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## SUMMARY:—

A laudable Example of School-room Decoration.—The Arts Club of New York.—The Fine-Arts Association, Washington, D. C.—Suggested Fountain for the Plaza, New York City.—Death of Sir E. C. Burne-Jones, Painter.—Accident during Demolition of a Brewery Building.—American Ignorance of the Functions of the Arch.—The Edwin Booth Memorial Window.—A Curious "Church Squabble."—Tunnelling a Glacier at St. Gervais, Savoy.—Dismissal without Notice illegal in Germany. . . . . 97

EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY. . . . . 99  
SOME INSTANCES OF PILES AND PILE-DRIVING, NEW AND OLD.—III. . . . . 102

## ILLUSTRATIONS:—

Main Staircase, First Floor: Hotel Waldorf-Astoria, New York, N. Y.—Exhibition of the National Sculpture Society: The Château d'Eau, and the Conservatory; "The Hahnemann Monument"; "Rufus Choate"; "Fountain Group"; "Bust."—XVI-Century Fountain in the Piazza Vittorio Emanuele, Cesena, Italy.—Detail of Choir Stalls in Sta. Maria in Organo, Verona, Italy.  
Messrs. Barclay & Company's Bank, Fleet St., London, Eng.—A Group of Exhibition Buildings.  
Additional: Confessionals in the Church of St. Johannes Nepomuk, Munich, Bavaria.—Exhibition of the National Sculpture Society: "Bust in colored Terra-cotta"; First Prize Design for Sun-dial; The Italian Garden, with Statues of "Solon" and "Bacon"; "Fountain Group."—Mount Street, Grosvenor Square, W., London, Eng.—The Alun Intermediate County School, Mold, Wales. . . . . 103

## COMMUNICATION:—

A Damp Cellar. . . . . 104

NOTES AND CLIPPINGS. . . . . 104

WE have received a letter from Mr. Partington, the principal of the Staten Island Academy, of which Mr. John M. Carrère is a trustee, with a description of what is being done, under Mr. Carrère's advice, in the way of systematic decoration of the school-rooms of the Academy. Naturally, the scheme can only be carried out by degrees, but some of the rooms are already completed. The Junior Room has a painted frieze, composed of groups taken from Flaxman's outline illustrations of Homer. Judging from the half-tone reproduction, the Flaxman drawings are very faithfully followed, and it would be hard to find anything for such a purpose better adapted to illustrate the quiet elegance of antique art. The groups have the inscriptions belonging to them, and the young students of Homer should have their appreciation of their poet greatly assisted by them, to say nothing of the æsthetic influence of constant familiarity with the beautiful Flaxman figures. Another room has a long frieze, illustrating Longfellow's Evangeline; and a third has, over the blackboards, forming a sculptured frieze, a set of casts from the Luca della Robbia group in the Museum at Florence. In addition to what may be called the fixed decorations, the school already owns separate objects of art, and it is intended to add more, as opportunity may offer. It will be interesting to watch the development of this admirable plan, and the influence upon the children of an artistic atmosphere so carefully arranged. It seems to us that the combination of permanent decoration with a collection of detached works, of various kinds, is much more advantageous to children than either separately. The influence of refined and beautiful rooms on the young people who occupy them is, of course, great; but in a collection of separate works each child is likely to find some objects which appeal more particularly to his or her own taste or character; and the more sensitive ones often, so to speak, "fall in love" with some picture, or cast, which happens to suit their individual sympathies, or, rather, aspirations, in a way which is extremely beneficial.

THE "Arts Club" of New York, which is intended to include all artistic interests in the United States, including particularly those relating to the arts applied to industry, has been incorporated, with a Board of Trustees including Messrs. George B. Post and Walter Cook, representing the architects; Messrs. Thomas W. Wood, J. Carroll Beckwith, John LaFarge and Louis C. Tiffany, from among the artists; and Prof. Allan Marquand, Judge Henry E. Howland, and Messrs. Henry Walters, of Baltimore, R. Hall McCormick, of

Chicago, Brayton Ives, James W. Ellsworth, William T. Evans, R. W. De Forest, Perry Belmont, Spencer Trask, R. W. Gilder and Charles De Kay, and President Gilman, of Johns Hopkins University, and several others, representing the general public.

THE City of Washington, D. C., is to have a Fine-Arts Association, to carry out purposes similar to those of the artistic alliances which exist in other cities. Three professional delegates each, from the Society of Washington Artists, the Water-Color Club, the Washington Chapter of the American Institute of Architects, and the Washington Architectural Club, will constitute the new association. Under the peculiar administration of the District of Columbia, which is practically dependent upon a Congressional Committee, rather than on its own elected representatives, the Association can hardly have anything like the direct authority over the municipal art which is accorded to such bodies elsewhere, even if it should wish to claim such authority; but it may find a substitute for it, which will not be less useful to the public, in the indirect influence which inhabitants of the District, distinguished for their learning or accomplishments, exercise over the members of Congress, and of the Administration, whom they meet in society; and art all over the country will be benefited by anything which tends to improve the standing of the artistic community in Washington.

UNDER its new charter, New York is likely to get some municipal art of real value. The statutes now permit any city in the State, of a certain population, to expend fifty thousand dollars a year on objects of art, and the law seems to be interpreted to mean that three or four years' allowance may be spent at once, if desired. Under this permission, the Fine-Arts Commission created by the new charter proposes to erect in the Central Park Plaza a fine fountain, to cost one hundred thousand dollars or more, and to be adorned with sculptures by New York artists, among whom, we are glad to see, it still reckons Mr. Augustus St. Gaudens, although it is understood that he has fixed his residence permanently in France. The new Commission could hardly be better constituted for active and intelligent work, including, as it does, Mr. Charles T. Barney, the Chairman, and Messrs. Daniel C. French, Charles F. McKim, S. P. Avery, Henry G. Marquand, H. E. Howland, John Bigelow and A. A. Healy, and it may be hoped that, with the resources which New York possesses, so skilfully directed, it will not be long before a work is accomplished which will be a revelation, even to the New Yorkers themselves.

THE telegraph brings the news of the death of Sir Edward Coley Burne-Jones, the artist. Sir Edward Burne-Jones was the son of Edward Richard Jones, of Birmingham. He was a good scholar, and was sent to Oxford on an "exhibition" from his school. While at Oxford he met William Morris, who entered the same college on the same day, and the two became intimate. Young Jones was destined for the Church, but he and Morris became interested in the Pre-Raphaelite movement, which was then being vigorously "written up" by Mr. Ruskin and others, and the sight of some pictures by Rossetti determined him to become a painter. He went to London and obtained an introduction to Rossetti, who advised him to leave Oxford, and he followed the advice forthwith, and took lodgings in London, to study art under Rossetti. Morris, soon afterwards, following a similar inclination to an artistic career, joined him in London, and attached himself, as a student of architecture, to the office of the late George Edmund Street. Rossetti made much of his talented devotees, introduced them to Mr. Ruskin, and found employment for them. Jones began early to make designs for stained-glass, and assisted in the decoration of the Oxford Union, in which Rossetti and Morris were also engaged. Although he was for a long time rather ignored by the great artistic societies, his peculiar style of painting found favor with the public, and he had for many years been, perhaps, the most noted artist in England. Whether his influence had been altogether good is a doubtful question, but there is, apparently, something in the English character which demands the startling and queer, or, to give it the accepted name, the "imaginative," in its art, and this want Mr. Jones, or Burne-Jones, was well fitted to supply.

He was, however, much more than a heartless manufacturer of sensations, and through his eccentricities generally appeared the true artist.

**A**N accident, of a sort which it is almost impossible to guard against, occurred in New York a few days ago. A contractor was engaged in pulling down an old building, used many years ago as a brewery, in which was a huge brick vault, twenty feet in span, and running the whole length of the building, and, with the characteristic ignorance of American workmen of the properties of the arch, half a dozen laborers were set at work to remove the vault, which they proceeded to accomplish by the simple method of having one of their number sit on the top and dig out the masonry with a crowbar, while the five others stayed below, gathering up the bricks as their companion dislodged them. After something more than two hours of industrious labor in pulling out the bricks on which the support of the structure depended, the portion of the vault thus weakened gave way, carrying down the side-walls with it, and burying the men in the ruins, killing one, and injuring two others. The contractor was speedily found, and arrested, and is held to await the result of the inquest.

**W**ITHOUT presuming to forestall the verdict of the coroner's jury, it may be observed that all architects can testify to the dense ignorance of American contractors generally in regard to constructions in which lateral thrust is involved. Our native cements are so good and cheap that they have for many years been almost always employed, with or without lime, in laying ordinary brickwork; and the consequence is that American brickwork is, as a rule, almost a concrete construction, resembling more the Roman work than the scientific masonry of the Germans and French. With such brickwork all sorts of liberties can be taken, and it is common to see in our cities brick arches meeting on a corner; and, in demolitions, even half an arch removed, and the other half projecting from its pier like a bracket, and carrying a wall above; and it is not surprising that the notions of flexibility and thrust are hardly associated, in the minds of workmen, with brick arches and vaults. Nevertheless, the thrust, although greatly diminished by the cohesion of the mass, is not overcome, and accidents frequently occur from neglect to consider it. Fortunately, the accidents are not often serious, and the brickwork usually gives warning of its intention some time before the final crash; but this cannot be depended upon, and from time to time ignorance and carelessness, applied to such constructions, produce lamentable consequences.

**T**HE Rochester *Union* has raised a curious question of taste by protesting against the window which has been placed in the Church of the Transfiguration, in New York, in memory of the late Edwin Booth. The window, which was designed by Mr. John LaFarge, represents the great actor in costume, looking at a mask. The Rochester newspaper is shocked at this mode of treating the subject, and thinks that it is as inappropriate as it would be to ornament the vestibule of a theatre with busts of the twelve Apostles, or to paint a picture of the "Last Supper" on a drop-curtain; and Mr. Booth's friends, very naturally, write to the New York papers, not only in defence of the design of the window, but in protest against the idea that there is anything about the profession of an actor, or about the symbols of it, which is incongruous with the Christian religion. As the life of Booth himself presented a noble example of Christian fortitude and charity, the public is not likely to find fault with anything, even in connection with a church, which recalls his virtues; but one cannot help feeling that Mr. Booth, even more than most men, would prefer to be remembered for his kind acts to others, rather than for his professional eminence, and that there may, perhaps, be some reason for thinking that the memorial window gives undue prominence to the latter.

**M**AINE is, we believe, distinguished above the other States in the Union for the frequency and atrocity of what are called there "family murders"; and New York certainly holds the palm for church squabbles. Not long ago, the organist of a certain church in New York City had to sue the Trustees for his salary. He recovered judgment, and, as the Trustees could not, or would not, pay the judgment, the sheriff seized, under execution, the pews, pulpit, reading-desk, prayer-books and whatever else of movables he found in the

church building. The property was, in due course, publicly sold, and was bought in by the brother-in-law of the minister of the church for the amount of the judgment and costs. The organist having thus got his pay from the family of the pastor, the Trustees turned their arms against the latter. It appears that the church buildings were mortgaged for eighty-eight thousand dollars to some prominent members of the denomination, who had advanced that sum, upon interest, to run at the rate of one dollar a year, so long as the property should be used for church purposes. The ingenious Trustees discovered that the dollar a year had not been paid, and sued to foreclose the mortgage. There seems to have been no defence worthy of the name, and a decree of foreclosure was issued. This, of course, affected only the real-estate, but, to obtain a claim on the personal estate, the Trustees sued for back interest on the mortgages, at the rate of six per cent, amounting to about nine thousand dollars. This suit seems to have been as poorly defended as the other, for judgment and execution were issued, and the sheriff was ordered to seize and sell the pews, prayer-books and other furniture which had already been sold to Mr. Freeman, the minister's brother-in-law, for the Trustees' debt. Mr. Freeman seems to have paid for his purchase, the only honest payment which appears in the whole transaction, and, not unnaturally, objected to having it taken away from him without compensation, and given back to the people who had sold it to him, to satisfy a technical claim, in which, even if it had been a real claim, he had no concern. The sheriff, however, taking a bond to protect himself, seized and sold the property, presumably to the representatives of the Trustees, and Mr. Freeman then brought suit for its recovery, with damages. Owing, probably, to the lack of proper defence in the original suits, the question to be passed upon at present is simply whether pews, prayer-books, pulpit and so on are personal property or not; but the decision on this point will be interesting.

**T**HE most remarkable tunnel in the Alpine region is to be constructed by the French Government, at Saint Gervais, in Upper Savoy. In 1892, a terrible avalanche took place in this region, by which the villages of Bionnay and Le Fayet were swept away, the water-cure establishment at Saint Gervais destroyed, and more than two hundred persons killed. It was ascertained that the catastrophe was caused by the sudden irruption of water from an immense circular crevasse, which forms in summer in the glacier of the Tête-Rousse, above the village, by the action of currents of water meeting on the ice, and melting their way down into it. The water accumulating in the cavity exerts, as its depth increases, a great pressure, so that it may at any time burst out at the bottom of the glacier, or through some secondary crevasse, and do great damage. The people of Saint Gervais have lived in fear ever since the accident, and have at last persuaded the Government to come to their relief. As the only way of preventing the water from accumulating is to drain it off, the Administration of Forests has designed a tunnel, which penetrates the side of the mountain ridge bordering the Tête-Rousse glacier, and is carried through the ice of the glacier, far below the surface, to the bottom of the circular crevasse, which it effectually drains, leading the water to an outfall upon the ice of another glacier, the Bionasset. Besides the singularity of being cut in great part through ice, this tunnel has the distinction of being the highest in Europe, the bottom of the circular crevasse being more than eleven thousand feet above the sea.

**T**HE German courts look upon the relations between workman and employer very much as ours do. Not long ago, a man agreed to employ another, on the condition, to which the other consented, that the workman might be dismissed without notice, "whenever his employer should not be satisfied with him." The workman, in pursuance of this stipulation, was afterwards summarily dismissed, and sued his employer for damages. The German code requires, unless some other agreement is made, fourteen days' notice from either side of dismissal or of leaving employment; but it provides that a different period may be agreed upon by both parties, and then it applies to each. In this case, however, the Court said that an agreement upon a period wholly dependent upon the caprice of one party had nothing of reciprocity in it, and was not an agreement within the meaning of the law, and it decided that the fourteen-day provision of the statute applied, and that the employer must pay damages.



## EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY.



Henry Linder, Sculptor.

THE National Sculpture Society has now held three exhibitions, and, if it has accomplished no other work, has completely demonstrated its right to existence and accomplished the performance of a very valuable service for the sculptors of this country and the public at large. That the artist needs a public is an undisputed fact; but how to reach the public, how to interest it, how to hold it, are questions whose persistent debating has added little to their solution. Fashion, of course, comes first, since art is costly and must find its supporters among the rich; and so, when the exhibition-galleries are thronged with well-dressed men and women, when the opening reception is a "crush," and when the doings of a society are chronicled in the daily press, it is generally assumed that that society has "arrived" and that all that remains is to count up the sum total of the sales as an indication of the success of the effort.

Yet only the most enthusiastic can maintain that art is fashionable in New York so far as the exhibitions of the societies are concerned. A crowded first night or private view is no indication of real interest or fashionable support. Even those most able to pay their way will rush to a free show and stay at home rather than repeat their visits on pay days. Certainly we have not yet in New York made art popular in the exhibitions as it is in London and Paris, where the Academy and the *Salon* are crowded day after day during a lengthy exhibition. Suppose people do go to these historic shows to see the latest styles in bonnets, or the most recent creations in gowns, the highly important fact remains that these gatherings are under artistic auspices, they are brought about, nominally at least, by artistic impulses, they take place in rooms filled with works of art. Art dominates the assembly whether those who compose the crowd are vitally interested in it or not. Scented as these rooms may be with the perfumes of ladies more intent on their own appearances and those of other visitors than on the art objects around them, the atmosphere is, nevertheless, artistic. And there is the value of it; and we have nothing at all in this country that approaches it.

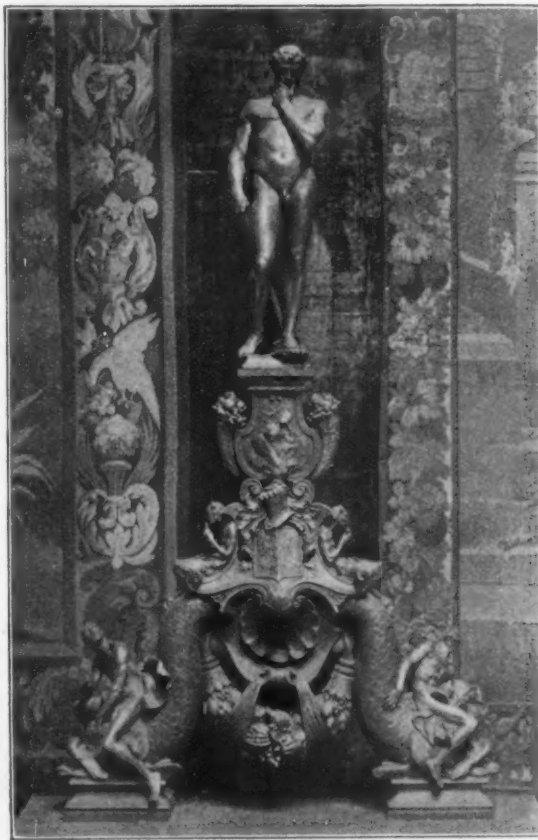
There are many reasons for this unfortunate condition of affairs, but, perhaps, none more marked than the quality of the exhibitions. People who know nothing whatever of art are its keenest critics and insist on having the very best at all times. The public will throng a loan exhibition, a collection of "Old Masters," anything that bears the impress of careful selection and fine discrimination. That in such shows the greatest thing is not always the most popular in no way detracts from the general facts. But of society exhibitions the public is apt to fight shy. One reason is, perhaps, the general tendency of the metropolitan press to condemn, off hand, while suffering from an attack of chronic dyspepsia, the works that have consumed the time and energies of the artists for months. For a number of years the societies in New York have suffered from this attitude

of the press, which cannot but have its influence on the public. On the other hand, perhaps we should be thankful for the existence of so many accomplished and well-meaning gentlemen and ladies, who, having nothing to do with the art exhibitions but visit them, know so very well and so completely just what ought to be done with them and by them.

Other cities, too, have their influence on New York; for so small a circumstance that in other cities transportation expenses for works of art are paid, while in New York the exhibiting societies assume no charges of this sort, has resulted in bringing about more carefully chosen and, in some respects, finer exhibitions outside New York than in the artistic metropolis itself. This also helps in maintaining the general impression that the art exhibitions in New York are not just what they ought to be.

But there is another reason why our exhibitions fail to interest the public as a whole, whether fashionable or not, and that is their arrangement and manner of addressing themselves to the people. The most interesting work of art gains added attractiveness from a beautiful setting. But the alignment of pictures on a gallery wall, one after the other, placed close together, and covering the entire surface, is very far from being an attractive mode of exhibition, albeit it has the warrant of long-continued usage and the support of the highest authority. Even in the Louvre the first impression forced on one by the crowded wall is one of weariness and stupefaction that there should be so much to see, notwithstanding one knows that here are real masterpieces. This, apparently, is the orthodox way in which to exhibit pictures, since it is the universal way. Yet it has the essential drawback that in a crowded gallery one undertakes to see everything shown, and carries away scarce more than a general impression of color, of greatness or of littleness, as the case may be. There can be no doubt at all but that more good is done by limited exhibitions, by showing a small number of canvases, well arranged, than by wholesale exhibitions that, if not popular, are at least of invariable occurrence.

The value of arrangement in art exhibitions has never been brought out more clearly nor achieved with greater success than in the exhibition of the National Sculpture Society which has just closed in New York. The first exhibition of the society, in 1894, was in conjunction with the Architectural League of New York, and its exhibits were disposed in the League's Galleries without reference to



Andirons for George Vanderbilt, Esq. Karl Bitter, Sculptor.

effective arrangement. The second exhibition, in 1895, was a brilliant success, and struck a key-note that made it difficult for its successors to surpass. The charming arrangement of the galleries of the American Fine-Arts Society at that time attracted wide attention, and was a revelation of the possibilities of art exhibitions when artistically arranged. The present exhibition repeated the success of the second show, though in a very different manner, and, so, for the second time, in the last five years, New York has had an art

exhibition that has taught a most impressive and useful lesson to the general public, that has given a new meaning to the possibilities of art, and that has shown what may be done with an art exhibition arranged in an artistic manner. Heretofore arrangement has been secondary to contents; that arrangement itself may be of artistic value, and a most helpful adjunct to the contents of an exhibition is a fact of the utmost significance.

The disposition and treatment of the galleries, which were planned and arranged by Mr. Charles Rollinson Lamb, were very admirable. It was proposed, not only to exhibit works of sculpture—which any one might do and which has, time and again, been done in exhibitions without any thought or care—but also to teach a lesson in arrangement, to show how sculpture might add to the beauty of the house and the garden, and to give an object-lesson in arrangement under ordinary and possible circumstances. The latter phase of the scheme was quite as important as the former, and in some senses more so, since we have had sculpture exhibited innumerable times; but we have been taught how it ought to be shown and how it might be shown in an artistic manner exactly twice, and on each occasion by the National Sculpture Society.

The arrangement of the exhibition-galleries in the building of the American Fine-Arts Society, in which the exhibition was held, is well known. First, a large oblong room, opening directly from the entrance-hall. Then, elevated a few steps, a small connecting room, with smaller rooms opening from either side of it; and then, still a few steps higher, the great Vanderbilt Gallery, the largest room of the series. The plan permits a concentration and separation of exhibits, and is thus sufficiently convenient; though it is to be regretted that, as the largest rooms are entered on the longer sides, they are approached sideways, instead of at their ends. For picture-shows this perhaps makes no great difference; yet there is always a sense of being lost in the outer gallery as one enters its spreading space from the narrow hall that would not be felt had the site of the building permitted a gallery deeper than it is wide.

There was little of this feeling in the present exhibition. Mr. Lamb was exceedingly happy in his conception of the treatment of the rooms, and not only planned an arrangement that set off the works of art shown to their best advantage, but presented a logical and orderly arrangement of the series of rooms. The underlying idea was to represent the house and garden of a man of wealth. The outer gallery was treated as a vestibule used as a sculpture gallery. Large statues filled the four corners: the fine statue of "Choate" by Mr. French for Boston, "Dr. William Pepper," for Philadelphia, by Mr. Bitter, an ideal statue, "Egypt awakening," by Mr. Elwell, and a bronze by Mr. Moynihan. In the centre of each of the short walls was a cast of a door to the Library of Congress; one by Olin L. Warner, the other, begun by Mr. Warner



"The Confederate." F. Moynihan, Sculptor.

and completed by Herbert Adams. Other works, mostly of small size, in bronze and plaster, were ranged along the walls, or placed in groups at conspicuous points, while others stood free in the centre of the floor-space.

Directly before the door leading to the next room, at the top of

the steps, was the fine statue of "Hahnemann," by Charles H. Niehaus, for the monument to be erected in Washington. Four reliefs, which are to form part of this monument, formed a screen behind which were the steps to the other rooms. This statue was admirably placed, but its relationship to the reliefs was not happy, since, while



"Magdalen." Clement J. Barnhorn, Sculptor.

it recalled the actual appearance of the monument, the final disposition of the various parts, the absence of the stonework and the incompleteness of the effect seriously detracted from the whole. Still, as a centrepiece, and as the most conspicuous work of art in the room, it was highly effective where it stood, and the reliefs were properly employed as a barrier to the stairs. The statue, by the way, is a most impressive work of art.

The small connecting room immediately behind the "Hahnemann" was treated as a conservatory. A simple trellis, open in the centre, and decorated with vines, helped to produce the effect. Evergreens and plants were placed in the corners of the room and at the base of the trellis-supports. Plaster pilasters on the corner walls supported framed tapestries of rural scenes. And in the centre was a fountain by Frederick MacMonnies, which the Hon. Frank Squier, of Brooklyn, has presented to that Borough. It was the single piece of sculpture in the room, and being shown with water, it carried out the general idea in a perfectly legitimate manner. It represented a jolly little boy struggling with a mother duck, while the young ducklings fluttered up against the pedestal on which he stood: a pleasant, agreeable work of art, without pretence of profundity or of anything save a felicitous treatment and a happy thought.

The small room to the left was treated as a collector's room, and contained those objects of art that any collector of taste might have in his house. In the centre was a case of magnificent Japanese ivory carvings, loaned by Mr. James F. Drummond, and offering, in their exquisite technique, refined feeling and naturalistic treatment, many an object-lesson that could not have been other than striking in this exhibition of American sculpture. The walls were covered with tapestries loaned by Mr. William Baumgarten, that served as a rich and effective background for the many small works of art shown here. On one wall was a superb series of nine cases of coins, loaned by the American Numismatic and Archaeological Society, consisting of reproductions of coins in the British Museum from 600 B. C. to the Renaissance and illustrating the chief periods in the history of coinage. Mr. Samuel P. Avery loaned a series of bronze medallions of noted men by David d'Angers. Messrs. Tiffany & Co. sent a case of reproductions of old Roman silver found at Bosco Reale, near Pompeii. Mr. Elmer E. Garnsey loaned some bronze reproductions of originals in the Museum at Naples. These, and other interesting loan-exhibits formed the major part of the contents of the collector's gallery, which also contained a number of interesting original works. Among these special mention may be made of an elaborate pair of andirons (in plaster) designed by Karl Bitter for George Vanderbilt, Esq., Biltmore. Henry Linder also exhibited a charming pair of andirons, designed with that exquisite originality that distinguishes this sculptor.

The room opposite this, on the other side of the "Conservatory," was designated as the "Memorial Room." Directly in the centre was the superb tomb by Frank Duveneck, dedicated in loving memory to his deceased wife, whose effigy it represents. No more noble work than this was included in the exhibition. The figure itself is not only beautiful, but the conception and the execution are carried out in a masterly way. Directly behind it, and erect against the wall, was a bronze door for the Clark Mausoleum in Woodlawn Cemetery by Paul W. Bartlett. The surface is filled with a portrait of Mrs. Clark in very low relief, surrounded by a foliated border in very high relief. Interesting as this door is from a technical standpoint, it scarcely received the attention it deserved as a work of art. This room also contained a fine collection of bronze reproductions of works by the late Olin L. Warner, partly prepared by the society itself for presentation to the Metropolitan Museum of Art as a memorial of this accomplished sculptor, and partly prepared by Mrs. Warner for the same purpose. It comprised an interesting collection of portrait-busts, medallion-heads, and one ideal statuette, the latter forming part of the collection made by the National Sculpture Society. Several designs for tombs were, appropriately enough, placed in this room. And as each room of the exhibition was given an individual setting and decoration, so this one was decorated with handsomely decorated leathers, loaned by Mr. C. R. Yandell, which



not only relieved the walls of bareness, but were themselves rich and effective exhibits.

The Vanderbilt Gallery formed at once the end and the culmination of the exhibition. The rooms thus far traversed represented, it will be remembered, the apartments in the dwelling of a man of wealth, even the Memorial Room being treated as a collector's gallery, in a certain sense. The Vanderbilt Gallery was arranged as a garden, the idea being a winter-garden closed with glass during the inclement weather of winter, the enclosures being removed for the fine weather of summer. Strangely enough, some criticism has been directed against this idea, because, we were told, a garden implies out-of-doors, and there was no mistaking the fact that this particular garden was indoors, under cover, and surrounded with hermetically sealed walls, save at the entrance.

But one scarcely realized these restrictions if one entered the gallery in a sane frame of mind, so thoroughly were the enclosing surfaces hidden with foliage and so charmingly was the gallery decorated and arranged. The lower walls, to a point at a level with the electric-lights, were completely covered with cedar branches. Hedges of the same material, having the effect of a formal garden, formed aisles at one end and by the entrance. In the centre was a colonnade of Ionic columns, open at one end and making the central feature of the garden; and immediately opposite it was a *château d'eau*, which formed the culminating feature.

In itself, and without the aid of sculpture, this garden was charming enough to excite the interest and the admiration of the visitor; it became very much more delightful and impressive because of the arrangement of the works of sculpture contained in it. President Ward occupied the post of honor at the *château d'eau*, above which was placed his "Student" from the Garfield Monument at Washington, while on either side were studies for colossal statues for the State-house at Hartford, Conn., "Music," "Agriculture," "Science" and "Law." Directly opposite, and one of the best-placed statues in the exhibition, was a reproduction in bronze of the "Indian Hunter" by the same artist, intended to mark the site of the home of James Fenimore Cooper, at Cooperstown, N. Y. There is a vigor and life in this stalwart figure, an earnestness and an intensity of feeling that was quite wanting in some other Indian figures in the exhibition.

Under the colonnade stood several plaster models of the bronze statues in the reading-room of the Library of Congress. These included "Herodotus" by French, "Solon" by Ruckstuhl, "Bacon" by Boyle (not included in the catalogue), "Kent" by Bissell, "Columbus" by Bartlett, and "Henry" by Adams. It was an excellent thought to bring these plaster casts here, since it is quite impossible to study the bronzes as they are placed in the Library, and the present opportunity was a welcome one to those who have seen them in the position for which they were designed. The centre of the court formed by the colonnade was filled with flower-beds; and in the middle was a fountain by Karl Bitter, a boy with a goose, that in *motif* followed somewhat the same lines of Mr. MacMonnies's fountain, though wholly original and individual in treatment. The fact is, there are not many ways in which a nude boy can hold a struggling goose or duck while the latter ejects water from its mouth (as, of course, is never done in nature); but there was no confounding of these fountains one with another, and the two formed an interesting contrast.

Directly before the visitor as he entered the garden from the "Conservatory" was the fine group by Daniel C. French for the John Boyle O'Reilly Monument in Boston, of "Erin" supported by "Poetry" and "Patriotism," a group to which one returns again and again, with increased appreciation of its extraordinary merit and the great strength of the accomplished artist whose work it is. President Ward's "Indian Hunter" formed, as has been said, the central feature of the adjoining wall, being directly opposite the *château d'eau*. By the hedge before it Herbert Adams had an interesting series, consisting of two terra-cotta "Hermes," a portrait-bust of Miss Julia Marlowe in colored plaster, and a portrait-bust of a lady in colored terra-cotta. The portrait of Miss Marlowe is rather strongly colored; but the terra-cotta bust has a soft, agreeable texture, obtained by working its surface with a sand-blast, and thus removing the brilliant glaze. Painted sculpture is so little known and so seldom seen that these works have a special interest, not surpassed, in a certain way, by anything in the exhibition.

Four things tended to make the exhibition a notable one: the arrangements of the galleries and the exhibits, the great interest of many of the sculptures, the number of the sculptors represented, and the variety and extent of the kind of sculpture shown. The last feature was as strongly marked as any, and afforded impressive evidence of the increased appreciation of this noble art. It is not many years since sculpture was represented in the Academy exhibitions by a solitary bust, economically, if undignifiedly, placed on a radiator. That New York should, in the last three years, have supported two notable exhibitions of sculpture alone is truly a significant sign of the times. And the single bust has developed into a multitude of forms. Great ideal groups, like Mr. French's for the O'Reilly Memorial, or President Ward's "Student" from the Garfield Monument; decorative statues, as those for the Library of Congress; statues for the external decoration of buildings, as the two colossal bronzes shown by J. Massey Rhind for the new Exchange Court Building — "Henry Hudson" and "Peter Stuyvesant," vast bronze effigies that suffered somewhat from their position in the galleries and from the fact that they will

never be seen again so close at hand; memorial statues, such as the "Confederate Infantryman" for the Georgia State Monument to be erected at Chickamauga Park, by Fred. Moynihan, and Mr. Niehaus's "Hahnemann"; ideal statues and statuettes; busts and portrait-statues; sculptures for household decoration, — delightfully illustrated by a small series by Miss Bessie Potter; reliefs; memorial designs; in short, scarce a field of sculpture that was not represented numerous and, in most cases, interestingly. Truly sculpture can never again seek the support of the radiator or the seclusion of the vacant corridor in the face of so remarkable a record as this.

It has been sometimes charged, by those who know nothing whereof they spake — and it is amazing how frequently those who know nothing of a subject have so much to say upon it — that the National Sculpture Society is a "close corporation." The recent exhibition should emphatically put an end to such twaddle. Nearly one hundred names were included in the catalogue as exhibiting sculptors, and the proportion of members and non-members was fairly well divided. And the geographical range of the exhibition was quite as marked, sculptors from many cities being well represented. The exhibition was, indeed, a truly national one.

And the quality of the sculpture was admirably illustrative of the state of the art at this time and entirely representative of the work of our most capable sculptors. Mr. Bitter sent several subjects in addition to his andirons and the fountain: a charming portrait-statue of a lady, seated, warrants special mention. Mr. Charles Grafty sent, with a bust, a small group in bronze entitled "The Symbol of Life," a highly imaginative composition — a primitive man and woman standing erect and gazing at an ear of wheat that the woman held out in one hand — a work marked by deep symbolism and profound thought. A very charming "Marguerite" was contributed by Mr. Frank Lemon, a graceful little German maiden dreamingly meditating as she sits on a stool with her feet outstretched before her. Mr. J. Scott Hartley was well represented with a fine series of portrait-busts and groups. Miss Katherine M. Cohen sent a fine bust of a little boy and an interesting bronze entitled "Rabbi-ben-Ezra." Mr. Clement J. Barnhorn's "Magdalen," a recumbent nude figure of a woman who had thrown herself on the ground, was an exquisite piece of modelling and a fine conception of the sainted penitent. Mr. Solon H. Borglum, who, like Mr. Barnhorn, lives in Cincinnati, was represented by a remarkable statuette of a horse out of doors, entitled "Winter," treated with a fine feeling for the forlornness embodied in a forgotten animal exposed to the wind and storms of winter. These are but a few of the more notable works that may be especially referred to here, though by no means including all the examples that rightly excited interest and deserved appreciation.

In addition to the very extended display in the exhibition-galleries the society included a number of objects in its own room. The larger amount of space there was filled with the models submitted in the competition for a design for a sun-dial, instituted by Mr. Thomas H. Kelly of New York. Two prizes were offered, a first prize of \$500 and a second prize of \$250. Twenty-eight models were submitted, the result being highly satisfactory and most interesting. Not only was a very considerable ability shown in the choice of subjects and the practical application of artistic ideals to the problem, but the quality of the models was unusually good, and all concerned in this competition may safely take the utmost satisfaction in it. The problem called for a design for a sun-dial standing on a lawn and free from other structures. The first prize, won by Mr. Charles A. Lopez, consisted of a circular pedestal enriched with a band of sculpture in high relief; an ornamental seat surrounded half of the great circular base on which the dial was placed. The design was at once simple and monumental, appropriate and practical, and carried out with excellent artistic ability. Mr. I. M. Kimball, who won the second prize, also submitted a circular design; a couple of steps led to a central pedestal, against which reclined four female figures, symbolic of the four seasons. The designs submitted by the winners of the four honorable mentions were not so elaborate as the prize designs; but each had its own individual merit and fully warranted the honor conferred upon it. Several other highly creditable designs were sent in, but it was obvious that the honor list could not be indefinitely continued.

The room in which the sun-dials were placed was the only portion of the exhibition that displayed some hint of carelessness in arrangement. Originally intended for the sun-dials alone, several architectural and monumental models were placed with them, and there was not that careful placing that distinguished the main galleries. The architectural models lost, somewhat, from their intrusion among so considerable a series of related objects as the sun-dial models, and the latter were not all displayed to the best advantage. The walls were hung with a collection of photographs of sculpture in America, partly loaned by exhibiting sculptors, partly by individual exhibitors. Among the latter special mention should be made of the very handsome collection of sculptural subjects published in the *American Architect*. The Century Company, of New York, also loaned a considerable group of framed photographs of battle monuments and other historical memorials. Here, also, was a series of photographs entered in competition for two prizes in photography instituted by the society, and limited to works of sculpture in America. Mr. W. P. Agnew, of New York, won the first prize, of \$50, for his photograph of the "Fountain of Neptune,"

in Washington; Messrs. W. W. Whiddit and A. B. Bogart, of New York, the second prize, of \$25, for a photograph of a portrait-relief, and honorable mentions were accorded to Wm. George Oppenheimer, of New York, and H. G. Smith, of Boston.

Notwithstanding a little falling off in the arrangement of the Sundial room the exhibition throughout testified to extraordinary and prolonged effort on the part of the society and those members of it most active in carrying it to a successful completion. The remodeling of the galleries was complete and entire. The brilliant red of the walls was everywhere masked, with a resulting color-scheme of deep interest. In the outer gallery the walls were covered with cheese-cloth tinted a brownish-yellow. Then came the "Conservatory," with its canopy of vines, in which singing-birds were hidden, with the two richly decorated collector's rooms opening out of it. Then the beautiful Italian garden, with its background of green, a bluish-white cheese-cloth filling out the upper wall-space. The hedges and flower-beds, the greens and plants in pots and vases, the latter including some great glazed jars, formed, as has been repeatedly said, an exquisite setting for the sculpture. The flowering plants, one or two gorgeous peacocks, garlands of gay flowers hung on Mr. Adams's "Hermes," and other decorations added greatly to the general charm.

It would be ungracious, in concluding this general account of the exhibition, not to give due credit for those actually responsible for this splendid show. The Exhibition Committee consisted of Messrs. Daniel Chester French, Chairman, Herbert Adams, Karl Bitter, John J. Boyle, Thomas Shields Clarke, Barr Ferree, J. S. Hartley, Charles R. Lamb, Charles H. Niehaus and F. Wellington Ruckstuhl. The Jury of Selection was composed of Messrs. Herbert Adams, George Grey Barnard, George E. Bissell, Karl Bitter, John J. Boyle, Daniel C. French, J. S. Hartley, John Galen Howard, Charles R. Lamb, Philip Martiny, William Couper, Edward C. Potter, F. Wellington Ruckstuhl, Lorado Taft and J. Q. A. Ward. The Placing Committee consisted of Messrs. Bitter, Ruckstuhl and Lamb. Very great and especial praise is due Mr. Lamb, who designed the exhibition and superintended its carrying out, and the thanks of the public are also due Mr. Ruckstuhl, who, succeeding the Secretary of the Society as Secretary of the Exhibition Committee, was most active in the arduous labors of installation and arrangement.

The record of the exhibition would be incomplete without reference to the social features, arranged by a Reception Committee composed of Messrs. John De Witt Warner, Chairman, Thomas Shields Clarke, William Couper, Barr Ferree, William T. Evans, W. C. Hall, Thomas Hughes Kelly and George F. Kunz. This Committee arranged the enormously successful reception with which the exhibition opened; a dinner, held on the evening of May 10th in the Vanderbilt Gallery, where, in the fascinating surroundings of the Italian garden, a hundred and fifty ladies and gentlemen dined in a delightful environment and under most unusual and charming circumstances. A Ladies' Tea held on the afternoon of May 17th for which Mr. Lamb arranged a special effect by darkening the galleries and illuminating them with colored electric-lights disposed in the foliage completed the social festivities of the exhibition, and closed a record that has not been surpassed by any art society in New York.

BARR FERREE.

#### SOME INSTANCES OF PILES AND PILE-DRIVING, NEW AND OLD.—III.

##### BROOKLYN DOCK.

WE come next to the valuable paper of W. J. McAlpine, Past President American Society Civil Engineers, on "Pile-Work at the Government Graving Dock, Brooklyn," which was presented to the Institution of Civil Engineers, 1868. Extracts as follows:—

"The absence of any reliable data in the text-books upon the weight which may be safely imposed upon piles has led the author to present the subject, under the hope that it may call out the recorded experiences of other engineers, for the purpose of comparison with, and perhaps a correction and extension of, the formula prepared from an extensive set of experiments made for the purpose in 1847.

"Piles are used under the three following conditions: *First*, to compact a soil which is not quite firm enough alone to support the superstructure; *Second*, as columns of support, when the material immediately below the structure is very loose or fluid, and is underlaid by a firm material to or into which the piles are driven; and *Third*, when the support is mainly derived from the adhesion of the material into which they are driven, and slightly from their sectional area. The first two of these conditions will not be discussed, but the present paper will be confined to the practical hints growing out of the author's experience in driving a large number of piles of different kinds of timber and of different dimensions, and with rams of different weights and falls and the use of various kinds of power.

"The Government Graving Dock at Brooklyn, N. Y., is a structure of granite masonry weighing 50,000 tons, the walls of which commence 36 feet below the sea level, and the excavation was carried 4 feet deeper.

"A considerable portion of the foundation had to sustain a weight of 3 or 5 tons per square foot. A line-of-battle ship weighing 5,000 tons would require to be mainly supported on its narrow keel within a

length of 200 feet, which gives an estimated weight upon the keel of about 20 tons per lineal foot. The grillage and foundation distribute this weight, but the centre piles are probably subjected to a weight of from 10 to 15 tons each.

"The material removed from the excavations was a fine silicious sand, mixed with minute particles of mica and a little vegetable loam and fully charged with water, rendering the mass somewhat fluid, resembling quicksand, which it did become to a depth of several feet wherever it was much trodden by the workmen.

"Borings were made and trial piles were driven to a depth of upwards of 50 feet below the excavation. These indicated the same character of material to that depth, and it was believed to extend 50 feet or more below the borings. The structure rested on about 7,000 piles, which were driven in rows 2 1-2 feet apart, and at a transverse distance of 3 feet, all from centre to centre. Intermediate piles of very tough second-growth oak were frequently driven. The main piles were chiefly round spruce spars, very straight, from 25 to 45 feet long, averaging a driven length of 32 feet. They were not less than 7 inches in diameter at the smaller end, and on an average of 14 inches in diameter at the larger end. The heads of the piles were always protected in driving by bands of iron 3" x 1", and occasionally iron shoes were used, but they did not increase the penetration, as the resistance was chiefly from the lateral friction, and the tenacity of the pointed wood was sufficient to displace the material at the bottom.

"During the progress of this portion of the work a careful record was kept, which showed the distance moved by every blow on every pile used in the structure, and the weight and fall of the hammer at each blow. From this record it was ascertained that the number of blows required to drive 6,539 piles in the foundation an average depth of 32 feet was 2 1-3 to each foot of pile, and the distance moved uniformly diminished from the first to the last blow, ranging from 8 inches at the beginning to no movement at the end, and the average distance driven by the last five blows was 1 inch. The effect of driving the intermediate piles by compressing the material was to bring them all to the point of ultimate resistance. The piles were secured at the top by a mass of concrete masonry 3 feet around the heads, and by a grillage of timber, plank and concrete 2 1-2 feet thick at the top. The piling machines were strongly and accurately made, with the ways bound with smooth plates of iron. The rams were of cast-iron, swelled out at the bottom to concentrate the weight at that point. They weighed generally about 2,200 pounds, but some were used of 1,500 pounds. The leaders generally gave a fall of 30 feet to the ram; but some machines were tried with leaders of various lengths up to 57 feet.

"A considerable number of piles were driven by a Nasmyth steam-piling machine, with a ram of 3 tons and a stroke or fall of 3 feet, and making 60 to 80 strokes per minute. The other machines were generally operated by steam-power, giving an average of a blow per minute; but occasionally the hammers were hoisted by manual or horse power. It was observed that the heaviest ram, when striking blows of the same effect as lighter ones, did the least injury, either to the head of the pile or to the protecting iron ring, and this injury was still less with the Nasmyth hammer. It was also found that no advantage was gained by increasing the fall of the ram beyond 40 feet, as the friction on the ways then prevented any increased velocity to the ram when falling from a greater height. This experiment was repeated many times in the machines with the longest leaders by tripping the hammer at various heights, from 35 feet upwards, until the maximum penetration of the same pile was ascertained. A few of the piles, under peculiar circumstances, had to be driven with a follower, which was made of very tough oak, and well banded at both ends. The effect of the blows of the ram was about one-third as much as when directly striking the head of the pile. The Nasmyth hammer was capable of driving the piles to a much greater depth than any of the other machines, and although the force of its blows is much less than those of the ordinary rams when falling nearly 30 feet, it produces a much greater effect. With the former, piles were driven 35 feet in 7 minutes, while with the other machines similar piles required one hour or more to drive them the same distance. Two trial piles were driven with each of these machines, with the following results:—

##### PILE DRIVEN BY THE NASMYTH MACHINE.

|           |                       |                   |
|-----------|-----------------------|-------------------|
| The first | 4 blows drove it..... | 4 ins. each blow. |
| Next      | 8 " " ".....          | 3 1-2             |
| 22        | " " ".....            | 3                 |
| 25        | " " ".....            | 2                 |
| 40        | " " ".....            | 1 3-4             |
| 56        | " " ".....            | 1 1-2             |
| 32        | " " ".....            | 1 1-4             |
| 64        | " " ".....            | 1 1-8             |
| 73        | " " ".....            | 1                 |
| Last      | 49 " " ".....         | 1-2               |
| 373       |                       |                   |

"This pile was nearly the same size as the other trial pile, and was driven 43 feet in 7 minutes with 373 blows, and was not iron-shod.

##### PILE DRIVEN BY A RAM WEIGHING ONE TON FALLING FROM 1-2 FT. TO 35 FT

|           |                                               |
|-----------|-----------------------------------------------|
| The first | 100 blows drove it a few feet.                |
| 260       | " " " 30 ins. in all.                         |
| 265       | " " " from 1-2 in. to 1 1-2 in. at each blow. |
| 110       | " " " 1 1-4 in. at each blow.                 |
| 735       |                                               |

"This pile was driven 45 feet with 735 blows. It was 20 inches in diameter at one end and 14 inches at the other, and was shod with iron, and occupied 166 minutes in the driving—viz, 264 blows in 46 minutes, 265 blows in an hour, and 110 blows in an hour.

"The ordinary piles were smaller and shorter than these trial piles, and the ram in the common machines began with a greater fall than above stated, on the trial pile, and there was not so marked a difference

<sup>1</sup>A paper by Horace J. Howe, member Boston Society of Civil Engineers, and read before the society, March 30, 1898. Continued from No. 1173, page 93.



between the two machines in the first part of the operation as was shown afterwards when the pile had penetrated deeper. At first the force of the blows in each of the machines was absorbed by the vibrations of that part of the comparatively slender, elastic column which was above ground; but when it had been driven a considerable distance into the earth these vibrations for the instant removed the partially fluid material from contact with the pile for nearly the whole of its penetration.

"In the case of the Nasmyth machine the blows succeeded each other at intervals of a second of time, and before the material which had been displaced by the vibrations of the preceding blow could subside again into close contact with the sides of the pile, and therefore nearly the whole force of its blows was employed in the displacement beneath the pile.

"In the other machines the blows were given at intervals of a minute, by which time the vibrations caused by the preceding blow had ceased, and the semifluid material had partially subsided around the pile, so that a considerable portion of the force of the blows was consumed in overcoming the friction along the sides, and in the removal by new vibrations, leaving only a comparatively small part of the force to displace the earth at the bottom of the pile.

"As before stated, the pile derives its support mainly from the frictional surface in contact with the earth, which is measured by the force of the blow due to the weight and velocity of the ram. The ram, however, does not fall in free space, but meets with great resistance along the ways, depending upon their smoothness and the strictly vertical position of the machine at all times.

"In wet foundations the material obtains a degree of fluidity when disturbed by the operation of driving which lessens the resistance to the penetration of the pile; but the superior gravity of the earth to that of the water causes it subsequently to settle in close contact with the sides of the pile, and if not afterwards disturbed gives a greater coefficient of support than if the same pile had been driven through the same kind of material in a dry state. In using comparatively slender piles the vibrations caused by the blows enlarge the passage and loosens the material, and although they absorb much of the power, they doubtless increase the penetration at each blow.

"It would be hazardous, however, to trust to the effect of this subsidence in a superstructure which is liable to vibration, and to convey these vibrations to the piles; but when there is a large mass of matter intervening, like that of the masonry of the piers of a bridge, there is no danger from this cause.

"Experiments were made at different times during the progress of the construction of the dry-dock to ascertain the weight which the piles driven in the manner described would sustain. For this purpose one end of a lever of oak timber 60 feet long was firmly secured to a cluster of piles with a short arm resting on the trial pile. The bearings were angular steel bars resting on planed plates of iron. The outer end of the lever was slowly weighted with successive weights, which towards the latter part of the trial were allowed to remain several hours, and in a few cases a whole night. A number of the foundation and coffer-dam piles were withdrawn by a similar process, and the power required was also ascertained. Many of these trials were made on piles of nearly the same size and driven in exactly the same manner, and the results were in all cases nearly alike, giving 125 tons as the weight required to move a pile driven 33 feet into the earth to the point of ultimate resistance [ $s = 0$ ] with a ram weighing one ton (2240) and falling 30 feet at last blow. These trial piles averaged 12 inches diameter in the middle.

"The complete record of the driving before referred to also enabled the selection of piles for some other experiments of different sizes and driven with rams of different weights and falls. As these trials had to be continued until the final weights applied produced a visible movement of the pile, and as some allowance must be made for the friction and imperfection of the lever attachments, and for the support of the sectional area of the pile, it was believed that the extreme supporting power of this pile due to its frictional surface was 100 tons, or 1 ton per superficial foot of the area of its circumference.

"From an analysis of these experiments the following general laws seem to have prevailed in these cases:—

"First. That the effect of lengthening the fall of the ram was to increase the sustaining power of the pile (driven as before mentioned) in the ratio of the square root of the fall.

"Second. That by adding to the weight of the ram the sustaining power of the pile was increased by 0.7 to 0.9 of the amount due to the ratio of the augmented weight of the ram.

"Third. That a pile driven by a ram weighing 1 ton and falling 30 feet will sustain an extreme load of 100 tons.

"The author is of the opinion that under the most favorable circumstances the pile should not be loaded with more than one-third of the result given by his formula, and where there is any danger of a future disturbance of the material around the pile, or when there is any vibration in the structure which may be communicated to the piles, the load imposed should not exceed one-tenth.

"In the preceding discussion the bearing support due to the sectional area of the pile has not been considered, as it forms so small a portion of the support. Numerous experiments have been made which give results of from 5 to 10 tons per square foot."

The formula is as follows, in terms of " $h$ " and " $w$ " only:—

$$L \text{ (tons)} = F 80 [0.228\sqrt{h} + w \text{ (tons)} - 1]$$

The discussion which followed was an interesting one. Sanders's formula was generally spoken well of, while the above was spoken of as applicable only to the conditions which prevailed at the Brooklyn Dock.

I will quote only T. D. Ridley, who said:—

"Eleven years ago (1857) I drove a large number of piles for the foundations of the viaduct which carried the Border Counties' Railway across the river Tyne at Hexham. The bed of the river consisted of compact boulder gravel and sand, which latter material, when it contained water and had a superincumbent load, was perhaps the most

difficult substance through which it was practicable to drive piles. After the first few blows none of the piles descended more than 3-8 inch for each stroke and at depths ranging from 16 to 33 feet they responded only 1-8 inch to the final falls of the hammer. Rams weighing 2,000 to 2,400 pounds were found to be of little use in this case, and the piles usually failed under the high fall of 16 to 20 feet which was required to force them downwards. Seeing the injurious effect, a ram of 5,000 pounds was used, and by giving a fall of from 8 to 12 feet, and never exceeding the latter limit, the piles were successfully driven. The conclusions there formed as to the superiority of a heavy hammer with a low fall over a light ram with a long stroke in difficult ground had been amply confirmed by subsequent experience."

The practical nature of McAlpine's first two conclusions is seen if we suppose the case of a set of specifications calling for a certain weight of hammer, while the contractor is using another weight. Opinions differ on this point. McAlpine says the sustaining power varies as the square root of " $h$ " (that is, according to the law of falling bodies); Sanders as " $h$ " directly, while Trautwine, also from experiment (see "*Pocket Book*"), says the cube root of " $h$ ," etc.

Only McAlpine has made experiments of the kind indicated in his conclusion No 2.

It might be well to say here that specifications should also cover any correction for batter of piles, or for the effect of rest already mentioned. In this last case the contractor would claim the benefit, if any, resulting therefrom.

In several of the preceding papers there has been mentioned the fact, well known among pile-driver men and the profession, of the increased resistance, under some circumstances, of the pile after a period of rest. Exact data, with time limit, if any, are wanting. Also data on the effect of a persistent quiescent load. It is customary to tap a pile before pulling it with the hammer line or tackle.

(To be continued.)



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

MAIN STAIRCASE, FIRST FLOOR: HOTEL WALDORF-ASTORIA, NEW YORK, N. Y. MR. H. J. HARDENBERGH, ARCHITECT, NEW YORK, N. Y.

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

EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY: THE CHÂTEAU D'EAU, AND THE CONSERVATORY.

For description, see article elsewhere in this issue.

EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY: "THE HAHNEMANN MONUMENT," MR. C. H. NIEHAUS, SCULPTOR; "RUFUS CHOATE," MR. D. C. FRENCH, SCULPTOR; "FOUNTAIN GROUP," MR. H. K. BUSH-BROWN, SCULPTOR; "BUST," MR. J. J. BOYLE, SCULPTOR.

The busts upon either side of the "Rufus Choate" are by J. S. Hartley and Lorado Taft.

XVI-CENTURY FOUNTAIN IN THE PIAZZA VITTORIO EMANUELE, CESENA, ITALY.

DETAIL OF CHOIR STALLS IN STA. MARIA IN ORGANO, VERONA, ITALY.

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

MESSRS. BARCLAY & COMPANY'S BANK, FLEET ST., LONDON, ENG. MR. ARTHUR C. BLOMFIELD, ARCHITECT.

This plate is copied from the *Builder*.

A GROUP OF EXHIBITION BUILDINGS.

[Additional illustrations in the International Edition.]

CONFESSORIALS IN THE CHURCH OF ST. JOHANNES NEPOMUK, MUNICH, BAVARIA.

[Gelatine Print.]

THIS church represents the highest development of the art of the two Asam brothers, who, but recently, were mentioned in these columns,<sup>1</sup> it being their most finished and most harmonious piece of work. With the general outlines of the design, Egid Quirin Asam is probably to be credited. Work was begun by him A. D. 1733 upon the site adjacent to his dwelling-house in Sendlingergasse.<sup>1</sup> The

<sup>1</sup> See *American Architect* No. 1157.

church was intended as a votive offering by the two brothers, in commemoration of their rescue from shipwreck in a storm on one of the Bavarian lakes. As a matter of fact, the site was paid for by the architects and the costs of construction defrayed by them, except what slight help they got from the collections taken up at divine service. In December, 1734, already the church was consecrated; in the following year the street-front was completed, but the interior, with its elaborate decoration, was not finished until 1746.

The narrowness of the building-plot accounts for the contracted appearance of the plan. The church consists of a single nave of rectangular plan, with its corners rounded off, bordered by the oval vestibule at the east end, by the presbytery, of like shape, at the west end. All around the auditorium runs a gallery supported by pilasters with Ionian capitals terminating in Hermæ. The upper side-walls, above the gallery, are again subdivided by Hermæ supporting a cornice which carries vases of stucco-marble containing flowers. The space above the cornice is filled with mural paintings representing scenes from the life of the Patron-Saint, St. John Nepomuk. The ceiling is encircled by a rich framework of flowers in stucco. The confinement of the building site between other buildings permitted of one window only on the right-hand side, giving but scant side light, the principal sources of light being the large window in the street-front and the window high up in the presbytery, or choir. Mirrors, arranged like windows, along the nave, were depended upon to enhance the effect of the small amount of light that reaches the auditorium.

In the presbytery at the west end is installed the principal altar having a sarcophagus-like superstructure, above which an image of the "Saviour" is seen, with a large glory around it. On the gallery, right over the main altar, rises another altar, flanked on each hand by niches, containing the statues of "St. John the Baptist" and "St. John the Evangelist," respectively. Four powerful twisted columns with nondescript capitals, rising from the balustrade of the gallery, complete the structural frame of the altar-niche. Over the upper altar is seen Egid Asam's most famous work of sculpture, a great group of the "Holy Trinity," showing the Saviour crucified, surrounded by a host of angels and geni, floating in the air without visible support, above the cross God Almighty, and above Him the Holy Ghost. It is true, the fundamental principles of plastic art, as generally conceived, here appear disregarded, yet the effect upon the beholder, which is enhanced by the yellowish light falling upon the group from the rear, is very fine. The ceiling is decorated with a large painting illustrating, in different sections, the life of St. John Nepomuk, his martyrdom, and his solemn burial, and containing, among other objects of interest, a view of Prague Cathedral.

There are two side-altars provided, occupying the rounded corners of the nave, the north one, with its crowning statue, being partly visible in our plate. Both side-altars are overtopped by winged Hermæ, carrying baldachins. At the east, or entrance end of the nave, the rounded corners are filled with confessionals, decorated with characteristic busts, and surmounted by remarkable sculptured groups, expressive of sin and its penalty: death. One of our plates shows this, the northeast corner of the nave, permitting also a glance into the well-lighted vestibule, in which additional confessionals are provided for the penitent, and from which access is had to the auditorium through a large and gorgeous wrought-iron gate of exquisite workmanship. It remains only to state that the two portraits over the doors leading from the presbytery to the sacristy, on each side of the high-altar, are those of the artists and founders, the Asam brothers.

Egid Quirin Asam outlived the completion of this splendid structure by a few years only. His brother, Cosmas Damian, died soon after finishing the great painting of the ceiling, two coincidences which led Cornelius Gurlitt to call this remarkable piece of work "the swan-song of the artist brothers."

EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY: "BUST IN COLORED TERRA-COTTA," MR. HERBERT ADAMS, SCULPTOR; FIRST PRIZE DESIGN FOR SUN-DIAL, MR. CHARLES A. LOPEZ, SCULPTOR.

EXHIBITION OF THE NATIONAL SCULPTURE SOCIETY: THE ITALIAN GARDEN, WITH STATUES OF "SOLON," MR. F. W. RUCK-STUHL, SCULPTOR, AND "BACON," MR. J. J. BOYLE, SCULPTOR; "FOUNTAIN GROUP," MR. KARL BITTER, SCULPTOR.

MOUNT STREET, GROSVENOR SQUARE, W., LONDON, ENG.

THE ALUN INTERMEDIATE COUNTY SCHOOL, MOLD, WALES. MR. FRANK BELLIS, ARCHITECT.

MEISSONNIERS FOR THE LOUVRE. — Meissonnier's widow, who died recently in great poverty in Paris, has bequeathed the pictures by her husband that had remained in her possession to the Louvre. Among the collection were the "Siege of Paris," for which she refused an offer of 800,000 francs; the "Madonna del Bacio," painted at night; the "Song," "View of Venice," "Mass at St. Mark's," "Thunderstorm at Antibes," "Sunset at St. Germain," "Venice by Moonlight," "Jean Jacques at Lausanne," "Samson slaying the Philistines," "Louis Treize Cavaliers," "Ruins of the Tuileries," the portraits of Meissonnier and of his wife, fifteen water-colors and a great many drawings. — *N. Y. Tribune.*

## COMMUNICATIONS

[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 DAMP CELLAR.

NEW YORK, N. Y., June 14, 1898.

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

Dear Sirs, — Can you suggest a remedy for a cellar which frequently becomes so wet through condensation that water stands in pools on the cement floor? If you can you will greatly oblige

M.

[It might aid in drying off the cellar to distribute about the floor, in proper receptacles, more or less bushels of fresh lime which in air-slacking will absorb the excess of moisture. Judicious airing will of course hasten the drying process. A cellar inclined to dampness should only be opened to the outer air after proper consideration of the hygroscopic condition of the outer atmosphere: it should never be opened for "airing" on humid days (dog-days), and as a rule only in the early morning and in the evening, when there is least difference between the temperatures of the outer and inner air. — Eds. AMERICAN ARCHITECT.]

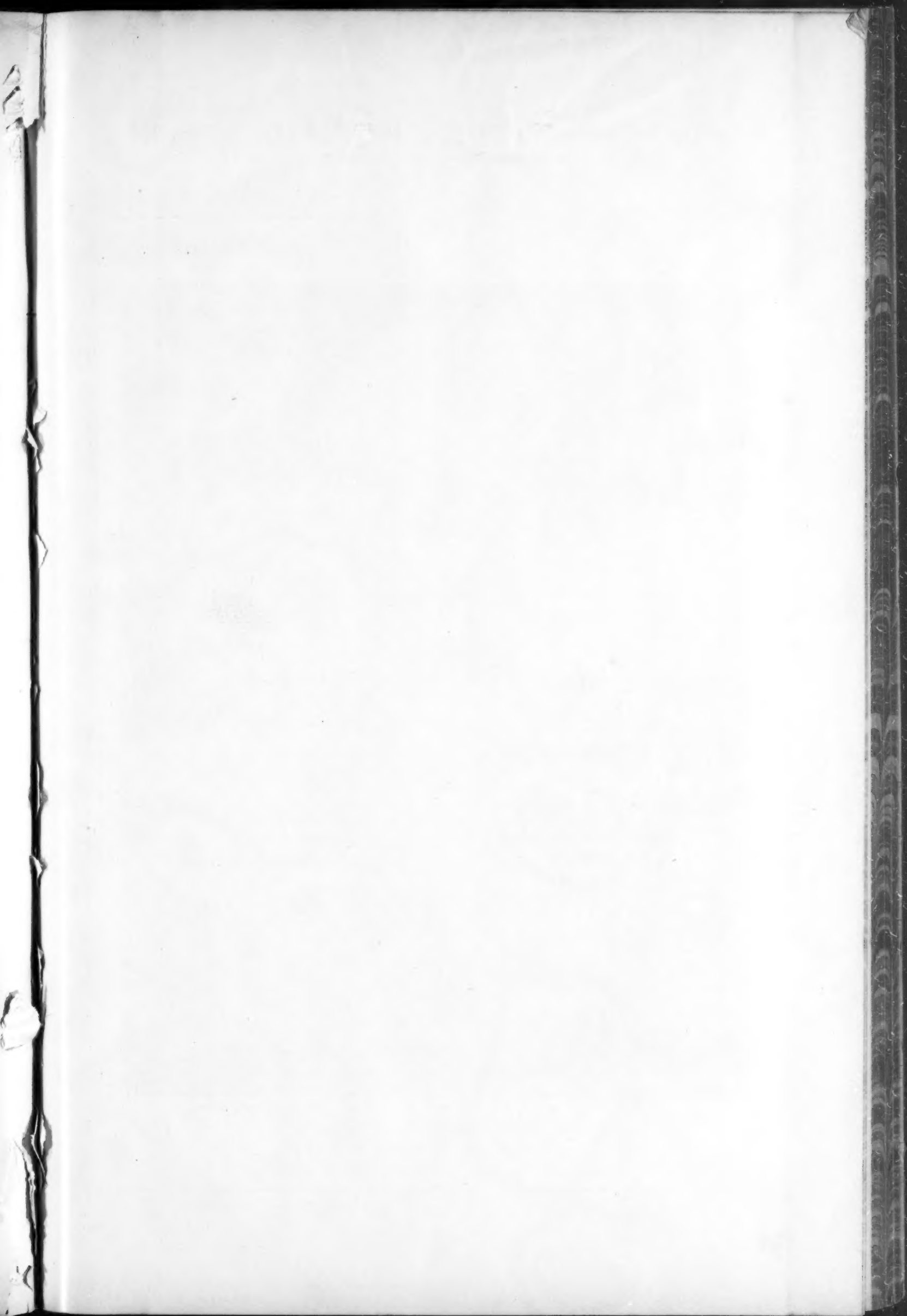
## NOTES AND CLIPPINGS

MILAN CATHEDRAL. — One building alone is built of [marble] that generally shunned material — the unlucky Cathedral of Milan, the by-word of all architectural students and assuredly the ugliest building of great size which Europe contains. In Milan Cathedral every detail is misunderstood and misapplied, every principle of Gothic design ignored or deliberately repudiated, and every element of architectural beauty banished from the work. If the detail were of any value, the white reflections of the surface would be felt to ruin it; but the detail is worthless. Two things alone are good in that unfortunate structure: its vast height (for, though the public hardly suspects it, the central spire rises to an enormous altitude), and the very splendid sixteenth-century windows in the west front, contradicting wholly the Gothic design, put in with as absolute an indifference to their effect upon the façade as if they had been hung up temporarily for a feast-day, but in themselves immeasurably superior to anything which the building proper contains. — *R. S. in the N. Y. Evening Post.*

THE WORLD'S RAILROADS. — The *Railroad Gazette* translates from a German publication of high character the railroad statistics of the world, which that publication annually collects and collates. It appears that the railways of all countries gained but 1,111 miles in 1897, or less than has been built in this country, in one or more instances, in a single year. Adding the 1,111 to the world's total mileage of 445,064 at the end of 1896, we have a total of 446,175 miles, enough to reach around the globe almost nineteen times. Of this aggregate the United States had 182,746 miles, or about 41 per cent, but our rate of increase from 1892 to 1896 was but 4 1-2 per cent, or less than that of any other great country. This was due to previous overbuilding, which we carried to a most injurious excess, investing hundreds of millions in roads that have gone into bankruptcy, and many of which will never pay a cent to those who furnished most of the money for their construction. Germany, France, Russia and India have been the great fields of railway building in the past two or three years. In 1896 France and Germany each added to its system 585 miles, Russia 575, and India 707. But Russia exceeded that limit very far in 1897, and will surpass her highest record in 1898.

AN ARCHITECT DESERVES PAYMENT FOR HIS WORK. — So many American judges appear to be whimsical in their judgments on cases in which architects have a concern, it is a relief to discover one who is inspired by equity, viz, Judge Barnard. The case in question might be called a stereotyped one, which is familiar to the courts of all lands. Mr. Bardsley, an architect, sued a client for his fees. He had prepared plans according to instructions for farm buildings, on the understanding that if the work was carried out under his supervision he was to be paid 5 per cent on the lowest tender, or 3 per cent if the buildings were not constructed. The tenders ranged from \$14,000 to \$23,000. The client said he had given directions that the cost of the work was to be \$7,000 or \$8,000. The judge, in giving his decision, said: "The duty of an architect generally is to anticipate the wants of the owner in respect to the building capacity and workmanship. He is not a builder. The work done by him is to be made out with extreme care, so as to prevent disputes between the builders and the owner. The specifications are so made out in this case. I deem it to be more in accordance with ordinary business conduct to find that the architect did not agree to lose his labor if the estimates of others were too high. I believe they were not too high to meet the structures wished for by the defendant and his son. The structures were exactly what was wanted by the owner, but they could not be built for \$7,000 or \$8,000. The plaintiff is, therefore, entitled to recover 3 per cent." It would be difficult to discover a judgment in an English court in which it was held that to bring an action for the recovery of fees was evidence of business capacity in the architect which would be advantageous to those who commissioned his services. — *The Architect.*







THE CONSERVATORY.

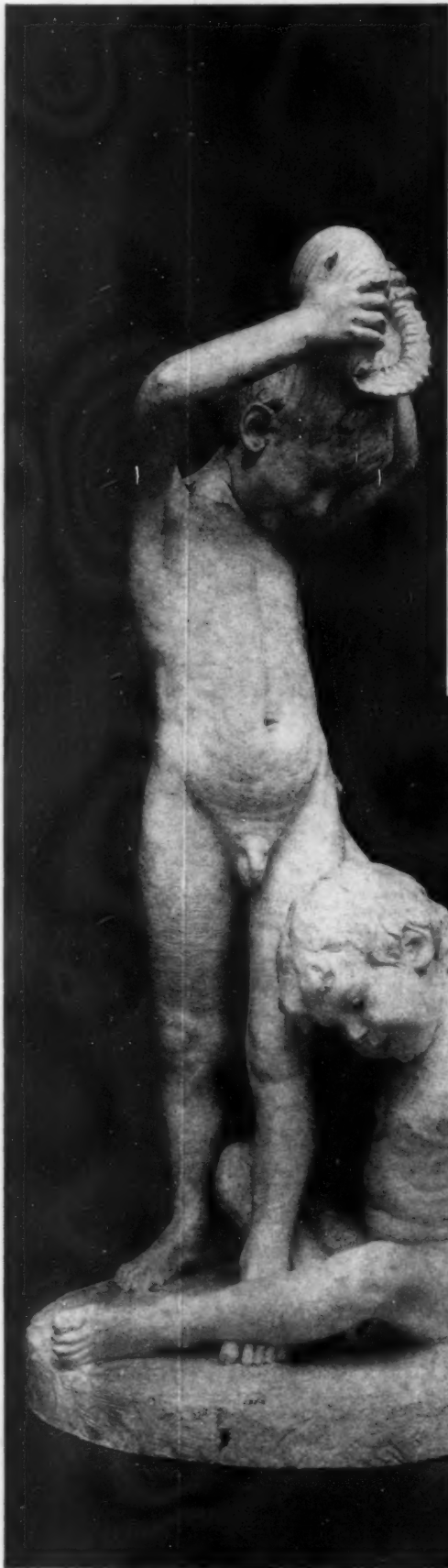




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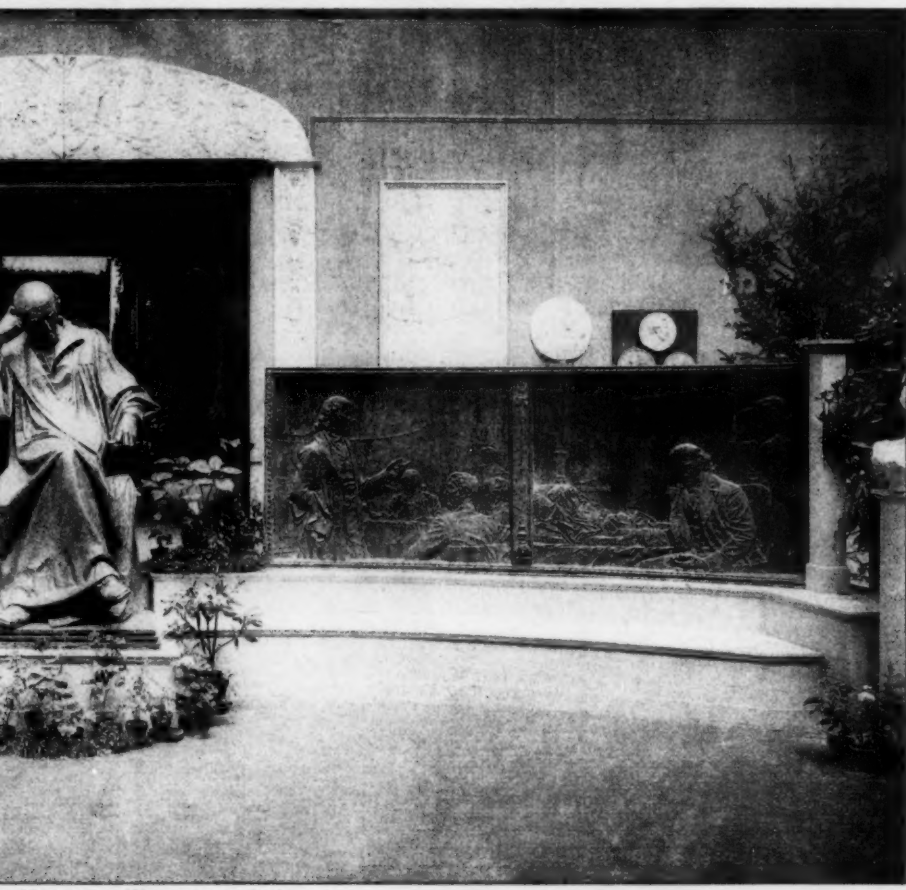


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VOL. LX.—No. 1162.]

SATURDAY, APRIL 2, 1898.

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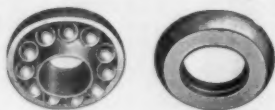
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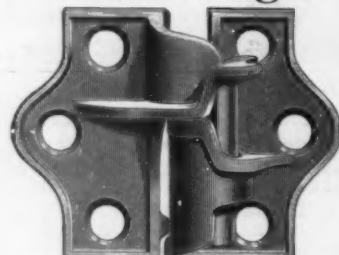
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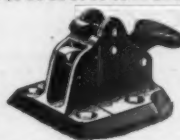
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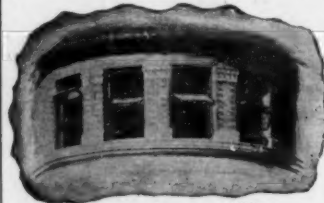
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| New Brunswick (Dorchester).....       | 1 00 @ 1 30         | 75 @ 90                               | 1 40 @ 1 50       |
| Potsdam Red.....                      | 1 30 @              | 1 40 @                                | 1 25 @ 1 35       |
| Caen.....                             | 1 05 @              | 1 05 @                                | 95 @ 1 05         |
| Carlisle, English.....                | 1 05 @              | 1 05 @                                | 95 @ 1 05         |
| Corse Hill (Scotch).....              | 1 05 @              | 60 @                                  | 55 @ 65           |
| <b>Granite: (Maine)</b>               |                     |                                       |                   |
| Limestone:                            |                     |                                       |                   |
| Bedford.....                          | 45 @ 1 25           | 95 @ 1 00                             | 20 @ 40           |
| Joliet.....                           | 1 00 @              |                                       |                   |
| Lemont.....                           |                     |                                       |                   |
| Serpentine.....                       |                     | 10 50 per ton.                        |                   |
| <b>Bluestone: (P sq. ft.)</b>         |                     |                                       |                   |
| Sidewalk.....                         | 30 @ 5 00           | 40 @ 1 75                             | 1 00 @ 1 25       |
| Planed.....                           | 50 @ 6 00           | 75 @                                  | 1 00 @ 1 25       |
| <b>Marble: (P cu. ft.)</b>            |                     |                                       |                   |
| Leo, Mass.....                        | 1 25 @ 1 75         | 1 75 @ 2 50                           | Not sold.         |
| Rutland, white and blue.....          |                     | 3 00 @                                | 3 50 @ 6 00       |
| Sutherland Falls.....                 |                     | 2 00 @                                | 3 50 @ 6 00       |
| Glens Falls, black.....               |                     |                                       | Not sold.         |
| Italian, blue-veined.....             |                     |                                       | 4 40 @            |
| " Sienna.....                         |                     |                                       | Not sold.         |
| Tennessee, red.....                   |                     |                                       | 4 40 @            |
| " Knoxville.....                      |                     |                                       | Not sold.         |
| Pennsylvania, blue.....               |                     |                                       | 3 50 @ 6 00       |
| Vermont, white.....                   |                     |                                       |                   |
| <b>Slate: Roofing (P square.)</b>     |                     |                                       |                   |
| Green.....                            | 5 00 @ 6 00         | 4 75 @ 5 25                           | 3 75 @ 5 00       |
| " unfading.....                       | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       |
| Purple.....                           | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       |
| Red.....                              | 10 00 @             | 10 00 @ 11 00                         | 10 50 @ 12 50     |
| Black, Lehigh.....                    | 4 25 @ 4 75         |                                       | 4 50 @ 5 50       |
| " Chapmans.....                       |                     |                                       | 5 30 @ 6 15       |
| Genuine Bangor.....                   | 4 35 @ 5 50         | 4 75 @ 5 90                           | 5 25 @ 6 50       |
| Unfading black.....                   | 6 00 @ 8 50         | 6 00 @ 8 50                           | 4 25 @ 8 95       |
| ".....                                | 5 50 @ 8 00         | 5 50 @ 8 00                           | 5 50 @ 9 20       |
| Tiles, Am..... P M.                   |                     |                                       | Salt-glazed tiles |
| N. Peach Bottom, war. unfading        |                     |                                       | 9" 8c. per ft.    |
| Fire Clay Roof Tile on cars at fac.   | 8 00 @              | 8 00 @                                | 6 00 @ 6 50       |
| <b>LUMBER. — P M.</b>                 |                     |                                       |                   |
| <b>Boards: (Ordinary dimensions.)</b> |                     |                                       |                   |
| Pine, 1st quality, clear.....         | 65 00 @ 75 00       | 55 00 @ 70 00                         | 50 00 @ 60 00     |
| " 2d quality.....                     | 55 00 @ 60 00       | 42 00 @ 50 00                         | 42 00 @ 50 00     |
| " 3d quality.....                     | 18 00 @ 22 00       | 30 00 @ 40 00                         | 20 00 @ 28 00     |
| Spruce.....                           | 25 00 @             | 11 00 @ 17 00                         | Not sold.         |
| Hemlock.....                          | en134 @ 14          | 12 00 @ 14 00                         | 10 00 @ 12 00     |
| Yellow pine.....                      | 20 @ 40             | 20 00 @ 35 00                         | 18 00 @ 25 00     |
| Cypress.....                          |                     | 28 00 @ 40 00                         | 30 00 @ 35 00     |
| <b>Clapboards:</b>                    |                     |                                       |                   |
| Pine.....                             |                     | 38 00 @ 50 00                         | 25 00 @ 30 00     |
| Spruce.....                           |                     | 24 00 @ 35 00                         | Not sold.         |
| <b>Framing Timber:</b>                |                     |                                       |                   |
| Pine.....                             |                     | 14 50 @ 16 00                         | 15 00 @ 25 00     |
| Spruce.....                           | 14 00 @ 18 00       | 12 50 @ 15 00                         | Not sold.         |
| Hemlock.....                          | 18 00 @ 21 00       | 17 00 @ 25 00                         | 10 00 @ 15 00     |
| Yellow pine.....                      |                     |                                       | 16 00 @ 25 00     |
| <b>Laths:</b>                         |                     |                                       |                   |
| Pine..... Round Wood                  | 1 65 @ 1 75         | 2 25 @ 2 50                           | 1 90 @ 2 00       |
| Spruce..... Slab.....                 | 1 75 @ 1 85         | 1 80 @ 2 25                           | Not sold.         |
| <b>Shingles:</b>                      |                     |                                       |                   |
| Pine, shaved..... P M.                | 5 00 @ 6 00         |                                       | Not sold.         |
| Pine, sawed.....                      | 4 00 @ 5 00         |                                       | 2 60 @ 2 75       |
| Spruce, sawed.....                    | 1 50 @ 2 00         | 1 50 @ 1 75                           | Not sold.         |
| Redwood..... P M.                     | 1 40 @ 1 60         | 3 00 @ 3 75                           | 4 00 @ 6 00       |
| Cedar split.....                      |                     |                                       | Not sold.         |
| Cedar sawed.....                      |                     | 2 00 @ 3 25                           | 2 50 @ 2 90       |
| Cypress, Split..... 7 x 24 "          | 18 00 @ 30 00       | 5 00 @ 6 00                           |                   |



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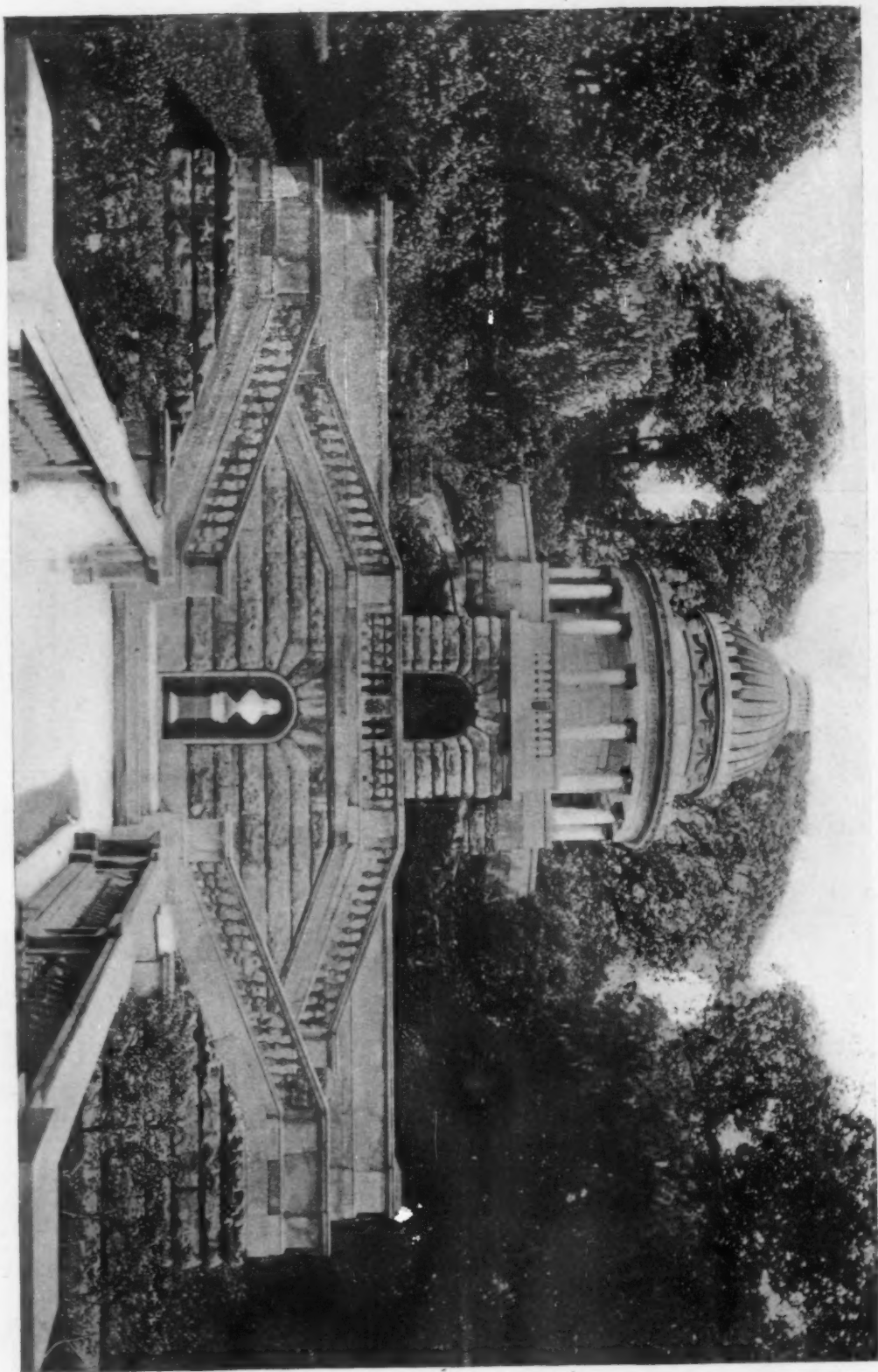
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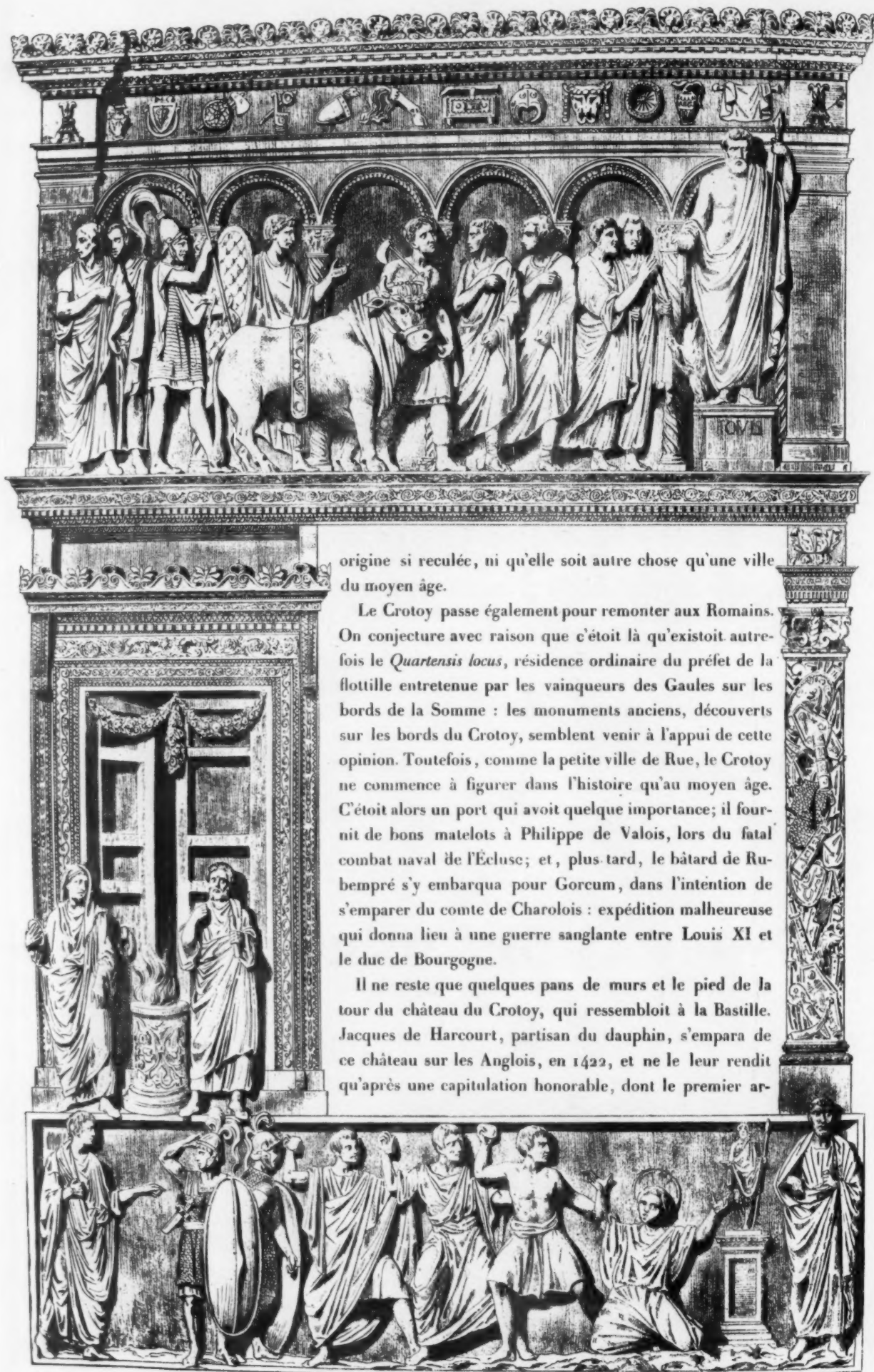
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origine si reculée, ni qu'elle soit autre chose qu'une ville du moyen âge.

Le Crotoy passe également pour remonter aux Romains. On conjecture avec raison que c'étoit là qu'existoit autrefois le *Quartensis locus*, résidence ordinaire du préfet de la flottille entretenue par les vainqueurs des Gaules sur les bords de la Somme : les monuments anciens, découverts sur les bords du Crotoy, semblent venir à l'appui de cette opinion. Toutefois, comme la petite ville de Rue, le Crotoy ne commence à figurer dans l'histoire qu'au moyen âge. C'étoit alors un port qui avoit quelque importance; il fournit de bons matelots à Philippe de Valois, lors du fatal combat naval de l'Écluse; et, plus tard, le bâtard de Rubempré s'y embarqua pour Gorcum, dans l'intention de s'emparer du comte de Charolois : expédition malheureuse qui donna lieu à une guerre sanglante entre Louis XI et le duc de Bourgogne.

Il ne reste que quelques pans de murs et le pied de la tour du château du Crotoy, qui ressembloit à la Bastille. Jacques de Harcourt, partisan du dauphin, s'empara de ce château sur les Anglois, en 1422, et ne le leur rendit qu'après une capitulation honorable, dont le premier ar-





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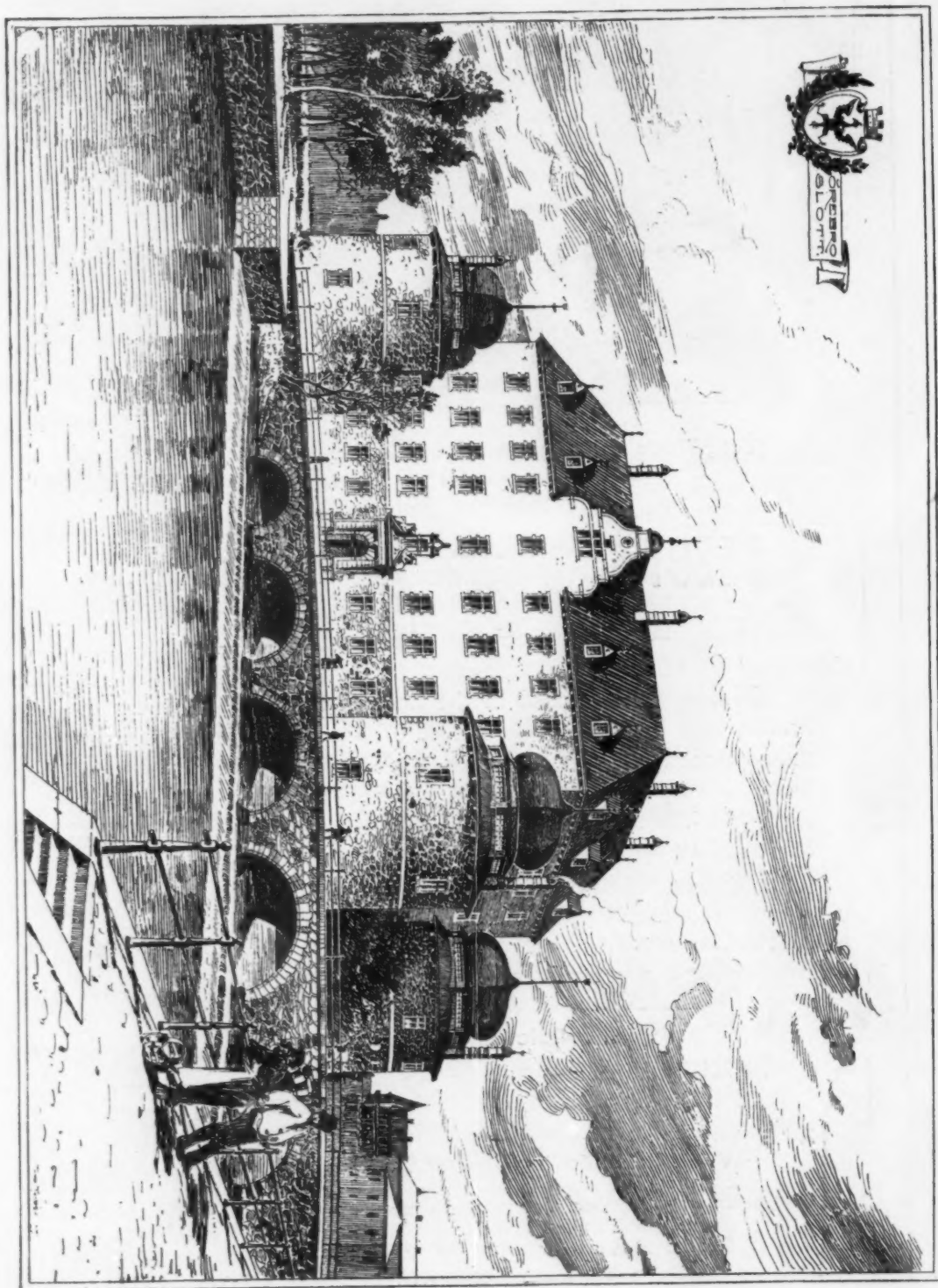
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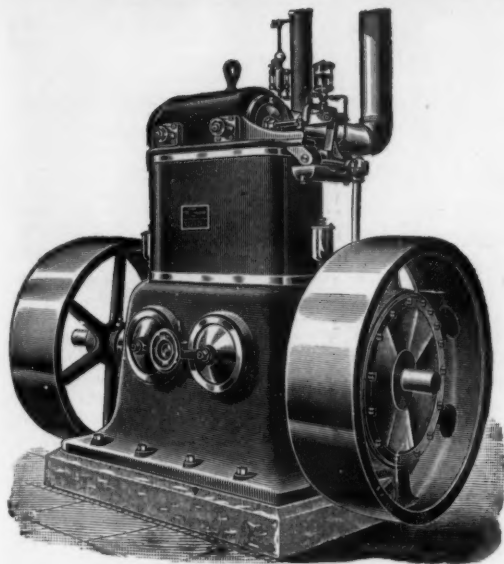


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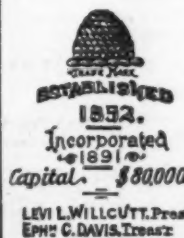
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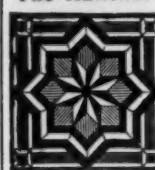
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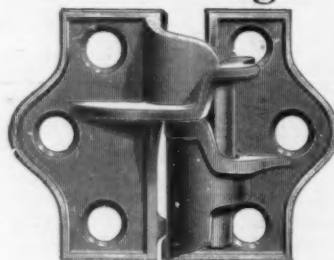
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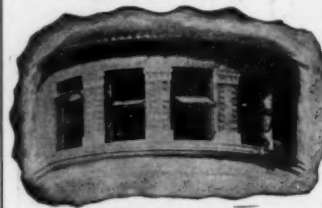
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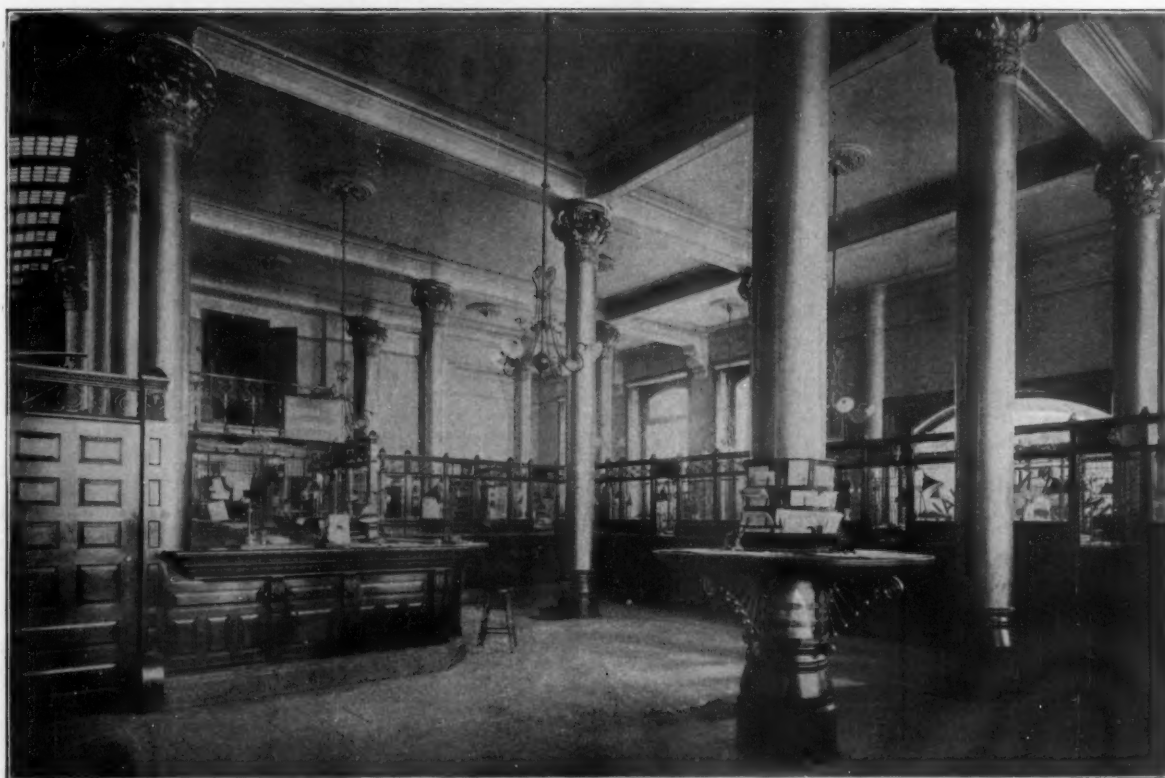
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| Planed.....                           | 50 @ 6 00           | @ 75          | 1 00 @ 1 25                           |                   |
| <b>Marble: (\$ cu. ft.)</b>           |                     |               |                                       |                   |
| Leo, Mass.....                        |                     | 1 75 @ 2 50   | Not sold.                             | 2 00 @ 2 50       |
| Rutland, white and blue.....          |                     | @ 3 00        | 3 50 @ 6 00                           | 2 00 @ 3 00       |
| Sutherland Falls.....                 | 1 25 @ 1 75         | @ 2 00        | 3 50 @ 6 00                           | 1 70 @ 3 00       |
| Glens Falls, black.....               |                     |               | Not sold.                             | 4 00 @ 4 50       |
| Italian, blue-veined.....             |                     |               | @ 4 40                                | 2 50 @ 2 75       |
| " Sienna.....                         |                     |               | Not sold.                             | @ 5 00            |
| Tennessee, red.....                   |                     |               | @ 4 40                                | 4 00 @ 5 00       |
| " Knoxville.....                      |                     |               | @ 4 40                                | 3 00 @ 4 00       |
| Pennsylvania, blue.....               |                     |               | Not sold.                             | 2 00 @ 3 00       |
| Vermont, white.....                   |                     |               | 3 50 @ 6 00                           | 2 25 @ 3 00       |
| <b>Slate: Roofing (\$ square)</b>     |                     |               |                                       |                   |
| Green.....                            | 5 00 @ 6 00         | 4 75 @ 5 25   | 3 75 @ 5 00                           | 2 90 @ 3 80       |
| " unfading.....                       | 5 00 @ 6 00         | 5 50 @ 6 50   | 5 25 @ 6 00                           | 4 25 @ 5 00       |
| Purple.....                           | 5 00 @ 6 00         | 5 50 @ 6 50   | 5 25 @ 6 00                           | 4 50 @ 5 50       |
| Red.....                              | @ 10 00             | 10 00 @ 11 00 | 10 50 @ 12 50                         | 11 50 @ 13 00     |
| Black, Lehigh.....                    | 4 25 @ 4 75         | @             | 4 50 @ 5 50                           | 4 00 @ 4 35       |
| " Chapmans.....                       |                     |               | 5 30 @ 6 15                           | 4 50 @ 5 00       |
| Genuine Bangor.....                   | 4 35 @ 5 50         | 4 75 @ 5 90   | 5 25 @ 6 10                           | 4 35 @ 5 50       |
| Unfading black.....                   | 6 00 @ 8 50         | 6 00 @ 8 50   | 4 25 @ 8 95                           | 6 50 @ 9 00       |
| ".....                                | 5 50 @ 8 00         | 5 50 @ 8 00   | 5 50 @ 9 20                           | 6 50 @ 9 00       |
| Tiles, Am..... P M.....               |                     | @             | Salt-glazed tiles                     | 5 75 @ 6 25       |
| N. Peach Bottom, war unfading         |                     | @             | 9" sq. per ft.                        | 8 00 @            |
| Fire Clay Roof Tile on cars at fac.   | 8 00 @              | 8 00 @        | 6 00 @ 6 50                           |                   |
| <b>LUMBER. — P M.</b>                 |                     |               |                                       |                   |
| <b>Boards: (Ordinary dimensions.)</b> |                     |               |                                       |                   |
| Pine, 1st quality, clear.....         | 55 00 @ 75 00       | 55 00 @ 70 00 | 50 00 @ 60 00                         | 47 50 @ 60 00     |
| " 2d quality.....                     | 55 00 @ 60 00       | 42 00 @ 50 00 | 42 00 @ 50 00                         | 38 00 @ 45 50     |
| " 3d quality.....                     | 18 00 @ 22 00       | 20 00 @ 40 00 | 20 00 @ 28 00                         | 27 50 @ 36 50     |
| Spruce.....                           | @ 25 00             | 11 00 @ 17 00 | Not sold.                             | 15 00 @ 21 50     |
| Hemlock.....                          | 20 @ 14             | 12 00 @ 14 00 | 10 00 @ 12 00                         | 11 50 @ 13 75     |
| Yellow pine.....                      | 20 @ 40             | 20 00 @ 35 00 | 18 00 @ 25 00                         | 14 00 @ 20 00     |
| Cypress.....                          | @                   | 28 00 @ 40 00 | 30 00 @ 35 00                         | 30 00 @ 38 00     |
| <b>Clapboards:</b>                    |                     |               |                                       |                   |
| Pine.....                             | @                   | 38 00 @ 50 00 | 25 00 @ 30 00                         | 14 00 @ 25 00     |
| Spruce.....                           | @                   | 24 00 @ 35 00 | Not sold.                             | Not sold.         |
| <b>Framing Timber:</b>                |                     |               |                                       |                   |
| Pine.....                             | 14 00 @ 18 00       | 14 50 @ 16 00 | 15 00 @ 25 00                         | 25 00 @ 37 30     |
| Hemlock.....                          | 12 00 @ 16 00       | 12 50 @ 15 00 | Not sold.                             | 15 00 @ 21 50     |
| Yellow pine.....                      | 18 00 @ 21 00       | 17 00 @ 25 00 | 10 00 @ 15 00                         | 14 00 @ 20 00     |
| ".....                                | @                   |               | 16 00 @ 25 00                         | 22 50 @ 30 00     |
| <b>Laths:</b>                         |                     |               |                                       |                   |
| Pine..... Round Wood                  | 1 55 @ 1 65         | 2 25 @ 2 50   | 1 90 @ 2 00                           | 2 75 @ 3 00       |
| Spruce..... Slab.....                 | 1 60 @ 1 70         | 1 80 @ 2 25   | Not sold.                             | 2 30 @ 2 35       |
| <b>Shingles:</b>                      |                     |               |                                       |                   |
| Pine, shayed..... P M.....            | 5 00 @ 6 00         | @             | Not sold.                             |                   |
| ".....                                | 4 00 @ 5 00         | @ 4 50        | 2 60 @ 2 75                           |                   |
| Spruce, sawed.....                    | 1 50 @ 2 00         | 1 50 @ 1 75   | Not sold.                             |                   |
| Redwood..... P 125.....               | 1 40 @ 1 60         | 3 00 @ 3 75   | 4 60 @ 6 00                           | (30" \$35 @ 40    |
| Cedar split..... P M.....             | @                   | @ 6 00        | Not sold.                             | 24" 8 @ 21        |
| Cedar sawed.....                      | @                   | 2 00 @ 3 25   | 2 50 @ 2 90                           | 30" 35 @ 14       |
| Cypress. Split..... P M.....          | 18 00 @ 20 00       | 5 00 @ 6 00   | @                                     | 11 00 @ 14 00     |



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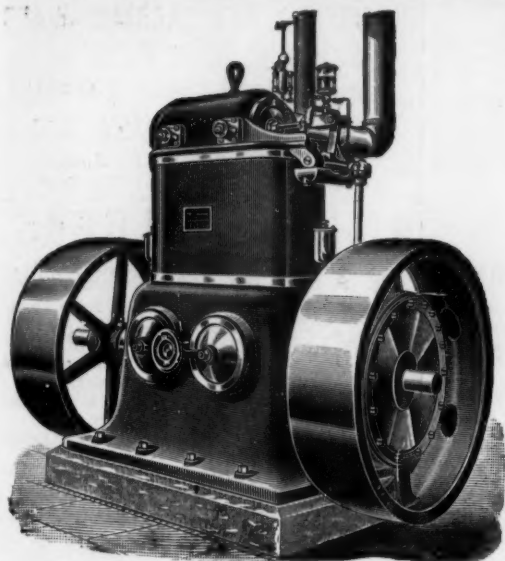


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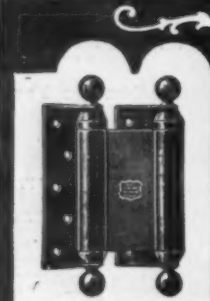
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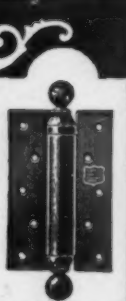
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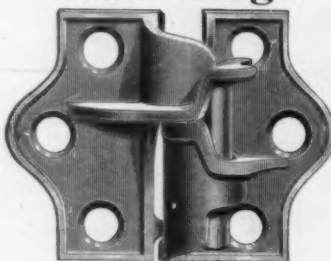
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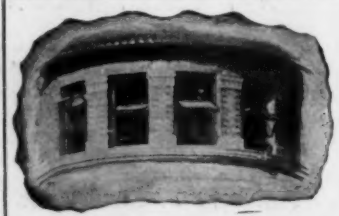
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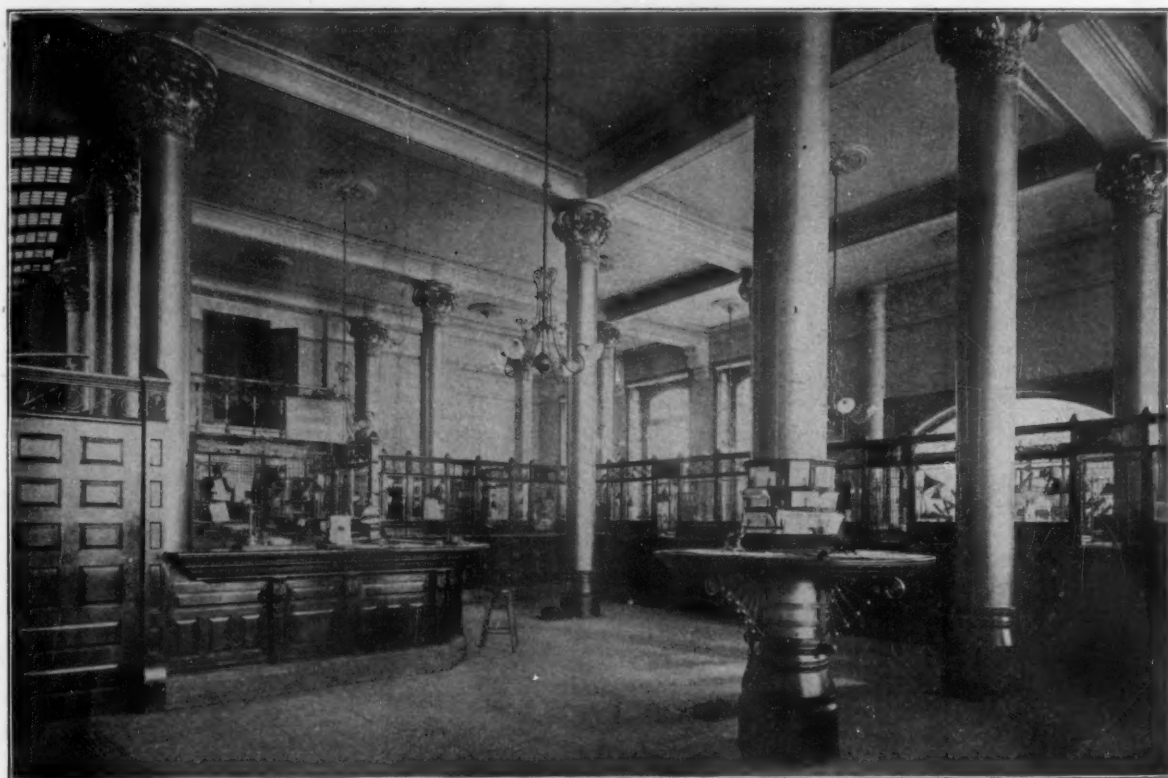
|                                       | New York.      | Boston.        | Chicago.          | Philadelphia.     |
|---------------------------------------|----------------|----------------|-------------------|-------------------|
| <b>STONE. (P cubic foot, rough.)</b>  |                |                |                   |                   |
| <b>Foundation:</b>                    |                |                |                   |                   |
| Dimension.....                        | 5 00 P ton.    | 20 @ foot      | 10 00 @ cord      | 5 00              |
| Block.....                            | 4 60 P perch.  | 10 00 @ cord   | 9 00 @ "          | Conschocken       |
| Rubble.....                           | 1 25 @ 1 50    |                |                   | 1 45 @ 2 50       |
| <b>Sandstone:</b>                     |                |                |                   |                   |
| Longmeadow.....                       | 80 @ 90        | 80 @ 90        |                   | 95 @ 1 05         |
| Kibbe.....                            | 90 @ 1 10      | 90 @ 1 10      |                   | 1 05 @ 1 25       |
| Brown (Connecticut).....              | 1 00 @ 1 30    | 1 00 @ 1 30    | 1 50 P cub. ft.   | 85 @ 95           |
| Amherst Ohio.....                     | 90 @ 95        | 90 @ 1 00      | 45 @ 55           | 85 @ 95           |
| Berea.....                            | 75 @ 1 00      | 85 @ 90        | 45 @ 55           | 85 @ 95           |
| Berlin.....                           | 75 @ 1 00      | 80 @ 90        | 45 @ 55           | 85 @ 95           |
| Bellville.....                        | 80 @ 1 25      | 25 @ 1 35      | Not sold.         | 1 00 @ 1 10       |
| New Brunswick (Dorchester).....       | 1 00 @ 1 25    | 75 @ 90        | Not sold.         | 1 05 @ 1 15       |
| Potdam Red.....                       | 1 30 @         | 1 40 @         | 1 55 @            | 1 40 @            |
| Caen.....                             | 2 00 @         | 2 00 @         | 1 25 @ 1 35       | 1 25 @ 1 35       |
| Carlisle, English.....                | 1 05 @         | 1 05 @         | 95 @ 1 05         | 95 @ 1 05         |
| Corse Hill (Scotch).....              | 1 05 @         | 1 05 @         | 95 @ 1 05         | 95 @ 1 05         |
| <b>Granite: (Maine)</b>               |                |                |                   |                   |
| <b>Limestone:</b>                     |                |                |                   |                   |
| Bedford.....                          | 45 @ 1 25      | 95 @ 1 00      | 20 @ 40           | 75 @ 85           |
| Joliet.....                           | 1 00 @         |                |                   | Richmond          |
| Lemont.....                           |                |                |                   | P 75 @ 1 50       |
| Serpentine.....                       |                | 10 50 per ton. |                   | P 4 50 @ 5 50     |
| <b>Bluestone: (P sq. ft.)</b>         |                |                |                   |                   |
| Sidewalk.....                         | 30 @ 5 00      | 40 @ 1 75      | 1 00 @ cub. ft.   | 1 in. th. 10 @ 25 |
| Planed.....                           | 50 @ 6 00      | 75 @           | 1 00 @ 1 25       | 37 @ 50           |
| <b>Marble: (P cu. ft.)</b>            |                |                |                   |                   |
| Lee, Mass.....                        | 1 75 @ 2 50    | 1 75 @ 2 50    | Not sold.         | 2 00 @ 2 50       |
| Rutland, white and blue.....          | 3 00 @         | 3 00 @         | 3 50 @ 6 00       | 2 00 @ 3 00       |
| Sutherland Falls.....                 | 1 25 @ 1 75    | 2 00 @         | 3 50 @ 6 00       | 1 70 @ 3 00       |
| Glens Falls, black.....               |                |                | Not sold.         | 4 00 @ 4 50       |
| Italian, blue-veined.....             |                |                | 4 40 @            | 2 50 @ 2 75       |
| "Sienna.....                          |                |                | Not sold.         | 5 00 @            |
| Tennessee, red.....                   |                |                | 4 40 @            | 4 00 @ 6 00       |
| "Knoxville.....                       |                |                | 4 40 @            | 3 00 @ 4 00       |
| Pennsylvania, blue.....               |                |                | Not sold.         | 2 00 @ 3 00       |
| Vermont, white.....                   |                |                | 3 50 @ 6 00       | 2 25 @ 3 00       |
| <b>Slate: Roofing (P square)</b>      |                |                |                   |                   |
| Green.....                            | 5 00 @ 6 00    | 4 75 @ 5 25    | 3 75 @ 5 00       | 2 90 @ 3 60       |
| "unfading.....                        | 5 00 @ 6 00    | 5 50 @ 6 50    | 5 25 @ 6 00       | 5 25 @ 6 00       |
| Purple.....                           | 5 00 @ 6 00    | 5 50 @ 6 50    | 5 25 @ 6 00       | 4 50 @ 5 50       |
| Red.....                              | 10 00 @        | 10 00 @ 11 00  | 10 50 @ 12 50     | 11 50 @ 13 00     |
| Black, Lehigh.....                    | 4 25 @ 4 75    |                | 4 50 @ 5 50       | 4 00 @ 4 35       |
| "Chapmans.....                        | 4 35 @ 5 50    | 4 75 @ 5 90    | 5 30 @ 6 15       | 4 50 @ 5 00       |
| Genuine Bangor.....                   | 6 00 @ 8 50    | 6 00 @ 8 50    | 5 25 @ 6 50       | 4 35 @ 5 50       |
| Unfading black.....                   | 5 50 @ 8 00    | 5 50 @ 8 00    | 4 25 @ 8 85       | 6 50 @ 9 00       |
| ".....                                |                |                | 5 50 @ 9 20       | 6 50 @ 9 00       |
| Tiles, Am.... P M.....                |                |                | Salt-glazed tiles | 5 75 @ 6 25       |
| N. Peach Bottom, war, unfading        |                |                | 9" sq. per ft.    | 8 00 @            |
| Fire Clay Roof Tile on cars at fac.   | 8 00 @         | 8 00 @         | 6 00 @ 6 50       |                   |
| <b>LUMBER. — P M.</b>                 |                |                |                   |                   |
| <b>Boards: (Ordinary dimensions.)</b> |                |                |                   |                   |
| Pine, 1st quality, clear.....         | 65 00 @ 75 00  | 55 00 @ 70 00  | 50 00 @ 60 00     | 47 50 @ 60 00     |
| " 2d quality.....                     | 55 00 @ 60 00  | 42 00 @ 50 00  | 42 00 @ 50 00     | 38 00 @ 48 50     |
| " 3d quality.....                     | 18 00 @ 22 00  | 20 00 @ 40 00  | 20 00 @ 28 00     | 27 50 @ 36 50     |
| Spruce.....                           | 25 00 @        | 12 00 @ 17 00  | Not sold.         | 15 00 @ 21 50     |
| Hemlock.....                          | ea 13 1/2 @ 14 | 12 00 @ 14 00  | 10 00 @ 12 00     | 11 50 @ 13 75     |
| Yellow pine.....                      | 20 @ 40        | 20 00 @ 35 00  | 18 00 @ 25 00     | 14 00 @ 29 00     |
| Cypress.....                          |                | 28 00 @ 40 00  | 30 00 @ 35 00     | 30 00 @ 38 00     |
| <b>Clapboards:</b>                    |                |                |                   |                   |
| Pine.....                             |                | 38 00 @ 50 00  | 25 00 @ 30 00     | 14 00 @ 25 00     |
| Spruce.....                           |                | 24 00 @ 35 00  | Not sold.         | Not sold.         |
| <b>Framing Timber:</b>                |                |                |                   |                   |
| Pine.....                             | 14 00 @ 18 00  | 14 50 @ 16 00  | 15 00 @ 25 00     | 25 00 @ 37 30     |
| Spruce.....                           | 12 00 @ 16 00  | 12 50 @ 15 00  | Not sold.         | 15 00 @ 21 50     |
| Hemlock.....                          | 18 00 @ 21 00  | 17 00 @ 25 00  | 10 00 @ 15 00     | 14 00 @ 20 00     |
| Yellow pine.....                      |                |                | 16 00 @ 25 00     | 22 50 @ 30 00     |
| <b>Planks:</b>                        |                |                |                   |                   |
| Pine..... Round Wood                  | 1 50 @ 1 60    | 2 00 @ 2 50    | 1 90 @ 2 00       | 2 75 @ 3 00       |
| Spruce..... Slab.                     | 1 60 @ 1 70    | 1 80 @ 2 25    | Not sold.         | 2 80 @ 2 85       |
| <b>Shingles:</b>                      |                |                |                   |                   |
| Pine, shaved..... P M.....            | 5 00 @ 6 00    |                | Not sold.         |                   |
| Pine, sawed..... "                    | 4 00 @ 5 00    |                | 2 60 @ 2 75       |                   |
| Spruce, sawed..... "                  | 1 50 @ 2 00    | 1 50 @ 1 75    | Not sold.         |                   |
| Redwood..... P 125.                   | 1 40 @ 1 60    | 3 00 @ 3 75    | 4 00 @ 6 00       | 30" \$35 @ 40     |
| Cedar split..... P M.....             |                | 6 00 @         | Not sold.         | 24" 8 @ 21        |
| Cedar sawed..... "                    |                | 2 00 @ 3 25    | 2 50 @ 2 90       | 20" 35 @ 14       |
| Cypress, Split..... P 24 "            | 18 00 @ 20 00  | 5 00 @ 6 00    |                   | 11 00 @ 14 00     |



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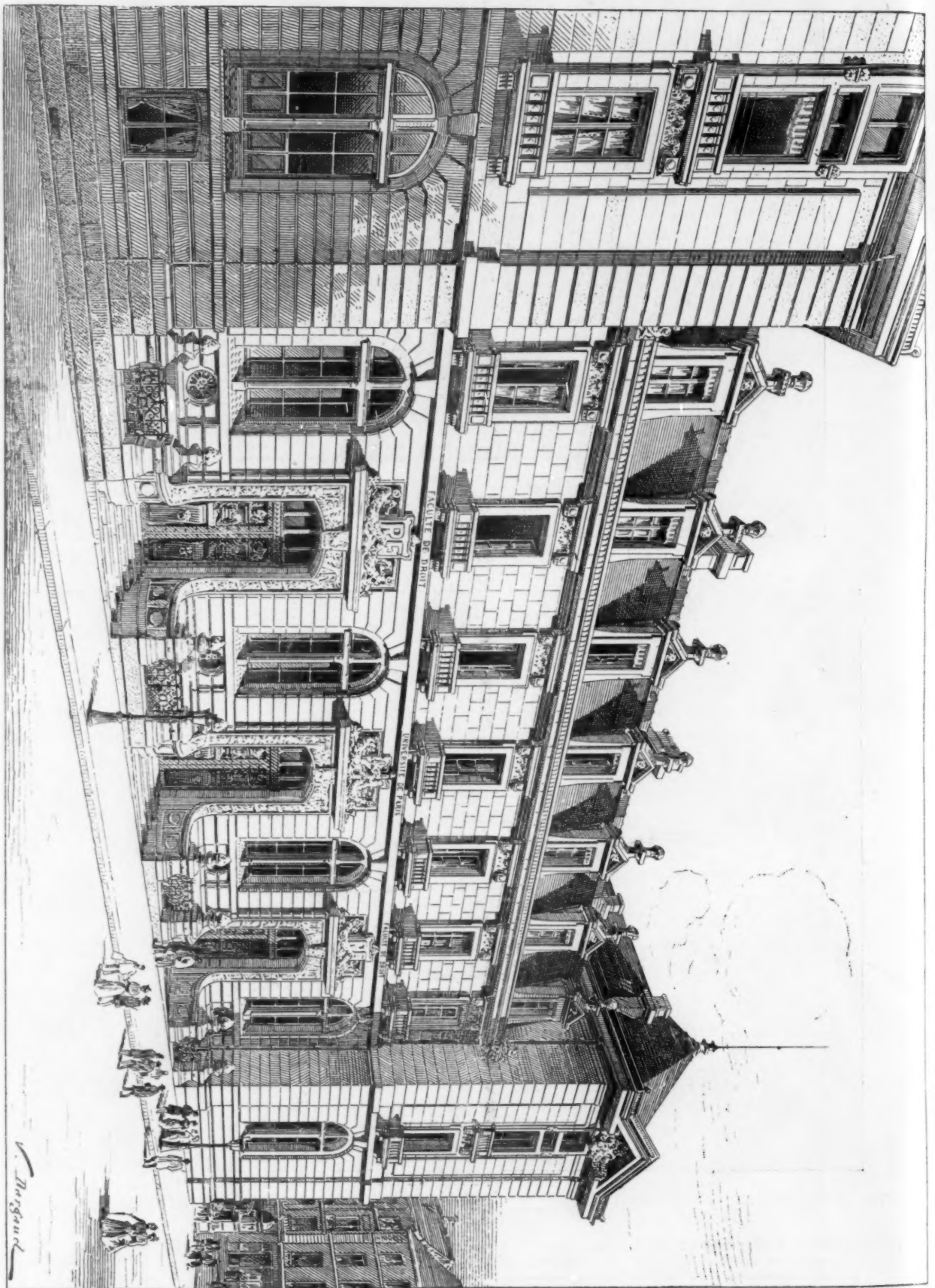
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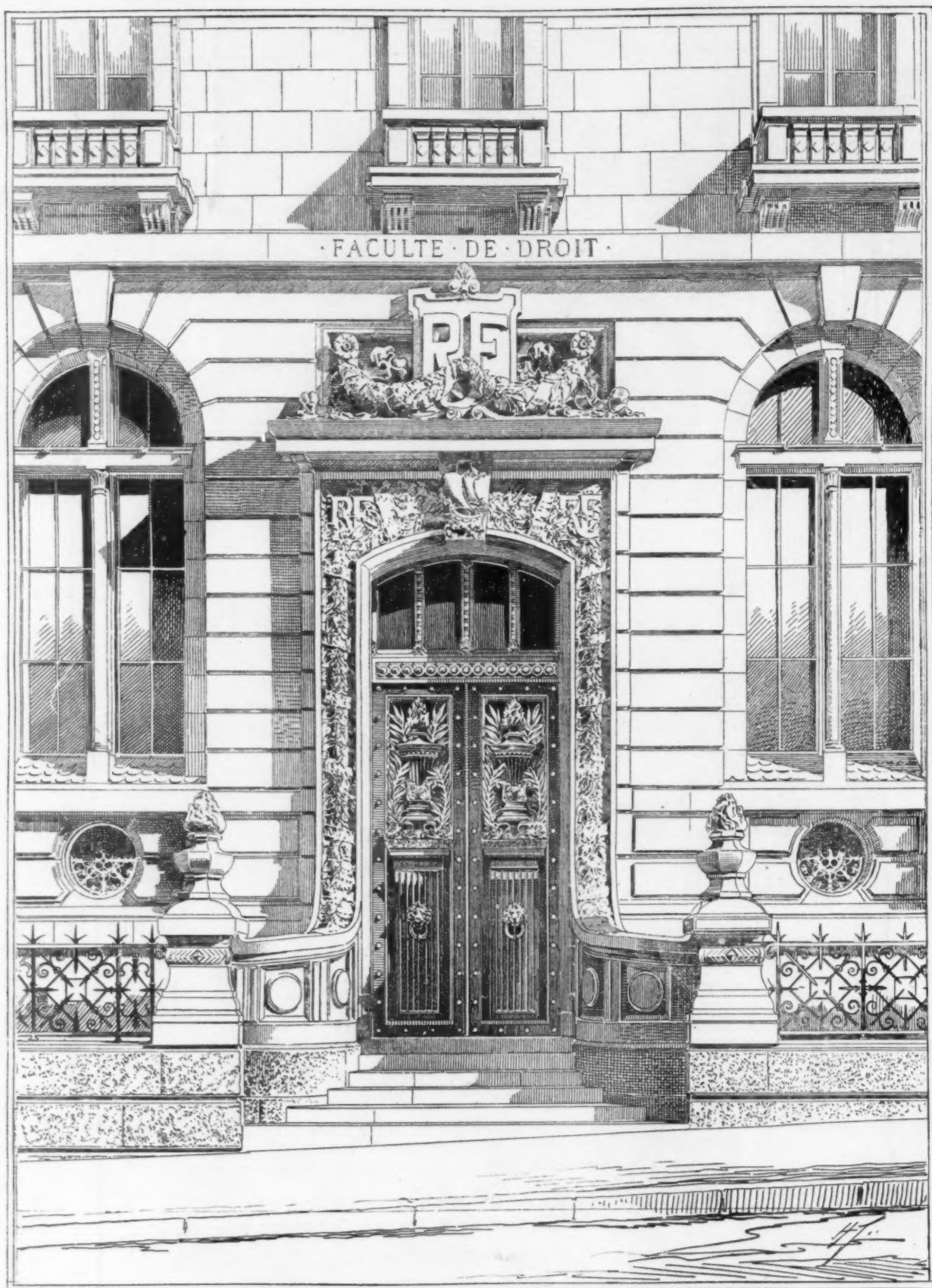
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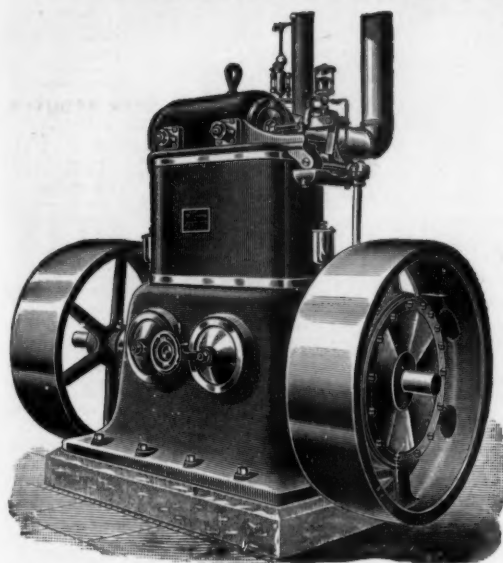


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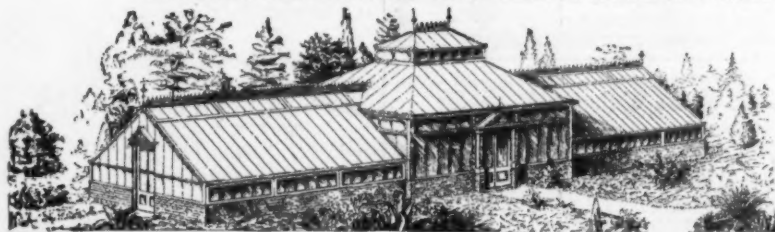
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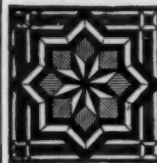
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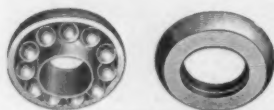
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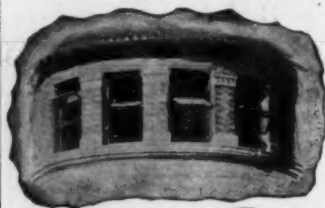
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| Rubble.....                           | 1 25 @ 1 50         | 9 00 @ "                              | 1 45 @ 2 50       |
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| Longmeadow.....                       | 80 @ 90             |                                       | 95 @ 1 05         |
| Kibbe.....                            | 90 @ 1 10           |                                       | 1 05 @ 1 25       |
| Brown (Connecticut).....              | 1 00 @ 1 30         | 1 50 P cub. ft.                       | 85 @ 95           |
| Amherst Ohio.....                     | 90 @ 1 00           | 45 @ 55                               | 55 @ 75           |
| Berea.....                            | 85 @ 90             | 45 @ 55                               | 85 @ 95           |
| Berlin.....                           | 75 @ 1 00           | 45 @ 55                               | 1 00 @ 1 10       |
| Bellville.....                        | 80 @ 1 25           | @ 1 25                                | 1 05 @ 1 15       |
| New Brunswick (Dorchester).....       | 75 @ 90             | Not sold.                             | @ 1 40            |
| Potdam Red.....                       | 1 00 @ 1 30         | @ 1 50                                | 1 25 @ 1 35       |
| Caen.....                             | @ 1 05              | @ 1 05                                | 95 @ 1 05         |
| Carlisle, English.....                | @ 1 05              | @ 1 05                                | 55 @ 65           |
| Corse Hill (Scotch).....              | @ 1 05              | @ 60                                  |                   |
| <b>Granite: (Maine)</b>               |                     |                                       |                   |
| <b>Limestone:</b>                     |                     |                                       |                   |
| Bedford.....                          | 45 @ 1 25           | 95 @ 1 00                             | 20 @ 40           |
| Joliet.....                           | 1 00                |                                       | @                 |
| Lemont.....                           |                     |                                       | @                 |
| Serpentine.....                       |                     | 10 50 per ton.                        | @                 |
| <b>Bluestone: (P sq. ft.)</b>         |                     |                                       |                   |
| Sidewalk.....                         | 30 @ 5 00           | 40 @ 1 75                             | cub. ft.          |
| Planed.....                           | 50 @ 6 00           | @ 75                                  | 1 00 @ 1 25       |
| <b>Marble: (P cu. ft.)</b>            |                     |                                       | 1 00 @ 1 25       |
| Leo, Mass.....                        | @                   | 1 75 @ 2 50                           | Not sold.         |
| Rutland, white and blue.....          | @                   | @ 3 00                                | 3 50 @ 6 00       |
| Sutherland Falls.....                 | 1 25 @ 1 75         | @ 2 00                                | 3 50 @ 6 00       |
| Glens Falls, black.....               | @                   | @                                     | Not sold.         |
| Italian, blue-veined.....             | @                   | @                                     | @ 4 40            |
| " Sienna.....                         | @                   | @                                     | Not sold.         |
| Tennessee, red.....                   | @                   | @                                     | @ 4 40            |
| " Knoxville.....                      | @                   | @                                     | Not sold.         |
| Pennsylvania, blue.....               | @                   | @                                     | 3 50 @ 6 00       |
| Vermont, white.....                   | @                   | @                                     |                   |
| <b>State: Roofing (P square)</b>      |                     |                                       |                   |
| Green.....                            | 5 00 @ 6 00         | 4 75 @ 5 25                           | 3 75 @ 5 00       |
| " unfading.....                       | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       |
| Purple.....                           | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       |
| Red.....                              | @ 10 00             | 10 00 @ 11 00                         | 10 50 @ 12 50     |
| Black, Lehigh.....                    | 4 25 @ 4 75         | @                                     | 4 50 @ 5 50       |
| " Chapmans.....                       | @                   | @                                     | 5 30 @ 6 15       |
| Genuine Bangor.....                   | 4 35 @ 5 50         | 4 75 @ 5 90                           | 5 25 @ 6 50       |
| Unfading black.....                   | 6 00 @ 8 50         | 6 00 @ 8 50                           | 4 25 @ 8 95       |
| ".....                                | 5 50 @ 8 00         | 5 50 @ 8 00                           | 5 50 @ 9 20       |
| Tiles, Am..... P M.                   | @                   | @                                     | Not sold.         |
| N. Peach Bottom, war. unfading        | @                   | @                                     | Salt-glazed tiles |
| Fire Clay Roof Tile on cars at fac.   | 8 00 @              | 8 00 @                                | 9" 8c. per ft.    |
| <b>LUMBER.—P M.</b>                   |                     |                                       | 6 00 @ 6 50       |
| <b>Boards: (Ordinary dimensions.)</b> |                     |                                       |                   |
| Pine, 1st quality, clear.....         | 65 00 @ 75 00       | 55 00 @ 70 00                         | 50 00 @ 60 00     |
| " 2d qual ty.....                     | 55 00 @ 60 00       | 42 00 @ 50 00                         | 42 00 @ 50 00     |
| " 3d quality.....                     | 18 00 @ 22 00       | 20 00 @ 40 00                         | 20 00 @ 28 00     |
| Spruce.....                           | @ 25 00             | 12 00 @ 17 00                         | Not sold.         |
| Hemlock.....                          | ea134 @ 14          | 12 00 @ 14 00                         | 10 00 @ 12 00     |
| Yellow pine.....                      | 20 @ 40             | 20 00 @ 35 00                         | 18 00 @ 25 00     |
| Cypress.....                          | @                   | 28 00 @ 40 00                         | 30 00 @ 35 00     |
| <b>Clapboards:</b>                    |                     |                                       |                   |
| Pine.....                             | @                   | 38 00 @ 50 00                         | 25 00 @ 30 00     |
| Spruce.....                           | @                   | 24 00 @ 35 00                         | Not sold.         |
| <b>Framing Timber:</b>                |                     |                                       |                   |
| Pine.....                             | 14 00 @ 18 00       | 14 50 @ 16 00                         | 15 00 @ 25 00     |
| Spruce.....                           | 12 00 @ 16 00       | 12 50 @ 15 00                         | Not sold.         |
| Hemlock.....                          | 18 00 @ 21 00       | 17 00 @ 25 00                         | 10 00 @ 15 00     |
| Yellow pine.....                      | @                   | @                                     | 16 00 @ 25 00     |
| <b>Laths:</b>                         |                     |                                       |                   |
| Pine..... Round Wood                  | @                   | 2 00 @ 2 50                           | 1 90 @ 2 00       |
| Spruce..... Slab.....                 | @ 1 65              | 1 80 @ 2 25                           | Not sold.         |
| <b>Shingles:</b>                      |                     |                                       |                   |
| Pine, shaved..... P M.                | 5 00 @ 6 00         | @                                     | Not sold.         |
| Pine, sawed.....                      | 4 00 @ 5 00         | @ 4 50                                | 2 00 @ 2 75       |
| Spruce, sawed.....                    | 1 50 @ 2 00         | 1 50 @ 1 75                           | Not sold.         |
| Redwood..... P 125.                   | 1 40 @ 1 60         | 3 00 @ 3 75                           | 4 60 @ 6 00       |
| Cedar split..... P M.                 | @                   | @ 6 00                                | Not sold.         |
| Cedar sawed.....                      | @                   | 2 00 @ 3 25                           | 2 50 @ 2 90       |
| Cypress, Split..... 7 x 34 "          | 18 00 @ 20 00       | 5 00 @ 6 00                           | @                 |

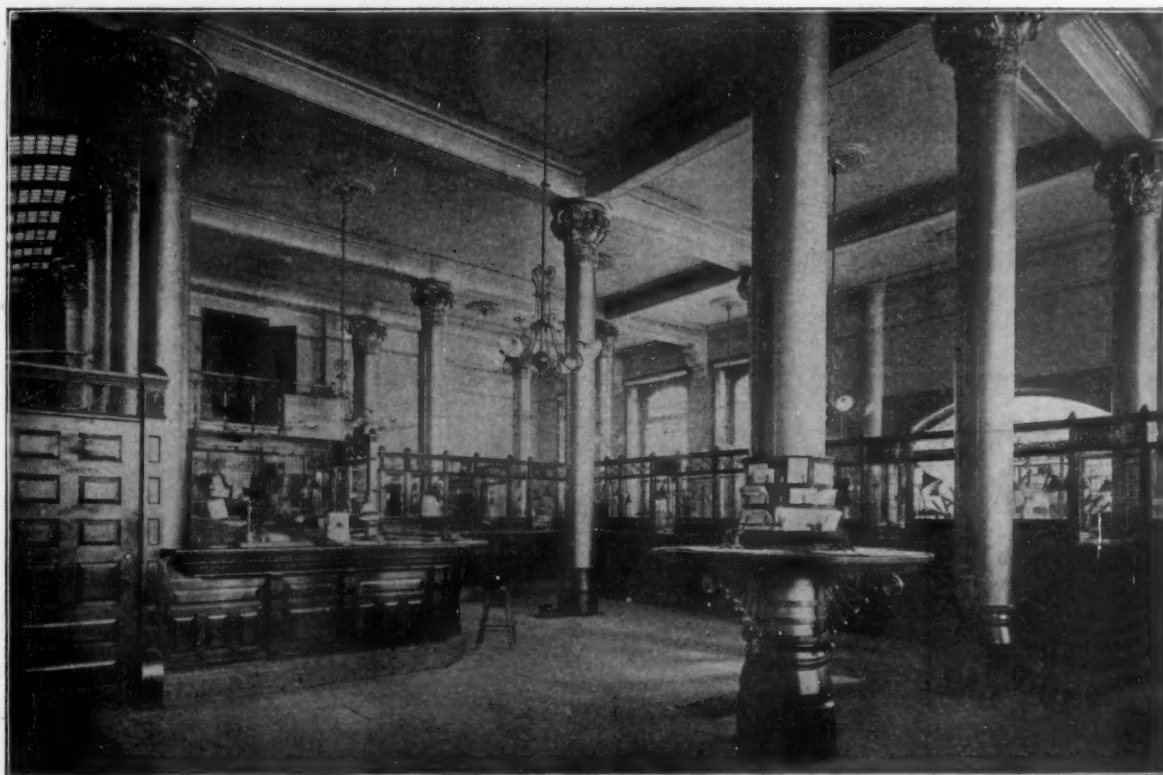
(30" \$35 @ 40  
24" 8 @ 21  
20" 25 @ 14  
11 00 @ 14 00



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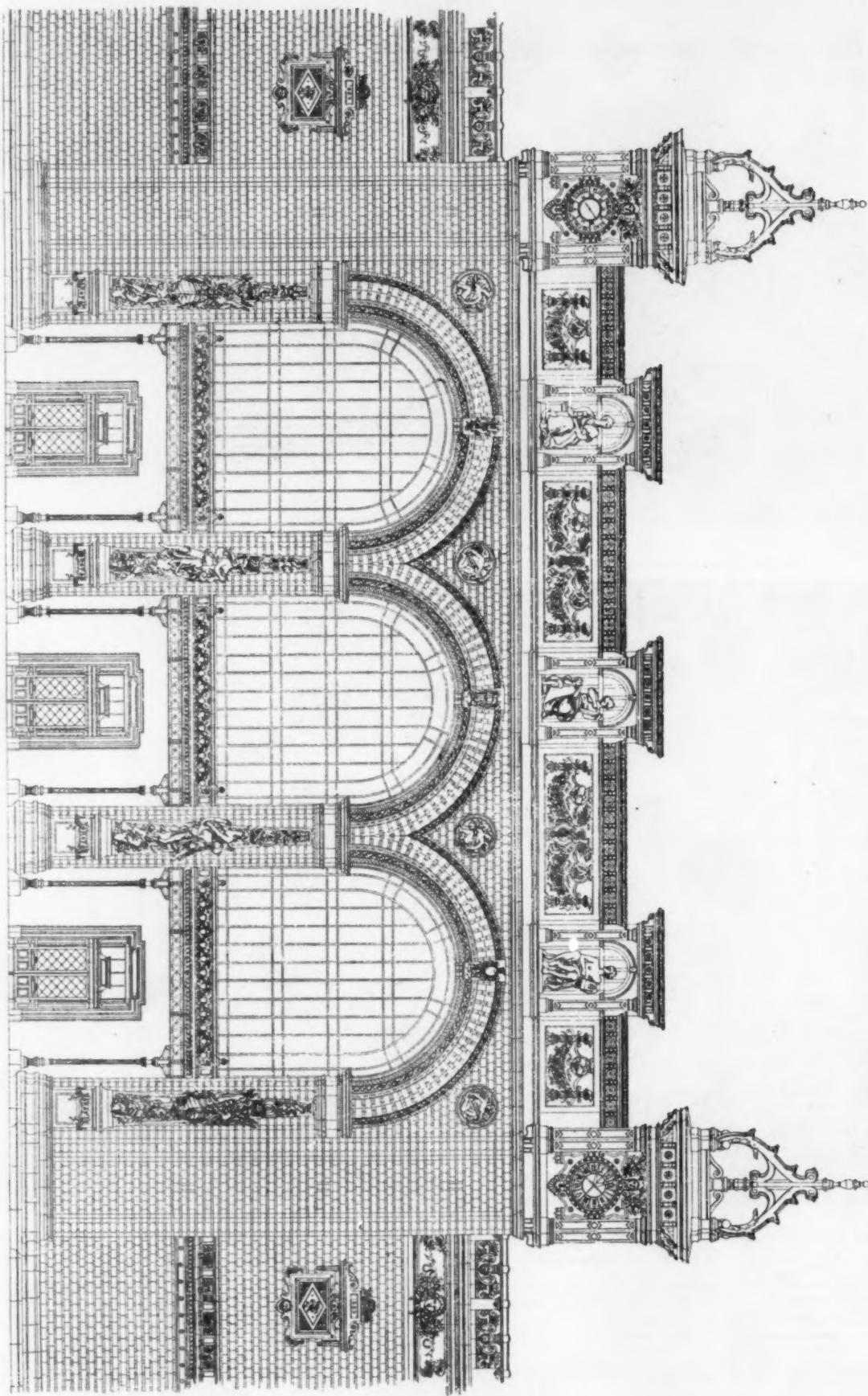
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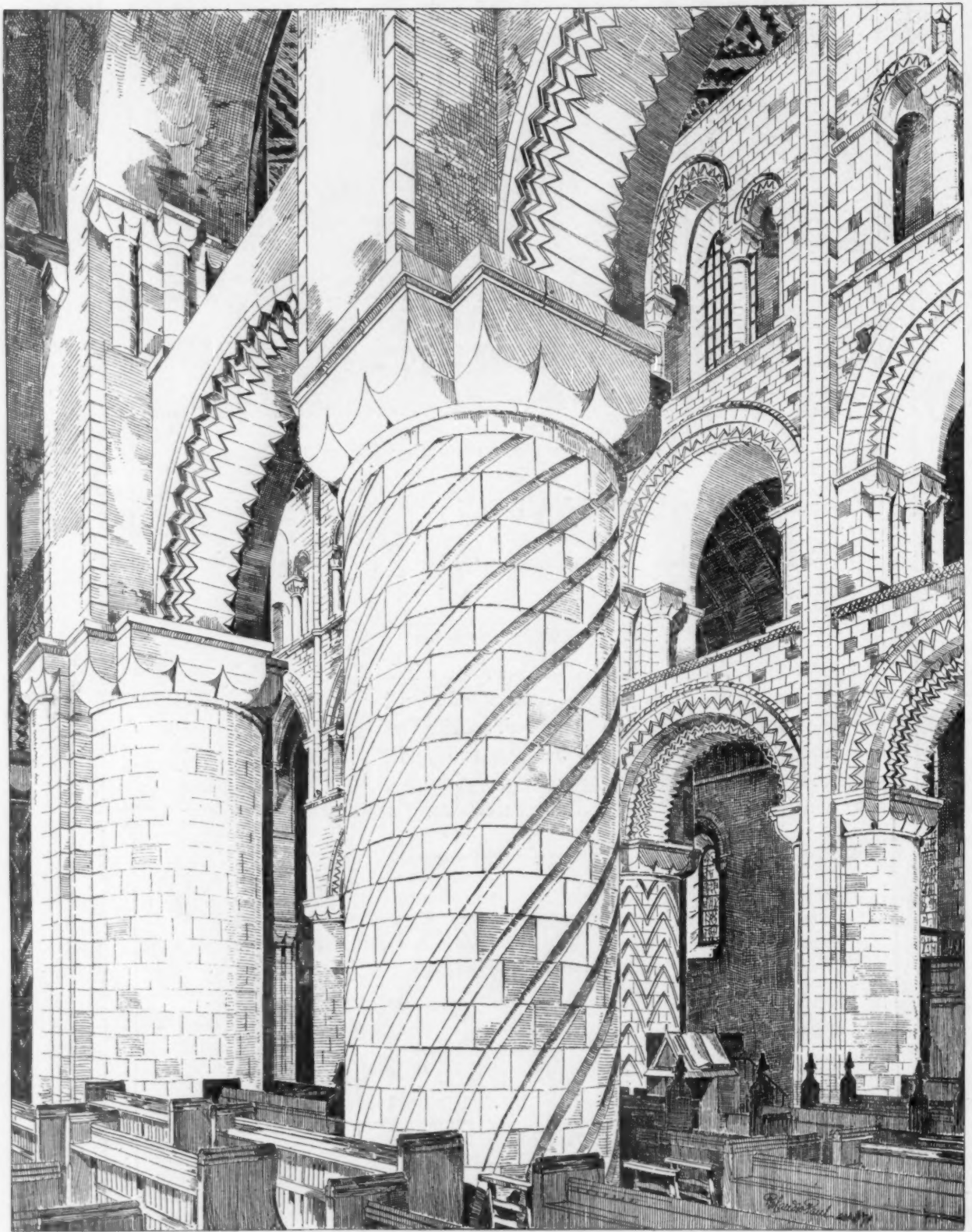
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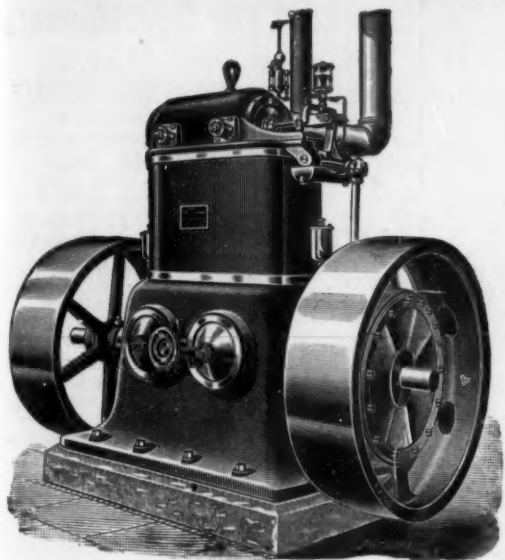


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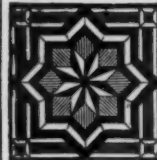
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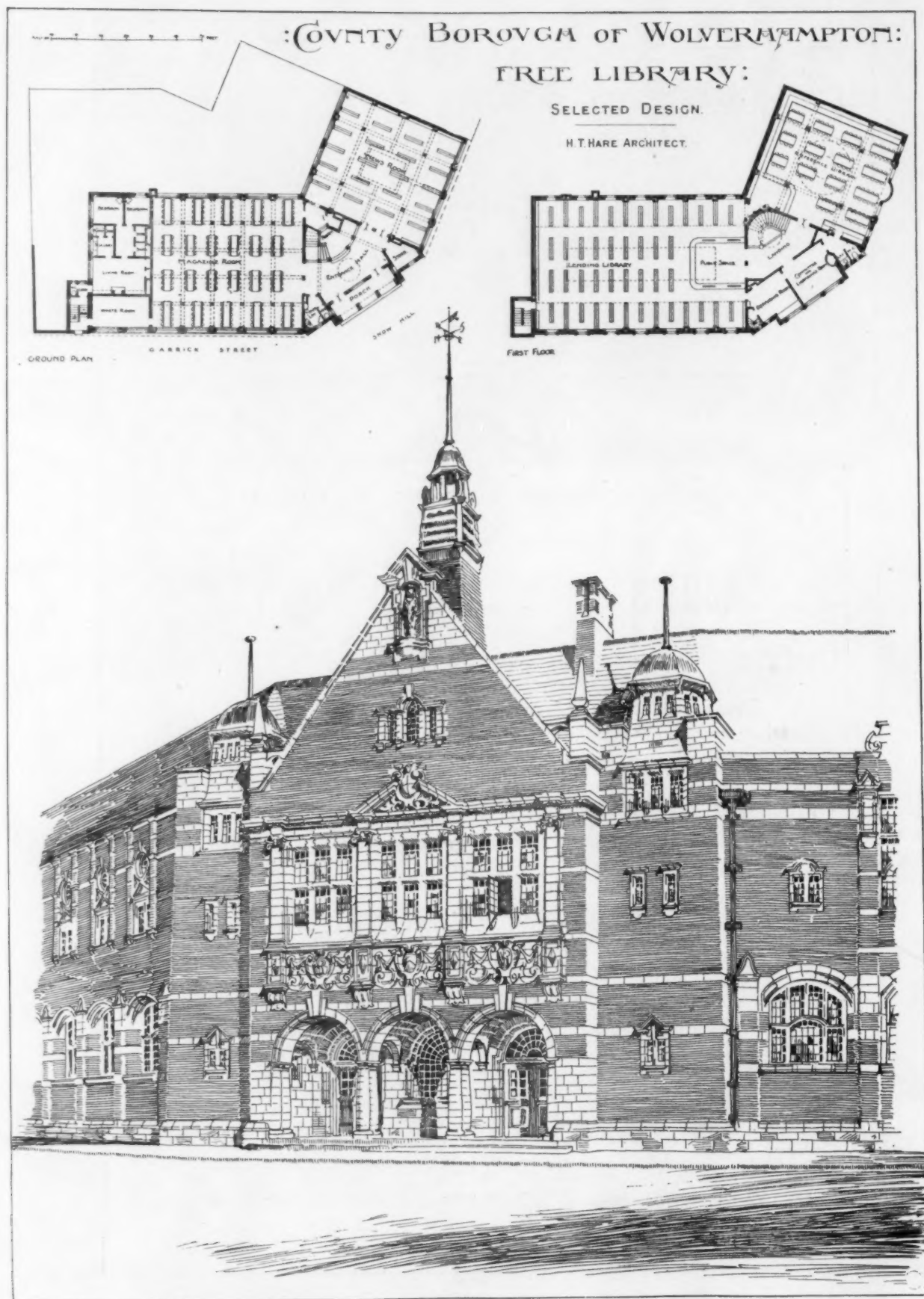
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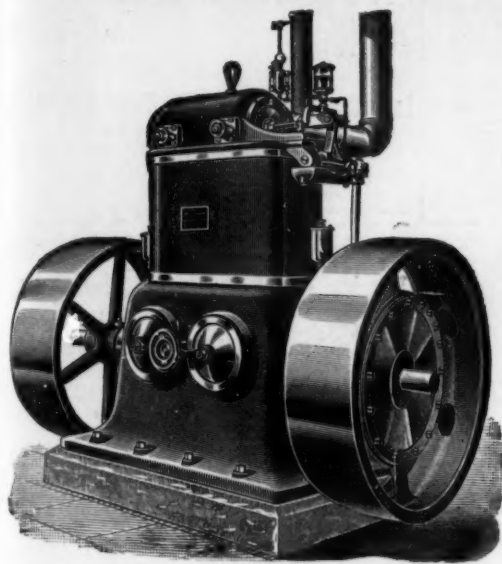
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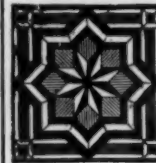
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| Belleville.....                       | 80 @ 1 25           | 1 25                                  | 1 05 @ 1 15   |
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| Potdam Red.....                       | 1 30                | @ 1 55                                | @ 1 40        |
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| Pennsylvania, blue.....               |                     |                                       |               |
| Vermont, white.....                   |                     |                                       |               |
| <b>Slate: Roofing (P square)</b>      |                     |                                       |               |
| Green.....                            | 5 00 @ 6 00         | 4 75 @ 5 25                           |               |
| " unfading.....                       | 5 00 @ 6 00         | 5 50 @ 6 50                           |               |
| Purple.....                           | 5 00 @ 6 00         | 5 50 @ 6 50                           |               |
| Red.....                              | 10 00               | 10 00 @ 11 00                         |               |
| Black, Lehigh.....                    | 4 25 @ 4 75         |                                       |               |
| " Chapman.....                        |                     |                                       |               |
| Genuine Bangor.....                   | 4 35 @ 5 50         | 4 75 @ 5 90                           |               |
| Unfading black.....                   | 6 00 @ 8 50         | 6 00 @ 8 50                           |               |
| ".....                                | 5 50 @ 8 00         | 5 50 @ 8 00                           |               |
| Tiles, Am..... P M.....               |                     |                                       |               |
| N. Peach Bottom, war. unfading        |                     |                                       |               |
| Fire Clay Roof Tile on cars at fac.   | 8 00 @              | 8 00 @                                |               |
| <b>LUMBER.—P M.</b>                   |                     |                                       |               |
| <b>Boards: (Ordinary dimensions.)</b> |                     |                                       |               |
| Pine, 1st quality, clear.....         | 55 00 @ 75 00       | 55 00 @ 70 00                         | 50 00 @ 60 00 |
| " 2d quality.....                     | 55 00 @ 60 00       | 42 00 @ 50 00                         | 42 00 @ 50 00 |
| " 3d quality.....                     | 18 00 @ 22 00       | 20 00 @ 40 00                         | 20 00 @ 28 00 |
| Spruce.....                           | @ 25 00             | 12 00 @ 17 00                         | Not sold.     |
| Hemlock.....                          | 14 @ 14             | 12 00 @ 14 00                         | 10 00 @ 12 00 |
| Yellow pine.....                      | 20 @ 40             | 20 00 @ 35 00                         | 18 00 @ 25 00 |
| Cypress.....                          | @                   | 28 00 @ 40 00                         | 30 00 @ 35 00 |
| <b>Clapboards:</b>                    |                     |                                       |               |
| Pine.....                             | @                   | 38 00 @ 50 00                         | 25 00 @ 30 00 |
| Spruce.....                           | @                   | 24 00 @ 35 00                         | Not sold.     |
| <b>Framing Timber:</b>                |                     |                                       |               |
| Pine.....                             | 14 00 @ 18 00       | 14 50 @ 16 00                         | 15 00 @ 25 00 |
| Hemlock.....                          | 12 00 @ 16 00       | 12 50 @ 15 00                         | Not sold.     |
| Yellow pine.....                      | 18 00 @ 21 00       | 17 00 @ 25 00                         | 10 00 @ 15 00 |
| <b>Laths:</b>                         |                     |                                       |               |
| Pine..... Round Wood                  | @                   | 2 00 @ 2 50                           | 1 90 @ 2 00   |
| Spruce..... Slab.....                 | @ 1 65              | 1 80 @ 2 25                           | Not sold.     |
| <b>Shingles:</b>                      |                     |                                       |               |
| Pine, shaved..... P M.....            | 5 00 @ 6 00         | @                                     | Not sold.     |
| Pine, sawed..... "                    | 4 00 @ 5 00         | @ 4 50                                | 2 60 @ 2 75   |
| Spruce, sawed..... "                  | 1 50 @ 2 00         | 1 50 @ 1 75                           | Not sold.     |
| Redwood..... P 125.                   | 1 40 @ 1 60         | 3 00 @ 3 75                           | 4 60 @ 6 00   |
| Cedar split..... P M.....             | @                   | @ 6 00                                | Not sold.     |
| Cedar sawed..... "                    | @                   | 2 00 @ 3 25                           | 2 50 @ 2 90   |
| Cypress, Split..... 7 x 24 "          | 18 00 @ 30 00       | 5 00 @ 6 00                           | @             |

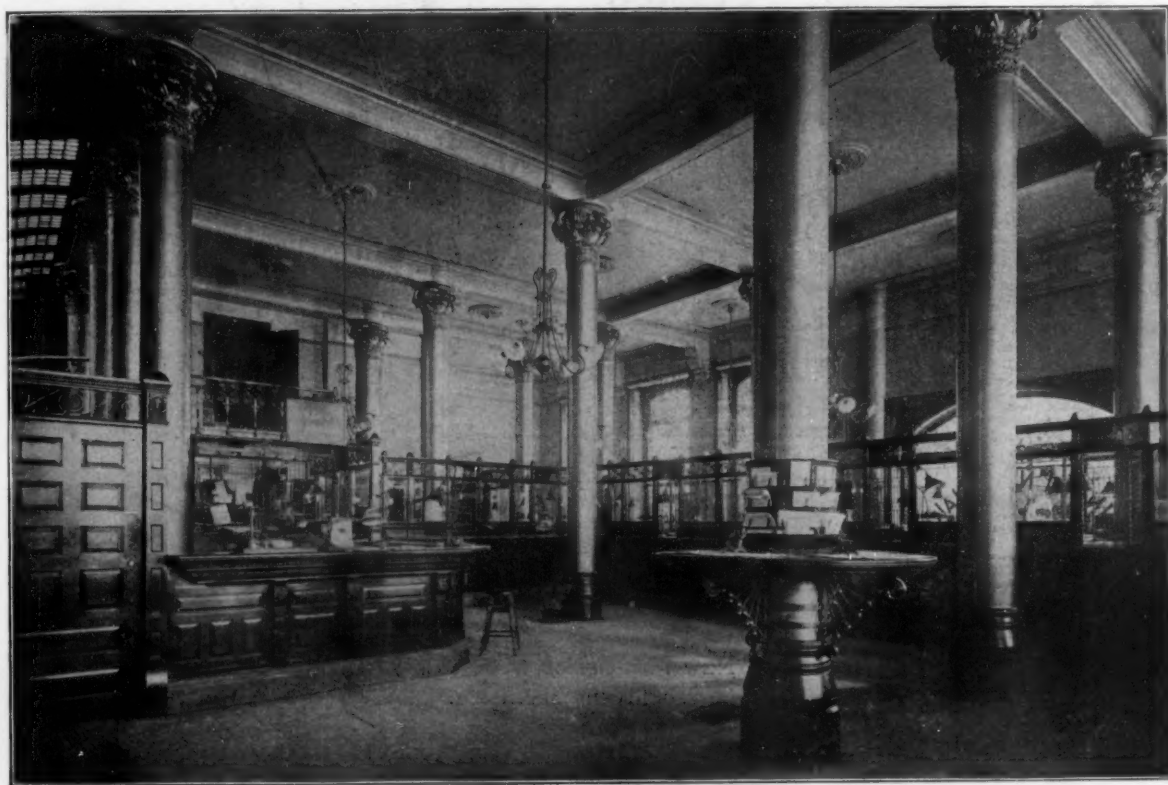
(30" \$35 @ 40  
24" 8 @ 21  
20" 35 @ 14  
11 00 @ 14 00



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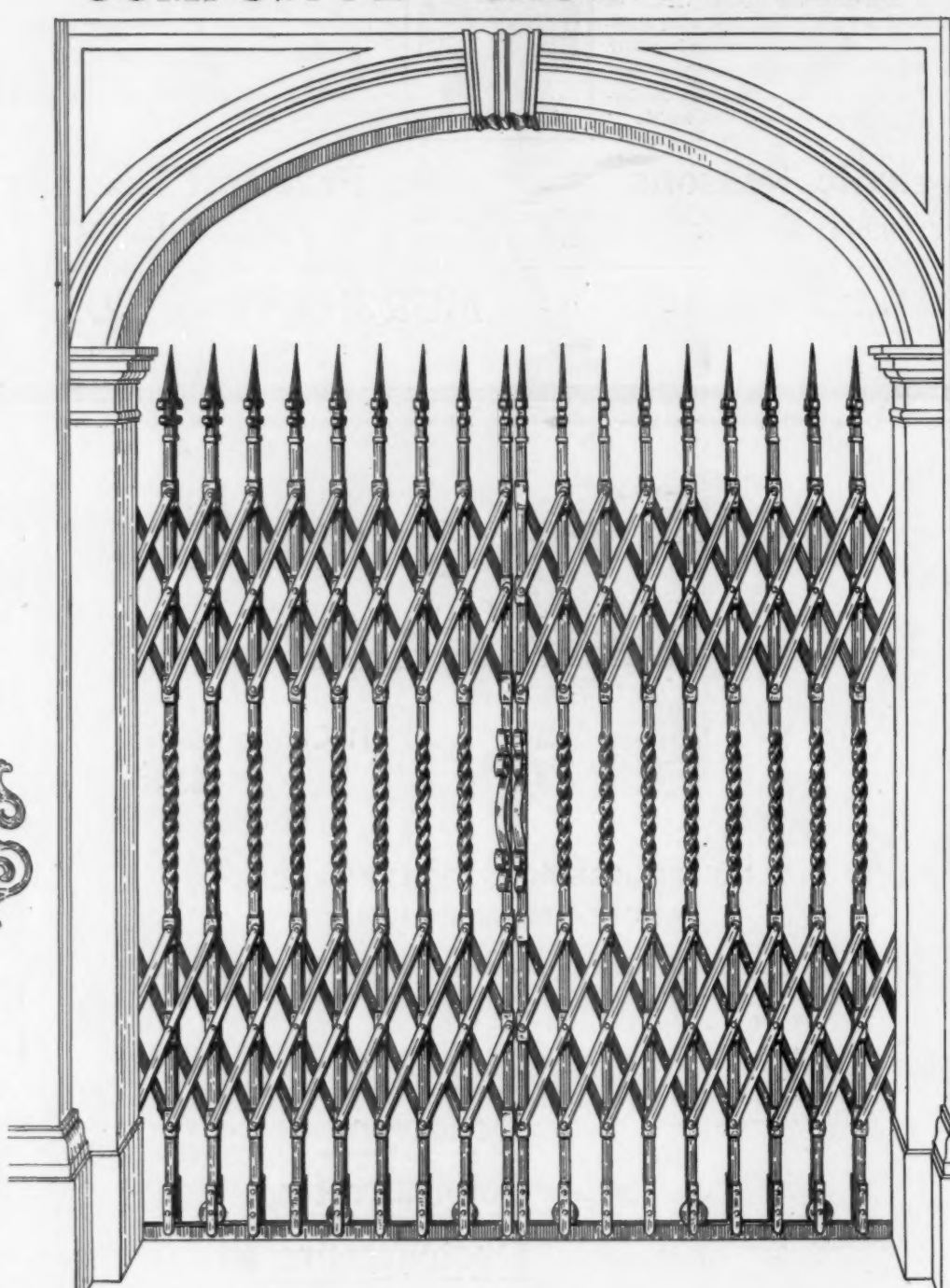
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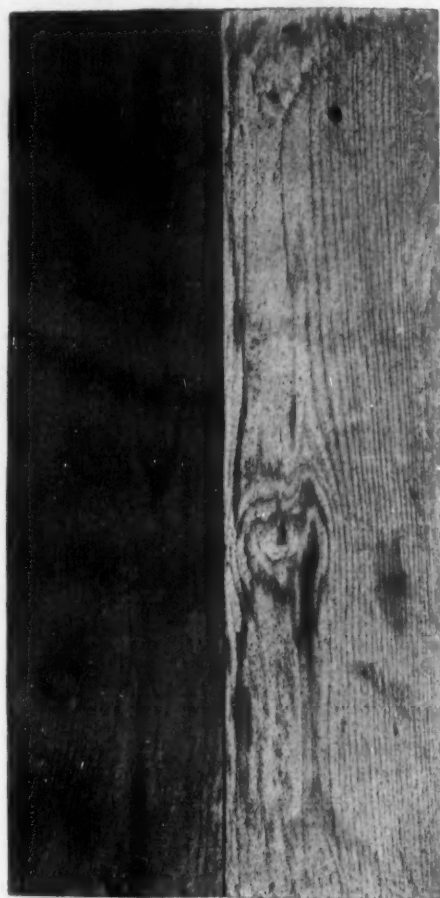


Fig. 1.

Fig. 2.

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Old House at Willey, near Guilford, Eng.



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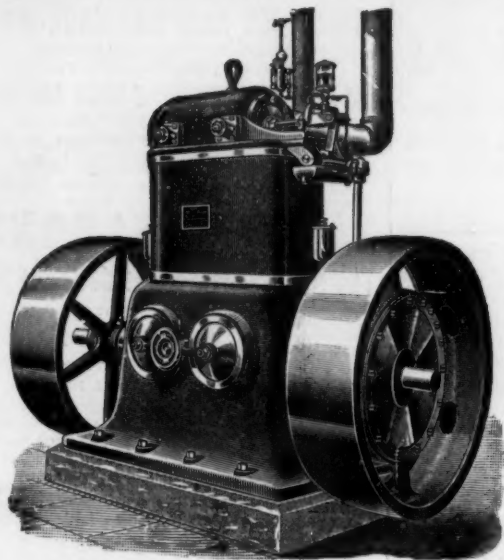
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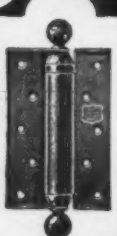
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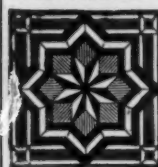
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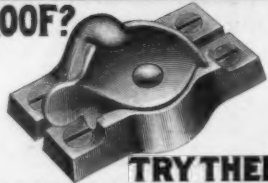
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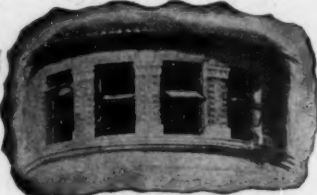
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| Sutherland Falls.....               | 1 25                |       | 2 00                                  |      |
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| Italian, blue-veined.....           |                     |       |                                       |      |
| " Sienna.....                       |                     |       |                                       |      |
| Tennessee, red.....                 |                     |       |                                       |      |
| " Knoxville.....                    |                     |       |                                       |      |
| Pennsylvania, blue.....             |                     |       |                                       |      |
| Vermont, white.....                 |                     |       |                                       |      |
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| Green.....                          | 5 00                | 4 75  | 5 25                                  |      |
| " unfading.....                     | 5 00                | 5 50  | 6 50                                  |      |
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| Red.....                            | 10 00               | 10 00 | 11 00                                 |      |
| Black, Lehigh.....                  | 4 25                |       | 4 75                                  |      |
| " Chapmans.....                     |                     |       |                                       |      |
| Genuine Bangor.....                 | 4 35                | 4 75  | 5 90                                  |      |
| Unfading black.....                 | 6 00                | 6 00  | 8 50                                  |      |
| ".....                              | 5 50                | 5 50  | 8 00                                  |      |
| Tiles, Am..... P M.                 |                     |       |                                       |      |
| N. Peach Bottom, war. unfading      |                     |       |                                       |      |
| Fire Clay Roof Tile on ears at fac. | 8 00                | 8 00  |                                       |      |
| LUMBER.—P M.                        |                     |       |                                       |      |
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| Pine, 1st quality, clear.....       | 55 00               | 55 00 | 70 00                                 |      |
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| Spruce.....                         |                     | 12 00 | 17 00                                 |      |
| Hemlock.....                        | ea 13 1/2           | 12 00 | 14 00                                 |      |
| Yellow pine.....                    | 20                  | 20 00 | 35 00                                 |      |
| Cypress.....                        |                     | 28 00 | 40 00                                 |      |
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| Laths:                              |                     |       |                                       |      |
| Pine..... Round Wood                |                     | 2 00  | 2 50                                  |      |
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| Shingles:                           |                     |       |                                       |      |
| Pine, shaved..... P M.              | 5 00                |       |                                       |      |
| Pine, sawed..... "                  | 4 00                |       | 4 50                                  |      |
| Spruce, sawed..... "                | 1 50                | 1 50  | 1 75                                  |      |
| Redwood..... P 125.                 | 1 40                | 3 00  | 3 75                                  |      |
| Cedar split..... P M.               |                     |       | 6 00                                  |      |
| Cedar sawed..... "                  |                     | 3 00  | 3 25                                  |      |
| Cypress. Split..... 7 x 24 "        | 18 00               | 5 00  | 6 00                                  |      |



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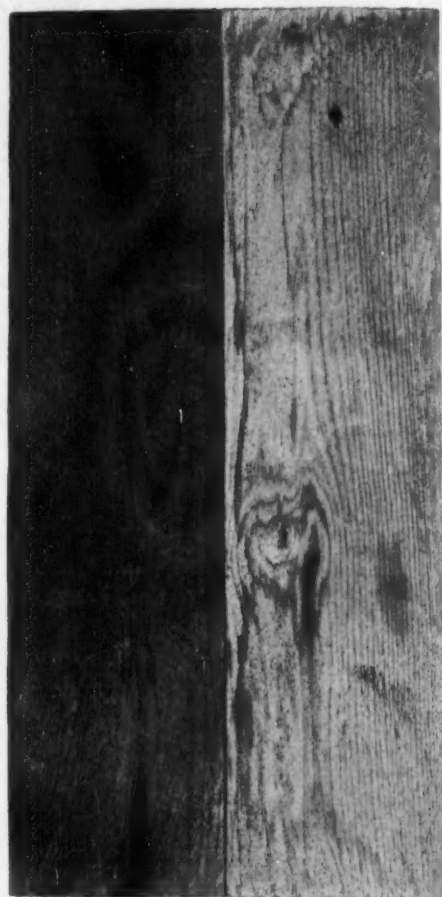


Fig. 1.

Fig. 2.

## "SILVER-GRAY" SHINGLES

Art and Nature vs. Nature Alone.

The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

Fig. 1 shows the action of the weather upon an entirely untreated shingle, and

Fig. 2 shows the action of the weather upon a shingle which had been treated with

## Cabot's Creosote Bleaching Oil.

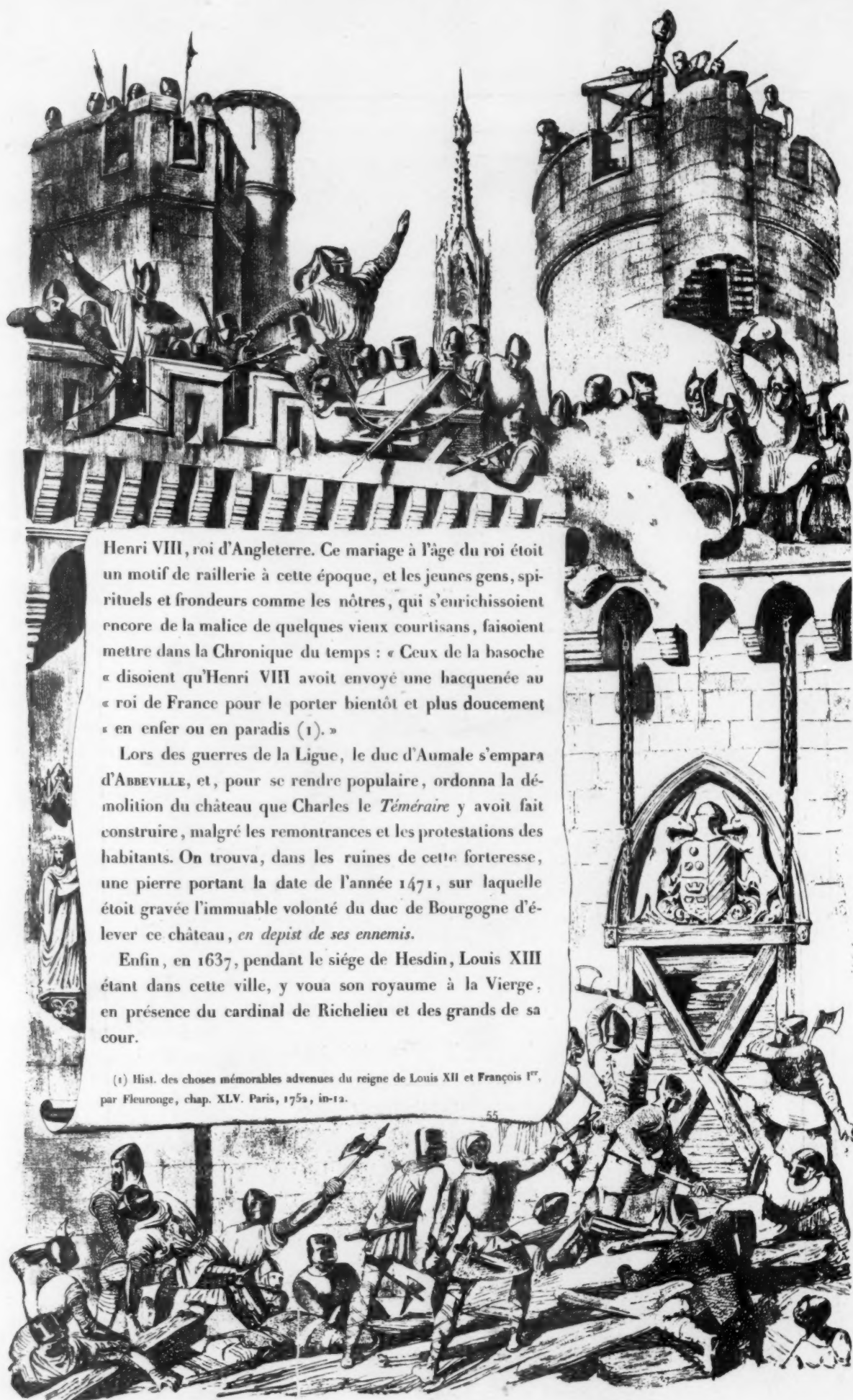
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Henri VIII, roi d'Angleterre. Ce mariage à l'âge du roi étoit un motif de raillerie à cette époque, et les jeunes gens, spirituels et frondeurs comme les nôtres, qui s'enrichissoient encore de la malice de quelques vieux courtisans, faisoient mettre dans la Chronique du temps : « Ceux de la basoche « disoient qu'Henri VIII avoit envoyé une hacquenée au « roi de France pour le porter bientôt et plus doucement « en enfer ou en paradis (1). »

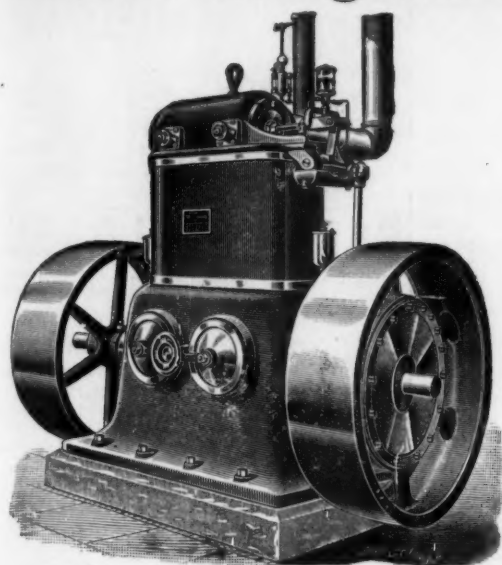
Lors des guerres de la Ligue, le duc d'Aumale s'empara d'Abbeville, et, pour se rendre populaire, ordonna la démolition du château que Charles le Téméraire y avoit fait construire, malgré les remontrances et les protestations des habitants. On trouva, dans les ruines de cette forteresse, une pierre portant la date de l'année 1471, sur laquelle étoit gravée l'immuable volonté du duc de Bourgogne d'élever ce château, *en depist de ses ennemis*.

Enfin, en 1637, pendant le siège de Hesdin, Louis XIII étant dans cette ville, y voua son royaume à la Vierge, en présence du cardinal de Richelieu et des grands de sa cour.

(1) Hist. des choses mémorables advenues du règne de Louis XII et François I<sup>er</sup>, par Fleurouge, chap. XLV. Paris, 1752, in-12.



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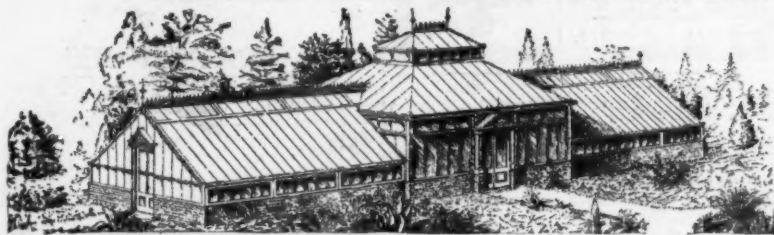
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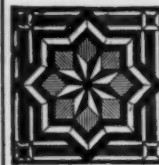
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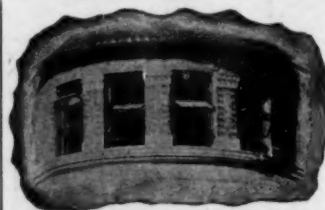
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| Rubble.....                           | 1 25 @ 1 50         | 9 00 @ "                              | 1 45 @ 2 50       |
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| Longmeadow.....                       | @ 80                | @                                     | 95 @ 1 05         |
| Kibbe.....                            | @ 90                | @                                     | 1 05 @ 1 25       |
| Brown (Connecticut).....              | 1 00 @ 1 30         | 1 50 P cub. ft.                       | 85 @ 95           |
| Amherst Ohio.....                     | 90 @ 95             | 45 @ 55                               | 55 @ 75           |
| Berea ".....                          | 75 @ 1 00           | 45 @ 55                               | 85 @ 95           |
| Berlin ".....                         | 75 @ 1 00           | 45 @ 55                               | 1 00 @ 1 10       |
| Belleville ".....                     | 80 @ 1 25           | @ 1 25                                | 1 05 @ 1 15       |
| New Brunswick (Dorchester).....       | 25 @ 1 35           | Not sold.                             | 1 40              |
| Potsdam Red.....                      | 75 @ 90             | @ 1 55                                | 1 25 @ 1 35       |
| Caen.....                             | @ 1 30              | @ 2 00                                | 85 @ 1 05         |
| Carlisle, English.....                | @ 1 05              | @                                     | 95 @ 1 05         |
| Corse Hill (Scotch).....              | @ 1 05              | @                                     | 55 @ 65           |
| <b>Granite: (Maine)</b>               |                     | 80 @ 1 50                             |                   |
| Bedford.....                          | 45 @ 1 25           | 20 @ 40                               | 75 @ 85           |
| Joliet.....                           | @ 1 00              | @                                     | Richmond          |
| Lemont.....                           |                     | @                                     | P 75 @ 1 50       |
| Serpentine.....                       |                     | @                                     | Perch 4 50 @ 5 50 |
| <b>Bluestone: (P sq. ft.)</b>         |                     |                                       |                   |
| Sidewalk.....                         | 30 @ 5 00           | 10 50 per ton.                        | 1 in. th. 10 @ 25 |
| Planned.....                          | 50 @ 6 00           | @ 75                                  | 37 @ 50           |
| <b>Marble: (P cu. ft.)</b>            |                     |                                       |                   |
| Leo, Mass.....                        | @                   | 1 75 @ 2 50                           | 2 00 @ 2 50       |
| Rutland, white and blue.....          | @                   | @ 3 00                                | 2 00 @ 3 00       |
| Sutherland Falls.....                 | 1 25 @ 1 75         | @ 2 00                                | 1 70 @ 3 00       |
| Glens Falls, black.....               | @                   | @                                     | 4 00 @ 4 50       |
| Italian, blue-veined.....             | @                   | @                                     | 2 50 @ 2 75       |
| " Sienna.....                         | @                   | @                                     | @ 5 00            |
| Tennessee, red.....                   | @                   | @                                     | 4 00 @ 6 00       |
| " Knoxville.....                      | @                   | @                                     | 3 00 @ 4 00       |
| Pennsylvania, blue.....               | @                   | @                                     | 2 00 @ 3 00       |
| Vermont, white.....                   | @                   | @                                     | 2 25 @ 3 00       |
| <b>Slate: Roofing (P square.)</b>     |                     |                                       |                   |
| Green.....                            | 5 00 @ 6 00         | 4 75 @ 5 25                           | 2 90 @ 3 00       |
| " unfading.....                       | 5 00 @ 6 00         | 5 50 @ 6 50                           | 4 25 @ 5 00       |
| Purple.....                           | 5 00 @ 6 00         | 5 50 @ 6 50                           | 4 50 @ 5 50       |
| Red.....                              | 10 00 @ 10 00       | 10 00 @ 11 00                         | 11 50 @ 13 00     |
| Black, Lehigh.....                    | 4 25 @ 4 75         | @                                     | 4 00 @ 4 35       |
| " Chapmans.....                       | @                   | @                                     | 4 50 @ 5 00       |
| Genuine Bangor.....                   | 4 35 @ 5 50         | 4 75 @ 5 90                           | 4 35 @ 5 50       |
| Unfading black.....                   | 6 00 @ 8 50         | 6 00 @ 8 50                           | 6 50 @ 9 00       |
| " ".....                              | 5 50 @ 8 00         | 5 50 @ 8 00                           | 6 50 @ 9 00       |
| Tiles, Am..... P M.....               | @                   | @                                     | @ 28 00           |
| N. Peach Bottom, war. unfading        | 8 00 @              | 8 00 @                                | 5 75 @ 6 25       |
| Fire Clay Roof Tile on cars at fac.   |                     |                                       | 8 00 @            |
| <b>LUMBER.—P M.</b>                   |                     |                                       |                   |
| <b>Boards: (Ordinary dimensions.)</b> |                     |                                       |                   |
| Pine, 1st quality, clear.....         | 65 00 @ 75 00       | 55 00 @ 70 00                         | 50 00 @ 60 00     |
| " 2d quality.....                     | 55 00 @ 60 00       | 42 00 @ 50 00                         | 42 00 @ 50 00     |
| " 3d quality.....                     | 18 00 @ 22 00       | 20 00 @ 40 00                         | 40 00 @ 28 00     |
| Spruce.....                           | @ 25 00             | 12 00 @ 17 00                         | Not sold.         |
| Hemlock.....                          | 21 13 @ 14          | 12 00 @ 14 00                         | 10 00 @ 12 00     |
| Yellow pine.....                      | 20 @ 40             | 20 00 @ 35 00                         | 18 00 @ 25 00     |
| Cypress.....                          | @                   | 28 00 @ 40 00                         | 30 00 @ 35 00     |
| <b>Clapboards:</b>                    |                     |                                       |                   |
| Pine.....                             | @                   | 38 00 @ 50 00                         | 25 00 @ 30 00     |
| Spruce.....                           | @                   | 24 00 @ 35 00                         | Not sold.         |
| <b>Framing Timber:</b>                |                     |                                       |                   |
| Pine.....                             | 14 00 @ 18 00       | 14 50 @ 16 00                         | 15 00 @ 25 00     |
| Hemlock.....                          | 12 00 @ 16 00       | 12 50 @ 15 00                         | Not sold.         |
| Yellow pine.....                      | 18 00 @ 21 00       | 17 00 @ 25 00                         | 10 00 @ 15 00     |
| <b>Laths:</b>                         |                     |                                       |                   |
| Pine..... Round Wood                  | @                   | 2 00 @ 2 50                           | 1 90 @ 2 00       |
| Spruce..... Slab.....                 | 1 75 @ 1 85         | 1 80 @ 2 25                           | Not sold.         |
| <b>Shingles:</b>                      |                     |                                       |                   |
| Pine, shaved..... P M.....            | 5 00 @ 6 00         | @                                     | Not sold.         |
| Pine, sawed.....                      | 4 00 @ 5 00         | @ 4 50                                | 2 60 @ 2 75       |
| Spruce, sawed.....                    | 1 50 @ 2 00         | 1 50 @ 1 75                           | Not sold.         |
| Redwood..... P 125.....               | 1 40 @ 1 60         | 3 00 @ 3 75                           | 4 60 @ 6 00       |
| Cedar split..... P M.....             | @                   | @ 6 00                                | Not sold.         |
| Cedar sawed.....                      | @                   | 2 00 @ 3 25                           | 2 50 @ 2 90       |
| Cypress. Split..... T x 24 ".....     | 18 00 @ 20 00       | 5 00 @ 6 00                           | @                 |

(30" P 35 @ 40  
24" 8 @ 21  
20" 35 @ 14  
11 00 @ 14 00



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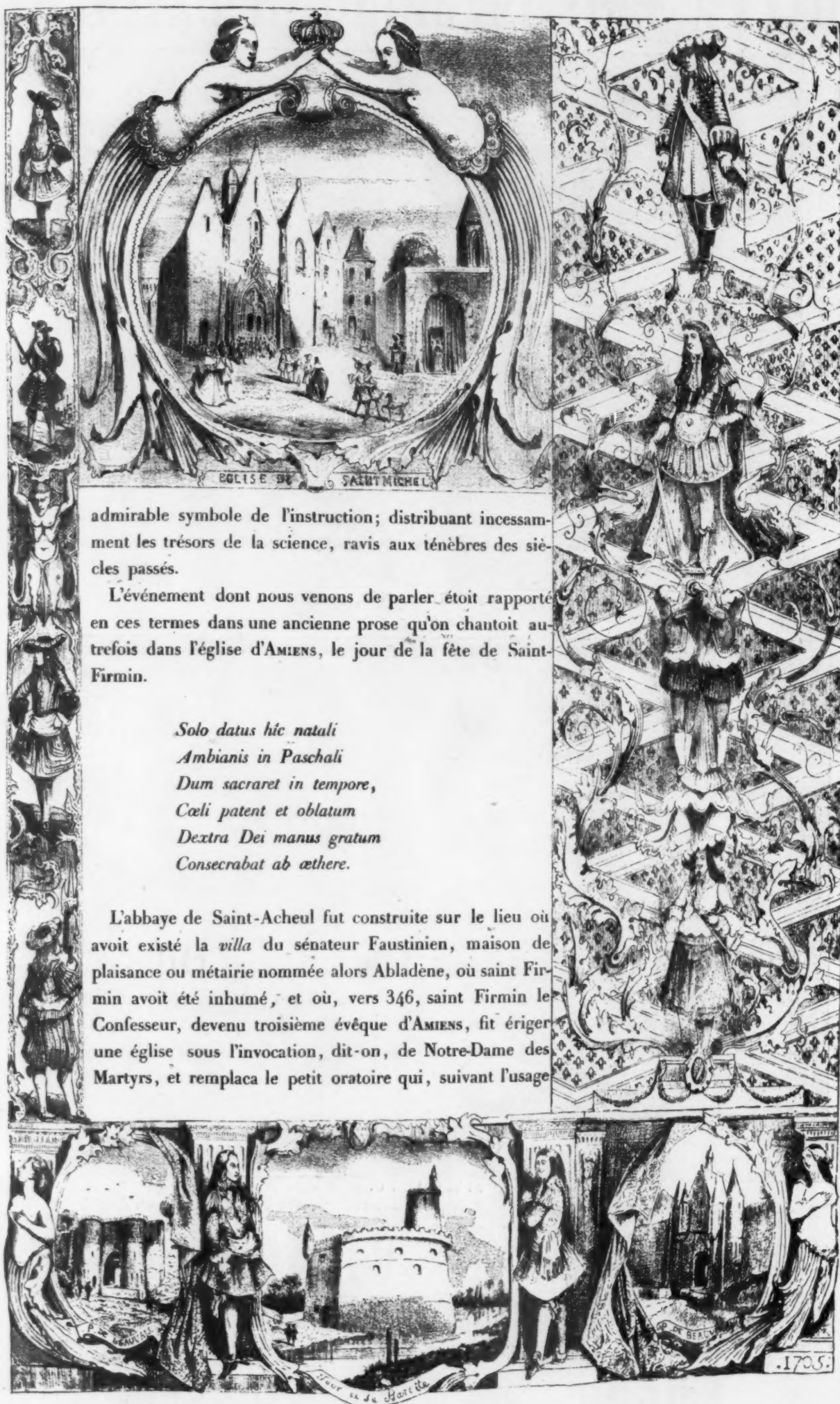
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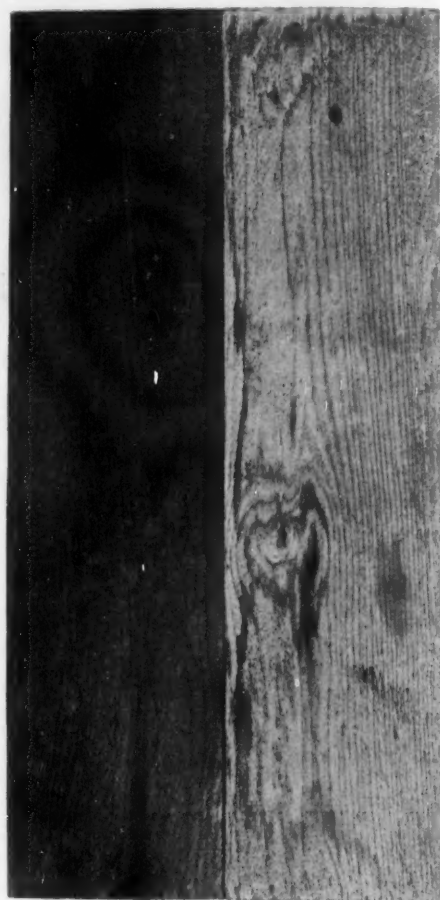


Fig. 1.

Fig. 2.



## "SILVER-GRAY" SHINGLES

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The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

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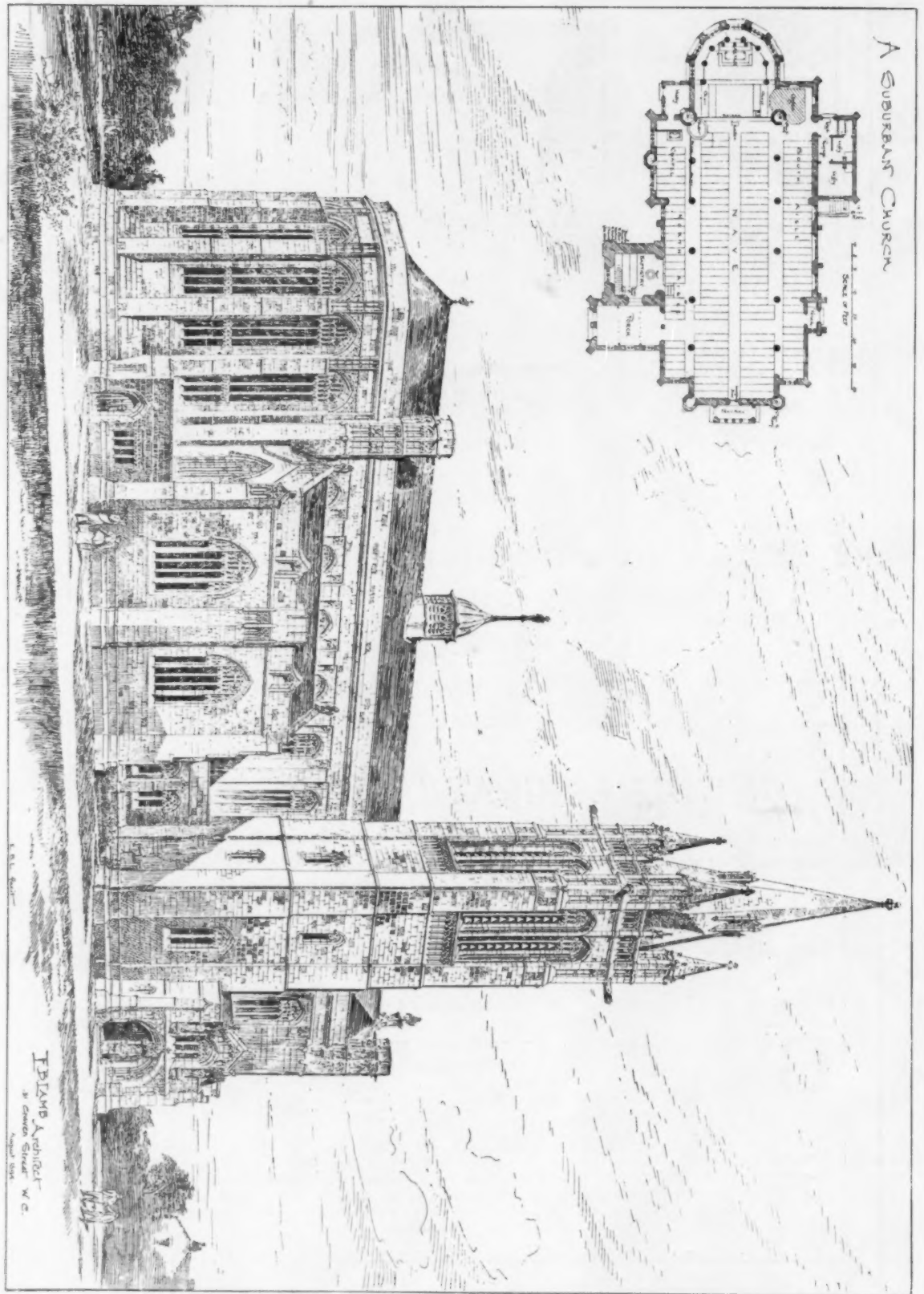
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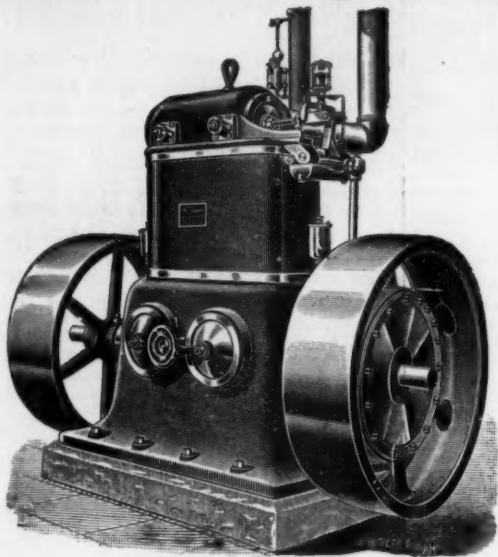


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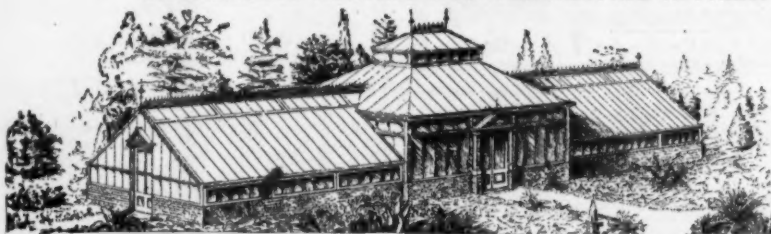
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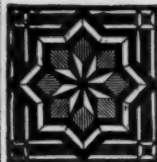
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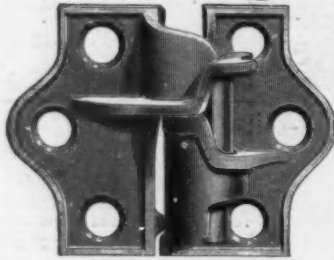
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| <b>Foundation:</b>                    |                     |                                       |          |                   |
| Dimension.....                        | 5 00 P ton.         | 20 @ foot                             |          | 5 00              |
| Block.....                            | 4 60 P perch.       | 10 00 @ cord                          |          | Conshohocken      |
| Rubble.....                           | 1 25 @ 1 50         | 9 00 @ "                              |          | 1 45 @ 2 50       |
| <b>Sandstone:</b>                     |                     |                                       |          |                   |
| Longmeadow.....                       | 80 @ 90             |                                       |          | 95 @ 1 05         |
| Kibbe.....                            | 90 @ 1 10           |                                       |          | 1 05 @ 1 25       |
| Brown (Connecticut).....              | 1 00 @ 1 30         |                                       |          | 85 @ 95           |
| Amherst Ohio.....                     | 90 @ 1 00           |                                       |          | 55 @ 75           |
| Berea.....                            | 75 @ 1 00           |                                       |          | 85 @ 95           |
| Berlin.....                           | 75 @ 1 00           |                                       |          | 1 00 @ 1 10       |
| Bellefonte.....                       | 80 @ 1 25           |                                       |          | 1 05 @ 1 15       |
| New Brunswick (Dorchester).....       | 1 00 @ 1 30         |                                       |          | 1 40 @ 1 40       |
| Potsdam Red.....                      | 1 30 @ 1 40         |                                       |          | 1 25 @ 1 35       |
| Caen.....                             | 1 00 @ 1 05         |                                       |          | 95 @ 1 05         |
| Carlisle, English.....                | 1 05 @ 1 05         |                                       |          | 95 @ 1 05         |
| Corse Hill (Scotch).....              | 1 05 @ 1 05         |                                       |          | 55 @ 65           |
| <b>Granite: (Maine)</b>               |                     |                                       |          |                   |
| Limestone:                            |                     |                                       |          |                   |
| Bedford.....                          | 45 @ 1 25           |                                       |          | 75 @ 85           |
| Joliet.....                           | 1 00 @ 1 00         |                                       |          | Richmond          |
| Lemont.....                           |                     |                                       |          | 75 @ 1 50         |
| Serpentine.....                       |                     |                                       |          | Pereh 4 50 @ 5 50 |
| <b>Bluestone: (P sq. ft.)</b>         |                     |                                       |          |                   |
| Sidewalk.....                         | 30 @ 5 00           |                                       |          | 1 in. th. 10 @ 25 |
| Planed.....                           | 50 @ 6 00           |                                       |          | 37 @ 50           |
| <b>Marble: (P cu. ft.)</b>            |                     |                                       |          |                   |
| Lee, Mass.....                        |                     |                                       |          | 2 00 @ 2 50       |
| Rutland, white and blue.....          |                     |                                       |          | 2 00 @ 3 00       |
| Sutherland Falls.....                 |                     |                                       |          | 1 70 @ 3 00       |
| Glens Falls, black.....               |                     |                                       |          | 4 00 @ 4 50       |
| Italian, blue-veined.....             |                     |                                       |          | 2 50 @ 2 75       |
| " Sienna.....                         |                     |                                       |          | 4 00 @ 5 00       |
| Tennessee, red.....                   |                     |                                       |          | 4 00 @ 6 00       |
| " Knoxville.....                      |                     |                                       |          | 3 00 @ 4 00       |
| Pennsylvania, blue.....               |                     |                                       |          | 2 00 @ 3 00       |
| Vermont, white.....                   |                     |                                       |          | 2 25 @ 3 00       |
| <b>Slate: Roofing (P square)</b>      |                     |                                       |          |                   |
| Green.....                            | 5 00 @ 6 00         |                                       |          | 2 90 @ 3 00       |
| " unfading.....                       | 5 00 @ 6 00         |                                       |          | 4 25 @ 5 00       |
| Purple.....                           | 5 00 @ 6 00         |                                       |          | 4 50 @ 5 50       |
| Red.....                              | 5 00 @ 6 00         |                                       |          | 11 50 @ 13 00     |
| Black, Lehigh.....                    | 4 25 @ 4 75         |                                       |          | 4 00 @ 4 35       |
| " Chapmans.....                       |                     |                                       |          | 4 50 @ 5 00       |
| Genuine Bangor.....                   | 4 35 @ 5 50         |                                       |          | 4 35 @ 5 50       |
| Unfading black.....                   | 6 00 @ 8 50         |                                       |          | 6 50 @ 9 00       |
| " ".....                              | 5 50 @ 8 00         |                                       |          | 6 50 @ 9 00       |
| Tiles, Am..... P M.....               |                     |                                       |          | 8 00 @ 28 00      |
| N. Peach Bottom, war. unfading        |                     |                                       |          | 5 75 @ 6 25       |
| Fire Clay Roof Tile on cars at fac.   |                     |                                       |          | 8 60 @            |
| <b>LUMBER.—P M.</b>                   |                     |                                       |          |                   |
| <b>Boards: (Ordinary dimensions.)</b> |                     |                                       |          |                   |
| Pine, 1st quality, clear.....         | 65 00 @ 75 00       |                                       |          | 47 50 @ 60 00     |
| " 2d quality.....                     | 55 00 @ 60 00       |                                       |          | 38 00 @ 48 50     |
| " 3d quality.....                     | 18 00 @ 22 00       |                                       |          | 27 50 @ 36 50     |
| Spruce.....                           | 20 @ 25 00          |                                       |          | 15 00 @ 21 50     |
| Hemlock.....                          | ea 13 @ 14          |                                       |          | 11 50 @ 13 75     |
| Yellow pine.....                      | 20 @ 40             |                                       |          | 14 00 @ 20 00     |
| Cypress.....                          | 28 00 @ 40 00       |                                       |          | 30 00 @ 38 00     |
| <b>Clapboards:</b>                    |                     |                                       |          |                   |
| Pine.....                             | 38 00 @ 50 00       |                                       |          | 14 00 @ 25 00     |
| Spruce.....                           | 24 00 @ 35 00       |                                       |          | Not sold.         |
| <b>Framing Timber:</b>                |                     |                                       |          |                   |
| Pine.....                             | 14 00 @ 18 00       |                                       |          | 25 00 @ 37 30     |
| Spruce.....                           | 12 00 @ 16 00       |                                       |          | 15 00 @ 21 50     |
| Hemlock.....                          | 18 00 @ 21 00       |                                       |          | 14 00 @ 20 00     |
| Yellow pine.....                      |                     |                                       |          | 22 50 @ 30 00     |
| <b>Laths:</b>                         |                     |                                       |          |                   |
| Pine..... Round Wood                  |                     |                                       |          | 2 75 @ 3 00       |
| Spruce..... Slab.....                 | 1 85 @ 1 75         |                                       |          | 2 30 @ 2 35       |
| <b>Shingles:</b>                      |                     |                                       |          |                   |
| Pine, shaved..... P M.....            | 5 00 @ 6 00         |                                       |          | Not sold.         |
| Pine, sawed..... ".....               | 4 00 @ 5 00         |                                       |          | 2 60 @ 2 75       |
| Spruce, sawed..... ".....             | 1 50 @ 2 00         |                                       |          | Not sold.         |
| Redwood..... P 125.....               | 1 40 @ 1 80         |                                       |          | 4 60 @ 6 00       |
| Cedar split..... P M.....             |                     |                                       |          | Not sold.         |
| Cedar sawed..... ".....               |                     |                                       |          | 2 50 @ 2 90       |
| Cypress, Split..... P 24.....         | 18 00 @ 30 00       |                                       |          | 11 00 @ 14 00     |



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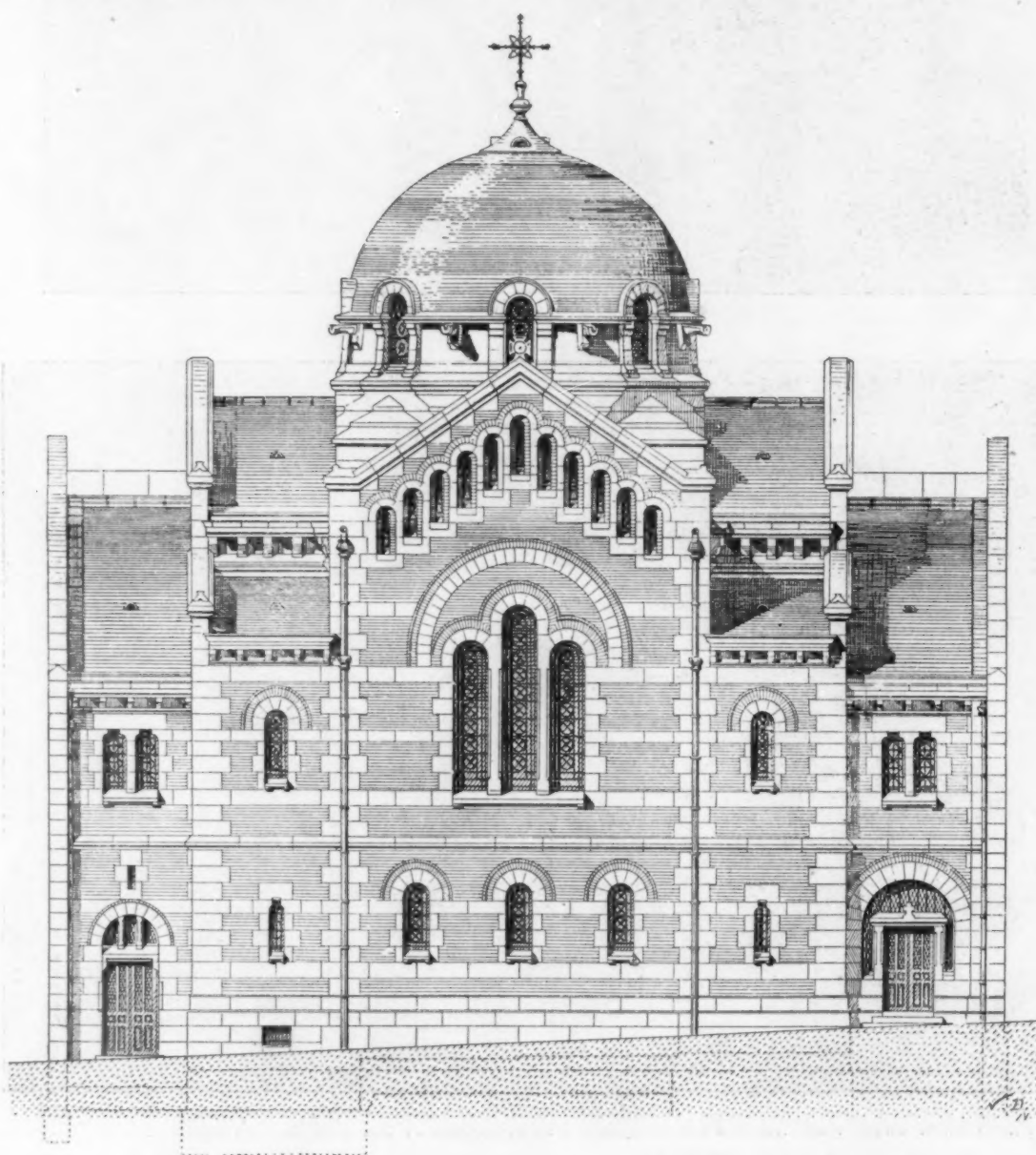
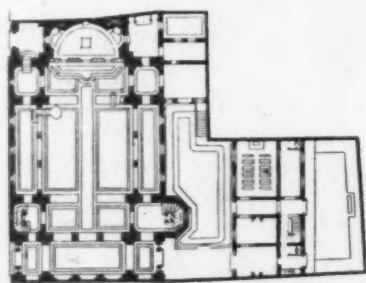
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Fig. 1.

Fig. 2.

## “SILVER-GRAY” SHINGLES

Art and Nature vs. Nature Alone.

The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

Fig. 1 shows the action of the weather upon an entirely untreated shingle, and

Fig. 2 shows the action of the weather upon a shingle which had been treated with

## Cabot's Creosote Bleaching Oil.

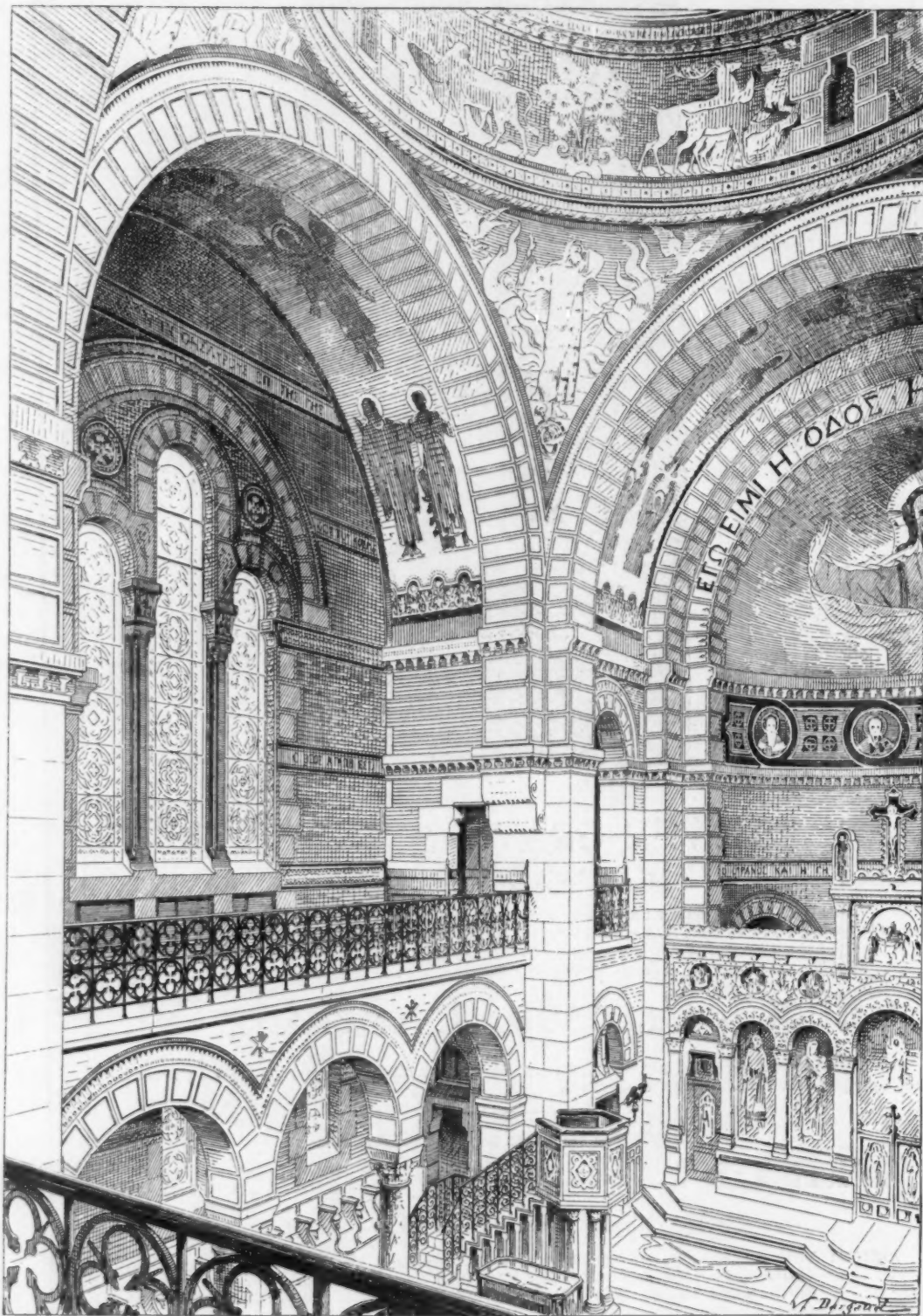
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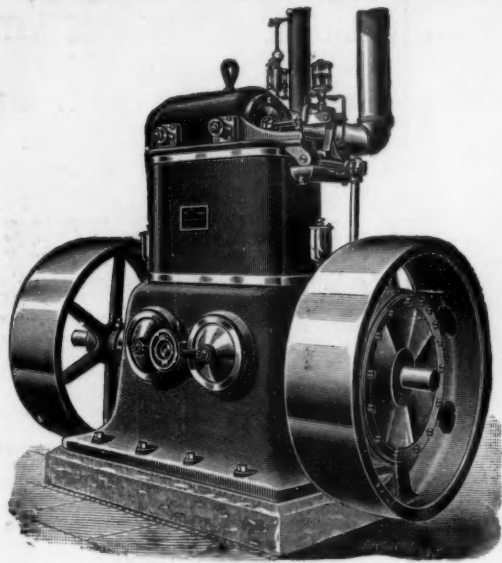
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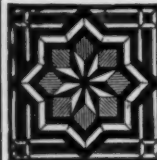
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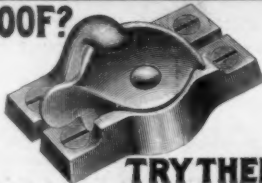
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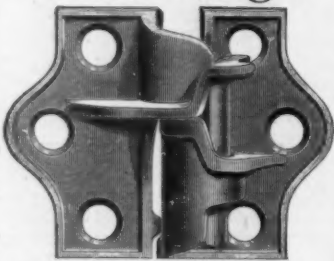
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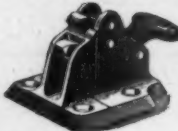
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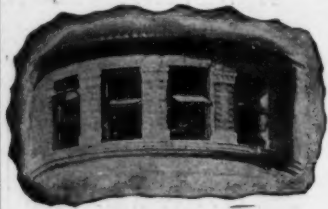
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| Longmeadow.....                                        | 80 @ 90             |                                       |                   | 95 @ 1 05         |
| Kibbe.....                                             | 90 @ 1 10           |                                       |                   |                   |
| Brown (Connecticut).....                               | 1 00 @ 1 30         |                                       | 1 50 P eub. ft.   | 1 05 @ 1 25       |
| Amherst Ohio.....                                      | 90 @ 95             |                                       | 45 @ 55           | 85 @ 95           |
| Berea ".....                                           | 75 @ 1 00           |                                       | 45 @ 55           | 85 @ 95           |
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| Bellefonte.....                                        | 80 @ 1 25           |                                       | @ 1 25            | 1 00 @ 1 10       |
| New Brunswick (Dorchester)....                         | 1 00 @ 1 30         |                                       | Not sold.         | 1 05 @ 1 15       |
| Potsdam Red.....                                       | @ 1 30              |                                       | @ 1 35            | @ 1 40            |
| Caen.....                                              | @ 2 00              |                                       | @                 | 1 25 @ 1 35       |
| Carlisle, English.....                                 | @ 1 05              |                                       | @                 | 95 @ 1 05         |
| Corse Hill (Scotch).....                               | @ 1 05              |                                       | @                 | 95 @ 1 05         |
| Granite: (Maine)                                       |                     |                                       | 80 @ 1 50         | 55 @ 65           |
| Limestone:                                             |                     |                                       |                   |                   |
| Bedford.....                                           | 45 @ 1 25           | 95 @ 1 00                             | 20 @ 40           | 75 @ 85           |
| Joliet.....                                            | 1 00                |                                       | @                 | Richmond          |
| Lemont.....                                            |                     |                                       | @                 | P 75 @ 1 50       |
| Serpentine.....                                        |                     | 10 50 per ton.                        | @                 | Perch 4 50 @ 5 50 |
| Bluestone: (P sq. ft.)                                 |                     |                                       |                   |                   |
| Sidewalk.....                                          | 30 @ 5 00           | 40 @ 1 75                             | 1 00 @ 1 25       | 1 in. th. 10 @ 25 |
| Planed.....                                            | 50 @ 6 00           | @ 75                                  | 1 00 @ 1 25       | 37 @ 50           |
| Marble: (P cu. ft.)                                    |                     |                                       |                   |                   |
| Leo, Mass.....                                         | @                   | 1 75 @ 2 50                           | Not sold.         | 2 00 @ 2 50       |
| Rutland, white and blue.....                           | @                   | @ 3 00                                | 3 50 @ 6 00       | 2 00 @ 3 00       |
| Sutherland Falls.....                                  | 1 25 @ 1 75         | @ 2 00                                | 3 50 @ 6 00       | 1 70 @ 3 00       |
| Glens Falls, black.....                                | @                   | @                                     | Not sold.         | 4 00 @ 4 50       |
| Italian, blue-veined.....                              | @                   | @                                     | 4 50 @ 5 50       | 2 50 @ 2 75       |
| " Sienna.....                                          | @                   | @                                     | Not sold.         | @ 5 00            |
| Tennessee, red.....                                    | @                   | @                                     | @ 4 40            | 4 00 @ 6 00       |
| " Knoxville.....                                       | @                   | @                                     | @ 4 40            | 3 00 @ 4 00       |
| Pennsylvania, blue.....                                | @                   | @                                     | Not sold.         | 2 00 @ 3 00       |
| Vermont, white.....                                    | @                   | @                                     | 3 50 @ 6 00       | 2 25 @ 3 00       |
| Slate: Roofing (P square)                              |                     |                                       |                   |                   |
| Green.....                                             | 5 00 @ 6 00         | 4 75 @ 5 25                           | 3 75 @ 5 00       | 2 90 @ 3 80       |
| " unfading.....                                        | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       | 4 25 @ 5 00       |
| Purple.....                                            | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       | 4 50 @ 5 50       |
| Red.....                                               | 5 00 @ 10 00        | 10 00 @ 11 00                         | 10 50 @ 12 50     | 11 50 @ 13 00     |
| Black, Lehigh.....                                     | 4 25 @ 4 75         | @                                     | 4 50 @ 5 50       | 4 00 @ 4 35       |
| " Chapmans.....                                        | @                   | @                                     | 5 30 @ 6 15       | 4 50 @ 5 00       |
| Genuine Bangor.....                                    | 4 35 @ 5 50         | 4 75 @ 5 90                           | 5 25 @ 6 50       | 4 35 @ 5 50       |
| Unfading black.....                                    | 6 00 @ 8 50         | 6 00 @ 8 50                           | 4 25 @ 8 95       | 6 50 @ 9 00       |
| " ".....                                               | 5 50 @ 8 00         | 5 50 @ 8 00                           | 5 50 @ 9 20       | 6 50 @ 9 00       |
| Tiles, Am..... P M.....                                | @                   | @                                     | Salt-glazed tiles | @ 23 00           |
| N. Peach Bottom, war, unfading                         | @                   | @                                     | 9" 8c. per ft.    | 5 75 @ 6 25       |
| Fire Clay Roof Tile on cars at fac.                    | 8 00 @              | 8 00 @                                | 6 00 @ 6 50       | 8 60 @            |
| LUMBER.—P M.                                           |                     |                                       |                   |                   |
| Boards: (Ordinary dimensions.)                         |                     |                                       |                   |                   |
| Pine, 1st quality, clear.....                          | 65 00 @ 75 00       | 55 00 @ 70 00                         | 50 00 @ 60 00     | 47 50 @ 60 00     |
| " 2d quality.....                                      | 55 00 @ 60 00       | 42 00 @ 50 00                         | 42 00 @ 50 00     | 38 00 @ 48 50     |
| " 3d quality.....                                      | 18 00 @ 22 00       | 20 00 @ 40 00                         | 20 00 @ 28 00     | 27 50 @ 36 50     |
| Spruce.....                                            | @ 25 00             | 12 00 @ 17 00                         | Not sold.         | 15 00 @ 21 50     |
| Hemlock.....                                           | ea134 @ 14          | 12 00 @ 14 00                         | 10 00 @ 12 00     | 11 50 @ 13 75     |
| Yellow pine.....                                       | 20 @ 40             | 20 00 @ 35 00                         | 18 00 @ 25 00     | 14 00 @ 29 00     |
| Cypress.....                                           | @                   | 28 00 @ 40 00                         | 30 00 @ 35 00     | 30 00 @ 38 00     |
| Clapboards:                                            |                     |                                       |                   |                   |
| Pine.....                                              | @                   | 38 00 @ 50 00                         | 25 00 @ 30 00     | 14 00 @ 25 00     |
| Spruce.....                                            | @                   | 24 00 @ 35 00                         | Not sold.         | Not sold.         |
| Framing Timber:                                        |                     |                                       |                   |                   |
| Pine.....                                              | 14 00 @ 18 00       | 14 50 @ 16 00                         | 15 00 @ 25 00     | 25 00 @ 37 30     |
| Hemlock.....                                           | 12 00 @ 16 00       | 12 50 @ 15 00                         | Not sold.         | 15 00 @ 21 50     |
| Yellow pine.....                                       | 18 00 @ 21 00       | 17 00 @ 25 00                         | 10 00 @ 15 00     | 14 00 @ 20 00     |
| Laths:                                                 |                     |                                       |                   |                   |
| Pine..... Round Wood                                   | @                   | 2 00 @ 2 50                           | 1 90 @ 2 00       | 2 75 @ 3 00       |
| Spruce..... Slab.....                                  | @ 1 75              | 1 80 @ 2 25                           | Not sold.         | 2 30 @ 2 35       |
| Shingles:                                              |                     |                                       |                   |                   |
| Pine, shaved..... P M.....                             | 5 00 @ 6 00         | @                                     | Not sold.         |                   |
| Pine, sawed..... ".....                                | 4 00 @ 5 00         | @ 4 50                                | 2 60 @ 2 75       |                   |
| Spruce, sawed..... ".....                              | 1 50 @ 2 00         | 1 50 @ 1 75                           | Not sold.         |                   |
| Redwood..... P 125.....                                | 1 40 @ 1 60         | 3 00 @ 3 75                           | 4 60 @ 6 00       | 30" \$35 @ 40     |
| Cedar split..... ".....                                | @                   | @ 6 00                                | Not sold.         | 24" 8 @ 21        |
| Cedar sawed..... ".....                                | @                   | 2 00 @ 3 25                           | 2 50 @ 2 90       | 30" 35 @ 14       |
| Cypress. Split..... 7 x 24 ".....                      | 18 00 @ 30 00       | 5 00 @ 6 00                           | @                 | 11 00 @ 14 00     |



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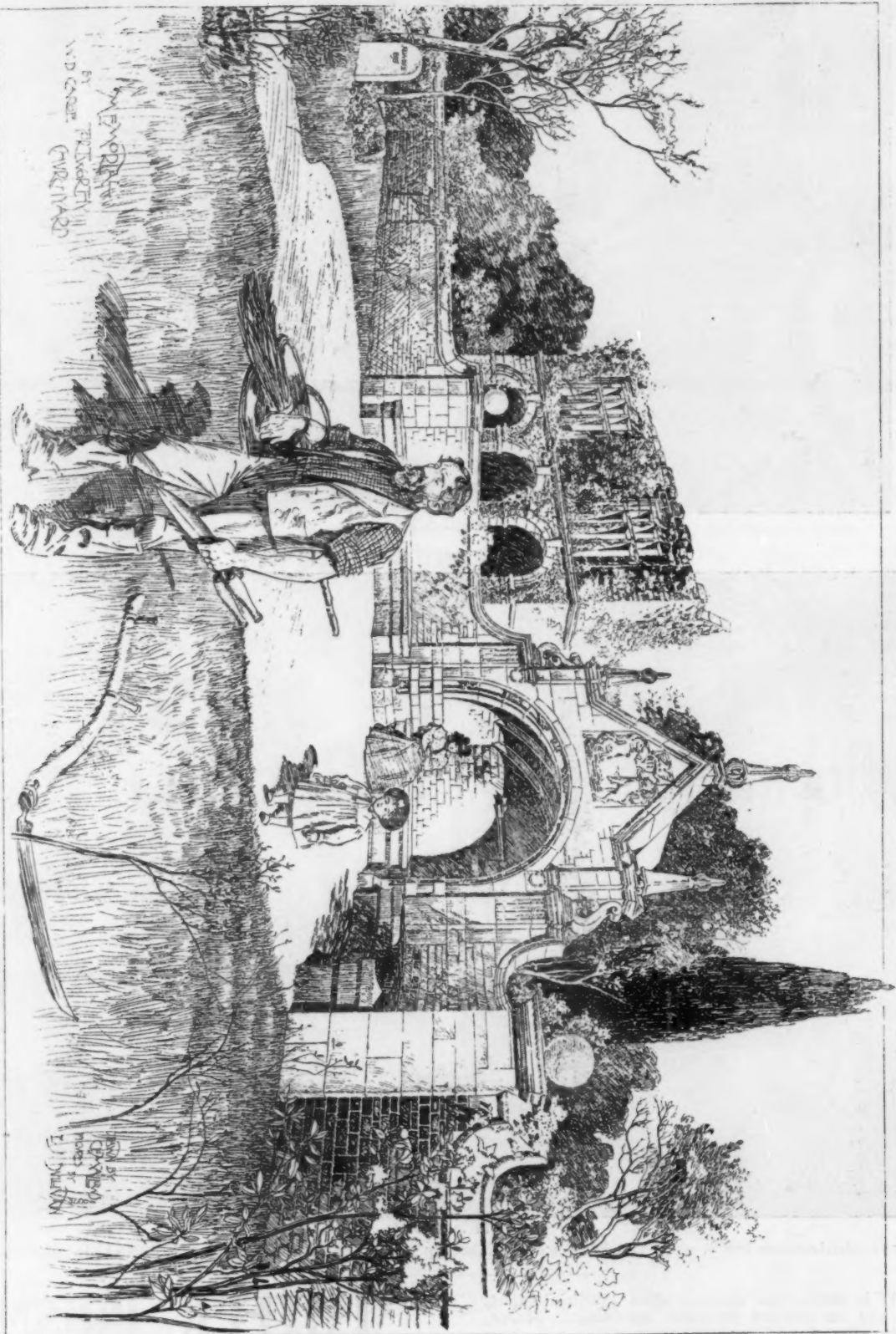
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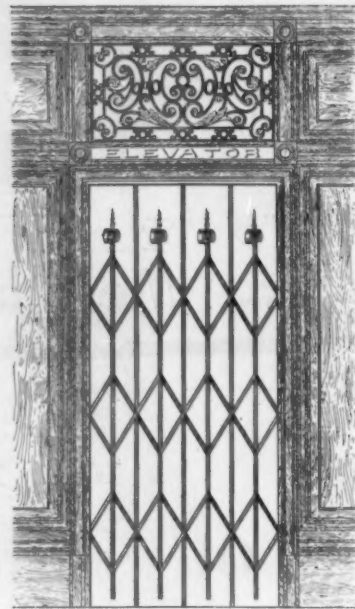
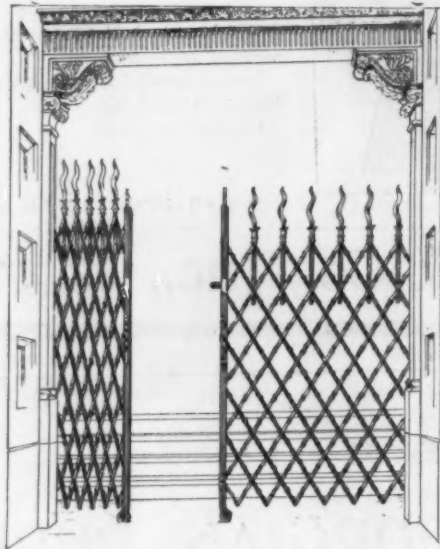
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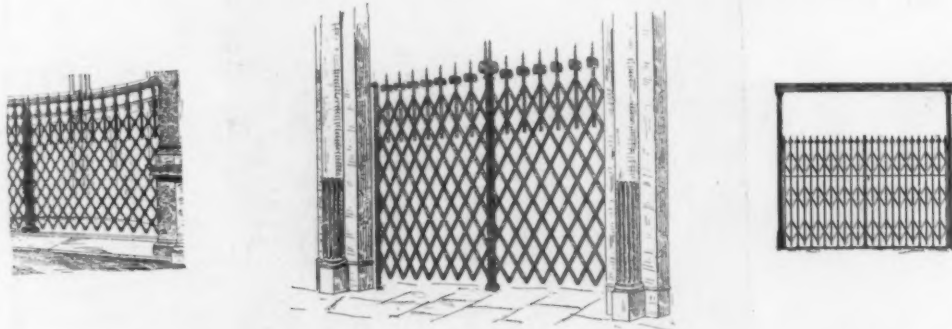
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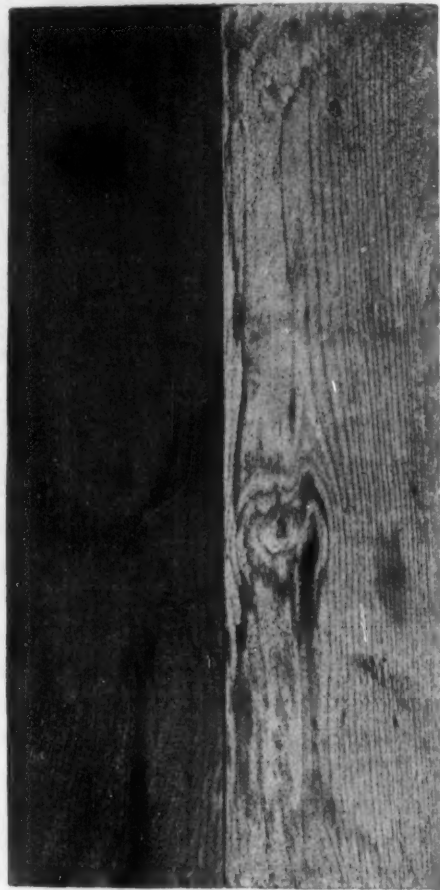


Fig. 1.

Fig. 2.

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Art and Nature vs. Nature Alone.

The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

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Fig. 2 shows the action of the weather upon a shingle which had been treated with

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formoit le tiers de la hauteur de la façade. La figure de saint Martin et d'un autre saint, et la croix placée au milieu, à l'aplomb entre les beilles et au-dessus du couronnement en ogive des belles fenêtres du premier étage, ont laissé supposer que ce monument dépendoit peut-être, comme presbytère, de l'église de Saint-Firmin, située près de là; mais il n'y a rien de certain à cet égard. L'hôtel du Berceau d'or a quelque célébrité dans les annales d'AMIENS, par un événement qui s'y passa en 1628: « Un conseiller « d'État, nommé Pommereux, étant venu à AMIENS pour « mettre à exécution un édit portant levée de cent sols « sur chaque métier des sayeteurs, ils enfoncèrent pendant la nuit la porte de cet hôtel, où il logeoit, s'emparèrent de son carrosse qu'ils jetèrent dans la Somme, « et l'auroient infailliblement massacré, s'il ne fût parvenu « à leur échapper en escaladant les toits des maisons voisines. De retour à Paris, Pommereux se plaignit de l'insulte qu'on lui avoit faite: la communauté des sayeteurs fut obligée de lui aller demander pardon et de lui payer la somme de dix mille livres à titre de réparation; mais ce ne furent pas les sayeteurs qui versèrent en définitive cette somme: un arrêt du conseil, du 17 février 1629,

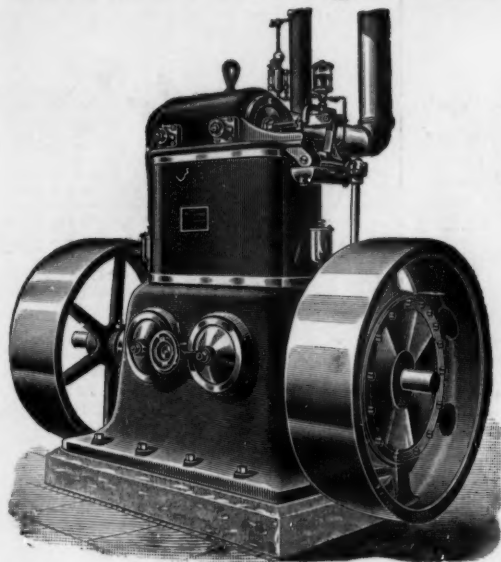
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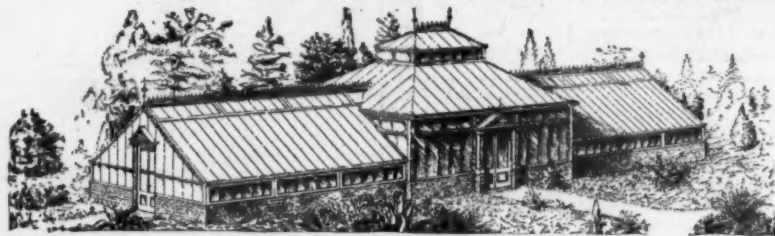
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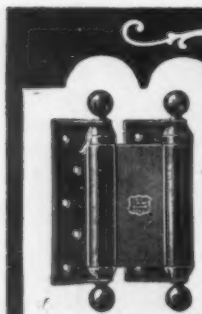
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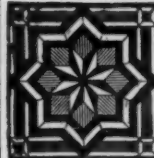
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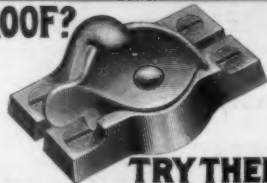
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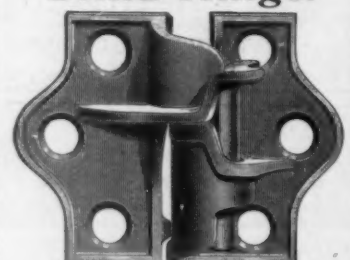
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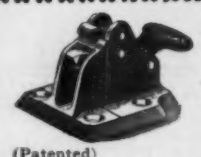


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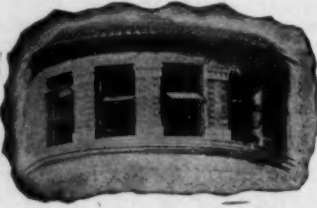
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| Block.....                                                                              | 4 60 P perch. |                | 10 00 @ cord      | Conschocken       |
| Rubble.....                                                                             | 1 25 @ 150    |                | 9 00 @ "          | 1 45 @ 250        |
| Sandstone:                                                                              |               |                |                   |                   |
| Longmeadow.....                                                                         | 80            | 80 @ 90        |                   | 95 @ 1 05         |
| Kibbe.....                                                                              | 90            | 90 @ 1 10      |                   | 1 05 @ 1 25       |
| Brown (Connecticut).....                                                                | 1 00 @ 1 30   | 1 00 @ 1 30    | 1 50 @ cub. ft.   | 85 @ 95           |
| Amherst Ohio.....                                                                       | 90 @ 95       | 90 @ 1 00      | 45 @ 55           | 85 @ 95           |
| Berea ".....                                                                            | 75 @ 1 00     | 85 @ 90        | 45 @ 55           | 85 @ 95           |
| Berlin ".....                                                                           | 75 @ 1 00     | 80 @ 90        | 45 @ 55           | 85 @ 95           |
| Belleville.....                                                                         | 80 @ 1 25     | 25 @ 1 35      | 45 @ 1 25         | 1 00 @ 1 10       |
| New Brunswick (Dorchester).....                                                         | 25 @ 1 30     | 75 @ 90        | Not sold.         | 1 05 @ 1 15       |
| Potsdam Red.....                                                                        | 1 30          | 1 40           | 1 15              | 1 40              |
| Olsen.....                                                                              | 1 05          | 1 05           | 1 25 @ 1 35       | 95 @ 1 05         |
| Carlisle, English.....                                                                  | 1 05          | 1 05           | 95 @ 1 05         | 95 @ 1 05         |
| Corse Hill (Scotch).....                                                                | 1 05          | 1 05           | 80 @ 1 50         | 55 @ 65           |
| Granite: (Maine)                                                                        |               |                |                   |                   |
| Limestone:                                                                              |               |                |                   |                   |
| Bedford.....                                                                            | 45 @ 1 25     | 95 @ 1 00      | 20 @ 40           | 75 @ 85           |
| Joliet.....                                                                             | 1 00          |                |                   | Richmond          |
| Lemont.....                                                                             |               |                |                   | 75 @ 1 50         |
| Serpentine.....                                                                         |               | 10 50 per ton. |                   | Perch 4 50 @ 5 50 |
| Bluestone: (P sq. ft.)                                                                  |               |                |                   |                   |
| Sidewalk.....                                                                           | 30 @ 5 00     | 40 @ 1 75      | cub. ft.          | 1 in. th. 10 @ 25 |
| Planed.....                                                                             | 50 @ 6 00     | @ 75           | 1 00 @ 1 25       | 37 @ 50           |
| Marble: (P cu. ft.)                                                                     |               |                |                   |                   |
| Leo, Mass.....                                                                          |               | 1 75 @ 2 50    | Not sold.         | 2 00 @ 2 50       |
| Rutland, white and blue.....                                                            |               | 3 00           | 3 50 @ 6 00       | 2 00 @ 3 00       |
| Sutherland Falls.....                                                                   | 1 25 @ 1 75   | @ 2 00         | 3 50 @ 6 00       | 1 70 @ 3 00       |
| Glens Falls, black.....                                                                 |               |                | Not sold.         | 4 00 @ 4 50       |
| Italian, blue-veined.....                                                               |               |                | @ 4 40            | 2 50 @ 2 75       |
| "Sienna.....                                                                            |               |                | Not sold.         | @ 5 00            |
| Tennessee, red.....                                                                     |               |                | @ 4 40            | 4 00 @ 6 00       |
| "Knowville.....                                                                         |               |                | @ 4 40            | 3 00 @ 4 00       |
| Pennsylvania, blue.....                                                                 |               |                | Not sold.         | 2 00 @ 3 00       |
| Vermont, white.....                                                                     |               |                | 3 50 @ 6 00       | 2 25 @ 3 00       |
| Slate: Roofing (P square).....                                                          |               |                |                   |                   |
| Green.....                                                                              | 5 00 @ 6 00   | 4 75 @ 5 25    | 3 75 @ 5 00       | 2 90 @ 3 60       |
| "unfading.....                                                                          | 5 00 @ 6 00   | 5 50 @ 6 50    | 5 25 @ 6 00       | 4 25 @ 5 00       |
| Purple.....                                                                             | 5 00 @ 6 00   | 5 50 @ 6 50    | 5 25 @ 6 00       | 4 50 @ 5 50       |
| Red.....                                                                                | 10 00         | 10 00 @ 11 00  | 10 50 @ 12 50     | 11 50 @ 13 00     |
| Black, Lehigh.....                                                                      | 4 25 @ 4 75   |                | 4 50 @ 5 50       | 4 00 @ 4 35       |
| "Chapmans.....                                                                          |               |                | 5 30 @ 6 15       | 4 50 @ 5 00       |
| Genuine Bangor.....                                                                     | 4 35 @ 5 50   | 4 75 @ 5 90    | 5 25 @ 6 50       | 4 35 @ 5 50       |
| Unfading black.....                                                                     | 6 00 @ 8 50   | 6 00 @ 8 50    | 4 25 @ 8 95       | 6 50 @ 9 00       |
| ".....                                                                                  | 5 50 @ 8 00   | 5 50 @ 8 00    | 5 50 @ 9 20       | 6 50 @ 9 00       |
| Tiles, Am..... P M.....                                                                 |               |                | Salt-glazed tiles | @ 28 00           |
| N. Peach Bottom, war, unfading                                                          |               |                | 9" sc. per ft.    | 5 76 @ 6 25       |
| Fire Clay Roof Tile on cars at fac.                                                     | 8 00 @        | 8 00 @         | 6 00 @ 6 50       | 8 00 @            |
| LUMBER.—P M.                                                                            |               |                |                   |                   |
| Boards: (Ordinary dimensions.)                                                          |               |                |                   |                   |
| Pine, 1st quality, clear.....                                                           | 65 00 @ 75 00 | 55 00 @ 70 00  | 50 00 @ 60 00     | 47 50 @ 60 00     |
| "2d quality.....                                                                        | 55 00 @ 60 00 | 42 00 @ 50 00  | 42 00 @ 50 00     | 38 00 @ 48 50     |
| "3d quality.....                                                                        | 18 00 @ 22 00 | 20 00 @ 40 00  | 20 00 @ 25 00     | 27 50 @ 36 50     |
| Spruce.....                                                                             | @ 25 00       | 12 00 @ 17 00  | Not sold.         | 15 00 @ 21 50     |
| Hemlock.....                                                                            | en13 @ 14     | 12 00 @ 14 00  | 10 00 @ 12 00     | 11 50 @ 13 75     |
| Yellow pine.....                                                                        | 20 @ 40       | 20 00 @ 35 00  | 18 00 @ 25 00     | 14 00 @ 20 00     |
| Cypress.....                                                                            | @             | 28 00 @ 40 00  | 30 00 @ 35 00     | 30 00 @ 38 00     |
| Clapboards:                                                                             |               |                |                   |                   |
| Pine.....                                                                               | @             | 38 00 @ 50 00  | 25 00 @ 30 00     | 14 00 @ 25 00     |
| Spruce.....                                                                             | @             | 24 00 @ 35 00  | Not sold.         | Not sold.         |
| Framing Timber:                                                                         |               |                |                   |                   |
| Pine.....                                                                               | 14 00 @ 18 00 | 14 50 @ 16 00  | 15 00 @ 25 00     | 25 00 @ 37 30     |
| Spruce.....                                                                             | 12 00 @ 16 00 | 12 50 @ 15 00  | Not sold.         | 15 00 @ 21 50     |
| Hemlock.....                                                                            | 18 00 @ 21 00 | 17 00 @ 25 00  | 10 00 @ 15 00     | 14 00 @ 20 00     |
| Yellow pine.....                                                                        |               |                | 16 00 @ 25 00     | 22 50 @ 30 00     |
| Laths:                                                                                  |               |                |                   |                   |
| Pine..... Round Wood                                                                    | @             | 2 00 @ 2 50    | 1 90 @ 2 00       | 2 75 @ 3 00       |
| Spruce..... Slab.....                                                                   | @ 1 75        | 1 80 @ 2 25    | Not sold.         | 2 30 @ 2 35       |
| Shingles:                                                                               |               |                |                   |                   |
| Pine, shaved..... P M.....                                                              | 5 00 @ 6 00   | @              | Not sold.         |                   |
| Pine, sawed.....                                                                        | 4 00 @ 5 00   | @ 4 50         | 2 00 @ 2 75       |                   |
| Spruce, sawed.....                                                                      | 1 50 @ 2 00   | 1 50 @ 1 75    | Not sold.         |                   |
| Redwood..... P 125.                                                                     | 1 40 @ 1 60   | 3 00 @ 3 75    | 4 60 @ 6 00       | 30" @ 35 @ 40     |
| Cedar split..... P M.....                                                               | @             | @ 6 00         | Not sold.         | 24" @ 8 @ 21      |
| Cedar sawed.....                                                                        | @             | 3 00 @ 3 25    | 2 50 @ 2 90       | 30" @ 25 @ 14     |
| Cypress, Split..... 7 x 24                                                              | 18 00 @ 30 00 | 5 00 @ 6 00    | @                 | 11 00 @ 14 00     |



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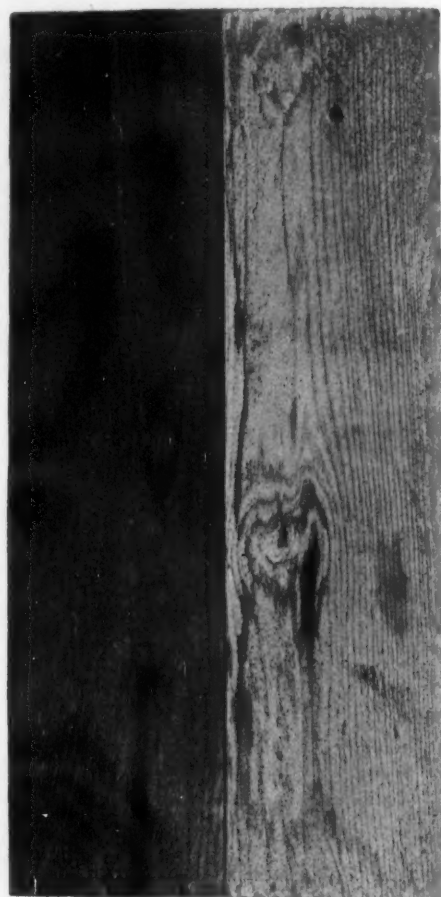


Fig. 1.

Fig. 2.

## "SILVER-GRAY" SHINGLES

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The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

Fig. 1 shows the action of the weather upon an entirely untreated shingle, and

Fig. 2 shows the action of the weather upon a shingle which had been treated with

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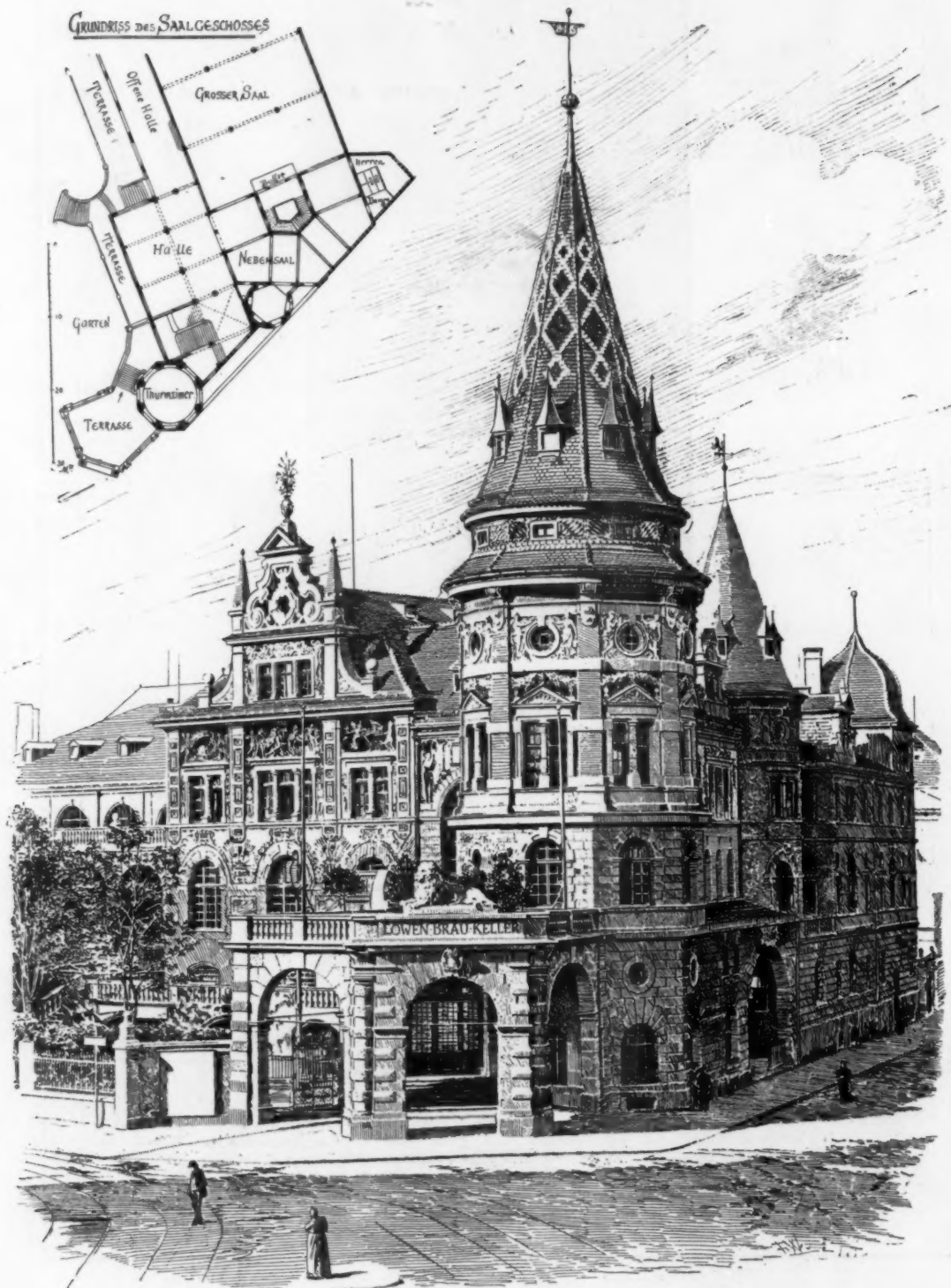
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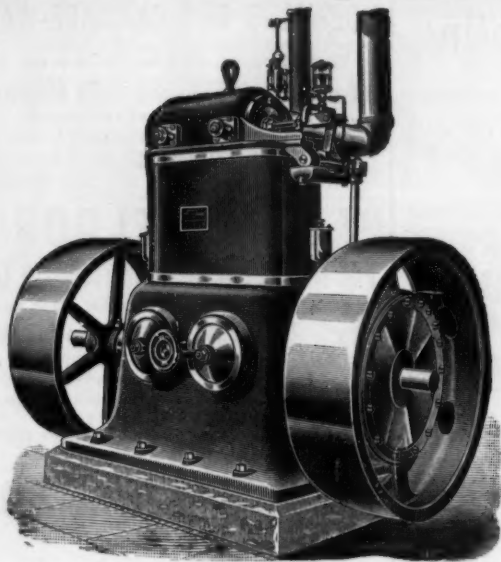
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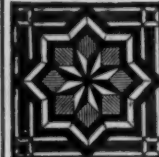
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A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART.

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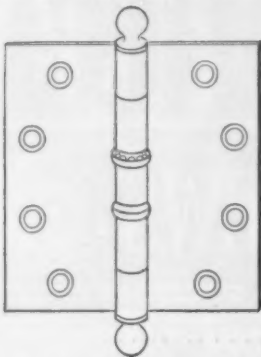
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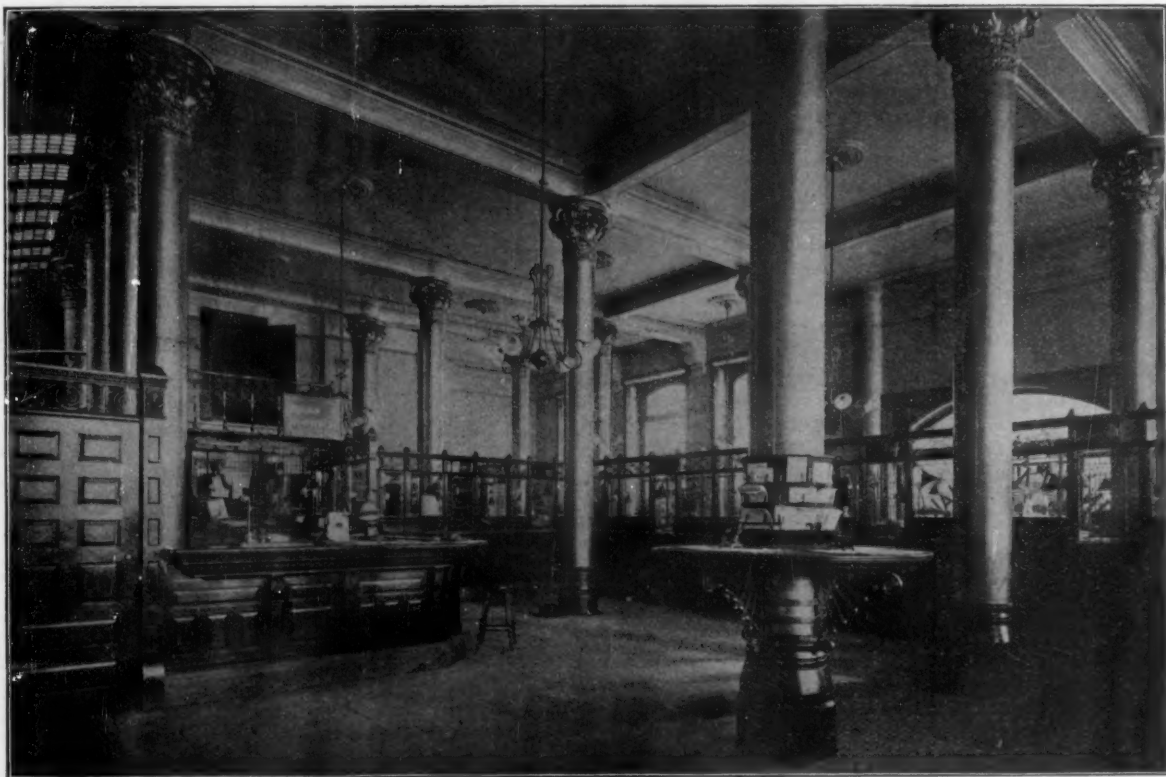
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|---------------------------------------|---------------------|---------------------------------------|
| <b>Foundation:</b>                    |                     |                                       |
| Dimension.....                        | 5 00 P ton.         | 20 @ foot                             |
| Block.....                            | 4 60 P perch.       | 10 00 @ eord                          |
| Rubble.....                           | 1 25 @ 1 50         | 9 00 @ "                              |
| <b>Sandstone:</b>                     |                     |                                       |
| Longmeadow.....                       | 80 @ 90             | 80 @ 90                               |
| Kibbe.....                            | 90 @ 100            | 90 @ 110                              |
| Brown (Connecticut).....              | 1 00 @ 1 20         | 1 00 @ 1 20                           |
| Amherst Ohio.....                     | 90 @ 95             | 90 @ 100                              |
| Berea ".....                          | 75 @ 100            | 85 @ 90                               |
| Berlin ".....                         | 75 @ 100            | 80 @ 90                               |
| Bellefonte.....                       | 80 @ 1 25           | 25 @ 1 35                             |
| New Brunswick (Dorchester)....        | 1 00 @              | 75 @ 90                               |
| Potadam Red.....                      | 1 30 @              | 1 40 @                                |
| Caen.....                             | 1 00 @              | 2 00 @                                |
| Carlisle, English.....                | 1 05 @              | 1 05 @                                |
| Corse Hill (Scotch).....              | 1 05 @              | 1 05 @                                |
| <b>Granite: (Maine)</b>               |                     |                                       |
| Bedford.....                          | 45 @ 1 25           | 95 @ 1 00                             |
| Joliet.....                           | 1 00 @              |                                       |
| Lemont.....                           |                     |                                       |
| Serpentine.....                       |                     |                                       |
| <b>Bluestone: (P sq. ft.)</b>         |                     |                                       |
| Sidewalk.....                         | 30 @ 5 00           | 40 @ 1 75                             |
| Planned.....                          | 50 @ 6 00           | 75 @                                  |
| <b>Marble: (P cu. ft.)</b>            |                     |                                       |
| Leo, Mass.....                        | 1 25 @ 1 75         | 1 75 @ 2 50                           |
| Rutland, white and blue.....          |                     | 3 00 @                                |
| Sutherland Falls.....                 |                     | 2 00 @                                |
| Glens Falls, black.....               |                     |                                       |
| Italian, blue-veined.....             |                     |                                       |
| " Sienna.....                         |                     |                                       |
| Tennessee, red.....                   |                     |                                       |
| " Knoxville.....                      |                     |                                       |
| Pennsylvania, blue.....               |                     |                                       |
| Vermont, white.....                   |                     |                                       |
| <b>Slate: Roofing (P square)</b>      |                     |                                       |
| Green.....                            | 5 00 @ 6 00         | 4 75 @ 5 25                           |
| " unfading.....                       | 5 00 @ 6 00         | 5 50 @ 6 50                           |
| Purple.....                           | 5 00 @ 6 00         | 5 50 @ 6 50                           |
| Red.....                              | 4 25 @ 4 75         | 10 00 @ 11 00                         |
| Black, Lehigh.....                    |                     |                                       |
| " Chapmans.....                       | 4 35 @ 5 50         | 4 75 @ 5 90                           |
| Genuine Bangor.....                   | 6 00 @ 8 50         | 6 00 @ 8 50                           |
| Unfading black.....                   | 5 50 @ 8 00         | 5 50 @ 8 00                           |
| Tiles, Am..... P M.....               |                     |                                       |
| N. Peach Bottom, war, unfading        |                     |                                       |
| Fire Clay Roof Tile on cars at fac.   | 8 00 @              | 8 00 @                                |
| <b>LUMBER. — P M.</b>                 |                     |                                       |
| <b>Boards: (Ordinary dimensions.)</b> |                     |                                       |
| Pine, 1st quality, clear.....         | 85 00 @ 75 00       | 55 00 @ 70 00                         |
| " 2d quality.....                     | 55 00 @ 60 00       | 42 00 @ 50 00                         |
| " 3d quality.....                     | 18 00 @ 22 00       | 20 00 @ 40 00                         |
| Spruce.....                           | 25 00 @             | 12 00 @ 17 00                         |
| Hemlock.....                          | enl33 @ 14          | 12 00 @ 14 00                         |
| Yellow pine.....                      | 20 @ 40             | 20 00 @ 35 00                         |
| Cypress.....                          |                     | 28 00 @ 40 00                         |
| <b>Clapboards:</b>                    |                     |                                       |
| Pine.....                             |                     | 38 00 @ 50 00                         |
| Spruce.....                           |                     | 24 00 @ 35 00                         |
| <b>Framing Timber:</b>                |                     |                                       |
| Pine.....                             | 14 00 @ 18 00       | 14 50 @ 16 00                         |
| Spruce.....                           | 12 00 @ 16 00       | 12 50 @ 15 00                         |
| Hemlock.....                          | 18 00 @ 21 00       | 17 00 @ 25 00                         |
| Yellow pine.....                      |                     |                                       |
| <b>Laths:</b>                         |                     |                                       |
| Pine..... Round Wood                  |                     | 2 00 @ 2 50                           |
| Spruce..... Slab.....                 | 1 75 @              | 1 80 @ 2 25                           |
| <b>Shingles:</b>                      |                     |                                       |
| Pine, shaved..... P M.....            | 5 00 @ 6 00         |                                       |
| Pine, sawed..... ".....               | 4 00 @ 5 00         | 4 50 @                                |
| Spruce, sawed..... ".....             | 1 50 @ 2 00         | 1 50 @ 1 75                           |
| Redwood..... P 125.....               | 1 40 @ 1 60         | 3 00 @ 3 75                           |
| Cedar split..... P M.....             |                     | 2 00 @ 6 00                           |
| Cedar sawed..... ".....               |                     | 2 00 @ 3 25                           |
| Cypress, Split..... 7 x 24 ".....     | 18 00 @ 20 00       | 5 00 @ 6 00                           |



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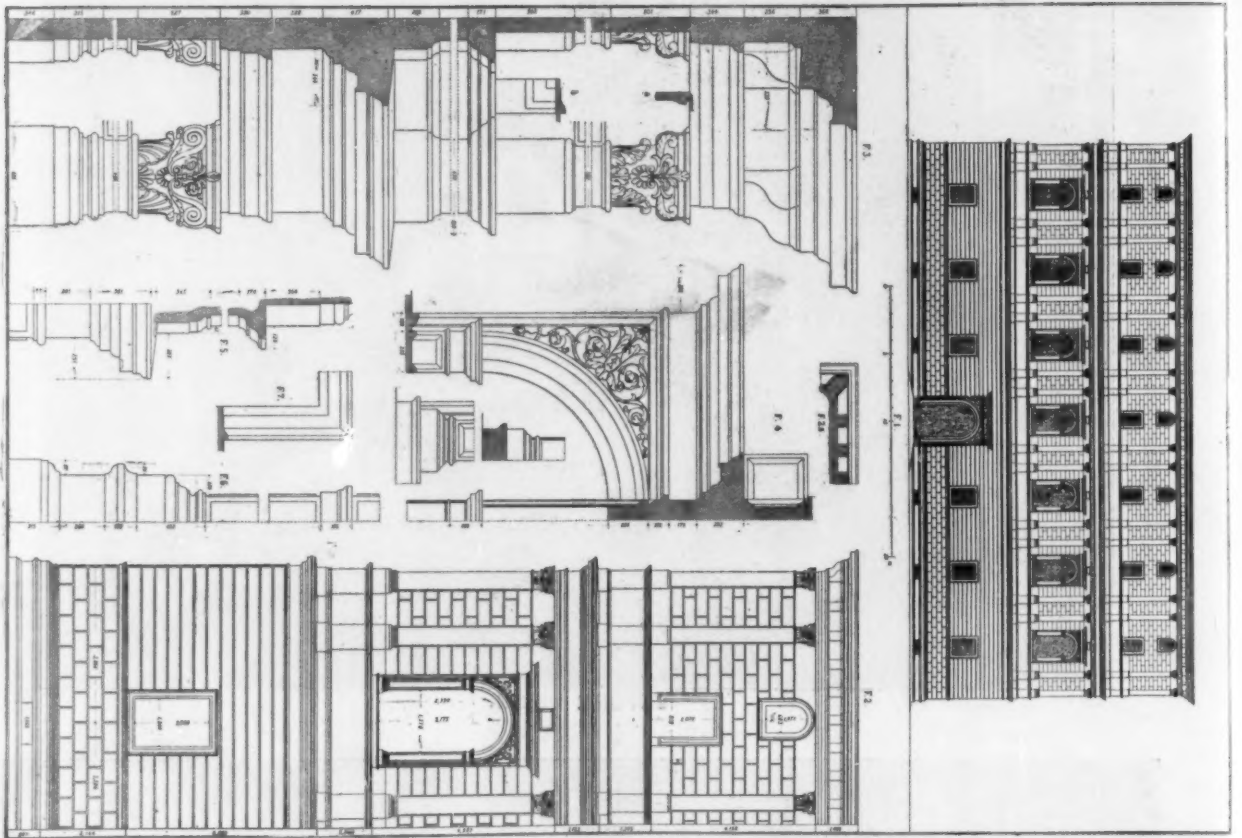
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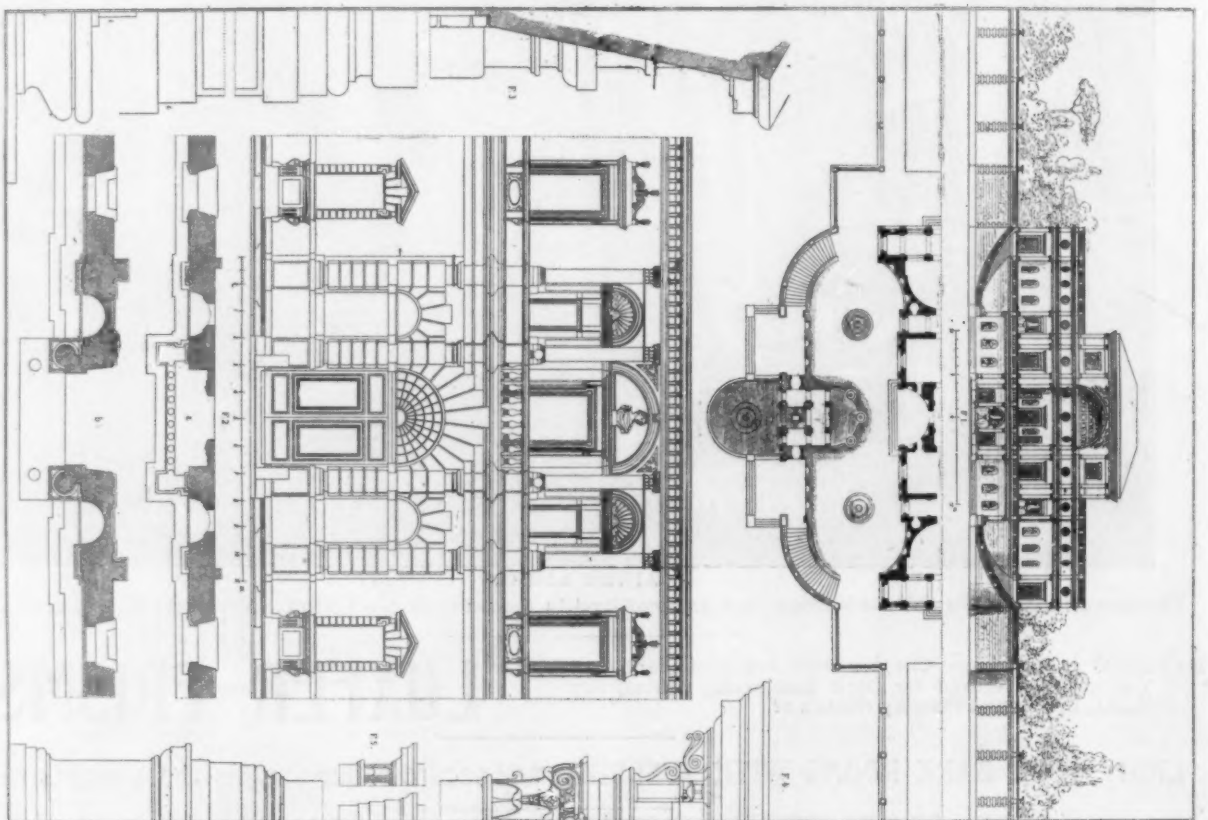
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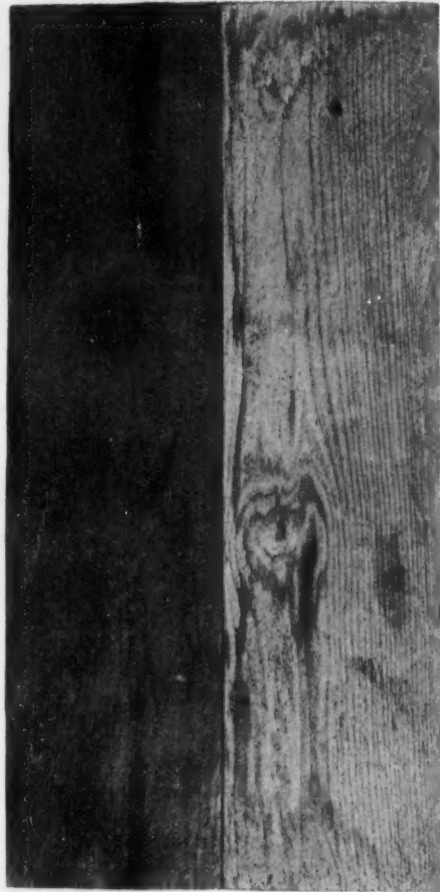


Fig. 1.

Fig. 2.

## "SILVER-GRAY" SHINGLES

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The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

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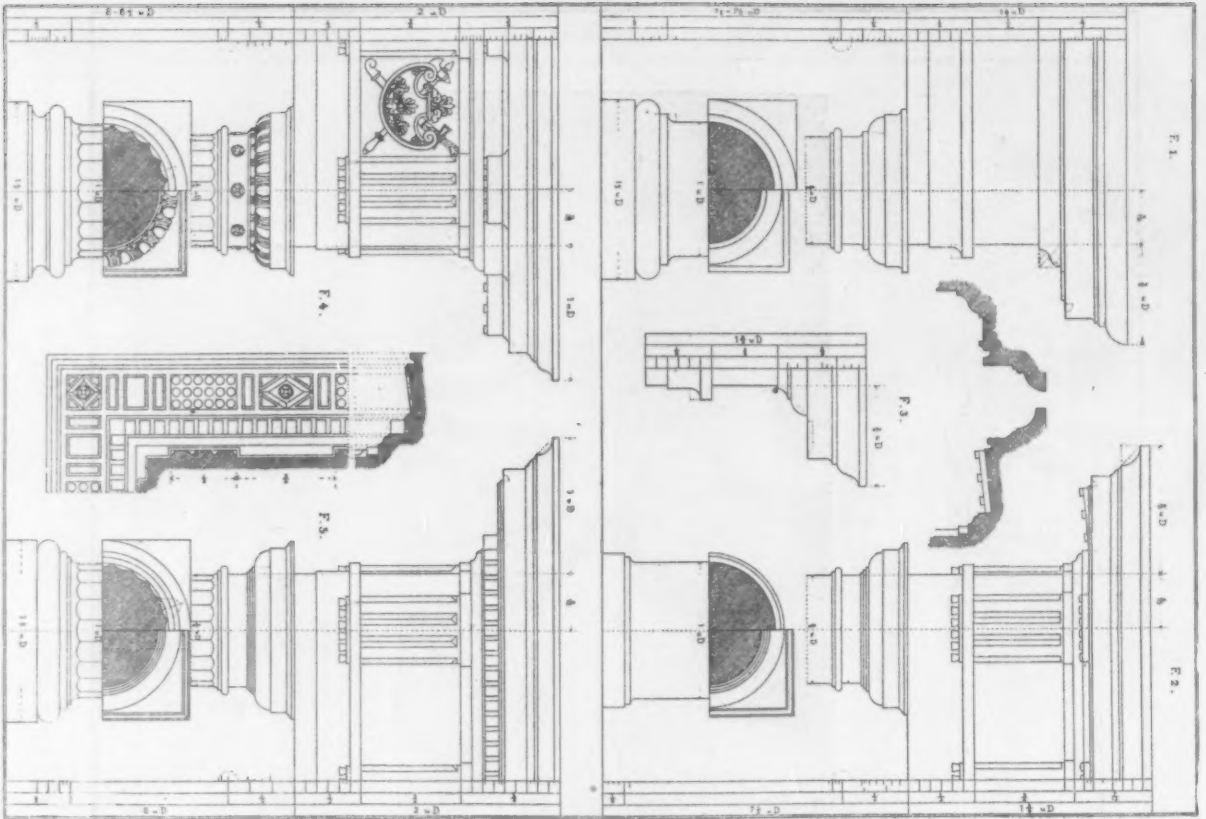
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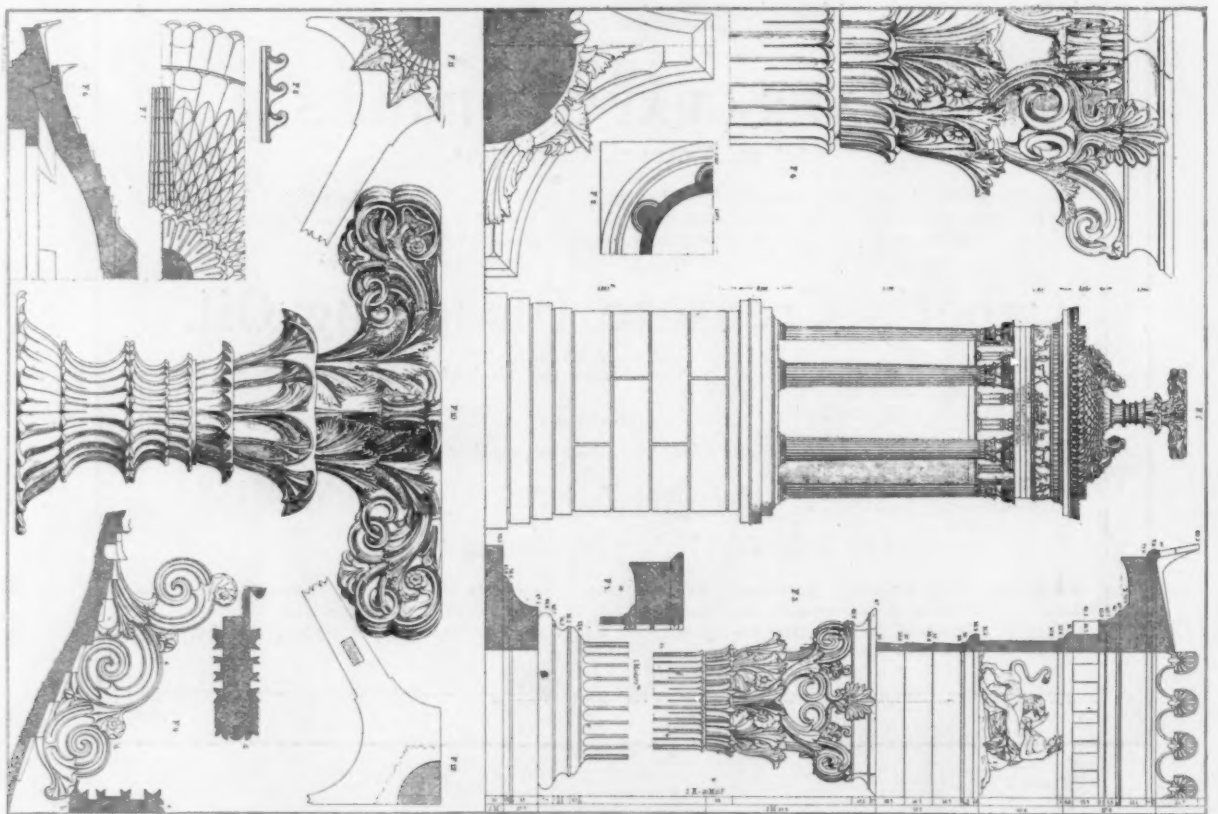
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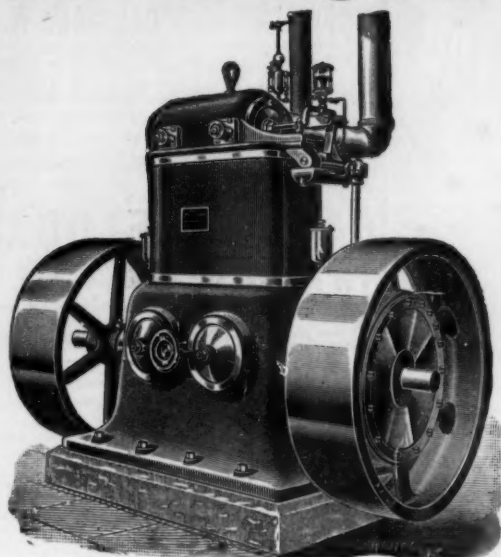
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VOL. LX.—No. 1174.]

SATURDAY, JUNE 25, 1898.

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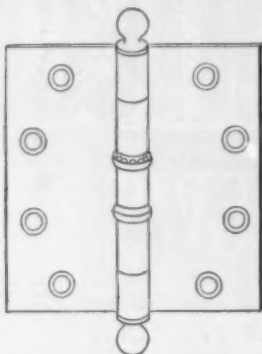
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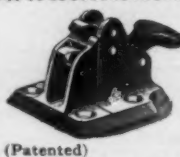
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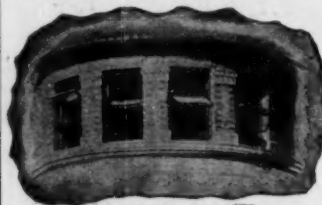


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| Dimension.....                      | 5 00 P ton.         | 30 @ foot                             | @ 5 00            |
| Block.....                          | 4 00 P perch.       | 10 00 @ cord                          | Conshohocken      |
| Rubble.....                         | 1 25 @ 1 50         | 9 00 @ "                              | 1 45 @ 2 50       |
| Sandstone:                          |                     |                                       |                   |
| Longmeadow.....                     | 80 @ 90             |                                       | 95 @ 1 05         |
| Kibbe.....                          | 90 @ 1 10           |                                       |                   |
| Brown (Connecticut).....            | 1 00 @ 1 30         | 1 50 P cub. ft.                       | 1 05 @ 1 25       |
| Amherst Ohio.....                   | 90 @ 1 00           | 45 @ 55                               | 85 @ 95           |
| Berea ".....                        | 75 @ 1 00           | 45 @ 55                               | 55 @ 75           |
| Berlin ".....                       | 75 @ 1 00           | 45 @ 55                               | 85 @ 95           |
| Belleville.....                     | 80 @ 1 25           | 25 @ 1 35                             | 1 00 @ 1 10       |
| New Brunswick (Dorchester).....     | 80 @ 1 00           | 75 @ 90                               | 1 05 @ 1 15       |
| Potsdam Red.....                    | 1 30 @              | 1 40 @                                | 1 40 @            |
| Caen.....                           | 1 05 @              | 2 00 @                                | 1 25 @ 1 35       |
| Carlisle, English.....              | 1 05 @              | 1 05 @                                | 95 @ 1 05         |
| Corse Hill (Scotch).....            | 1 05 @              | 1 05 @                                | 95 @ 1 05         |
| Granite: (Maine)                    |                     |                                       | 55 @ 65           |
| Limestone:                          |                     |                                       |                   |
| Bedford.....                        | 45 @ 1 25           | 95 @ 1 00                             | 75 @ 85           |
| Joliet.....                         | 1 00 @              |                                       | Richmond          |
| Lemont.....                         |                     |                                       | 75 @ 1 50         |
| Serpentine.....                     |                     | 10 50 per ton.                        | Pereh 4 50 @ 5 50 |
| Bluestone: (P sq. ft.)              |                     |                                       |                   |
| Sidewalk.....                       | 30 @ 5 00           | 40 @ 1 75                             | 1 in. th. 10 @ 25 |
| Planned.....                        | 50 @ 6 00           | @ 75                                  | 37 @ 50           |
| Marble: (P cu. ft.)                 |                     |                                       |                   |
| Lee, Mass.....                      | 1 25 @ 1 75         | 1 75 @ 2 50                           | 2 00 @ 2 50       |
| Rutland, white and blue.....        |                     | @ 3 00                                | 2 00 @ 3 00       |
| Sutherland Falls.....               |                     | @ 2 00                                | 1 70 @ 3 00       |
| Glens Falls, black.....             |                     |                                       | 4 00 @ 4 50       |
| Italian, blue-veined.....           |                     |                                       | 2 50 @ 2 75       |
| " Sienna.....                       |                     |                                       | @ 5 00            |
| Tennessee, Knoxville.....           |                     |                                       | 4 00 @ 6 00       |
| Pennsylvania, blue.....             |                     |                                       | 3 00 @ 4 00       |
| Vermont, white.....                 |                     |                                       | 2 00 @ 3 00       |
| Slate: Roofing (P square)           |                     |                                       | 2 25 @ 3 00       |
| Green.....                          | 5 00 @ 6 00         | 4 75 @ 5 25                           | 3 75 @ 5 00       |
| " unfading.....                     | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       |
| Purple.....                         | 5 00 @ 6 00         | 5 50 @ 6 50                           | 5 25 @ 6 00       |
| Red.....                            | 4 25 @ 4 75         | 10 00 @ 11 00                         | 10 50 @ 12 50     |
| Black, Lehigh.....                  |                     |                                       | 4 50 @ 5 50       |
| " Chapmans.....                     |                     |                                       | 5 30 @ 6 15       |
| Genuine Bangor.....                 | 4 35 @ 5 50         | 4 75 @ 5 90                           | 5 25 @ 6 50       |
| Unfading black.....                 | 6 00 @ 8 50         | 6 00 @ 8 50                           | 4 25 @ 8 95       |
| ".....                              | 5 50 @ 8 00         | 5 50 @ 8 00                           | 5 50 @ 9 20       |
| Tiles, Am..... P M.                 |                     |                                       | Salt-glazed tiles |
| N. Peach Bottom, war. unfading      |                     |                                       | 9 75 sc. per ft.  |
| Fire Clay Roof Tile on cars at fac. | 8 00 @              | 8 00 @                                | 6 00 @ 6 50       |
| LUMBER.—P M.                        |                     |                                       |                   |
| Boards: (Ordinary dimensions.)      |                     |                                       |                   |
| Pine, 1st quality, clear.....       | 65 00 @ 75 00       | 55 00 @ 70 00                         | 50 00 @ 60 00     |
| " 2d quality.....                   | 55 00 @ 60 00       | 42 00 @ 50 00                         | 42 00 @ 50 00     |
| " 3d quality.....                   | 18 00 @ 22 00       | 20 00 @ 40 00                         | 20 00 @ 28 00     |
| Spruce.....                         | 20 @ 25 00          | 12 00 @ 17 00                         | Not sold.         |
| Hemlock.....                        | 20 @ 14             | 12 00 @ 14 00                         | 15 00 @ 12 00     |
| Yellow pine.....                    | 20 @ 40             | 20 00 @ 35 00                         | 18 00 @ 25 00     |
| Cypress.....                        |                     | 28 00 @ 40 00                         | 30 00 @ 35 00     |
| Clapboards:                         |                     |                                       |                   |
| Pine.....                           |                     | 38 00 @ 50 00                         | 25 00 @ 30 00     |
| Spruce.....                         |                     | 24 00 @ 35 00                         | Not sold.         |
| Framing Timber:                     |                     |                                       |                   |
| Spruce.....                         | 14 00 @ 18 00       | 14 50 @ 16 00                         | 15 00 @ 25 00     |
| Hemlock.....                        | 12 00 @ 16 00       | 12 50 @ 15 00                         | Not sold.         |
| Yellow pine.....                    | 18 00 @ 21 00       | 17 00 @ 25 00                         | 10 00 @ 15 00     |
| Laths:                              |                     |                                       |                   |
| Pine..... Round Wood                |                     | 2 00 @ 2 50                           | 1 50 @ 2 00       |
| Spruce..... Slab.....               | 1 75 @              | 1 80 @ 2 25                           | Not sold.         |
| Shingles:                           |                     |                                       |                   |
| Pine, shaved..... P M.              | 5 00 @ 6 00         |                                       | Not sold.         |
| Pine, sawed..... " "                | 4 50 @ 5 00         | @ 4 50                                | 2 60 @ 2 75       |
| Spruce, sawed..... " "              | 1 50 @ 2 00         | 1 50 @ 1 75                           | Not sold.         |
| Redwood..... P 125.                 | 1 40 @ 1 60         | 3 00 @ 3 75                           | 4 60 @ 6 00       |
| Cedar split..... P M.               |                     | @ 6 00                                | Not sold.         |
| Cedar sawed..... " "                |                     | 2 00 @ 3 25                           | 2 50 @ 2 90       |
| Cypress. Split..... 7 x 24 " "      | 18 00 @ 20 00       | 5 00 @ 6 00                           |                   |



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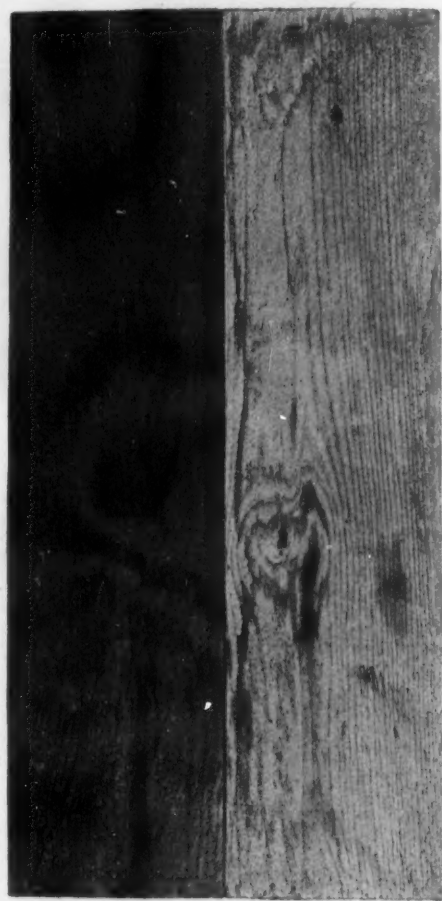


Fig. 1.

Fig. 2.

## "SILVER-GRAY" SHINGLES

Art and Nature vs. Nature Alone.

The above photographic reproductions show two common white cedar shingles which have been to the weather, side by side, for the same length of time, upon the wall of a building near Boston:

Fig. 1 shows the action of the weather upon an entirely untreated shingle, and

Fig. 2 shows the action of the weather upon a shingle which had been treated with

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Bleaching Oil preserves the wood, prevents Mildew and blackening, and gives a soft, natural silver-gray effect which never needs renewal.

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Woman's Building.



A Corner of the "Old Town."  
Dresden Exhibition, 1896.



Lake Wautega and the Building of the City of Memphis.  
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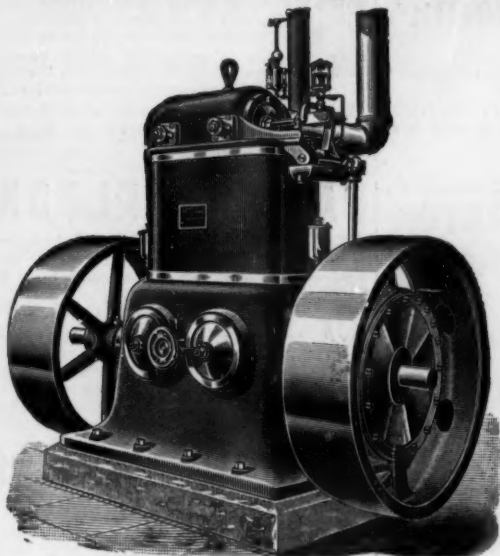
General View of the Tennessee Centennial Exhibition Buildings.

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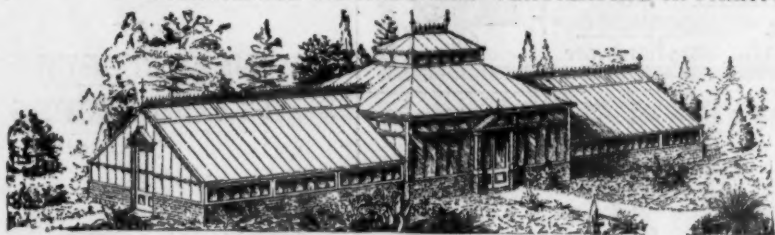
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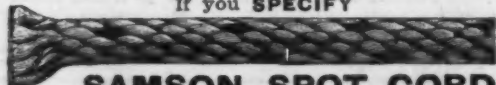
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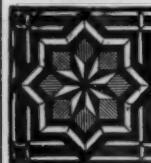
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