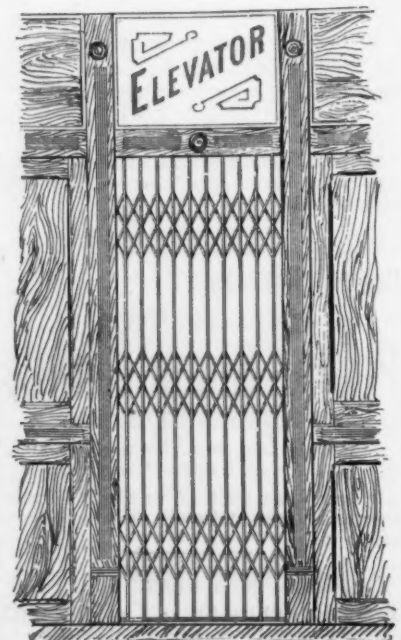
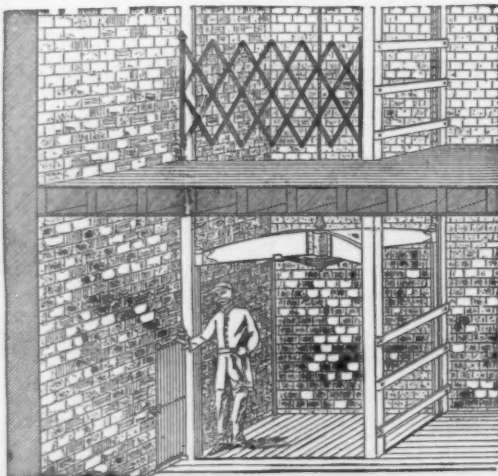
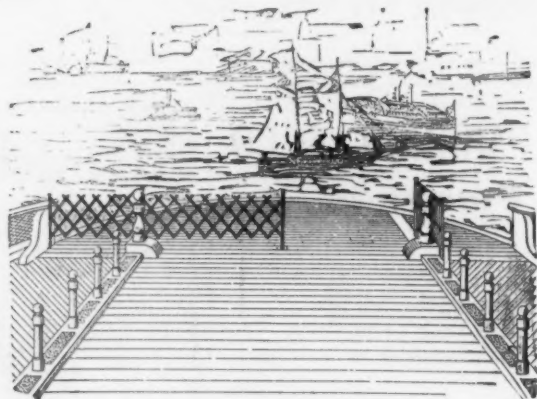
WE MANUFACTURE THE "PITT" PATENT AND THE "BOSTWICK" PATENT FOLDING-GATES IN STEEL, BRASS AND BRONZE AND IN STEEL ELECTRO-PLATED.

THESE GATES ARE EXTENSIVELY USED FOR THE PROTECTION OF STORES, OFFICE BUILDINGS AND PRIVATE RESIDENCES. MANY OF THE FINE RESIDENCES IN NEW YORK AND OTHER PROMINENT CITIES OF THE UNION ARE PROTECTED WITH THESE GATES ON THE WINDOWS AND DOORWAYS. THEY ARE BURG-LAR PROOF, AND IN THE SUMMER TIME PERMIT OF PERFECT SAFETY AND VENTILATION.

OUR GATES ARE USED FOR SAFETY IN ALL ELEVATOR OPENINGS AND ON ELEVATOR CARS. THEY ARE THE **STRONGEST AND BEST**. THEREFORE, ARCHITECTS SHOULD SPECIFY THEM AND SEE THAT THE CONTRACTOR SUPPLIES THEM AND *No Other*.

THE

WM. R. PITT COMPOSITE IRON WORKS,
111 FIFTH AVE., NEW YORK, N. Y.





CABOT'S CREOSOTE SHINGLE STAINS ❁

The Pioneer and Standard Shingle-stains and the only Creosote (wood-preserving) Stains. Any color made on request.

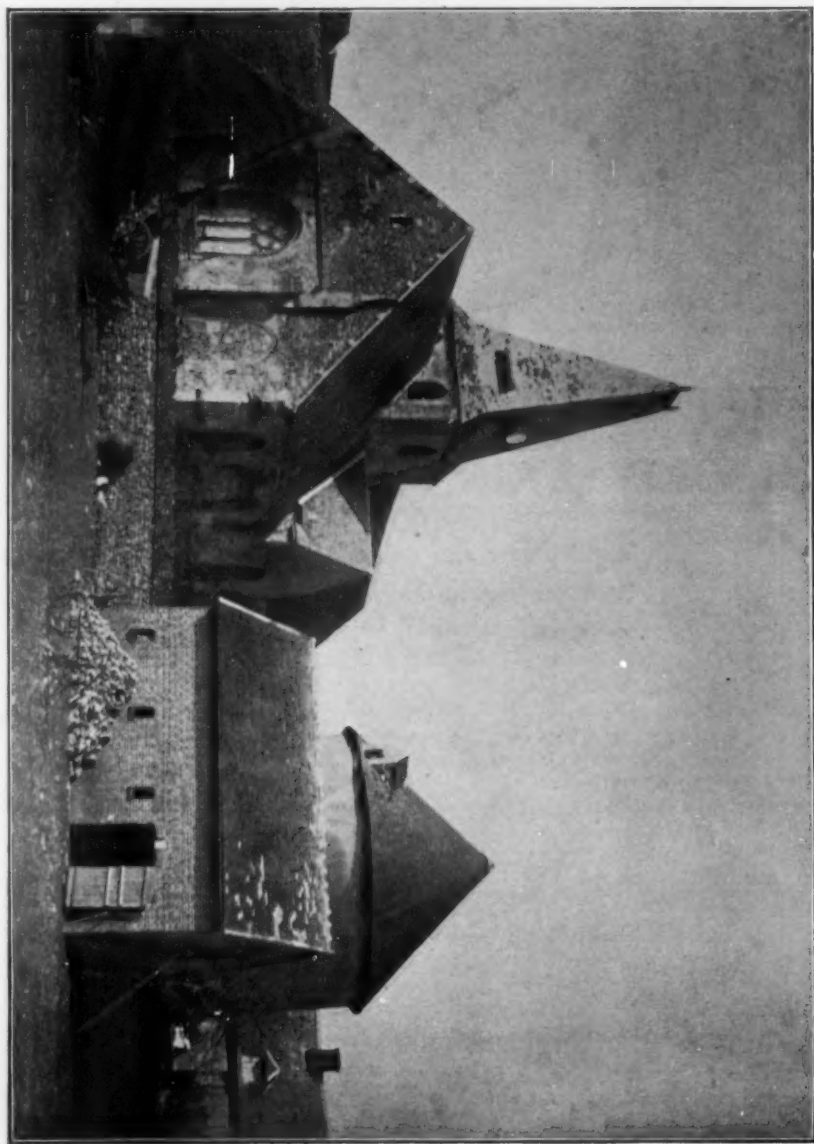
CABOT'S INSULATING ❁ **and DEAFENING "QUILT"**

The most efficient sound-deadener and heat insulator made. A perfect scientific non-conductor.

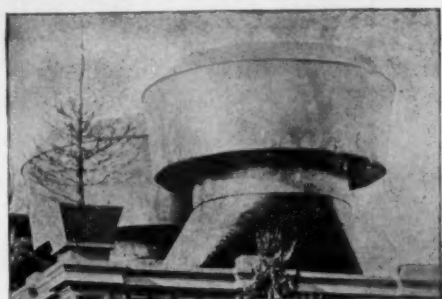
Full information and samples of both materials sent on application.

SAMUEL CABOT, ^{Sole} _{Manufacturer,} **BOSTON, MASS.**
315 Dearborn Street, Chicago, Ill.

AGENTS: V. H. Schneider, 12 Wooster St., New York; Samuel H. French & Co., Philadelphia, Pa.; Charles J. Waterhouse, San Francisco, Cal.; P. H. Mathews, Los Angeles, Cal.; Whitelaw Brothers, St. Louis, Mo.; George H. Lawes & Co., St. Paul, Minn.; John H. Corning, Washington, D. C.; Brady & Co., Detroit, Mich.; The National Building Supply Co., Baltimore, Md.; C. H. Brown & Co., Portland, Oreg., and Seattle, Wash.; Cleveland Builders' Supply Co., Cleveland, O., and all other central points.



XV CENTURY CHURCH AND XVI CENTURY FARM BUILDINGS, BOURRY, OISE, FRANCE.



.....Section of
Pancoast Ventilators

Roof of Waldorf-Astoria
Hotel, New York.

**PANCOAST VENTILATING
COMPANY,**

316 Bourse Building,
PHILADELPHIA, PA.



**NEW ENGLAND
FELT ROOFING
WORKS.**

18 Post Office Sq., BOSTON.

Originators of Felt Roof-
ing in New England.

Inventors and only Manu-
facturers of the Celebrated

"BEEHIVE BRAND."

Incorporated
1891
Capital, \$80,000
LEVI L. WILLIAMS, Pres't
EPH. C. DAVIS, Treas'r

— 1889 —

PARIS EXPOSITION,

MEDAL FOR RUBBER INSULATION



TRADE MARK
THE STANDARD FOR RUBBER INSULATION.

THE OKONITE CO., Ltd.,

SOLE MANUFACTURERS OF

OKONITE WIRES, OKONITE TAPE, MANSON TAPE, CANDEE WEATHERPROOF WIRES.

WILLARD L. CANDEE,
H. DURANT CHERVER,

MANAGERS.

GEO. T. MANSON, Gen'l Supt.
W. H. HODGINS, Sec'y.

253 BROADWAY, NEW YORK.

— 1893 —

WORLD'S FAIR,

MEDAL FOR RUBBER INSULATION

ESTABLISHED 1868
SKYLIGHTS HAYES & LATHING
71-8TH AVE. (METALLIC) NEW YORK.
FIRE-PROOF CONSTRUCTION

DIXON'S AMERICAN No. 219½
GRAPHITE

Is the Ideal Draughting Pencil that Architects have longed for. Make the finest black
lines without feather edges. Ask your stationer, or send 10 cents for a sample.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J



Pneumatic Tubes

FOR RAPID TRANSMISSION OF CASH, ORDERS,
PAPERS, DOCUMENTS.

USED IN Prominent Department Stores, Dry Goods Houses, Wholesale
Establishments, Newspaper Offices, Banks, etc. Write for Estimates.

Bostedo Package and Cash Carrier Co.,

CHICAGO, 156 Lake St. NEW YORK, 156 Fifth Ave.



BUTCHER'S BOSTON POLISH
is the best finish for
FLOORS, ...

Interior Woodwork and Furniture.

Circulars Sent on Application.
For Sale by Dealers in Painters' Supplies.

MANUFACTURED BY THE

BUTCHER POLISH CO.,

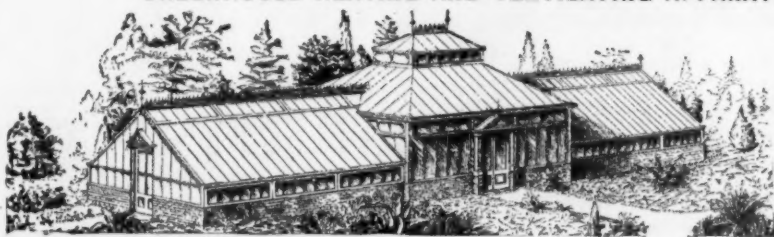
356 Atlantic Ave., Boston, Mass.

HITCHINGS & CO., Established 50 years

HORTICULTURAL ARCHITECTS AND BUILDERS

and largest Manufacturers of

GREENHOUSE HEATING AND VENTILATING APPARATUS.



The highest awards received at the World's Fair for Horticultural Architecture, Greenhouse Con-
struction and Heating Apparatus. Conservatories, Greenhouses, Palmhouses, etc., erected complete with
our Patent Iron Frame Construction.

Send four cents for Illustrated Catalogue.

233 MERCER STREET, N. Y. CITY.

Heliotype Printing Co.,

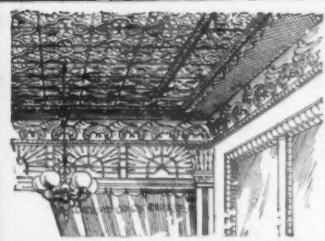
211 Tremont Street, Boston.

ESTABLISHED 1872.

- PHOTO-LITHOGRAPH.
- PHOTO-COLOR-LITHOGRAPH.
- PHOTO-GELATINE.
- PHOTO-GRAVURE.
- PHOTO-ENGRAVING.

COPIES OF ARCHITECTURAL,
MECHANICAL AND OTHER
DRAWINGS, MAPS, PLANS, ETC.,
PORTRAITS, VIEWS AND ALL
BOOK ILLUSTRATIONS.

Heliotype Printing Co.



**BERGER'S METAL
CEILINGS**

NEW DESIGNS

In the past year we have brought
out more than twice as many new
and artistic designs as have all
other metal-ceiling manufacturers
combined. We are the only ones
prepared to furnish complete Clas-
sified Designs. Write for details.

THE BERGER MFG. CO.,
Canton, O.

SAMUEL FARQUHAR.

ESTABLISHED 1836.

DAVID W. FARQUHAR.

JOHN FARQUHAR'S SONS.

Slate, Copper, Tin and Gravel Roofing.

Nos. 20 and 22 EAST STREET, BOSTON.

Order Box at Master Builders Association,
164 Devonshire Street.Special attention given to Repairs
of all kinds.

Inventors and owners of Farquhar's Patent Slate Fasteners, for securing slates to iron roofs, acknowledged to be the strongest method in use, and has been applied to many of the best constructed and largest buildings in this country.

Contracts made for Work wherever desired.

ASPHALT ROOFING AND PAVING MATERIALS.

WARREN'S "ANCHOR BRAND" NATURAL ASPHALT ROOFING. WARREN'S NATURAL ASPHALT READY ROOFING.

Send for circulars, samples and specification forms to

WARREN CHEMICAL & MFG. CO. 81 & 83 Fulton Street, NEW YORK, U.S.A.

WE CLAIM THE FOLLOWING MERITS FOR JENKINS BROS.' VALVES.

1. Manufactured of the best Steam Metal.
2. No regrinding, therefore not constantly wearing out the Seat of the Valves.
3. Contain JENKINS DISC, which is suitable for all Pressures of Steam, Oil and Acids.
4. The Easiest Repaired, and all parts Interchangeable.
5. Every Valve Tested before leaving the factory.
6. ALL GENUINE stamped with Trade Mark.

JENKINS BROTHERS, New York, Philadelphia, Chicago, Boston.

Send
for
Samples.

If you SPECIFY



SAMSON SPOT CORD

You can tell at a glance that no other cord is substituted. It is warranted to be of pure Cotton, smooth finish and perfect braid.

Samson Cordage Works, Boston, Mass.



L'HABERSTROH AND SON:
INTERIOR DECORATORS AND PAINTERS

9 Park St. Cor. Beacon
Boston, Mass.

Artistic Relief Processes Tapestry-Leather Mosaic Effects

Established in 1848

Welded Chrome Steel and Iron. (5 ply)



FOR SAFES AND VAULTS

Positively Burglar-proof, cannot be Cut, Sawed, or Drilled.

We are the only manufacturers of Chrome Steel in the United States.

None genuine unless stamped with our Trade Mark.

CHROME STEEL WORKS,

Kent Ave., Keap and Hooper Sts., BROOKLYN, N. Y.

C. P. HAUGHIAN, President.
F. E. CANDA, Vice-President.
C. J. CANDA, Vice-President.
F. MORA CANDA, Secretary.
T. I. JONES, Treasurer.

BOMMER
SPRING HINGES
ARE THE BEST

"PRACTICALLY UNBREAKABLE"
SAYS THE WORLD'S FAIR AWARD.

MADE OF WROUGHT STEEL, BRONZE & BRASS

For sale by Dealers in Builders Hardware.

Asbestos Fire-Felt Coverings.

The Most Efficient and Durable Non-Conducting Coverings for Pipes and Boilers. FIRE-FELT Covering made in Cylindrical Sections for Pipes, Sheets for Boilers and Other Large Surfaces. Does not sag from pipe. Will not powder. Is not affected by moisture or vibration.

FIRE-FELT Represents the Highest Efficiency
in Modern Pipe and Boiler Coverings.H. W. JOHNS M'FG CO.,
100 WILLIAM ST., NEW YORK.

Chicago.

Philadelphia.

Boston.

Columbus.

Pittsburgh.

ASPHALT FLOORS,
ROOFS,
SIDEWALKS AND CARRIAGE-WAYSOf Public Buildings, Hospitals,
Warehouses, Stables, Cellars, etc.

Laid with VAL de TRAVERS ROCK ASPHALT,

DURABLE, FIREPROOF AND IMPERVIOUS.

For estimates and list of works executed, apply to

THE NEUCHATEL ASPHALT CO., Limited,

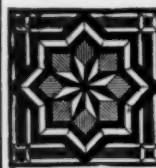
265 BROADWAY - NEW YORK.

PARQUET FLOORS.

The National Wood Manufacturing Co.,

129 5th Avenue, New York.

WAINSCOTINGS and CEILINGS.

Inlaid Wood Floors 3-16 and
7-8 inch thick.Solid work, Tongued and Grooved
in each piece.Designs & Estimates on applica-
tion. Established 1867.

F. W. DEVOE & CO.

(Established 1852.)

Fulton St., cor. William, New York.
No. 176 Randolph St., Chicago.

Pure Ready-mixed Paints.

We desire to call attention of consumers to the fact that we guarantee our ready-mixed paints to be made only of pure linseed oil and the most permanent pigments. They are not "Chemical," "Rubber," "Patent," or "Fireproof." We use no secret or patent method in manufacturing them by which benzine and water are made to serve the purpose of pure linseed-oil.

Sample cards, containing fifty desirable shades sent on application.

FINE VARNISHES.

Hard Oil-Finish & Wood-Stains

Illustrated Catalogue of Engineers' and
Architects' Supplies, 250 pages, 700
Illustrations, on request.

White-Lead Colors in Oil and Japan.

THE WINSLOW BROS. CO.,

CHICAGO,

Ornamental Iron and Bronze.

ABOUT..... ACETYLENE

GAS GENERATORS.

... We Manufacture ...

THE "KOPF"—IT'S THE BEST.

Approved by the National Board of Underwriters.

Write for information.

M. B. Wheeler Electric Co., GRAND RAPIDS,
MICH.

Agents Wanted.....

Opalite

OPALITE
GRANULATED
ADHERING SURFACE.OPALITE
IN POSITION.

A recently patented

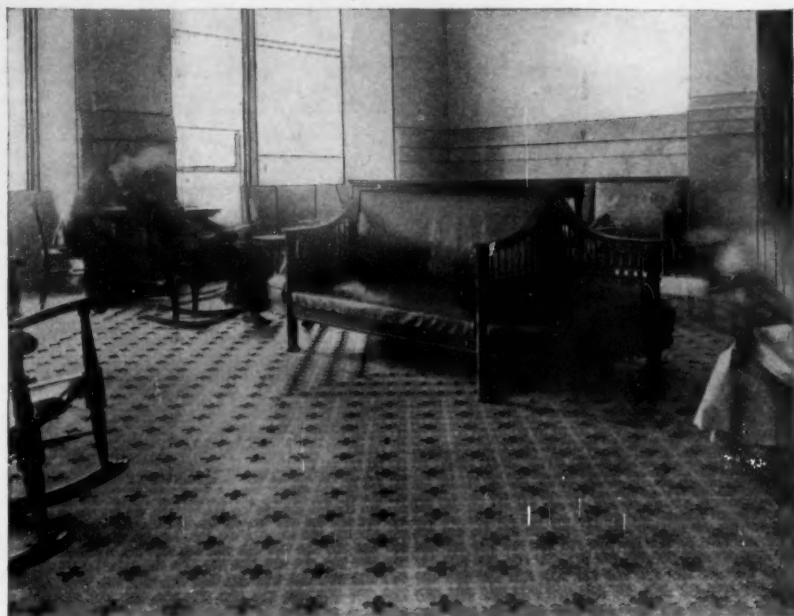
VITREOUS VENEER.

FOR WALLS AND
CEILINGS . . .Aseptic, Sanitary, Adaptable,
Durable and Decorative.

THE OPALITE TILE CO.,

Westinghouse Bldg.

PITTSBURGH, PA.



INTERLOCKING RUBBER TILING

as laid by us in the Ladies' Retiring-room, Broad Street Depot, Pennsylvania R. R., Philadelphia. Noiseless, non-slippery, waterproof, sanitary, durable. A perfect floor for offices, banking-rooms, court-rooms, school-rooms, libraries, hospital wards, cafés, bath-rooms, billiard-rooms, vestibules, halls, church aisles, piazzas, etc. Laid directly on wood, stone, concrete or iron. Call or write.

New York Belting &
Packing Co., Ltd.

New York 25 Park Place
Philadelphia 308 Chestnut St.
Chicago 143-145 Lake St.
St. Louis 411 No. 3d St.
San Francisco 509-511 Market St.
London, A. L. Gibson 20 John St.

The American Architect and Building News

IS PUBLISHED EVERY SATURDAY BY

The American Architect and Building News Co.,
211 TREMONT ST., BOSTON, MASS.

Advance Subscription Rates.

Regular Edition, \$6.00 per year; six months, \$3.50.
Imperial Edition, \$10.00 per year; six months, 6.00.
International Edition, per year in advance, 25.00.
quarterly " 26.00.

[Foreign Postage extra.]

Payment should be made to American Architect and Building News Co. direct, either by draft or post-office order.

Address all business correspondence to
the publishers direct.

Advertising Agents:

New York City:—
H. M. Carleton, Temple Court, 5 Beekman St.
Chicago and the Central States:—
A. B. Titcomb, 177 La Salle St., Chicago, Ill.
Ohio and Michigan:—
C. A. Burrell, 661 Hough Ave., Cleveland, O.
Agent at Large:—
F. P. Spokesfield, 211 Tremont St., Boston, Mass.

Advertising Rates: For "wants" and "proposals"
15 cents per line (8 words to the line), each inser-
tion. 50 cents the least charge. Other rates on ap-
plication.

New Advertisements.

THE WINSLOW BROS. COMPANY (Chicago, Ill.),
Ornamental Iron and Bronze. Page viii.
BOSTEDO PACKAGE AND CASH CARRIER CO.
(Chicago, Ill.), Pneumatic Tubes. Page vii.

See last or next issue for the following
advertisements:—

Bower Trap and Specialty Co., The
Cudell, F. E.
Dwight Lumber Co.
Flexible Door & Shutter Co.
General Electric Co.
Keasby & Mattison Co.
Merchant & Co.
Morse, Williams & Co.
Taylor, N. & G. Co.
Spaulding Print Paper Co.
Thorn Co., J. S.

ARCHITECTS' REMOVALS, Etc.

MESSERS. BRUCE & MORGAN, architects, At-
lanta, Ga., have removed their offices from the
Grant Building to the Prudential Building. 1210

J. E. R. CARPENTER, architect, has removed his
offices to 502 and 503 Citizens Bank Building,
Norfolk, Va., where he will be pleased to receive
catalogues and samples. 1210

VENTILATING APPARATUS FOR GREENHOUSES, FACTORIES, ETC. Low Cost—SATISFACTION GUARANTEED.

Send 5 cents postage to New York Office for latest catalogue of
HEATING and VENTILATING Apparatus.

Send for estimates on CYPRESS GREENHOUSE MATERIAL,
Also for our PATENT IRON GREENHOUSE CONSTRUCTION.
Send for circulars of HOT-BED SASH and FRAMES.

We make special Greenhouse PUTTY,—Price on application.

LORD & BURNHAM CO., Horticultural Architects
and Builders

NEW YORK OFFICE:
St. James Building, Broadway and 26th St.

GENERAL OFFICE AND WORKS:
Irvington-on-Hudson, N. Y.

JOHN WILLIAMS, 544 to 556 West 27th Street, New York. WROUGHT IRON AND BRASS WORK TO SPECIAL DESIGNS ONLY.

REFERENCES: { Tiffany & Co., N. Y.; Cottier & Co., N. Y.; L. Marcotte & Co., N. Y.; McKim, Mead &
White, N. Y.; Babb, Cook & Willard, N. Y.; Bruce Price, N. Y.; R. M. Hunt, N. Y.; Bailey,
Banks & Biddle, Phila.; Frank Hill Smith, Boston; A. H. Davenport, Boston.

WANTED.

CATALOGUES WANTED.—Mr. Charles M. Boon,
care Dell Co., Medan, Deli, Sumatra, Dutch East
Indies, an architect, there in practice, would like to
receive price-lists and trade-catalogues of building-
materials. 1210

BUILDING PATENTS.

[Printed specifications of any patents here mentioned
together with full detail illustrations, may be obtained
of the Commissioner of Patents, at Washington, for
five cents.]

619,430. FIREPROOF BUILDING.—Jas. A. McKim,
Indianapolis, Ind.
619,437. PIPE-JOINT.—James F. Pool, Rochester,
N. Y.
619,444. SASH-FASTENER.—Jesse F. Smith, Hatties-
burg, Miss.
619,448. ELECTRIC BURGLAR-ALARM.—James
Tomney, New York, N. Y.
619,449. ELECTRIC PROTECTIVE SYSTEM.—James
Tomney, New York, N. Y.
619,461. SASH-FASTENER.—Myron Angel, San
Luis Obispo, Cal.
619,464. FLOOR-DRESSER.—Louis A. Baumann,
Wheeling, W. Va.
619,483. APPARATUS FOR HEATING AIR.—James
Higginbottom, Liverpool, Eng.
619,542. HOT-WATER HEATER.—Abner F. But-
trick, Everett, Mass.
619,568. WATER-HEATER.—James T. Helms and
Robert A. Keller, Knoxville, Tenn.
619,571. SASH BALANCE AND LOCK.—Fred W.
Hironimus and Richard A. Harness, Corydon, Ky.
619,575. LIGHT FOR SIDEWALKS, ETC.—Jacob
Jacobs, New York, N. Y.
619,579. FIREPROOF PAINT.—Stanislaus Kala-
maikowski, New York, N. Y.

BUILDING PATENTS.

615,587. WEATHER OR DOOR STRIP.—John A. O.
Livoni, Marion, Kan.
619,626. DOOR OPENING, CLOSING AND LOCKING
DEVICE.—Eli B. Slonacher, Greensburg, Pa.
619,657. WEATHER-STRIP FOR WINDOW-SASHES.
—David B. Bauder, Abrams, Wis.
619,674. STORM-DOOR.—Oscar Cobb, Chicago, Ill.
619,676. DOOR.—Frederick J. Cronin, Buffalo,
N. Y.
619,689-690. DOUBLE-ACTING SPRING-HINGE.—
Otho C. Moore, Norfolk, Va.
619,709. MAGAZINE OR RETORT FOR STOVES OR
FURNACES.—Alvin Blair, Tiffin, O.
619,769. FIREPROOF CEILING.—Louis W. G. Lillen-
thal, Gross Lichterfelde, Ger.
619,780. WINDOW-SASH.—William W. Newcomb,
Bradfordville, Ky.
619,794. SLIDING DOOR.—John Schlutter, Balti-
more, Md.
619,795. LOCKING-CLIP FOR GAS-PIPE JOINTS
AND ENDS.—Frank J. Schreiner, Columbus, O.
619,813. BEAM-COMPASS.—Robert C. Weishampel
and Frank K. Duncan, Baltimore, Md.
619,849. REFLECTOR FOR ART-GALLERIES.—Geo.
F. Spencer, Newark, N. J.
619,862. SECTIONAL BOILER FOR WATER AND
STEAM HEATING.—Samuel Burns, Jersey City, N. J.
619,876. WATER-HEATING APPARATUS.—Michael
H. Dorgan, San Francisco, Cal.
619,879. LOCKING APPARATUS FOR DOORS OF
HOISTS OR LIFTS.—John C. Etchells, Heaton Chapel,
Eng.
619,939. SASH HOLDER AND LOCK.—Ransom M.
Chance, Hooks Switch, Tex.
619,968. WALL-FURRING.—Elof R. Leonard, New
York, N. Y.
619,997. DOOR-FASTENER AND BURGLAR-ALARM.
—Louis Saladin, New York, N. Y.
619,998. COMPOUND LUMBER.—Sam'l E. Saunders,
Goring-on-Thames, Eng.

E. ELTON DEANE,

Architectural Colorist and Draughtsman.
63 Seymour Building, Fifth Ave., cor. 42d St.
NEW YORK CITY.

PERSPECTIVES RENDERED

IN PEN-AND-INK AND WATER-COLOR.

WALTER M. CAMPBELL,

54 Devonshire St., Boston, Mass.

OSCAR LOWINSON,
Consulting Architectural Engineer
39 & 41 CORTLANDT ST., NEW YORK.

J.W. TAYLOR'S PHOTOGRAPH SERIES

MONUMENTS OF AMERICAN ARCHITECTURE.
Removed to Owings Building.
Send two 5 cent stamps for Catalogue.

BUILDING PATENTS.

620,006. SHUTTER-OPERATING DEVICE. — Franklin F. Williams, St. Louis, Mo.
620,023. WINDOW FRAME AND SASH. — Clarence A. Eighmy, Erie, Pa.
620,039. SANITARY CLOSET. — Hiland H. Kendrick, Fulton, N. Y.
620,052. GAS-FURNACE. — Charles W. Rice, Columbus, O.
620,058. SHUTTER-FASTENER. — Albert L. Stetler, Allentown, Pa.
620,086. ELECTRIC HEATER. — Louis Casper, Chicago, Ill.

BUILDING INTELLIGENCE.

(Reported for The American Architect and Building News.)

[Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.]

ADVANCE RUMORS.

Albert Lea, Minn. — Report states that Chas. Jorgenson will erect a 40-room hotel at a cost of \$25,000.

Algona, Ia. — It is stated that O. B. Burdall will erect a new \$25,000 hotel. It will be 66' x 132', and three stories high.

Annapolis, Md. — A bill appropriating \$100,000 for a public building has been passed by Congress.

Atlanta, Ga. — The North Avenue Presbyterian Church has purchased an \$18,000 lot at the corner of Peachtree St. and North Ave., and will build a new church thereon.

Avon, N. Y. — Report states that Geo. Cary, 184 Delaware St., Buffalo, is preparing plans for a \$20,000 church for the St. James Episcopal Society. Rev. H. F. Darnell, rector.

Bangor, Me. — It is stated that the Great Northern Paper Company, with a capital of \$4,000,000, will erect mills on the Penobscot River, having a daily capacity of 250 tons of paper.

Bellaire, W. Va. — It is reported that an opera house, to cost about \$20,000, will be erected in this city. Dr. R. W. Muhlemann, Geo. O. Robinson and S. L. Seaman, committee.

Blue Ridge, Ga. — A. J. Bryan & Co., Atlanta, have prepared plans for the \$35,000 Court-house to be built by Fannin County.

Buffalo, N. Y. — Plans have been filed at the Bureau of Buildings by Architect G. Kuch for a \$15,000 brick dwell. for Bishop Kaminski, of the Polish Independent Catholic Church on Fillmore Ave. The house will adjoin the church property.

Extensive alterations are to be made to the Hotel Iroquois, at Main and Eagle Sts. Messrs. Esenwein & Johnson have drawn plans; estimated cost, \$200,000.

Cedar Rapids, Ia. — It is reported that Henry Ives Cobb, 100 Washington St., Chicago, Ill., has plans in preparation for a \$100,000 six-story store and office building, to be erected by S. L. Dows.

Cedartown, Ga. — The Cedartown Co. contemplate building a new \$250,000 mill.

Charles City, Ia. — The erection of a \$30,000 high-school building is contemplated.

Chicago, Ill. — It is announced that Chas. Yondorf, 365 Blue Island Ave., will erect a \$20,000 residence on the South Side. H. L. Ottenheimer, architect. The Bethel congregation, N. Fair St., is said to have decided to build a \$20,000 synagogue. S. Klee, pres.

The Western Cold Storage Co. will begin at once the erection of an addition to its warehouse on the Illinois Central pier after plans by Architect Geo. Beaumont; cost, \$150,000.

Architect Henry Lord Gay has completed plans for a magnificent country home, which Otto Young will build at Lake Geneva, on property purchased by him some months ago for the sum of \$65,000. The structure will be in the Italian style of architecture and of carved white stone; cost, \$150,000.

Dr. George S. Isham, 321 Dearborn Ave., will erect a \$50,000 stone residence on his recently acquired property on N. State St., near Schiller St. Plans have been prepared by James Gamble Rogers, 74 Buena Ave.

Columbus, O. — Plans have been prepared by Mueller & Milder, Union Trust Building, Detroit, Mich., for a four-story brewery building, for the Columbus Brewing Co.; estimated cost, \$60,000.

Concord, N. C. — The Cannon Mfg. Co. will erect a new mill at a cost of \$100,000.

Davenport, Ia. — The School Board asks the citizens to vote \$54,000 for the erection of a school-building and the purchase of a site.

Des Moines, Ia. — It is stated that the Carr & Adams Co. will erect a two-story brick warehouse on 9th St., near the K. & W. tracks; cost, \$10,000.

DOMESTIC WATER SUPPLY.

There are TWO and ONLY TWO absolutely safe machines that will pump water every day in the year.

They are —

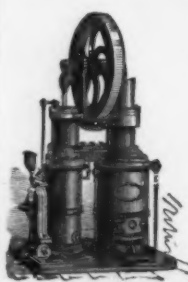
The Improved Rider Hot Air Engine...

The Improved Ericsson Hot Air Engine.

Prices reduced. Catalogue "B" on application.
Address the nearest office,

RIDER-ERICSSON ENGINE CO.,

Succeeding { DELAMATER IRON WORKS,
RIDER ENGINE CO.



22 Cortlandt St., NEW YORK.
239 and 241 Franklin St., BOSTON.
692 Craig St., MONTREAL, P. Q.



86 Lake St., CHICAGO.
40 N. 7th St., PHILADELPHIA.
22 A Pitt St., SYDNEY, N. S. W.



Boston Office: 48 Congress St., Room 23.

MASON SAFETY TREAD.

UNWEARABLE. NON-SLIPPING.

The approved stair covering. Refer to Brooklyn Bridge and Boston Subway. For information address
American Mason Safety Tread Co., 40 Water Street,
BOSTON.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Dubois, Pa. — The plans of Chas. M. Robinson, of Altoona, are stated to have been accepted for a school; cost, about \$30,000.

Eau Claire, Wis. — The Eau Claire Grocery Co. is to erect a business building adjoining its present structure, at a cost of \$50,000.

Elizabeth City, N. C. — Congress has appropriated \$50,000 for a public building.

Elmira, N. Y. — The Hedding Methodist Society is said to be considering the matter of erecting a \$40,000 edifice.

Erie, Pa. — There is a movement on foot to build a \$100,000 Y. M. C. A. Building.

Fitchburg, Mass. — \$50,000 has been appropriated by Congress for a public building.

Flushing, N. Y. — The 17th Separate Company is to have a new armory. The State has purchased six lots in Amity St., from the Thomas H. Leggett estate, and on this site the armory is to be erected.

Gainesville, Ga. — The plans submitted by John A. Pierce for the new City-hall have been accepted.

Germantown, Pa. — Hales & Ballinger, Philadelphia, have prepared plans for a three-story brick stable, 60' x 150', to be built at the Junction.

Hartford, Conn. — It is stated that the Trustees of Trinity College have decided to erect a \$40,000 building, to be known as a Natural Science Hall.

Hebron, Me. — A new building for girls is to be erected this spring on the Hebron Academy grounds. The main structure will be 48' x 164', having three stories. There will also be a wing 35' x 52', which will contain the kitchen, matron's quarters and dining-room, the latter to have accommodations for 278 students. Mrs. B. F. Sturtevant, of Boston, Mass., is to present it as a gift to the Academy.

Ironwood, Mich. — Report states that Dan Egan, Ashland, Wis., has received the contract for a high school here, at \$30,000.

Janesville, Wis. — A three-story brick warehouse will be erected by the Janesville Machine Co.; cost, \$15,000.

Jersey City, N. J. — At a late conference of the Jersey City Boards of Finance and Education it was decided to allow \$100,000 for a new school-house to be erected on the site of School No. 20, destroyed by fire recently, and to purchase the four adjoining lots for \$12,000. It was also decided that a primary school should be built in the Greenville section, and \$6,000 was allowed for the site and \$18,000 for the building.

Knoxville, Tenn. — It is reported that plans prepared by Baumann Bros. have been adopted for a city hospital; cost, \$30,000.

La Grange, Ill. — It is announced that J. Neal Tilton, 112 Clark St., Chicago, will design the new Lyons Township High School Building, to be erected here. The present building will also be remodelled, and the total cost of the improvements will be about \$35,000.

Lancaster, Pa. — A brick and stone school is to be erected at a cost of \$25,000; architect, C. Emlen, Urban.

Lansdale, Pa. — This place has been selected as a suitable site for the location of the new college to be built by the German Baptist Brethren. The structure will cost \$100,000. Students of all denominations, will be admitted to the institution, it is said.

PROTECTIVE PAINTS

FOR IRON OR WOOD

Ensuring Durability and Beauty

HARRISON BROS. & CO.

Incorporated

PHILADELPHIA CHICAGO NEW YORK

Pamphlets and information on application.

"La Construction Moderne,"

A journal of whose merits our readers have had opportunity to judge because of our frequent reference to it and our occasional republication of designs that are published in it, is the most complete and most interesting of the French architectural journals.

The thirteenth annual volume is now in course of publication.

Subscription, including postage, 35 francs.

Each weekly issue contains, besides the illustrations included in the text, two full-page plates, which by themselves are worth double the amount of the annual subscription.

PRICE OF BACK ANNUAL VOLUMES,

:: 40 Francs. ::

Address for subscriptions and catalogues,

LIBRAIRIE DE LA CONSTRUCTION MODERNE,
13 Rue Bonaparte, Paris, France.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Lawrence, Mass. — A bill appropriating \$100,000 has been passed by Congress for the erection of a public building.

Lebanon, Ind. — It is said that the Commissioners of Boone County have passed an order for the erection of a new Court-house at an estimated cost of \$250,000; Boll & Taylor, of Cincinnati, architects.

Lockport, N. Y. — Congress has appropriated \$50,000 for a public building.

London, Ont. — It is stated that the St. James Presbyterian Society will build a \$25,000 church. Neil McNeil, Chmn.

Manayunk, Pa. — Efforts are being made for the organization of a Polish Catholic Church under the direction of Rev. M. Kopytkiewicz, who has been appointed to the place by Archbishop Ryan. Plans are under way looking to the purchase of a suitable site and to the erection of an edifice.

Mansfield, O. — The plants of the Monarch & Baxter Stove Companies were destroyed by fire, with a loss of \$90,000. They will be rebuilt.

Martinsville, Ind. — J. M. Carleton, Secretary School Board, states that a \$15,000 brick high-school building will be erected at this place.

Mattoon, Ill. — The citizens are stated to have voted to issue \$25,000 school bonds.

Merrill, Wis. — A \$25,000 hotel is to be erected by a stock company.

Mexico, Mo. — It is stated that G. D. Ferris will erect a new hotel.

Morgantown, W. Va. — A \$25,000 Court-house for Doddridge County is contemplated.

Newport News, Va. — The Newport News Abattoir Co. will build a plant near this city at an estimated cost of \$500,000. E. Palmer, president, Merchantsville, N. J.

Newport, Vt. — \$50,000 has been appropriated by Congress for a public building.

Newton, Mass. — S. J. Brown, Boston, has prepared plans for a one-story stone stable to be built on Prospect Ave., for A. Fred. Brown; cost, \$3,000.

New York, N. Y. — It is reported that a hotel and restaurant will be erected by Mr. Thurley of this place, and the Pabst Brewing Co., of Milwaukee, Wis., after plans prepared by H. F. Kilbourn, of New York, and Otto Strack, of Milwaukee. The

DYCKERHOFF IS THE BEST

Portland Cement

E. THIELE, 78 William St., N. Y.
SOLE AGENT.

PLEASE SEND FOR PAMPHLET.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

building will be 50' x 110', ten stories high, constructed of brick, stone and terra-cotta, have tile roof, and will cost about \$250,000.

St. Agnes's Church corporation, Rev. H. A. Brann, rector and treasurer, whose building on 43d St., near 3d Ave., was partly burned in December last, has filed plans for the rebuilding of the damaged parts of the structure, which operation will cost in the neighborhood of \$40,000.

Northampton, Mass. — B. Hammett Seabury, of Springfield, has prepared plans for a three-story brick store and office building, to be built on Pleasant St., for John T. Dewey; cost, \$15,000.

Norwich, Conn. — A bill appropriating \$100,000 for a public building has been passed by Congress.

Omaha, Neb. — Funds are being raised in South Omaha for the establishment of a permanent hospital.

It is reported that Armour & Co. have had plans drawn for a warehouse to be built facing Q Street viaduct in South Omaha. It will be ten-story and basement, 200' x 200', of brick and stone, with gravel roof; cost, \$175,000. The company also has plans for several additions to its packing plant.

Pasadena, Cal. — A Michigan syndicate has been formed to erect a \$500,000 hotel, to be run on the European plan, in connection with the tourist business.

Pittsburgh, Pa. — Rutan & Russell, 1011 Tradesmen's Building, have prepared plans for the new church, to be erected by the St. Augustine Roman Catholic Society, at 38th and Bank Sts.; estimated cost, \$80,000.

Pouca, Neb. — W. R. Parsons & Son Co., of Des Moines, Ia., have prepared plans for a two-story school-building, slate roof; cost, \$14,000.

Portland, Ind. — Report states that the plans of M. S. Mahurin, of Fort Wayne, have been accepted for a \$23,000 Jail.

Raleigh, N. C. — The plans for the new annex to the Agricultural Building have been accepted. The building will be three stories, and cost between \$15,000 and \$17,000. H. E. Bonitz, of Wilmington, architect.

Rock Island, Ill. — John Volk & Co. have secured the contract for the school-house to be erected here; cost, \$30,000; a., Fr. Borgolte.

Rome, N. Y. — \$50,000 has been appropriated by Congress for a public building.

Salina, Kan. — Orff & Guilbert are preparing plans for a large brick high-school building to be erected here. It will cost about \$32,000.

Salinas, Cal. — The citizens have voted to erect a \$30,000 school.

Seattle, Wash. — It is stated that the Pacific Coast Co. will erect additional warehouses on its dock, and make other improvements costing \$50,000.

Scottsboro, Ala. — \$8,000 of the money derived from the sale of bonds is to be used in making improvements in Court-house.

Severy, Ark. — The main building of the Galloway College, of this place, will be constructed at once, to cost \$30,000.

Shell Rock, Ia. — The contract for the erection of the new school-building has been let to C. E. Patterson, at \$10,200.

Sherman, Tex. — The Council is said to have voted to appropriate \$20,000 for a school.

Sioux City, Ia. — The Trustees of the Morning Side College are considering the matter of erecting a \$40,000 college.

Springfield, Mass. — Frank E. Owen is to erect a four story brick store and flat building on Main St.; cost, \$20,000.

\$20,000 has been appropriated for public buildings by Congress.

St. Louis, Mo. — John S. Sullivan will erect a seven-story business building, corner 10th St. and Washington Ave.; cost, \$124,000.

Superior, Wis. — It is stated that a \$25,000 addition will be erected to the Blaine School.

Tacoma, Wash. — The University Land Co. will erect at once for the Puget Sound University, three buildings, two dormitories and a main school-building. The main building will cost \$120,000, and the girls' dormitory \$30,000.

Tifton, Ga. — The Masonic Fraternity will have plans drawn for a three-story brick structure to be erected on Main St.

Toledo, O. — Plans have been prepared for an apartment-house to be built for J. S. Wolcott on Michigan and Madison Sts. It will be a seven-story fire-proof building, and will cost \$150,000.

Topeka, Kan. — Congress has appropriated \$85,000 for a public building.

Trenton, Tenn. — A \$30,000 Court-house is to be built from plans by W. Chamberlin & Co., Knoxville.

Valdosta, Ga. — A movement is on foot to build a \$50,000 hotel-building. Messrs. T. G. Cranford, J. T. & B. H. Roberts are at head of movement.

Plans are being prepared by W. Chamberlin & Co., Knoxville, Tenn., for a \$25,000 hotel, to be erected in this city by a stock company.

Washington, D. C. — Plans are being prepared for a \$125,000 club-house for the Army and Navy Club.

Wheeling, W. Va. — The Pabst Brewing Co., of Milwaukee, Wis., has purchased property in Benwood, and will erect a modern brick building.



GRAND RAPIDS CARVED MOULDING CO.
9-11 MYRTLE ST., GRAND RAPIDS, MICH.
THESE MOULDINGS ARE MACHINE CUT NOT PRESSED



The C.T. NELSON CO.
COLUMBUS, OHIO.
WHOLESALE MANUFACTURERS OF
VERANDA COLUMNS
NEWELS, BALUSTERS, CARVED CAPITALS
RAIL, ETC.
DETAIL WORK A SPECIALTY
COLUMNS BORED OR BUILT UP
WRITE FOR PRICES AND CATALOGUE. Any Size Furnished up to 24 In. Diameter and 24 Ft. Long

DO YOU KNOW

Why some white paint darkens and chalks off?
Why some tinted paints fade or discolor?

IT IS THE FAULT OF THE PIGMENT:

Pure white lead paints have these defects. The remedy is ZINC WHITE. Combination paints based on ZINC WHITE are permanent in color and durable in material.

FREE: Our Practical Pamphlet, **THE NEW JERSEY ZINC CO.,**
"The Paint Question." 52 WALL ST., NEW YORK.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Wilkesburg, Pa. — It is reported that Architect A. K. Miller, 514 Pennsylvania Building, Pittsburgh, has prepared plans for a three-story brick and stone bank-building for the Second National Bank, to cost about \$20,000.

Yankton, S. D. — The burned building at the State Insane Asylum will soon be replaced. \$70,000 has been appropriated with which to erect 3 buildings.

APARTMENT-HOUSES.

Boston, Mass. — Fleet St., Nos. 26-30, Ward 6, three-story bk. apart., 53' x 55' x 87', flat roof, stores; \$35,000; o., Benj. Piscopo; b., S. Noelle; a., F. M. Churchill, 85 Devonshire St.

Brooklyn, N. Y. — Ashland Pl., nr. De Kalb Ave., seven-story bk., st. & terra-cotta apart., 44' x 145'; \$80,000; o., Hugh Stewart, Fulton and Bridge Sts.; a., J. G. Glover, 186 Remsen St.

Chicago, Ill. — Forty-fifth St. and Berkeley Ave., three-story bk. & st. apart., 100' x 100', comp. roof, steam; o., Jos. McCormack; a., Thos. McCall, 53d St. & Lake Ave.

Bryn Mawr Ave., three-story st. & bk. apart., comp. roof, steam; \$48,000; a., Niels Buck, 123 La Salle St.

New York, N. Y. — One Hundred and Twelfth St., nr. 8th Ave., 2 five-story & base, flats, 37' 6" x 82' 4" x 100' 11"; \$80,000; o., S. D. Lanchantin, 206 Hawthorne St., Brooklyn; a., Lorenz F. J. Weiher, Jr., Mount Morris Bank.

One Hundred and Sixtieth St., cor. Elton Ave., 2

BUILDING INTELLIGENCE.

(Apartment-Houses Continued.)

four-story bk. & st. flats & stores, 25' x 75' & 25' x 95'; \$40,000; o., Geo. A. MacDonald, 51 E. 117th St.; a., Edward Wenz, 1491 Third Ave.

West Central Park, cor. 33d St., seven-story bk. & st. apart., 75' x 120'; \$150,000; o., James Livingston, 8 W. 91st St.; a., Neville & Bagge, 217 W. 125th St.

Eleventh St., Nos. 516-518, 2 six-story & base, bk. stores & flats, 25' x 81' 7"; \$87,000; o., L. Bachrach, 128 Livingston St.; a., G. F. Pelham, 503 Fifth Ave.

Third St., Nos. 71-75, 3 six-story bk. stores & flats, 26' 10" x 26' 8" x 82' 9"; \$85,500; o., Jacob Kassewitz, 45 Avenue A; a., G. F. Pelham, 503 Fifth Ave.

Eighty-first St., Nos. 504-512, 5 five-story bk. flats, 25' x 85' 10"; \$100,000; o., Andrew Brose, 1 Madison Ave.; a., Jobst Hoffmann, 247 W. 116th St.

Ninety-eighth St., nr. Columbus Ave., five-story bk. flat, 25' x 86' 10"; \$25,000; o., Peter Arnot, Mills & Orchard Sts., Astoria; a., W. C. Dickerson, 149th St. & 3d Ave.

Ninety-ninth St., nr. Columbus Ave., 2 five-story bk. flats, 25' x 86' 10"; \$50,000; o., Mary McWalters, 43 W. 98th St.; a., W. C. Dickerson, 3d Ave. & 149th St.

Eightieth St., nr. Amsterdam Ave., seven-story bk. flat, 50' x 92' 2"; \$73,000; o., John J. White, 209 W. 80th St.; a., G. A. Schellenger, 128 Broadway.

Amsterdam Ave., cor. 70th St., 2 six & seven-story bk. stores & flats, 30' x 45' x 95' 5" & 58' 5"; corner \$185,000, inside \$90,000; o., Andrew J. Kerwin, 893 Boulevard; a., S. B. Ogden & Co., 364 Lexington Ave.

Iron-Work.

JACKSON ARCHITECTURAL IRON WORKS,
ESTABLISHED 1840.

IRON

Fronts for Buildings, Cornices, Lintels and Sills, Doors and Shutters, Girders and Beams, Fire-escape
Balconies and Ladders, Columns and Roofs, Sky and Floor Lights, Stable Fittings and Fixtures,
Sidewalk Lights. Artistic work in Wrought and Cast Iron, Brass and Bronze.
Designs and Estimates of Cost Furnished for Work in any Department.
Foundry and Shops, East 28th and East 29th Sts. Office, 315 East 28th St., New York.



J. H. ELLER & CO.,

...MANUFACTURERS OF...

Stamped Metal Ceilings, * * *
Ornamental Crestings, Finials, etc.,

GALVANIZED CORNICE, * * * *

* * * GALVANIZED IRON SKYLIGHTS.

Pressed Steel Brick and Rock Face Siding. Galvanized Steel Eaves Trough
and Conductor Pipe.

Office: 1200 E. FIFTH STREET.

CANTON, OHIO.

THE

"LIBRARY OF CONGRESS."

TWENTY GELATINE PLATES,

14" x 16½" in Portfolio.

PRICE, \$5.00.

This excellent series of Architectural Illustrations forms No. VI of
the Series of Monographs of American Architecture.

Published by

THE AMERICAN ARCHITECT AND BUILDING NEWS CO.

BUILDING INTELLIGENCE.

(Apartment-Houses Continued.)

Boulevard, nr. 107th St., seven-st'y bk. store &
flat, 50' x 89' 4"; \$80,000; o., N. & L. Ottinger, 92d
St., cor. Madison Ave.; a., Henry Anderson, 1180
Broadway.
Seventh Ave., cor. 114th St., seven-st'y bk. flat,
50' 5½" x 95'; \$80,000; o., Leith & Glenn, 217 W. 125th
St.; a., Neville & Bagge, 217 W. 125th St.

CHURCHES.

Chicago, Ill. — Kedzie Ave., cor. Walnut St., two-
st'y granite, terra-cotta & bk. church, 57' x 101',
slate & tile roof; \$25,000; o., Garfield Park M. E.
Church; a., Wesley Arnold, Oak Park.

Cleveland, O. — Burton St., nr. Clark St., two-st'y
bk. & st. church, 88' x 144', steam; \$40,000; o., St.
Procop's Catholic Society; a., Fugman & Uhlrich,
89 Euclid Ave.

Houston, Tex. — Texas Ave. and Milan St., one &
two story bk. & st. church, 50' x 100', slate roof,
steam; \$35,000; o., German Evangelical Congrega-
tion; a., O. H. P. Kudesill & Son.

Minneapolis, Minn. — Second St. and Seventh Ave.,
one-st'y bk. church, 76' x 140', slate roof, furnace;
o., Address Rev. Mr. Timothy, pastor; a., Herman
Kretz & Co., St. Paul.

CLUB-HOUSES.

Brooklyn, N. Y. — Knickerbocker Ave., cor. Bleecker
St., three-st'y bk. club-house, 100' x 105'; \$60,000;
o., C. Alchmann, 335 Grove St.; a., P. Brandner, 47
Liberty St., New York.

EDUCATIONAL.

Eau Claire, Wis. — Two-st'y bk. & st. school, 70'
x 87', shingle roof, furnace; \$15,000; o., Board of
Education; a., C. L. Brown.

Marshall, Minn. — Two-st'y bk. & st. school, 70' x
170', slate roof, steam; \$35,000; o., City of Marshall;
a., W. B. Dunnell, Bank of Commerce Building,
Minneapolis.

New York, N. Y. — Ninety-ninth and One Hun-
dredth Sts., nr. 2d Ave., five-st'y bk. public school,
150' x irreg.; \$260,000; o., City of New York; a., C.
B. J. Snyder, 585 Broadway.

One Hundred and Eighth and One Hundred and
Ninth Sts., nr. 2d Ave., three and five story st.
school, 65' x 135'; \$123,000; o., City of New York;
a., C. B. J. Snyder, 585 Broadway.

FACTORIES.

Brooklyn, N. Y. — Flushing Ave., cor. Nostrand
Ave., five-st'y bk. mill-construction factory, 65' x
100'; \$50,000; o., Webster & Anderson, 171 Broad-
way, New York City; a., David W. King, 1133
Broadway, New York City.

Chicago, Ill. — Fifth Ave., Nos. 477-485, seven-st'y

BUILDING INTELLIGENCE.

(Factories Continued.)

bk. factory, 100' x 125'; \$60,000; o., Allen B. Wrisley
Co.; a., W. J. Brooks.

Milwaukee, Wis. — Oregon St., three-st'y bk. & st.
machine-shop, 114' x 120', comp. roof; \$17,000; a.,
C. F. Ringer.

HOUSES.

Boston, Mass. — Patten St., nr. Wachuset St.,
Ward 23, two 2½-st'y fr. dwells, 24' x 35', pitch
roofs, furnaces; \$9,000; o. & a., Jas. Manning, 120
Tremont St.

Endicott St., No. 219, Ward 6, two-st'y bk. dwell.,
19' x 40', flat roof, stoves; \$6,000; o., Antonio
Bruno; a., W. E. Clarke, 15 Court Sq.

Wachuset St., Nos. 15-19, Ward 23, 2 two-st'y fr.
dwells, 28' x 48', pitch roofs, furnaces; \$9,000; o.
& b., Thos. J. Tobin, 3628 Washington St.

Norris St., nr. Marion St., Ward 1, 2 two-st'y fr.
dwells, 21' x 46', flat roofs, stoves; \$7,000; o. & b.,
Israel Levin, 315 Cambridge St.

Waumbeck St., Ward 21, 2½-st'y fr. dwell., 27' x
40', pitch roof, furnace; \$5,000; o., John H. French,
2696 Washington St.; b., T. R. Willis.

W. Park St., nr. Washington St., Ward 20, 2½-st'y
fr. dwell., 27' x 52', pitch roof, furnace; \$5,000; o.
& b., Jacob P. Power, 583 Broadway.

Bremen St., nr. Putnam St., Ward 1, 2 two-st'y
fr. dwells, 21' x 46', flat roofs, stoves; \$8,000; o.
& b., L. S. Glasberg, 58 Webster St.

Linden Park, Nos. 47-53, Ward 18, 4 two-st'y bk.
dwells, 14' x 20' x 55', flat roofs, stoves; \$22,000; o.
& b., Simon Heller & Co., 91 Webster St., E. Boston.

Brookline, Mass. — Chestnut Hill Road, two 2½-st'y
dwells, pitch roofs, furnaces; \$14,000; o., B. E.
Bates; b., Wm. Pettigrew.

Regent St., 5 three-st'y bk. & st. dwells, steam;
\$60,000; o. & b., H. M. Whitney; a., P. Butterworth.

Everett, Mass. — Main St., three-st'y bk. dwell.,
flat roof, steam; \$16,000; o. & b., Herbert E. Den-
nison.

Brooklyn, N. Y. — Willoughby Ave., nr. Tompkins
Ave., 2 three-st'y bk. & st. dwells, 19' x 50'; \$10,000;
o. & b., Julius Strauss, 1058 Broadway; a., M. J.
Smallheiser, Bowery & Spring St., New York City.

Avenue G, cor. E. 23d St., 4 two-st'y & attic fr.
dwells, 26' x 45', shingle roof; \$20,000; o., Daniel
Lauer, 1626 New York Ave.; a., B. Driesler, 1432
Flatbush Ave.

Parkway, cor. Degraw St., 6 three-st'y & base.
bk. dwells, gravel roofs; \$120,000; o. & a., F. L.
Hine, 936 St. Johns Pl.

Jersey City, N. J. — Belmont St., nr. Summit Ave.,
2½-st'y fr. dwell., 27' x 51'; \$5,000; o., Geo. Double-
day; a., W. A. Tilton.

Union St., No. 128, four-st'y bk. dwell., 25' x 57';
\$7,000; o. & a., David Armour.

Structural and Ornamental.....

IRON WORK, CASTINGS, :: ::
STEEL BEAMS, Etc.

..... WRITE US

DAVENPORT FOUNDRY and MACHINE CO.,

1678 W. 4th St., Davenport, Iowa.

Contracts executed anywhere.

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

Steel Beams

4 inches
to
20 inches
deep.

ALL STRUCTURAL SHAPES.

NEW YORK OFFICE . . . 45 BROADWAY.

BUILDING INTELLIGENCE.

(Houses Continued.)

Milwaukee, Wis. — Grand Ave. and Thirty-first
St., three-st'y & base. bk. dwell., 42' x 58', slate
roof, steam; \$12,000; o., Wm. H. Meyer; a., Otto
Strack.

Cedar St., nr. 15th St., two-st'y fr. dwell., fur-
nace; \$8,500; o., Mrs. M. E. Torrestal.

Newark, N. J. — S. Eleventh St., nr. Central Ave.,
2½-st'y fr. dwell., 32' x 78'; \$6,000; o., Louis Meyer;
a., Wm. K. Schoenig.

Omro, Wis. — Two-st'y fr. dwell., 40' x 50', hot
water; \$6,000; o., W. E. Sharp; a., Wm. C. Klap-
proth, Oshkosh, Wis.

Philadelphia, Pa. — Vine St., No. 1027, three-st'y
bk. & st. dwell., 18' x 82'; \$7,500; o., John T. Cro-
nin; b., H. J. Wenzelberger; a., Henry D. Daget.

Plainfield, N. J. — W. Seventh St., 2½-st'y fr. dwell.,
28' x 35'; \$5,000; o., Plainfield Real Estate Co.; a.,
F. L. Lancaster.

St. Louis, Mo. — Washington Ave., two 2½-st'y bk.
dwells, 28' x 42', slate roofs, furnaces; \$10,000; o.,
Jos. Weiner; a., Will Levy, Odd Fellows Building.

Washington Ave., nr. Lake St., two-st'y bk.
dwell., 38' x 54', slate roof, hot water; \$6,000; o.,
S. S. Pomeroy, care architect; a., J. L. Howard, 64
Turner Building.

Washington Ave., nr. Lake St., two-st'y granite
& bk. dwell., 38' x 52', slate roof, hot water; \$7,000;
a., J. L. Howard, Turner Building.

MERCANTILE BUILDINGS.

Boston, Mass. — Northampton St., cor. Albany St.,
Ward 17, three-st'y bk. business building, 95' x 90',
flat roof, steam; \$20,000; o., Geo. O. Conant; a., A.
B. Pinkham, 24 Warren St.

Peoria, Ill. — Four-st'y bk. & st. business building,
comp. roof, steam; \$30,000; o., D. M. Mayer; a., J.
A. Shank, 212 S. Adams St.

PUBLIC BUILDINGS.

Springfield, Ill. — Four st'y st. court-house, 92' x
123', metal & tin roof, steam; \$50,000; o., Sangamon
County; a., S. J. Hanes and S. A. Bullard, Farmer
Bank Building.

STABLES.

Birmingham, Ala. — Two-st'y bk. livery-stable,
140' x 150', comp. roof; \$15,000; o., J. Fies & Sons;
a., T. U. Walter & Ullman.

Des Moines, Ia. — Walnut and Ninth Sts., 2½-st'y
bk. barn, 60' x 132'; \$15,000; o., Frank Baylies; a.,
Clinton Nourse.

Twelfth St., nr. Locust St., two-st'y bk. & st.
livery barn, 60' x 132'; \$10,000; o., Chas. Gilcrest;
b., John Porter.

New York, N. Y. — Seventh St., No. 251, six-st'y bk.
stable & factory, 24' 9" x 95'; \$15,000; o., Adolph
Mandel, 333 E. 4th St.; a., Horenburger & Straub,
122 Bowery.

Omaha, Neb. — N St., No. 2415, three-st'y bk. barn,
60' x 150'; \$15,000; a., L. A. Davis.

STORES.

New York, N. Y. — Twelfth St., cor. University Pl.,
ten-st'y store & loft-building; \$160,000; o. & b., J.
Stanley, 1133 Broadway; a., Wm. C. Hazlett, 1133
Broadway.

Willis Ave., nr. 3d Ave. & 148th St., seven-st'y
bk. office & store building, 23 6¼' x 65.47' x 48.93'
x 49.30', tile roof; \$55,000; o., W. F. & C. H. Smith,
149th St. & 3d Ave.; a., John De Hart, 1637 Fox St.

TENEMENT-HOUSES.

Chicago, Ill. — Garfield Boulevard and Ashland
Ave., three-st'y st. flat, 50' x 60', comp. roof, steam;
\$18,000; o., Robt E. Fruin, 3027 State St.; a., Wm.
J. Brinkmann, 86 Metropolitan Block.

New York, N. Y. — One Hundred and Thirty-third
St., nr. 8th Ave., 2 four-st'y bk. & st. flats, 25' x 85';
\$34,000; o. & a., S. M. Holden, 81 E. 124th St.

Pike St., cor. Monroe St., six-st'y bk. & st. store
& tenement, 35' x 45'; \$20,000; o., L. Ratner, 163
Bowery; a., M. Bernstein, 245 Broadway.

Eleventh St., No. 296, five-st'y bk. tenement, 24'
7½' x 85' 7" & 85' 8½"; \$17,000; o., J. H. Cooper, 294
W. 11th St.; a., G. A. Schellenger, 128 Broadway.

Cherry St., cor. Catharine St., 3 six-st'y bk. tene-
ments, 30' x 36' x 63' 8½" & 62' 6"; \$85,000; o., Louis
J. Levy, 205 E. Broadway; a., Horenburger &
Straub, 122 Bowery.

THEATRES AND HALLS.

St. Louis, Mo. — Twentieth St. and Clark Ave., four-
st'y bk. & st. Railroad Y. M. C. A. Building, gravel
roof, steam; \$75,000; o., St. Louis Y. M. C. A.; a.,
T. C. Link, Century Building.

Youngstown, O. — One & two story fr. & st. theatre,
shingle roof, hot air; \$75,000; o. & a., W. H. Park
Land Co., H. Hamilton, manager, 123 N. Phelps St.

WAREHOUSES.

Moline, Ill. — Two-st'y bk. & steel warehouse &
foundry, tile and gravel roof, steam; \$40,000; o.,

JAP-A-LAC

NEW FLOOR FINISH

The "HARDEST DRYING" and most "ELASTIC" Floor Varnish ever used.

REGISTERED AND MANUFACTURED BY

THE GLIDDEN VARNISH COMPANY, CLEVELAND, O.

THE KENNEY FLUSHOMETER...



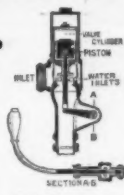
An ingenious device for flushing water-closets. Takes the place of noisy and dirty overhead flush-tanks with troublesome chain, ball-cock, etc.

SIMPLE, SURE AND SANITARY.

ENDORSED AND SPECIFIED BY LEADING ARCHITECTS ALL OVER THE COUNTRY.

The Kenney Flushometer is patented, and manufactured only by The Kenney Co., who guarantee the successful operation of the system.

THE KENNEY COMPANY, 72-74 TRINITY PLACE, NEW YORK.



Catalogue?

THE BRAENDER CELLAR DRAINER.

AUTOMATIC.

Operated by WATER or STEAM PRESSURE.

Is the Best; therefore the Cheapest. It is used in Municipal and U. S. Government Departments, endorsed by leading sanitary experts, and is guaranteed to do what is claimed for it. Sold to the trade only. Write for circular and testimonials.

PHILIP BRAENDER, 47 W. 125th St., NEW YORK.

SALES (W. N. McKENNA, 73 Chestnut St., Boston, Mass. J. H. WHITE, 631 W. Baltimore St., Baltimore, Md. AGENTS) DOUGLASS & WEBBER, 42 Dearborn St., Chicago, Ill.

ENORMOUS. Over 1,000,000

.. CLEAN SWEEP TRAPS ..

In use in the public buildings and residences in this country, Canada, England and Scotland.

Never a complaint as to their Sanitary Worth. Strictly up-to-date.

They never foul or become clogged by use.

Send for new catalogue.

DETROIT SANITARY SUPPLY CO., Detroit, Mich.

Office: 27 and 29 Jefferson Ave.

Works: 35 to 39 First St.

BUILDING INTELLIGENCE.

(Warehouses Continued.)

Moline Plow Co.; a., W. L. Paul, care Moline Plow Co.

New York, N. Y.—Washington St., cor. Desbrosses six-st'y bk. warehouse & lofts, 21' 10" x 82' 4" & 82' 8"; \$35,000; o., S. L. Mitchell, 1782 Lexington Ave.; a., Kurtzer & Rohl, 7th St. & 3d Ave.

MISCELLANEOUS.

Mercerburg, Pa.—Three-st'y bk. & st. dining-hall & dormitory, 45' x 105', slate roof, steam; \$70,000; o., Mercerburg Academy; a., M. R. Rhoades, Chambersburg, Pa.

Newport, Ky.—Twelfth St., two-st'y bk. & st. car-house & shop, 200' x 312', corrugated iron roof; \$60,000; o., Covington, Newport & Cincinnati St. Ry. Co.

Portland, Ind.—Two-st'y bk. & st. jail & sheriff's residence, 40' x 90', slate roof, steam; \$23,000; o., Jay County; a., Wing & Mahurin, Fort Wayne.

St. Paul, Minn.—Randolph St., two-st'y bk. & st. orphan asylum, slate roof, hot water; \$38,000; o., St. Joseph Orphan Asylum; a., Herman Kretz & Co., New York Life Building.

COMPETITIONS.

CHANGE OF SCALE.—Society of Beaux-Arts, Class B, Order Programme No. 9, Competition No. 34. The scale of finished plan has been reduced from 1-8" to the foot to 1-16" to the foot. ERNEST FLAGG, Chairman.

PROPOSALS.

BANK AND OFFICE BUILDING.

[At Lake City, Ia.] Sealed proposals will be received by the undersigned until March 20, 1899, at the Citizens' Bank, Lake City, Ia., for the furnishing of all materials and labor for the erection of a bank, two stories, with offices, entertainment and I. O. O. F. hall. E. W. & W. A. TOWNSEND & JOHN HANSON, for I. O. O. F. 1211

PROPOSALS.

CHURCH.

[At Lake Crystal, Minn.] Sealed proposals will be received by D. H. Edwards, Secretary of Welsh C. M. Building Committee until March 22, 1899, for the erection and completion of a frame church-building, 46' x 71' in size, to be built for the Welsh C. M. Society. D. H. EDWARDS, Secretary of Committee, Box 1193, Lake Crystal, Minn. 1211

SCHOOL-HOUSE.

[At Algona, Ia.] C. M. Doxsee, secretary, will receive bids until March 14, for the erection of an 8-room high-school building, after plans by Smith & Gutterson, architects, of Des Moines. Bids will also be received at same time for a steam-heating plant. 1210

SCHOOL-HOUSE.

[At Wood Lake, Minn.] The undersigned hereby gives notice that sealed proposals for the erection of a frame school-house at Wood Lake, Minn., including all labor and material, will be received by J. P. Hauck, clerk, until the third day of April, 1899. (Signed) H. G. WERNER, Director. 1211

LIFE-SAVING STATION.

[At Point Bonita, Cal.] Treasury Department, U. S. Life-saving Service, Washington, D. C. Sealed proposals will be received at this office until March 14, 1899, for the construction of a life-saving station at Point Bonita, Cal. S. I. KIMBALL, general superintendent. 1210

SCHOOL.

[At Louisville, Ky.] Bids are wanted March 15 for a school, including lighting, ventilating, heating, etc. WM. J. DAVIS, Secy. Com. on Bldgs. 1210

ANNEX TO INSANE ASYLUM.

[At Lancaster, Wis.] Bids are wanted March 15 for building an annex to the County Asylum for Insane and alterations in the County Home; also for hot-water heating in both buildings. HERMAN GRIMM, Chmn. Bldg. Com. 1210

THE J. L. MOTT IRON WORKS,

88 Beekman St., NEW YORK, N. Y.

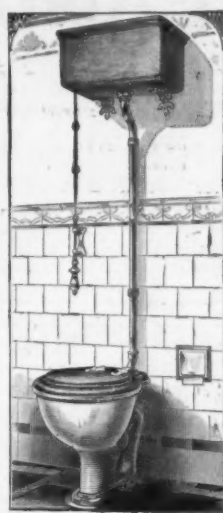
The Primo Improved Vitro-Adamant.

PLATE 495 R.

No. 33 Design I. Cistern with Nickel-plated Brass Brackets, Nickel-plated Brass Flush Pipe, Nickel-plated Chain, Hardwood Pull, and Brass Floor Flange.

Copyrighted, 1897.

Copy of Circular furnished on application.



References in New York:

Commercial Cable Building,
R. G. Dunn Building,
Bowling Green Office Building.

For information and printed matter

Adams Sewage Lift,

DREXEL BLDG., PHILADELPHIA, PA.

PROPOSALS.

COURT-HOUSE.

[At Canton, S. D.] Bids are wanted March 15 for a Court-house. M. B. BENNETT, Co. Aud. 1210

SUPERSTRUCTURE.

[At Mankato, Minn.] Bids are wanted March 15 (change of date) for the superstructure of St. Joseph's Hospital. J. B. MEAGHER, Secy. Bldg. Com. 1220

Treasury Department, Office Supervising Architect, Washington, D. C., February 25, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 30th day of March, 1899, and then opened, for the all the masonry work, roof-covering, etc., for the United States Post-office, Court-house, etc., building at San Francisco, Cal., in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Superintendent at San Francisco, Cal. JAMES KNOX TAYLOR, Supervising Architect. 1211

SCHOOL-BUILDING.

[At Louisville, Ky.] Plans will be received until March 15 for a \$45,000 pressed-brick school-building, to be erected at Second and Hill Streets. 1210

WIRE SCREENS.

[At Fort Hancock, N. J.] Office Constructing Quartermaster of Fort Hancock, N. J., Army Building, Whitehall St., New York City. Sealed proposals will be received here until March 14, 1899, for furnishing wire screens for 36 buildings at Fort Hancock, N. J. G. G. BAILEY, Capt., A. Q. M., U. S. V. 1210

Treasury Department, Office Supervising Architect, Washington, D. C., February 20, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 23d day of March, 1899, and then opened, for the interior finish, vault doors and linings, plumbing, gas-piping, approaches, certain changes, etc., for the United States Post-office and Court-house building at Kansas City, Mo., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the superintendent at Kansas City, Mo. JAMES KNOX TAYLOR, Supervising Architect. 1210

PORTLAND CEMENT.

[At Washington, D. C.] Office of the Commissioners, D. C., Washington. Sealed proposals will be received at this office until March 11, 1899, for furnishing 20,000 barrels, more or less, of Portland cement. JOHN B. WIGHT, JOHN W. ROSS, LANSING H. BEACH, Commissioners, D. C. 1210

VENTILATING AND HEATING.

[At Cleveland, O.] Bids are wanted March 10 for a ventilating and heating apparatus in the Children's Hospital at the City Infirmary. WM. J. AKERS, Dir. Charities and Correction. 1210

SUPERSTRUCTURE.

[At Iowa City, Ia.] Bids are wanted March 20 for finishing the basement and erecting the superstructure of the collegiate building. WM. J. HADDOCK, Secy. Bd. of Regents, State University. 1210

CEMENT, STONE, ETC.

[At Hawkins Point, Md.] U. S. Engineer Office, 312 St. Paul St., Baltimore, Md. Proposals for furnishing and delivering at Hawkins Point, North Point, Rock Point and Fort Carroll, cement, stone, brick, iron beams and lumber will be received until March 10, 1899. PETER C. HAINES, Col., Engrs. 1210

THE EXPANDED METAL

SYSTEM OF FIRE-PROOFING

Covers a construction of light concrete floors with imbedded sheets of heavy metal insuring strength for any requirement.

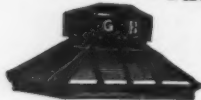
EXPANDED METAL Is the STANDARD METAL LATH in all markets. Used by all First-class Architects.

Write for Illustrated Book containing full information, FREE by mail.

Northwestern Expanded Metal Co. - Chicago
Central Expanded Metal Co. - Pittsburgh
Eastern Expanded Metal Co. - Boston
Pittsburgh Expanded Metal Co. - Pittsburgh

New York Expanded Metal Co. - New York
Southern Expanded Metal Co. - Washington
Expanded Metal Fireproofing Co. - Chicago
Merritt & Company - Philadelphia
Buffalo Expanded Metal Co. - Buffalo

G. BICKELHOUP,
PATENT



**METALLIC
SKY-LIGHT
WORKS.**

242 and 245 West 47th Street, New York.
Telephone: 675 39th St. a few doors west of Broadway.
Send for Catalogue.



80-Page Illustrated Catalogue
of over 250 Designs of
Superior

**WEATHER VANES,
TOWER ORNAMENTS,
CHURCH CROSSES,
FINIALS, Etc., Etc.**

Mailed to any address for 2-cent
stamp—half the postage.

T. W. JONES, Manufacturer,
170-172 FRONT ST., New York.

Better Than Money

Technical knowledge
cannot be lost or stolen. It
can always be converted into
cash. Work that is high
grade and well paid. Success
guaranteed. Best text books
free. Courses in



ARCHITECTURE

Bridge, Steam, Electrical or Civil Engineering;
Mathematics; Chemistry; Mining; Architectural
or Mechanical Drawing; Surveying; Plumbing;
Metal Pattern Drafting; Prospecting; Book-keep-
ing; Shorthand; English Branches

TAUGHT BY MAIL

Circular free. State subject you wish to study.
Estab. 1891. 45,000 students and graduates.
The International Correspondence Schools,
Box 986, Scranton, Pa.

**\$2.00
a
Month**



**"MONARCH" IS THE
SASH CHAIN BEST.**

Write for prices and particulars.
Orders filled promptly.

**The Bridgeport Chain Co.,
BRIDGEPORT, CONN.**

The Heliotype Printing Co.

LITHOGRAPHERS, ETC.

211 Tremont Street
Boston

FAC-SIMILE REPRODUCTIONS IN COLOR
OR MONOCHROME A SPECIALTY



Lithography

Heliotype

Color Printing

Photogravure

Maps, Plans, etc.

BEST WORK ONLY
PROMPT DELIVERY
REASONABLE PRICES

WRITE FOR ESTIMATES

Professional Ethics.

The following . . .

. . . CODE OF ETHICS . . .

Prepared in Conformity with the Best Standards of Practice, and Recommended to its Members by the Boston Society of Architects, was

ADOPTED BY THE SOCIETY, FEBRUARY 1, . . . 1898. . .

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Fireproof Building.

TRADE
RARITAN

**FRONT BRICK.
HEARTH TILE.
FIREPROOFING.**

MARK. MANUFACTURED BY
RARITAN HOLLOW AND POROUS BRICK CO.
Henry M. Keasbey, Vice-Prest. Office, 874 Broadway. Rowland P. Keasbey, Sec. and Treas.

CENTRAL FIREPROOFING COMPANY,
Manufacturers and Contractors for the Erection of
**HOLLOW TILE and POROUS
TERRA-COTTA FIREPROOFING**
HENRY M. KEASBEY, President. **874 Broadway, New York.**
CONTRACTS TAKEN IN ALL PARTS OF THE UNITED STATES OR CANADA.

PIONEER FIREPROOF CONSTRUCTION CO.,
1515 Marquette Building, Chicago.
Manufacturers and Contractors for every description of
Tile for Fireproofing
ALL KINDS OF BUILDINGS.
Our Goods embody all the latest Scientific ideas for rendering buildings Thoroughly Fireproof.
CONTRACTS TAKEN IN ALL PARTS OF THE UNITED STATES. Send for Illustrated Catalogue and Price List.

PITTSBURGH TERRA COTTA LUMBER CO.,
Manufacturers and Contractors for the Erection of
**POROUS AND DENSE
. TERRA-COTTA. FIRE PROOFING**
Works: PITTSBURGH, PA.
WASHINGTON, N. J.
E. PALESTINE O.
General Offices: Carnegie Building, Pittsburgh, Pa.
Eastern Offices: Townsend Bldg, New York, 411 John Hancock Bldg, Boston, Mass.

The Roebling System of Fireproofing.



Highest efficiency in fire and water tests of the New York Building Department and now the recognized standard of fireproof construction. Send for catalogue.

The Roebling Construction Company,
121 Liberty Street, New York.

MINERAL WOOL
FIRE, SOUND and VERMIN PROOF INSULATOR.

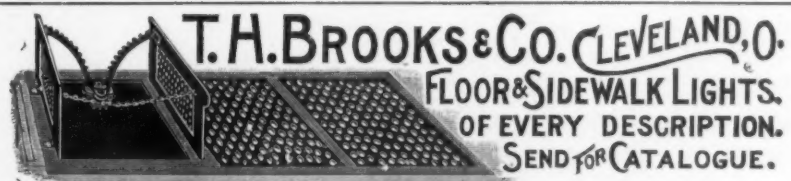
Samples and Circulars Free.

WESTERN MINERAL WOOL CO., || **U. S. MINERAL WOOL CO.,**
Cleveland, Ohio. || 1 Cortlandt St., New York.

THE ATLAS CLAY MATERIAL CO.

DENSE AND . . . **Fireproof Construction.** Contracts taken in any part of the United States or Canada. . . .
POROUS
HOLLOW TILE .

GERMAN NATIONAL BANK BUILDING, Cor. Wood St. and Sixth Ave. **PITTSBURGH, PA.**



LUDLOW SAYLOR WIRE CO. N. E. Cor. Fourth & Elm St
ST. LOUIS, MO.



Elevator Enclosures and Cabs,
Metal Work in Brass,
Wire and Wrought-Iron,
Office and Bank Railings,
Wire and Iron Fences, etc.

BENT GLASS FOR MODERN STORE FRONTS, Etc.
ORIEL CLASS CO.,
St. Louis, Mo., U. S. A.

