

THE AMERICAN ARCHITECT AND BUILDING NEWS

Vol. LXXIII

SATURDAY, AUGUST 3, 1901

No. 1336



SUMMARY:—

Aspirations for a Fine-Arts Building in New York.—A Way in which the Sale of Paintings could be promoted.—Fluctuations in the Prices of Paintings.—The Louisiana Purchase Exposition.—Death of Thaddeus Hyatt.—The Recent Accident to the Brooklyn Bridge.—Spiral Railroad Tunnels in the Engadine.—Traction by Compressed-air in France.—No Lemonade, no Work.—The Turin Exposition of 1902.	33
PLUMBING.—I.	35
BRISTOL, ENGLAND.	37
THE BASILICA EMILIA, ROME.	39
AN ENGLISH PITTSBURGH.	39

ILLUSTRATIONS:—

United States Post-office and Court-house, Abilene, Tex.—United States Post-office and Court-house, Creston, Iowa.—A Competitive Design for the Department of Justice Building, Washington, D. C.—Design for Village-hall, Glens Falls, N. Y.—Society Club-houses: Wellesley College, Wellesley, Mass.	
Ceramic-work Fountain, Limoges, France.	
Additional: The Chapter-house, Bristol, Eng.—Bristol, Eng., Churches: The Cathedral and St. Mary Redcliffe.—The Nave and North Aisle: St. Mary Redcliffe, Bristol, Eng.—St. Stephen's and St. Mary Redcliffe, showing Hexagonal Porch, Bristol, Eng.—United States Post-office and Court-house, Elmira, N. Y.—Sketches for the Mercantile Trust Building, San Francisco, Cal.	39
NOTES AND CLIPPINGS.	40

THE artists of New York "hope," as we are told, that some one will give a million dollars to buy land and erect a building in which all the artistic societies can have their executive officers, and where, presumably, the exhibitions of the American Salon will be held. Of course, no one could be more amiably disposed than ourselves toward the Fine-Arts Federation, and we should be glad to see an American Salon, in New York or anywhere else; but we do not see the necessity of waiting, either for the establishment of a Salon, or for the beneficent activity of the Fine-Arts Federation, until some one gives a million or two to help them along; and, as we have often said, we believe that a million dollars could, just now, be spent more effectively in encouraging American art, and American artists, in other ways than by building "executive offices," or even exhibition-galleries, for artistic societies. What artists in this country need most is to sell their pictures, and, in order to sell their pictures, they must paint good ones. Many of them already paint good pictures, but they would paint much better ones if they were encouraged as the foreign artists are; and many more, who do not paint very good ones, have the capacity for doing so, if they were encouraged to work and improve themselves by a prospect of professional success. Very few of these artists, comparatively, can belong to the New York Fine-Arts Federation, or would derive any direct benefit from the gift of one million, or two million, dollars to it, while the interest on this sum, if regularly devoted to the purchase of good, but unpretending, works of art, would carry hope and encouragement to multitudes of people, whose artistic aspirations are now held in check by the poverty of the prospects before them. Supposing money to earn four per cent, the interest on two millions would be eighty thousand dollars a year. This would not pay for many life-size bronze groups, but it would buy, at a price reasonably remunerative to the artist, at least a thousand pictures, of the sizes most suitable for hanging in the rooms of ordinary dwelling-houses, and the example set by a rich man of known taste in art would find so many imitators that a single purchase made in this way might open for multitudes of deserving, but obscure, artists the way to competence and fame.

IT is true that our very rich men are too busy with their own affairs to spend their time in searching for modest talent, and that it is much easier for them to endow art with a million dollars in a lump than to devote the interest on it to encouraging artists; but this difficulty could be overcome by putting the work of purchasing pictures into the hands of qualified persons. If some reliable dealer, interested in the object to be accomplished, could be commissioned, in each of a dozen of our large cities, to buy annually, for the account of

some well-known patron of the arts, a few thousand dollars' worth of pictures, under the condition that they should be painted by Americans, a great benefit would be conferred upon American art. The purchaser would be under no obligation to keep the pictures, if he did not wish to encumber himself with too many of them. The fact that he, or his agents, had considered them worthy of purchase would still be counted to the credit of the artist, and their transfer to other hands would not diminish, but rather increase that credit. Meanwhile, the philanthropist would, in all probability, find some works among his annual purchases so far superior to the rest that he would be unwilling to part with them, and the fact that he retained them would be an additional laurel for the artist.

SOME such plan as this might, as it seems to us, be easily carried out, and would do much, not only to encourage art, but to give artistic work a steady and adequate value. All American artists of experience will agree that much harm is done by the extravagant fluctuations in the selling-price of pictures. We once saw a canvas, about eight inches by twelve, by a living American artist, sold at auction for more than eight hundred dollars. A few weeks later, another, and much better, picture, at least four times as large, by the same artist, was sold, also at auction, for twenty-five dollars. Evidently, the reason for this difference was that a few admirers of the painter went to the first auction, and, having bought what they wanted, stayed away from the second, and it is equally evident that the way to avoid such variations, which are a serious injury to an artist, is to enlarge the market for works of art, by enlarging the circle of those who understand and appreciate them. In the same way, it is not many months since one of the most beautiful landscapes we ever saw, painted by an American whose most important work hangs in the Luxembourg, was for sale by a dealer at one hundred and fifty dollars, with no purchasers, at the same time that many thousands were being bid at auction for French pictures of less merit, at the sale of some noted New York collector. We do not say that the French pictures were not worth all that they brought, or that French artists, as a rule, are not better painters than the Americans, but some American artists stand among the very first, even in Paris, and what we need now is to bring the others up to the same standard. This can be done, as we believe, in the same way that French art has been encouraged, by providing ready sale, at fairly remunerative prices, for all good pictures, and honorable distinction, through medals or prizes, or, still better, through purchase by noted collectors, for the best ones. If these things could be made reasonably sure, nothing more would be necessary, and our artists might be left to study the beautiful subjects which their country affords, with confidence in a future of unexampled brilliancy for American art.

THE Commission of architects for the St. Louis Exposition is composed of Messrs. D. H. Burnham, of Chicago; Walker & Kimball, of Boston and Omaha; Carrère & Hastings, of New York; Van Brunt & Howe, of Kansas City; Cass Gilbert, of New York; and Messrs. Isaac S. Taylor; T. C. Link; Eames & Young; Barnett, Haynes & Barnett, and Widdemann, Walsh & Boissellier, all of St. Louis. The general scheme of planning for the grounds and buildings will follow the design prepared by Messrs. Walker & Kimball. It would not be easy to select a better Commission, and, as nearly all the members have already been conspicuously successful in the designing and grouping of buildings of the kind proposed, it may be presumed that the St. Louis Exposition will be, architecturally, extremely interesting.

MR. THADDEUS HYATT, once a conspicuous figure in New York, died a few days ago in England, where he had long resided, in his eighty-fifth year. It is so many years since Thaddeus Hyatt was famous as the most energetic of the Abolitionists, the friend of Phillips and Greeley, the defender of John Brown and of the Kansas Free-soil men, that the younger generation can hardly believe in the possibility that any one could have survived from an age so remote; but Mr. Hyatt was not only far from being superannuated, but was, even at an advanced age, more energetic than many a younger man. After the Civil War took the defence of the slaves out

of the hands of private citizens, Mr. Hyatt turned his attention to invention, and devised the famous "Hyatt sidewalk light," consisting of round pieces of glass, set in an iron framework, which has been ever since so extensively used, both in this country and abroad. The Hyatt light filled an urgent need, particularly in New York, where space under sidewalks is of great value, and acres of it were soon sold. So valuable an invention was exposed to infringement, and Mr. Hyatt had some trouble in defending his rights, but he prevailed at last, and is said to have acquired a great fortune from his royalties. His inventive faculties were not, however, put to sleep by riches, and he devoted himself, later, to the study of the combination of iron and concrete which has since been worked out in detail by Ransome, Monier and many others. Mr. Hyatt's original system, as he once himself explained it to us, consisted in reinforcing the tensile resistance of Portland-cement concrete by burying in the lower part of a mass of such concrete flat iron bars, punched with holes, in which were inserted short cross-pieces of stout wire. A rod of this kind could not be drawn through the concrete by a bending strain, and the result was accomplished which was afterwards more cheaply attained by the twisted bar of Ransome and the nettings of other inventors. Mr. Hyatt, if we are not mistaken, did not attempt to patent his new invention, but gave to the world a description of it in a book, in which the comparative rates of expansion of iron and concrete, and other matters of practical importance, were carefully studied.

A GOOD deal of excitement was caused last week in New York and Brooklyn by the failure of some of the rods which carry the roadway of the Brooklyn suspension-bridge. It is said that some of the rods must have parted long ago, the fractured surfaces being covered with rust, but the remaining ones still held the roadway until several of them, unable to bear the increased strain, broke at once, letting the roadway sink several inches. Traffic was at once stopped, and repairs made, but the discussion of the occurrence has brought out some interesting facts, one of which is said to be that there is no regular inspection of the bridge, the officials in charge of it depending on chance for information as to defects. It is reported also that the bridge has not been painted for three years. We have not very much faith in paint as a preservative of iron which has once begun to rust; and experience has shown that wire cables, particularly, may have their inner wires almost destroyed before the outside is affected; so that a thorough inspection of the whole structure should certainly precede repainting. The newspapers call attention to the fact, which should be kept constantly in mind by those responsible for the safety of the bridge, that it was never intended for such traffic as now passes constantly over it. Even if it were in perfect condition, the running of cable and electric cars over it would subject it to a strain which it was never designed to bear, and the risk is far greater now, when many of the supporting members are proved to be deeply corroded, and the condition of others, which may be still more seriously affected, is unknown.

ONE of the most extraordinary pieces of railway engineering in Europe is to be found in the new extension of the Rhaetian Railway, in the Engadine, from Coire, by way of Thusis, to Pontresina and St. Moritz. The road follows, in general, the line of the Albula Pass, but with wide diversions, as a railway cannot make zigzags with acute angles, as a carriage-road can. For this reason the railway, in the short distance between the hamlets of Muot and Naz, returns on itself four times, running in three of these cases through spiral tunnels, of which two are nearly superposed, so that a train, after a journey of about two miles, half of which is underground, finds itself only a few rods away from its starting-point, the road, in the meantime, crossing itself four times, at different levels. Although a spiral tunnel is no more cheerful, in actual transit, than any other kind, it is an interesting object in plan, and the skill with which not only spirals but reverse curves and tangents are constructed on this road in the heart of high mountains is something extraordinary.

IT seems as if the electric trolley-line might be seriously threatened by the compressed-air system of traction, which has recently taken great extension in Europe. Many of our readers have probably made the excursion from Paris to Versailles and back on top of the tram-cars from the Louvre

Colonnade, drawn by a compressed-air locomotive, the Louvre-St.-Cloud-Sèvres-Versailles line having long been operated in this way; but, within a year or two, many other Parisian lines have been similarly equipped, and the Auteuil, Passy, Boulogne, La Muette and Montrouge tram-cars are now propelled by compressed-air motors, much to the satisfaction of the General Omnibus Company, which owns them, and of the public. The system used is that named after its inventor, M. Mekarski, the peculiarity of which consists in heating the compressed-air after its admission to the cylinders. Where the traffic is heavy, as on the Sèvres-Versailles lines, trains of three or four cars are used, dragged by a locomotive; but, on the lines of lighter traffic, a motor is attached to each car. As applied to our roads, the compressed-air system would have the advantage that no trolley-wires and poles would be required, and the principal source of delays and other vexations would be dispensed with. Compressed-air could be supplied, as is the case in Paris, at stations several miles apart, and, in case of necessity, even rails might be omitted, as no return conductors would be necessary, and the compressed-air cars are capable of running over heavy grades, as well as over obstacles much more serious than those found on any good road.

A GOOD illustration of the "struggle for life" which, as we are told, is raging between the "greed of capital" and the down-trodden "producers of wealth" is to be found in a recent occurrence at Pittsburgh. In this city a twenty-two-story office-building is in process of erection on a time contract. The superintendent on the ground furnished the men, as is usual with builders in hot weather, with water in which oatmeal was mixed. The water was filtered, but it did not satisfy the oppressed "toilers," who demanded lemonade instead. To pay for the lemonade, the men agreed to contribute ten cents a week per head, and the lemonade was duly mixed and served. No limit was placed on the amount that each man should drink, and, apparently, most of them thought it prudent to make sure of their ten cents' worth the first day; for no sooner did the lemonade make its appearance than the "toilers" descended upon it, and drank so much that the superintendent became alarmed, and shut off the supply. Many of the men, with strong stomachs, felt themselves, however, still capable of assimilating more, and, on the superintendent's refusal to give them a further supply until the next day, fifty of them struck in a body. Some of the strikers, after the lemonade had had an hour and a half to produce its effect upon them, concluded that they did not need any more immediately, and offered to go back to work without it, if the superintendent would pay them for the hour and a half which they had spent in idleness while coming to this sage conclusion; but this proposition was declined; and, at last advices, the lemonade-lovers were still out, having thrown away enough in wages to keep them supplied with lemonade for the rest of their lives.

THERE is to be an International Exposition of Modern Decorative Art at Turin, Italy, in 1902, beginning April 1, and continuing until November. The managing Commission calls this the first international exhibition of the kind that has ever been held, and it seems, at least, to be the first wholly devoted to decoration. Tourists who know Turin, which is now a city of three hundred and fifty thousand inhabitants, do not need to be told of its delightful situation, almost at the foot of the snow-covered range of the Italian Alps. The Exposition is to be held in the Valentino Park, lying on the bank of the River Po, in the outskirts of the city, and in full sight of the mountains. For architects and artists who can take their vacations early enough next year to be in Turin in May or June, it would be difficult to find a more interesting exhibition, or a more delightful climate, to say nothing of the excursions which can be made in all directions, to the old Roman town of Susa, the Mont Cenis tunnel, Geneva and Switzerland, Milan and the Italian Lakes, and Genoa and the Riviera. The Exposition is to include exterior decoration of streets and buildings; interior decoration, including wall-papers, furniture and textile fabrics; ceramics; metalwork, and designs for interior effects, with details. The President of the Managing Committee is the Duke of Aosta, cousin of the King, and everything that the Government can do to make the affair successful is sure to be done. Foreigners are specially invited to participate, and Italian ambassadors and consuls generally are instructed to facilitate so far as possible such participation.

PLUMBING.—I.

THE OLD, THE MODERN, AND THE ADVANCED SYSTEMS.¹

IT might be appropriate, in a lecture on plumbing delivered before an association of health-officers, in the first year of the twentieth century, to give a history of the development of the art and craft of plumbing during the last decades of the preceding century. Interesting as the task might be, the limit of time assigned to this paper would prohibit giving even a short synopsis of the subject. I will, therefore, have to restrict myself to a discussion of the relations existing between health-officers or health-boards and the subject given in the title.

The word "plumbing," which is derived from the Latin word *plumbum* (lead), formerly signified "the trade and art of working in lead." You will all know without my telling you that at the present time such a definition would hardly be appropriate and accurate, for but little lead is nowadays used in the plumbing of habitations. I would define modern plumbing as "the trade of fitting-up in buildings the metal pipes, traps, tanks and fixtures of different materials used for water-supply, drainage, gas-illumination, gas-cooking and heating, as well as the pipe-system and apparatus used for the conveyance of water, sewage and gas."

The professional and trade papers of the last twenty years have been so filled with accounts of the dangers of defective plumbing, the daily press has so many times called attention to the "deadly effects of sewer-gas," and the cry has been so often raised, "Look to your drains," we have become accustomed to think of the plumbing and drainage of houses as being the chief causes of many of the grave ills to which human beings are subject.

But, in your capacity as health-officers, you have constant opportunities of observing that a great many other conditions affect the well or ill being of the human race, and that while it is doubtless true that a lower death-rate may in some cases be due to better drainage and plumbing, still it is impossible to tell how much of this is actually due to the plumbing alone. There has been in the past fifty years an enormous advance and progress in sanitation in general; this progress was slow at first, but it has been a steady progress, until to-day the effects of improved sanitation, which comprises not only correct plumbing and efficient sewerage, but also better water-supply and ventilation, better conditions of foods and clothing, cleaner streets, improved methods of housing our populations, increased bathing-facilities for the poorer classes, sanitary school-buildings and many other factors, are felt in every section of our country.

While it is certain that criminally defective sewerage and plumbing work have, in some instances, existed where cases of zymotic disease occurred, yet the writer has had in his professional practice a number of cases where these or similar illnesses were proved beyond a doubt to have been caused by conditions entirely foreign to the subject under discussion. Some cases of illness have occurred where the plumbing and drainage upon inspection were found to be entirely in a safe condition; other cases, the writer remembers, where, though the inspection, or test, did show defects, the cause of an outbreak of an epidemic could be traced conclusively to other matters. Thus, slowly and by degrees only I have acquired the conviction that a great deal of the sensational writing or talking on defective plumbing or defective drainage is ill-advised, and is apt to mislead the layman and the public in general. In my judgment, a great deal of harm has been done in the past by unsubstantiated reports on the alleged effects of bad drainage or bad plumbing.

If time permitted I would quote at length the opinions and views of some of the best medical observers of Germany and of other countries, who have reached the conclusion that there is no positive proof of any direct connection between bad drainage or bad plumbing and such diseases as diphtheria, cholera, etc. From a mass of professional testimony I will quote but a few important sentences.

Modern German sanitarians are nearly united in being opposed to the so-called "sewer-gas theory;" they claim that the researches of Von Pettenkofer, of Pasteur, of Dr. Koch and others have established, almost beyond a doubt, the fact that every infectious or zymotic disease requires the presence of a specific microorganism or pathogenic bacterium to cause it, and that the gases of putrefaction *per se* cannot cause the disease. Moreover, it is claimed that pathogenic bacteria, cast off from diseased persons (either with the feces, the urine, the sputa or skin particles in ablutions), do not find in the house-drains and street-sewers conditions favorable to their growth. As a rule, owing to absence of oxygen, or owing to the existence of non-pathogenic bacteria, the former are crowded out, as it were, and die, while the few which may survive are said to lose their power for harm. In the sewers they attach themselves to the damp sides of their interiors, and, hence, do not rise into the air. This may also be the explanation why the bacteriological examinations of the air of sewers show the same to contain comparatively few bacteria. Hence German sanitarians argue that sewer-air *per se* does not cause specific diseases.

Prof. A. Jacobi, a very high authority of New York City, in a paper on "The Production of Diseases by Sewer-air," comes to the conclusion that "foul air and sewer-gas do not create diphtheria, but they do create such a condition of general ill-health as to afford the diphtheritic virus a ready resting-place." He argues that "there is no connection [in New York City] between diphtheria and sewer-air

in any shape or form," and cites the experience of the New York Health Department that "both diphtheria and typhoid have occurred where plumbing was perfect, and were often not found where it was defective."

But, on the other hand, I should state that I have always held the view that no matter whether such connection between bad drainage and disease exists or not, it is absolutely essential that the drainage and plumbing work of habitations should be *correctly* arranged. If there is one method of doing a thing right and another one by which it is done less well, the right method only should be chosen.

We require correctly-arranged drainage and plumbing arrangements for several important reasons, viz, we must prevent the air of soil-pipes and drains from becoming putrid; we must also prevent any escape of noxious air into the interior of a house; all foul smells are unpleasant, and if inhaled for any length of time they may have a deteriorating influence upon health. Accumulations or escapes of foul gases cause general sickness, various ailments, or sore throats; they also reduce vitality and predispose to sickness, and so assist indirectly in the dissemination of disease. The air of modern sewers is, of course, always much diluted, and even the house-pipes are nowadays so ventilated that no great accumulation of gases can exist in them. Therefore the danger becomes very much reduced where good planning, construction and maintenance of street-sewers and house-drains are enforced, and if the essential requirements of good drainage are followed, viz, good construction, ventilation, flushing, tightness of joints, safe-trapping, etc., we diminish greatly the chance of harm arising from sewer-air.

In the past, correct principles of house-drainage have not often been followed and even twenty-five years ago the plumbing in houses was done in so crude and unscientific a manner that it became necessary to subject this work of craftsmen to official rules, regulations or ordinances, and to the inspection of special municipal officers called plumbing-inspectors.

In the United States the municipal inspection of plumbing-work was instituted about the year 1881, and among the first large cities to have such inspection were Washington, New York and Boston. There are now a great many other cities, large as well as small, which have followed in this matter. In all instances the plumbing-rules were made a part of the health-ordinances, and out of the various municipal departments, it was the Department of Health which was entrusted with the carrying-out of these rules and with the inspection of all new plumbing-work. Later on in some of these cities, notably in New York and Brooklyn, and I believe also in Boston, the plumbing-inspection was transferred from the Health to the Building Department.²

The question here arises, To which of the municipal departments should this subject be assigned? One of the reasons why in New York City the filing of plumbing plans and specifications and the plumbing-inspection was transferred from the Health to the Building Department was that inasmuch as the Building Department had control over the erection of buildings, it should also have control over the plumbing-work in them; that inasmuch as the architects or builders had to file plans for construction, their work would be simplified and the labor of the municipal officers reduced if the system of plumbing was shown on the construction-plans. This argument, however, soon proved itself to be fallacious, for in practice one plan to cover not only all the points of construction, but also the plumbing, proved to be so complicated as to be a greater burden to the examining inspector, as well as a source of more trouble to the architect who had to prepare it.

There seems to me to be no more reason for placing the plumbing of a building under control of a building department than to subject other matters of interior construction to such control, for instance, the steam and ventilating work, the gas-piping, the electric-wiring work, etc. If defective plumbing-work really may become the cause of ill-health or disease, then it would seem to me that the department of health is the proper body under whose control this subject should be placed.

It is, therefore, my judgment that wherever cities or towns adopt a system of official plumbing-inspection—and I am a firm believer in the advantages derivable from such a system—it should be the health, and not the building, department under whose control the plumbing and drainage should be; but if for some reason or other this cannot be done, then I should be in favor of placing the plumbing and drainage of houses under the control either of the city-engineer, in small towns, or of the municipal department in charge of the construction or maintenance of the city sewerage-system.

² After preparing the paper, the author found in the new book by Dr. Charles V. Chapin, Superintendent of Health of Providence, R. I., entitled "Municipal Sanitation in the United States," the following list of cities in which the plumbing is controlled otherwise than by the board of health:—

New York.....	Department of Buildings.
Boston.....	Department of Buildings.
Milwaukee.....	City Engineer's Department.
Cambridge.....	Superintendent of Buildings.
Cincinnati.....	Inspector of Buildings.
St. Louis.....	Board of Public Improvements.
Somerville, Mass.....	Inspector of Buildings.
Butte, Montana.....	Inspector of Buildings.
Newton, Mass.....	Inspector of Buildings.
New London, Conn.....	Board of Sewer Commissioners.
Erie, Pa.....	Water Department.
Providence, R. I.....	Independent Department.
Omaha.....	Independent Department.
Pawtucket.....	Independent Department.
Memphis.....	Independent Department.
Columbus, Ohio.....	Department of Public Improvement.
Minneapolis.....	Building Department.

¹ A paper read by the author, Wm. Paul Gerhard, C. E., at the annual meeting of the School for Health Officers, at Burlington, Vt., on July 10, 1901.

We will assume then that it is agreed that the official inspection of plumbing and drainage of buildings is desirable in order to prevent bad work and its possible ill results, and we will take it for granted, further, that it should be placed under the supervision of the officials of the health department. When such department deems it necessary or desirable to have official plumbing-regulations, it should proceed on a business basis: it should establish a regular office or bureau of plumbing, and should place the same in charge of salaried officials. If, for any reason, the municipal budget should be unable to make the proper and necessary allowance for the employment of examining-clerks and plumbing-inspectors, then I say it would be better not to have any system of municipal inspection. I know of a large city of about 100,000 inhabitants, not many miles from New York, which has a plumbing-department and also plumbing inspection, and the two duly appointed plumbing-inspectors are both master-plumbers doing a thriving business in their town, and the plumbing-work which Mr. Brown does is officially inspected and his plans approved by his colleague, Mr. Smith, and *vice versa*. That would hardly seem to be a fair method of securing good results, particularly if Mr. Brown and Mr. Smith happen to be on good terms, and intent upon keeping all outsiders away. I know of another suburban community in the State of New Jersey which recently became incorporated as a city, where the Board of Health issued plumbing-rules and required the filing of plumbing plans, but where no office was provided for to receive such plans, and where the plumbing-inspector was a journeyman-plumber occupied during most of his time on work of some local firm.

All health-officers in charge of plumbing-regulations or plumbing inspections should have a thorough, practical knowledge of the subject. The plumbing-inspectors appointed by them and working under their direction should be well qualified for their position; they should be required to prove their qualification by an examination in sanitary science, and also show their fitness for the practical part of the work; fitness for the discharge of the duties of the office should be the only guide in such appointments, and not political motives or a pull, or the affiliation of such persons with the ruling political power or party. The inspectors should be subject to civil-service examination and civil-service rules, and their appointment should continue during good behavior. They should not be subject to removal when another political party comes into power. I freely confess I have never been in sympathy with the idea, which unfortunately seems to be the ruling one in many cities of the United States, that to the victors belong the spoils. If any good to the public, to the tax-payers, to the house-builders, may come from official plumbing inspection, I hold that it is absolutely immaterial and irrelevant whether the inspector of plumbing is a Republican, a Democrat, or possibly a "mugwump." As some one has truly said, "Degrading political influences should never be permitted to impair the efficiency of a well-organized health department."

Now a few words as to plumbing-regulations and as to the question by whom they should be drawn up. I have during the past ten years collected and filed a large number of such official plumbing rules and regulations from cities and towns in all parts of our country, and I have had an opportunity of examining these very closely. I have also in a great many cases been professionally consulted as to the best rules to adopt, and I have advised many public officials on the different sections composing such plumbing-rules. It has been my experience that some of the best rules came from small towns, and had been drawn up carefully, after a good deal of study and consultations, either by practical men in the trade or by municipal engineers who had made a special study of plumbing and drainage. I find that in a great many other cases the plumbing rules and regulations of large cities have been copied almost entirely from the existing rules of, say, either New York or Boston, and in this way some serious errors and imperfections in these rules have time and again been copied and perpetuated.

Plumbing-rules should be as concise, comprehensive and brief as possible. Each section should be definite, and should not leave room for doubt as to what its intention is. It would seem to me that in the case of the smaller towns a simple and comprehensive set of rules drawn up from original investigation would answer a great deal better than the very extensive and long rules of some of our metropolitan cities.

Whatever the rules on plumbing issued by a health department may be, it seems to me that they should be so framed as not to be able of arbitrary interpretation on the part of the plumbing-inspectors, as is so frequently the case.

The testing of plumbing-work has been one of the chief means of improving the character of such work, and I cannot lay too much stress upon the importance of having the entire work done under the health department supervision, inspected and tested at the various stages of the work. Such inspection and test should be carried out with great thoroughness and faithfulness. One cannot be too particular about the testing of the work. The plumbing-rules should state, in a direct and positive manner, how many and what tests the department requires. The kind of test should in no case be left optional with the plumbing-inspector. For the drain, soil, waste and vent pipe system, including the branches to the fixtures, there is no better test than the hydrostatic-pressure test, which consists in filling the pipes with water, and this test is certainly much superior and better adapted to new plumbing-work in course of construction than, for instance, the air-pressure test. The only time at

which such a water-pressure test may not be practicable is during freezing weather, and the plumbing-rules should distinctly state that in such cases only the plumbing-inspector may require the substitution of an air-pressure test. In the same way it is acknowledged to-day by experts that the smoke-test is the best available test for newly completed work, as well as for old work in buildings to be inspected, and that it is superior in many respects to the peppermint-test. It is well known that the peppermint-test, unless applied with a great deal of care and with a thorough understanding of the layout of the plumbing-system in a building, is apt to be misleading or to give entirely erroneous indications. In fact, in the hands of careless or unscrupulous workmen such a test is a very dangerous one. In view of these facts, I cannot approve of any plumbing rule or ordinance requiring that the final test to be applied to the work may be either the smoke-test or the peppermint-test, at the option of the inspector. A case recently happened in my own practice where I had inserted in my specification the requirement of a smoke-test at the completion of the work. In this case the official plumbing-rules had been worded so as to make it optional with the plumbing-inspector which test should be applied. He accordingly refused to witness the smoke-test, stating that he preferred to have a peppermint-test applied.

As regards the layout of the plumbing and the house-drainage as we find it in houses at the present day, we may distinguish three principal systems, namely:—

- (a) The antiquated, or defective, system.
- (b) The regular system of plumbing as carried out to-day, which is the common system followed by most of the cities having plumbing regulations.
- (c) The advanced system, embodying simplified and improved methods that have suggested themselves in the light of recent experience. This latter, I may say right here, is the system advocated by the foremost sanitarians as the system of the future.

1. To the antiquated system belong all the defective arrangements of plumbing or house-drainage as we see them described in most of the text-books, and as we still find them in our inspections of buildings which are more than twenty-five years old.

Among the chief defects of such systems I mention the square brick channels for house-drains or drains consisting of pipes of too large calibre, and very often made of vitrified pipe with faulty grade and alignment, with imperfectly closed joints and other defects. To this class belong also all those systems in which the soil-pipe is not carried the full size to the roof, but either stops entirely at the highest fixture in the house or else has a diminutive vent-pipe carried through the roof.

In connection with such layouts we generally find defective pan or valve closets with direct flush from the water-main instead of a cistern-supply; we find the other fixtures of a bath-room unprovided with separate traps, and the waste simply run into the lead trap of the water-closet.

In aggravated cases of this class the safe-waste pipes are directly connected into the soil-pipes, and sometimes local vents for water-closets or urinals are so connected, thus forming a direct means of entrance of sewer-air into the room. Sometimes the overflow-pipe of a bath-tub or wash-basin is connected with a waste-pipe on the wrong side of the trap, and where there are house-tanks the overflow from these or from the underground cistern is connected either with the soil-pipe or with the house-drain, sometimes even without the interposition of a trap. (Reference was at this point made by the speaker to a wall-diagram illustrating the defective system.)

The remedies of the radical defects mentioned are well known, and need not be discussed here. In a general way, I would say from a large experience in such work, that the best and almost only thing to do to remedy such defects is to rip out the entire plumbing and to provide not only new fixtures, but also new house-drains, soil and vent pipes.

2. The second system, which is the regular system conforming with the majority of plumbing-regulations, is in many ways an improved system. It is the outcome of the experience of the last twenty-five years, but it is by no means perfect nor as simple and comprehensive as might be desired, as I will explain later on. To mention only the chief features of such a system I will give a brief description of the same.

Every building is connected separately and directly with the sewer in the street in front of the house or with the sewer in an alley in the rear of the same. Vitrified stoneware pipes are used for the main outside house-sewer to within a distance of, generally, five feet of the foundation-walls, but under special conditions outside sewer-pipes of iron are used.

The diameter of the house-sewer is made much smaller than formerly. In the case of country-houses where the rain-water is excluded, and also in the case of urban residences in cities having the separate system of sewerage, it is determined by the number of plumbing-fixtures. Where, however, the rainfall is discharged through the house-sewer into the public sewer, the size of the house-roof, the area of the lot if paved and the amount of rain-fall govern the size. Speaking generally, small houses are readily drained by 4" sewers, 5" sewers answer for a large city-house, and 6" sewers are required only for very large buildings. For buildings covering a wide area it is better to provide two or more 6" sewers rather than one 8" or 9" sewer. The smaller the size of the pipe the larger must be the inclination given to secure a velocity of flow which will

prevent deposits in the house-drains. Where sufficient fall cannot be obtained flushing arrangements are provided. All joints are made absolutely tight to prevent contamination of the soil under and around habitations by the leakage of sewage and to prevent in the country the pollution of the drinking-water in wells. All inside house-drainage arrangements are governed by the following three essential principles, viz, first, all waste matter capable of being transported by water must be removed quickly and completely as soon as produced, and no retention of foul matter in hidden parts must be permitted. Second, the air of the house-sewer, and of soil, drain and waste pipes must not be permitted to enter the rooms of the building through the outlets of fixtures. Third, the entire drainage-system, including fixtures, traps and pipes, must be self-cleansing and constructed so as to be readily accessible in all its vital parts.

The house-drains are, as a rule, carried exposed above the cellar-floor. The drain, soil and waste pipes are of heavy cast-iron or else of screw-jointed wrought-iron pipe, and, in rare cases, of brass. The advantages of the screw-joint over the caulked-joint are the permanent tightness, the reduction in number of joints and the greater rigidity of the system. The connections between the house-sewer and the vertical soil and waste lines, those with the branches intended for the removal of rain-water, etc., and all other junctions, are made with Y-branches, for right-angled connections impede the flow and create stoppages. Cleaning hand-holes are provided at all traps, bends and junctions. All soil and waste pipes are extended full-size through the roof, and the outlets on the roof are left open and unobstructed.

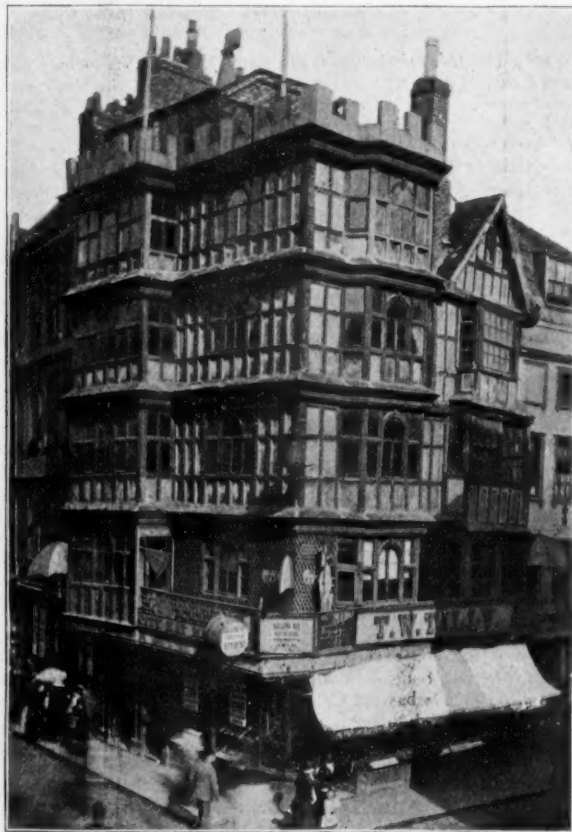
All fixtures are separately trapped, and are concentrated in a few groups; this concentration leads to more frequent use of the apparatus, and this, in turn, secures a more thorough flushing and cleansing, particularly where fixtures are arranged to act like a flush-tank. The points enumerated so far are all excellent, and leave scarcely any room for improvement.

Since the S-traps are liable to siphonage, a second system of pipes, called "back-air pipes," is carried parallel to the soil and waste lines, and branches are run from these vertical stacks to the upper bends, or crowns, of all fixture-traps. Where there are fixtures above one another on several floors this leads to a double-pipe system and to a confusing network of branch-pipes. The modern intricate pipe-system of a house has in this way introduced new evils and new dangers, some of which will be alluded to farther on.

[At this point the lecturer explained by means of a large wall diagram, the complications of the "back-airing" system.]

[To be continued.]

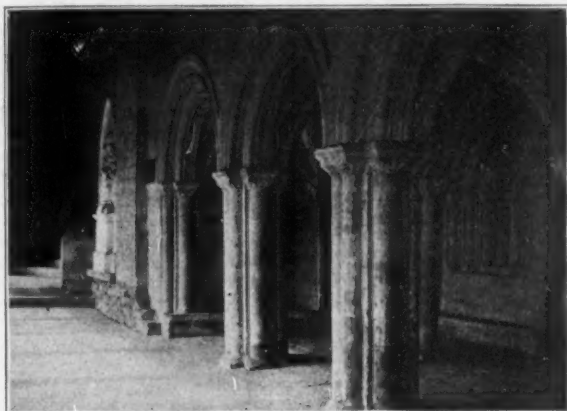
BRISTOL, ENGLAND.



Old Houses on High St., Bristol.

ALTHOUGH the venerable city has been much spoiled for the antiquary, there are still a considerable number of old gabled houses dispersed about it. The so-called Dutch house is a fine specimen of half-timber building, not at all Dutch in character, but

so named, it is said, because the wood was brought from Holland — which is, in all probability, one of Bristol's many fictions. Nearly all the Pithay, a street of gabled-houses, has disappeared, but Christmas Street and Steps remain as a record of what was once the chief



Entrance to Chapter-house from Cloister.

thoroughfare of the city, and down which good Queen Bess passed with all her usual ceremony and pomp. At the top of the Steps are four stone seats after the manner of church *sedilia* — origin unknown.

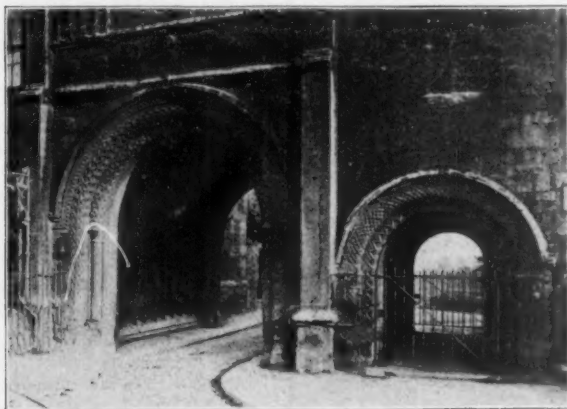
The Cathedral has only been finished recently. The choir, Lady Chapel and central tower are old; the nave, west-end towers and transepts are modern. The monastery was founded, in 1142, by Robert Fitzhardinge (who became Lord Berkeley), for Augustinian canons. In 1332, it was made a mitred abbey, and when dissolved in 1542, the church became the cathedral of the new see created by Henry VIII. Bishop Butler, the author of the "*Analogy*," was one of its most distinguished bishops.

The central tower dates 1421-1481, but the early Norman and Decorated parts of the church are exceedingly interesting. With the exception of some corbels in the triforium-staircase, the Chapter-house is the earliest part which remains. It is Transitional (though often stated to be Norman), as may be seen in the vestibule, where the peculiarity of that style is brought out: viz, the arches from east to west are round, while those from north to south are pointed. The nail-head moulding runs round the arches; the capitals are plain cushion. The Chapter-house originally had three bays: it is a parallelogram, like those of Oxford, Gloucester, Chester and Exeter. Its measurements are 42' x 25'; but, originally, they were 71' x 25'. All the walls are arcaded and enriched with ornament.

The double-arched gateway on College Green was the original entrance to the abbey precincts; the smaller gate (also Norman) was the doorway to the Abbot's lodgings, now the deanery. The remaining two walks of the cloisters are Perpendicular in style.

The Lady Chapel dates from 1234; its columns are Purbeck marble, and it is an exquisite specimen of thirteenth-century architecture. The choir was begun in 1306.

Many distinguished personages were mixed up in the history of Bristol. One of its high-stewards was the famous Earl of Leicester. In 1587, he visited the city and was "princely" entertained at Alderman Kitchen's residence in Small Street. The Earl was much fussed over, and he wished to have certain tolls transferred to him; but in this the Corporation was obdurate. Not so in a lesser matter. It appears that the Alderman had provided a bed of no ordinary description for his guest, and so pleased was the Earl therewith that



Entrance to the Close from College Green.

he requested his secretary to intimate that he should like it to be presented to him. This was done, and a short time after the bed was seen on the road to Bath, whither the Earl had gone, the chamberlain and his serving-man on horseback, and the latter leading

two more horses bearing the bed, together with goodies in the shape of marmalade, citron, etc. But his Grace did not accede to the Chamberlain's desire for an interview; all he got was a message that his "Grace was obliged, and that he should style it his Bath bed." Why not his Bristol bed? It had a canopy, and was called a field-bed; its curtains were green, and cost £4. Other presents flowed in for his Kenilworth festivities — wine, etc.; but his "promise to pay" is said never to have been realized. Alderman Kitchen, however, seems to have forgiven him, for he attended the Earl's funeral, to which he had been invited as a great honor.

Far finer architecturally than the Cathedral is the large parish-church of St. Mary Redcliffe, founded and built by city merchants. Leland describes it as "by far the fairest of all churches"; and Camden, as "the most elegant of all the parish-churches I have ever seen"; and no modern critic will gainsay such statements. From one of the city's charters, which dates back to 1229, we find that in 1246 there was an indulgence of ten days accorded to all who contributed to the repairs of St. Mary, showing that some sort of church had been erected previously to that date. In 1294, another church was built; but, probably, the present one is mostly that of 1376, when William Canynges built the body "from the cross-side downwards." In 1445-6, the spire was struck by lightning and the rest of the church damaged, but another William Canynges restored it.

The lower part of the tower, the inner north porch, the south transept and porch, and a great deal of the interior are Early English; the remainder is Perpendicular. Camden (*"Britannia"*) speaks of the beauty of the church: "so large is it, the workmanship so exquisite, and the roof so artificially vaulted with stone, and the tower so high, that in my opinion it goes much beyond all the parish-churches in England I have yet seen."

The iron gates in the church are good examples of the craft, and were made by one William Edney, smith, about the year 1710, as we find by an entry in the books of £60 for iron gates to chancel, and £50 for two pair of gates at the side. It may interest builders to know that in that year (1710) bricks in Bristol cost 16s. per 1,000, and freestone 11d. per cubic foot.

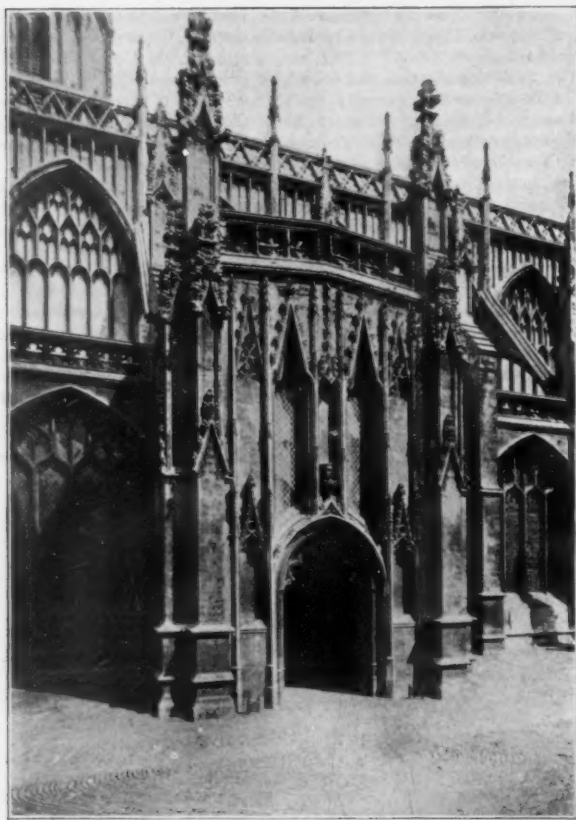
The inside measurement of the entire church is 239 feet long by 52 feet wide. The transept from north to south is 117' 6" x 47'. Nave and chancel are each 60 feet long; the latter to the crown of vaulting measures 53 feet.

The ornaments in the cornice represent various conceits and animals: a goat and a boy, a man and a monkey, a cripple, a cat, and a dog barking at it. The interior, at the last restoration, some twenty or thirty years ago, was painted and gilded in the original manner. The form of the windows is peculiar, being produced by

carved door somewhat resembling that of the monastery of Batalha, in Portugal. "The plan is hexagonal, with buttresses at the angles, ornamented with magnificent niches." It has a dwarf upper story. The south porch is a fine specimen of rich Perpendicular work, but not quite satisfactory in proportion.



St. John Baptist.



South Porch: St. Mary Redcliffe.

a series of niches outside. St. Mary's has several old tombs. One to Sir Thomas Mede and his wife is canopied.

The Decorated north porch is a noteworthy feature of this church. In plan it is considered unique in England, having an elaborately-

It was in the treasury in the north porch that the precocious poet Thomas Chatterton " (who was a son of a chanter of the Cathedral, and a nephew of St. Mary's sexton) pretended that he had discovered in an old chest (fragments of which are still preserved), known as *Canynges Cofre*, the manuscript poems of Rowley, a Bristol priest of the fifteenth century." There is a curious wooden effigy of Queen Elizabeth in the northwest chapel. On the opposite side of the nave is an old font attached to a pillar, lead-lined, but disused; why it should have been substituted by a new one, it is difficult to say. I have noticed that in the neighborhood of Bath and Bristol many churches have been denuded of their old fonts, which have been placed in the parish-rooms or elsewhere, new ones of very inferior workmanship taking their places in the churches.

The bosses at St. Mary's are exceedingly rich and numerous, and there are at least a dozen different varieties of groining.

The poets Southey and Coleridge were married in St. Mary's to the sisters Fricker, and Americans may like to note that there is, in the nave, a monument to Sir W. Penn, the father of the famous founder of Pennsylvania. His cuirass, sword, iron gauntlets and tattered banners are still hanging in the chapel, and it is to him that Bristol gives the origin of the admiral's pennant. Van Tromp, they say, stuck up a broom at his mast head to imply that he would sweep the Channel of the English fleet, and Vice-Admiral Penn (then serving under Blake) retorted by putting his riding-whip at his mast-head to show that he was going to flog the Dutchmen back to Holland — which he did after three days' fighting.

Tradition hath it that the curious bone hanging opposite the effigy of Queen Elizabeth is the rib of the "dun cow" killed by Guy, the far-famed Earl of Warwick; but commonplace persons think it may simply be the bone of a whale brought from Labrador by the celebrated mariner Sebastian Cabot.

St. Stephen's church-tower is a beautiful specimen of Perpendicular work, marred somewhat by the restoration in 1862 of the upper part. It has a richly-decorated south porch. The fine old carved-wood pulpit has been re-made into a large chair by the Ancient Order of Ringers, and a stone one substituted.

St. John's Church is interesting as having been built on the city-wall, the gate being under the tower of the church. It contains some exquisite sixteenth-century woodwork, and the fine tomb of the founder, Walter Frampton, Mayor, who died 1357. The church has no aisles, but a fine groined crypt a little below the level of the road. The church itself is reached by a stone staircase. There are several ancient brasses, mostly Flemish. In churches of small size, brasses were often substituted for monuments in the thirteenth century.

The metal was embedded in pitch and rivetted to stone slabs, the incised lines being filled up with compo or enamel.

As these notes are only intended as explanatory of the accompanying photographs, I have omitted many of the Bristol churches, and the notes themselves are not meant to be at all exhaustive — indeed only very fragmentary. But the city will repay a considerable amount of study given by architects, artists and archaeologists who may have time to spend a few days in explorations. Moreover, the beauty of the scenery at Clifton (hard by) adds not a little to the charm of a sojourn in the neighborhood. S. BEALE.

THE BASILICA ÆMILIA, ROME.



THE workmen of the Roman Forum, under the direction of Signor Boni, have lately been clearing as much of the surface of the Basilica Æmilia as possible without endangering the houses which stand on the top of the embankment some 30 feet above. The embankment and the houses still prevent a large, and probably the most important, part of the Basilica from being cleared, so much so that several valuable archaeological fragments have to be left partially embedded because their removal would endanger the solidity of the embankment and the stability of the houses. But the recent work has enabled accurate calculation to be made of the exact extent of the Basilica and its original position. Pending the generosity of some donor who will supply the £4,000 necessary to expropriate the houses, it is interesting to state the facts as they are at present known.

The Basilica Æmilia is situated between the temple of Antoninus and Faustina and the Curia; it faced southwest, running for 110 metres (about 120 yards) along the Sacred Way. The depth was 48 metres and its area about 5,000 square metres. The right side, facing the Temple of Antoninus and Faustina, ran at right angles to the front; but the left side, parallel to the Curia, was oblique. A wide row of steps in Greek marble led from the Sacred Way up to a majestic portico, seven yards wide, in the Doric style. The portico consisted of sixteen arches, built entirely of marble blocks richly carved with bucrania and rosettes. The first archway to the right was connected with the Temple of Julius Cæsar by a kind of arched flying-buttress, which formed a triumphal archway across the Via Sacra. It seems that the great marble inscription dedicated to Lucius, adopted son of Augustus, belonged to this triumphal arch. All the fragments of the inscription are still lying where they fell when the Basilica was destroyed, and where they were found in the summer of 1899 during the excavation of the site presented to the Italian Government by Lionel Phillips.

Behind the portico and corresponding to each of its arches were the Tabernæ, of which the foundation-walls and some valuable fragments of the dividing-walls and pavements still exist. The pavement was made of various kinds of marble in the so-called Alexandrine style. The dividing-wall of the Tabernæ served to support the wall of the great internal hall built of tufa blocks. Of this hall a part still exists. The hall, which was about 25 yards wide, was divided into three naves, of which the central one measured 15 yards between the columns and the two lateral ones 5½ yards each. The naves were divided by two colonnades, each consisting of two rows of columns placed one above the other. The lower row was of African marble, and supported a rich and exquisitely carved cornice of Greek marble. Round the cornice ran a sculptured frieze in high relief, beautifully wrought. On the cornice rested the upper row of columns, which were monoliths of African marble, and which, like the lower columns, supported a richly-carved marble cornice. Into the upper cornice fitted the transversal supports of the roof.

The pavement of the lateral naves was of sextile works, and that of the central nave consisted of large squares of African marble, of Porta Santa, from the Island of Chios, of giallo antico, of green Eubæan cipollino, of pavonazzeto, or Phrygian marble, and other rare stones. The same marbles were used to cover the walls.

The most marvellous part of the Basilica, regarded as a work of art, was the Tribunal, of which many fragments have come to light, such as basements, pilasters and capitals. All these fragments are carved in the best style of the epoch of Augustus, and are being reproduced to serve as models for the various Italian schools of arts and crafts. The parts of the Basilica hitherto cleared are those most damaged and robbed by the vandals of the fifth and sixth centuries A. D. The parts still buried beneath the embankment, though not intact, appear from their position likely to have been much less devastated, so that their excavation would yield results still more valuable than those already obtained. Even at present an astonishing quantity of fragments of marble columns has been found, together with bas-reliefs, sculptures in Phrygian marble, Grecian marble, marble candelabra, portions of porphyry statues and architectural ornaments of all kinds. — *Rome Correspondence of the London Post.*

AN ENGLISH PITTSBURGH.

GR^{EAT} progress is being made with the great factory which the Westinghouse Engineering and Manufacturing Company, in the course of its invasion of England, is building at Manchester. It is to be an immense hive of British industry directed by American brains.

The enormous building which is being reared in Trafford Park is so far advanced that one can form some idea of the magnitude it will

assume when completed, about ten months hence. The buildings alone are to cost nearly £900,000, and the plant that will be laid down is valued at £400,000, so that this will be one of the largest places of business that have ever been erected at the outset of an enterprise.

The new works will belong to the British branch of the Westinghouse business, and will employ 6,000 British workmen when in full order. At the outset at least, Americans will direct operations, and American methods will be adopted as far as possible. Young English engineers are at Pittsburgh at present learning those methods, and they may help to inoculate their fellow-countrymen with Western ideas on their return.

The construction of the huge buildings is being carried on by British workmen directed by Americans. The Westinghouse Company were anxious to hurry on the erection of their works, and they called in James C. Stuart, of a famous contracting firm in the States, to take charge of the work. He came over two months ago with half a dozen young assistants, and they have been engaged in the congenial task of "hustling things along."

Two thousand six hundred British workmen are engaged on the job, and these seven American men reckon to keep each and every one of them going steadily at work every minute of the time that is put down against his name in the time-sheet. There is no loafing, smoking or waiting for bricks. Every single man has something to do, and you can see him doing it. There is no shouting or chaff, no hurrying, but steady, quiet progress.

Mr. Stuart and his colleagues have taken quite a liking to the British workman, and say they are getting more work out of the men than they usually give. All heavy work that can be done by machinery is so performed, and every contrivance that will lighten labor is employed. Wheel-barrows are made lighter by the use of iron, so that more bricks can be carried at each journey. American hoisting-engines whisk the barrows up 50 feet in the twinkling of an eye, and bring down others at the same time. Every detail of the work is organized. The scaffolding is always ahead and waiting for the men, and the materials are crowded on to their hands, so that they never waste a minute in waiting. That is how the "hustling" is done. Men are not driven; they are led. While the skilled labor is good, the common laborer is a comparatively poor creature in the view of these Americans.

The Westinghouse Works will be divided into seven great departments, under 40 acres of roof. The machine-shop will cover an area of 8 acres. From the north end of this shop to the south end of the power-house there will be a single stretch of roof, 1,135 feet long, and the breadth will be 427 feet. The steel-foundry will be nearly two-thirds the size of the machine-shop; the iron-foundry is to be the same size as that for steel, and the foundry for brass and malleable iron will be half as large. Box-factory, pattern-shop and dipping-house are to be on a corresponding scale; and a fine six-story block of offices will have a frontage of 250 feet.

The first step in construction was to set up a vast framework of steel pillars, stanchions and girders, and then this giant skeleton had to be clothed with brick and timber and glass. A contract for 15,000 tons of steel at £18 a ton was given to a Middlesborough firm, although the builders say it could have been got cheaper in America. The timber comes from America, and amounts to 9,000,000 feet. Within eight weeks of the order being placed in the States for the window-frames some of them were built into the brick walls.

The power to work the machinery will be provided in the first instance by steam-engines generating electricity, but after a couple of years gas-engines may be introduced in place of steam. All through the grounds tunnels are being laid for the transmission of power. For transport purposes the works could not be better situated. The Ship-canal is close at hand for goods coming from America and the shipment of machinery to foreign parts. The Bridgewater Canal will bring all the coal. Railway connections are already in existence. When the work is complete there will be 32 miles of permanent line going through the shops and from one to another and all over the estate.

Another company has undertaken to erect dwellings near the works, and a little village has already sprung up there. The streets are named in American fashion — Third Street, Fourth Street, and so on. The houses are to be lighted with electricity and heated by gas when the American engineers come along.

Altogether there will be a pocket edition of Pittsburgh in England. — *London Daily Mail.*



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

UNITED STATES POST-OFFICE AND COURT-HOUSE, ABILENE, TEX.
MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT, WASHINGTON, D. C.

UNITED STATES POST-OFFICE AND COURT-HOUSE, CRESTON, IA.
MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT, WASHINGTON, D. C.

A COMPETITIVE DESIGN FOR THE DEPARTMENT OF JUSTICE BUILDING, WASHINGTON, D. C. MESSRS. D'OENCH & YOST, ARCHITECTS, NEW YORK, N. Y.

DESIGN FOR VILLAGE-HALL, GLENS FALLS, N. Y. MESSRS. D'OENCH & YOST, ARCHITECTS, NEW YORK, N. Y.

SOCIETY CLUB-HOUSES: WELLESLEY COLLEGE, WELLESLEY, MASS. MR. C. K. CUMMINGS, ARCHITECT, BOSTON, MASS.

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

CERAMIC-WORK FOUNTAIN, LIMOGES, FRANCE. M. GENUYS, ARCHITECT.

This plate is copied from *La Construction Moderne*.

[Additional illustrations in the International Edition.]

THE CHAPTER-HOUSE, BRISTOL, ENG.

BRISTOL, ENG., CHURCHES: THE CATHEDRAL AND ST. MARY REDCLIFFE.

THE NAVE AND NORTH AISLE: ST. MARY REDCLIFFE, BRISTOL, ENG.

ST. STEPHEN'S AND ST. MARY REDCLIFFE, SHOWING HEXAGONAL PORCH, BRISTOL, ENG.

UNITED STATES POST-OFFICE AND COURT-HOUSE, ELMIRA, N. Y. MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT, WASHINGTON, D. C.

SKETCHES FOR THE MERCANTILE TRUST BUILDING, SAN FRANCISCO, CAL. MR. WILLIS POLK, ARCHITECT, SAN FRANCISCO, CAL.



DANGERS OF GASOLINE.—Chicago underwriters are interested in a crusade against the use of gasoline. As taken from the official records, losses from the gasoline hazard have been appalling, entailing heavy expenses upon the companies. Statistics covering the last eleven years have been prepared, which will be sent to agents and companies in quantities, with the request that one be included in each policy issued. The figures are taken from the records of the fire-patrol. From 1890 to 1900 inclusive there were 110 fatal accidents from the use of gasoline, 169 serious casualties, and 138 slight. The fire-statistics for the eleven years follow:—

	Number of Fires.	Gasoline-stores.	Careless use Gasoline.	Gasoline-lamps.	Loss by Gasoline.
1890.....	72	42	22	8	\$ 14,408
1891.....	130	80	47	3	106,212
1892.....	189	149	34	6	13,484
1893.....	325	263	56	6	381,142
1894.....	332	257	61	14	27,260
1895.....	321	202	116	3	26,730
1896.....	358	260	80	9	21,583
1897.....	497	389	106	2	43,584
1898.....	454	341	110	3	43,099
1899.....	419	285	130	4	115,807
1900.....	373	249	124	0	81,136
Total..	3,470	2,526	886	85	\$874,445

CHEAPSIDE'S GREAT TREE.—Cheapside is surely among the busiest streets in the world, but its chief interest for sightseers is still one of the finest trees to be seen anywhere within a radius of fifty miles. For two centuries, according to those who ought to know best, the famous tree has cheered the multitudes of passengers as they have passed through Cheapside, and for two hundred years more, if law is still respected then, its branches may remind the city toiler of the green fields far away. No power on earth, as long as the British Constitution is what it is, can pull down this tree, unless the property all round should be bought up. Somewhere in a lease, where it is surely as good as if it were in the statute-book of the realm, it is written that no shops of more than two stories shall be erected at the corner of Wood Street, where the tree stands, and all round the tree the space is preserved by the right of light of other buildings. It is the most valuable tree in the world, worth a small fortune every time it blooms, and it is likely to bloom on for years and years to come—a thing of beauty in an ugly place, a joy forever in the heart of the "joyous city." The Cheapside tree, mark-

ing the place where a church once stood before the great fire which burned down half a city, moved Wordsworth to poetry, as it has moved many other lesser lights than he. The sweet singer of the Lakes, pleased by the sight of the branches in which the rooks built their nests, heedless of the hum of a great city's traffic below, imagined a servant-girl recalling her country home on looking up at the tree, and placed his feelings on record in the little poem beginning:—

At the corner of Wood Street, when daylight appears,
Hangs a thrush that sings loud, it has sung for three years.
—*St. James's Gazette*.

THE FLORIDA SHIP-CANAL.—Florida papers are devoting much space to exploitation of the proposed ship-canal across the State. As is generally known, the project is an old one, to which new life is given by the incentive of other large enterprises, and by liberal charter-rights granted recently by the Legislature. So far as can be learned, the money to dig the canal is not yet in sight. Indeed, its promoters are looking for National Government aid, to be obtained, perhaps, through a union of the Representatives in Congress from the Gulf and Mississippi States, which, it is argued, would profit most by a shortening of the route from Atlantic to Gulf ports. This aid is desired, although the promoters of the enterprise boast that the land-grants conferred by the Florida charter would pay for the digging of the canal, and make a handsome profit besides. These lands are the Everglades of Florida, an admittedly rich section of alluvial deposit, needing only the draining which the canal would give it to fit it for the raising of various kinds of tropical productions. The canal contemplated is a tide-water one, presenting no difficult engineering problem, but involving a vast expenditure of money for its digging through soft rock. As designed now, it would pass from Charlotte Harbor, on the Gulf, to Jupiter, on the Atlantic, via Lakes Hickpochee and Okeechobee. —*N. Y. Evening Post*.

DUTY OF ONE INDEPENDENT CONTRACTOR TOWARD EMPLOYEES OF ANOTHER INDEPENDENT CONTRACTOR.—Frederick Bill, while working for a contractor doing the brickwork of a building, had occasion to go into a room where the New York Expanded Metal Company, another contractor, was laying a floor. Its method of operation was to lay down a false wooden floor, then a metal netting, and then a layer of concrete or cement. After a few days the cement would harden, and the floor would become fit for use. The false floor would then be removed. In the room in question the false floor had been prematurely removed, and Bill fell through. A judgment in favor of Bill in his action against the Company to recover damages for the injuries which he sustained has been affirmed by the Second Appellate Division. The evidence showed that the door of the room was open, and that there were no barricades or danger-signals. The floor was apparently finished. The Court holds, by Justice Jenks, that where several independent contractors are working on a building, each of them owes to the employees of the other contractors a duty to exercise due care in performing his work if it might otherwise be a source of danger to such employees while lawfully engaged in their own work on the building. It was also held that as it did not appear that the plaintiff knew, or should have known, that a part of the false floor had been removed, it could not be said, as matter of law, that he was guilty of contributory negligence in attempting to cross the apparently completed floor. —*N. Y. Times*.

BERLIN STATUES.—It is believed by many travellers that Paris possesses more statues of celebrities than any other city. But it is now claimed that Paris is surpassed by Berlin. The German capital possesses seventy-two official memorials, for not much value is attached to those which are erected by private subscriptions. The statue of Bismarck lately unveiled is the third memorial of a statesman. There are twelve of princes, eleven of military commanders. Incredible as it may sound, there are nine statues of architects. The scholars have also nine, the poets ten, physicians three, politicians two, and the remainder are devoted to various personalities. There is only one figure of a musician, but it is expected that statues of Wagner, Haydn, Mozart and Beethoven will shortly be set up. Memorials of the Kaiser Frederick, Moltke, and Fichte, the philosopher, are also contemplated. —*The Architect*.

FIREPROOFING WOOD BY ELECTRICITY.—By the Noden and Bretonneau process, as used at Paris, wood is made proof against fire by placing it in a bath of magnesium-sulphate. Lead electrodes are used, the one being separated from the other by a sailcloth diaphragm. A direct current of 110 volts is then sent through the wood, with the result that the sap is extracted and is replaced by a non-inflammable salt. According to the *Electro-Chemist* and *Metallurgist* the phenomenon is thus explained: 1. Part of the sulphate fills up the cells by electro-capillarity. 2. There is an osmotic exchange between the sulphate and the salts of the sap. 3. Aseptic action. The process has been applied with success to paving-blocks. The treatment lasts for forty-eight hours, the timber being turned over after twenty-four hours. The rate of energy is about half an electric horse-power at 20 to 30 volts per cubic metre. —*Boston Transcript*.

WATER-GAS POISONING.—Workmen in steelworks are occasionally poisoned by water-gas, of which carbon-monoxide is a large constituent. A treatment for such cases has been transfusion of blood, and now in its place M. A. Mosso, in the *Comptes Rendu* of the Paris Academy of Science, has suggested that the victim be placed in an atmosphere which contains oxygen at considerable pressure. In experiments on two monkeys, poisoned with carbon-monoxide, it was found that the one subjected to this treatment, which involved being placed in an atmosphere containing oxygen at a pressure of thirty pounds to the square inch, completely recovered in half an hour, while the other animal, which had been left to its own resources, died. —*N. Y. Evening Post*.

THE AMERICAN ARCHITECT AND BUILDING NEWS

ADVERTISERS' TRADE SUPPLEMENT

No. 231

SATURDAY, AUGUST 3, 1901

VOLUME LXXIII
No. 1539

RUBBER FLOOR COVERINGS.

OUR Perforated Mats are the healthiest and most serviceable made. There are no fibres to absorb and hold disease-germs; the corrugations scrape off the mud, it drops into the perforations and the mat is always ready for the next muddy foot. Our mats are constructed of a tough, durable stock, which lasts for years.

Fitted with a rubber-coated canvas back, the Perforated Mat holds water, and prevents dust or dirt from falling through to the floor. Specially applicable to soda-water fountains, etc.

The advertising feature of a rubber mat should not be overlooked. Initials, numbers, monograms and facsimile signatures or advertising-designs in red, white or black can be inserted. The effect is pleasing and adds greatly to the attractiveness of the mat. For this extra work, or for any special shape in mats, we will be pleased to submit designs and estimates.

The various designs shown in our catalogue can be made in any combination of mat and border desired. The "Nahma" is entirely new. The design is especially neat and attractive, and the splendid quality of rubber used gives extreme service.

In ordering give the following particulars:—
Length, breadth and thickness in inches.

Designate the pattern by the proper name.

Specify whether the surface is to be plain or corrugated; if the latter, in which direction the corrugations should run.

In ordering odd-shaped mats, send a paper-pattern, cut exactly to shape and size, specifying the upper side.

Mats can be made 20 feet long, but it is best to divide large mats into sections so that they can be easily handled; in very large mats the heavy weight tends to tear out the meshes.

Our Embossed Solid-back Mats are also known as N. P. M., or new-pattern mats. They will outwear three cocoa-mats, are cleaner and more sightly, and, being only $\frac{3}{4}$ inches thick, do not interfere with opening or shutting of doors. Manufactured in three different styles.

A corrugated-rubber mat is neat in appearance and durable in service; all regular sizes kept in stock and special sizes made to order at short notice. All sizes are $\frac{1}{2}$ inch thick. Prices on application.

The Diamond-cell Mat offers a very desirable style. The bars forming the diamonds are raised, and the dirt or dust, being thoroughly cleaned from the feet, drops into the

cells and remains there until the mat is shaken out. Cell mats keep the floor dry and clean. Carried in stock in both square and oval shapes.

In halls, corridors, vestibules and other places where the foot-traffic is heavy, runners of Corrugated Matting preserve the floor from wear, deaden noise, and on marble, tile or hardwood floors, prevent slipping.

The rubber-compound used in our matting is designed especially for the service and is almost indestructible.

Kept in stock in rolls 36 inches wide; thickness, $\frac{3}{8}$ inch, $\frac{1}{2}$ inch, $\frac{5}{8}$ inch and $\frac{3}{4}$ inch. If desired, matting will be laid by us, at a moderate charge.

Where the wear is heavy, we do not recommend anything lighter than $\frac{1}{2}$ inch. Made to order in widths not exceeding 72 inches, and in thicknesses from $\frac{3}{8}$ inch to $\frac{3}{4}$ inch.

The Pyramid Matting may, perhaps, be preferred, as this style is more easily cleaned than the corrugated, because it can be brushed in either direction. It is especially convenient and economical for stair-treads, the form of the pyramids permitting the cutting to be done either crosswise or lengthwise of the roll, avoiding waste.

Made in rolls of any size up to 30 inches wide.

Wherever there is much traffic, Stair-treads are exceedingly useful. They prevent slipping and make the steepest steps safe, at the same time protecting the edges from wear. We furnish them either moulded or cut; the former are made with a border, and have the extra smoothness and finish peculiar to moulded goods. We carry in stock Nos. 1 (6" x 18") and 2 (7" x 24"); the remaining sizes are made to order. We are prepared to get up special designs and sizes at moderate prices.

We also furnish cut treads in either Corrugated or Pyramid styles, without border, in any size required, at the same price as corrugated matting, making no charge for the cutting.

The tread is used with metal nosing on edge of step. This protects the step and rubber and gives a neat finish, especially if brass nosings are used. We supply these and also galvanized-iron nosings.

Perhaps our most useful and artistic flooring device is our Interlocking Rubber Tiling. This is noiseless, non-slippery, sanitary and extraordinarily durable, the finest floor that can be laid in business-offices, banking-rooms, court-rooms, vestibules, halls, billiard-rooms, cafés, libraries, churches, hospitals and hotels.

It is specially adapted for steamships, yachts, etc., standing, without cracking or separating, the straining and racking of the ship. Each tile is interchangeable and distinct, but shaped so as to lock firmly into the surrounding tiles. The interlocking feature produces a solid rubber floor, unlimited in size or shape, with all the durability of the hard tile, without its liability to damage.

Manufactured under our patent, and sold only by us and our authorized agents. Estimates, designs and samples furnished on application. Send for special catalogue.

NEW YORK BELTING AND PACKING CO.,
NEW YORK, N. Y.

THE American Bridge Company will furnish two deck-plate girder-spans for the Nacozari R. R. Company, of Mexico.

COLUMNS.

THE C. T. Nelson Co., Columbus, Ohio, make a speciality of "Built-up" Columns to special designs and architect's details.

These "Built-up" Columns are staved-up out of 2-inch, 2½-inch, or 3-inch lumber and with eight to twenty-four staves to the column, according to the size and style, and we carry on hand a stock of dry, thick poplar plank for making these staved columns. The lumber is thoroughly kiln-dried and the staves are joined together by tongue-and-grooved glued joints, running the entire length of the stave, which makes a perfect joint and one that will stand. Our staved columns will not open in the joints.

We make these staved columns as large as 30 inches in diameter and 24 feet long and larger, and have on hand 3-inch poplar plank 22 feet long for making the shafts of these largest size columns. Can also furnish white-pine columns, but they cost more than poplar, as the lumber is more expensive.

We manufacture hand-carved capitals, and can make the columns to be used with composition capitals.

We make a speciality of this business, and have a fully-equipped factory and the best of facilities, and manufacture first-class goods.

Write us for prices, giving sizes and specifications. We make prompt shipments.

C. T. NELSON CO.,
COLUMBUS, O.

NOTES.

THE firm of L. Haberstroh & Son, of Boston, has made a most important addition to its staff in Mr. Henry B. Pennell, who graduated from the Institute of Technology in

(Continued on page 3.)

"The Georgian Period"

THIS publication, which now consists of eight Parts, contains more than a hundred pages of text, illustrated by over three hundred text-cuts, and two hundred and ninety-seven full-page plates, of which one-third are gelatine or half-tone prints. It is in truth a work of superior excellence and great usefulness.

The matter already illustrated may in small part be classified thus:

PUBLIC BUILDINGS

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

CHURCHES

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

IMPORTANT HOUSES

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

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

Porches and Doorways		67 Subjects
Staircases		21 "
Mantelpieces		81 "
Pulpits		6 "
Fanlights		60 "

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

Atlas PORTLAND CEMENT

The
Standard
American Brand.

Used Exclusively in the Following New York Buildings:

HAVEMEYER STORES

SINGER BLDG.

ST. PAUL BLDG.

UNIVERSITY CLUB

AMERICAN SURETY BLDG.

N. Y. LIFE INS. BLDG.

BANK OF COMMERCE

STANDARD OIL BLDG.

JOHNSTON and PRESBYTERIAN BLDGS.

AND MANY OTHERS.

Atlas Portland
Cement Company

143 LIBERTY STREET
NEW YORK



DIAMONDS AND CEILINGS

Diamonds must be properly set to bring out their full power and brilliancy.
Ceiling Plates must be properly combined to bring out their true character and beauty.
The Ceiling which looks best is the one in which handsome, harmonious designs are combined in an artistic manner.
Even good designs are spoiled by combining them with those belonging to other artistic styles.
The sure way to avoid conglomerations and unartistic mixtures is to use BERGER'S CLASSIC METAL CEILINGS.

Berger's Classic Metal Ceilings

are made in a series of complete and artistic classified designs. Each classified design is made up of pieces which are in harmony with each other.
Our Catalogue classifies each piece of material under the style to which it belongs.
This makes it easy to make an intelligent and artistic selection.
Write for our handsome Catalogue of Classified Metal Ceilings. We mail it free upon application.

THE BERGER MFG. CO., Canton, Ohio

New York Office, 210 East 23d St.
Philadelphia Office, 1013 Arch St.
New England Branch, 116 Federal St., Boston, Mass.
Western Branch, 1428 N. Broadway, St. Louis, Mo.

SPECIALTIES:—Ceiling, Roofing, Siding, Eave Trough, Conductor Pipe, Hangers, etc.

1890 and held the Rotch Travelling-scholarship during 1898 and 1899, and while abroad made a special study of the best examples of interior decoration; which, in addition to his architectural training acquired by seven years' work in the office of Messrs. Peabody & Stearns, makes him eminently fitted for decorative work of the highest order. Lucas and Albert Haberstroh have always made it the aim of their firm to work strictly in conjunction with the architect, and to design their decoration in conformity with his plans. Since 1848, the firm has been engaged upon State and county buildings, residences, churches, clubs, theatres, banks, hotels and other buildings, constantly enlarging the scope of its work, which now embraces decoration and furnishings of all descriptions.

THE American Sheet Steel Company have at the present time twenty-one sheet mills in the Vandergrift Works, at Vandergrift, Pa.; ten mills in the Leechburg Works, at Leech-

burg, Pa.; four mills at the Saltsburg Works, at Saltsburg, Pa., and six mills in the Apollo Works, at Apollo, Pa. It is the intention to add eight more mills to the Vandergrift Works, making that a 29-mill plant. All these mills are in charge of E. W. Pargny, who is Manager for the Pittsburgh district for the American Sheet Steel Company. The equipment at the Leechburg Works has been very much improved, and has been brought up to the best possible sheet practice. The equipment at the above four works is kept in the best possible condition by a large force of millwrights and machinists, so that a shut-down in the summer for repairs is not necessary. At these works the Amalgamated scale is not signed, and the mills are all in full operation, despite reports to the contrary.

WILLIAM B. SCAIFE & SONS, of Pittsburgh, manufacturers of structural ironwork, pressure-tanks, galvanized ice-cans, sheet-plate and forged ironwork, have secured a

contract from the Mexican Central Railroad for a large galvanized cylinder, on which a steel-frame pier is to rest. The contract necessitates an enlargement of the galvanizing plant of William B. Scaife & Sons. These cylinders, which are to be galvanized and then riveted together, are 6 feet in diameter, made of $\frac{3}{8}$ -inch thick steel, each weighing about 2,800 pounds. They are to act as piers, and when put in place will be filled with concrete. They are the largest cylinders that have ever been galvanized in this country, and it is doubtful if anything as large has ever been galvanized elsewhere. This firm did similar work for the Port Royal Navy Yard wharf last year, but the cylinders were only $4\frac{1}{2}$ feet in diameter, made of $\frac{3}{8}$ -inch, and weighed 1,100 pounds each.

THE International Correspondence Schools, Scranton, Pa., call attention to the fact that instruction is given throughout the entire year, the vacations of the principals and instructors being arranged so that there is no

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.

The W. S. Tyler Company

CLEVELAND, OHIO



ORNAMENTAL IRON AND BRONZE

The Soderlund Twin Faucet



And in all places where hot and cold water is used

PATENT APPLIED FOR

UNION BRASS WORKS

11 Hawkins Street, Boston, Mass.

interruption in the work of the Schools. This affords an opportunity for mechanics and

TRY A BOARD

Paint one end of a board with a sky-blue tint of zinc white and Prussian blue, match the other end with white lead and Prussian blue; hang it out and let the sun be umpire.

ZINC WHITE

Is not only more economical, more beautiful and more durable than any other white pigment, but it also preserves tints.

FREE: Our Practical Pamphlets—

"The Paint Question,"

"Paints in Architecture,"

"House Paints: A Commonsense Talk About Them."

The New Jersey Zinc Co.
11 Broadway
New York

others who have a dull season during the summer to take up a course by mail and make good use of what would otherwise be waste-time.

THE American Steel Roofing Co., formerly of Cincinnati, has recently moved its entire plant to Middletown, Ohio, the object being to bring its manufacturing plant into closer conjunction with its rolling-mill, which was operating in the latter town.

BUILDING INTELLIGENCE.

Reported for the American Architect and Building News

ADVANCE RUMORS.

Philadelphia, Pa.—Architects Cope & Stewardson 320 Walnut St., have completed plans and specifications for the library and dormitory buildings to be constructed at Bryn Mawr, for the college of that place. They will be two or three-story structures, of handsome design, and for which \$175,000 has been appropriated.

Portsmouth, O.—Andrew Carnegie has offered this city \$50,000 for a public library.

Richmond, Va.—The Committee on Public Institutions has adopted a resolution calling for the building of a new penitentiary at a cost not exceeding \$500,000.

Saginaw, Mich.—Cooper & Jackson have prepared plans for a \$14,000 addition to the West Side High School.

St. Louis, Mo.—Weber & Groves, 509 Olive St., are preparing plans for an eight-story building to be erected at the entrance of the Fads Bridge, for the Norvell-Shapleigh Hardware Co., to cost about \$250,000.

Suncook, N. H.—A two-story brick and stone building, 63' x 63', will be erected for Pembroke Academy from plans furnished by William H. Butterfield, architect, of Manchester.

Valley City, N. D.—Andrew Carnegie offers \$15,000 for a library building under the usual conditions.

EDUCATIONAL.

Philadelphia, Pa.—Eighth and Clearfield Sts., three-story school, 57' x 147'; \$64,700; o., Board of Education; b., Wm. J. Smith.

FACTORIES.

Atlanta, Ga.—Means St., five-story bk. furniture factory, 70' x 250'; \$20,000; o., Ware Furniture Co.; a., Butt & Morris.

New York, N. Y.—Sixteenth St. and Seventh Ave., six-story bk. building, 38' x 136' 6" for manufacturing purposes; \$60,000; o., James L. Van Alen, Newport, R. I.; a., Clinton & Russell.

Philadelphia, Pa.—A St. and Allegheny Ave., four-story bk. carpet-factory, 39' x 52', with boiler & engine house; \$27,000; o., Archibald Holmes & Son; b., Robert Beatty & Bro.

BUILDING INTELLIGENCE.

HOTELS.

Atlanta, Ga.—Peachtree and Luckie Sts., ten-story steel-fr. bk. & st. hotel; \$350,000; o., Piedmont Hotel Co.

New York, N. Y.—Broadway, Nos. 2128-30, four-story brick & st. hotel, 52' 3" x 96' 8" & 81' 5", plastic slate roof; \$40,000; o., The Tilden Bldg., care Henry D. Hotchkiss, 35 Nassau St.; a., John H. Duncan, 21 W. 24th St.

HOUSES.

Columbus, O.—E. Town St., three-story 10-room bk. dwell.; \$10,000; o., Dr. T. W. Rankin; a., McAllister & Restiaux, 114 N. High St.

N. Monroe Ave., 24-story bk. dwell., slate roof, furnace; \$5,000; o., H. G. Price; a., C. A. Stribling & Co.

Collins Ave., 24-story bk. double dwell., 42' x 48', slate roof, furnace; \$8,000; o., H. D. Curl; a., Frank L. Packard.

Somerville, Mass.—24-story fr. dwell., 42' 6" x 62' 6", pitch roof, steam; \$13,000; o., Geo. H. Pendergast; a., Prescott & Sidebottom, Boston.

Weston, Mass.—Three-story fr. & plaster dwell., 48' x 82', with ell, 28' x 100'; o., Horace S. Sears; b., J. W. Bishop & Co., Boston; a., J. Everett Chandler, Boston.

LIBRARIES.

New Britain, Conn.—One-story bk. building for the Kensington Library, 25' x 40', with stone trimmings; \$10,000; a., Davis, Brooks & Crosby, Hartford; b., Tracy Bros., Waterbury.

OFFICE-BUILDINGS.

New York, N. Y.—W. Sixty-seventh St., nr. Columbus Ave., seven-story bk. studio, 75' x 85'; \$150,000; o., Wm. J. Taylor; a., D. M. B. Sturges and H. B. Simonson.

STABLES.

Brooklyn, N. Y.—King's Highway, nr. Coney Island Ave., 1½-story fr. stable, 40' 8" x 94' 10", shingle roof; \$1,500; o., W. H. Simmons, Avenue D & E. 9th St.; a., J. S. Kennedy.

E. Tenth St., nr. Avenue Q, 1½-story racing stable, 42' x 166', shingle roof; \$1,200; o., J. H. Carr, on premises.

Himrod St., nr. Evergreen Ave., three-story & cellar stable & dwell., 23' x 40'; \$11,000; o., G. Pope, 867 Bushwick Ave.; a., A. E. Parfitt, 26 Court St.

Chicago, Ill.—Garfield Boulevard, rear, No. 830, two-story bk. stable, 30' x 45', tile roof; \$10,000; o., James O'Leary; a., Z. T. Davis, 79 Dearborn St.

Minneapolis, Minn.—Two-story bk. livery-stable; \$12,000; o., Thos. Gavin, 1614 Lyndale Ave.; a., Carl F. Strevek.

New York, N. Y.—One Hundred and Forty-first St., nr. 8th Ave., four-story bk. & st. stable, 30' x 108'; o., A. B. Grathomy; a., Murchison & Jacobs, 1135 Broadway.

Broome St., No. 126, seven-story bk. & st. stable & lofts, 20' x 87' 6"; o., Aron Asen, 121 Broome St.; a., Horenburger & Straub.

Third Ave., No. 3752, two-story bk. stable, 24' 8" x 47'; \$1,500; o., Chas. N. Mazza, on premises; a., W. O. Talt.

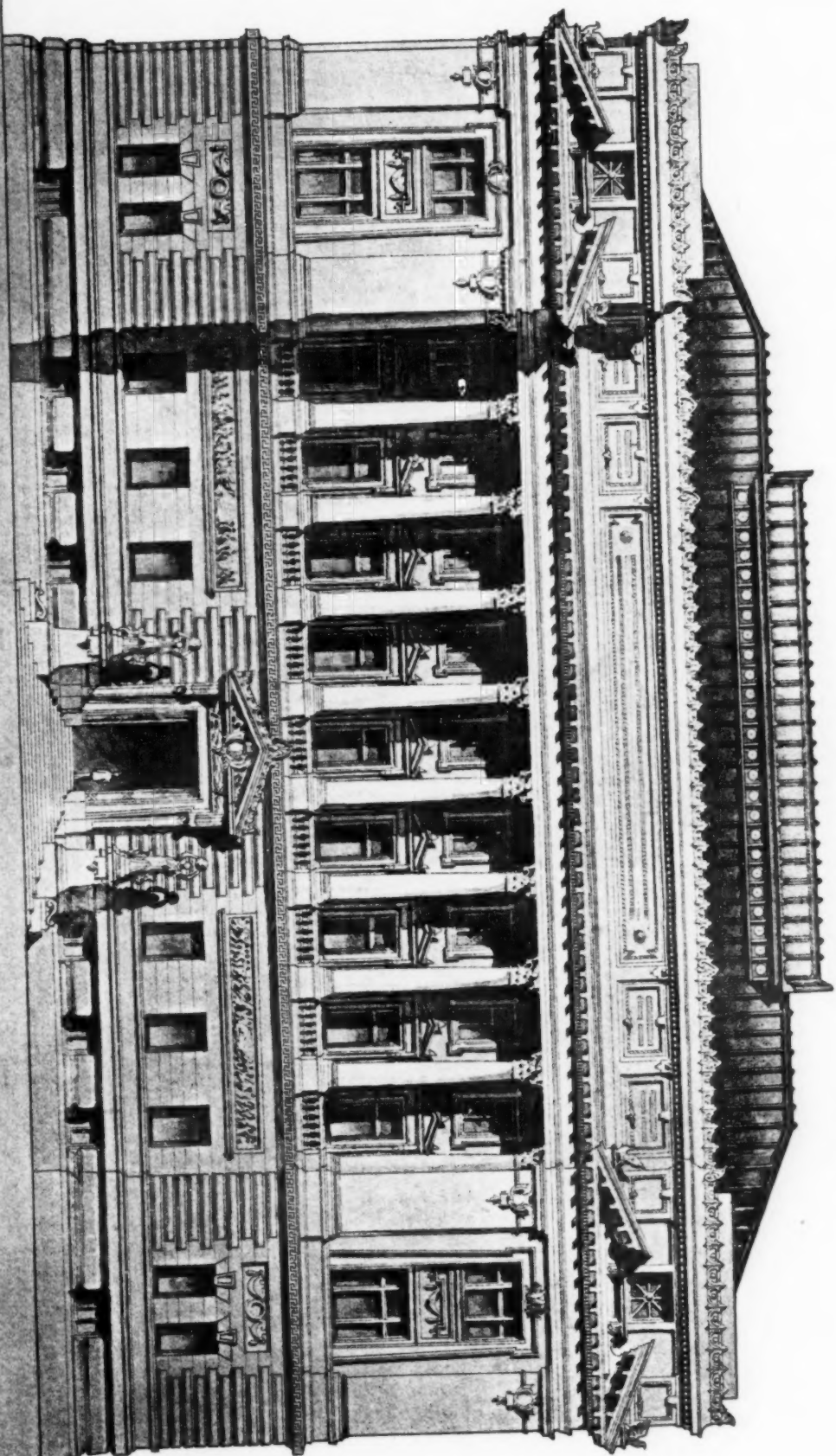
Philadelphia, Pa.—Forty-eighth St. and Paschall Ave., two-story bk. stable, 30' x 80'; \$2,800; o., Dan'l Bider; b., Matthew J. Welsh.



Copyright 1901 by The American Architect and Building News Co.

LITHOGRAPHED BY THE AMERICAN ARCHITECT AND BUILDING NEWS CO., NEW YORK

The American Architect
Aug. 3, 1901.
No. 1336.



A COMPETITIVE DESIGN FOR THE DEPARTMENT OF JUSTICE BUILDING, WASHINGTON D. C.
 D'ONCH & YOST, ARCHITECTS

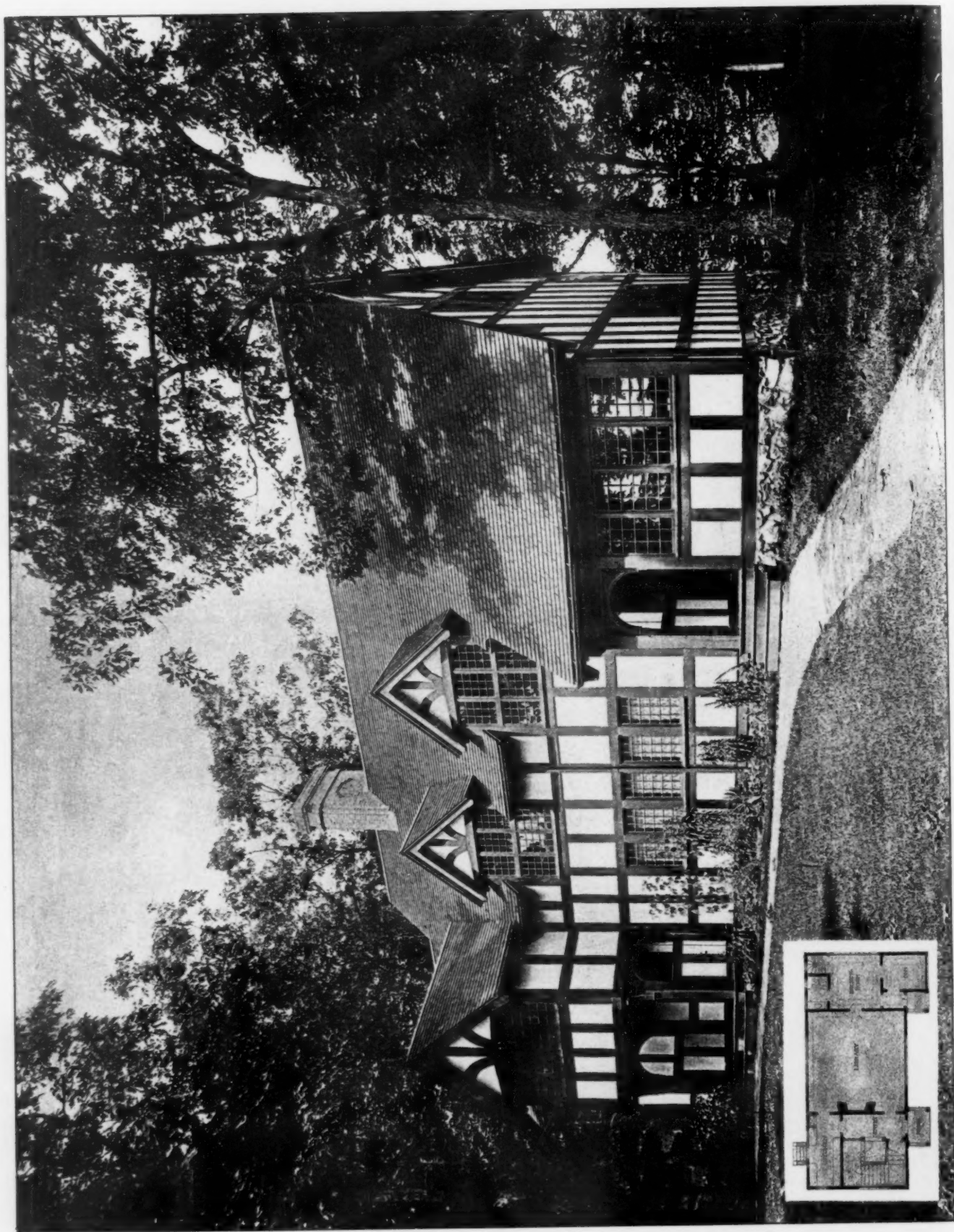


V. S. POST OFFICE & COURT HOUSE
CRESTON, IOWA

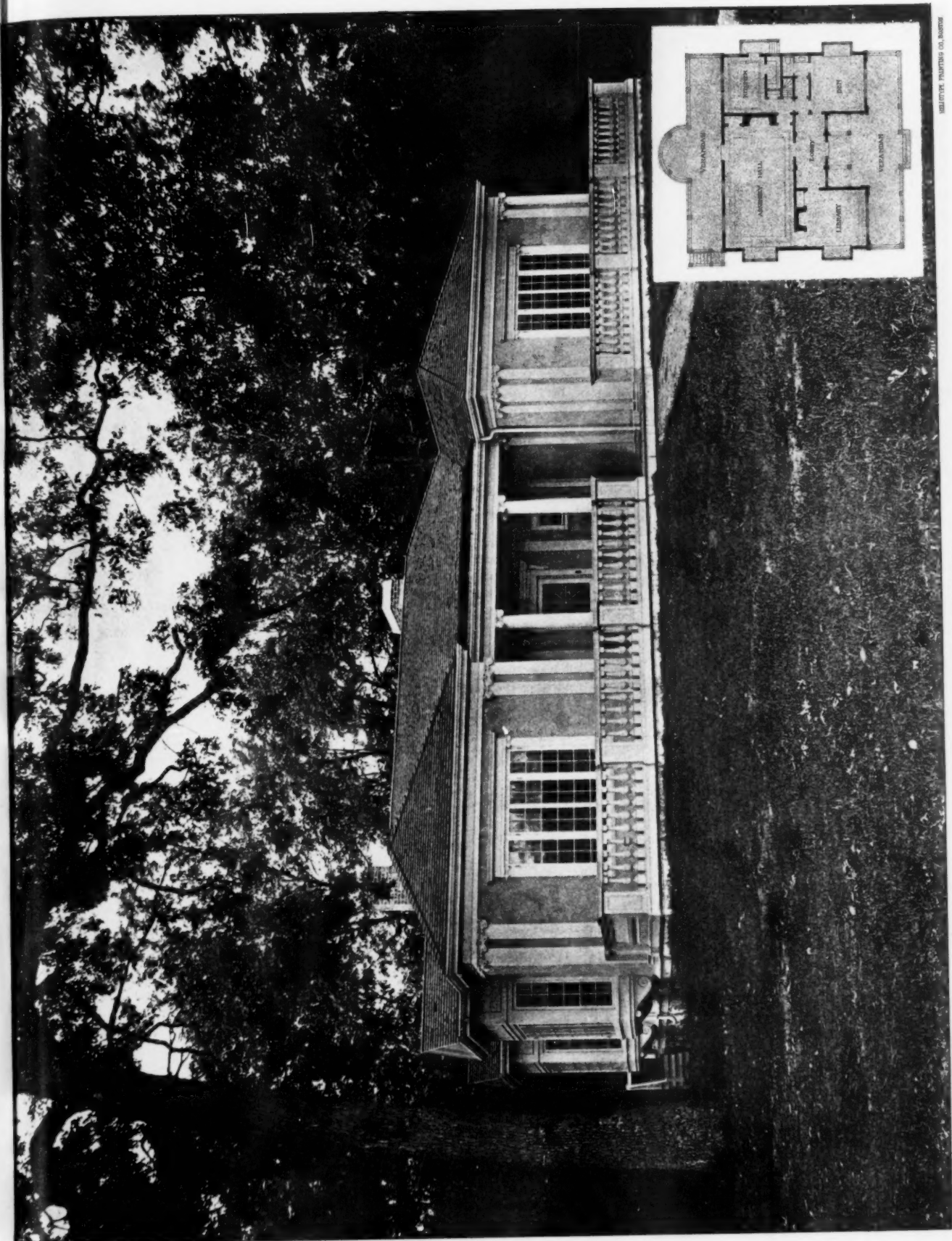
JAMES C. KNOX · TAYLOR & SUPERVISING ARCHITECT

CONSUMER: WAS MY TURTLE ANCESTRAL AND BODILY HARMED BY

The American Architect
Aug. 3, 1901.
No. 1336.



THE SHAKESPEARE CLUB-HOUSE.



DESIGNED FOR BY THE AMERICAN ARCHITECT AND BUILDING NEWS CO.

PHI SIGMA CLUB-HOUSE.

SOCIETY CLUB-HOUSES: WELLESLEY COLLEGE, WELLESLEY, MASS
C. K. CUMMINGS, ARCHITECT.

The American Architect
Aug. 3, 1901.
No. 1336.

THE AMERICAN ARCHITECT AND BUILDING NEWS

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART

VOL. LXXIII. — No. 1336.]

SATURDAY, AUGUST 3, 1901.

PRICE, { INTERNATIONAL ISSUE, 50 CTS
REGULAR " 15 "

ARCHITECTURAL INSTRUCTION.

BOSTON, MASS.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

DEPARTMENT OF ARCHITECTURE.

Options in Architectural Engineering and Landscape Architecture.

College graduates and draughtsmen admitted as special students.

SUMMER COURSES in Elementary Design and Shades and Shadows. Proficiency in these subjects will enable draughtsmen and students from other colleges to enter third year work.

For catalogues and information apply to
H. W. TYLER, Secretary,
Mass. Institute of Technology, Boston, Mass.

CAMBRIDGE, MASS.

HARVARD UNIVERSITY.

LAWRENCE SCIENTIFIC SCHOOL.

PROF. H. LANGFORD WARREN.

ITHACA, N. Y.

CORNELL UNIVERSITY

COLLEGE OF ARCHITECTURE

Offers a four-year course in Architecture leading to the degree of B. Arch.; also a two-year special course with certificate.

PROF. ALEXANDER BUEL TROWBRIDGE.

NEW YORK, N. Y.

COLUMBIA UNIVERSITY, IN THE CITY OF NEW YORK.

SCHOOL OF MINES.
SCHOOL OF CHEMISTRY.
SCHOOL OF ENGINEERING.
SCHOOL OF ARCHITECTURE.
SCHOOL OF PURE SCIENCE.

Four years' undergraduate courses and special facilities for graduate work in all departments. Circulars forwarded on application to the Secretary of the University.

ATELIER MASQUERAY

123 EAST 23D STREET, NEW YORK CITY

9th Year

Architecture and Decorative Composition
Rendering

MONSIEUR E. L. MASQUERAY

WHITTIER MACHINE CO.,

PASSENGER AND FREIGHT
ELEVATORS.

53 STATE STREET - - - BOSTON.

LOOMIS FILTERS.

ESTABLISHED 1880.

Improved System. Simple and Effective.

LOOMIS-MANNING FILTER CO.,

Main Office: 402 CHESTNUT ST., PHILADELPHIA.
Boston. New York. Baltimore. Washington.

COLUMBUS, OHIO.

OHIO STATE UNIVERSITY COLLEGE OF ENGINEERING

Offers four-year courses in Architecture, Civil, Electrical, Mechanical and Mining Engineering, and in Ceramics. Tuition free. For information address,
President W. O. THOMPSON, Columbus, Ohio.

PHILADELPHIA, PA.

UNIVERSITY OF PENNSYLVANIA. SCHOOL OF ARCHITECTURE.

PROF. WARREN P. LAIRD.

SYRACUSE, N. Y.

SYRACUSE UNIVERSITY, Syracuse, N. Y. DEPARTMENT OF ARCHITECTURE.

PROF. EDWIN H. GAGGIN.

BOOKS:

"Cathedral of St. John the Divine."

Designs submitted in the First Competition.

57 Plates, folio. Price \$5.00.

AMERICAN ARCHITECT AND BUILDING NEWS CO.

BOOKS:

"The Library of Congress."

20 Plates, folio. Price \$5.00.

AMERICAN ARCHITECT AND BUILDING NEWS CO.

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.

SCAIFE FILTERS.

10 to 10,000 Gallons per Hour.

NO CHEMICALS REQUIRED.

RESULTS GUARANTEED.

WM. B. SCAIFE & SONS,
Pittsburgh, Pa.

The WINSLOW BROS. COMPANY,

CHICAGO,

Ornamental Iron and Bronze.

BOOKS:

"Ile de France, Picardie."

PART I. I.

A portion of the series of "Archives de la Commission des Monuments Historiques."

25 Plates, folio. Price \$6.00.

AMERICAN ARCHITECT AND BUILDING NEWS CO.

BOOKS:

"Croquis d'Architecture."

(Intime Club.)

XXII Year, complete. Price \$6.70.

A hiatus of ten years occurs between the date of the 21st and 22nd volumes.

AMERICAN ARCHITECT AND BUILDING NEWS CO.

BOOKS:

"Architectural Masterpieces of Belgium and Holland."

96 Plates, quarto. Price \$10.00.

AMERICAN ARCHITECT AND BUILDING NEWS CO.

ROBERT C. FISHER & CO.

Successors to Fisher & Bird,

MARBLE AND GRANITE WORKS.

97, 99, 101 and 103 EAST HOUSTON STREET,
Established 1830. NEW YORK

A Dingy Front Door



Makes the handsomest house look shabby. Preserve its lustre by specifying our

SPAR COATING

Our Varnish Booklet Free.

EDWARD SMITH & CO.

Varnish Flakers and Color Grinders
45 Broadway, New York

ARCHITECTS

VISITING THE
Pan-American Exposition
ARE INVITED TO INSPECT
IN MANUFACTURERS' BUILDING

Our Exhibit
OF
Ball Bearing Hinges

..IN..
Wrought Steel AND
Wrought Bronze
IN A
Great Variety of Finishes

The Stanley Works
NEW BRITAIN, CONN.
79 Chambers St., NEW YORK

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.

CLINTON WIRE-CLOTH CO.

Sole Proprietors and Manufacturers of

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

Plain, Japanned 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.



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

"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 fifteenth 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.

Established nearly 40 Years

.. THE ..

ARCHITECT

AND

Contract Reporter

Published Every Friday by P. A. Gilbert Wood

6 TO 11 IMPERIAL BUILDINGS
LUDGATE CIRCUS. LONDON, E. C.

PRICE, FOURPENCE

The "ARCHITECT AND CONTRACT REPORTER" has been established nearly 40 years; has a large and influential circulation; has been proved to be the best medium for advertising to Architects, Builders and Contractors; has the finest illustrations, and has been specially noted for its Art reproductions.

Send us six English 1d. stamps and we will mail you sample copy.

Send us post-office money order for 50 cents and we will send you the last six weeks' issues.

On receipt of \$6.25 we will forward for 12 months.



THE Hardware of Ornament

(comprising decorative metal work for doors, windows and cabinets)

is produced in practically all schools, and a great variety of finishes, by the

Yale & Towne Mfg. Co.

General Offices: 9-11-13 Murray St., New York.

The collection of designs and patterns of this class is by far the largest in the world and is of the highest technical excellence.

"Artist and Artisan" is the title of an attractive Brochure dealing with the origin of the Hardware of Ornament and its present development and uses. It will be sent on request.

An Exhibit Room for the convenience of Architects and their Clients is provided at the above address.



The Ideal "ARCADIA" Water-Closet Combination

Unquestionably the
Finest Closet that
has ever been pro-
duced. None other
can be compared
with this High-
Grade, Original and
Strictly Sanitary
Closet Combination

THE IDEAL MFG. CO.
DETROIT, U. S. A.

THE LIBRARY of CONGRESS,

WASHINGTON, D. C.

Architects: Smithmyer & Pelz:

P. J. Pelz; E. P. Casey.

Twenty Gelatine Plates, in Portfolio

14" x 16 1/2".

PRICE - - \$5.00.

AMERICAN ARCHITECT AND BUILDING NEWS CO



80-Paged 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,
18 FLETCHER ST., NEW YORK.

Cathedral of St. John the Divine.

✠ New York, N. Y. ✠

WE offer the illustrations of the competitive
designs for the great Protestant Episco-
pal Cathedral, now building on Bloomingdale
Heights, New York.

In all, fifty-seven plates [loose], 14 x 20 inches,
printed on plate-paper.

Price, \$2.50 per set.

American Architect and Building News Co.,
211 Tremont St., Boston, Mass.,
U. S. A.

SPECIFY CRANE FITTINGS

WRITE FOR POCKET CATALOGUE

CRANE CO.
CHICAGO
ESTABLISHED 1855
NEW YORK PHILADELPHIA CINCINNATI KANSAS CITY SIOUX CITY OMAHA
ST. PAUL ST. LOUIS LOS ANGELES SAN FRANCISCO PORTLAND, ORE.



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.

Topographical Index of Advertisers.

[For pagination, see Alphabetical Index on Cover 2.]

CONNECTICUT.

New Britain.
The Stanley Works.....[Wrought-Steel Butts.

New Haven.
Fitch Co., The W. & E. T.....[Sash Lock.

Stamford.
Yale & Towne Mfg. Co.....[Locks.

Waterbury.
Hendrick & Burnham Mfg. Co.....[Seamless
Nickel-Silver Tubing.....[Locks.

London. **ENGLAND.**
The Architect and Contract Reporter.....[Maga-
zine.

Chicago. **ILLINOIS.**
Crane Co.....[Valves.
Johnson Co., E. V.....[Fireproofing.
Northwestern Terra-Cotta Co.....[Terra-Cotta.
Peck Brothers Company.....[Flush-Valves.
Stamson & Blom.....[Cement Porting.
Taylor, J. W.....[Photographs.
Winslow Bros. Co., The.....[Ornamental Iron
and Bronze.

Baltimore. **MARYLAND.**
Vaile & Young.....[Skylights.

Boston. **MASSACHUSETTS.**
Amer. Mason Safety Tread Co.....[Stair Tread.
Bartlett Lumber Co.....[Redwood Lumber.
Butcher Polish Co.....[Floor Polish.
Cabot, S.....[Single-Stem.
Campbell, Walter M.....[Perspectives.
Carlisle, Pope & Co.....[California Redwood.
Carter Ink Co.....[Ink.
Dickey & Co., A.....[Spiral Mouldings.
Polson Snow Guard Co.....[Snow Guards.
Gurney Heater Mfg. Co.....[Hot-water, etc.
Haberstroh & Son, L.....[Decorators.
Heliotype Printing Co.....[Art Printing.
Massachusetts Institute of Technology.....[School.
New England Felt Roofing Works.....[Roofing.
Samson Cordage Works.....[Sash-Cord.
Spaulding Print Paper Co.....[Blue Prints.
Union Brass Works.....[Faucets.
Whittier Machine Co.....[Elevators.

MASSACHUSETTS.

Clinton.
Clinton Wire Cloth Co.....[Metallic Lathing.

Palmer.
Flynt Building & Construction Co.....[Building
Contractors.....[Mouldings.

Detroit. **MICHIGAN.**
Berry Brothers, Limited.....[Shinglelat.
Dwight Lumber Co.....[Hardwood Flooring.
Ideal Mfg. Co.....[Sanitary Specialties.

Grand Rapids.
Grand Rapids Carved Moulding Co.....[Mouldings.

St. Louis. **MISSOURI.**
Ludlow Saylor Wire Co.....[Art Metal-Work.

Jersey City. **NEW JERSEY.**
Dixon Crucible Co., Jos.....[Graphite.

Paterson.
Passaic Rolling Mill Co.....[Structural Iron.

Perth Amboy.
Perth Amboy Terra-Cotta Co.....[Terra-Cotta.

Brooklyn. **NEW YORK.**
Moore, Benjamin.....[Mureco.

Irvington-on-Hudson.
Lord & Burnham Co.....[Conservatories.

Ithaca.
Cornell University.....[School.

Jamestown.
Art Metal Construction Co.....[Art Metal
Work.....[Mureco.

N. Y. City.
Alsen's Cement Works.....[Cements.
American Iron Bridge Co.....[Steel Structures.

NEW YORK.

American Sheet Steel Co.....[Galvanized Iron.

Atelier Masqueray.....[School.
Atlas Cement Co.....[Cement.
Buckley & Co., G.....[Sculpture.
Columbia University.....[School.
Deane, E. Eldon.....[Colorist.
Fisher & Co., Robert C.....[Marble.
Frank, I. E.....[Reflector.
Gorton & Liddigwood Co.....[Sculpture.
Hayes, George.....[Metallic Lathing.
Hitchings & Co.....[Greenhouses.
Jackson & Co., Wm. H.....[Grates.
Jenkins Bros.....[Valves.
Jones, T. W.....[Fanes.
Kenney Co., The.....[Flushometer.
Kent-Costlyan.....[Raps (Carnets).
Mott Iron Works, The.....[Iron Work.
Neuchatel Asphalt Co.....[Asphalt.
New Jersey Zinc Co.....[Zinc White.
New York Belting and Packing Co., Ltd.
New York Mastic Works.....[Interlocking Rubber Tiling.
N. Y. Metal Ceiling Co.....[Metal Ceilings.
Okonite Co. (Ltd.).....[Insulated Wire.
Put, W. R.....[Folding-Cases.
Rider-Ericsson Engine Co [Hot-Air Engines.
Sargent & Co.....[Builders' Hardware.
Smith Co., H. B.....[Steam Heat.
Smith & Co., Edward.....[Varnishes.
Thiele, E.....[Portland Cement.
U. S. Mineral Wool Co.....[Mineral Wool.
Warren Chemical & Mfg. Co.....[Asphalt Roofing.
Williams, John.....[Wrought Metal.
Yale & Towne.....[Hardware (Art).

Rochester.
Cutler Mfg. Co.....[Mail Chutes.

Syracuse.
Syracuse University.....[School.

Troy.
Globe Ventilator Co.....[Ventilators.
Troy Laundry Machinery Co.....[Washing Ma-
chines.....[Hardware (Art).

OHIO.

Canton.
Berger Mfg. Co., The.....[Metal Ceilings.
Canton Steel Roofing Co., The.....[Metal Ceilings.

Cincinnati.
American Steel Roofing Co., The.....[Condensers.
Ohio Marble and Wood Co., The.....[Marbles Col-
ored.....[School.

Cleveland.
Glidden Varnish Co., The.....[Varnish.
Tyler Co., The W. S.....[Ornamental Iron and
Bronze.....[School.

Columbus.
Kinnear Mfg. Co.....[Steel Rolling-Doors.
Nelson Co., The C. T.....[Capitals (Carved).
Ohio State University.....[School.

Salem.
Mullins, W. H.....[Architectural Metalwork.

Philadelphia. **PENNSYLVANIA.**
Kearney & Mattison Co.....[Magnesia Covering.

Philadelphia.
Electric Storage Battery Co.....[Chloride-
Accumulator.....[Marble Colors.
French & Co., Samuel H.....[Protective Paints.
Harrison Brothers & Co.....[Automatic
Sprinklers.....[Filters &
Loomis Filter Improved System.....[Filtration.
Merchant & Co., Inc.....[Ventilation.
Morse, Williams & Co.....[Elevators.
Taylor Co., N. & G.....[Sheet Metal.
Thorn, J. S. Co.....[School.
University of Pennsylvania.....[School.

Pittsburgh.
Scaife, Wm. B. & Sons.....[Fitters.
Wisconsin Graphite Paint.....[Graphite Paints.

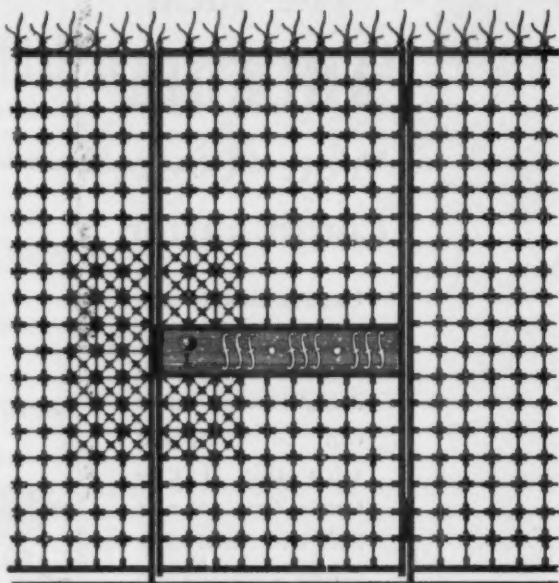
Scranton.
International Correspondence Schools, The..
[Architects.....[School.

York.
Vapor Heating Co.....[Heating Apparatus, Steam.

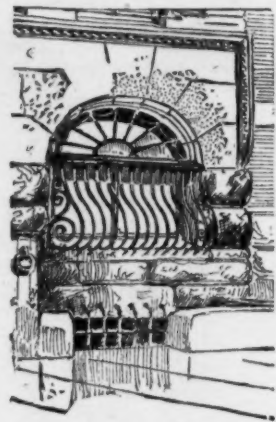
Burlington. **VERMONT.**
Burlington Venetian Blind Co.....[Venetian
and Sliding Blinds.....[School.



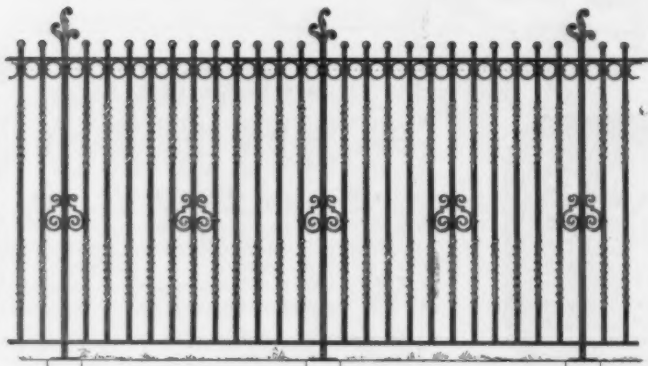
Wrought Iron Lantern.



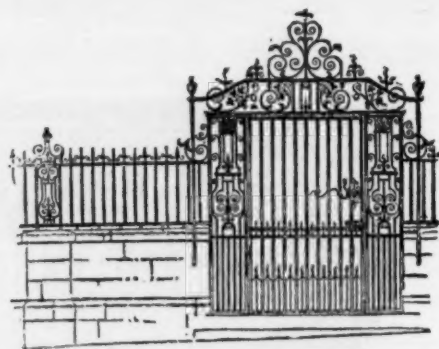
Grille Office Railing and Gate.



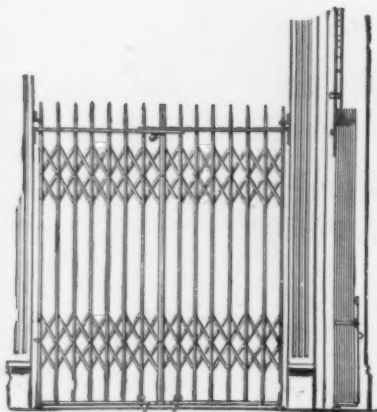
Wrought Iron Window Guard.



Ornamental Wrought Iron Railing.



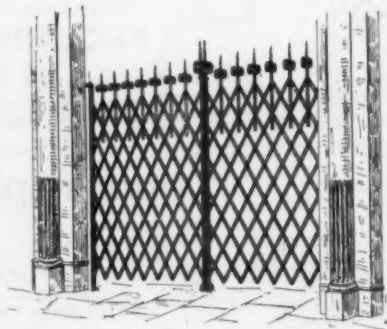
Wrought Iron Railing and Entrance Gate.



Bostwick Folding Gate for Store Entrance.

THE WM. R. PITT
COMPOSITE IRON WORKS,
111 FIFTH AVENUE,
NEW YORK.

MANUFACTURERS OF THE "PITT," "BOSTWICK," NOVELTY AND COMPOSITE PATENT FOLDING GATES AND GUARDS, IN BRASS, BRONZE, STEEL OR IRON, FOR STORE FRONTS, VESTIBULES, ELEVATOR ENCLOSURES AND CARS, BANK VAULTS, WINDOWS, BRIDGES, FERRYBOATS, CARS, ETC. ALSO ARCHITECTURAL AND ORNAMENTAL IRON, BRASS AND BRONZE WORK RAILINGS, DRIVEWAY AND ENTRANCE GATES, WINDOW GRILLES, MARQUEES, BANK AND OFFICE GRILLE WORK, STAIRS, LANTERNS, SPECIAL HARDWARE AND ALL ARTISTIC WROUGHT WORK. ESTIMATES FURNISHED.



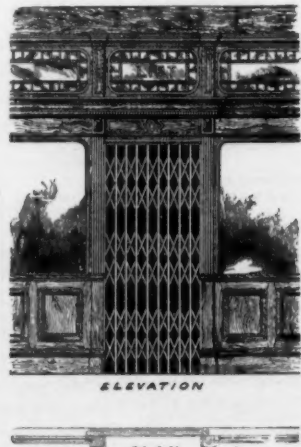
Pitt Folding Gate for Store Entrance.



Bostwick Folding Gate for Vestibule Entrance.



Bostwick Folding Guard for Windows.



Bostwick Folding Gate for Elevator Enclosures.



Architects are warned against imitations of

Cabot's Sheathing and Deafening Quilt

which is suffering the penalty of success. The imitations are made with cow-hair and other putrescible materials which harbor moths and vermin, in place of the absolutely sanitary and uninflam-
mable eel-grass which our patents protect to our sole use.

We like the flattery of imitation, but do not want our patrons to suffer by it.

The genuine article bears our trade-mark

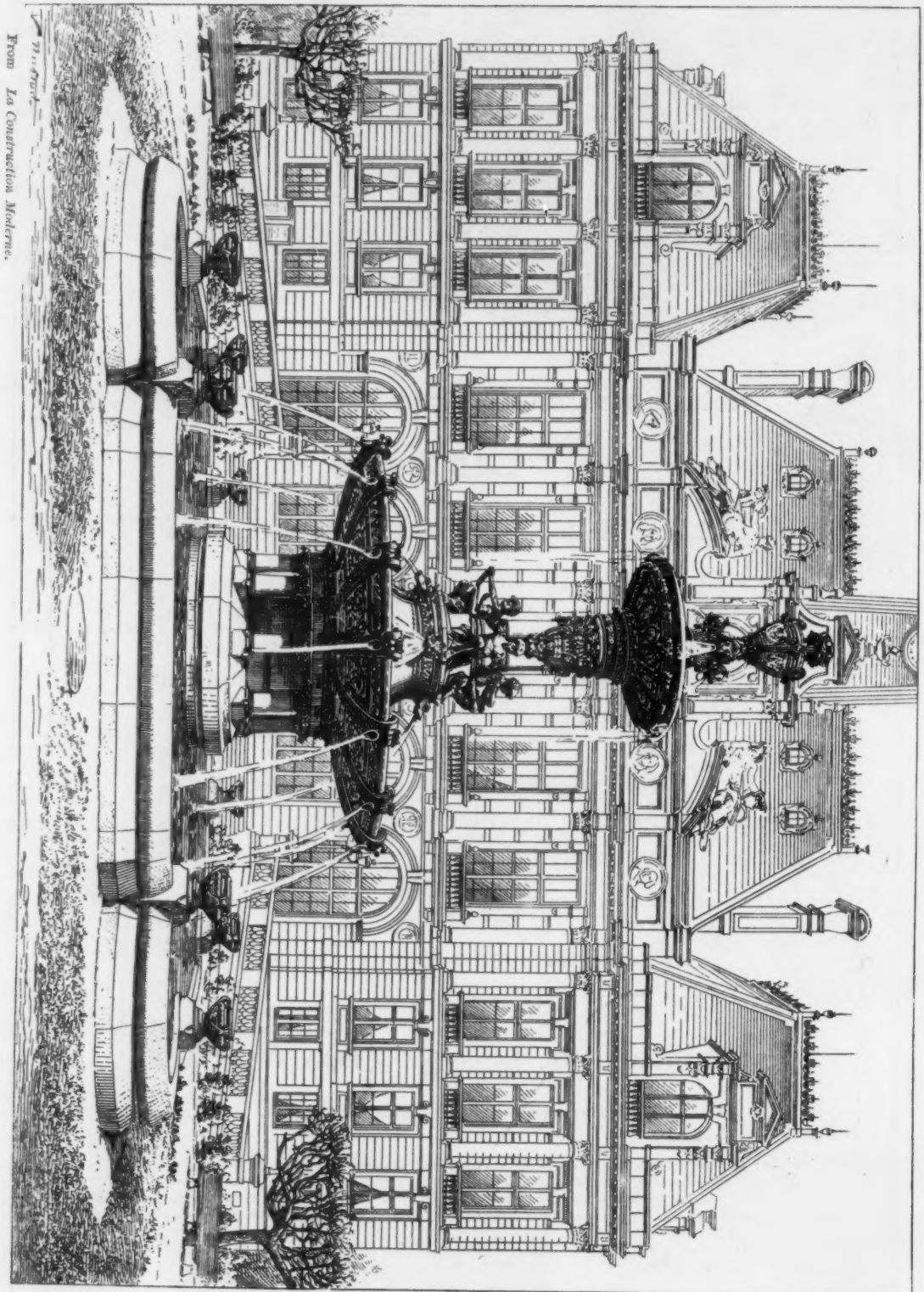
"QUILT."

Samples and full information sent on request.

SAMUEL CABOT, Sole Manufacturer, BOSTON, MASS.

28 Dearborn Avenue, Chicago, Illinois.

AGENTS: V. H. Schneider, 8 Wooster St., New York; Samuel H. French & Co., Philadelphia, Pa.; Waterhouse & Price, San Francisco, Cal.; P. H. Mathews, Los Angeles, Cal.; Whitelaw Brothers, St. Louis, Mo.; George H. Lawes & Co., St. Paul and Minneapolis, Minn.; John H. Corning, Washington, D.C.; Brady & Co., Detroit, Mich.; The National Building Supply Co., Baltimore, Md.; Timms, Edwards & Co., Portland, Ore.; Cleveland Builders' Supply Co., Cleveland, O.; Seymour & Co., Montreal; S. W. R. Dally, Seattle, Wash., and at all other central points.



From *La Construction Moderne*.

CERAMIC-WORK FOUNTAIN, LIMOGES, FRANCE.
M. GENUYS, ARCHITECT.

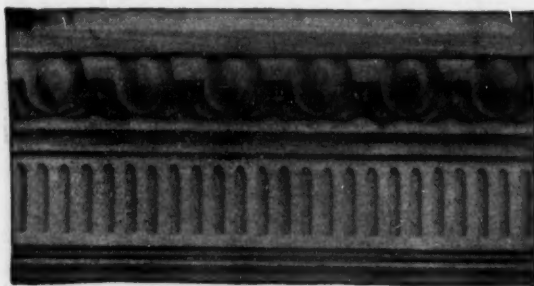
STANDARD FOR RUBBER INSULATION.



TRADE MARK.

WILLARD L. CANDEE, Mgrs. GEO. T. MANSON, Gen'l Supt.
H. DURANT CHEEVER, Sec'y. W. H. HODGINS, Sec'y.**OKONITE INSULATED ELECTRIC LIGHT WIRES**Are pronounced by leading Architects to be **SAFE, DURABLE** and **EASILY ADJUSTED** for the inside wiring of **PUBLIC and PRIVATE BUILDINGS.****CANDEE WEATHERPROOF WIRES, OKONITE WATERPROOF TAPE, MANSON PROTECTING TAPE.**— **SOLE MANUFACTURERS** —**THE OKONITE CO., LTD., 253 BROADWAY, NEW YORK.****DIXON'S SILICA GRAPHITE PAINT****FOR TIN OR SHINGLE ROOFS AND IRON WORK.** Tin roofs well painted have not required repainting for 10 to 15 years.
IT IS ABSOLUTELY WITHOUT AN EQUAL.

If you need any paint it will pay you to send for circular.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.**CARVED WOOD MOULDINGS...**

For Interior Finish

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

..... New Catalogue just out.

GRAND RAPIDS CARVED MOULDING CO.

9 and 11 Myrtle Street,

GRAND RAPIDS, MICH.**ATTENTION IS RESPECTFULLY CALLED TO THE INTERESTING ARTICLE, ENTITLED****"American Art in Bronze and Iron"**By **KATHLEEN GRAY NELSON**In July Number of **MUNSEY'S MAGAZINE**, with illustrations of work executed by**JNO. WILLIAMS BRONZE FOUNDRY, NEW YORK**

OFFICE, 556 WEST 27TH STREET, NEW YORK

BROOMELL'S**VAPOR SYSTEM OF HEATING**

Adapted to buildings of every kind and size.

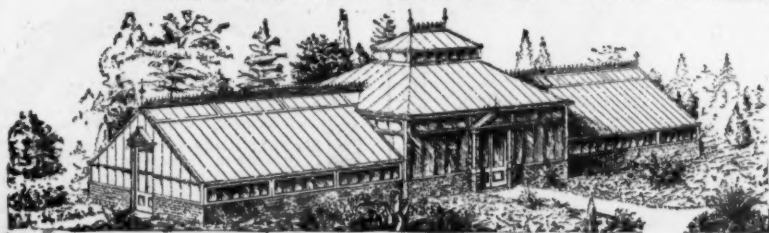
Superior to hot water heating.**No pressure on radiators. No air valves.****No noise. No machinery. Heat under perfect control.**

Easily installed by all steamfitters.

Architects are requested to send blue prints with data. Drawings and specifications will be furnished free. Open to all contractors for bids.

VAPOR HEATING CO., York, Pa.**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 Construction 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.**The Star Ventilator****STORM-PROOF EFFECTIVE**

FOR

**COTTON, WOOLEN AND PAPER MILLS,
DYE HOUSES, SLASHERS, ETC.**

Send for Illustrated Catalogue

MERCHANT & CO., Inc.

Sole Manufacturers

Phila. New York Chicago Brooklyn
Charlotte, N. C.

ESTABLISHED 1868

SKYLIGHTS, LATHING & METAL
71 8TH AVE. NEW YORK.
FIREPROOF WIRE-GLASS WINDOWS**NEW ENGLAND FELT ROOFING WORKS,**

18 Post Office Sq., BOSTON.

Originators of Felt Roofing in New England.

Inventors and only Manufacturers of the Celebrated

"BEEHIVE BRAND."**Stairbuilders' Supplies**of all
kinds

and

**Spiral
Mouldings**

of

every

description

**A. DICKEY & CO.**

37 Bristol St., BOSTON

The Search for Work

The man who can do something better than anyone else doesn't search for work. Employers search for him. We teach the theory of engineering and the trades to men already at work. Thousands of our students have secured a

Salary-Raising Education

in Mechanical, Electrical, Steam, Civil or Mining Engineering, Chemistry, Architecture, Plumbing, English Branches.

When writing state subject in which interested.

International Correspondence Schools,
Box 286, Scranton, Pa.

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.



Jenkins Bros.' Valves

are manufactured of the best steam metal, and are fully guaranteed. Why experiment with cheap valves? If you want the **BEST** ask your dealer for valves manufactured by Jenkins Brothers. Remember all genuine are stamped with Trade Mark like cut.

JENKINS BROTHERS, New York, Philadelphia, Chicago, Boston

KINNEAR

STEEL ROLLING (DOORS SHUTTERS)

SEND FOR CATALOGUE "K"

THE KINNEAR MFG. CO.,

COLUMBUS, OHIO. U.S.A.

BOSTON 85 WATER ST. NEW YORK 45 VESEY ST. CHICAGO 112 CLARK ST. PHILADELPHIA 1011 CHESTNUT ST.

ASPHALT ROOFING & 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.

L. Haberstroh & Son,

9 PARK ST., COR. BEACON, BOSTON,

Interior Decorators and Painters.

Decorations in Color and Relief.
Wall Hangings of all Descriptions.
Sketches and Estimates Furnished.

MARBLES COLORED

Domestic Marbles colored in exact imitation of imported marbles, without their cracks, flaws, imperfections and patched-up appearance, and at great saving in cost.

We match broken pieces, reproduce varieties from extinct quarries, tint acid, ink-stained or smoked marbles to new effects.

Also, Color Wood Veneering, Etc. Manufacturers of Wooden Wall Paper, equal in finish to that of a piano. Agents wanted to sell our handsome Pedestals, Jardinieres, and Marble Top Kitchen and Dining Room Tables.

THE OHIO MARBLE AND WOOD CO.

130-132 West Front Street

CINCINNATI, OHIO

The reputation of a manufacturer making a standard article over a long number of years is the best guarantee of the quality of that article. Such an article guarantees itself. Anyone can offer a guarantee and take the risk of the result. The "TAYLOR OLD STYLE" brand of Roofing Tin guarantees itself.

N. & G. TAYLOR CO.

SOLE MANUFACTURERS
.. OF ..

THE "TAYLOR OLD STYLE" BRAND

FOR SALE BY ALL DEALERS

Tinplate Works
PHILADELPHIA

Rolling Mills and Blackplate Plant
CUMBERLAND, MD.

ASPHALT FLOORS, ROOFS, SIDEWALKS AND CARRIAGE-WAYS

Of 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 NEUCHÂTEL ASPHALT CO., Limited,
265 BROADWAY - NEW YORK.

Conservatories,

Greenhouses,

Vineries, Etc.

Designed, erected and heated. Catalogue, also special plans and estimates, on application.

LORD & BURNHAM CO.,
1133 Broadway - New York City.

METAL CEILINGS

Suitable for
Residences, Offices, Stores, Schools, Hospitals & Churches

Can be applied over old Plaster
Without removal of same

Give Measurements for estimate

N.Y. METAL CEILING CO.
21 ST. AND 13TH AVE.
NEW YORK, N.Y.

Boston Office: 48 Congress St., Room 23.

"Cohesive Construction."

An Essay on the

Theory and History of
Cohesive Construction.

By **RAFAEL GUASTAVINO** - Architect.

Price, \$1.25.

For Sale by the **AMERICAN ARCHITECT.**

BOOKS:

"Les Concours publics d'Architecture."

(A Monthly Publication.)

Edited by MM. Wulliam and Farge.

Vol. IV. 120 Plates. Price \$9.40.

AMERICAN ARCHITECT AND BUILDING NEWS CO.

Big Four

The
'Buffalo
Route'

to



1901

**Pan-American
Exposition**

Big Four Route in connection with Lake Shore & Michigan Southern and New York Central R.R. offers the finest equipped train service at frequent intervals to Buffalo from South & West.

M. E. Ingalls, President.
Warren J. Lynch, Genl. Pass. Agt.
W. P. Deppe, A. G. P. A.
Cincinnati.



INTERLOCKING RUBBER TILING

As laid by us in the main offices of the Montgomery Ward Building, Chicago. Noiseless, non-slippery, waterproof, sanitary, extraordinarily durable. A perfect floor for stores, offices, banking-rooms, court-rooms, school-rooms, libraries, hospital wards, cafés, bath-rooms, billiard-rooms, vestibules, halls, piazzas, etc. Laid directly on wood, stone or iron. Call or write.

New York Belting & Packing Co., Ltd.

New York 25 Park Place
Philadelphia 724 Chestnut St.
Chicago 150 Lake St.
St. Louis 411 No. 3d St.
San Francisco 509-511 Market St.
London, Eng. The B. & S. Folding Gate Co., 19 to 21 Tower St., Upper St. Martin's Lane, W. C.
Baltimore Baltimore Rubber Co., 101 Hopkins Place.

PERSPECTIVES RENDERED

IN PEN-AND-INK AND WATER-COLOR,

WALTER M. CAMPBELL,

8 Beacon St., Boston, Mass.

E. ELDON DEANE,

Architectural Colorist and Draughtsman.

63 Seymour Building, Fifth Ave., cor. 42d St.

NEW YORK CITY.

MASON SAFETY TREAD

BEWARE OF INFRINGEMENTS

AMERICAN MASON SAFETY TREAD CO., Boston

J. W. TAYLOR'S PHOTOGRAPH SERIES

151 MONROE ST., CHICAGO

OF AMERICAN ARCHITECTURE

Removed to Owings Building.

Send two 5 cent stamps for Catalogue.

R. P. SOUTHARD General Supt. Building Construction

Takes entire charge of Building Operations

LARGE WORKS A SPECIALTY

Address — 1053 Exchange Building, Boston, Mass.

E. V. JOHNSON CO.

Manufacturers and Contractors

Fire-Proofing for Buildings

Latest Improved Systems

85 HARTFORD BUILDING, CHICAGO



Send for Pamphlet of

Automatic Self-Locking

SCUTTLE OPENER

Secure from BURGLARS

Quick escape in case of FIRE

Metallic Skylights

Fire-Proof Windows

For Factories, Warehouses, etc.

G. Bickelhaupt Skylight Works

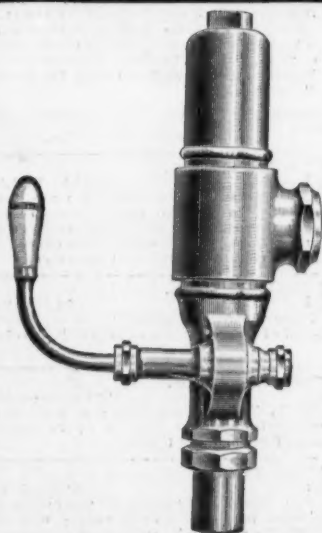
243 & 245 West 47th St.

Tel., 675-38th. NEW YORK

“Topical Architecture”

Classified Architectural Motives and Details.

Published Monthly.



FLUSHOMETER

TRADE MARK.

The leading architects of the country are specifying **THE FLUSHOMETER** for all classes of work.

THE Flushometer
KENNEY SYSTEM — IS
NOISELESS
and the Neatest, Simplest,
Most Effective, and Cleanest
System for
FLUSHING WATER CLOSETS

USED IN: U. S. Treasury Building, Washington; U. S. Mint, Phila.; State Capitol Buildings, Providence and Hartford; Metropolitan Water Board Building; Hotel Union Apartments, Boston; Hotel Ansonia; Hotel Manhattan, New York; U. S. Hotel, and Grand Union, Saratoga N. Y.; Prudential Life Building, Newark, N. J.; Broad Exchange, and Broadway Chambers, New York, and others.

Send for List of Recent Installations

THE KENNEY COMPANY

72-74 TRINITY PLACE, NEW YORK.

N. E. AGENTS: The Harlow-Inslee Co.
176 Federal St. (Weld Building)
BOSTON, MASS.

CALIFORNIA REDWOOD LUMBER

COSTS NO MORE THAN PINE

and will last for generations. Resists fire. Does not SWELL, SHRINK, CHECK or SPLIT, and EXCELS all other woods for BUILDINGS.

REDWOOD SHINGLES have no equal. Will last 50 to 75 years.

For sale at retail by all the principal dealers in the New England and Middle States. If your dealer cannot supply you, write us and we will inform you of the nearest dealer handling Redwood Lumber.

We have in stock and in transit from one to two millions of Redwood and can furnish any sizes required. Read our references from week to week; also write us for descriptive booklet.

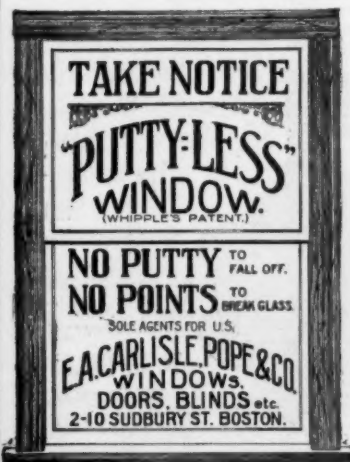
BARTLETT LUMBER CO.,

Room 409, Exchange Bldg., State St., Boston, Mass.

Telephone, Main 1911.

CALIFORNIA REDWOOD DOORS

Stand better than Pine, under all conditions, Painted, Stained or Natural. All regular sizes in stock.
WHOLESALE and RETAIL.



Trouble and Expense caused by Putty falling off may be avoided by using "Putty-less" Windows. Send for Booklet. E. A. Carlisle, Pope & Co., 2-10 Sudbury Street, Boston, Mass. New York Office, 101 1/2 W. 74th St.

Re "Topical Architecture."

APPLAUSE FROM THE ARCHITECTURAL SCHOOLS

["MASS. INSTITUTE OF TECHNOLOGY," Boston, Mass.]

Represents one of the very best means for comparative study.

F. W. CHANDLER,
Professor of Architecture,
Mass. Institute of Technology.

["UNIVERSITY OF ILLINOIS," Urbana, Ill.]

You have struck the keynote of what, developed, must prove of immense value.

SETH J. TEMPLE,
Assistant Professor of Architecture.

["SCHOOL OF ARCHITECTURE, COLUMBIA UNIVERSITY," New York.]

The "Topical Architecture" is precisely what students and practitioners have alike been needing and sighing for for no one knows how many years.

A. D. F. HAMLIN,
Adjunct Professor of Architecture.

["HARVARD UNIVERSITY," Cambridge, Mass.]

This scheme seems to me to be an admirable one.

H. LANGFORD WARREN,
Professor of Architecture, Lawrence
Scientific School, Harvard University.

["UNIVERSITY OF PENNSYLVANIA," Phila., Pa.]

The scheme embodied in your "Topical Architecture" is most welcome, because it presents this great abundance of illustrations properly classified for immediate reference.

WARREN P. LAIRD,
Professor of Architecture.

["SYRACUSE UNIVERSITY," Syracuse, N. Y.]

Should find its way into the reference-room of every public library, as well as into the draughting-rooms of the architects, and the studies of cultured men.

EDWIN H. GAGGIN,
Professor of Architecture,
College of Fine Arts, Syracuse University.

["COLLEGE OF ARCHITECTURE, CORNELL UNIVERSITY," Ithaca, N. Y.]

I have looked over the plates of "Topical Architecture" and think the idea excellent.

ALEX. B. TROWBRIDGE,
Professor in Charge.

American Bridge Company

OF NEW YORK.

Engineers and Contractors.

BRIDGES, BUILDINGS, ROOFS, TRUSSES.

Structural Steel and Iron.

Steel Frame Work for Factories, Sheds, Public Markets, Power Houses, Etc.

General Offices: 100 Broadway, N. Y.

European Office: London

L. L. BRIDGE, N. Y., 21-215.



HAND FORGED WRO'T IRON GRILLE

The
Winslow
Brothers
Company

CHICAGO

ORNAMENTAL IRON AND BRONZE

The Winslow Elevator and Machine Co.

HIGH-GRADE ELECTRIC AND HYDRAULIC ELEVATORS

PROPOSALS.

COAL-POCKET.

[At Boston, Mass.]

Proposals of mason's work for a coal-pocket at the Massachusetts State-house. Sealed proposals will be received by the State-house Committee of the Council at the Council Chamber at the State-house at 2 P. M. on Tuesday, the 6th day of August, 1901, for the mason's work of a coal-pocket to be located on the grounds of the east side of the Massachusetts State-house. Plans and specifications may be seen at the office of Charles Brigham, architect, 12 Bosworth St., Boston, on or after Thursday, the 25th inst. The committee reserve the right to reject any and all bids. 1336

SCHOOL.

[At Greenfield, Mass.]

Bids are wanted August 10 for erecting an eight-room brick school at Davis and Pleasant Sts. JOS. W. STEPHENS, ehmn. com. 1336

Treasury Department, Office Supervising Architect, Washington, D. C., July 26, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 20th day of August, 1901, and then opened, for the installation of a conduit and wiring system

PASSAIC ROLLING MILL CO.,

PATERSON, N. J.

Steel Beams

4 inches
to
20 inches
deep.

ALL STRUCTURAL SHAPES.

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

PROPOSALS.

for the U. S. Post-office building at Elgin, Illinois, in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Elgin, Illinois, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1337

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 26th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 22d day of August, 1901, and then opened, for furnishing and installing new boiler-plant for



Architectural Sheet Metal
Ornamental Work
Cornices, Skylights

Tile Roofing

Statuary

Send for illustrated
catalogue.
Architects' special
designs accurately
produced in sheet
metal.

Write for our prices.

W. H. MULLINS

107 Depot St.

SALEM, - OHIO

DYCKERHOFF **PORTLAND CEMENT.**

E. THIELE,

Sole Agent,

99 John Street, New York.

THE...

BEST IS NOT
TOO GOOD FOR YOUR CLIENT

Specify the

WATROUS

"AQUAMETER"

It is a Self-Measuring Flush Valve for Water Closets and Urinals.

Constructed on entirely new principles, and contains more practical and valuable features necessary to the successful working of the Valve than any other now in use.

HANDSOME

QUIET

DURABLE

ADAPTED TO ALL CONDITIONS

Do not compare this Valve with others. Investigate for yourself. Fully Guaranteed by the Manufacturers.

Peck Brothers Company

No. 233 WASHINGTON STREET

CHICAGO, ILL., U. S. A.



PROPOSALS.

the U. S. Marine Hospital at Cleveland, Ohio, in accordance with drawings and specifications, copies of which will be furnished at the discretion of the Supervising Architect on application at this office or at the office of the Custodian at Cleveland, Ohio. **JAMES KNOX TAYLOR**, Supervising Architect. 1337

Treasury Department, Office Supervising Architect, Washington, D. C., July 24th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 21st day of August, 1901, and then opened, for furnishing the heating apparatus complete in place for the U. S. Post-office at Elgin, Illinois, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Elgin, Ill., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR**, Supervising Architect. 1337

Treasury Department, Office Supervising Architect, Washington, D. C., July 30, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 4th day of September, 1901, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post-office at St. Cloud, Minnesota, in accordance with drawings and specifications, copies of which may be had at the discretion of the Supervising Architect, by applying to this office, or the office of the Superintendent at St. Cloud. **JAMES KNOX TAYLOR**, Supervising Architect. 1337

FIRE-ESCAPES, ETC.

[At Rome, N. Y.] Bids are wanted August 7 for enlarging barn, constructing fire-escapes on the boys' and on the girls' buildings, and for heating the boys' building and principal's residence at the Central N. Y. Institution for deaf-mutes. **W. J. KINGSLEY**, pres. bd. trustees. 1337

COURT-HOUSE.

[At Carterville, Ga.] Bids will be received until September 17 for the construction of the \$40,000 two-story brick and stone court-house, 75' x 108', for Bartow County, in accordance with plans by Kenneth McDonald and J. F. Shebley, of Louisville, Ky., and G. W. Gouneke & Co., of Atlanta, Ga. 1337

PROPOSALS.

STABLE.

[At Washington, D. C.] Secretary's Office, Dept. of Interior, Washington. Proposals will be received until 2 P. M., August 13, for the construction of a stable at the Government Hospital for the Insane at Washington, D. C. **E. A. HITCHCOCK**, secretary. 1337

SCHOOL.

[At Washington, D. C.] Bids are wanted August 17 for the construction of a twelve-room school at Lincoln Ave. and Prospect St., N. E. **LANSING H. BEACH**, commr. 1337

BUILDINGS.

[At Portsmouth, N. H.] Sealed proposals, endorsed "Proposals for Brick and Steel Buildings," will be received at the bureau of yards and docks, Navy Department, Washington, until 1 o'clock, August 24, 1901, for constructing two brick and steel buildings, 60' x 275' and 35' x 37' at the navy yard, Portsmouth, N. H. Appropriation, \$98,000. Plans and specifications will be furnished by the commandant, navy yard, Portsmouth, N. H., upon deposit of \$15 to secure their return, or can be seen at that navy yard or at the bureau. **MORDECAI T. ENDICOTT**, chief of bureau, Washington, D. C. 1337

BUILDINGS.

[At Algiers, La.] Sealed proposals, endorsed "Proposals for Brick and Steel Buildings," will be received at the bureau of yards and docks, Navy Department, Washington, until 1 o'clock, August 31, 1901, for constructing four buildings at Algiers, La., of about the following dimensions: 66' x 276', 60' x 224', 40' x 87' and 40' x 60'. Plans and specifications can be seen at the navy yard, New York, the naval station, Algiers, La., or the bureau, or will be sent upon deposit of \$25 to secure their return by **MORDECAI T. ENDICOTT**, chief of bureau. 1337

SCHOOL.

[At Springfield, Mass.] Bids are wanted August 14 for erecting a school on Chestnut and Prospect Sts. **EDW. J. MURPHY**, chmn. city property com. 1336

PROPOSALS.

ASYLUM.

[At Pine Bluff, Ark.] Bids are wanted September 2 for erecting a deaf mute asylum to replace the structure recently destroyed by fire. Probable cost, \$80,000. **FRANK W. GIBBS**, archt., Little Rock. 1336

COURT-HOUSE.

[At Lake City, Fla.] The Board of Commissioners will receive bids until August 8, for the construction of new court-house to be built of brick and stone. It will cost \$35,000. Address communications to **R. T. BOOZER**, chairman, Lake City, Fla. 1336

ALTERATION AND ADDITION.

[At Rolla, Mo.] The School of Mines and Metallurgy, Rolla, Mo., Office of George E. Ladd, Ph. D., Director, July 1, 1901. Sealed proposals will be received at this office until 3 P. M., August 2, 1901, and then opened, for the addition and alteration to chemical laboratory and metallurgical buildings, and for the construction of a mechanical building, in accordance with plans and specifications, copies of which may be seen at this office or the office of **B. Cumliff** and **P. C. Pape**, architects, 308 Lincoln Trust Building, St. Louis, Mo. The right to reject any or all bids is reserved. 1336

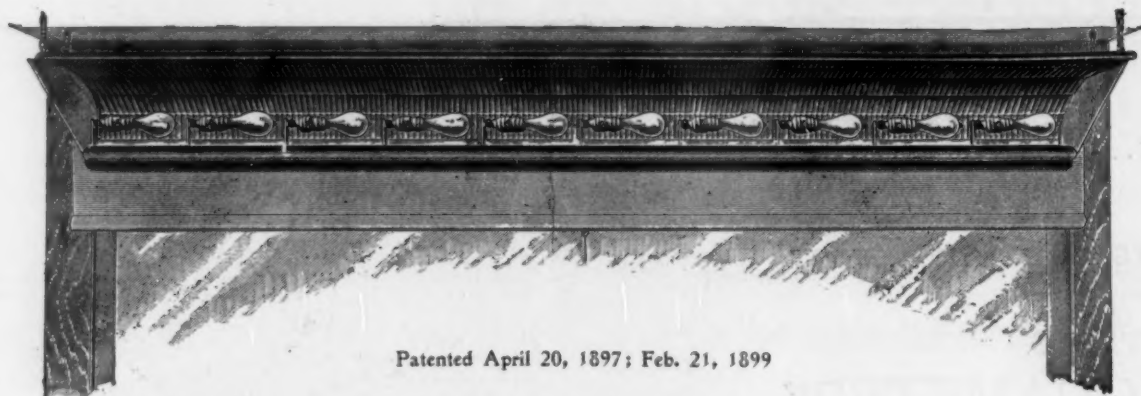
CITY-HALL.

[At Vicksburg, Miss.] Sealed bids are wanted by Architect **J. Riely Gordon**, of Dallas, Tex., until August 15 for erecting a city-hall to cost about \$40,000 when completed. 1336

BARRACKS.

[At Sitka, Alaska.] Headquarters United States Marine Corps, Quartermaster's Office, Washington, D. C. Sealed proposals, in duplicate, will be received in this office until noon August 26, 1901, and then there publicly opened, for furnishing all necessary materials and labor in the construction and completion of one set of officers' quarters at the marine barracks, Sitka, Alaska. **F. L. DENNY**, colonel, quartermaster, U. S. Marine Corps. 1336

THE IDEAL WINDOW LIGHT



Patented April 20, 1897; Feb. 21, 1899

GOOD STOCK NEEDS GOOD LIGHTING

and every progressive merchant appreciates the trade-drawing value of well-lighted show windows. They should do their work of drawing trade night and day. Not a lamp should be in sight to attract the eye by its greater brilliancy from the goods, whose display is the main purpose of the window. No light should be lost; none thrown where not needed. Window reflectors are as important as the display itself, but the reflectors must be made to fit. Not a single objection can be raised against the Frink System of Window Lighting. It is made to fit all conditions. Placed at top of window it floods the entire window space with a brilliant, evenly diffused, and most agreeable light without any dazzling glare in the eyes of the onlooker, thus showing the goods to best possible advantage.

The most perfect window-lighting device in existence. Adopted as the best window light by the finest stores in the country. All kinds of fixtures for store window and interior lighting, and for every purpose. Send measurements for estimates, and partial list of prominent mercantile houses using same.

HIGHEST AWARD IN EVERY COMPETITION

IN WHICH THEY HAVE BEEN ENTERED

INVESTIGATION MEANS SPECIFICATION

I. P. FRINK, 551 Pearl St.

NEW YORK

MINERAL WOOL

FIRE, SOUND and VERMIN PROOF INSULATOR.

Samples and Circulars Free.

U. S. Mineral Wool Co., 143 Liberty Street,
NEW YORK.

LARGE STOCK OF
FOREIGN & DOMESTIC
Photographs

H. Herbert *Sidman*
Architectural
FOR Photographer

THE AMERICAN ARCHITECT

FINE INTERIORS
DETAIL EFFECTS
COPYING Permanent Prints
in PLATINUM OR CARBON
8 East 42 Street
NEW YORK

"COHESIVE CONSTRUCTION."

An Essay on the Theory and History of Cohesive
Construction.

By RAFAEL GUASTAVINO, Architect.

Price, \$1.25.

THE ARTIST

An Illustrated Monthly Record
of Arts, Crafts, and Industries

35 Cents. Yearly, \$3.50

A beautifully illustrated Magazine, which
covers in its survey the field of Art in European
countries and is devoted to the Arts and Crafts'
movement in America.

THE DIAL

"The Artist is one of the best of the art
journals."

THE CRITIC

"The Artist is a handsome cosmopolitan
magazine, very profusely illustrated."

THE ARGUS

"One of the handsomest magazines pub-
lished is The Artist."

LITERARY WORLD

"... Handsome and engaging candidate
for the favor of those whose tastes or occupa-
tions center in the world of applied art. ...
We recommend it warmly to all art students and
to all artisans who desire to rise in their profes-
sions."

BOOK AND NEWSDEALER

"We see in The Artist a publication of con-
stantly increasing merit. The classically artistic
exterior is the equal of anything we have seen."

PUBLISHED BY

TRUSLOVE HANSON & COMBA Ltd.
67 Fifth Avenue, New York

NEW ENGLAND

MATERIAL-MEN & CONTRACTORS.

BLUE PRINTING.

CHAS. E. MOSS,
Rapid Printing Papers.
14 Broad St., Boston.
Telephone: Boston, 2751-2.

CONTRACTOR & BUILDERS.

WILLIAM L. RUTAN,
1016 Tremont Bldg., Boston.

ROOFING DUCK.

C. H. BATCHELDER & CO.,
135 State St.,
Cor. India St., Boston, Mass.

SASH CORD.

SILVER LAKE CO.,
78 Chauncy St., Boston.

SEAM-FACE GRANITE.

GILBRETH SEAM-FACE GRANITE
CO.,
Park Row Building, New York
85 Water St., Boston.

WATERPROOF CELLARS.

FRANK B. GILBRETH,
Park Row Bldg., New York.
176 Federal St., Boston.

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,
.. 1895. . .

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

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

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

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

SECTION 5. It is unprofessional to offer draw-
ings 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 altera-
tions of a building designed by another archi-
tect, 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, with-
out 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 criticize 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 de-
signs 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 draw-
ings except as an original contributor in any
duly instituted competition, or attempt to
secure any work for which such a competition
remains undecided.

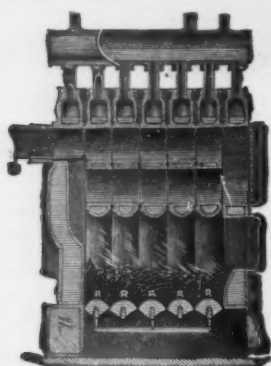
SECTION 12. The American Institute of Archi-
tects' "schedule of charges" represents mini-
mum rates for full, faithful and competent
service. It is the duty of every architect to
charge higher rates whenever the demand for
his services will justify the increase, rather
than to accept work to which he 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 archi-
tect 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 profes-
sional education and render all possible help
to juniors, draughtsmen and students.



THE H. B. SMITH CO. 133-135 . . .
Centre Street,
New York.
MANUFACTURERS.

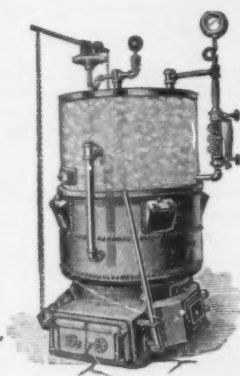
Steam and Water Heating Apparatus,

Factory: Westfield, Mass.

ESTABLISHED 1853.

Send for Catalogue.

NEW YORK, PROVIDENCE
PHILADELPHIA.



THE Gorton Side-Feed Boilers

Insure a warm building day and night
in coldest weather.

Our Book, MODERN HOUSE HEATING, gives the information.
Mailed free.

Send for a copy, and investigate for yourself.

GORTON & LIDGERWOOD COMPANY

96 Liberty Street NEW YORK 77 Oliver Street BOSTON Old Colony Building CHICAGO

LUDLOW SAYLOR WIRE CO.

N. E. Cor. Fourth & Elm Sts.

ST. LOUIS, MO.



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

Masonry in Modern Work.

A "PROLEGOMENOS" ON THE FUNCTION OF MASONRY
IN MODERN ARCHITECTURAL STRUCTURES.

BY
R. GUASTAVINO - - - Architect. | Price, Paper Cover - - 30 Cents.

FOR SALE BY THE

AMERICAN ARCHITECT.

SEYSEL ROCK ASPHALT
and Bitumen Damp Course,
NEW YORK MASTIC WORKS,
11 Broadway, New York.

THE
Northwestern Terra-Cotta Co.
Manufacturers of
Architectural Terra-Cotta.
WORKS & MAIN OFFICE: CITY OFFICES:
Cor. Olybourn & Wright- Room 1118 Rookery Bldg.
wood Avenues. cor. La Salle & Adams St.
CHICAGO.
Estimates given on application. Send for
Catalogue and Samples.

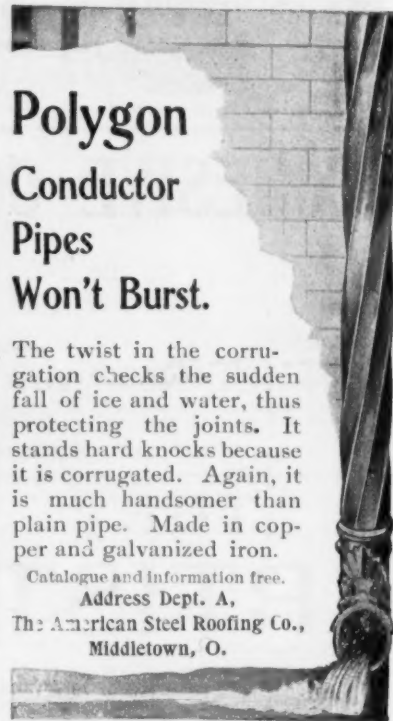
PERTH AMBOY
TERRA-COTTA COMPANY,
— OF —
PERTH AMBOY, NEW JERSEY.
OFFICE, 160 Fifth Ave., NEW YORK.
BOSTON AGENTS:
WALDO BROS., 102 MILK STREET.

Polygon Conductor Pipes Won't Burst.

The twist in the corrugation checks the sudden fall of ice and water, thus protecting the joints. It stands hard knocks because it is corrugated. Again, it is much handsomer than plain pipe. Made in copper and galvanized iron.

Catalogue and information free.

Address Dept. A,
The American Steel Roofing Co.,
Middletown, O.



[See Alphabetical Index on Cover 2 for Pagination.]

CLASSIFIED ADVERTISEMENTS.

[Advertisers can be indexed only under a single head free of charge.]

ARCHITECTURAL METALWORK.
Mullins, W. H., Salem, O.

ART METALWORK.
Ludlow Saylor Wire Co., St. Louis,
Mo. (mon)

ASPHALT.
Neuchatel Asphalte Co., New York.
New York Mastic Works, New York.

ASPHALT ROOFING.
Warren Chemical & Mfg. Co., N. Y.

AUTOMATIC SPRINKLER.
Internat'l Sprinkler Co., Phila., Pa.

BLINDS (Venetian).
Burlington Venetian Blind Co., Bur-
lington, Vt.

BLUE PRINTS.
Moss, Chas. E., Boston.
Spaulding Print Paper Co., Boston
(eow)

BOILERS (Side-Feed).
Gorton & Lidgerwood Co., New York.

BRICKS (Red Oxide).
Wisconsin Graphite Co., Pittsb'g, Pa.

CALIFORNIA REDWOOD.
Carlisle, Pope & Co., E. A., New York.

CAPITALS (Carved).
O. T. Nelson Co., The, Columbus, Ohio

CEMENT.
Alsen's Cement Works, N. Y. (eow)
Atlas Cement Co., New York.
Thiele, E. New York.

CEMENT PAVING.
Stamsen & Blome, Chicago, Ill.

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

CONDUCTORS.
American Steel Roofing Co., The,
Cincinnati, Ohio.

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

CONTRACTING.
Flynt Building & Construction Co.,
Palmer, Mass.
Rutan, William L., Boston.
Southard, R. F.

CONTRACTOR AND BUILDER.
Rutan, William L., Boston.

CORDAGE.
Samson Cordage Works, Boston. (eow)

CREOSOTE STAINS.
S. Cabot, Boston.

CUTLER PAT. MAILING SYSTEM.
Cutler Mfg. Co., Rochester, N. Y.

DEAFENING QUILT.
Samuel Cabot, Boston, Mass.

DECORATORS.
L. Haberstroh & Son, Boston.

DOORS.
Kinneer Mfg. Co., The, Columbus, O.

DOORS (Interior Finish).
Carlisle, Pope & Co., E. A., New York.

DRAUGHTSMAN,
E. Eldon Deane, New York.

ELEVATORS, ETC.
Morse, Williams & Co., Philadelphia.
Whittier Machine Co., Boston.

ENGINES (Hot-Air).
Rider-Ericsson Engine Co., New York.

FAUCETS.
Union Brass Works, Boston, Mass.

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

FILTER.
Loomis-Manning Filter Co., Phila., Pa.
Sealife & Sons, Wm. B., Pittsb'g, Pa.

FIREPROOF DOORS.
Kinneer Mfg. Co., The, Columbus, O.

FIREPROOFING.
Johnson Co., E. V., Chicago, Ill.

FIREPROOF LATHING.
Hayes, Geo., New York.

FIREPROOF SHUTTERS.
Kinneer Mfg. Co., The, Columbus, O.

FLOOR POLISH.
Butcher Polish Co., Boston.

FLUSHMETER.
Kenney Co., The, New York.

FLUSH-VALVE.
Peck Brothers Co., Chicago, Ill.

GALVANIZED IRON.
American Sheet Steel Co., New York

GATES.
Wm. E. Pitt, New York (mon)

GRATES, ETC.
Wm. H. Jackson & Co., New York.
GREASE: (Graphite).
Wisconsin Graphite Co., Pittsb'g, Pa.