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CONTENTS.

SUMMARY:—

The "Georgian Period."—The Coal Strike.—The New England Coal Measures.—The Office of the Supervising Architect under Mr. Taylor.—The Office now a Place for ambitious Draughtsmen.—The Wholesale Grocery Employes' Union of Chicago voluntarily seeks Incorporation.—The Trade-unions Comedy in Australia.—A Protection against High-tension Electricity.	1
ITALIAN TOWN-HALLS OF THE MIDDLE AGES.	3
SOUND-PROOF PARTITIONS.	5
IS THE ARCHITECT A BLACKMAILER?	6
BOOKS AND PAPERS.	6

ILLUSTRATIONS:—

The Ducal Palace, Venice, Italy;—Palazzo Pubblico, Perugia, Italy.—Palazzo de' Consoli, Gubbio, Italy;—Palazzo Apostolico, Orvieto, Italy.—Palazzo del Podestà, Florence, Italy;—Palazzo Comunale, Todi, Italy.—Palazzo Comunale, Cremona, Italy;—Palazzo Comunale, Piacenza, Italy.—Palazzo della Signoria, Siena, Italy;—Palazzo Vecchio, Florence, Italy.—Palazzo del Comune, Pistoja, Italy;—Hall of the Fraternity of St. George, Genoa, Italy.	
The Louisiana Purchase Exposition, St. Louis, Mo.: A Corner of the Textiles Building;—The Fine-Arts Building.	
Additional: Communal Hall, Piacenza, Italy: Side View.—Hall of the Jurisconsults, Cremona, Italy.—Competitive Design for the City-hall, Newark, N. J.—Elevations and Sections of the Same.	7
COMMUNICATION:—	
A Voice from the Coal Region.	7
NOTES AND CLIPPINGS.	7

"IT is, indeed, a valuable work, for the historian, scholar and reader of American literature as much as for the student of architecture."—When, in spite of the multitudes of complete new books which lay claim to its notice, the *Nation* finds it worth while to give serious consideration to each fragment of the "Georgian Period" as it appears and to express, in terms more or less similar to those which we quote above from its review of the Tenth Part, its appreciation of the manner in which we are accomplishing our undertaking, we feel more and more satisfied that those who have joined with us in the production of the work have just cause for gratulation that their names will be associated with the production of an acceptable fragment of architectural literature. For our own part, we hope that, in the fulness of time, our account-books may show that we had a commercial justification in expending the many thousands of dollars the work has cost us. But, though the general reader finds the work interesting, it was intended primarily for the architect, for those the bulk of whose work consists in the building of five or ten thousand dollar houses quite as much as for those to whom a hundred thousand dollar job is no rarity. It is emphatically a *useful* publication to architects and builders of every grade. This reference to the "Georgian Period" is in the nature of a "last call," for the reason that on the publication of the Twelfth Part, which is now nearly ready for the press, the discount now prevailing will be discontinued. It would, therefore, seem to be only good business policy on the part of those whose sets are incomplete and those who intend eventually to procure the work to take advantage of the fleeting chance and send in their orders now.

THE great coal strike, or, rather, the great assault made upon the public in furtherance of a conspiracy between politicians and would-be union tyrants, is rapidly approaching the alarming stage. Although a small military force is in the anthracite region, it seems to be without efficiency or authority, for the strikers assault and kill men every day, and blow up houses with dynamite, apparently with impunity, the military appearing, in the newspapers, only as having been "stoned by the mob." The commanding officer seems to be disposed to act, but it is not easy to do much under instructions which oblige soldiers to submit in silence to "stoning," and which expose any one who uses his rifle or bayonet in self-defence to immediate arrest and incarceration on a charge of murder. Meanwhile, the supply of coal in the Eastern cities is being rapidly exhausted, and a few days of cold weather, which may be expected at any time now, would cause great suffering. Some large city schools have already been closed, on account of the impossibility of warming them; and the hospitals must follow, unless relief is soon given; while the poor people are already suffering. One poor laundress, within

our knowledge, has already been obliged to send her customers word that she cannot take any more work, not having any means of heating water; and there will soon be many similar cases, followed, as winter approaches, by thousands of deaths from cold and privation.

IT is curious to see Mr. Mitchell, who could set the miners at work with one word, making the tour of the country, to ask the people whose distresses are due to him to contribute of their scanty means to support his plans for putting himself in control of the anthracite industry, especially after the exhibition which he is making of his devotion to the cause of the "toilers," by sending off, under his direction, as he claims, thousands of anthracite miners to the bituminous coal regions, to take the bread out of the mouths of the bituminous coal miners, who have been the most generous contributors to the anthracite strike fund. In the meantime, the clamor of the Republican newspapers for some grand stroke on the part of President Roosevelt, or his administration, in seizing the mines, "compelling arbitration," or some other unconstitutional abuse of power, is taken, whether rightly or wrongly, by a large part of the community as an indication of collusion between the strike leaders and, perhaps, the coal operators, and influential Republican politicians. Naturally, the Democratic election committees are preparing to take advantage of this feeling at the November election, and it is doubtful whether the country would not, in the end, be benefited by a severe rebuke at the polls to a party incapable of defending citizens in the peaceful exercise of their employment, and responsible for such an act of oppression as the Pennsylvania miners' license law.

SO far as New England and New York are concerned, it is strange that relief should not be sought from the anthracite mines which underlie a great extent of territory in Massachusetts and Rhode Island. For nearly a hundred years, anthracite, of a very hard quality, but quite available for purposes to which the Lehigh coal is adapted, has been mined in a small way near Tiverton, Rhode Island, and used in the neighborhood. So long as the Pennsylvania anthracite could be obtained at a reasonable price, it was preferred; but, that supply being cut off, it seems as if the Tiverton beds, which contain an enormous body of coal, might be utilized. In case of need, it would be quite within the powers of the States of Massachusetts and Rhode Island to seize the mines and operate them, just as Governor Hoffman, in New York, thirty years ago, seized the Hudson River Railroad, on the occasion of a strike of trainmen, and operated it under martial law; and such a precedent would be far less dangerous than the interference of the Federal Government in such affairs, or than Constitutional amendments in favor of "compulsory arbitration."

FEW things have been more satisfactory to watch than the developments that have attended the reorganization of the office of the Supervising Architect of the Treasury Department, begun by Mr. Aiken and carried by Mr. Taylor to a higher level than any one thought could be possible. When the Tarsney Act was to be accorded a trial, it was, in the ranks of the profession, rather taken for granted that the designs prepared in the offices of private practitioners, selected with care and discrimination, would by their superior merit greatly overshadow the designs prepared under the eye of the Government's official architect. But, without in any way detracting from the merit of the designs prepared under the Tarsney Act, we feel that architects generally will agree that the average architectural worth of the designs for which Mr. Taylor is officially responsible has at least equalled the average worth of those prepared by private architects, under the workings of the Tarsney Act. That as little as this can be safely said shows in itself how great a change has been accomplished and how grateful the profession, and the public at large, should be to the man who has had the good sense, the patience and enough self-abnegation to bring about the long-desired improvement. Mr. Taylor recognized that, no matter how much the routine methods might be changed and bettered, good results could not follow unless the work of all kinds could be handled by

designers and draughtsmen as competent, well-trained and reliable as those who held permanent places in the best private offices, and one of his first cares was to replace incompetent political material with trained architectural ability. In this he gradually succeeded, and the throwing the protection of the Civil Service law over the members of the working force has helped him to secure a grade of assistants that would hardly have been possible without it. The consequence is that the personnel of the office is of an unusually good type and the place has acquired the real atmosphere of an architectural studio, to have access to which a young man may now honorably be eager. Ten years ago it would never have occurred to us to recommend an able young man to secure a position in the Supervising Architect's office; it would have been simply to advise his voluntarily seeking to degrade his own talent and set a bar across the path of his professional progress. Happily, things are changed, and we can now not only advise but urge young men of ability, who have not the connection and backing that entitle them to believe they can become successful private practitioners, to seek a position in the Government office.

WE speak of the matter because, just now, the office is in need of a score or so of competent young men, and as the Civil Service Commission is to hold an examination for the establishment of an eligible list towards the end of October, we believe it is well worth the while of draughtsmen of real ability to take the time to pass these examinations and secure a place on the list, as a kind of "anchor to windward," even if they have no immediate desire to become public servants. The places to be filled yield salaries of from eight hundred and forty dollars to twelve hundred dollars per year, with chance for promotion and increase of pay up to twenty-two hundred dollars per annum. The hours are short, from nine to four o'clock daily, the year through, but with generally a chance for leave of absence for thirty days, on full pay, at some convenient time. The hours and the pay are attractive—they always were that, at least—but what now makes it worth while to pass the examination is the chance of securing the *entrée* to a thoroughly well organized office, where a vast amount of interesting work is done, and to the agreeable companionship of a group of highly-trained and capable associates. A very large number of public buildings was authorized at the last session of Congress and further bills will be introduced at the next session, so that there is little likelihood that the office force will be curtailed by compulsory discharges for several years to come, and as we have every reason to believe that Mr. Taylor has so firmly established the fact that he is the right man for the place that there is little likelihood that he will not be reappointed at the end of his official term, there seems to be good grounds for believing that the tone of the office will long remain as agreeable as it is now and the work produced there as instructively interesting.

THE Wholesale Grocery Employés' Union of Chicago has set the example of voluntary application for a charter of incorporation, under the laws of Illinois. This step is taken as a preliminary to the making of contracts between the union, as a body, and the employers, which the members of the union believe can be made to better advantage if the union treats as a responsible corporation, liable in damages for any breach of its agreements. While we believe that the separation of employers and employed into different, and, to some extent hostile, organizations is a misfortune for both, depriving the employer of the intelligent and sympathetic cooperation of his assistants which is so advantageous for both, at the same time that it degrades and discourages the persons employed, by separating them from those who can appreciate and reward faithfulness and intelligence, and tying them to those whose interest it is to repress industry and ambition, it is, at least, a step in advance to give the unions a character of responsibility and integrity, instead of making them nurseries of dishonesty and shiftlessness. A workman who finds that his union maintains its agreements to the letter has received a lesson of incalculable value, not only to himself, but to the community of which he forms a part; and the spread of honesty and fidelity in the community, if it can be secured by such means, may have momentous results.

AUSTRALIA has been so long famous as the trades-union paradise that it is only fair to draw attention to the occasional notes of discord which mar the general harmony of its affairs, and to point out the possibilities of future trouble

which these indicate. As every one knows, the eight-hour day, that highest good of every one who does not care to distinguish himself in this world, and does not wish any one else to do so, has for several years been established by law throughout the country. In addition to this, the unions hold complete political control, and their differences with any employers who have the temerity to resist their dictation are settled, under compulsion, by courts of arbitration, which have, until lately, practically given their decisions invariably in favor of the union men. In addition to these delights, the unions, in order to keep their members constantly employed, at high wages, have utilized their political ascendancy to run the colonies, or, more properly, the taxpayers of the colonies, into debt at a frightful rate, using the money raised by the sale of bonds for public works of all kinds. When the indebtedness of the colonies reached something like a thousand dollars for each family, or about ten times the proportion of debt to population which prevails in the United States, the credulity, even of British investors, took alarm, and public works came to an end, for want of anybody simple enough to lend money for them. Then the unions, finding employment slacken, made a characteristic move. Reasoning that, if there was not work enough to keep them all employed at satisfactory wages, the remedy for the trouble was to prevent any one else from coming to take away such jobs as might be left, they passed laws, in most of the colonies, forbidding immigration. This measure, which simply strangled the natural growth of the country, did not bring much relief to their troubles, and even the courts of arbitration became so unruly as to decide occasionally against the demands of union workmen upon their employers. As the conviction dawned upon the more sensible people in the community that public bankruptcy was staring them in the face, some feeble attempt was made to postpone the crash by reducing the public expenses, so as to save money to pay the interest on the bonds. A large proportion of the voters have comfortable positions on the various public railroads, and it was thought that these could bear a slight reduction of their salaries for the common good, particularly as the operation of the railways, which were purposely built of different gauges, so as to prevent interchange of cars, and possible economies in administration and management, is extravagantly expensive. The railway hands, however, who found their berths extremely satisfactory, and knew their political power, struck against the reduction. The other union men made common cause with them, and, in one of the Australian States, the economical Ministry has already been ignominiously driven from power. What will be the conclusion of the comedy remains to be seen. It is evident that, with Australia shut off from immigration, and loaded with an overwhelming debt, there can hardly be any alternative between economy and repudiation, and the ruling class seems determined to reject the former.

PROFESSOR ARTEMIEFF, of the Technical High School in Kieff, Russia, has invented a protection against high-tension electricity which deserves to be widely known, although it was originally devised only for the benefit of Professor Artemieff's assistants in the electrical laboratory of the School. The protective armor consists simply of a dress of very fine brass wire-gauze, covering the whole body, including the hands, feet and head. The whole affair weighs only a little over three pounds, but it seems to afford complete protection, a current of any tension, and any ordinary volume, being carried off by the metal before it can reach the body. Even in the case of very heavy currents, which might be expected to heat the wire to an uncomfortable degree, the surface of metal exposed to the air is so large that the temperature is only slightly raised. In experimenting with the armor before a scientific Commission, of which he was a member, Professor Artemieff, clothed in the wire cloth, and standing on the ground, drew sparks from a wire charged with current at seventy-five thousand volts, ending by grasping the wire. The pressure of the current was then raised to one hundred and fifty thousand volts; and, as before, the experimenter drew sparks from both poles, and held both wires in his hands. In these experiments the current was derived from a transformer, supplied by a direct-current machine of one hundred and seventy kilowatts capacity. Professor Artemieff then put his hands on the electrodes of the machine, short-circuiting through his arms a current of two hundred amperes, at one thousand volts pressure. In all these trials he was perfectly protected by the wire-gauze, feeling, as he said, no effect whatever from the current.

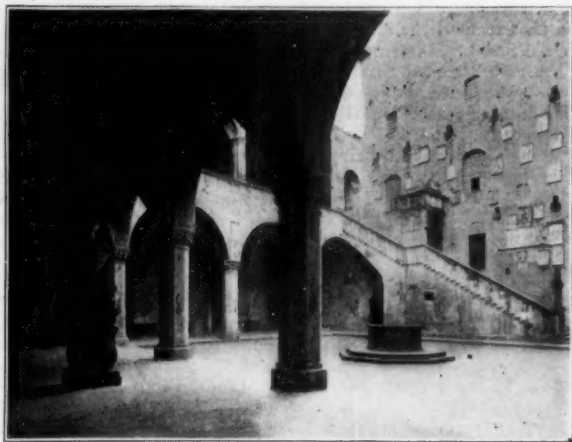
ITALIAN TOWN-HALLS OF THE MIDDLE AGES.

COMMUNAL life has been particularly fruitful in Italy. The liberties of the communes brought to the Peninsula abundant riches, hence the period of the Middle Ages formed an epoch of active industries with us, and although time has destroyed a large quantity of the monuments everywhere, there still exist witnesses to this communal life which has been one of the popular and democratic glories of the Italian character.

The public palaces, or town-halls, are the most notable examples, and in point-of-view of monumental importance need not yield the palm to the great cathedrals. We must take a glance at this group of monuments, selecting the most important. Tuscany is exceptionally rich in them, and we will begin with this territory, which was the birthplace of Dante, Machiavelli and Michael Angelo.

In Florence, the Bargello, at present the National Museum, first draws our attention. It was the Palace of the Podestà, that is, of the highest municipal authority, who happened also to be the highest political authority. Imposing, crowned with crenellations, it was begun about 1250, and its aspect, so far as strength and dignity go, is entirely suitable for the residence of the chief man of the city. The original design has been attributed to an architect named Lapo, a fellow-pupil with Arnolfo di Cambio, the first architect of the Cathedral of Florence; but it is certain that the palace was modified in the course of the work and that popular outbreaks, conflagrations and inundations operated in such a way that the palace as we see it to-day is very far from being the one designed by Lapo, if Lapo really was its first architect, his place being taken in later times by Benci di Cione and Neri di Fioravante.

On one of the façades, near the door, about 1288, they used to paint the effigies of traitors who had contumaciously objected



Courtyard of the Bargello, Florence.

to come in and be actually hung in *corpo vili*. Amongst those who underwent this platonic punishment were the Duke of Athens and his most faithful adherents. The architectural irregularities of the façades find their correspondences in the courtyard, which is one of the most picturesque bits of architecture to be found, whether because of the majestic value of its lines or because of its coloration. The stairway, guarded by "Il Marzocco," and its rich armorial decorations are known to everybody.

The celebrity of the Bargello has not eclipsed that of the Palazzo Vecchio, which, during the time of the Florentine Republic, was at once the fortress and the official home of the Government, and was called the Palazzo del Popolo, Palazzo della Signoria and Palazzo dei Priori, because the Priori delle Arti, with their Gonfaloniere della Giustizia, constituted the executive power in the democratic organization of the Commune.

This imposing palace was begun in 1299 after the designs of Arnolfo di Cambio, who, as they say, took for his model the then recently built castle of the Counts Poppi, in Casentino, Tuscany. It was finished in all essentials in about 1314; at that time it was a lofty and crenellated quadrilateral tower-surmounted building of which nowadays we see only the two sides at the angle of the piazza and the third on the Via della Ninna, with eight windows on the north, six on the west and four on the south, with two doors on the west and north. It was only in 1308 that was begun the tower which is picturesquely placed a little to one side of the centre, for, as the story goes, they wished to make use of the old tower of the Palazzo Foraboschi, surnamed "de la Vacca." This tower is the most elegant portion of the Palazzo Vecchio, the most celebrated of the communal palaces of Italy, after the Ducal Palace at Venice.

There is no use in halting to examine the exterior, but the court and the halls should be seen, although the visit cannot be made in a moment; but I must restrain myself, and simply draw attention to the celebrated hall called the Sala dei Cinquecento, which is one of the most imposing and successful architectural and decorative compositions to be found in all Italy. Built for the Grand Council of the people in consequence of the demands of Girolamo Savonarola, the

reformer frequently preached in it. Moreover, this hall of the Cinquecento was to be decorated by Leonardo and Michael Angelo, those two immortal masters who, in fact, did some work on it in 1504. Leonardo was to paint the Battle of Anghiari, and Michael Angelo the Battle of Cascina, but neither the cartoons nor the works themselves nor the beginnings of the frescos have remained for us. There is only the description given by Vasari, a writer and artist of the sixteenth century, who, entrusted with the general renovation of the Palazzo Vecchio, with the aid of several artists, left it a very treasury of the imagination.

More elegant than the Palazzo Vecchio, although less characteristic, is the Palazzo Or San Michele, also in Florence, at once a church and a palace, which externally is rather a palace than a church or oratory. A loggia forms the beginning of this edifice, and this loggia was built, about 1337, on the foundations of a still older one, erected for the grain-trade in 1280. It is not certainly known who was the architect of the new building, and it is likely that it was Taddeo Gaddi, but I believe that the famous Francesco Talenti, who, being the architect of the Cathedral of Florence and of the campanile now known as Giotto's Campanile, enjoying at that time a great name, had some part in rebuilding this structure, with its fine mouldings and its cornice supported on consoles—a magnificent crowning and one wholly proper to a Florentine monument. However this may be, Or San Michele bears witness to a feeling for monumental effect which the Florentines of those times possessed. It is not in fact, however, a communal palace, but it has all the air of being one, and because of this I mention it here.

A building still more clearly stamped as a communal palace is that at Pistoja, near Florence, and I know nowhere in Italy a palace more grave, more massive, more serious than this one. Begun in 1294, by the Podestà Giano della Bella, it was finished about 1353 in a pointed style which has none of the elegance proper to that style. The exceptional gravity of this palace may have been corrected by a polychromatic decoration, of which the late G. Gailhabaud, after documents which were furnished him by a French architect, the late M. Laval, presented the model in his monumental publication, "*L'Architecture du V au XVIII Siècle*." The Palazzo del Comune at Pistoja, according to this restoration, originally had its windows decorated with painted leafage and its walls worked *en bossage* separated by red lines, and if this decoration really existed it is certainly an important example of polychromy applied to architecture. But all this is a dream. M. Laval made one of the most deplorable mistakes that an architect travelling in search of documents to publish has ever made. I can assure him, for I have made researches in this connection, having studied long ago the restoration of the Palace at Pistoja, that my researches justify me in saying that the illustration inserted in the work of the above-mentioned French author is nothing but a solemn farce.

Since one often takes pleasure in contrasts, I beg you to consider, side by side with the Palazzo del Comune at Pistoja, that at Siena, "the red city," as M. Bourget calls it. This city, entirely filled with Gothic buildings of the fourteenth century, so full that no city in the north or centre of Italy—Florence or Venice, or even, in foreign lands, Bruges or Nuremberg—is richer in this respect, this city possesses the most elegant communal palace in the entire Peninsula, and its slender tower, which makes one think of the most sky-piercing minarets of the Orient, this tower of brick and stone, could not be more light and poetical; surely, it is one of the finest of its class in all Italy. But the building itself, which rises on the Piazza del Campo at Siena, has an *ensemble* of a marked and picturesque character; a character due in part to the details, the doors and windows, the greater part of the latter separated by colonnettes. One must notice in the Siennese pointed arch that its function is merely decorative; there is often below it a discharging-arch, usually segmental, which gives to the Gothic system of Siena, and only of Siena, a *cachet* which is altogether individual.

Just as I have said in the case of the Palazzo Vecchio at Florence, I will say here, that the courtyard (in process of restoration at present) and the halls, likewise, have an interest of the highest order for artists and visitors careful to inform themselves as to the whereabouts of the beautiful things in Italy. The halls of the Palazzo Pubblico at Siena constitute a veritable museum where frescos by the most eminent painters of the Siennese school are intermingled with works in wrought-iron and carved furniture. The frescos in particular cannot catch the eye of the visitor without his acquiring a very distinct impression.

The Palazzo Pubblico of which we are speaking is the most important and majestic of a group of Siennese palaces, private monuments in stone and brick; as, for instance, the Palazzi Salimbeni, Buonsignori, Tolomei, Saracini, and so on, which have rather the air of fortresses than of private habitations, and maintain a rivalry with the public buildings of the time.

The architecture of these palaces is of the purest simplicity and modesty, exteriorly, while within, on the contrary, everything was luxurious. I say "was," for the interiors of these seigneurial habitations have been everywhere defaced. Italy deplores these defacements, but proper restorations cannot be made every day, and Siena has good reason for bewailing several "restorations" that have been made.

From Tuscany passing into Emilia we find in our way Bologna and Piacenza. At Bologna is a remarkable Palazzo Comunale, which makes us remember that this city—the *alma mater studiorum*, somewhat like Oxford, in England, and Boston, in the United States—

during the first half of the fourteenth century gave birth to a dynasty of eminent architects, the Fioravanti, who practised architecture at home and abroad; and to Fioravante Fioravanti is due the honor of having prepared the designs for the Palazzo Comunale and the court, whose imposing tower exercises a certain influence on the imagination. Far more important in its entirety and its details is the Palazzo Comunale at Piacenza, one of the finest models of Gothic architecture in brick in Italy. To tell the truth, this building, called "Il Gotico di Piacenza," is of mixed material. Its most interesting parts, the windows, are of brick, and these are the parts which give character and importance to the edifice. These windows have all the richness possible to brickwork, and the building is of all the town-halls in Italy the most highly decorated. Begun in 1281, it had several architects — Pietro Burgeto, Pietro Cagnano, Gherardo Campanario and Negro dei Negri; interrupted during the overthrow of the communal liberties, the façade which faces the grand piazza is only one of the four divisions of a building which was intended to enclose the courtyard, but of which nowadays we see only this part, although traces exist of the foundations.

"Il Gotico di Piacenza" below-stairs consists of an open vestibule on stone piers which leads to the courtyard, particularly important because of its details, and far from being equal on every side with the exterior. The palace has a façade, or a side, the left, where there is to be noticed a treatment of the windows surmounted by a rose window and a gable, with interlacing arches, constituting a perfectly harmonious treatment.

If I were to speak of communal palaces which were also fortresses, I should be apt to speak of the celebrated Castello dei Rocche at Finale in Emilia amongst others, but they would form a subject which might better be treated elsewhere, as I should like to do.

Surely there exists nowhere in Italy a communal hall which can equal the glory of the Ducal Palace at Venice; the Palace of the Doges is the most beautiful of its kind in all Italy. Although the palace is very well known, my task is no less important, for the history of the Ducal Palace has almost always been based on imperfect data and on tradition rather than on serious documents.

The Ducal Palace at Venice, which rests against the right flank of the Golden Basilica, just as the Vatican rests against the right flank of the Basilica of St. Peter, has a very remote beginning. The first palace was erected in 814 by Agnello Partecipazio at a time when the ducal seat was transferred from Malamocco to Venice. A conflagration having reduced it to deplorable conditions in the time of the conspiracy against Candiano IV, the palace was restored by Pietro Orseolo in 976, then, ruined again by fire in 1105, it was rebuilt by the doge Ordelafo Faliero, and when the power was in the hands of Sebastiano Ziani it was enlarged, in 1173, and the works were carried on to 1340, when the rebuilding on the side of the Molo was begun, after designs, as obscure tradition has it, of Filippo Calendario; these works were carried on to 1355, resumed again in 1362, and finished in 1365. In the following century, or, to be more exact, in 1424, the façade upon the Piazzetta was begun, and finished in 1463 by such artists as Andrea da Milano, Giovanni and Bartolomeo Bon, the authors of the celebrated Porta della Carta, the Venetian master Pantaleone Bon and other sculptors and Tuscan ornamentists; then, in 1483, because of another fire, and later, in 1577, again because of a fire, the palace needed important repairs, which were carried out. All this shows that the Ducal Palace, far from being a Gothic construction of the Gothico-Oriental character common in Venice, is a mixture of styles, Gothic without, Renaissance within. So far as the details are concerned, there should be noticed the beauty of the capitals, carved by several artists, capitals of the porticos ornamented with leafage and figures which I myself have endeavored to study and explain in my "*Ornamenti dell' Architettura*," Vol. II, Page 85 and following, describing the capital of Justice, at the angle of the palace near the Porta della Carta, a *chef d'œuvre* of sculpture, the most beautiful capital that Italy can produce, signed by two Florentine artists. The chief artists who, at the time of the Renaissance, labored on the Ducal Palace were Antonio Rizzo, to whom we owe the celebrated Giants' Staircase, Pietro Lombardo, or Solari, and Antonio Abbondi, called "Il Scarpagnino." I need not speak of the romantic Bridge of Sighs which connects the Ducal Palace with the prisons, the work of Antonio Daponte (end of the sixteenth or beginning of the seventeenth century), nor of the façade on the Court of the Orologio, erected after the design of Bartolomeo Monopola, for the sake of enlarging the field of my present researches. Rather, I will point out the great beauty of the halls. Tiziano, Tintoretto, Paolo Veronese, Palma il Giovane are the painters of our palace, and their paintings and frescos are interwoven with carved marble doorways and chimneypieces, with bronzes and hangings, especially in that famous hall called the Sala del Maggior Consiglio, the most imposing room in the Ducal Palace, with Tintoretto's "Paradiso" and the "Glory of Venice" by Veronese, which taken together form an architectural and ornamental whole which produces a powerful impression.

Let us hope that the fear aroused in 1898 over the compromised stability of the Ducal Palace may be forever removed, as just now it seems as if it might be, and let us hope that the recent disaster to the Campanile of St. Mark may not have a sequence in the palace, which for several years back has been undergoing reinforcements and the lightening of the loads imposed on its foundations.

The Ducal Palace has been the object of recent restorations, the most memorable being the ones carried on with regularity from 1876 to 1889. There was at that time a kind of general reorganization,

the decorative side concerning itself particularly with the exterior capitals, several of which were cut over amidst much opposition, particularly from Ruskin, who demanded that the old capitals should be replaced with plain uncarved blocks of marble. The restoration of 1873-89 is also memorable because of an ingenious wooden scaffolding invented by the architect Forcellini and used in the restorations.

Following now along the northern road while moving away from the Adriatic, I shall not halt at the ancient Broletto, or Arengario, at Monza (twelfth century), or at that of Brescia (begun in 1187), the one at Milan (thirteenth century) or that at Como (twelfth century), it being more agreeable to halt at Cremona, whose Communal Palace is a very imposing bit of brick architecture. Its origin is unknown, but it is certain that in the first years of the eleventh century a communal palace existed at Cremona, but the documents which relate to it do not necessarily refer to the present building, which does not date earlier than 1200; in fact, the front portion, on the piazza, was erected in 1206, and the façade of the court in 1245. Restorations have modified and disfigured it, and yet its Gothic character is very marked.

Cremona possesses another very remarkable Gothic building, the Palazzo di Gonfalonieri, which reminds one of "Il Gotico di Piacenza." This building was erected in 1292 by the captains of the army of citizens, and later was the seat of the juriconsults, or advocates, from whence is derived the modern name of "wolf's staircase."

A Gothic palace which should not here be overlooked is the one which in the first years of the fourteenth century Guido Buonacolsi built at Mantua, carried on later from 1328 by the Gonzagas. Exteriorly, it preserves fairly enough its ancient lines, but within it has been wholly modified during the time of the Renaissance. The palace that I speak of is the celebrated Ducal Palace of Mantua, which recalls to us an heroic page in the history of our national painting, for it was here that the best artists of the fifteenth and sixteenth centuries executed their never-to-be-forgotten frescos and paintings from the time of Mantegna to Giulio Romano, and other exquisite performers in stucco decoration, marble and ebony-work here carried out work which even to-day excites admiration.

The interior of the Ducal Palace is, however, in great part in a most deplorable condition, but amateurs still find here reason enough for leaving the spot with their minds filled with sweet memories.

The North still calls us on to Genoa, where the Palazzo de S. Giorgio is one of the most precious monuments of this grand maritime city. This palace, which was built quite near the harbor on the *quai* bordering the sea, where the movement is intense, agitating, is always provoking long and interminable discussions on the necessity of surrendering a portion of itself to the demands of the merchants; but it has been resolved, in opposition to the demands of these gentlemen, that the Palazzo di S. Giorgio should remain as it was built by the Genoese powers of the thirteenth century, in the time of Guglielmo Boccanegra, by one of the most estimable men of his epoch, Father Oliviero dei Cistercensi (of the Carthusian brotherhood).

I have not yet spoken (now I am proceeding downward to the centre of the peninsula) of the Communal Palace of Perugia and the Palace of the Popes, or Soliano, at Orvieto, an elegant work due to the initiative of Pope Boniface VIII (1294-1302); nevertheless, properly speaking, the Gothic palace at Orvieto, while having all the air of a communal palace, does not come within the purview of my researches. So, limiting myself to the palace at Perugia, I will only mention its solemn air. Uncertainty veils its origin: it appears likely that its first architect was Father Benvignate da Perugia, (died 1310), who must have begun it in 1281; and this same palace has been the subject of a lively discussion because of a semicircular staircase which they wanted to plant against its façade. But my readers will be less interested with this discussion than with knowing that in the interior of the palace there exists a large hall, very richly decorated with frescos, an ornamentation which, unfortunately, has been over-restored in our days. Yet, this decoration is of a remarkable type for a hall of the Middle Ages. Without going far from Perugia, I will mention the Communal Palaces at Todi and Gubbio, sufficiently well known in Italy, particularly the latter. The palace at Gubbio, called "Dei Consoli," is generally attributed to Giovannello, surnamed "Il Gattapone," but this is a mistake, for the palace was built by Angelo d'Orvieto, who lived in the first half of the fourteenth century: the name of Gattapone has been brought forward without rhyme or reason, while the name of Angelo d'Orvieto is actually found engraved over the entrance to the palace.

If, leaving the communal palaces, I might enter on a consideration of the profane buildings of the Middle Ages, I should speak of Apulia, Abruzzi and Sicily, and I might mention the castle of Ortona de Marsi, the Castel del Monte, the Palazzo Tabassi at Sulmona, the elegant appearance of the Badia Vecchia at Taormina, a Gothic structure of the finest; and the Osterio, grand and small, at Cefali, falsely attributed to the times of Roger II; but, since I must hold to my subject, I must bid farewell to my reader, content if my notes have interested him.

ALFREDO MELANI.

PARIS ARTS AND CRAFTS SCHOOL.—The erection of a school of arts and crafts has been decided upon by the Paris municipality, says the London *Times's* correspondent in the French capital. A spacious site has been chosen on the Boulevard de l'Hôpital. The school will cost 5,000,000*fr.*, the State contributing one-fourth of this amount.

SOUND-PROOF PARTITIONS.

THE subject of "fire-resistant partitions" and of "heat-resistant coverings for wooden surfaces" has long since been investigated on behalf of the Factory Mutual Fire Insurance Companies. There are many places in factories where it is desirable to put up partitions sufficiently light to be supported on the timbers without the necessity of building from the foundation. There are also many stairways, elevator-wells and belt-chambers in mills, where it is desirable to put up a fire-resistant partition without going to the heavy expense of encasing them in brick.

The materials and method of constructing such partitions vary with the conditions in each case. Thin metal, plastering on wire laths, expanded metal and other methods have been applied in different cases.

Among the heat-resistants, the Sackett's Plaster Board proved to be one of the most effective for covering wooden surfaces or partitions made of plank. This material is made $\frac{1}{2}$ inch in thickness and may be made thicker. It consists of four layers of felt and three layers of magnesium plaster. It is made in large sheets and may be fastened up in various ways at a moderate cost. It is then covered with "brown plastering" so called, and finished with a skim coat of hard plaster. The partition occupies very small space; some which were put up in the office occupied by the undersigned, about two years since, without interfering with the daily work in any considerable measure, have proved to be free of cracks or any discoloration, taking up very little space. In this instance, the plaster board was nailed to seasoned wood-studding.

So far as we could judge, this material also retarded the passage of sound.

When the subject was submitted to Professor Norton by the architect in charge of the construction of a dormitory or dwelling-place for students in the New England Conservatory of Music, arrangements were made for including this material with others. The report of Professor Norton is herewith submitted.

Cabot's Quilt, recommended in connection with this material, is made of dry seaweed, padded between two thicknesses of paper, which, in buildings of fireproof construction, should be asbestos paper.

The architect in charge of the construction of the building of the New England Conservatory of Music, in which instruction is to be given, has adopted a partition of the Keystone Fireproofing Co.'s blocks with the Cabot's Quilt between the two sections.

These buildings are both approaching completion, so that ere long a practical test will be possible by which the relative sound-proof quality of each partition may be determined.

Respectfully submitted, EDWARD ATKINSON, Director.

BOSTON, MASS., August 8, 1902.

REPORT OF CHARLES L. NORTON: SOUND-PROOF PARTITIONS.

The subject of partitions for fireproof buildings is one which has led to much investigation, especially by the New York City Building Department.

When it is desired to make a partition which shall be reasonably sound-proof, it is apparently necessary to diminish somewhat the absolute incombustibility of the partition, though to a less extent than was supposed.

The following account of tests made for Mr. Edward T. Barker, architect of the dormitories of the New England Conservatory of Music, will show the relative values of some of the typical partitions of sound-proof separations between rooms:—

There were built upon the concrete floor of the B. & A. warehouse, East Boston, five rooms, 7 feet square, whose side walls were made of the several partitions. The rooms were built upon a floor of the same kind as that which is to be used in the buildings for the students of the Conservatory, for which the results of these tests were especially desired.

The rooms were built near one another on the fifth floor of the warehouse in a large loft or room about 50' x 70' long and 9 feet high. The ceiling of each room was the under surface of the concrete ceiling of the large room. Each room had a floor of two thicknesses of $\frac{1}{2}$ -inch floor-boards with two thicknesses of Cabot's Sheathing Quilt between the floor-boards and the concrete slab of the main floor. On one side of each room was a door with a glass panel, the door-jambs being faced with soft felt, and the bottom of the door was fitted with a stop, or "weather-strip," operated when the door closed, making a tight joint at the bottom.

The side with the door will be referred to as the front in the following description:—

Room A: This room was submitted by the National Fireproofing Co., and its four sides were made of terra-cotta blocks. The front and back walls were made of blocks 4 inches thick; the sides of 2-inch and 3-inch blocks. After the blocks were in position the room was given two coats of plaster inside and out.

Room B was submitted by the Keystone Block Co., and its four walls were made of the blocks of the Keystone material of the nature of plaster-of-Paris with a fibrous bond. The front wall was of blocks 4 inches thick, and the left side was of blocks 2 inches thick, the back of blocks 3 inches thick, and the right side of two 2-inch blocks with a 2-inch air-space between them. The entire room was given

two coats of plaster inside and out, except the front, which had no plaster on the outside of the blocks.

Room C was submitted by the Sackett Wall Board Co. and was built of Sackett Plaster Board $\frac{1}{2}$ inch thick, wired upon both sides of 3-inch steel channels. The channel truss or studs of the back and right side were wrapped with felt about $\frac{1}{2}$ -inch in thickness before applying the plaster-board. The Sackett Plaster Board is a composite board of alternate layers of paper and plaster, the whole being about $\frac{1}{2}$ inch thick. This room, like the other, was plastered inside and out, but to a slightly less thickness.

Room D was submitted by J. Russell & Co. and was of a more complex construction. The left side was a solid partition of metallic lath and plaster. The $\frac{1}{2}$ -inch steel ties were spaced 16 inches on centres, metal lath was applied to one side only of the ties, and then plastered to a thickness of 2 inches. The rear wall was built upon two rows of $\frac{1}{2}$ -inch studs staggered. Between them were placed one thickness of waterproof paper about $\frac{1}{2}$ inch thick and metal lath was wired to both sides of the row of studs and given two coats of plaster. The right side was of the same construction with a layer of $\frac{1}{2}$ -inch felt between the two thicknesses of waterproof paper. The front wall was of metal lath on two rows of staggered studs, with Cabot's Seaweed Quilt between the rows of studs.

Room E was submitted by Mr. Samuel Cabot, and was wholly of metal lath and plaster double partitions, with the space between the lath filled with Cabot's Sheathing Quilt. The front and left sides contained three thicknesses of quilt, and the right side and rear two thicknesses. The quilt was placed between the studs and the metal lath, and where three thicknesses were used, one was between the row of studs as well.

The rooms had been vigorously dried for several days, none longer than a week, but the whole building was so damp and the time so short that no considerable part of the plaster and none of the interior portions of the partition were dry. The Sackett Board room was the driest and Cabot's was the least dry.

The preliminary trials showed so great a range of efficiency of the several constructions that the microphonic apparatus, which was designed to make rapid comparisons of sound intensity possible, could not be used. Reliance had to be placed wholly on listening with and without a felt-mouthed stethoscope at the outside of the partition to sounds of various quality and intensity from within. The notes of the piano, violin, cornet and the human voice were carefully tried throughout wide ranges of pitch and intensity. The performers and the instruments were interchanged, every possible chance of unfairness, due to the variations of intensity in the sounds used, was eliminated. Of course, no interchange of the positions of the room was possible. No electrically-driven tuning-fork could be used for producing sounds of constant loudness. The insulating property of some of the partitions was so good that even the blare of a cornet or the overpowering tones of an Italian tenor, drawn from the ranks of the laborers on the building, could be heard through the partition, except by careful listening within a few inches of the wall.

After much consideration, the writer has given the following ratings to the different partitions. The order of their standing upon the list indicates their efficiency as compared with those above and below them.

No. Room.	Side.	Scale.	Composition.
1	E Left	100	Cabot's Quilt, 3 thick + metal lath.
2	E Right	95	Cabot's Quilt, 2 thick + metal lath.
3	E Rear	95	Cabot's Quilt, 2 thick + metal lath.
4	C Rear	85	Sackett Board, 2 felt on s.
5	C Left	85	Sackett Board, 2 felt on s.
6	C Right	80	Sackett Board, 2 felt.
7	D Rear	75	Metal lath + paper.
8	D Right	75	Metal lath + paper + felt.
9	B Right	60	Two 2" Keystone Block with 2" air-space.
10	A Rear	50	3" National Terra-cotta Blocks.
11	B Rear	50	3" Keystone Blocks.
12	A Right	45	3" National Terra-cotta Blocks.
13	B Left	40	2" Keystone Blocks.
14	A Left	40	2" National Terra-cotta Blocks.
15	D Left	30	2" Metal lath, solid plaster.

Nothing more is to be inferred from the numerical efficiencies than that the first partition is about three times as good as the last, and that the numerical interval between any two partitions on the list merely indicates the order of magnitude of the difference between the partitions.

The partitions making up the rooms submitted by Samuel Cabot and the Sackett Wall Board Company were the most efficient; but it is distinctly to be borne in mind that no other room had so easy a test as did these, in that each of the others had one thin and ineffective side which transmitted sound to the sides adjacent to it. The thin side of the Keystone room was noticeably resonant and plainly rendered it impossible to make a fully satisfactory test of the air-space partition. The solid metal-lath plaster partition of the room submitted by J. Russell & Co. acted in the same way in that room.

I do not believe, however, that this defect in the structures has caused any changes in the position on the efficiency list of the Cabot and Sackett rooms.

The efficiency of the Cabot Quilt as a material for rendering the partition "sound-proof" is so clearly demonstrated in these tests that I recommend it for use in the partitions for which these tests were made. The nature of the material in which the Quilt is encased should be carefully considered. I do not think it within the province

of this report to discuss the partition from other than acoustic considerations, and as an encasing medium the most effective material is Sackett Board and Adamant Plaster.

I would, therefore, give as my opinion that the best acoustic results would be attained by using a partition of Sackett Board and plaster with two thicknesses of Cabot's Quilt between the plaster-board.

I should recommend a wooden stud rather than steel channels, if the fire-risk is not materially increased thereby.

As later tests showed, some sort of a suspended ceiling will be needed, as the concrete slab transmits the sound across the top of the partition readily. No trouble will be given by the sound passing through the concrete to the rooms above or below; but, unless a layer of Cabot's Quilt, with under-lath and plaster, or of Sackett Board and plaster be put on the under side of the concrete ceiling, the efficiency of the partitions will be diminished somewhat.

The front walls could not be tested because of the leaks around the door and through the door-frames, even where covered with a large shutter padded with Cabot's Quilt. It is evident that a double glass door will be needed. The floor construction is acoustically good.

Respectfully submitted,

C. L. NORTON.

IS THE ARCHITECT A BLACKMAILER?

THE following remarks, published in last week's issue of the *Record and Guide*, so entirely coincide with opinions which we have more than once expressed on the subject of exhibition catalogues, that we gladly take the opportunity to reprint them with permission, for the sake of showing that we are not singular in entertaining them:—

It has long been recognized that one of the greatest obstacles to reform is the timidity of the suffering and the virtuous. Those people who suffer most from an abuse, as well as those who are most familiar with its operation, refuse to lift up their voices in public either for the benefit of themselves or their fellows. They vociferate secretly and denounce privately, but when called upon to give effective testimony, in order to secure the punishment of rascality, or the correction of an evil, they shirk the ordeal with a cowardice that makes the spectator respect even the crime or the oppression of which the victims themselves complain.

Every newspaper-office is thoroughly familiar with this reformer "without a name"—this man who, in regard to public abuses, would write letters, which he will not sign, this civic weakling, willing to give important evidence only on condition that his incognito is sacredly preserved.

For some years past the *Record and Guide* has been hotly importuned by a number of building-material firms and others in this city in regard to what they are pleased to call the "blackmail" practised by the architectural profession in general. This "blackmail," it is alleged, is exerted in many ways, through the medium of exhibitions, catalogues, commissions, but depends, in all cases, essentially upon the fact that the architect, as purchasing-agent for his client, considers himself entitled to "propitiation" from the building-material houses with which he deals, thus making it at least dangerous to refuse tribute to the enterprises, schemes or interests which receive his endorsement, or with which he happens to be connected.

A building, let us say, is erected. As soon as it is finished a prospectus or catalogue is produced, describing the building, illustrating the street-front and giving floor-plans. The architect supplies the drawings. His name figures prominently in the pages. Every contractor or building-material firm who has done a dollar's worth of work or supplied a dollar's worth of material is solicited for a contribution under the guise of "advertising." Some firms contribute perhaps \$50 or \$100. The outlay stands on the books of the building-material firm as an expenditure for advertising, but it is regarded by the house strictly as "backsheesh."

"Scarcely a day goes by now," complains the manager of a large concern, "without our being called upon to 'stand and deliver,' in the name of some architectural exhibition, some annual catalogue, some club or society publication or architects' pamphlet. In many cases we are given plainly enough to understand what is expected of us. In other cases, the 'blackmailed' hand is gloved, and all we see is the names of a number of leading architects placed on a letter-head, soliciting, mark you, soliciting our advertisement! I have one such letter now before me.

"Sometimes these schemes are boldly entrusted to advertising-agencies. Frequently, indeed, they are actually farmed out to these people. I could tell you, and so could others tell you, of how the names of apparently honorable men in the profession have been used by these agencies in a way that would make the owners blush for shame."

Another firm whose book-keeping methods possess the virtue of candor have actually opened an account headed "Blackmail." We had the privilege of looking at it recently and found among the items the names of several highly respected architectural and building organizations in different parts of this country where the firm had a considerable market. In speaking to one of the officers of the company, we were told: "We are merely waiting until the evil reaches the breaking point. It is fast getting there. It is something like the Tammany police system; it doesn't pay any one individual to fight it alone. It is cheaper to grin and sign a check for the petty larceny. Last year we were called upon to pay out something like \$2,000 for 'exhibitions,' professional catalogues, organization publications, and the like.

"I cannot believe that the honorable members of the architectural profession and the building-trades realize what is being done with their apparent sanction. It is time they did. If, in the judgment of these people, it is desirable to hold annual exhibitions, issue club publications and print catalogues, should it not be done at the cost of the beneficiaries? Take for instance, these architectural exhibitions that are held in the chief cities of the country. Is not every one of them carried on mainly at the expense of building-material firms? The architect will tell you he doesn't advertise. Oh, no! Such a commercial method of seeking fame is unprofessional! Nevertheless, he permits his agents to approach building-material firms in his name, extract money from them, and then, with that extorted cash, he exhibits his own drawings to an admiring public, thus obtaining in an indirect way and at the expense of others, the publicity which he is not candid enough to say he appreciates, or independent enough to pay for from his own purse."

These are serious indictments. We believe that no one will more quickly or more honestly repudiate them than our architects and builders themselves. But that is only the personal side of the matter. The fact is, the evils complained of have developed through a certain moral carelessness or a certain financial optimism, which makes people when associated for a common purpose other than a directly pecuniary one somewhat incurious as to the exact source of the dollars that come to them. Moreover, there is a certain specious side to the situation that may well blind an insensitive person. No one, it may be said, is bound to advertise in these catalogues or contribute to these exhibitions. There is no compulsion. If firms sign a contract for advertising-space, presumably it is because they deem the publicity they get of a value equivalent to their cash. This argument is fallacious. It doesn't touch the realities of the case. Similar statements might be made regarding the tyranny of the tipping-system and of all other forms of general blackmail. In all these extortions people "put up" as though their payments were really voluntary, but essentially, there is coercion, and every man feels it. The men who canvass for these schemes might indeed repudiate the word "blackmail," yet they all know very well how much power there is in "suggestion," and do not delude themselves for a moment that they are engaged in presenting a thoroughly business proposition to those who give them an audience. They know there is an uncommercial element in the proposition, and they know that it is just that very uncommercial element that is most potent in obtaining the signatures to the contracts from which these architectural, building and other societies derive the benefit.

The truth of the situation could very easily be discovered by a small committee, intent upon getting the truth, were they to visit fifty of the chief victims in this city alone, and have with them a private, candid and quite unperfunctory conversation. They would learn enough to enable them to make a report that would cause every honorable man to withdraw his name from these exhibitions, publications and catalogues, in which the real beneficiaries are not the persons who pay the bills.

The architect is prone to talk much of his professionalism. The most professional step that is open to the architect of this country to-day is to rigorously pay his own bills for the exhibition of his own drawings and to cease farming out his professional dignity and his professional name for a price. This is about equally true of builders throughout this country, though, of course, for reasons not concerned with professional ethics. It is also true of labor organizations. They are all offenders. Yet the offense from every point-of-view is a mistake. No good cause is really served by contributory petty enterprises based on extortion. It is time a stop were put to the evil. It has attained great proportions. It is much talked of and inwardly opposed. But "publication" is another matter, and complaints and appeals are forwarded to the *Record and Guide* only on condition of secrecy. We hope yet to remove that, or, rather, conditions are now so near to the point of intoleration that it will be cheaper to speak out than to pay up.

BOOKS AND PAPERS

IT is not easy to write anything very original upon the subject of steam-heating and ventilation, for while it is quite possible that such writers as Baldwin, Mills and Carpenter have not uttered the last word upon such subjects, it is nevertheless almost inevitable that any new work should follow the same lines that these authors have beaten out so well and should of necessity constantly refer to them as standard authorities. This recent addition to the technical library on the subject¹ was originally written as a series of articles for the *Engineering Record* and has been somewhat revised for its present form. The subject-matter is treated simply and in a perfectly comprehensible manner and the principles of the science and application thereof are set forth in such a manner as to be readily available, and while in no sense exhaustive or strikingly original, it is a trustworthy guide to the practice of those who have this sort of work to do. Heating and ventilation is essentially a practical science in which it is safe to say that more depends upon knowledge of good practice

¹ "Steam Heating and Ventilation." By William S. Monroe, M. E. Price \$2.00. New York: The Engineering Record, 1902.

than of the theory, especially as all the theories relating to the proportioning of heating-surfaces are almost purely empirical. The author admits the lack of usual information in regard to this branch of the subject, but it is to be regretted that he could not have managed to collect in available form some of the experience which has certainly proved satisfactory in the past. In the earlier days of steam-heating radiating-surfaces were generally figured by rule-of-thumb methods based upon the cubic contents of the space to be heated. The writer gives considerable study to the endeavors to devise a more scientific method of analysis which would take account of the loss of heat through different mediums and through different kinds of construction, but at the best such methods of analysis have little tangible value unless they can be substantiated by actual observation, and in ordinary practice it is found on the whole quite as safe, and far easier, to lay out the radiating-surfaces in proportion to the cubic contents of a room, varying the proportion to meet the varying requirements. It is safe to say that no one, however well posted theoretically, could be trusted to design the heating-apparatus for a large building unless he has had practical experience.

It is to be regretted that the writer seems to advise the concealment of risers in fireproof buildings. This is a thoroughly bad practice and is not to be defended even upon the score of looks, while from every practical standpoint the risers should never be concealed except in vertical ducts which are readily accessible.

On the whole, the work is a concise, practical manual embodying and illustrating the best of the common practice.

MR. CAIN's work on the Theory of Steel-Concrete Arches¹ is the best and most available treatise upon the subject which has come under our notice. The analyses of the strains in an arch are necessarily worked out in a more or less empirical manner and assumptions have to be made as to lines of action of forces which are doubtless not in exact accordance with the real conditions, so that the solution of the strains in an arch is indeterminate, but the reasoning is very logical and gives results which are trustworthy, while the methods are, on the whole, the best which we have seen presented. The book is to be commended to all who are interested in this kind of work.



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

THE DUCAL PALACE, VENICE, ITALY;—PALAZZO PUBBLICO, PERUGIA, ITALY.

FOR description of this and the following plates see article "Italian Town-halls of the Middle Ages" elsewhere in this issue.

PALAZZO DE' CONSOLI, GUBBIO, ITALY;—PALAZZO APOSTOLICO, ORVIETO, ITALY.

PALAZZO DEL PODESTÀ, FLORENCE, ITALY;—PALAZZO COMUNALE, TODI, ITALY.

PALAZZO COMUNALE, CREMONA, ITALY;—PALAZZO COMUNALE, PIACENZA, ITALY.

PALAZZO DELLA SIGNORIA, SIENA, ITALY;—PALAZZO VECCHIO, FLORENCE, ITALY.

PALAZZO DEL COMUNE, PISTOIA, ITALY;—HALL OF THE FRATERNITY OF ST. GEORGE, GENOA, ITALY.

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

THE LOUISIANA PURCHASE EXPOSITION, ST. LOUIS, MO.: A CORNER OF THE TEXTILES BUILDING. MESSRS. EAMES & YOUNG, ARCHITECTS, ST. LOUIS, MO.;—THE FINE-ARTS BUILDING. MR. CASS GILBERT, ARCHITECT, NEW YORK, N. Y.

The Textiles Building is situated to the left of the main lagoon, and this and the Electricity and Machinery Building are the only two buildings facing the Grand Basins with the cascades and approaches to the terrace crowning the hill on which the Art Building stands. While not the largest in area, the building fronts 525 feet on the main thoroughfare of the Exposition. Its position makes it one of the most conspicuous buildings, in what has been called the "Main Picture" of the Exposition. The four elevations are similar in character, varying only as required by the irregular shape of the

ground plan. The interior court will follow the general outline of the buildings in form and style, and will be laid out in the form of a plaisance or garden of a formal type. It is estimated that the cost of this building will be about \$600,000. It will be wholly temporary in character, and will be constructed of staff, or other similar material.

THE Art Palaces consist of a group of three buildings, having a total frontage in the northwest façade of 836 feet. The middle building is 166' x 348' and is of the most substantial and enduring fireproof construction. This building will contain a hall for statuary 94' x 157', with an arched ceiling 51 feet high. Picture-galleries will have places on either side of the sculpture-hall. The two pavilions at either side are of temporary construction, each being 200' x 422' in size. Each will stand 44 feet from the central building. A court 262' x 530' south of the central building, enclosed on three sides, will receive a rich decoration in landscape effect and will be one of the many delightful resting-places to be found in the Exposition. The lighting of the buildings will be principally from clerestory windows, so that the entire interior side-wall space may be available for pictures.

[Additional illustrations in the International Edition.]

COMMUNAL HALL, PIACENZA, ITALY: SIDE VIEW.

FOR description of this and the following plate see article "Italian Town-halls of the Middle Ages" elsewhere in this issue.

HALL OF THE JURISCONSULTS, CREMONA, ITALY.

COMPETITIVE DESIGN FOR THE CITY-HALL, NEWARK, N. J. MESSRS. RANKIN & KELLOGG, ARCHITECTS, PHILADELPHIA, PA.

ELEVATIONS AND SECTION OF THE SAME.



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

A VOICE FROM THE COAL REGION.

WILKESBARRE, PA., September 30, 1902.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I wish to thank you for the sane articles on the strike question which are in the September 27th number of the *Architect*. If the newspapers in general and the parsons and philanthropists so-called could profit by them it would be a blessing indeed. So few people outside the coal region understand the fight for American liberty which the operators are maintaining, or have any sympathy with the men who want to work and are not allowed to do so, that it is refreshing to find some one who understands the whole situation.

Gratefully yours, AN AMERICAN WOMAN.



LIGHT AND AIR IN CITIES.—In New York the importance of the light-and-air question is now pretty well understood, though it has been egregiously overlooked in several instances; and the result is that large office-buildings are attempted only on especially favorable sites, the majority of which have already been pre-empted. The influence of the Trinity churchyard, in affecting realty valuations, is an interesting case in point. Here is an open green square in the heart of the financial centre, which sentiment and tradition have made consecrated ground; which the wealthy proprietary corporation refuses to sell at any price; and which, as far as can now be seen, will always remain in its present state. Consequently, the office-buildings erected on abutting property are assured of a splendid supply of light and air for an indefinite period. It is for this reason that the Empire Building, on the south side of Rector Street, is one of the most successful enterprises in the Metropolis; and it is for this reason that the old Trinity Building, at 111 Broadway, is regarded as probably the most available building site in the lower business district.—*E. J. Hendrick in the October Atlantic*.

DIFFICULT ENGINEERING IN THE NEW YORK SUBWAY.—Mr. Frank W. Skinner of the *Engineering Record* has a paper in the *October Century* on the above topic, in which he describes the running of the subway under the Columbus Monument, and the moving of a tunnel. He also gives this account of the relocating of a long, thin, high wall: "An ordinary derrick will handle compact loads of 3, 5, or even 10 tons; a 100-ton load is about the limit of the capacity of the heaviest steel ordinance cars drawn by powerful locomotives, or of the largest hydraulic jacks, which will lift it a few inches so slowly that the motion is scarcely perceptible. A building weighing 500 tons may be carefully braced and lifted up or moved laterally with rollers on smooth level

¹"Theory of Steel-Concrete Arches, and of Vaulted Structures." By William Cain, Member Am. Soc. C. E., Professor of Mathematics, University of North Carolina. Second edition, thoroughly revised. Price 50 cents. New York: D. Van Nostrand Company, Nos. 23 Murray and 27 Warren Sts. 1902.

tracks by the help of scores of powerful jacks. It would require immense power to push along even a 50-ton boulder resting on the ground, and be yet more difficult to move a long, thin, high wall several feet transversely without cracking, tipping or twisting it. Generally, when such a wall is to be relocated, it is taken down and rebuilt; but such was not the case on the subway above 135th Street, where, at the entrance to a tunnel-section, walls nearly 200 feet long retain the bank on each side of the cut. After the structure was completed it was decided to widen it 11 feet to receive a third track, and although it was at first intended to tear down the masonry and build new, it was finally decided to move it bodily, and this was successfully accomplished at a saving of several thousand dollars. The walls are of concrete and brick, 13 feet high at one end, 3 feet thick on top, and weigh about 400,000 pounds each. The earth was dug away behind them for a width of 6 feet, and to a depth a little below their foundations. In the bottom of each trench a concrete floor was laid just below the level of the foot of the wall. Small holes were tunnelled under the wall a few feet apart, and in them were laid transverse timbers reaching to the floor of the trench and having both ends supported on cross-sills. Narrow, thin, greased steel track-plates were inserted under the walls, on top of the timbers, and extended across the trench floors. Small steel bearing-plates were set on the track-plates under the front and rear edges of the walls, and pairs of oak wedges, driven between the cross-timbers and their sills, lifted the whole wall on the steel-plates. Horizontal 5-ton jack-screws were set close together against the face of the wall at the base for its whole length, and being simultaneously operated, the wall in a few hours was moved back 5½ feet on the floor in the trench. The projecting ends of the track-plates were cut off, and the spaces between the plates under the wall were filled with liquid cement. The work on each wall was done by twenty men in ten days, and the walls were not distorted the sixteenth of an inch."

STATUES OF BRUAND AND HARDOUIN-MANSART.—Among the projects under the consideration of the Paris Municipal Council is one for the erection of two statues in the Square de Breteuil, the subjects being Liberal Bruand and Jules Hardouin-Mansart. Bruand's name is seldom mentioned, although he prepared the original design for the Invalides. Mansart's name is, on the contrary, familiar to Frenchmen, and it is surprising that an artist who is so identified with the national architecture should still be without a statue in Paris. One reason may arise from the difficulty of distinguishing between the various members of the family. Nicholas from an early age was entrusted with great buildings in Paris. One of them was the mansion now used for the Bank of France. He began the great church of Val de Grâce, but the upper part, including the dome, is the work of Le Mercier. Hardouin-Mansart, who was the pupil of Bruand, was for about thirty years engaged on the works at Versailles. He completed the Invalides with the exception of the dome, which he designed and partly carried out. There was another member of the family, who was engaged on the church of St. Eustache. We presume there can be no objection to statues of the two artists. It is true they were both Royalists, but it would be unfair to make them responsible for the shortcomings of the age in which they lived. — *The Architect*.

GIFT TO THE IRISH NATIONAL GALLERY.—The Countess of Milltown has made a most generous gift to the nation, which will be highly appreciated by the Irish people among whom she has lived so long. She has made over by deed to the National Gallery in Dublin all the splendid pictures, plate, furniture, and other objects of value in her residence, Russborough, Blessington (County Wicklow), and directs them to be kept in separate rooms, and marked as the Milltown Museum. Thus, the Irish National Gallery will have the unique advantage of showing the whole furniture of a stately country house, built and adorned in the best period — towards the end of the eighteenth century. The donor of this interesting and remarkable gift is a daughter of the fifth Earl of Harrington, and married in 1871 the sixth Earl of Milltown, who died in 1890. He left no children, and the peerage went to his brother, who only held it for a year, when he also expired without heirs, and the title became extinct. There are, however, two claimants to it, descendants of sons of the third Earl, but neither of them has, as yet, established his right, and the title no longer appears on the Ulster roll. — *London Telegraph*.

ACOUSTIC CHANGES AT THE PRINCE REGENT'S THEATRE, MUNICH.—Few opera-houses in any country are acoustically satisfactory. In the past there was a belief that it was all a matter of luck, and that, if the architect did not accidentally stumble onto the right thing, the public would have to submit to its fate, with Oriental resignation. We know better now. The changes made in the new Prince Regent's Theatre in Munich last year show how much can be done to mend matters. Otto Lessmann describes these changes in the *Allgemeine Musik Zeitung* for August 29, and attests that "the orchestral sound has gained much in softness and refinement, without any loss of brilliancy. The individual parts of the body instrumental can now be distinguished, even in the most complex polyphony, with surprising clearness. The brasses, which last year were hard and blaring, now have a soft metallic clang, while the mighty body of strings gives forth sounds which are ideally beautiful in *forte* as well as in *piano*. In a word, the improvement of the acoustics is astounding, and I believe that from the tonal point-of-view the Munich festival theatre now equals that of Bayreuth." — *N. Y. Evening Post*.

AN EXHIBITION OF PARIS SHOP-SIGNS.—For some months past the idea of an exhibition of shop-signs has been fructifying in the mind of M. Detaille, the well-known painter of battle-scenes. Now the project has taken definite shape, and has for godfather the Prefect of the Seine, M. Selves. Notices have been issued giving particulars of the exhibition, which is to take place in October next. The wish of M. De-

taille and his brother-artists associated with him on the committee is to revive the old signs that were such a picturesque feature of Paris of fifty years ago. Here and there one meets portions of the old streets incorporated in the new boulevards, quaint old houses with their old signs still attaching to the little narrow shop-fronts. There are, indeed, some interesting trade-symbols in various parts of the city, some but newly installed. In the Rue Bonaparte, for instance, a tradesman has recently raised a sign above his premises, which bears the figure of Napoleon mounted upon his white horse. Oddly enough, the name of the tradesman is Lempereur. The sweep and the barber have very largely conserved their ancient distinctions, and, indeed, there is a very common tendency in the ornamentation of the building to call attention to the wares of the tenant. The florists, however, who show such exquisite taste in the arrangement of their windows, have, as a trade, adopted a sign which is as lugubrious and unpleasant as can well be imagined — a composition funeral wreath. It is needless to say that the committee will not encourage designs of that sort; rather we may expect to see a revival of the arts of the cunning smith who with his own strong hands forges a graceful bracket for a swinging board. It has been pointed out that the painted sign is a remnant of the age when the public as a mass, unable to read, possessed this sole means of identification of a particular establishment. In that sense, the sign has ceased to be necessary. Nevertheless, the artistic sign will add to the amenities of the pleasant streets of Paris, even if there is no direct furtherance of trade. — *Pall-Mall Gazette*.

JAPANESE INVESTIGATION OF BUDDHIST REMAINS.—A remarkable illustration of Japanese enterprise and advancement is an archaeological expedition which has just left for Central Asia under the management of Count Otani Kozui and M. Watanabe Tetsushin, both Members of the Japan Society. Count Otani is also a Member of the Royal Geographical Society of London. The purpose of the expedition is to search for the Buddhist remains in Central Asia, India, and China, and to trace as far as is possible the course of Buddhism from its source northwards and eastwards to Japan. The members of the party, seven in number, are all Japanese. Count Otani's father, Otani Kozon, now living in Kioto, is Lord Abbott of Nishi Hongwan-ji, the monastery of the "Original Vow," and a direct descendant of Shinran, the richest founder of the Shin Shin sect, who lived in the eleventh century. Count Otani Kozui has been an extensive traveller, and was elected a Member of the Royal Geographical Society because of his explorations in China. His father sent him to Jerusalem to study Christianity and Mohammedanism, and on his own initiative he visited Iceland and spent the best part of a year in the Arctic Circle. He is an enthusiastic student of Sanskrit and ancient Chinese, and has done much original work in the Oriental room of the British Museum. All the members of the expedition have been preparing for this work for several years. M. Watanabe Tetsushin has been studying church history with a priest of the Church of England, and has paid particular attention to the Nestorians, who wandered from Constantinople off into Asia in the fifth century. He lived in St. Petersburg one year and speaks Russian fluently. M. Hori Masuo, who will look after the surveys and the map-making, has been studying topography in Oxford. M. Inongo Koen, a veteran of the Chino-Japanese war, will have charge of the transport; M. Fujii Sensho, Ph. D., is well versed in Chinese and Japanese Buddhist literature. He has been studying Sanskrit in Berlin and Paris, and has already been several times in India. — *N. Y. Evening Post*.

COAL BRIQUETTES IN GERMANY.—The manufacture and use of briquettes in Germany, an article of fuel composed of brown coal, peat and the dust and waste from coal-mines, has developed to such important proportions in recent years as to attract wide attention, especially at this time. The following tabulated statement shows the amount and the prices for a period of eleven years:—

	Production (Tons).	Sales of Syndicate (Tons).	Price Per Ton.
1891.....	482,495	202,780	\$3.02
1892.....	533,075	516,508	2.49
1893.....	694,025	645,144	2.16
1894.....	745,414	719,258	2.10
1895.....	796,363	780,185	2.16
1896.....	830,985	818,300	2.22
1897.....	943,732	934,221	2.38
1898.....	1,078,113	1,245,269	2.43
1899.....	1,530,816	1,485,130	2.34
1890.....	1,563,928	1,519,811	2.92
1891.....	1,666,385	1,560,230	3.17

This kind of briquette forms the principal domestic fuel in Berlin and other cities in Germany, and is used also in locomotives and manufacturing industries. It is clean and convenient to handle, lights quickly and burns with a clear, intense flame, and the combustion is practically smokeless. Hence, Berlin, though a busy manufacturing city, is one of the cleanest cities in Europe, so far as smoke is concerned. Like most other important German industries, this is controlled by a syndicate which includes thirty-one firms and companies, or more than nine-tenths of all the producers in the country, and which regulates the output and prices. Yet the prices remain comparatively low and are commensurate with the means of the poorer classes. Of the 1,566,385 tons sold by the syndicate last year, 749,208 tons were taken by the German railways, 124,380 tons were sold to retailers, 497,136 tons were sold to factories and works of various kinds, and 149,089 tons, or 9.8 per cent, were used by German merchant-steamers and the navy or exported to the German colonies or neighboring European countries. — *Boston Transcript*.

SHAKESPEARE STATUE AT ELSINORE.—A committee has been formed to erect a statue of William Shakespeare in the open space opposite the so-called "Hamlet Terrace" of Kronborg Castle, at Elsinore, Denmark. — *Exchange*.

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CALIFORNIA REDWOOD TO THE FRONT.

A GREAT deal of interest is being manifested by architects and builders throughout the East concerning the Redwood of California. This interest has arisen from the phenomenal increase in its use during the last few years; and when its good qualities become more generally known, and its adaptability to so many uses appreciated, the demand for it will be measured only by the ability of dealers to supply orders.

As showing the extraordinary increase in the use of California Redwood the reports of foreign and domestic shipments from Del Norte, Humboldt and Mendocino counties during the first eight months of 1902 are given as 169, 870, 554 feet.

During the same period there were shipped 9,288,190 feet of Pine.

From this it is fair to presume that the shipments for 1902 will exceed 300,000,000 feet. So, as a means of comparison, we give the record of eight months' shipment, 1894 to 1902, inclusive:—

1894	101,984,896
1895	130,972,302
1896	119,157,584
1897	126,686,319
1898	113,723,063
1899	147,554,587
1900	136,781,781
1901	146,743,842
1902..	169,870,554

This is a grand showing; but as it is conservatively estimated that at the present rate of consumption there is enough standing timber to last for 150 years, no immediate fear need be felt that the supply will fail. That its use in the East and Middle West is to-day not greater is because the building-trades and workers in wood generally, throughout those sections, do not sufficiently appreciate its superiority in many essential features.

But its superior qualities are becoming so fully recognized that it is daily gaining in favor. In California, its home, Redwood is strongly in evidence, for there is no town which is not principally constructed of this timber, and many years of use have proved its value for building purposes.

The exceptional freedom of California from disastrous fires may truly be attributed to the non-inflammable qualities of this lumber.

So decided is this quality that insurance companies quote lower rates when insuring buildings in which it is used. Its non-inflammability is due not only to the absence of pitch and resin in the cured lumber, but, as well, to the fact that it is slow of combustion, absorbs moisture readily, and when

moistened resists fire wonderfully; hence is more readily extinguished and less liable to become ignited.

Concerning the use of Redwood for building purposes, from an insurance standpoint, Mr. Bernard Faymonville, Secretary of the Firemen's Fund Insurance Co., San Francisco, says: "With the experience of over thirty years and a revenue and loss account much larger than any other company doing business on this coast, where Redwood lumber is so extensively used, our records show a great many instances where fires were extinguished in Redwood buildings with comparatively slight damages when, in our judgment, the same fire would have made practically a total loss had the buildings been constructed of other woods." But, while this claim is an important one, there are others as great, if not greater. It seems to possess all the desirable qualities required; and for shingles, tanks, flooring, furniture, porch-columns, pattern-wood, mouldings, water-pipes, railroad-ties, beer-vats, panning, mantels, clapboards, stairwork, blinds, paving-blocks, doors, sashes, veneering, coffins, ornaments, wainscoting, finish, car sidings and roofings, cornice-work, newel-posts, desks, etc., no other wood possesses so many admittedly strong claims.

Shingles from Redwood will not shrink to any noticeable degree; they are air-dried and cut from live timber; they are strictly clear and of vertical grain, and will not huff, shrink or swell as the result of changes in weather; they lie smoother than do other shingles, and form practically a fireproof roof.

For siding and outside finish Redwood will hold paint perfectly.

It is well known that many woods refuse to properly absorb the oil, the result being that after a time the paint peels or scales. It will hold paint—not as well, but better than does any other building-wood, as has been amply demonstrated wherever the wood has been used. For tanks and vats of all kinds years have demonstrated its value. It neither shrinks nor swells after once having been thoroughly dried, and is singularly free from decay, and for the building of railroad-tanks is especially adapted by reason of the greater length of material which can be procured from Redwood for the bottoms of those tanks.

Municipalities about to construct new streets or repair old ones would do well to investigate the merits of California Redwood for pavement, for Redwood paving-blocks in a superior degree withstand the wear resulting from heavy traffic, while their resistance to decay

is so remarkable that a Redwood pavement, if it were not worn out, would practically last forever. As a paving-wood it has been very popular in California cities for many years.

A Redwood street-pavement, properly and conscientiously laid on a good foundation, has many points of superiority over asphalt, brick or stone.

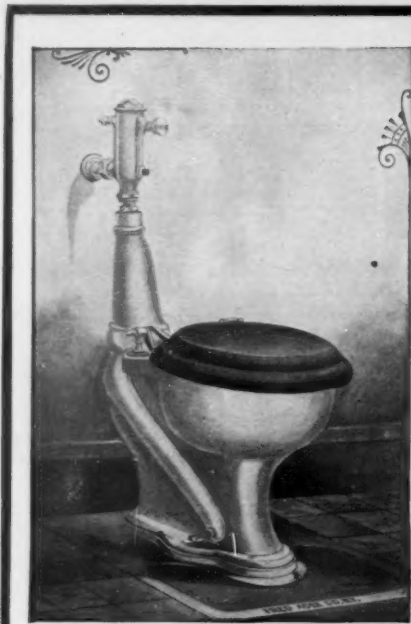
An asphalt-pavement will disintegrate and go to pieces even without use.

A brick-pavement will wear into ridges. The interstices between the bricks become filled with dirt and filth and serve as breeding-places for disease germs. This is true to some extent of any block-pavement where the interstices are not filled with grouting or cement. A stone-pavement is noisy.

A pavement made of rectangular blocks of Redwood laid close together and on a durable and smooth foundation is a long-lived pavement—in fact, one of the most durable of all pavements on heavily trafficked streets. On a residence street it would last for generations. Having a smooth surface, it is easily cleaned and kept clean. Although smooth, it never becomes slippery like asphalt and granite. One feature that will ever commend it as a pavement is that it is practically noiseless. Other things being equal, this one thing would give it preference over all other pavements. Another point worth remembering is that a Redwood pavement will possess sufficient "give" to make it the choice of all horse owners, as it is easier on a horse than are the harder pavements.

Although of reasonable first-cost, it is yet the pavement *de luxe* and is destined rapidly to increase in popularity.

The superintendent of one of the largest buildings in San Francisco recently stated that he had examined blocks taken from a Redwood pavement which had been laid nearly eighteen years before, and that they were to all appearances just as sound as they were when the pavement was first laid. And so we might go on at much greater length concerning its utility; but, briefly, we will say that no other wood is more easily worked or will remain so perfectly or securely in place without shrinking or swelling as will Redwood; and for these reasons it is rapidly growing in popularity as a wood from which to manufacture all manner of furniture, as well as interior finish of cars, newel-posts, banisters, grille-work, ornamental brackets, etc. When finished it changes but slightly and retains its gloss and beauty indefinitely. There is, too, perhaps no wood which forms so perfect a basis for staining and graining in



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imitation of the darker woods. When Redwood has been properly prepared, grained and polished an expert would be needed to distinguish it from genuine rosewood or mahogany.

In most of the wood the grain is very straight, and, therefore, is particularly well adapted for the manufacture of carvings, mouldings, brackets, etc., of any desired shape or size; the figured wood is rare and choice. The evenness and regularity of its texture make it particularly desirable for carved and turned workings. In regard to the supply of Redwood, it seems illimitable. Conservative estimates place the number of feet of Redwood timber still standing within the limits of Mendocino, Humboldt and Del Norte counties at 50,000,000,000 feet, while more liberal statisticians say for the same area 60,000,000,000 feet. People who have never visited the Redwood district of California cannot conceive the truth of the assertions made concerning the size of individual trees; but 'tis true, nevertheless, that there is a plentiful supply of trees exceeding 18 feet in diameter and towering 200 feet above ground. Trees of 12 and 14 feet are very common, while average specimens will measure 6 to 8 feet. Merchantable trees will run three-fourths in the clear.

Once felled these great trees cure quickly, the finished lumber being virtually free from resin and unaffected by future climatic conditions. The Redwood tree when felled remains practically sound forever, and there is no lumber in the world so little given to warping and shrinkage.

In an interview with the Bartlett Lumber Co., Room 409, 53 State Street, Boston, Mass., we learn that they have made a specialty of this wood for about four years, during which time much energetic missionary work has been done with the result that a large trade has been established, which is ample evidence that its many potent features and general adaptability are receiving deserved recognition.

Redwood is not only unrivalled, but on the basis of utility it is the best and cheapest finishing wood on the market.

GURNEY "BRIGHT IDEA."

We wish to call the particular attention of architects and heating-engineers to the

"Bright Idea" Hot-water Heaters and Steam-boilers. These boilers are especially intended for the larger heating-systems, in preference to the usual wrought-iron, tubular or firebox boilers, and, owing to the greater durability of cast-iron, are free from the corrosive and scaling action that usually quickly affects a wrought-iron construction.

The front and back sections of the Bright Idea are made in single-cored castings, while the intermediate sections are made in halves. All the sections, including the front and back, are connected to the supply and return drums by lock-nut nipples on the outside of the boiler, which therefore are where the fire cannot act upon them, forming a most permanent and tight joint under all circumstances.

The heating-surfaces of these boilers consist of specially designed horizontal cast-iron water-tubes (having diaphragms in them), which are screwed into each half-section and exposed at right angles to the direct heat of the fire. Positive circulation of the water is assured in the tubes, combined with ample flue-passages for the perfect combustion of the gases, thereby making the most powerful and effective heating-surface it is possible to produce.

The horizontal arrangement of the heating-surfaces is also the most convenient and practical form for the free circulation of water and quick vaporization of steam, since it presents the water to the action of the fire in the most effective manner, viz, in a connected series of small parts, or streams, through which the water or steam escapes, unobstructed by cross-currents, as rapidly as it forms.

There is no possibility of breakage of any part of this boiler through sudden expansion or contraction, as is the case where boilers consist of large single and necessarily rigid sections.

In comparison with the usual fire-tubes of wrought-iron tubular boilers, the water-tube type of boilers such as the Bright Idea is far more efficient, economical and durable. The heating-surfaces are also more effective and more easily cleaned or repaired at any time, with much less trouble or expense.

Should an accident occur to a section, and repairs be necessary, by loosening the lock-nut nipples at the top and bottom of the section it can be taken out, quickly repaired, or replaced; or the section may be left in tem-

porarily, the nipples taken out, plugs inserted in their places, and the boiler run in this manner until permanent repairs are made.

In the event of accident to any tube (if one should ever occur), it could also be taken out and a new one quickly screwed in or the outlet plugged—a very important feature.

Deflecting-plates are cast on certain rows of tubes, so that the products of combustion are compelled to travel over all parts of the heating-surfaces, thereby absorbing the maximum amount of heat before the final escape of the gases of combustion at the chimney.

Another very valuable feature of the Bright Idea Boilers is their compactness, and the small amount of space they occupy in proportion to their heating capacities. They are also portable, do not require brick setting, and, being constructed in sections, they can be conveniently handled and carried through any ordinary doorway.

There is also provided in the base of the 1200 Series, at the rear of the bridge-wall section, a draw-out door for the purpose of dumping into the ash-pit any accumulation of soot or ashes that may collect back of the bridge wall and in the combustion chamber.

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(Continued on page 4.)

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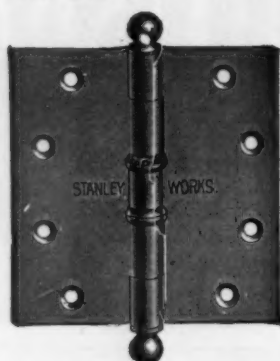
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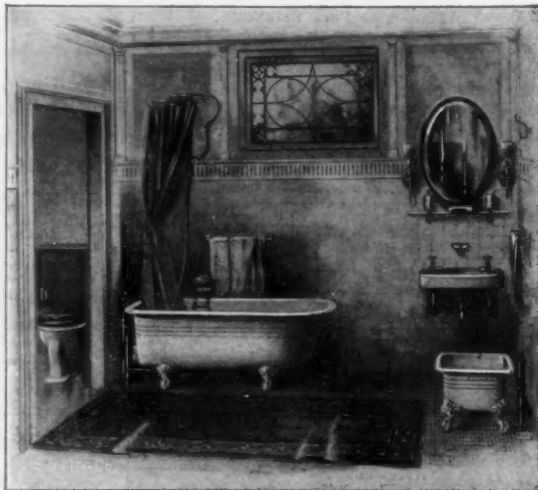
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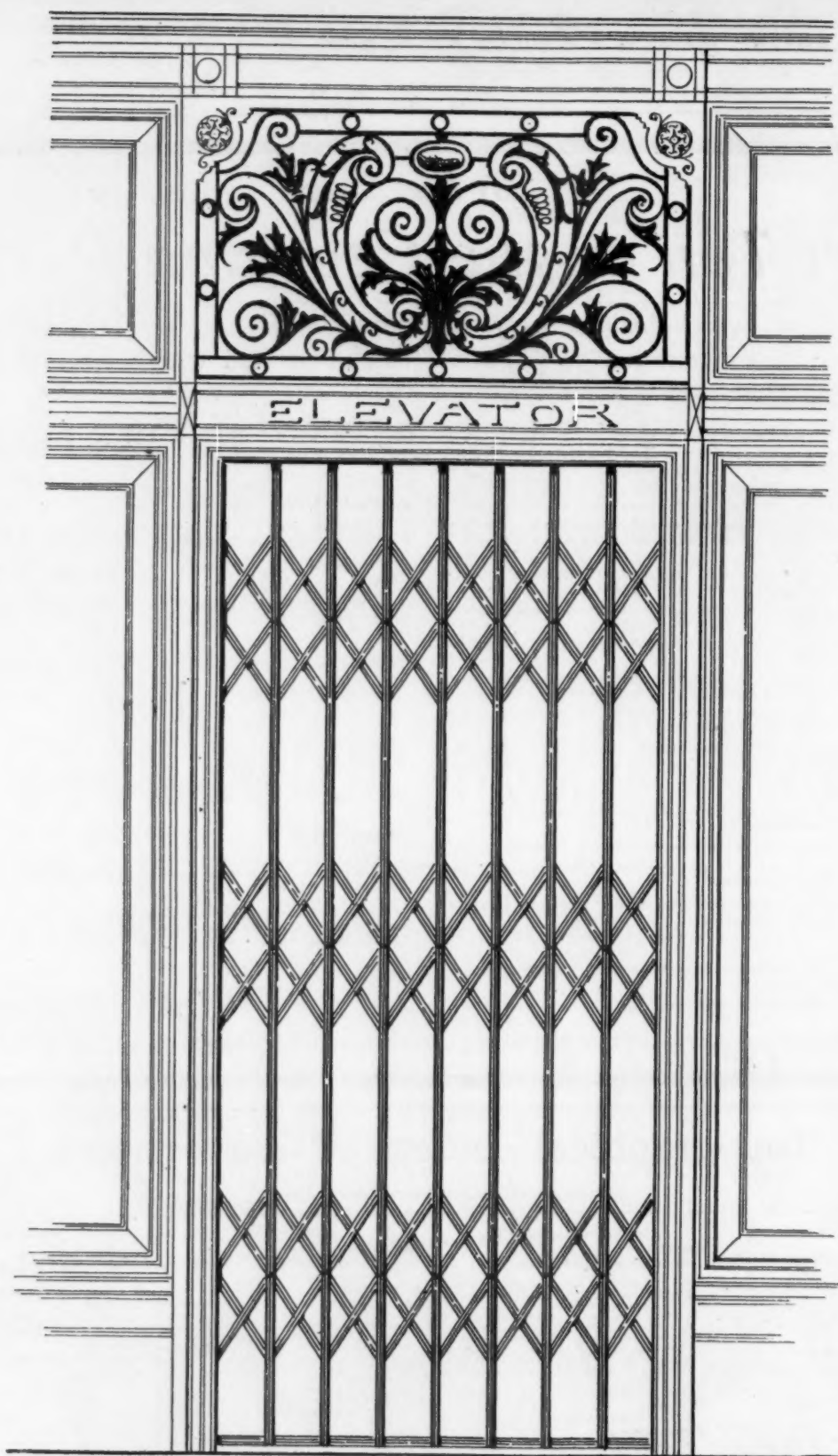
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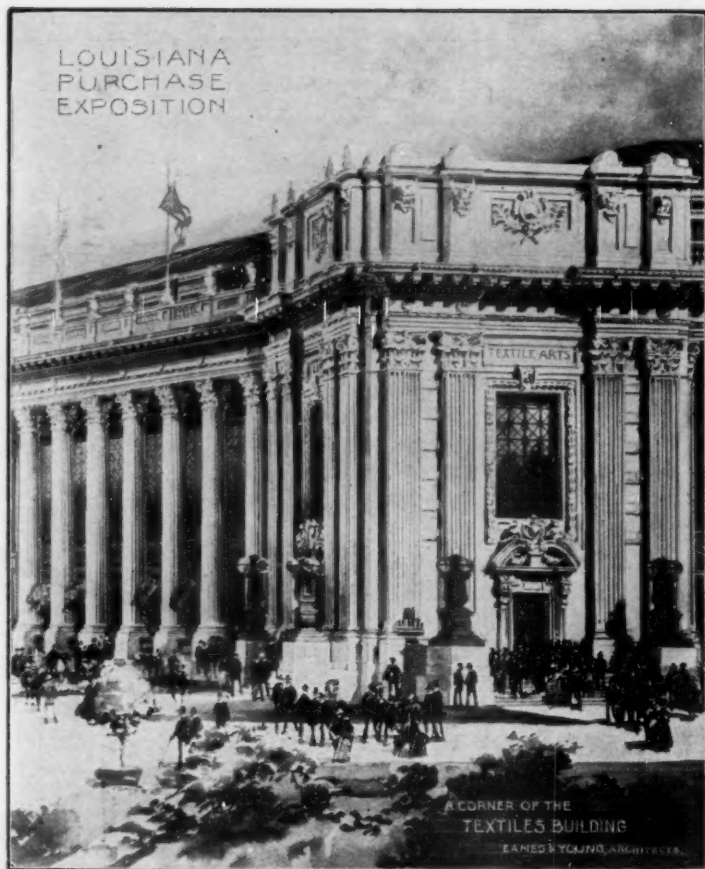
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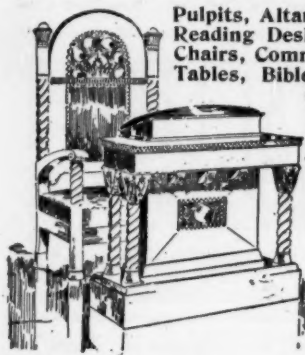
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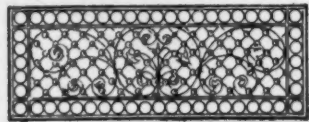
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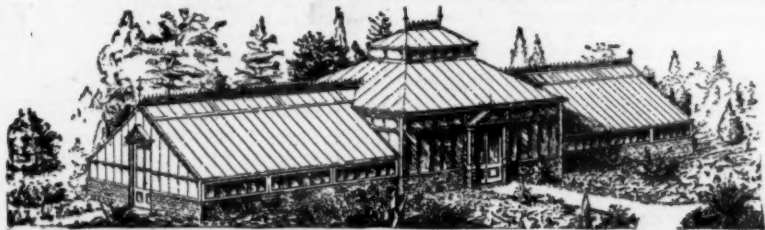
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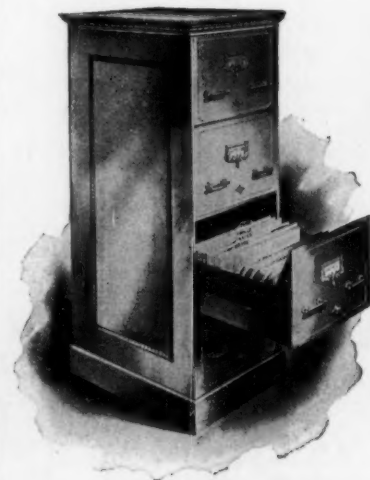
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THE KEASBEY & MATTISON CO., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr, to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50 per cent of magnesia, and especially coverings containing 85 per cent magnesia.

The Bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

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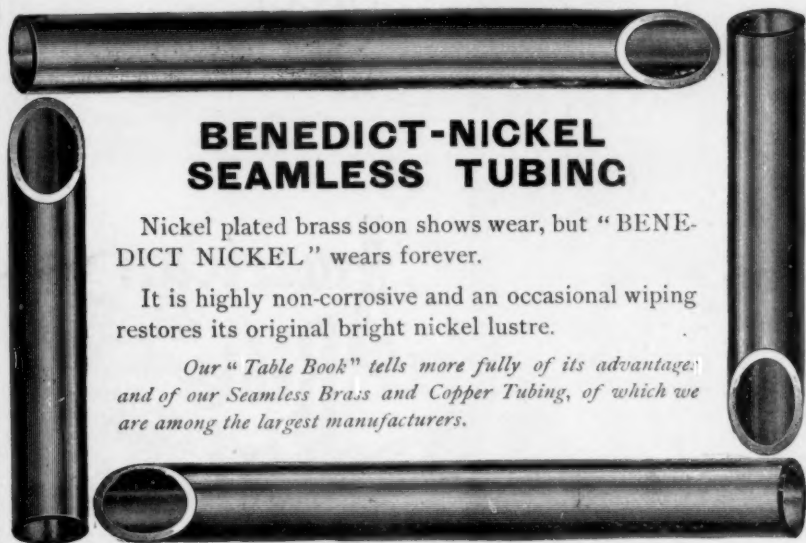
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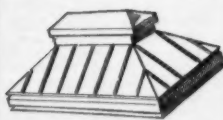
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

dry kiln, etc. Cost will be in the neighborhood of \$30,000.

Henry W. Schluster, 104 Dearborn St., is about to start work on the eight-story warehouse to be erected at the corner of Franklin St. and Charles Pl. for J. H. Leshner from plans by Architects Nimmons & Fellows, 204 Dearborn St. It will be of pressed brick, slow burning construction and cost about \$125,000.

Architect D. E. Postle, 204 Dearborn St., is ready to receive bids for the construction of a large plant at the southwest corner of Western Ave. and 22d St. for the Smeeth Copper and Bronze Co. Principal building will be one-story high, covering an area of 75' x 225', of brick and stone, saw-tooth construction. Cost is estimated at \$50,000.

Architects Borst & Hetherington, 100 Washington St., are taking figures for a residence to be built at the northeast corner of Woodlawn Ave. and 57th St. for Joseph Rankin. It will be two stories and attic high, 36' x 75', and will be constructed of pressed brick and stone with slate roof. Cost, \$25,000.

A \$40,000 school is to be erected for St. Alphonsus R. C. Church. Architect, Henry P. Beller, 84 La Salle St.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Cleveland, O. — It is stated that Harry L. Vail will erect a four-story apartment building on Euclid and Willson Aves. to cost \$50,000 after plans by Fenimore C. Bate, New England Building.

Coney Island, N. Y. — The Board of Estimate and Apportionment has appropriated \$30,000 for a building for Engine Co. 145.

Devil's Lake, N. D. — Outside capitalists propose to erect a three or four-story brick hotel to cost \$75,000.

Fargo, N. D. — M. E. Beebe, architect, has prepared revised plans for the warehouse for the J. I. Case Threshing Machine Co. Will be three-story, brick, with Kettle River sandstone trimmings, steel ceilings, rolling-steel doors, electric elevators, etc.; cost, \$40,000.

Fond du Lac, Wis. — Van Ryn & De Gelleke, architects, Milwaukee, have plans for a library building to be erected here. It will be of stone construction and have tile floors, Adamant plaster, etc., and cost \$50,000.

Harrisburg, Pa. — The new Capitol is to be constructed of granite; the dome of the same material.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

It is expected that the structure will be finished by January 1, 1906.

Hartford, Conn. — Architect George Zunner has drawn plans for the new buildings to be built on Albany Ave. by the O. K. Baking Co. Main building will be three stories high, 50' x 100'.

Harvard, Mass. — By will of the late Mrs. Warren Hapgood, \$40,000 has become available for the public library in this village; \$20,000 will be utilized in building an important addition to present edifice and the income from balance of the fund will be used for maintenance. Plans have been prepared and work will be started early in coming spring.

Kansas City, Mo. — Jas. H. Beckham has purchased a site on Grand Ave. and 11th St. and will erect a business building to cost between \$30,000 and \$75,000.

Kenosha, Wis. — The Pahst Co. has let the contract for the erection of a modern hotel and theatre here. Cost, \$30,000.

Lansdowne, Pa. — Plans and detailed specifications have been completed in the office of Bunting & Shrigley, of 140 N. 15th St., Philadelphia, for a handsome structure to be built here, for the Lansdowne and Darby Savings Fund Association. It will be a one-story structure, 30' x 50', of brick and stone and provided with the latest appliances in all lines.

Larchmont, N. Y. — Plans have been completed by Architect Frank A. Moore, 571 Fifth Ave., New York City, for a handsome private residence to be erected here for Mrs. F. W. Flint. Building will be two stories and attic, of brick and frame, and is to have shingle roof, open plumbing, hot air or hot water heat, tile and marble work, etc. Cost, \$12,000. Contract not let.

Leominster, Mass. — The Richardson Piano Case Co. will at once build an addition to its factory at West Leominster. The new part will be 20' x 56', four stories high.

Long Island City, N. Y. — The Board of Estimate and Apportionment has appropriated \$25,000 for house for Hook-and-Ladder Co. No. 66.

Magnolia, Mass. — Architect Josephine Wright Chapman, 9 Park St., Boston, is making plans for alterations and additions to the residence of A. F. Sutherland at this place.

Manchester, Mass. — Local authorities have voted to accept the gift of a memorial chapel for Rosedale Cemetery from Miss Susan E. Crowell, as a memorial to her brother, the late B. F. Crowell. It will be Gothic in design, built entirely of Rockport granite and finished in oak. An appropriation has been made for the installation of a hot-water heating plant.

Masonville, Ia. — Guido Beck, architect, Dubuque, has plans for a church for the Catholic Society, to be of pressed brick, 50' x 110'; cost, \$20,000.

Medford, Mass. — The well-known Langwood Hotel property in Middlesex Falls has been purchased by the New England Sanitarium and Benevolent Association of South Lancaster. Purchase includes 41 acres and many cottages, stables and other buildings besides the hotel. New owners will make extensive alterations and improvements prior to occupancy as a sanitarium.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Memphis, Tenn.—It is said that the Missouri Pacific R. R. will erect a depot on the river front at the foot of Auction St. to cost about \$200,000. Geo. J. Gould, pres., 195 Broadway, New York, N. Y.

Middletown, E. I.—At Gray Crag Park there is being built for Mitchell Clark, of New York, a magnificent summer residence to cost \$75,000. Abner J. Haydell, 156 Fifth Ave., New York City, is the architect. W. A. McCormick, of Newport, the general contractor.

Milwaukee, Wis.—The Milwaukee Electric Railway and Light Co. has taken out a permit for the construction of the Commerce Street power-house, which will cost \$100,000. The building, which was designed by Architect H. J. Esser, is of the first class of brick and stone construction, ground dimensions being 74' x 143'.

A resolution is to be introduced before the County Board providing for the erection of a court-house to cost \$1,000,000.

Montreal, Que.—It is stated that plans have been prepared for renovating, improving and enlarging the Mount Royal Club-house.

New Bedford, Mass.—At a special joint meeting of the committees appointed to select plans and site for the high-school building, proposed for erection here, the plans submitted by Samuel C. Hunt were adopted, and the site fronting on County St. was decided upon. Plans called for a three-story structure. Building will be placed 100 feet back from the street-line and, when completed, will take rank with the notable structures of its kind in Massachusetts.

New Haven, Conn.—Plans have been prepared by Charles C. Haight, New York City, for a group of dormitory buildings to be built of Indiana limestone for Yale College. The site is on College St., directly opposite the Memorial buildings. The new buildings are to be a part of the Sheffield Scientific School, and are a gift of Frederick W. Vanderbilt.



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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

The group will accommodate more than 200 students. Buildings operations will begin at once.

The Board of Education are making preparations for remodeling the high-school building on Orange St. into a grammar school. It will cost about \$30,000. L. W. Robinson, architect.

Newport, Vt.—Conners Bros., Lowell, have the general contract for the new custom-house and post-office, at \$84,261. Will be brick and stone, three stories, 50' x 80'.

New York, N. Y.—According to the specifications completed by the architect Harry Allan Jacobs, 1135 Broadway, the edifice which is soon to be erected on the southwest corner of Broadway and 103d St., will be by far the finest of its kind in that part of the West End section. The site fronts 120 feet on 103d St., running back 100.11 feet on Broadway. The building is to be of the modern fireproof type, nine stories, of brick, stone and terra-cotta; the roofing plate slate or tile. The first floor is to contain a palatial dining-room, 40' x 100', with a palm garden, offices, parlors, and three private dining-rooms. The plan of the second floor provides for a large dining-room for maids and children. The typical floor plan contains about thirty-one rooms to a floor, with eighteen private and two public bath-rooms. The tenth floor is laid out for servants, and contains three public baths.

Plans have been filed for a nine-story brick apartment hotel to be erected on 58th St., near 8th Ave., with a frontage of 42 feet and a depth of 90 feet. J. D. Matthews, 842 St. Nicholas Ave., is the owner, and plans are by Architects Ross & McNeill, 39 E. 42d St. Cost, \$200,000.

It is reported that a group of operators from Norfolk, Va., are about to erect a million dollar hotel at the corner of 7th Ave. and 36th St.

The old buildings on the west side of 11th Ave., between 39th and 40th Sts., purchased recently by the New York Butchers Dressed Meat Co., will be torn down at once to make room for the large abattoir which the company will erect on this site. Work on the new structure will soon be started.

The old buildings at 647 and 649 Fifth St., plot 39' 6" x 97', recently purchased by Mr. S. Sterner, will probably be torn down at once to make room for a six-story modern brick and stone structure.

Architects J. B. McElfatrik & Son, 1402 Broadway, have prepared plans for a five-story building to be erected at the southwest corner of 7th Ave. and 126th St. for the Associate Realty Concern. The building will be fireproof and will contain theatre, rathskeller and apartments and will cost \$400,000. It will be heated by steam and is to have

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

electric light, elevators, telephone system, tile and marble work, etc. Contract not let.

It is stated that the property at 419 W. 49th St., plot 19' 4" x 100' 5", purchased recently by Mr. Charles Bishop's Son, will be improved by the erection of a six-story modern building, plans for which are in course of preparation.

Oxford, Mass.—Although the site selected by the building committee having in charge the erection of proposed high-school building has been paid for and batter boards are up, the work has come to a standstill. Opposition to site selected has developed and an effort will be made to change the location.

Painesdale, Mich.—A contract has been let at Houghton for the construction of a memorial library to cost \$30,000. It is given by William A. Paine, of Boston, as a memorial to his mother, who died in 1901.

Philadelphia, Pa.—Milligan & Webber, 520 Walnut St., have prepared plans for a new building for Lu Lu Temple, Ancient Arabic Order, Nobles of the Mystic Shrine, to be erected on Spring Garden St., east of Broad. It will be a four-story structure, 77' x 140', and cost about \$100,000.

Pittsburgh, Pa.—Geo. N. Powell has had plans prepared for a four-story brick apartment-house which he intends building on Maryland Ave. and Elmer St., 20th Ward; cost, \$42,000.

Portland, Me.—New city stables are about to be built to take the place of those destroyed by fire. Plans have been drawn by Architect John J. Cunningham, and estimates are now being made. The building is to be located between Smith and Mayo Sts., facing on Fox. It is to have 107 feet frontage and 157 in depth. The building is to be of brick, three stories, brownstone and granite trimmings.

The plans for the new Grand Trunk Railroad station in this city have been accepted and the work of construction begun. The building is to be of immense proportions for a single railroad line in a city of this size. On the outside it will be 280 feet from end to end, 140 feet long on India St. and the same length on Forest St. Ample space is provided for flower-beds, grass-plots, driveways and sidewalks. It is expected to be finished next March.

Chas. A. Hanson, 191 Grant St., has the contract for enlarging the church at Peaks Island, Portland Harbor. A new vestry will be built and present church remodelled, with new stained-glass windows, new pews, heating, lighting and ventilating, etc.

Proctor, Vt.—Plans are under consideration for the proposed new Y. M. C. A. building to be built by the Vermont Marble Co. It will be of brick and marble, three stories high, and cost about \$20,000.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Providence, R. I.—At a meeting of the Edgewood Yacht Club held recently the plans for the proposed new club-house, which it is expected will be built before spring, were submitted for the inspection of the members. The plans were not formally adopted and it is possible they may be changed before they are finally accepted. They provide for a structure 60 feet long and 30 feet wide with piazzas 10 feet wide on all sides, with two floors and a loft. The building is to be connected with the shore by a bridge, and is to have floats on the sides and front.

The Friends School is to have a new gymnasium, modern in every particular. It will be located in the grove, east of the boys' campus, but the situation has been carefully selected, so that the magnificent trees will not be harmed. The building will be constructed of brick, three stories in height. The dimensions are 98' 8" x 42' 8". Plans have been perfected by G. G. Congdon, instructor of mechanical and architectural drawing at the Friends School, and also a professional architect with an office at 75 Westminster St. Excavations have already been commenced, and the building is expected to be completed next spring.

San Angelo, Tex.—It is reported that the London Hotel, recently burned, will be rebuilt at a cost of about \$50,000.

Schenectady, N. Y.—The fund for the renovation of the old South College dormitory at Union College, has been completed by a gift of \$2,500 from the General Electric Co., making the total amount \$11,500. The fund was secured through the efforts of the class of 1899.

Seattle, Wash.—R. H. Boyle and Chas. Power will erect a modern hotel building on 3d Ave., near Union St., three or four story, brick; cost, \$40,000.

Sioux City, Ia.—The Gudahy Packing Co. and Armour & Co. will expend \$1,500,000 in improvements to their plans here. It is reported that Swift & Co. will erect a \$2,000,000 plant here.

Stamford, Conn.—Architects Pettit & Green, Park Row, New York, have completed plans for two fine residences at Riverside, one for H. E. Jones, Park Row, New York, and the other for a Mr. Kelly. Cost about \$25,000 each.

St. Louis, Mo.—It is stated that plans are being prepared by Barnett, Haynes & Barnett, 8th and Locust Sts., for an apartment-house for W. F. Williamson, to be located on Hamilton and Maple Aves. It will be of red stock brick trimmed with a cream-color terra-cotta; cost, \$125,000.

Stoughton, Mass.—Local authorities have been tendered the gift of a public library building to cost \$25,000, provided suitable site for same is furnished.

Sunbury, Pa.—It is stated that several Philadelphia architects will prepare competitive plans for a new Odd Fellows' Orphan Home to be built here. The new structure is to be three stories high, fireproof, and will be provided with all modern improvements. About \$25,000 will be expended. Address E. C. Wagner, Girardville, for further particulars.

BUILDING INTELLIGENCE.

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Seventh St., Nos. 244-246, six-st'y bk. flat & stores, 45' 5" x 77' 10"; \$40,000; o., Newman & Spielberger, 123 E. 114th St.; a., Sass & Smallheiser, 23 Park Row.

CHURCHES.

Brooklyn, N. Y.—Fort Hamilton Ave., cor. 41st St., one-st'y bk. church, 33' x 127' 8", gravel roof, steam; \$20,000; o., Rev. J. J. O'Neill, 1118 Thirty-ninth St.; a., T. F. Houghton, 213 Montague St.

EDUCATIONAL.

Oldtown, Me.—Two-st'y bk. school-building, 66' x 84', granite trimmings, slate roof, steam; \$25,000; a., W. E. Mansur, Bangor.

HOUSES.

Brooklyn, N. Y.—E. Fifteenth St., nr. Avenue C, two-st'y & attic fr. dwell., 28' x 39' 8", shingle roof; \$4,500; o., S. B. Ackerson Construction Co., 297 E. 15th St.; a., J. B. Slee, 183 Amity St.

E. Twenty-first St., nr. Avenue A, two-st'y & attic fr. dwell., 27' 6" x 50'; shingle roof; \$5,500; o., F. W. Homes, 10 Regent Pl.; a., A. D. Isham, 220 Broadway, N. Y.

Luverne, Minn.—Two-st'y fr. dwell., 43' x 44', hot water; \$6,000; o., J. J. Schuck; a., W. E. E. Greene.

PROPOSALS.

DAM WORK.

[At Marysville, Cal.]

Office of California Debris Commission, Flood Building, San Francisco, Cal. Sealed proposals for building portion of dam (known as Barrier No. 1) on Yuba River, Yuba County, about fourteen miles above Marysville, Cal., will be received here until October 16, 1902. Information furnished on application. R. P. JOHNSTON, lieut., engrs., secretary. 1397

CITY HOSPITAL WORK.

[At Springfield, O.]

The Board of Hospital Trustees will receive bids for furnishing material and performing all labor for the excavation, grading and stone masonry for the city hospital until October 15. It is estimated that the building will cost \$50,000. 1397

BUILDING.

[At Bonita Point, Cal.]

Sealed proposals will be received at the office of the light-house engineer, 91 Flood Building, San Francisco, Cal., until October 15, 1902, for the construction of a brick fog-signal building, brick chimney, and erection of boilers at Bonita Point light station,

PROPOSALS.

Cal., in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to THOS. H. HANDBURY, lieut. col., corps of engrs., U. S. Army, engr. 1397

TIMBER.

[At Muskegon and Ludington, Mich.]

U. S. Engineer Office, Grand Rapids, Mich. Sealed proposals for furnishing yellow pine and Oregon fir timber and plank for pier work at Muskegon and Ludington, Mich., will be received here until October 15, 1902. Information furnished on application. CHARLES KELLER, captain, engrs. 1397

ADDITION TO HOSPITAL.

[At Fort Hunt, Va.]

Office of Constructing Quartermaster, Fort Washington, Md. Sealed proposals will be received at this office until October 20, 1902, for constructing frame additions to post hospital, Fort Hunt, Va. Plans and specifications furnished on application. GEO. H. McMANUS, constructing quartermaster, U. S. Army. 1398

ROADWAY.

[At Dover, Tenn.]

Quartermaster's Office, New Orleans, La. Sealed proposals for constructing roadway to National Cemetery, Dover, Tenn., will be received here and at office of superintendent until October 17, 1902. Information furnished on application. C. D. V. HUNT, Q. M. 1398

BUILDING.

[At Amarillo, Tex.]

U. S. Department of Agriculture, Office of the Secretary, Washington, D. C. Sealed proposals will be received by the secretary of agriculture until October 20, 1902, for the erection of a two-story and cellar frame building for the weather bureau, U. S. Department of Agriculture, at Amarillo, Tex., in accordance with plans and specifications, which may be obtained at the office of the chief of the weather bureau, Washington, D. C., and at the weather bureau office at Amarillo, Tex. JAMES WILSON, secretary. 1398

HEATING.

[At Fort Riley, Kan.]

Fort Riley, Kan. Sealed proposals will be received here until October 20, 1902, for changing the heating of buildings from central to individual plants. Information furnished upon application to this office, also at offices of depot quartermasters, Chicago, Ill., St. Louis, Mo., and Omaha, Neb. Envelopes to be indorsed "Proposals for Changing Heating of Buildings," addressed CAPT. G. O. CRESS, Q. M. 1398

BUILDING.

[At Watertown, Mass.]

Watertown Arsenal, Watertown, Mass. Sealed proposals will be received here until October 23, 1902, for erection of barrack building complete, exclusive of cellar excavation and stone footing, at this Arsenal. Separate proposals are also invited for all other walls and stonework, omitting roof and all woodwork, and for plumbing, heating and gas fitting. Information

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PROPOSALS.

can be had on application to LT.-COL. JOHN G. BUTLER, Ord. Dept., Comdg. 1398

ADMINISTRATION BUILDING.

[At Fort Rodman, Mass.] Office Constructing Quartermaster, 209 Thames St., Newport, R. I. Sealed proposals will be received here until October 22, 1902, for constructing, plumbing and wiring frame administration building, constructing and wiring frame quartermaster's and commissary storehouse, and constructing frame ordnance storehouse and frame coal-shed, at Fort Rodman, New Bedford, Mass.; information furnished on application. CAPT. THOMAS H. SLAVENS, Qr. Mr. 1398

BARRACK BUILDING.

[At Fort Meade, S. D.] Office of Chief Q. M., St. Paul, Minn. Sealed proposals will be received at this office until October 18, 1902, for the construction of one double barrack at Fort Meade, S. D. Plans and specifications may be seen and blank proposals with full instructions, had upon application here, or to the Quartermaster, Fort Meade, S. D. GEO. E. POND, C. Q. M. 1398

Treasury Department, Office of the Supervising Architect, Washington, D. C., September 27, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 12th day of November, 1902, and then opened, for the safety vaults, vault-doors and work incidental thereto, in the U. S. Mint, Denver, Col. (new building), in accordance with drawings and specification, copies of which may be had at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1399

Treasury Department, Office of the Supervising Architect, Washington, D. C., September 29, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 4th day of November, 1902, and then opened for a conduit and electric wiring system for the U. S. Public Building at Cheyenne, Wyo., in accordance with drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Cheyenne, Wyoming, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1399

HEATING.

[At Fort Getty, S. C.] Sealed proposals will be received here until October 14, 1902, for heating 1 double barracks, 1 single barracks, 1 commanding officers' quarters, 5 captains' quarters and 5 lieutenants' quarters by hot air system at this post. Information furnished on application. DAVID PRICE, Q. M. 1397

STEEL BUILDING.

[At League Island, Pa.] Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington,

PROPOSALS.

until October 11, 1902, for constructing a sheet steel house for locomotive crane machinery, navy yard, League Island, Pa. Plans and specifications can be seen at the Bureau or will be furnished by the commandant of the navy yard named. MORDECAI T. ENDICOTT, chief of bureau. 1397

BRIDGE.

[At Point Ellice, B. C.] Victoria, B. C. Sealed tenders will be received at the office of the undersigned until the thirteenth day of October, 1902, for the construction of a steel superstructure of a bridge at Point Ellice. Plans and specifications and all necessary information will be furnished by Mr. C. H. Topp, city engineer. WELLINGTON J. DOWLER, C. M. C. 1397

WELL.

[At San Antonio, Tex.] Bids are wanted until October 15 for sinking an artesian well at Fort Ringgold, Tex. J. L. CLEM, Ch. Q. M., San Antonio. 1397

GRADING AND STONE MASONRY.

[At Springfield, O.] Bids will be received by the Bd. of Hospital Trus. until October 14 for furnishing material and performing all labor for the excavation, grading and stone masonry for the City Hospital; estimated cost of building, \$50,000. R. N. LANTZ, City Clk. 1397

OFFICERS' QUARTERS.

[At Fort Lincoln, N. D.] Bids are wanted October 11 for constructing a double set of lieutenants' quarters, a double set of captains' quarters, a guard-house, a bakery, and set of hospital stewards' quarters at Fort Lincoln, N. D. GEO. E. POND, Ch. Q. M., St. Paul, Minn. 1397

REMODELLING BARRACKS.

[At Fort Snelling, Minn.] Bids are wanted October 11 for remodelling 4 double barracks at this post, including steam heating, plumbing and electric wiring in the same. GEO. E. POND, Ch. Q. M., St. Paul, Minn. 1397

SCHOOL.

[At De Witt, Ia.] R. M. Smith, Secretary De Witt Township School Board, will receive bids until October 15 for the erection of a school. 1397

PIER WORK.

[At Muskegon, Mich.] U. S. Engineer Office, Grand Rapids, Mich. Sealed proposals for construction of revetment and repair of pier at Muskegon, Mich., will be received here until October 15, 1902. Information furnished on application. CHAS. KELLER, capt., engr. 1397

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., September 17, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 15th day of October, 1902, and then opened, for the structural steel work of the U. S. Government Building at the Louisiana Purchase Exposition, St. Louis, Missouri, in accordance with the drawings and specification, copies of which may be had at this office or the office of Isaac S. Taylor, Director of Works, St. Louis, Mo., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1397

OFFICERS' QUARTERS.

[At Fort Myer, Va.] Sealed proposals for constructing officers' quarters will be received here until October 18, 1902. Information on application. CAPT. W. F. CLARK, Qr. Mr. 1398

JAIL.

[At Jefferson, Ga.] Proposals are wanted until October 21 by the county commissioners for erecting a jail. 1398

QUAY WALL.

[At Bremerton, Wash.] Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until October 25, 1902, for constructing an extension of the concrete wing wall, navy yard, Bremerton, Wash. Estimated cost, \$16,000. Plans and specifications can be seen at the bureau or will be furnished by the commandant of the navy yard named. MORDECAI T. ENDICOTT, chief of bureau. 1398

COMPLETION OF MESS HALL.

[At West Point, N. Y.] West Point, N. Y. Sealed proposals will be received here until November 1, 1902, for completion of the cadet mess hall as per plans in this office. Forms and specifications furnished upon application. Address Q. M., U. S. M. A. 1397

STEEL.

[At Yellowstone Park, Wyo.] U. S. Engineer Office, Yellowstone Park, Wyo. Sealed proposals will be received here until October 15, 1902, and then opened, for furnishing steel for 30 highway bridges in the Yellowstone National Park. Information furnished on application to this office. 1397

PAVEMENT.

[At Washington, D. C.] Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, until October 11, 1902, for constructing 30,000 square feet, more or less, of asphalt pavement at the navy yard, Mare Island, Cal. Plans and specifications can be seen at the bureau or will be furnished by the commandant of the navy yard named. MORDECAI T. ENDICOTT, chief of bureau. 1397

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

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

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

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

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

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

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

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

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

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

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

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

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

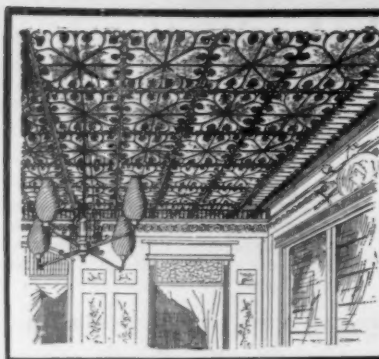
SECTION 14. It is unprofessional to enter into competition with or to consult with an architect who has been dishonorably expelled from the "Institute" or "Society."

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

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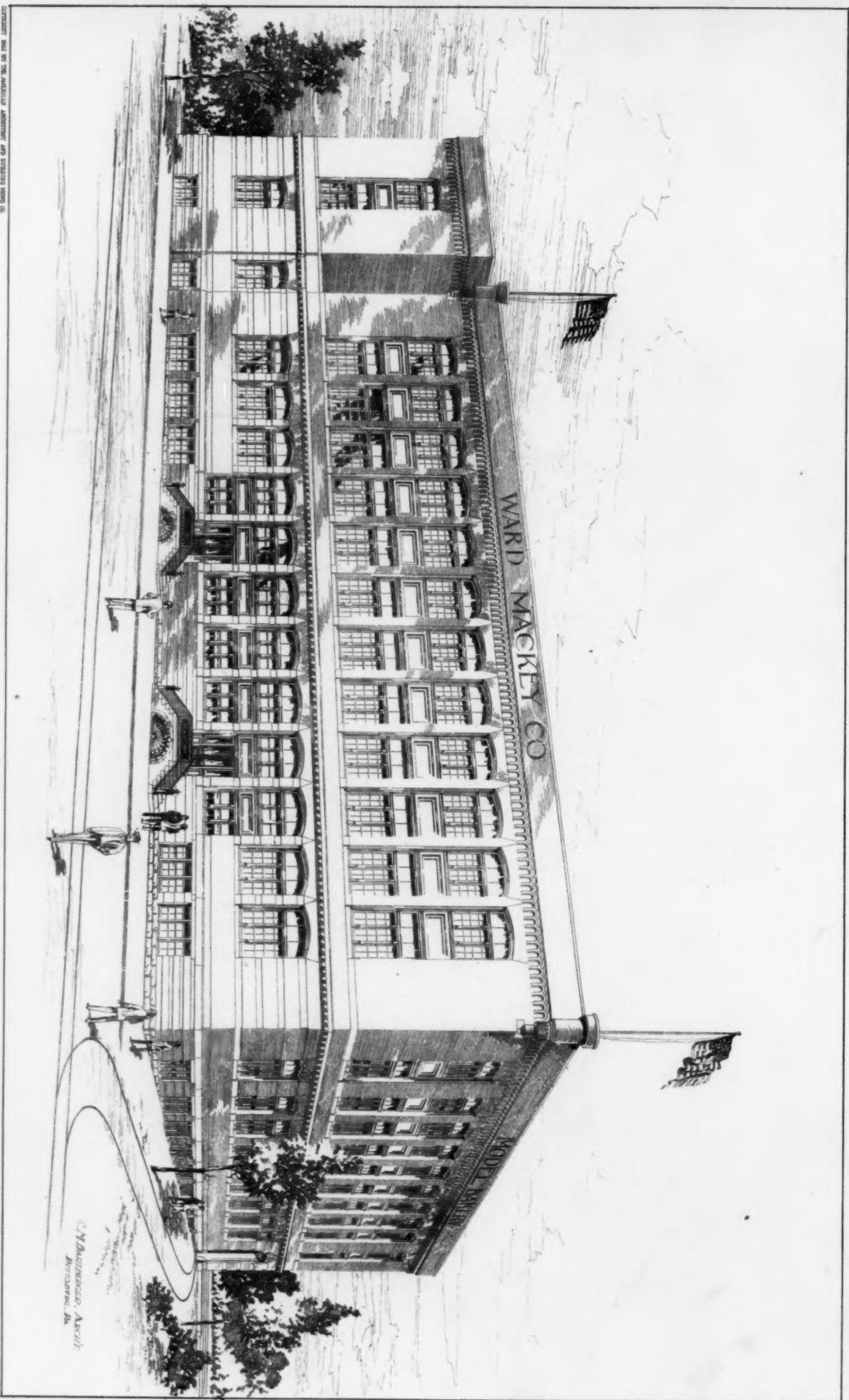
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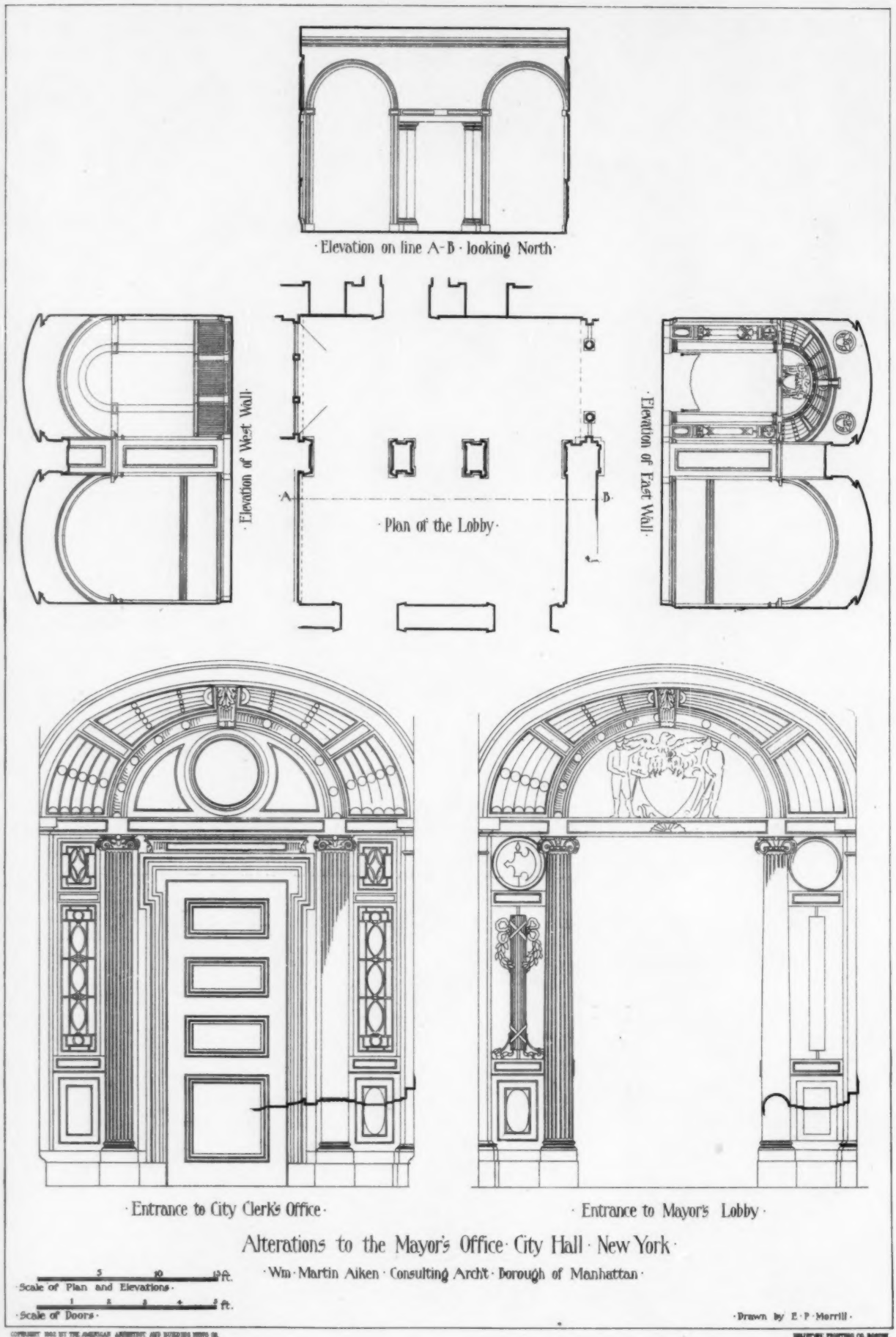
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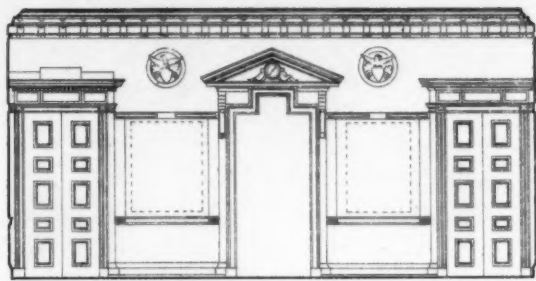
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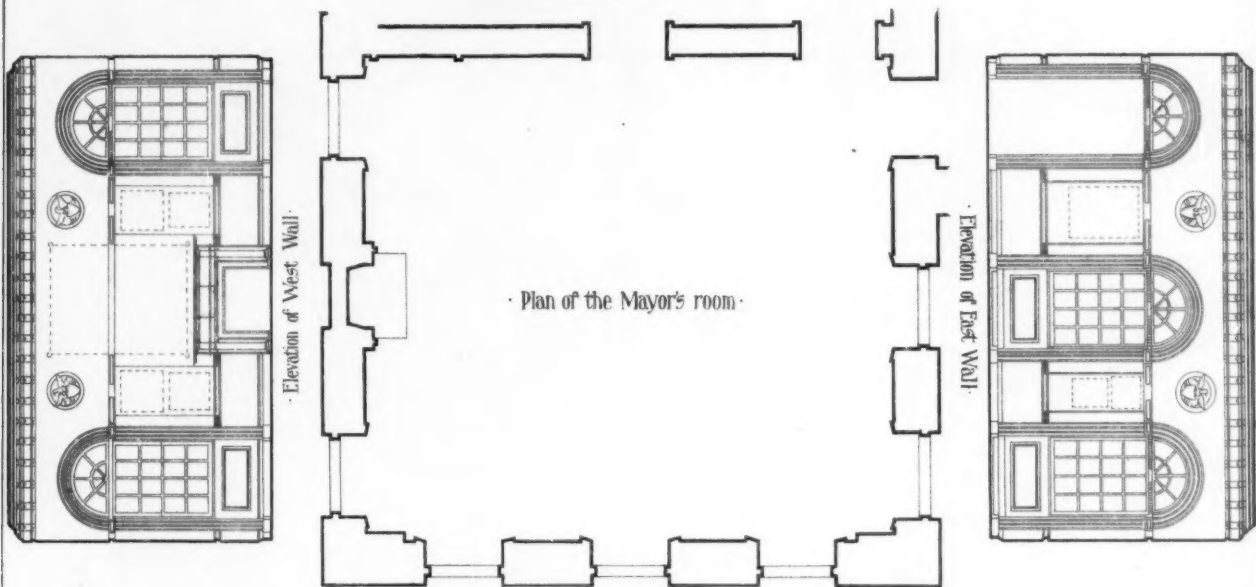
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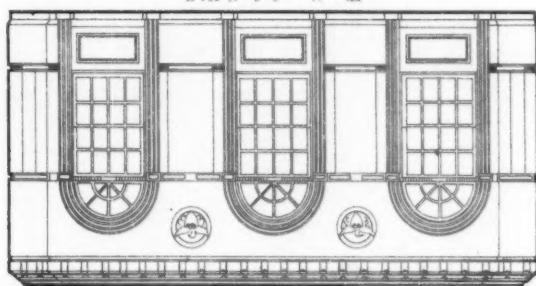




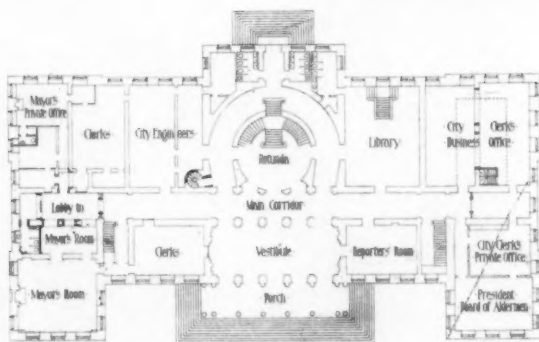
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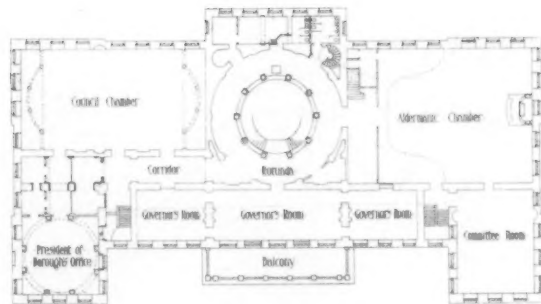
Plan of the Mayor's room



Elevation of South Wall



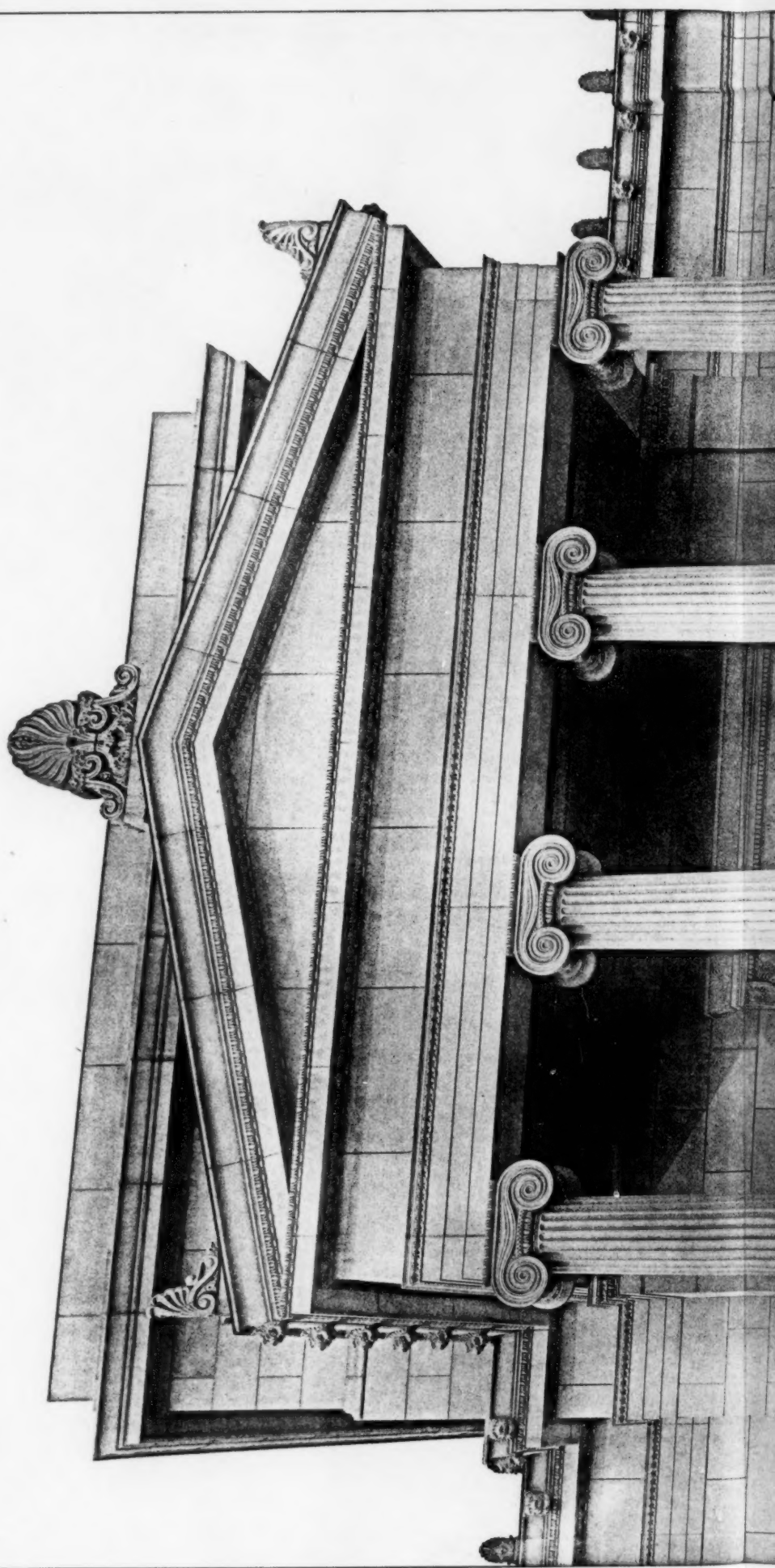
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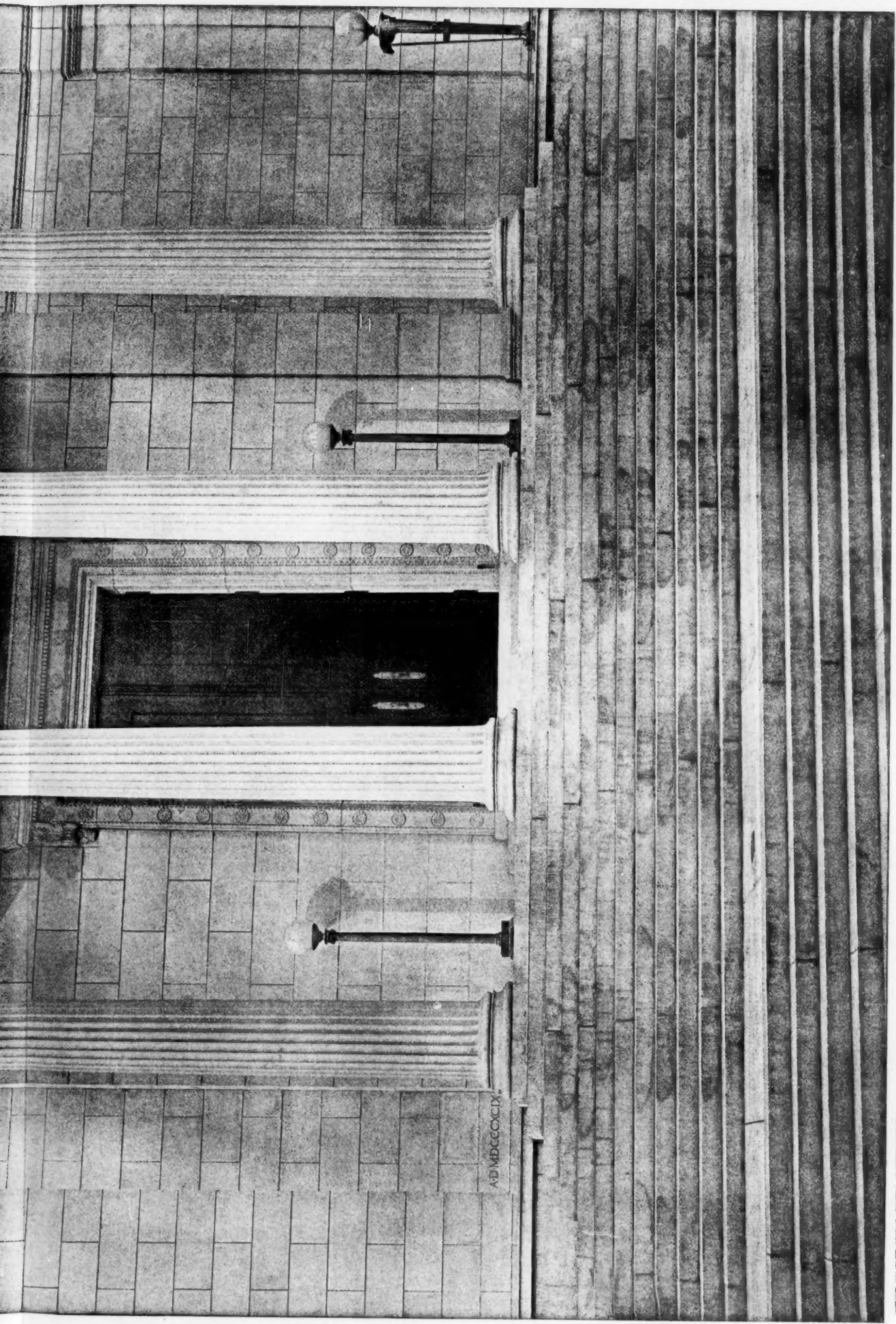


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