

# THE AMERICAN ARCHITECT AND BUILDING NEWS.

Vol. XI.

Copyright, 1882, JAMES R. OSGOOD & Co.

No. 333.

MAY 13, 1882.

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

## CONTENTS.

### SUMMARY:—

|                                                                                                                                                                                                                                                                                                                                                                                                       |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Industrial Coöperation in France: Workmen sharing the Builders' Profits.—The recent Forestry Congress at Cincinnati.—The German Practice of Examining Ground-Air.—Dr. Schlie-mann's Discoveries at Mycenæ.—M. Charnay and the Phantom City.—The Misadventure of a Falsifying Landlord.—Sellon & Volkmar's new form of Secondary Battery.—A Suggested Means of filling the Pennsylvania Museum of Art. | 217 |
| THE SOCIETY OF AMERICAN ARTISTS, NEW YORK.—I.                                                                                                                                                                                                                                                                                                                                                         | 219 |
| SIR HENRY COLE.                                                                                                                                                                                                                                                                                                                                                                                       | 220 |
| THE PANTHEON AS A LACONICUM.                                                                                                                                                                                                                                                                                                                                                                          | 221 |
| THE RIGHT OF SUPPORT TO BUILDINGS.                                                                                                                                                                                                                                                                                                                                                                    | 222 |
| THE ILLUSTRATIONS:—                                                                                                                                                                                                                                                                                                                                                                                   |     |
| House at Hillsboro, O.—House at Short Hills, N. J.—Scottish Sketches.—Design for a County Court-House.                                                                                                                                                                                                                                                                                                | 223 |
| THE AIR WITHIN OUR HOUSES.—II.                                                                                                                                                                                                                                                                                                                                                                        | 223 |
| THE SCOTT MONUMENT, EDINBURGH.                                                                                                                                                                                                                                                                                                                                                                        | 224 |
| SEWAGE AT EASTBOURNE.                                                                                                                                                                                                                                                                                                                                                                                 | 225 |
| THE AMERICAN SOCIETY OF CIVIL ENGINEERS.                                                                                                                                                                                                                                                                                                                                                              | 225 |
| COMMUNICATIONS:—                                                                                                                                                                                                                                                                                                                                                                                      |     |
| Tin-Encased Doors.—Books on Modern Architecture.—Architects' Fees.                                                                                                                                                                                                                                                                                                                                    | 225 |
| NOTES AND CLIPPINGS.                                                                                                                                                                                                                                                                                                                                                                                  | 226 |

IN view of the troubles which have fallen upon the building trades in France by reason of the frequent misunderstandings between employers and employed, several recent attempts have been made to adapt to the circumstances of those trades the principle now followed there in some kinds of manufacture—that of participation by the workmen in the profits of their employers' business, or, carrying it still further, of the assumption by corporate bodies formed among the workmen of the duties and responsibilities hitherto devolving on the employers alone. The subject has been brought particularly to the notice of architects by an official letter from the Prefect of the Seine to the Council of the French National Society of Architects, requesting its opinion as to the advisability of admitting such coöperative associations to compete for public work on equal terms with individual contractors; and also as to the wisdom of officially promoting the participation of workmen in their employers' profits. Upon the first question the Council remarks in its printed reply that there is an important distinction in point of responsibility between a coöperative society and an individual contractor, the latter having generally both capital and reputation to lose by bad work, while the former has usually neither, while even if it had, the shifting character of its membership would render it impracticable to call it to any effectual account for improper performance of its agreements. This consideration is of the more importance to French architects, since the Article 1792 of the Code Civil prescribes that the architect and builder of any structure shall be jointly responsible for any defect in it for ten years after its completion; and as the Council justly observes, not only would the difficulty of requiring good workmanship from an association of unknown individuals be so much greater than from a single contractor that prudent architects would have to keep a representative always in the workshops of such a corporation, but the joint responsibility of an architect and a coöperative association would soon resolve itself, by the changes in the constitution of the association, into the responsibility of the architect alone.

CONCERNING the participation of the workmen in a builder's profits, the Council of the National Society expresses its opinion that although such an arrangement may stimulate the energy of workmen by the powerful motive of self-interest, it is likely to promote a disposition on the part of the men to swell their profits by all possible means, which would much increase the difficulty and anxiety of the architect's position, and looking therefore at the two questions proposed from a purely professional point of view, the Council advises strongly against the expediency of lending official encouragement either to workmen's coöperative associations in the building trades, or to the participation of those employed in such trades in the profits of the contractors. If we regard this opinion in its proper light, as a caution, delivered by men of experience and intelligence, against the dangers which lie in the way of an industrial revolution in which the building trades are likely to be

involved before many years, it will seem only the expression of a wise prudence. Much as we have to hope from a system in itself so well adapted to foster independence, application and thought as that of industrial coöperation, the first steps must be taken with the utmost care, and much modest experimenting, with many failures, will be needed to prepare the way for a permanent reform.

THE Forestry Congress which met in Cincinnati the last week in April seems to have been a most interesting affair, and even from the meagre reports of the papers read which we find in the daily journals can be gathered some new and valuable information. That a serious calamity is rapidly coming upon this country in the shape of the extinction of its forests is now well understood, but it is not so generally known that the means for averting the calamity are within easy reach, if we will follow the example of European nations and devote ourselves seriously to the study and practice of scientific tree-planting, and the enthusiasts, as we call them, who are, so far as they are able, directing public attention to this subject, are rendering a service to their country which will not be without its reward. Among the essays read was one by Professor William Brown, of Canada, upon the measures now taken in Australia for reclaiming that almost desert country. In 1878 was passed in the Provincial Parliament what is called the Forest Tree Act, under which certain tracts of land may be taken by the Government and proclaimed forest districts. These tracts are then enclosed and planted with trees at the public expense. In addition to this a bonus of ten dollars per acre is awarded to private individuals who plant and maintain for two years clumps of young trees, extending over not less than five acres. Under this vigorous treatment we may hope to see an important change made in the character of the Australian territory before many years, and the example would be well worth following in many parts of our own country.

A CORRESPONDENT of the *Scientific American* calls attention to a practice which he says is very common in Berlin, of having the ground-air of building-lots examined by analysis for the benefit of intending purchasers, who avoid land discovered to be subject to foul vapors. It is often observed by farmers in all countries that in certain cellars milk or meat cannot be kept untainted, and the Germans have ascertained that the quality of the cellar atmosphere can be predicted from that of the air contained in the pores of the ground around it, which always fills any excavation made near by; so that a previous examination is certainly a wise precaution, which is worthy of extensive imitation. Under the common system of cesspool-drainage, the ground-air in the thickly settled portions of many of our towns, particularly those which possess an abundant water-supply, is rapidly becoming corrupted to a degree which must and does show itself in endemic diphtheria and fever. No man would knowingly expose himself and his family to the risks which attend habitation in such polluted spots, and a simple mode of ascertaining the true character of suspected ground would be widely useful. For the older parts of our large cities the test would be of little use, for the simple reason that in such places there is no such thing as a building site of wholesome soil. We have ourselves known forty-two abandoned cesspools to be uncovered in excavating the cellar of a building of moderate size in New York, and the ground for miles on each side was probably of the same character. Under such circumstances an impervious floor and sides for the cellar are essential to the healthfulness of a building. Concrete alone is not enough, any kind of gas passing readily through it; some airtight lining is necessary. Asphalt undoubtedly forms the best material now to be had for the purpose, but it is somewhat costly, and a cheaper substitute is much to be desired. Coal-tar in its various forms approaches perhaps nearer to the natural bitumen than any other substance, but its volatility and consequent disagreeable and persistent odor form an insuperable objection to its use inside of a building, and a wide field is still open to the ingenious inventor who can produce an inodorous artificial asphalt at a low price. If there should be any such disposed to undertake the inquiry, we would suggest to him the possibility that a study of the combinations of petroleum might lead to

good results. It is an old theory that deposits of natural asphalt owe their origin to the oxidation of the petroleum always found near by, and a petroleum resin may prove to be the long-desired solvent which will maintain the plasticity and check the volatility of coal-tar.

DR. SCHLIEMANN'S discoveries at Mycenæ are still occasionally discussed in the technical journals. One recent writer professes to have ascertained with certainty that the strange objects found in the tomb of Agamemnon, the masks of gold, the spiral ornaments and other remains of an art previously unknown, date back only a few hundred years, to the time, as he says with easy confidence, when the Celts occupied the territory from which the Hellens had departed. Practically, the fact of the existence of such a Celtic civilization in Argos in the Dark Ages would be quite as surprising, considered as an archaeological discovery, as any of those which Dr. Schliemann professes to have made, but Mr. James Fergusson now comes in, and gives his weighty authority to the statement that there is "no room for doubt that the treasuries of Minyas at Orchomenos, that of Atreus at Mycenæ, and the tombs discovered in the citadel there, with their sculptured stones and gold and bronze ornaments, all belong to the same age, and that before the epoch generally known as the Return of the Heracleidae." This opinion is partly founded on the results of Dr. Schliemann's latest undertaking, the exploration of the treasuries of Minyas at Orchomenos, in which a chamber was found decorated with sculptured patterns identical with those used in such profusion on the smaller objects at Mycenæ, but hitherto found nowhere else in Europe, and seems perfectly justified. Amid the sneers of incredulity with which Dr. Schliemann's discoveries have been received, we forget sometimes the overwhelming force of the evidence by which his theories are sustained. To us the Minyæ, the Atreidae, Paris and Helen, seem beings more fabulous, if possible, than the inhabitants of Valhalla, and it hardly occurs to us that the simultaneous discovery of two underground chambers, precisely alike in design and workmanship, but differing from anything else of the kind in existence, in the very places where the most ancient legends of the world assert that the two greatest contemporaneous kings of the heroic age had buried their treasures, is as strong a proof of the truth of those legends as the discovery of the communal houses of the Indians of New Mexico is of the truth of the accounts written by the Spanish invaders of that country respecting its inhabitants; and although we may refuse to believe that the daughters of Minyas were changed into bats, or that his nephew and niece flew through the air on the back of a ram with a gold fleece, or that the father of Atreus was once cooked, carved and partly eaten, and then restored to life, we can hardly now avoid the conviction that Atreus and Minyas themselves really lived at or near the period to which they are ascribed, and that some part at least of the traditions relating to them is founded on fact.

A ROMANTIC story comes from Central America, to the effect that M. Charnay, the director of the Lorillard archaeological expedition, has penetrated to what he calls the "Phantom City," in the depths of Guatemala, a place never before visited by white men, and only known through the vague and improbable legends current among the Spanish population of the neighboring territory. Forty years ago, Stephens and Catwood, the most energetic and best-equipped explorers who have hitherto visited this part of Central America, heard these stories of a great and populous Indian city, situated in the middle of the Terra de Guerra, which no white man was permitted to approach; and they even found a priest who remembered having seen distinctly from a mountain peak on the border its houses and towers shining in the sun. In the opinion of the settlers, however, an escort of at least five hundred men would be necessary to force a passage through the hostile region which surrounded it, and Stephens abandoned the attempt. How M. Charnay succeeded in accomplishing what Stephens could not do, or whether he found the town still occupied by the aboriginal inhabitants, we do not yet know; but even a recent ruin would be of great interest, and it is by no means impossible, as Stephens says, that in the Phantom City may yet exist the counterpart of those flourishing towns which Cortez and Alvarado found and destroyed, occupied, for all that we know, by a race of men who can still understand and explain the strange inscriptions of Uxmal and Copan.

AN over-sharp landlord in Chicago has come to grief in a manner which we hope will serve as a warning to others of the same kind. It appears that two years ago this individual rented a building to be used as a boarding-house, representing that the sewerage of the place was good, and that hot and cold water were carried all through the house. On taking possession, his tenant discovered that there were indeed a number of bowls with hot and cold water faucets, but without any pipes to bring the water to them; while the sewerage, so far from being good, was exceedingly bad, and the house full of foul smells in consequence. The furniture had already been moved in before it became fully apparent that the house was uninhabitable, and it was necessary to take it away again at considerable expense, and suit was brought against the landlord for reimbursement of this, and for other damages suffered. The judge instructed the jury that the tenant was not only entitled to recover indemnity for the losses actually sustained, but if they found that the landlord had knowingly made false representations with intent to deceive, they might punish him still farther by requiring exemplary damages. It would seem that the jury must have responded cordially to this last suggestion, for their verdict awarded thirty-five hundred dollars to the plaintiff.

AN invention of great importance is said by the *Scientific American* to be at present on exhibition at the Electrical Exhibition in London. This is the new secondary battery of Messrs. Sellon and Volkmar, which promises results far surpassing those yet obtained by any apparatus of the kind. The main principle on which the battery is designed seems obvious enough. As all the action in the ordinary accumulators takes place on the surface of lead plates, it is desirable to increase the surface, proportionately to the weight and bulk of metal, as much as possible. For this purpose the later batteries have been made by rolling together long strips of lead, separated by sheets of felt, so as to expose to electrical action a large superficial area of metal in a small bulk. Messrs. Sellon and Volkmar improve upon this by piercing their lead plates with an immense number of holes, thereby adding greatly to the surface, while diminishing the weight; and this device has the further advantage that the film of oxide formed within the holes has no tendency to detach itself and fall off, as it often does on an ordinary vertical surface, and the felt which is used with the Faure accumulators to keep the film in place may be dispensed with. By actual test a perforated-plate accumulator of sixty-two pounds' weight will receive and deliver as required electrical energy equivalent to a force of one horse-power acting for one hour, and by multiplying the plates the force may be increased to any extent. In the opinion of the inventor this battery is destined to come into general use as a means for storing power derived from natural sources, such as wind, tides, or running water, and it seems very probable that his anticipations are justified.

A VERY good suggestion is made by a Philadelphian residing in Europe, for the benefit of the new Pennsylvania Museum and School of Industrial Art,—that every traveller from Philadelphia who visits Europe or the East for the next few years should make a point of bringing back some object for the Museum. In that way a large collection of some kind would be quickly formed, and any lack of great value in particular branches could be easily remedied in future. Another good effect of such a practice on the part of travelling citizens would be the redoubled interest which they would feel on their return in the museum to which they had made a contribution, no matter how small, while the effort before their departure to discover some hiatus in the collections which they could fill, and their endeavors in foreign countries to procure suitable objects, would serve almost as an education in the history, at least, of the minor arts. It is to be hoped that the Philadelphia Museum will not be the only one to profit by such favors from the citizens. New York already possesses a very large collection, and the enormous wealth and liberality available there might perhaps abash the would-be donors of the most modest class of gifts, but the museums of Cincinnati, Boston and Baltimore, and perhaps Providence, are still only too glad to welcome with thanks the offerings of any who may be disposed to bestow upon them such objects of real art or curiosity as he would choose for his own mantelpiece or cabinet.

## THE SOCIETY OF AMERICAN ARTISTS, NEW YORK.—I.



O many good pictures were sent in to the Society of American Artists this year that when those which had been accepted by a rather rigorous committee were reviewed, it was found that more than a third must remain unhung for lack of space. But one room was at the Society's disposal, and it was deemed best not to crowd its walls unduly. Even if such crowding had been attempted, moreover, a large number of pictures must still have been unplaced: so a selection was made, as fairly and impartially as possible, and the result was an admirable collection. The committee acknowledged, however, that in making the best of its wall-space and in doing the best for the pictures put on view, they had excluded some of the most interesting that had been received, especially some of very large size. The public seemed to regret the fact as much as the committee, and the excluded artists, while making, so far as I can learn, no charges whatever against the fairness or the wisdom of the Society, deeply deplored their fate. For it is every year becoming more and more an acknowledged fact that the mere presence of a picture on the walls of this exhibition is a guaranty of excellence; and year by year our artists, old as well as young, are getting to preserve their best work more exclusively for this occasion. So, after the exhibition had been on view for a few days, it was decided then, when a moiety of the time allotted to it had been covered, the original pictures should be removed, and those which had been accepted but afterwards returned to their owners should be hung in their stead, provided, of course, that these owners were willing once more to intrust them to the Society. Investigation proved that they were not only willing, but glad of the opportunity—a quite convincing proof, I think, of the high standing of the Society in the minds of artists both within and without its ranks.

The first display contained about one hundred and fifty pictures and a few works of sculpture. The most prominent work was Whistler's portrait of his mother, which was shown in Philadelphia last autumn, and which I then described at length. The more one sees this noble canvas, the more beautiful and impressive it appears, and it is high praise to our home-keeping artists to say that their works were by no means thrown in shadow by its presence. A few other pictures that were also seen in Philadelphia need not further detain us now, chief among them being Mr. Bridgman's fine interior of a Cairene café, with Arabs playing chess. In portraits the collection was rich, though one could not but regret the absence of the fine masculine figures which have made the glory of some past exhibitions of the Society. There was nothing actually first-rate in the way of masculine portraiture, since neither Mr. Chase nor Mr. Weir nor Mr. Sargent had sent examples in this line.

Mr. Eastman Johnson sent a hard and mechanical portrait of a child, which made one long for his more artistic reproduction of his little daughter shown last season. Mrs. Whitman was represented by an admirable picture of a little girl in full light standing in a field. The landscape background was a little commonplace in design, and the drawing of the figure not entirely without reproach, and even the most thorough-going advocates of freedom and individuality in treatment may regret that Mrs. Whitman does not care to leave the surface of her paint a little less rough and spotty. But with all its imperfections, this canvas remained most interesting, being good in color, and, above all, instinct with life and character, and full of atmospheric truth. Mr. Duveneck sent two portraits of ladies, one life-size, the other smaller, both brilliantly painted and remarkably strong in character; both marked, however, by the valuable and patent, if rather indescribable quality of style. The color of the flesh in Mr. Duveneck's portraits is perhaps a little too high for its surroundings, but the originality, vitality, and technical beauty of his work would make a far worse fault go uncondemned. Mr. Eaton's two portraits, also of ladies in middle life, were beautiful in color and accomplished in treatment,—technically the best things he has yet accomplished; but they were a little commonplace beside those of Mr. Duveneck; a little wanting in this same quality of pictorial style. Mr. Alden Weir sent a large portrait of a young girl with her lap full of flowers, decorative in conception and effect, and remarkable for the good rendering of a variety of contrasted white tones, but a little stiff in pose, and uninteresting in character. More complete was a smaller head of a child, beautiful and strong in sentiment and painted in the very best manner of this variable workman. A landscape from his hand did not seem very genuine in feeling, and was but moderately interesting. Unfortunately he sent no still-life to repeat the great success he made with his flower painting of last season. The finest portrait of the year, however,—for Mr. Whistler's cannot be included under that head—was by Mr. Thayer. It was indeed, in my opinion, quite the great picture of the year, with the possible though scarcely probable exception of some that we may see in the coming second division of the society's

exhibition. Mr. Thayer's pictures have been interesting in former years, but nothing had quite prepared us for such an exquisite work as this. It showed the three-quarter figure of a young girl who stood in front of her horse, her right arm being capped under his neck, and his head thus drawn down toward her. The painting was strong, yet delicate and reserved, and well of a piece throughout. The color was beautiful: the black horse served as a background for the figure, his head alone being prominently shown. The habit was dark green velvet, the gloves pale brown, and the girl's skin of a brilliant fairness framed by soft red hair. The way in which, while each detail was beautifully and adequately treated,—and there was no appearance of deliberate subordination,—all parts of the canvas had nevertheless been actually subordinated to the head seemed to me the great merit of this beautiful work. There was no loss of tone, no crudeness of insistence, yet the head shone from amid its surroundings like a gem in an appropriate setting. In character the face was strong and interesting. No more beautiful and complete portrait has ever been done on this side of the water, and it would be hard to overmatch its artistic charm and completeness and individuality with a work from any living school. It was a genuine piece of portraiture, moreover, into which this great artistic value had been infused, and no mere studio creation designed for this especial purpose. It is hardly possible that Mr. Thayer can ever do better than in this picture, nor would the most capacious ask that he should. It is enough to hope that he will often do as well in future. Mr. Dewing sent a carefully-painted and thoroughly-vivid portrait of a lady, as devoid as possible of all the sensuous charms of painting, but fully able to win one's admiration in spite of its severity.

Mr. Fuller's two ideal figures were very interesting, but not, I think, as good as those he had given us of recent years. The larger and more important suggested the Winifrid Dysart of last season: a suggestion that was not to the advantage of the newer canvas. One felt, it seemed to me, in these two pictures a slight strain on the artist's part that had never before marred his work—a slight loss of spontaneity and freshness. It is not often that one feels inclined to tell an American artist that his danger may lie in too much ideality, in not keeping close enough to actual things; yet one sees, in looking at these last works of Mr. Fuller's, that he will do well to keep as strong a hold as his genius—for it is nothing less—will permit him on tangible flesh-and-blood realities. Mr. Chase sent a figure of a girl in Japanese costume, with the light falling from behind and striking her face in reflections from the sheet of paper she held in her hand. A little hasty, yet very clever in workmanship and thoroughly artistic in conception, these chiaroscuro effects made the canvas more than noteworthy. A studio interior from the same hand was not so rich and brilliant in color as his similar picture of last season. Mr. Twachtman's landscapes, though unpretending both in size and subject-matter, were the finest in the room. To the utmost *bravura* of handling, Mr. Twachtman adds a strong individuality and a preference for the most unhackneyed and prosaic and locally characteristic of themes, a preference he justifies by clothing them with an artistic charm and poetry drawn from his own nature and his originality of brush: a charm and poetry, therefore, that are not only stronger and more original than if they depended upon his subject-matter, but which are doubly valuable to us, standing as we hope we do on the threshold of a national development of art that must seek its materials from immediate surroundings if it is to be truly vital and characteristic. A winter scene, showing the outskirts of an American town, was perhaps the most striking of his contributions, and his brother artists proved their estimate of its claims by giving it more votes than fell to the lot of any other picture offered. Mr. Inness sent two landscapes: very different in kind but equally beautiful in their several ways. One was a richly-colored summer landscape, the other a winter-morning effect, similar in aim and almost equal in excellence to the one I have already noticed in the Academy exhibition. Mr. Smedley, hitherto known chiefly as a designer for illustrated periodicals, surprised everyone with a clever little rural interior called "The Evening Mail," where the two figures were well conceived and admirably rendered as to character. The chief fault in the picture was the way in which the landscape seen through the broad, open window was given, for it was painted with less light and air and color than one found in the room itself; but the vivid figures and the good tone of the rest of the picture amply compensated for this defect. Mr. Blum had a Venetian view, fine in the treatment of its bright blue tones; Mr. Bunce various works in his usual vein; and Mr. Ryder two exquisite little landscapes, rich in color, vague in theme, and full of sentiment to a degree that is attained, I think, by no other painter on our side of the water. To those who do not sympathize with Mr. Ryder's aims in art—the aim, if I may so say, after *beautiful paint* as such, and the aim after strength and individuality and poetry of sentiment rather than after definition and the recording of material facts—his pictures seem meaningless, I am told, or even affected; but to those who *do* sympathize with his aims, and these seem to include a growing band of lay admirers and all his brother artists, however alien from him in their own kinds of work, his pictures have a charm and value unequalled by that of any work done among his countrymen.

Mr. Turner sent a good picture with two figures in Puritan dress; Mr. Tryon a charming French landscape; Mr. Wyant an admirable landscape with large trees; Mr. Blashfield a symbolic figure of

Autumn, that was a solid and clever piece of painting if not quite as imaginative as it should have been to fit its title; and many other works decidedly above the average in interest and excellence. But how, within the compass of an article, even though unduly long, can one do entire justice to a collection where there was scarcely a picture that one liked to pass over without at least a word of mention?

The sculptures were chiefly bas-reliefs in the semi-pictorial style which is getting so popular with our best workmen; a style which is reprobated, of course, by dogmatic expounders of the canons of plastic art, but which justifies itself beyond appeal in its best examples. Mr. St. Gaudens sent a portrait of his own child that was most beautiful, and a larger panel with the figure of a girl picking roses. The head was good, and the decorative background well carried out, but the action of the hands was unfortunate. Mr. O'Donovan was also represented by bronze medallion portraits, and Mr. Olin Warner by a bas-relief in marble of the utmost merit. The catalogue called it "Cupid and Psyche," but it was very evidently Venus or a nymph, with the baby Cupid, into whom, in later Greek mythology, the lover of Psyche was transformed. The little Cupid stood toward the left of the long tablet; in the centre rose a light tripod with a tiny flame burning upon it, and across the panel, over this tripod stooped the nymph to caress the pouting child. As will be seen, the composition was extremely daring, so daring that only the utmost grace of line could have saved the work from failure. This grace was attained, however, and the curious, yet successfully-handled motive gave an added beauty to the composition. The face of the nymph was another point of surpassing excellence, so full of expression and individuality, yet with all the calm demanded by the art in question, and so far removed from the reproduction of anything but the *spirit* of the antique. I think many will agree with me when I say that if I were set to name the two chief works that, thus far, the spring exhibitions have revealed to us for the first time, I should name Mr. Thayer's portrait of a lady with her horse, and this bas-relief of Mr. Warner's.

M. G. VAN RENSSELAER.

#### SIR HENRY COLE.

WILLIAMSON MONUMENT  
BY PAUL CHRISTIANI, LONDON  
Designed by JAMES G. FROST



W HEREVER the influence of South Kensington has penetrated (says the *Times*), wherever the movement has been felt which during the present generation has brought the attractions and influences of art to bear on the life and industry of the country, the name of Henry Cole will long be remembered and held in honor. His action has often been harshly criticised, his untiring energy and perseverance have frequently

made him enemies: his choice of means may at times, as his critics so often averred, have been less praiseworthy than his ends; but his aim was always a generous one, and his achievements, which are now the inheritance of the public, will constitute no insignificant claim to its gratitude. Great national movements, like that which has produced the South Kensington Museum and all that it represents in the social life of our time, are no doubt due to causes deeper and more universal than the energy of any individual; but the instinct is nevertheless sound in the main which identifies South Kensington with Sir Henry Cole as its creator and chief representative. He was amongst the first to discern and insist upon the paramount need for the organization of national art, and the development of its relations to the national industry. He was the leading spirit and prime mover of the impulse which, beginning with the Exhibition of 1851 and earlier, has since produced such abundant results. We need only to reflect on the contrast between the present condition of national taste and that which prevailed not merely in the region of art itself, but in all the departments of technical industry in 1851, in order to form an estimate of the vast influence exercised by Sir Henry Cole. For certainly to him, as much as to any single man, the result is due, and it is only just to give the credit of the achievement to him who long had to bear all the discredit and obloquy of the original endeavor. When South Kensington was in disfavor, both with Parliament and with the public, no one ever hesitated to throw the weight of blame on the devoted head of "Cole, C. B." Now that it has taken its place among the most popular institutions of the country; now that its beneficial influence is universally ac-

knowledge; now that the reproach that England was far behind other nations in the attention it bestowed on art and design has been long wiped out; now that the Museum of Science and Art bids fair to outstrip its most celebrated rivals in other lands, and is regarded more or less as a model by all; especially now when the prime mover in all this progress has passed away from our midst, it is only right freely and fully to acknowledge the debt which the art and industry of England owe to Sir Henry Cole.

When Sir Henry Cole retired in 1873 from the double office of Secretary of the Science and Art Department and Director he had completed his fiftieth year of continuous public service. He was born at Bath in 1808, and was the son of Captain Henry Robert Cole, an officer in the 82d Regiment. He was educated at Christ Hospital, and thence passed, in 1823, at the age of fifteen, into the public service under the Record Commission. At a later date he was appointed an Assistant-Keeper of the Public Records. While holding this position he published "Henry the Eighth's Scheme of Bishoppicks," and copies of several of the public records; and a series of pamphlets which he wrote on the reform of the public record system contributed materially to the establishment of the present General Record Office. The name of Sir Henry Cole will no doubt be chiefly associated with the origin of the South Kensington Museum; but it should not be forgotten that nearly sixty years ago his energy was brought to bear on the proper custody of the national archives, and thereby indirectly contributed to that great revolution in the study of national history which has been effected by the Rolls Series of publications.

Long before his name became associated with art, Mr. Cole had devoted his energies to literature. In his efforts for the reform of the system of Public Records he had been associated with Charles Buller, whose memory has been revived for the present generation by the publication of Carlyle's biography. With Sir William Molesworth and Charles Buller, Cole started the *Guide* newspaper, of which he became editor, and at a later period he became successively editor of the *Historical Register* and the *Journal of Design*, and a frequent contributor to the *Illustrated London News*. He was an early and intimate friend of John Stuart Mill as well as of Thomas Love Peacock, another official of the India House, of whose remarkable works he edited a recent issue. Under the well-known *nom de plume* of "Felix Summerly," lately — we believe, resumed in his edition of "Walker's Aristology, or the Art of Dining," written by the eccentric author of the "Original" — he published several handbooks to the National Gallery, Hampton Court, and other public exhibitions of art. Besides this, he published a work on "Light, Shade, and Color," and edited a reprint of Albert Dürer's "Small Passion," with reproductions from casts of the original wood blocks preserved in the British Museum; and he was also a frequent contributor to the *Westminster, British and Foreign*, and *Edinburgh Reviews*. Among his early friends was Charles Wentworth Dilke, the grandfather of the present Under-Secretary for Foreign Affairs, and his name is more than once mentioned in connection with the *Athenaeum* and other literary undertakings of that distinguished critic in the memoir prefixed by his grandson to the "Papers of a Critic." In 1840, Mr. Cole, who was still engaged in the public service, gained one of the four prizes of £100 offered by the Treasury for suggestions for developing the Penny Postage plan originated by Sir Rowland Hill. This was not the first occasion on which he had rendered material assistance to his friend the great postal reformer, for as secretary to the Mercantile Committee on Postage he had effectively contributed to the original adoption of Sir Rowland Hill's proposals.

It was about the year 1845 that Sir Henry Cole began to devote his chief attention to the development of art in connection with industry and manufactures. At this time he originated a series of "Art Manufactures," contributing many designs himself, and he assisted the Society of Arts in organizing a series of exhibitions for the purpose of stimulating public industry and invention. This was the germ of the Great Exhibition of 1851, for Mr. Cole's suggestion, that every five years the exhibitions organized by him should assume a national character, was adopted by the late Prince Consort, and developed into the Great International Exhibition, which first revealed to the nation how far it had fallen behindhand in the finer arts of manufacture and design. From that exhibition and its lessons ultimately sprang South Kensington and all its consequences. Among its collateral results was a reform of the Patent Laws in 1852, largely due to the energy and initiative of Mr. Cole. In the same year Mr. Cole, who up to that time had remained attached to the Record Office, was invited by Lord Granville, on behalf of Government, to undertake the re-organization of the Schools of Design established in 1837. From this appointment sprang the establishment of the Science and Art Department of which Mr. Cole — who had been nominated a C. B. for his services in connection with the exhibition of 1851 — became secretary; an office which he relinquished after twenty-one years' laborious and splendid service in 1873. The South Kensington Museum was also largely due to the same vigorous and persevering initiative. At the close of the exhibition of 1851 Parliament had voted a grant of £5,000 towards the purchase of such of the more striking examples exhibited as were calculated to advance ornamental art. The articles thus purchased were exhibited, together with the prize drawings from the various art schools throughout the country, at Marlborough House in 1852. This was the beginning of the Museum of Science and Art, for the

permanent part of the Exhibition was afterwards transferred to those temporary buildings at South Kensington which were long known and despised as the "Brompton boilers." How South Kensington grew amid suspicion, opposition, and obloquy to what it is at present; how "Cole, C. B.," persevered through evil report and good report until the "Brompton boilers" were replaced by a stately pile, and the despised offspring of the great Exhibition of 1851 became one of the most precious and fascinating of the national treasures; how what was once a remote and deserted suburb became the centre of one of the most popular quarters of the town, is a story too long to relate at length, and not very pleasant in some of its details to recall at a time when the leading spirit of the movement has suddenly passed away. It is sufficient to say that wherever there was progress to be made Cole schemed incessantly until it was accomplished. When no one else dared approach the Treasury for money towards educating and elevating the tastes of the people he somehow managed to succeed, and he did this repeatedly in face of much narrow-minded and at times ill-matured opposition from politicians in the House of Commons. Whatever may have been the means employed, the results speak for and justify themselves. No one now speaks slightly of South Kensington. Contrasted with the Great Exhibition of 1851—certainly great in this, that it was perhaps the greatest exhibition ever made of national degradation in the arts of design—it represents a transition from darkness to light. There is hardly a household in the country that is not the better for the change: there is certainly no manufacture in which design has any place which has not felt its influence. How far the result is due to South Kensington itself and its indefatigable director, and how far to general causes which individuals rather direct than excite, the time has not yet come for determining; but few will doubt that Sir Henry Cole was first, or among the first, of the pioneers of that progress in national taste which has been continuous and rapid since the Exhibition of 1851.

Neither the Department of Science and Art nor the South Kensington Museum sufficed to exhaust the untiring energies of Sir Henry Cole. He was English Commissioner at the Paris Exhibition in 1855, and again in 1867, and he was among the principal managers of the International Exhibition of 1862 in London. He organized the annual exhibitions which were held in London in 1872 and the two following years; he was an active Vice-President of the Society of Arts, and he was among the first originators and most energetic promoters of the Royal Albert Hall. In 1873, after fifty years of public service, he retired on a full pension specially awarded by the Treasury, and two years afterward he was created a K. C. B.—an honor which he only accepted after much reluctance when it was represented to him by Mr. Disraeli, who was Prime Minister at the time, that it was conferred at the special instance of the Queen. But Sir Henry Cole's retirement from the public service brought no cessation from his active and philanthropic labors. In 1873, with the aid of the Society of Arts, he established the National Training School for Music, an institution which did good service in its time; and in 1874 he founded the National Training School for Cookery at South Kensington. From 1876 to 1879 he lived at Birmingham and Manchester, where he devoted himself to an endeavor, not so successful as he hoped, to induce the municipal authorities to turn their attention to plans for the utilization of sewage; but his residence at Birmingham secured him the acquaintance and ultimately the friendship of Cardinal Newman, with whom he maintained a frequent and intimate correspondence down to the time of his death. In 1879 he returned to the neighborhood of London and settled at Hampstead until the spring of 1880, when he went to live once more at South Kensington in the house in which he died on Tuesday. Last year Sir Henry Cole commenced framing a scheme for the formation of Guilds of Health—a design for diffusing common sanitary knowledge and an acquaintance with the ordinary rules for insuring health among all classes of the people. This plan is left incomplete by its originator, but the Society of Arts is to hold this year a meeting or conference for discussing it and for publishing information on the subject. During the last six months Sir Henry Cole had devoted much time, with the assistance of his daughter, to an account of his fifty years of labor in the service of the public. He had completed chapters upon his connection with the Penny Postage scheme and the Public Record Office, upon his various handbooks to public collections and public buildings, and upon the Great Exhibition of 1851, and he has left materials for the completion of the work.

Sir Henry Cole was spared the pain of a long illness. For some time he had suffered from an affection of the heart, and his medical attendants had recommended caution and freedom from excitement; but he continued to attend to his various occupations until the middle of last week, when on his return from a brief visit to Tunbridge Wells he over-exerted himself at a meeting which he attended in the City. By Sunday, however, he was considerably recovered, and on Monday he felt well enough to sit for an hour to Mr. Whistler, who is engaged on his portrait. On Monday evening he became seriously ill, the affection of the heart being complicated by congestion of the lungs, apparently due to exposure during the previous week. His condition was not considered specially critical, but on Tuesday evening he died, painlessly and without warning.

Such is a brief record of an active, beneficent, and well-spent life. Sir Henry Cole had many difficulties to encounter, many opponents to vanquish, much obloquy to undergo, and not a little ill-nature to

contend with; but all these obstacles he finally overcame, and no one can say that the work he actually accomplished fell short of the ability and public spirit with which he labored. Whatever mistakes he may have made, however much the means he employed may have been criticised and fairly open to criticism, it will hardly be denied that the work of his life was great in conception and great in executing, or that the creator of the South Kensington Museum did as much as any man of his time to recover the industrial arts of his country from the almost hopeless degradation into which they had fallen at the middle of the present century.

#### THE PANTHEON AS A LACONICUM.



VERY nearly twelve years ago excavations were commenced in the Baths of Caracalla. They were carried on vigorously for some time, and were watched with interest alike by archaeologists and the general public acquainted, some practically and others by report, with the Turkish bath, as we call the system now. All were curious to see what light the excavations would throw on the mechanism of such enormous establishments as the Roman *Thermæ* were: how they were heated; where the bathers sat; what the various chambers, large and small, were used for, and other details. But after a year or two the works were slackened, then they were stopped, to be recommenced as opportunity might permit—for the Government has many excavatory irons in the fire—and they have since been continued in a more or less desultory manner. The discoveries made have been highly interesting. Extensive remains of the beautiful and varied mosaic pavements have been uncovered; large fragments of the granite, porphyry, alabaster, and white-marble columns which supported the vaultings have been found; portions of the richly-carved cornices and other architectural features, with a number of the capitals, have been dug up; vestiges of the wealth of costly marbles, giallo-antico, africano, and other varieties with which the walls were panelled, have been found *in situ*; the uses of many of the rooms have been demonstrated by positive and negative evidence; the great tepidarium and the frigidarium have been cleared, so that all can recognize their principal features; and, further, the removal of the 10 feet to 15 feet of accumulation lying upon the floorings has enabled one to form a better, and indeed a complete, idea of the height of the walls and vaultings, and the vast grandeur of the larger chambers. But it is only recently that, through the extension of the works to the foot of those two gigantic piers towering aloft on the western side above all the other parts of these *Thermæ*—the remains of an immense circular hall, which, according to the great weight of archaeological opinion, was the *Laconicum*, or hot-air bath-room—that any discoveries adding materially to what was already known have been made. The results of the excavations at this spot are, however, of paramount interest, for, on the interior of this great chamber being disencumbered of the mass of loose debris and accumulation under which its remains were, with the exception of the two great piers I have mentioned, entirely buried, it was found to be in every respect so exact a counterpart of Agrippa's great temple in the Campus Martius as to afford evidence of apparently a conclusive character in favor of those archaeologists who have expressed the opinion that "the sanctuary and home of art and piety, Pantheon, pride of Rome," was planned and built to serve no other purpose than that of the hot-air bath-room of the *Thermæ* of Agrippa.

Until fifty years ago no one had presumed to doubt that the Pantheon was built to fulfil a primary intention of Agrippa's to dedicate a magnificent shrine to Jupiter and all the gods; but in the year 1834 Stefano Piale, a man who, endowed with great perceptive powers, possessed those two requisites—good scholarship and a practical knowledge of art and architecture—which are indispensable to form a competent archaeologist, started the controversy by reading before the Pontifical Academy of Archaeology a learned paper on the subject. The chief arguments he employed and developed at length in support of his theory that the Pantheon was designed by Valerius Ostiensis to serve as the *Laconicum* of the Baths of Agrippa, and that its dedication to the service of the gods was an after-thought, are briefly these: The edifice as originally built was a round hall without any of the characteristics of a temple. Of the many round temples of which we have either the description or the remains, not one agrees with the Pantheon, and there is not one in which the circular and rectilinear are combined. The rectilinear portico is an

entirely new feature, and one which, according to the opinion of the great antiquaries, was added by the Emperor Constantine in the fourth century. The Pantheon, as originally built, was a round hall without any of the characteristics of a temple. Of the many round temples of which we have either the description or the remains, not one agrees with the Pantheon, and there is not one in which the circular and rectilinear are combined. The rectilinear portico is an

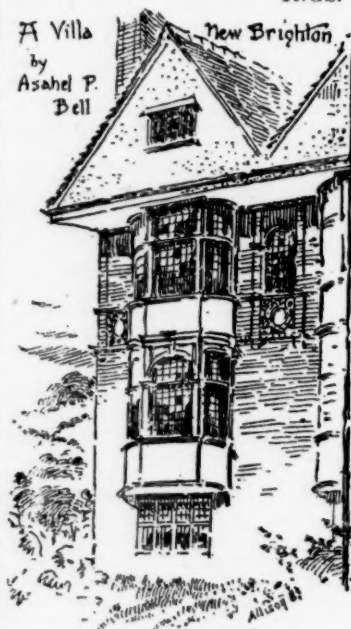
addition not contemplated in the original design and not agreeing with its principal lines. All the known circular temples in Rome were surrounded by colonnades. All the Roman temples were raised aloft upon platforms; whereas the pavement of the portico of the Pantheon is only the height of three steps above the ground-level, and from the portico there was a descent of 14 inches into the interior of the building, a thing contrary to all architectural rules relating to temples. If the round mole was originally built as the cella of a temple, a profane edifice such as a bathing establishment would never have been erected against its most sacred part, and the brickwork cornice of the circular mole continued along the walls of the *Thermae* as if they formed parts of the same edifice; and finally, the interior formation of the Pantheon is in exact accord with the rules laid down by Vitruvius for the building of the *Laconicum* of Roman *Thermae*. But even those who accepted Piale's views in their fullest extent were puzzled to explain in anything approaching to a satisfactory manner how the temperature of such an enormous chamber as the Pantheon, measuring 141 feet 7 inches in diameter, could ever have been raised to the high degree required by a *Laconicum*, or, in plain terms, a sweating-bath. The round opening in the dome might be closed by the bronze lid or valve described by Vitruvius; the chamber might have two floors, one raised on pedestals above the other, between which the flames from the furnace might play; the heat might be carried up the walls by terracotta pipes in close contact to each other behind the panelling; but even then a furnace large enough to resemble a small volcano would be insufficient to heat such an area in the way described. These apparently insurmountable difficulties have now received full explanation through the discoveries made in clearing the circular hall of the Baths of Caracalla, and, if not quite, it is very nearly, as simple as Columbus's solution of his egg problem. From a diagram which gives half the ground plan of the Pantheon, and half of that of the newly-uncovered hall in the Baths of Caracalla, placed against each other, it is seen that, after accounting for the slight alterations made in the former, when it was converted into a temple, they were to all intents and purposes identical.

The Pantheon is 141 feet 7 inches in diameter, internal measurement; the Caracalla *Laconicum* is 125 feet, or only 17 feet 7 inches less, while its dome is at a much loftier elevation. In the interior of the Pantheon there are seven large recesses. The largest, apse-like in form, facing the door, measures 31 feet in diameter; the other six, four of which are rectangular and two semi-circular, measuring 28 feet by 13 feet. It was supposed that these were designed to hold the statues of the divinities, that opposite the door being made of larger size out of regard to the higher dignity of almighty Jove; but the circular hot-air bath-room of the Baths of Caracalla has also seven recesses placed in exactly the same situations as those in the Pantheon with the remarkable difference in detail that the largest of the seven, facing the door, is really an apse, such as might have been destined for the statue of the greatest of the gods. It measures no less than 34 feet across what may be called the diameter, and 35 feet in depth from the circular line of the flooring of the hall, while the other six, which are all rectangular, measure 29 feet 6 inches in width by 17 feet 6 inches in depth. The difference in the proportions between the main apse and the other six recesses in this hall is, therefore, much greater than what is found in the Pantheon, and more exactly in character with the purpose for which the Pantheon was by some supposed to have been built, but no statues ever stood in these recesses, — they were all parts of one enormous and admirably-planned hot-air bath-room.

In describing the revelations made by the excavations in the *Laconicum* of the Baths of Caracalla, I equally describe the Pantheon as originally planned to be the hot-air bath-room of the *Thermae* of Agrippa. The flooring is double, the upper being raised above the lower in the usual manner upon a number of small pedestals three feet in height. The walls behind the marble panelling are covered with calorifers — terracotta rectangular pipes placed perpendicularly in close connection with each other — through which the heat was carried from the space between the floors; but this heat was the product, not, as was generally supposed, of one, but of six large furnaces — one behind and one below each of the smaller recesses. There were probably other furnaces, the positions of which have not yet been ascertained, for the examination of this *Laconicum* has not yet been entirely completed because of the masses of fallen vaulting which still hide some portions. In front of each recess — and of one the details are complete in every respect — there was a low wall or balustrade three feet in height, with one step or seat on the outside toward the centre of the hall, and three similar steps or seats on the inside of the balustrades leading down to the floors of these recesses, which are on a level two feet lower than that of the hall itself. These steps are continued along the sides of the recesses, and upon them the bathers sat. The furnace connected with each recess is behind the back wall. It is 9 feet in height, arched above, and 6 feet 9 inches in width and the same in length. Its floor is on the same level with the lower floor of the recess, which is again lower than the corresponding floor of the central portion of the hall. The arched summit of the furnace rises behind the back wall of the recess to the height of about 4 feet 6 inches above the line of its upper floor, while the lower 3 feet of the inside of the furnace — allowing for the 18-inch thickness of the upper floors of the recess — opens upon the space between the floors. It is, therefore, evident that when the furnaces were packed with wood the flames must have played with

such a degree of intensity against the back walls and beneath the floors of these recesses as to raise the temperature within them to even a higher grade than is required in any Turkish bath, and of the great force of the fire the furnaces found show abundant indications. Moreover, the space between the floors of these recesses is entirely open and bounded by almost continuous walls to concentrate the flames there, while the heat, passing through apertures at their ends, spread onward between the double floors of the hall and up the calorifers on its walls. What may have been the temperature in the middle of the hall I am not competent to judge, but it must have borne the same relative proportion to that in the recesses which the temperature in the middle of a large room does to that immediately in front of a roaring fire in the grate on one side; and the recesses in these great circular hot-air bath-rooms were so many fireplaces — of which the fires were hidden — close into which the bathers sat. If a bather found himself too hot he could vary the temperature by going more into the middle of the room. The access to the mouths of these furnaces was through the series of great subterranean corridors and chambers beneath the level of the *Thermae*. There, below, were the men who fed them, and there the wood was stored. Flights of steps lead up to the mouth of each furnace. — *Correspondence of the London Times.*

#### THE RIGHT OF SUPPORT TO BUILDINGS BY BUILDINGS.



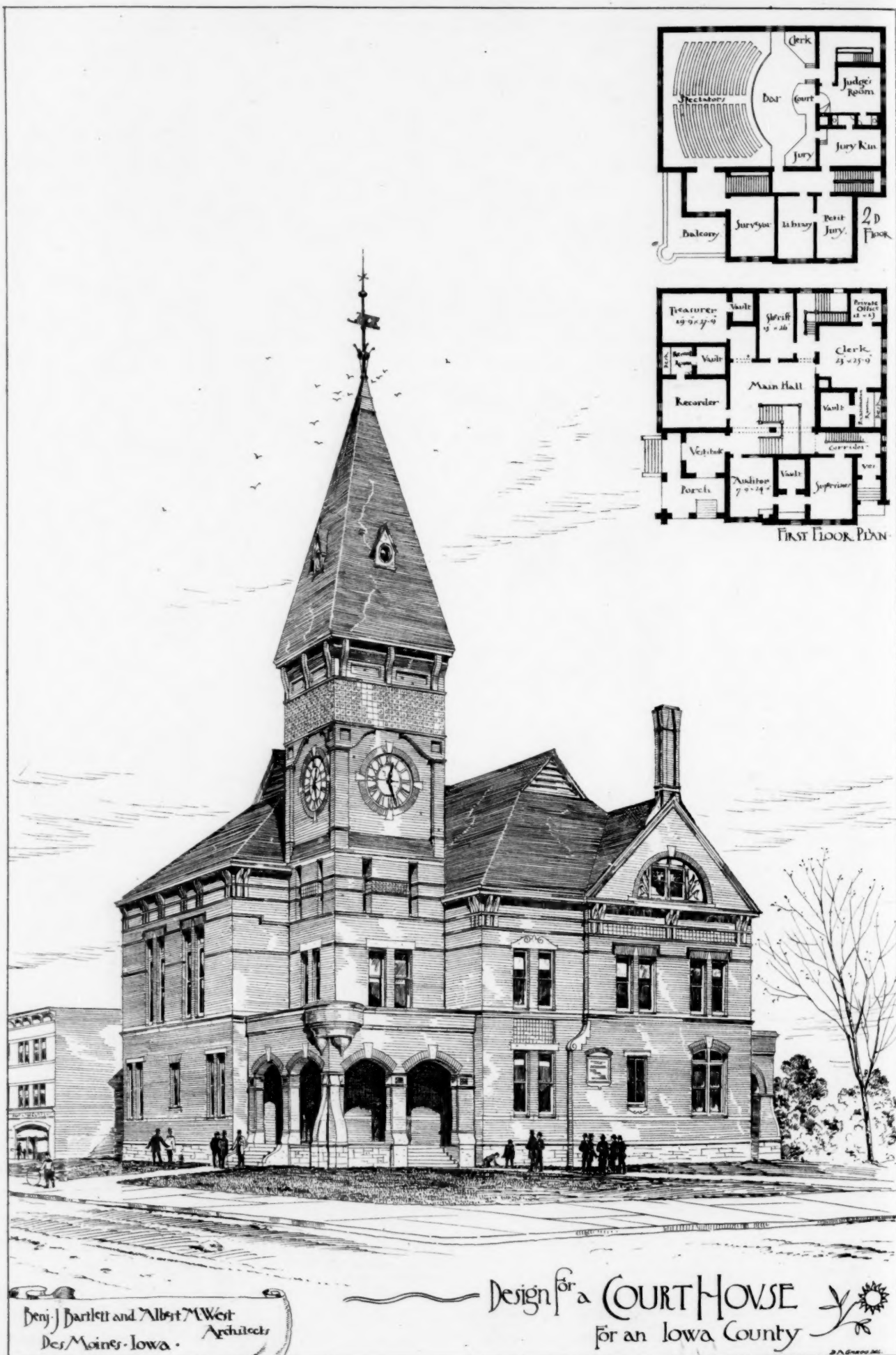
[From the *British Architect*.]

THE now famous case<sup>1</sup> of *Angus vs. Dalton*, or rather *Dalton vs. Angus*, as it actually is in its latest and most important stage, namely, in the appeal to the House of Lords, has quite recently received a supplement in the decision of Vice-Chancellor Hall in the case of *Lemaitre vs. Davis*, 50 *Law Journal*, Chancery Division, p. 173. In *Dalton vs. Angus* it was settled once for all that the owner of buildings has a right to support for such buildings from the adjacent land when they have been in existence for a period of twenty years. This conclusion was, as some of our readers will at any rate remember, arrived at on different grounds by the judges who advised the House of Lords and by the judicial members of that House themselves. Lord Selborne distinctly and boldly gave it as his opinion that the right to support was a right within the Prescription Act, and therefore that twenty years' enjoyment gave an absolute statutory right to support. Lord Blackburn, without denying that the Lord Chancellor's opinion was correct, yet based his judgment on the ground that an enjoyment of the right for a period of twenty years gave the owner, so to speak, of such enjoyment a prescriptive title to the right to support; and among the judges Mr. Justice Fry came with regret to the conclusion that a long series of judicial decisions had so formulated the law as to make it impossible to hold that twenty years' enjoyment did not give a right, though such law was based on no principle at all. Such, then, was the case of *Dalton vs. Angus*, to which Vice-Chancellor Hall has just added a very important and legally logical sequel.

The result of *Lemaitre vs. Hall* may be stated in half a dozen words. It was therein judicially decided that not only does an enjoyment of support for twenty years give buildings a right to such support from adjoining land, but also from adjoining *buildings* as long as such enjoyment has been neither secret, nor by force, nor discontinuous. This, it will once more be seen, is a most important development of the case in the House of Lords, and one which may have important practical consequences. As Vice-Chancellor Hall truly says, it is impossible to find a distinction in legal principles between the right to support from land for buildings and from buildings for buildings. The right of support by land to land, which it was decided long ago was a right given by English law, is one which differs from the right of buildings to support from adjoining land, because the former is a natural right which attaches to the possession of the land. But a right of support to buildings is a different right in its inception, being of a quasi-artificial character, and therefore whether it be land or buildings by which buildings are supported matters not. If the owner of buildings obtains a right to support from his neighbor's land because the land has supported his buildings for twenty years, and whether it is held that this right arises from the operation

<sup>1</sup> See *American Architect* for July 16, 1881.





Denj. J. Bartlett and Albert M. West  
Des Moines, Iowa. Architects

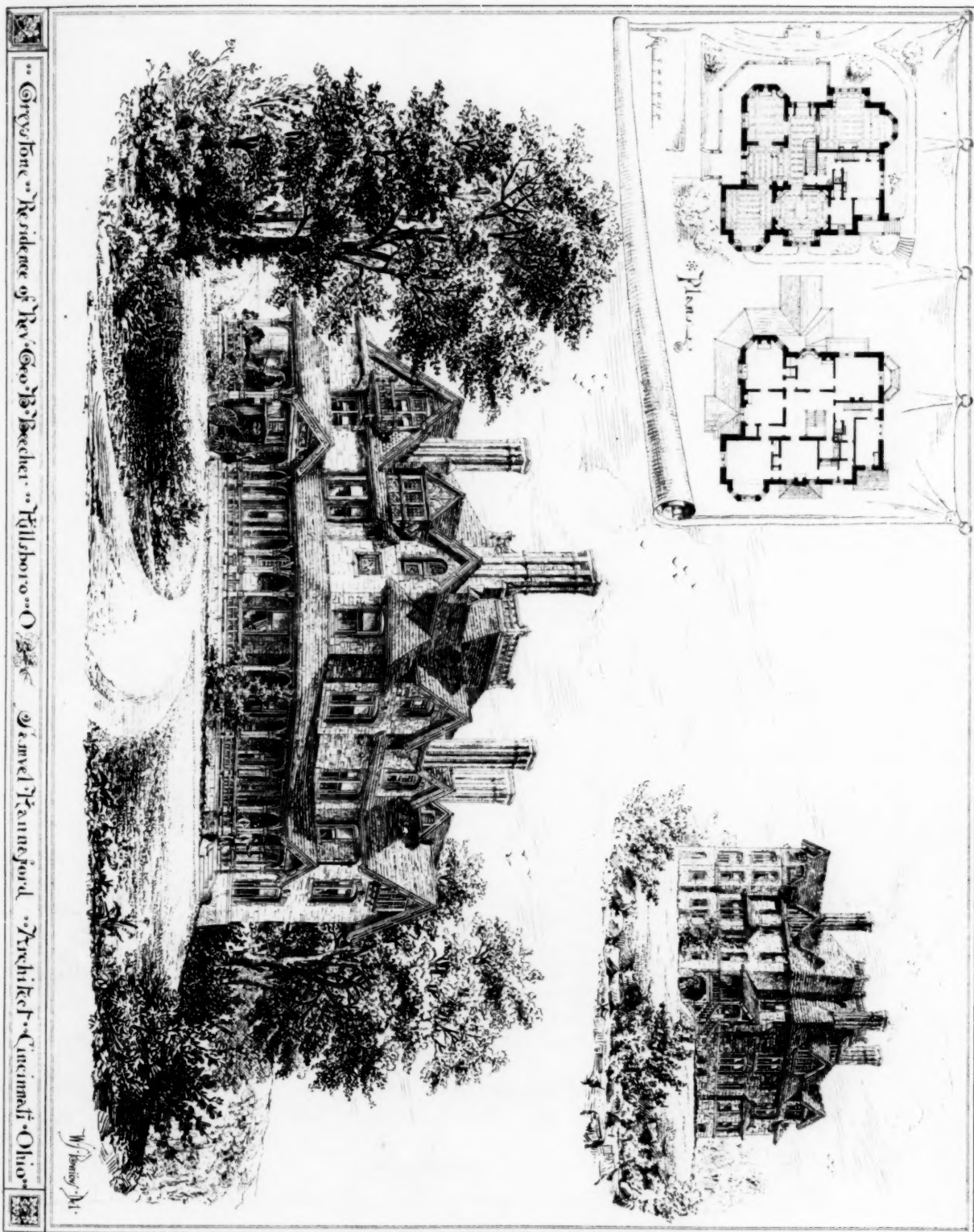
Design for a COURT HOUSE  
for an Iowa County





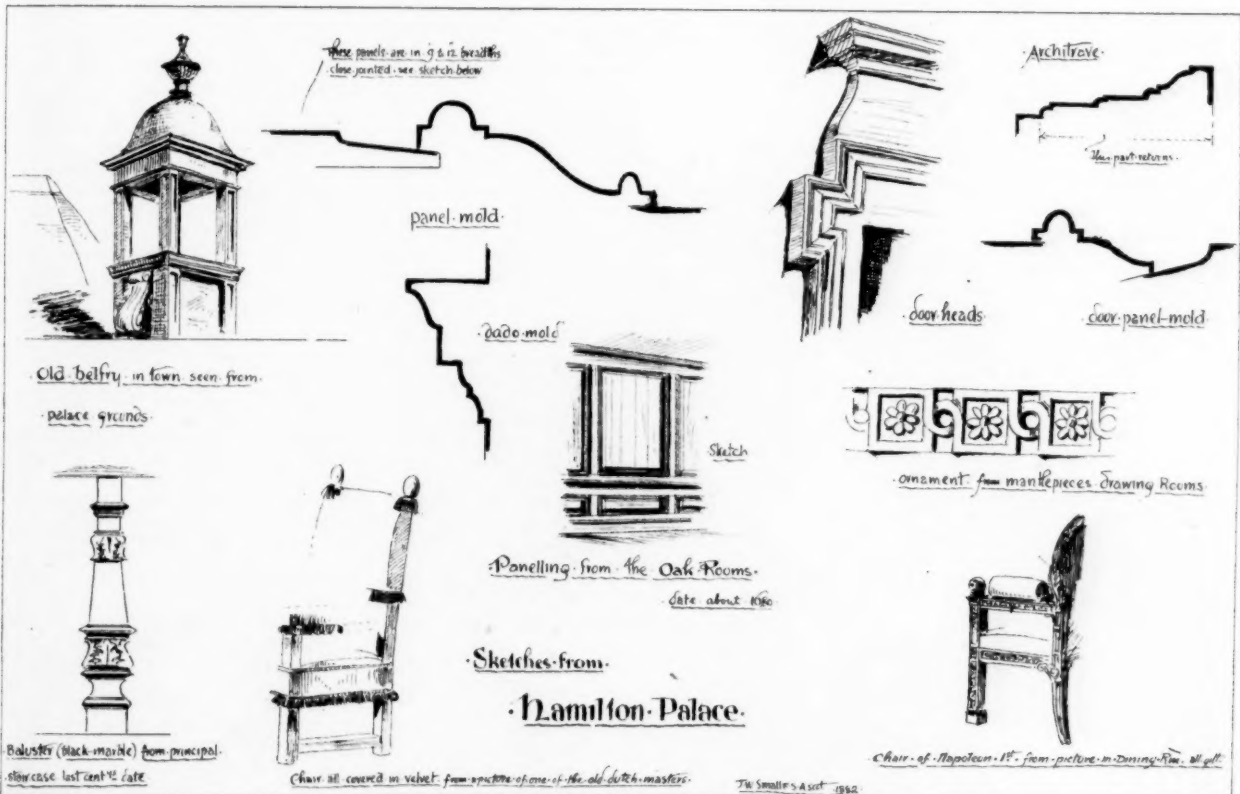
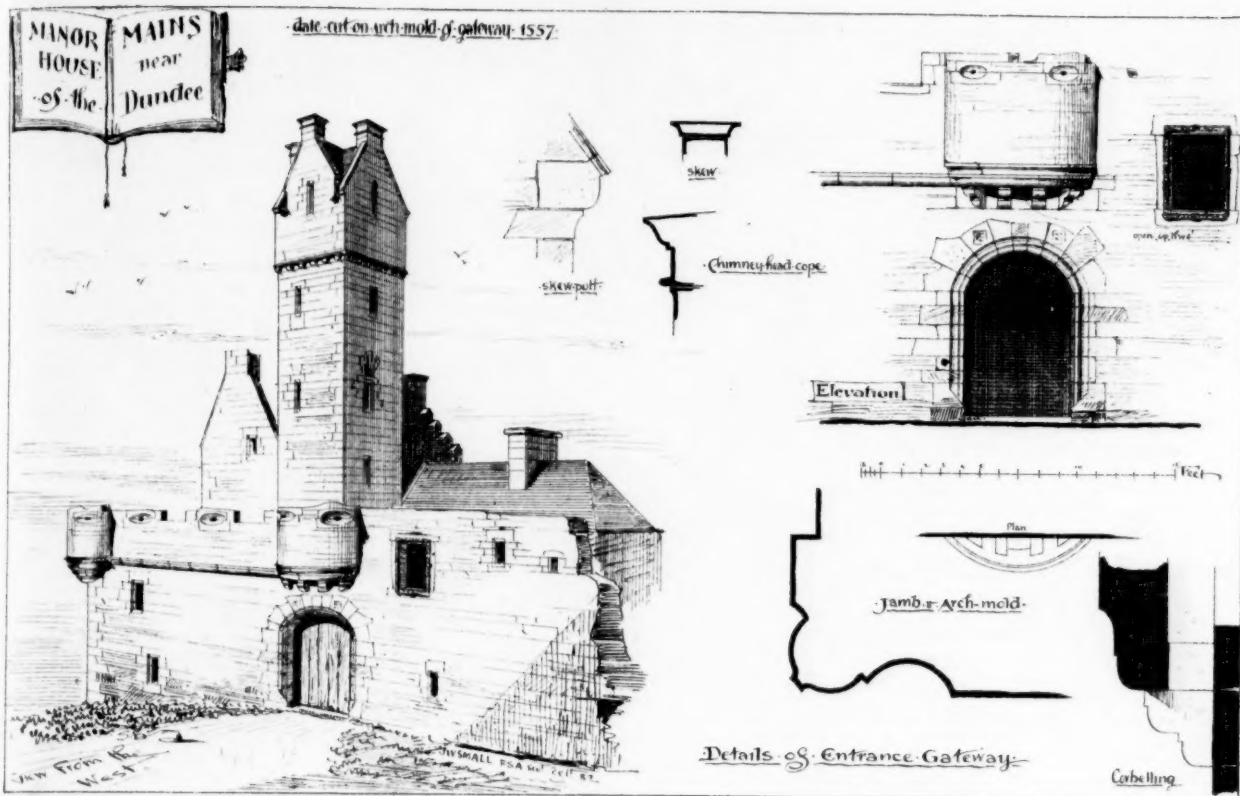
The Heliotype Printing Co. 211 Tremont St. Boston.

The Heliotype Printing Co. 211 Tremont St. Boston.



"Greystone" Residence of Rev. Geo. B. Beecher. Tillbort's Office, Cincinnati, Ohio.







M  
=  
o  
o  
E  
p  
in  
r  
s  
n  
o  
b  
o  
w  
n  
p  
b  
s  
th  
a  
s  
a  
fi  
h  
ju  
ti  
fr  
a  
h  
o  
st  
ti  
p  
L  
so  
n  
b  
b  
th  
a  
h  
o  
c  
m  
re  
th  
th  
C  
e  
w  
a  
m  
e  
w  
n  
o  
th  
th  
h  
fo  
ye  
w  
su  
th  
th  
su  
in  
of  
si  
fo  
p  
ti  
la  
p  
a  
A  
L  
w  
cu  
er  
a  
m  
da  
L  
bo

R

in

of the Prescription Act, or from actual enjoyment, whether founded on the fiction of a lost grant or not, or from the actual state at which English law has arrived, equally also if it be buildings which have supported buildings, the right must be created. Vice-Chancellor Hall, in his judgment in *Lemaitre vs. Davis*, seemed to consider he must rest his opinion on the fact that Lord Selborne held that the Prescription Act applied to such a right as the one in question. It does not seem necessary to make the right depend solely on the operation of this statute. As long as there is no logical and legal distinction between the right to support from land and buildings, the conclusions of the House of Lords in *Dalton vs. Angus* must be applicable, whether based on the ground stated by Lord Selborne or the other members of the Court.

But there is, as it seems to us, a distinction of some practical importance between the case of support from land and support from buildings. In *Angus vs. Dalton*, Lord Selborne stated that against such a servitude as that claimed in the case before him the owner of the adjoining land "has his own remedy, if he chooses to prevent and interrupt it. That power of resistance does, and must in all such cases, exist. They (the servitudes) can always be interrupted, and that without difficulty or inconvenience, when a man wishes and finds it for his interest to make such a use of his own land as will have that effect." Soon after the House of Lords delivered their judgment, in our comment on it we pointed out that such interruptions as the Lord Chancellor points to were, in the case of support from land to buildings, by no means so easy as he seemed to think, and that to let down your land, and so let down your neighbor's house, was quite a different thing from putting a hoarding in front of his window or a bar across a pathway. Now this objection is still more forcible in the case of support from buildings. Mr. Justice Frye, in the course of his interesting opinion, says, "Is the support of the house by the adjoining soil preventable? I think not. It is, of course, physically possible for one man so to excavate his soil as to let down his neighbor's building, and a man may or may not have occasion to excavate his own land for his own purposes, but such an excavation for the sole purpose of letting down a neighbor's house is of so expensive, so difficult, so churlish a character, that it is not reasonably to be required to prevent the acquisition of a right," and he thus proceeds: "In fact, in the case of adjoining houses it would be to require a man to destroy his own property in order to protect his right to it." This, more forcibly than we can put it, sums up the practical objection to this recent development of *Dalton vs. Angus*: to prevent the acquisition of the right it requires "a man to destroy his own property in order to protect it."

It must be confessed this is somewhat a *reductio ad absurdum* of the doctrine of the House of Lords; but it must also be confessed that it is a perfectly logical conclusion. In the case before Vice-Chancellor Hall, the actual building was a cellar belonging to an inn called the Mitre Tavern, and it, together with the wall of the tavern, was injured by the support from the adjoining buildings being taken away in the course of their demolition for the purpose of improvement. In such a case as this it seems difficult to see how any practical step can be taken to prevent the acquisition of the right: for whether it is worse to destroy your own building to prevent your neighbor gaining a right which may at some future time be a cause of grave inconvenience to you, or to let such right be gained and take the chance of its never being burdensome? It may, perhaps, be said, that if you threaten your neighbor, then, unless he will admit that he only has the right to support by your permission, and only for so long a time as you choose to let him have it, you will destroy your own building so as to prevent the acquisition of the right, he will at once make the required admission. But experience must have sufficiently shown us that there are scores of persons who, knowing the grave inconveniences and the great expense which must attend the carrying out of such a threat as this, will refuse to make any such admission, and trust to the inconvenience and expense preventing their neighbor from carrying his threat into force. There are, of course, other and well-known arguments to be urged on the other side, especially that it is expedient that a right after being enjoyed for a certain time should become absolute. Into these we do not propose to enter: they are at the bottom of all kinds of prescriptive titles, whether to light, to roads, or to the absolute possession of landed property. But it was impossible, in commenting on and pointing out this important extension of the doctrine finally fixed as a part of the positive law of this country, by the case of *Dalton vs. Angus*, which is caused by the judgment of Vice-Chancellor Hall in *Lemaitre vs. Davis*, not to show at the same time the grave difficulty which exists in preventing the acquisition of this right. The difficulty was noticed in *Dalton vs. Angus*, and was deliberately considered to be one which did not over-rule the more important benefit of a prescriptive title to the right to support from land. It possibly may have to be considered by the same high tribunal at some future day in relation to the support of buildings, but meanwhile, as long as *Lemaitre vs. Davis* is good law, building-owners must submit to it as best they can. — *The Builder*.

#### THE ILLUSTRATIONS.

RESIDENCE FOR REV. GEORGE B. BEECHER, HILLSBORO, O. MR. SAMUEL HANNAFORD, ARCHITECT AND SUPERINTENDENT, CINCINNATI, O.

This house is built of the native limestone, which is a yellow gray in tone. The jambs of the windows, chimneys, and parts of the

gables are laid up with dark red brick. Roof of slate. The ceilings are finished with beams and panels of oak, and most of the interior wood-work is of the same material. The main hall has a large stone fireplace.

SCOTTISH SKETCHES BY MR. J. W. SMALL, F. S. A. SCOT.—SKETCHES FROM HAMILTON PALACE; MANOR-HOUSE OF THE MAINS, NEAR DUNDEE.

COURT-HOUSE FOR AN IOWA COUNTY. MESSRS. BARTLETT & WEST, ARCHITECTS, DES MOINES, IO.

HOUSE AT SHORT HILLS, N. J. MESSRS. LAMB & RICH, ARCHITECTS, NEW YORK, N. Y.

#### THE AIR WITHIN OUR HOUSES.<sup>1</sup>—II.



THERE was one other consideration, and that was damp air. He would remind them that when air was laden with moisture it simply meant that it was charged with globules of water held in suspension, or floating in the air, by means of which globules of water the air was, as we said, in common parlance, thickened, so that an organic substance, as he had before said, was suspended in the air with greater facility. He knew a public institution not very far from where they were then assembled—public baths and wash-houses—which had been ingeniously built over a grave-yard. Now, air from public baths and wash-houses, he need scarcely tell them, must be necessarily damp—must be charged largely with water; and when a house containing air charged largely with water stood over an old grave-yard, what was the effect of the passage of the ground-air into the house? The effect was simply this: that when people opened the doors in the morning for the purpose of commencing work the air was said to go forth and meet them in the face with a strength "enough to knock them down." He need not tell them the cause of it, and he need not tell them that in that establishment one person died and another person died—a father died, a mother died, a son died, a daughter died, and yet that establishment had not been altered one iota to this day. That was the effect of damp, and the reason why in this climate we spoke so much of damp houses. The fact was that if there were any great amount of impurity in the air-bath it was held in suspension in greater density the greater the amount of water in the air. He thought he had given them to understand, by comparison, what really was the condition into which was liable to get the air-bath wherein we chose to live in this climate, and under the Gothic conditions of dwellings which pertained to us. Now, let them turn to the question of natural ventilation. It was of no use talking about nature doing everything aright, and leaving it there. What we wanted to do in our days was to trace the precise means by which nature did do everything aright, in order to guide ourselves in our humble attempts at contrivances—not to follow nature in a quibbling spirit, but by appreciating the conditions under which our planet exists and man had come into existence as a species; and in order that we might succeed in our contrivances to rectify the failings of nature, we must do the best we could, with some appreciation not only of the principles upon which nature worked, but also of the elements of which natural organization consisted. With respect to ventilation, he would point out to them how nature worked, to use a phrase which was not a good one, with respect to ventilation. They should take the dead body of a rat, and place it in the open fields: it was harmless; they might smell it probably, or they might not; but put a dead rat under the floor, or between the joists, and the state of things was very different. Put the dead rat, as the representative of a great deal of similar decaying matter, into a drain, and they knew the consequence. Instead of a small dead animal, they would suppose that an open field was covered with a considerable amount of rotten manure, as was done every day. They drove past it. The manure was in its right place, and nature was doing with it that which nature always did if left undisturbed. A portion of the manure was being converted into gas, and the atmospheric action automatically—without any impulse of our ingenuity—this grand, invisible, silent agent was carrying into the upper regions all that was prejudicial, poisonous, and unsatisfactory, or offensive to our nostrils, carrying it away so rapidly and effectually that it was perfectly harmless. But inclose that in a sewer or a chamber, and there the air could not carry it away: it was impossible for nature to work upon it if they would not let nature in. Such was the operation of natural ventilation in the open fields, that they knew perfectly well that it was scarcely possible to deposit in the open country any decaying substance without the automatic action of the air rendering its decomposition absolutely innocuous. That led him to lay before them this view of the condition of the atmosphere. We were accustomed to say that we could not live upon air (but we certainly could not live without it), as if it were some substantial food taken into our body, exercising its own influence as a repairing, nourishing substance. But let them look at it in a different light: was not air the great scavenger of this globe? It was the cleansing agent. If we inspired and expired the air, it was for cleansing purposes.

<sup>1</sup> Part of a paper read before the Civil and Mechanical Engineer's Society, March 2, by Professor Kerr, and published in the *Builder*.

The air acted upon a decaying object and cleansed it, and carried off the polluted matter into the air and distributed it presently by gravitation over the surface in a new form, rendered innocuous, and charged with a fructifying influence by which the whole world was nourished. Therefore, they, as engineers and architects, at any rate as scientific men contemplating the problem of ventilation, had to look upon the atmosphere as it was—namely, a great cleanser, and without the influence of the air being allowed to cleanse, it was impossible that anything on the surface of the globe could be cleansed. They knew that the air was constantly seeking access to every inclosed chamber which was calculated to become impure, as if it were an intelligent agent charged with the function of searching out its work, and persistent in finding access to every inclosed space if it possibly could. It would force its way in at the cracks of our doors and windows, and it would get in at the chimney, and if it could not get in in any other way it would get through the walls in appreciable quantities. It would play through every substance which it could possibly pierce, all with the determination to do its work of cleansing. That, for the science of ventilation, was the right light in which to regard the atmosphere. Perhaps they would allow him to suggest this, and it was a mere suggestion, and might be worth nothing, but he could not help thinking that the time was coming when we should live in houses, the walls of which were intentionally rendered porous; that was to say, that inasmuch as we knew that the air already played through our thick brick walls, so we should in time arrive at allowing the air to go through the walls, under proper control, and by that means maintain the purity of the air in a way which he thought could not be otherwise than beneficial. This was worth consideration, scientifically in its bearing, if not practically in its details. Having referred to the fact that where ventilators were put in a room it would be found that, in the great majority of cases they were carefully shut, he went on to say that that gave them a pretty clear understanding of the thoughtless condition of ventilation, or non-ventilation, in our houses, and chiefly in our best houses; and the better the house the worse, generally speaking, it was ventilated. Now he would go a little farther in respect to air in the abstract. A circumstance had lately been brought out and traced which was, he confessed, somewhat new to him, and that was the question of vitality in bad air. To speak non-scientifically for the moment, beneficent nature was never at a loss to create machinery which gained its ends. When we succeeded in producing the most abominable atmosphere in any room, continually and perpetually, which we could devise, nature stepped in, and, in her quiet, silent way, applied a remedy, all her own, to this detestable condition to things. In work-rooms in London and elsewhere, where the air was polluted in the worst form from the causes which he had mentioned, and also by the changes connected with the processes of manufacture which went on—and some of which changes were extremely formidable with respect to the pollution of the air-bath—when the air had been brought into the worst possible condition, then nature set up a compensating condition, and human life became adapted to it; and it seemed that human creatures who worked in those work-rooms had their vitality accommodated to the atmosphere. They did not die: they lived to an old age, but they lived on at a very low ebb of vitality. They did a minimum of work, their functions generally, in such cases, being mere routine and mechanical action. There was nothing which involved the need of intelligence, and, consequently, they carried themselves on in a dull, droning, wretched, miserable way, until they disappeared of sheer inanition, but not until after a long life. This was an instance of the way in which nature accommodated herself. When they went into a work-room where the air was constantly renewed, or when they went into the open fields where men were working in the air which nature breathed with its own freshness, then they would find the maximum of vitality, and a large quantity of food consumed as compared with the small quantity of food in the other case, and the muscular action of the system at its best, and the large amount of work done, as compared with a minimum of work done in vitiated air. This had been illustrated by two very remarkable instances which he had seen quoted, and which he would mention presently; but the question before them now, which was to be illustrated, was this question:—that in the work-room, in which the air was abominable, there was no cleansing done, and the air-bath was polluted, and charged with pollution upon pollution, and no cleansing took place, but in the open air the air was constantly changed, and also in well-ventilated work-shops; it was a question not merely between what people call fresh air and foul air, but what we recognized as cleansing *versus* non-cleansing. Here was the illustration to which he referred. In a certain work-room, occupied by a certain number of young women engaged in needle-work, there was a very bad condition of ventilation indeed, and some kind, scientific gentleman designed a simple process of ventilation, and the girls became lively instead of being dull and stupid; and they struck for an increase of wages, not on account of increased intelligence, but because they said they could not live on the old wages, as their appetites had increased. Whether the lady at the head of the establishment shut up the ventilator he did not know. In the other case, a certain barrack-room was described as being badly ventilated, and science stepped in again as a Good Samaritan, and introduced good ventilation. The soldiers did not stop up the ventilators, and they did not strike for more wages, but they struck for more food; their appetites increased, and their intelligence, and, no doubt their activity increased. The question had to be brought before the War Office, in the time of

Lord Herbert of Lea. They would see perfectly well the application of these illustrations and the science which was involved. One more matter which he might mention was the question of actual disease in the sense of a disturbance of the bodily organs, to be treated medically, produced by want of cleansing of the air. They would not talk any more about foul or impure air, or pure and fresh air; but they would talk about an air-bath which was cleansed, as against one which was not cleansed. They had all heard that in polluted air various forms of disease would come into existence; according to the old-fashioned formula, disease was said to be brought about by the medium of bad air. They all remembered the instance of Dr. Abernethy, when he went into a sick-chamber, and found the chimney blocked up with a sack, and the air otherwise carefully excluded, pushed his fist through the window in order to let in the beneficent air. We all now acknowledge the power of air and light, and doctors nowadays removed their patients to fresh air. They removed their patient from some back slum (of which there were too many in London and all large towns) to hospitals where there was plenty of space, and where ventilation was scientifically conducted. They all knew what was the cause of dry-rot. He need not talk to them about it as a fungus upon the surface of wood. Where there was under a floor, or elsewhere, the presence of a great deal of moisture, with a certain amount of heat, this fungus grew rapidly. They also knew the cure. Let in the air, by putting in two or three air-bricks, and they drove dry-rot out. So it was with disease. Dry-rot might be said to be in the lungs or liver, simply by reason of polluted air. In the fresh air this dry-rot would disappear. This was about the condition of things with respect to ventilation. They would ask, "How is this to be remedied?" He was not going to say; he left it to engineers to discover that. Speaking seriously, he thought they would agree with him that ventilation was still in its infancy, and that the problem of how to ventilate English rooms in English houses had not yet been fairly attacked. There were plenty of nostrums and patents, but there was nothing by which the air-bath of an ordinary room could be kept even reasonably pure. If there were, he should be happy to hear it described. It was of no use, in these days, to propose the use of anything which was complicated. If they had anything to propose with respect to ventilation, let it be simple. The more complicated it was, and the more ingenious it was, they might depend upon it, the more pestiferous it would turn out. Let them consider how simply nature did her work. They all knew what the air was, and what was its composition, and how it did its work with a simplicity that was perfectly charming; and when he contrasted it with our perverted contrivances, he asked, was it not perfectly plain that in the solution of this great question of ventilation, simplicity must be considered, and complications avoided? The question was simply this, and this was the plainest and most scientific way of putting it. They had a reservoir of air in the interior of their rooms, and that must be kept in the fresh condition of the air in the open fields. He would not accept anything else. He did not say they could solve the problem; he did not say that it would be solved in his lifetime or the lifetime of his children; but it must be solved sooner or later, otherwise we must go on with our vital energies impaired, generation after generation, and civilization be regarded more as an influence for the deterioration of the human system than for its improvement.

#### THE SCOTT MONUMENT, EDINBURGH.



A COMMITTEE was appointed lately by the Edinburgh Town Council for the purpose of applying the surplus of the Scott Monument Fund to the completion of the

structure, by filling the vacant niches with figures. Sculptors were invited to send in competitive designs, and a selection from these having been made, the artists were commissioned to have them executed in freestone. The result is now before the public in a collection of statues, which will remain on view for some time in the Calton Convening Rooms before being hoisted to their destined positions. By an expenditure of over £1,200 no less than thirty-two figures have been obtained, being the number required to fill the remaining empty niches. Eight of these—of which one has not yet left the sculptor's studio—are on the scale of six feet, the others being each about three feet high. The *Scotsman* says that the quality of the work is unequal. While a considerable number of the statues attain a more or less satisfactory standard, there are several that can only be classed as mediocre, not to speak of one or two decidedly feeble productions. An *Oliver Cromwell*, by the late W. Brodie, shows some vigor of characterization, but looks too short in stature; though this defect may not, perhaps, be so perceptible when the figure is looked at from below. By the same artist are a stern looking *Helen Macgregor*, clutching broadsword and target, as if ready for mortal combat; and

a *Madge Wildfire*, who hardly strikes one as looking particularly crazy. There is a certain piquancy in the dainty air of *Sir Piercie Shaf-ton*, as represented by Clark Stanton, in the act of twirling his moustache. D. W. Stephenson's *Fair Maid of Perth* may be remembered, as seen at the Academy, for its grave and graceful if somewhat impassive composure. His *Montrose* is spirited in attitude, if only the head had been a little more emphasized. C. M'Bride has hit off a lifelike conception of the *Dougal Cratur* as a wild and eager-faced gillie moving, dirk in hand, down a mountain path, with some bit of serious business in prospect. *Ivanhoe*, by John Rhind, is a well-proportioned and easily-poised figure, with the muscular contours showing effectively through chain-armor. His *John Knox* displays considerable force in the modelling of hands that grasp a large bible, though the lower limbs do not indicate so much as might be expected of corresponding tension. There is also a good deal of spirit in his rather short-armed *Rob Roy*; while another figure very racyly expresses the self-satisfied assurance of *Richie Monplies*. *Ravenswood*, from the same hand, is cleverly poised, with right hand on lips and left resting on haunch, in a posture suggestive of profound abstraction; and an appearance of vivacious movement has been successfully conveyed in the statue of *Lucy Ashton*. W. G. Stephenson's humorous vein has found vent in broadly expressive designs, showing *Peter Peebles* in the act of boring some one with his "gude gangling plea," and *Caleb Balderston*, with head aslant, as he notes the success of his efforts in polishing an old tankard. This artist has also contributed an *Abbess*, attractive in its quiet and graceful simplicity. W. B. Rhind's *Knight Templar*, though rather stagey in action is firmly set on his legs, and shows form under the armour. Bating, again, a dash of the theatrical, there is considerable energy of expression in this sculptor's demonstrative *Balfour of Burleigh*; but his *Claverhouse* looks rather ineffectual, and *Hatteraick* surely too jaunty in attitude. Of the remaining statues, *David Deans*, by T. S. Burnett, and *Gurth*, by W. Sheriffs, claim honorable mention.

## SEWAGE AT EASTBOURNE.



I N the *Journal of the Society of Arts* Mr. C. N. Crosswell writes as follows: Through the courtesy of Lord Cochrane and the directors of Shone's Drainage and Waterage Supply Company, Limited, I had an opportunity, on Thursday, the 16th inst., of assisting at the inauguration of new works of sewage collection, which have been executed upon the Shone system at Eastbourne. More than a hundred gentlemen, engineers and others, interested in the subject, from all parts of the country, accepted the invitation, and were rewarded by witnessing a practical illustration of what can be done by local enterprise when stimulated by self-interest, under the guidance of men of "light and leading." When Dr. Richardson projected his earthly paradise, dedicated to the goddess of health, selecting Worthing as the site of the new city, Eastbourne seems to have taken the hint and the lesson to heart. The result is the successful completion, on Thursday, of the first stage towards the practical realization of an ideal which many sceptics at the time deemed to be visionary and unattainable. The main sewer at Eastbourne, at its starting point, is 25 feet above the level of that part of the town, which was once a rustic dell, and now the fashionable resort of visitors and residents alike, on the estate of that sagacious nobleman who may be described as the Aladdin of municipal enterprise. This was the initial difficulty. The second is common to all seaside resorts which depend upon a tidal outfall for the disposal of their accumulated sewage, lying stagnant, or backing up in huge cavernous constructions, yeelped sewers, but in reality, subterranean reservoirs and elongated gas-factories. Of course, there were the usual crop of expedients for coping with these difficulties. First, a separate system of collection for the lower town, and precipitation works in the bottom of the dell. Secondly, a tunnel under the marine esplanade, direct into the sea, after the flagrant example of so many towns upon the same coast. Thirdly, a deep, capacious sewer, of metropolitan proportions, through the bowels of the earth, with the inevitable pumping-machinery at the outfall reservoir, to lift the accumulated sewage into the long-suffering sea. Fortunately, all such illusory methods were rejected, and the sewage of the lower is lifted into the main sewer of the upper town, by means of compressed air, working at an effective pressure of about 12 lbs. on the square inch, and supplied automatically at a depth of 22 feet below the surface, without need of supervision, or any charge for attendance, except at stated intervals. We descended by an easy flight of steps into a kind of grotto paved with tiles, lighted with gas, cool, quiet, noiseless and inodorous, the only sound perceptible being an occasional sigh from the compressed air as it escaped through the exhaust on its course to ventilate the old drain after each successive discharge. The motive force thus utilized serves a double purpose, not only by forcing the sewage from the ejector onto the higher level, but also insuring that thorough ventilation of the drain, which ren-

ders the formation of noxious gases well nigh impossible. This compressed air is conveyed from the outfall, two miles distant, where a 5-horse-power engine works two of Sturgeon's ordinary compressors; and the gauge in the grotto indicates to the inquirer that this effective pressure is transmitted throughout the intervening distance, in pipes of 2½-inch diameter, without any appreciable loss by leakage whatever. Arrived at the point of outfall, the collected sewage is forced into the sea, at all times of the tide, and in all states of wind or weather, thereby securing to the inhabitants of this favored town the inestimable benefit of sewage always in motion through sewers of moderate capacity, effectually ventilated by the same force which gives the impetus and keeps the sewage in motion; this at a cost for outlay of capital and working expenditure so insignificant, that it must cause the rate-payers of some of our towns to bite their lips with envy and disappointment. I am not in a position to give the exact details of this expenditure, but the information will doubtless be forthcoming from those who are best competent to give it. Having, I trust, written enough to excite the curiosity of your numerous readers, I have only to thank Mr. Wallis—the agent of the Duke of Devonshire, and an energetic member of the Local Board, to whose plucky initiative and very vigilant supervision the town of Eastbourne owes so much of its marvelous prosperity,—for his lucid explanation of the advantages of the system to the assembled company—reminding him, however, that his task, and that of his coadjutors, is not yet completed; that having brought the undiluted sewage to the outfall, by methods so admirable, and appliances so economical, it is a scandal to continue the waste of material so rich in fertilizing ingredients, and throw such potentiality of wealth to the (sea) dogs, in defiance of every law of mind or matter. I have reason to believe that the means of effective utilization are close at hand, and that the same master spirit which directed the work of economic collection, and has piloted Eastbourne safely over the quicksands of sanitary illusions and professional extravagance, will not rest long under the imputation of a half-hearted policy which collects sewage only to waste it in the teeth of all experience, and stops short of a logical conclusion to an otherwise great and exemplary work.

## AMERICAN SOCIETY OF CIVIL ENGINEERS.

May 3, 1882.

THE Society met at 8 P. M., President Welch in the chair, and John Bogart, Secretary. Details were announced of the Convention to be held at Washington, May 16–19 inst.

A paper on the Improvement of the Potomac, at Washington, by William R. Hutton, member of the Society, was read by the Secretary. The different plans proposed were described. Those of the Board of Survey of 1872, of a Committee of Tax-Payers in 1877, of Col. Albert in 1878, of the Commissioners of the District in 1879, and its modification in 1881, all preserve the main channel of the river on the Virginia side, and leave a large area of flat low-land to be reclaimed along the present water-front of Washington, virtually extending the city streets about three-fourths of a mile beyond the present wharves. In some of these plans a narrow channel adjacent to the present shore-line is retained for a part of the lower city water-front.

The objections urged against these plans are their excessive cost; the removal of the water-front too far from the business portion of the city; the increased difficulty of drainage; the reclamation of too much land of a character very expensive for maintenance, and in the project of the District Commission, special difficulties connected with the proposed flushing basin. The author advocates the deflections of the main channel of the river below Georgetown, across the flat to the Maryland shore, and its maintenance substantially along the present water-line of the city. He claims that this is entirely practicable, that the low land left on the Virginia side will be less objectionable, that the deep channel close to the city will be of permanent value, that the sewage and drainage of the city will be much more easily disposed of; that there will be less danger of ice gorges, and that the cost will be moderate.

## TIN-ENCASED DOORS.

BOSTON, May 6, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I observed in your paper of May 6 a repetition of an incorrect statement: that at a test of fire-shutters which took place at East Berlin, Conn., under the direction of the Corrugated Metal Co., a wooden shutter covered with tin, made as the circular states, "according to the specifications of the Boston Manufacturers' Mutual Fire Insurance Company," failed in its service.

Our inspector, Mr. Sherman, was present at this test. The shutter was *not* made according to the specifications of this Company, and was set very badly. The wood of the shutter was exposed on the edges; the building was of such construction that it spread apart and allowed the flame to come in direct contact with these unprotected edges, for which reason the shutter of course failed.

The metal shutter filled with mineral wool which was tried at this same test appeared to serve its purpose exceedingly well, and if it can be furnished at a reasonable cost, will be useful for those who are unwilling to trust a well-made wooden shutter properly encased in metal, or who are willing to pay for work which may perhaps serve the purpose more adequately. Upon this shutter time and experience will be required, as it is in all other matters. In the

meantime our confidence remains unimpaired in the wooden shutter encased in tin as the best example of a "slow-burning" safeguard which has yet been proved in actual fires.

Yours very truly, EDWARD ATKINSON, President.

[As we suppose the experiment of the Corrugated Metal Company, at East Berlin, Conn., mentioned in our last issue, was conducted in good faith, as certainly was the test of fire-resisting materials made by the Massachusetts Charitable Mechanic Association last autumn, we cannot but infer that the proper way of building a tin-encased door is not generally understood, and we therefore publish the specification for such doors as are recommended by the Boston Manufacturers' Mutual Insurance Company:—

"We find it necessary to repeat the warning against inadequate fire-doors, as we find that reliance is still placed on several classes of doors in which we have no confidence, such as rolled or cast iron doors, corrugated or hollow iron doors, wooden doors covered with zinc—a metal which melts at about 700 degrees Fahrenheit, wooden doors covered on only one side with tin.

"The wooden door, covered with tin, only serves its purpose when the wood is fully encased in tin, put on in such a way that no air, or the minimum of air, can reach the wood when it is exposed to the heat of a fire. Under these conditions, the surface of the wood is converted into charcoal; and charcoal, being itself a non-conductor of heat, itself tends to retard the further combustion of the wood; but if air penetrates the tin casing in any measure, the charcoal first made, and then the wood itself, are both consumed and the door is destroyed. In like manner, if a door is tinned only on one side, as soon as the heat suffices to convert the surface of the wood under the tin and next to the fire into charcoal, the oxygen reaches it from the outside, and the door is of little more value than a thin door of iron or a plain wooden door.

#### SPECIFICATIONS.

"A door of the right construction to resist fire should be made of good pine, and should be of two or more thicknesses of matched boards nailed across each other, either at right angles or at forty-five degrees. If the doorway be more than seven feet by four feet, it would be better to use three thicknesses of same stuff; in other words, the door should be of a thickness proportioned to its area. Such a door should always be made to shut into a rabbet, or flush with the wall, when practicable; or, if it is a sliding door, then it should be made to shut into or behind a jamb, which would press it up against the wall. The door and its jambs, if of wood, should then be sheathed with tin, the plates being locked at joints and securely nailed under the locking with nails at least one inch long. No air-spaces should be left in a door by panelling or otherwise, as the door will resist best that has the most solid material in it.

"This kind of door may be fitted with automatic appliances, so that it will close of itself when subjected to the heat of a fire; but these appliances do not interfere with the ordinary methods of opening and shutting the door. They only constitute a safeguard against negligence. The patterns for this apparatus are with the Holyoke Machine Company, who will make the castings when ordered, and this Company will furnish the necessary fusible links."—EDS. AMERICAN ARCHITECT.]

#### BOOKS ON MODERN ARCHITECTURE.

404 Market St., St. Louis, Mo., April 24, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I wish to take a course of study and reading on modern churches and modern residences. Can you refer me to any books which treat specially of those subjects? If so, will you please give me their names and prices? Will you kindly give me your opinion as to the most necessary requirements of an architect of to-day? Yours very respectfully, A. W. CHASE, Asst. U. S. Eng., U. S. Eng. Corps.

[MODERN Parish Churches, by J. T. Micklethwaite, B. T. Batsford, London; The Rules of the Church Building Society, just republished in our columns; and Withers' Church Architecture, will serve for elementary instruction in regard to ecclesiastical buildings. For dwelling-houses, Vaux's Villa and Cottage Architecture, H. Hudson Holly's Modern Dwellings, both published by Harper & Brothers, New York; Modern Architectural Designs and Details, published by Wm. T. Comstock, New York; Kerr's The Gentleman's House, Murray, London; and Stevenson's House Architecture, London, will furnish much valuable information.

The most necessary requirements for an architect of the present day are honesty, industry, and perseverance. Next to these a thorough knowledge of construction, a cultivated taste, and continual practice in design after the best models will do most for his professional advancement.—EDS. AMERICAN ARCHITECT.]

#### ARCHITECTS' FEES.

CHICAGO, April 24, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—A question as to allowance for architects' fees has been referred to you for a decision.

1. Having recently completed a dwelling, in my bill for services I have charged the usual per cent on the entire bill of mantels and grates—which in this case is quite large. The owner claims that having purchased without my assistance all the grates, etc., and ordered a greater portion of the mantels from designs other than my own, that I am not entitled to the usual five per cent commission on them.

2. Should not the architect be allowed an extra compensation for such designs as sideboard—a permanent fixture—and elaborate wood mantels? And if so, what is usually considered a fair per centum? ARCHITECT.

[If the mantels are included in the contracts for the building, and the architect has made designs for them, he is generally willing to include them in the five per cent commission on the total cost, whether the owner follows the designs or not. If, however, as is often the case, the mantels and grates are procured separately, without necessitating any special thought or adaptation of his plans on the part of the architect, it is customary to regard them as a part of the furniture, upon which the architect is not entitled to any commission, unless he designs them and superintends their execution. In this case he charges a reasonable percentage for furniture work, which is never less than ten per cent on the cost, and often much more, according to the character of the drawings required.—EDS. AMERICAN ARCHITECT.]

#### NOTES AND CLIPPINGS.

THE PALACES OF ENGLAND.—The vote for maintaining royal palaces in England this year is over \$200,000. This is quite independent of the Queen's revenue.

A \$80,000 WELL A FAILURE.—The artesian well at Calvary Cemetery, Long Island, just completed, has cost \$80,000, is 800 feet deep, but the water is so muddy that it is unfit for use.

A USEFUL FIRE DEPARTMENT.—The fire engine house in East Newark, N. J., with a steam fire-engine, a hook-and-ladder truck, two hose-carriages, the town-hall and three dwelling-houses, were burned last week. Loss, \$25,000.

THE SIR FRANCIS DRAKE MEMORIAL.—Long discussion of the Sir Francis Drake statue project at Plymouth has ended in a final decision to erect the memorial and to make it of bronze. Already a committee has been appointed to raise the required funds, but the Duke of Bedford has written that he should feel it an honor to be permitted to present the statue himself. It is not yet learned whether the town has decided to accept his gift, but it is confidently believed that it will accept it.

M. HENRI GIFFARD.—Dispatches from Paris announce the death of Henri Giffard, an engineer of eminence. He entered into the construction department of the Paris and Versailles Railroad in 1841. He took great interest in the question of aerial navigation, and in 1852 attracted much attention by his endeavors to employ steam as a motive power for balloons. The captive balloon in the Champ de Mars during the Paris Exhibition of 1867 and the ascents organized in it by M. Giffard will be long remembered by visitors to Paris. He was also the inventor of several well-known and valuable appliances in the mechanism of steam engines. He received the decoration of the Legion of Honor in 1863.

ST. MARK'S, VENICE.—A few years ago there was strong onterry in England against the proposed restoration of the west, or main front, of St. Mark's, at Venice. It is now learned that the suspension of the undertaking at that time—as it was supposed out of deference to the English and other protests—will not longer continue. Fresh scaffolding has been erected in front of the southernmost bays, and work is already in progress, but its nature cannot be ascertained, as the authorities decline to give any information and will not permit any one to inspect the work. "This secrecy," says a correspondent, "is calculated to give rise to the gravest apprehensions with regard to what is going on, and it is difficult to avoid the suspicion that it is proposed to carry out the so-called restoration of the whole of the west front, which will involve the total obliteration of all that is valuable in that wonderful and unique composition. The excuse that the works in question are necessary for the stability of the fabric was conclusively refuted by the evidence of English architects—the late Mr. George Street being among the number—who had carefully examined the building and declared that there was no ground for apprehension upon this score, and that the main piers and foundations are as solid as when first constructed. It should be borne in mind that the Cathedral of St. Mark's is constructed of rough masonry, covered externally with a thin veneer of marble, and that this covering has nothing to do with the stability of the building. It is this covering which it is proposed to renew."—New York Times.

VANDALISM IN ITALY.—The Society for the Preservation of Ancient Buildings has just received a letter from the Cavalier Paravicini, the distinguished Milanese antiquary, in which he gives a list of the ancient buildings in and near Milan which during the past year have been destroyed or completely falsified by an ignorant system of so-called "restoration." The fine old mediæval towers of the Porta Ticinese have been pulled down, for the sake of rebuilding them on a fresh site. The high altar of St. Ambrogio has been moved from its original position, slightly oblique to the axis of the church—a position characteristic of the high altars of early Lombardic churches. It is now proposed to destroy Bramante's noble portico on the north side of St. Ambrogio, the only pretext being that it is not in keeping with the rest of the church. A scheme, the originator of which has received a gold medal, is now on foot for refacing the richly-colored brick and terracotta exterior of St. Maria delle Grazie with complete new fronts of stone. The very interesting early churches of St. Giovanni in Conca d'Oro and St. Babila have been pulled down, and it is now proposed to remodel St. Calimero, St. Maria Inconronata, and St. Maurizio, with its glorious frescoes by Luini. In Pavia the early Lombardic church of St. Pietro in Ciel d'Oro is being rebuilt, and its western façade replaced by a new one of different design. The fine terra-cotta mosaic pavement in the transepts of the Church of the Certosa, near Pavia, has been destroyed for the sake of putting a new one of marble. The rich and elaborate terra-cotta ornaments of the façade have been painted over with thick red pigment, which has destroyed the sharpness of the delicate reliefs, and a general whitewashing over the walls of the cloister and cells of the monastery has obliterated all the remains of the old fresco decoration. These are a few examples of the manner in which the modern Italians are treating their priceless relics of art in its various forms. The Cavalier Paravicini dwells upon the sad fact that it is the Commission for the Preservation of Ancient Monuments and the Academies of Fine Art that have been committing the worst acts of vandalism—a fact that makes it difficult or impossible for any private Italian to get a hearing when he protests against such deeds. It is on this account that he appeals to the English people to assist him in the struggle to preserve what remains, and surely this appeal will not be without response in England when men reflect how important is the issue, and how irreparable a loss is being suffered by the whole civilized world as one link after another in the history of art is cut away to feed the vanity of some modern designer or the greed of some contractor eager for a job.—The Architect.

## BUILDING INTELLIGENCE.

(Reported for The American Architect and Building News.)

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

## BUILDING PATENTS.

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

257,145. SASH-FASTENER.—Fred. E. Bailey, Manchester, N. H.  
257,149. DECK-SWINGER.—Wallace C. Brown, Monks, Me.  
257,153. BRICK.—Joseph A. Dupuis, Montreal, Quebec, Canada.  
2-7,182. ELEVATOR.—William H. Patterson, Baltimore, Md.  
257,183. HEATING APPARATUS.—John F. Pease, Syracuse, N. Y.  
257,189. STAY-ROLLER FOR SLIDING DOORS.—Elijah U. Seoville, Manlius, N. Y.  
257,212. SAW JOINTER AND GAUGE.—Milo Covel, Chicago, Ill.  
257,226. COMBINED STEP-LADDER AND WINDOW SCAFFOLD.—Mary S. Kjellström, New York, N. Y.  
257,232. WASTE COMPRESSOR.—Edward W. McCormick, New York, N. Y.  
257,239. PROCESS OF UTILIZING SPENT LIME FOR BRICKS AND TILES.—Ernest L. Lansome, San Francisco, Cal.  
2-7,265. SPRING-HINGE.—Ezra Ale, Altoona, Pa.  
257,348. ADJUSTABLE WINDOW-SCREEN.—Edwin L. Lloyd, Philadelphia, Pa.  
257,356. BURGLAR-ALARM.—William D. Matney, Harvel, Ill.  
257,366. FIRE-PROOF TILE FURRING.—George M. Moulton and Ernest W. Johnson, Chicago, Ill.  
257,369. FIREPLACE.—David B. Murdoch, Pittsburgh, Pa.  
257,373. SPRING-HINGE.—Patrick K. O'Lally, Boston, Mass.  
257,374. BORING-MACHINE.—Charles R. Otis, Yonkers, N. Y.  
257,382. SASH-HOLDER.—Frederick W. Quitman, South Norwalk, Conn.  
257,401. SASH-KEY FOR SLIDING DOORS.—Isaac Somers, Detroit, Mich.  
257,413. DIVIDERS.—Morton Toulmin, Washington, D. C.

## SUMMARY OF THE WEEK.

## Baltimore.

**BUILDING PERMITS.**—Since our last report thirty-nine permits have been issued, the more important being as follows:—  
Catharine Murray, 2 three-story brick buildings, Howard St., between Park and Richmond.  
Emmanuel M. E. Church, South, stone church building, southeast cor. North and Druid Hill Aves.  
Andrew Hamilton, 3 three-story brick buildings, southwest cor. Cumbe land and Carey Sts.  
Otto Goldbach, 2 three-story brick buildings, Bond St., between Gough and Bank Sts.  
E. C. Jones, 4 two-story brick buildings, Ann St., north of Hanover.  
John Elbert, two-story brick building, Union Alley, between Central Ave. and Eden St.  
D. B. Deleoff, three-story brick building, Chase St., east of Greenmount Ave.  
Baltimore and Ohio R. R. Co., one-story brick shop, 76' x 300', at Mount Clare Depot.  
Thomas Herring, 2 two-story brick buildings, southeast cor. McElderry St. and Duane Alley.  
Neiker and Bro., two-story brick building, Union St., between Druid Hill and Pennsylvania Aves.  
Wilson R. Troxell, three-story brick building, Park Ave., between Wilson and McMeen Sts.  
Naomi E. Troxell, three-story brick building, Park Ave., between Wilson and McMeen Sts.  
John J. Greer, three-story brick building, Park Ave., between Wilson and McMeen Sts.  
Owen McKenna, 2 three-story brick buildings, McKim St., south of Chase.  
Chas. F. Michelman, 2 two-story brick buildings, Burke St., north of Aliceanna St.  
Cross Street M. E. Church, stone church building, southeast cor. Fremont and Warner Sts.  
National Grand Tabernacle, four-story brick building, Liberty St., south of Lombard.  
Sarah J. Lemcke, three-story brick warehouse, Arch St., between Pine and Green.  
George Appold, 3 three-story brick buildings, Harrison St., between Baltimore and Fayette.  
**CARPENTERS' WAGES.**—At a meeting held May 5th, the Carpenter's Union decided to make a demand for \$2.50 a day, on and after May 8th. Journeymen now receive \$2.25 per day.

## Boston.

**BUILDING PERMITS.**—*Brick.*—Brighton St. Ave., Ward 8, for Chas. Roberts, 2 dwellings, 17' x 32' 6", five-story; Wm. Smith, builder.  
*Wood.*—Melville Ave., cor. Allston St., Ward 24, for H. B. Alden, Jr., 2 dwellings, 27' 6" x 27' 6", two-story; hip; Chas. Stinson & Co., builders.  
*Jeffries St.*, near Summer St., Ward 2, for Henry B. Hill and Geo. Wright, stable and carriage-house, 30' x 45', two-story; Isaac G. Coswell, builder.  
*K St.*, No. 14, Ward 12, for Lawrence O'Connor, dwell. and store, 22' x 33', three-story; Wm. Peard, builder.  
*Dorset St.*, near Dorchester Ave., Ward 15, for Henry H. Hawley, dwell., 22' and 17' x 52', two-story; Wm. Eadie, builder.

*Waverley St.*, near Western Ave., Ward 25, for Chas. Sanderson, dwell., 22' x 32', two-story; J. C. Wadleigh, builder.

*Waverley St.*, near Market St., Ward 25, for Chas. Sanderson, dwell., 22' x 32', two-story; J. C. Wadleigh, builder.

*St. Louis Ave.*, cor. Morton St., Ward 24, for Wm. Halley, dwell., 26' and 31' x 36', two-story hip; ell, 19' 6" x 26'; Wm. J. Jobling, builder.

*River View St.*, near, near Adams St., Ward 24, for Ella F. Lapham, dwell., 25' x 23'; Elsie W. Lapham, builder.

*Train St.*, near Mill St., Ward 24, for Franklin King, dwell., 33' 5" x 35' 9", two-story; Edw. McKechnie, builder.

*L St.*, near East Broadway, Ward 14, for Mary A. Veney, dwell., 23' x 34', two-story mansard.

*West Cottage St.*, near Woodville Sq., Ward 20, for Eben F. Brown, 4 dwellings, 22' and 26' x 32'; ell, 18' x 18', two-story; Eben F. Brown, builder.

*Waverley St.*, near Blue Hill Ave., Ward 21, for A. P. Clifford, 22' and 26' x 31', two-story; ell, 15' x 19', 3 dwellings; A. P. Clifford, builder.

*East Fourth St.*, Nos. 833-835, for David A. Dunbar, 2 dwellings, 19' x 33', three-story; Richardson & Young, builders.

*East Fourth St.*, Nos. 841-843, for David A. Dunbar, 2 dwellings, 20' x 33', three-story; Richardson & Young, builders.

## Brooklyn.

**ACADEMY OF MUSIC.**—The Lee Avenue Baptist Church is to be altered into a place of amusement, and will be known as the Williamsburgh Academy of Music. It is to seat 2,000 people.

**BUILDING PERMITS.**—*Montrose Ave.*, s. s. 100' e Evans St., New Jersey freestone church, cost, \$120,000; owner, Church of Most Holy Trinity; architect, Wm. Schickel; builders, Power Bros. and Berlebach.

*Floyd St.*, n. s. 100' e Yates Ave., three-story frame tenement; cost, \$4,700; owner, Nicholas Weisensee, Hopkins St. and Throop Ave.; builders, J. Fuchs and John Rueger.

*Stuyvesant Ave.*, s. s. 40' s Vernon Ave., two-story frame dwell.; cost, \$3,000; owner, Richard Straubel, 500 Broadway; builders, John Fuchs and John Rueger.

*Norland Ave.*, e. s. 67' 9" w Carroll St., one-story frame car-house; cost, abt. \$2,000; owner, New Williamsburgh and Flatbush R. R. Co.

*President St.*, n. s. 115' w Clinton St., 3 three-story brownstone dwellings; cost, abt. \$6,500 each; owner, Julius Wadsworth; architect, etc., George Lowden; mason, J. J. Reynolds.

*Fayette St.*, Nos. 16 and 18, s. s. 150' e Broadway, 2 two-story frame dwellings; cost, \$5,200; owner and carpenter, Th. Engelhardt, 14 Fayette St.; mason, U. Maurer.

*Stagg St.*, s. s. bet. Ewen St. and Graham Ave., 2 three-story frame tenements and tenements; cost, \$4,000 each; owner, Joseph Millman, Ewen St., cor. Stagg St.; architect, John Platte; builders, Jacob Rauth and Joseph Fresse.

*Maujer St.*, n. w. cor. Agate St., two-story brick printing establishment; cost, \$10,000; owner, Schmidt & Co., 21 Bowers, New York; architect, Th. Engelhardt; builders, John Schlereth and Emil C. Bauer.

*Maujer St.*, n. w. cor. Agate St., two-story brick boiler-house; cost, \$3,000; owner, Schmidt & Co., 21 Bowers, New York; architect, Th. Engelhardt; builders, John Schlereth and Emil C. Bauer.

*Lincoln Pl.*, s. s. 129' e Seventh Ave., 2 three-story and basement brownstone dwellings; cost, \$8,000 each; owner and carpenter, William Flanagan, 46 Berkeley Pl.

*Berkeley Pl.*, s. s. 390' e Sixth Ave., 7 three-story brownstone flats; cost, abt. \$20,000 each; owner and builder, Thos. A. Brush, 135 Lafayette Ave.; architect, Fred E. Lockwood.

*Stanhope St.*, n. e. cor. Central Ave., three-story frame store and tenement; cost, \$4,200; owner, Wm. Lindeman, Stanhope St.; architect, Geo. Hillenbrand; builders E. Loersch and J. Rueger.

*Melrose St.*, n. s. 175' w Central Ave., two-story brick stable; cost, \$4,000; owner, Leon Eppig; architect, Geo. Hillenbrand.

*Melrose St.*, s. s. 150' w Central Ave., three-story frame tenement; cost, \$2,500; owner, Thomas Logan, 38 Melrose St.; architect, John Platte; builder, F. J. Berlebach.

*Atlantic Ave.*, s. s. 32' w Utica Ave., 20 two-story frame dwellings; cost, abt. \$2,000 each; owner, Peter Sullivan, cor. Lewis Ave. and Melbourn St.; architect, Anni Hill; builder, Wm. S. Montgomery.

*Clinton Ave.*, e. s. 240' s De Kalb Ave., four-story brownstone dwell.; cost, \$20,000; owner, A. G. Jennings, Park Ave. and Hall St.; architect, G. L. Morse; builder, Owen Nolan.

*Even St.*, s. w. cor. Skillman Ave., 4 three-story frame tenements; cost, \$2,000 each; owner and carpenter, John Donoghue, 24 Jackson St.

*South Eleventh St.*, s. e. cor. First St., one-story brick iron foundry; cost, \$9,000; owners, Bell & Fyfe; architect, W. H. Gaylor; builder, M. Smith.

**ALTERATIONS.**—*Manhattan Ave.*, No. 293, three-story frame extension, etc.; cost, \$2,000; owner, John Keppel, 135 Newell St.; builder, Thomas Keppel.

*Grand St.*, No. 37, interior and front alterations; cost, \$2,000; owner, Adolph Loewenthal, 32 Grand St.; architect, Frank Holmberg; builder, John Cumisky.

*Hoyt St.*, n. e. cor. Pacific St., one and one half-story brick extension, also interior and front alterations; cost, \$4,000; owner, James Downey; architect, M. Thomas; builder, F. P. Kelly.

*Ninth St.*, s. w. cor. Fifth Ave., two-story brick extension; cost, \$3,000; owners, McCormick & Murphy, on premises; builders, J. M. Brown and C. B. Sheldon.

## Chicago.

**BUILDING PERMITS.**—Dickinson & Reynolds, 5 three-story dwellings, 49' x 96', La Salle and Goethe Sts.; cost, \$36,000.

Frazer & Chalmers, four-story addition to factory, 30' x 146', 141 Fulton St.; cost, \$8,500.

C. E. Robinson, four-story store and flats, 22' x 96', 629 Clark St.; cost, \$8,000.

Dr. Morton, 2 additional stories, 18' x 80', 153 Clark St.; cost, \$5,000.

Bruno & Goll, three-story dwell., 25' x 55', 12th and Ashland Aves.; cost, \$12,000.

Union Club, three-story club-house, 80' x 81', Washington Place and Dearborn Ave.; cost, \$100,000.

Chicago and Western Indiana R. R., two-story freight-house, Clark and Fourteenth Sts.; cost, \$60,000.

Wm. Niemeyer, two-story carriage room, 17' x 60', 626 North Wells St.; cost, \$3,000.

John Zell, two-story dwell., 20' x 41', 61 Samuel St.; cost, \$2,500.

F. H. Behmeyer, five-story warehouse, 60' x 100', 206 to 210 Michigan St.; cost, \$20,000.

George A. Seaverns, four-story store and flats, 60' x 80', Wabash and 22d St.; cost, \$20,000.

George A. Seaverns, 5 three-story stores and flats, 60' x 200'; Twenty-second St., near Wabash; cost, \$40,000.

E. & W. Burke, 2 three-story stores and dwellings, 48' x 60', Milwaukee and North Aves.; cost, \$12,000.

M. D. Wells, two-story stone dwell. and barn, 50' x 90', 2560 Michigan Ave.; cost, \$125,000.

## Kansas City, Mo.

**WAGES AND MATERIAL.**—Material is said to be more abundant than last year, and labor is easier to be had. Brick now can be put in the walls at from \$8.50 to \$9.00 per 1,000; lumber of ordinary dimensions is selling at \$24.00 per M, and wages are no higher than last year. Lumber is about \$3 higher and hardware a little higher.

**CATHEDRAL.**—On Sunday, May 14th, the cornerstone of the new cathedral on Eleventh St. was laid. **BUILDING PERMITS.**—John J. Hogan, on Independence Ave., one-story frame, 40' x 80'; cost, \$5,000.

R. M. Stewart, on Ninth St., two-story brick, 50' x 60'; cost, \$6,000.

J. W. German, on Independence Ave., two-story brick, 18' x 10'; cost, \$3,500.

John John, at No. 1426 Broadway, two-story brick building, 20' x 50'; cost, \$2,000.

F. F. Todd, on Holmes St., two-story brick building, 28' x 45'; cost, \$3,100.

W. A. Sparks, on Grand Ave., two-story brick building, 24' x 80'; cost, \$5,000.

J. G. Biggs on Forest Ave., two-story brick, 19' x 44'; cost, \$2,500.

J. H. Lipscomb on Charlotte St., two-story brick, 24' x 60'; cost, \$3,000.

Jacob Dahl on West Ninth St., four-story brick, 300' x 500'; cost, \$100,000.

Hen McLean on Tenth St., two-story brick, 48' x 100'; cost, \$7,000.

Peter E. Emery on Wyandotte St., three-story brick, 42' x 53'; cost, \$6,000.

Robert Adams on St. Louis Ave., two-story brick, 64' x 70'; cost, \$2,000.

Edward Ackerson on West Ninth St., three-story brick, 24' x 72'; cost, \$5,000.

G. W. Strain on Ninth St., three-story brick, 28' x 47'; cost, \$7,000.

## New York.

**RESIDENCES.**—Mr. Wm. H. Vanderbilt has selected the designs of Mr. Chas. B. Atwood, for the houses he proposes to erect on Fifth Ave. and Fifty-fourth St.; Mr. J. B. Snook will be the constructive architect.

**CHAPEL.**—A memorial chapel and mission 66' 6" x 113', is to be built on the cor. of Avenue A and Tenth St., for St. Mark's Church. It is to be built of stone and will probably cost \$100,000.

**BUILDING PERMITS.**—*Serenity Fifth St.*, s. s. 80' w Lexington Ave., two-story brick stable; cost, \$20,000; owner, Wilhelm Pickhardt, 735 Madison Ave.; architect, Henry G. Harrison.

*Eighth Ave.*, s. w. cor. One Hundred and Twenty-fourth St., four-story brick flat; cost, \$20,000; owner, John McGarry, 583 Monroe St., Brooklyn; architect, R. Rosenstock.

*Eighth Ave.*, s. s. 25' s One Hundred and Twenty-fourth St., 3 four-story brick flats; cost, each, \$15,000; owner and architect, same as last.

*Avenue B*, n. w. cor. Eighty-sixth St., 12 three-story brick dwellings; cost, each, from \$7,000 to \$9,000; owner, John C. Henderson, 109 and 111 Spring St.; architects, Lamb & Rich; builders, Robinson & Wallace and John J. Brown.

*Sixty-first St.*, s. w. cor. Ninth Ave., five-story brick flat and stores; cost, \$40,000; owner, John Maloy, 213 East Forty-ninth St.; architect, A. B. Ogden.

*Sixty-first St.*, s. s. 30' w Ninth Ave., 3 five-story brownstone front flats; cost, each, \$40,000; owner and architect, same as last.

*East Sixty-ninth St.*, No. 161, three-story stable and dwell.; cost, \$16,000; owner, Harvey S. Ladew, 28 Spruce St.; architect, Chas. W. Roney; builders, J. & G. Rudell and Guy Culgin.

*Washington St.*, Nos. 243 and 247, 2 five-story brick stores; cost, \$15,000 each; owners, Mary R. Swan and Serena Rhineland; architects, Havilah M. Smith & Son.

*Thirty-second St.*, n. s. 225' e Eleventh Ave., two-story brick foundry building; cost, \$5,000; owners, Robert Deely & Co.; architects, Berger & Baylies.

*West Thirty-fifth St.*, No. 544, two-story brick workshop; cost, \$2,000; owner, Conrad Diehl, 504 West Thirty-sixth St.; architect, C. F. Ridder, Jr.; builder, J. Ruppert.

*East One Hundred and Eighteenth St.*, No. 171, 10 two-story and basement brick dwellings; cost, \$9,000 each; owner and builder, Joseph E. McCormack, Sea Cliff; architects, Carter & Ferdon.

*East One Hundred and Eighteenth St.*, No. 171, 4 two-story and basement brick dwellings; cost, \$7,000 each; owner and builder and architects, same as last. (These two plans cover a plot of ground 107' x 150'.)

*Courtland Ave.*, No. 783, two-story frame dwell.; cost, \$2,500; owner, Charles Baenisch; builder, S. Kramer.

*Maiden Lane*, No. 41, five-story brick store; cost, \$8,000; owner, S. F. Shortland, 108 Wall St.; architect, John Mumford; builders, B. Gallagher and W. and T. Lamb, Jr.

*One Hundred and Twenty-seventh St.*, n. s. 325' w Seventh Ave., 3 three-story brick (brownstone front) dwellings; cost, total, \$35,000; owner, Samuel O. Wright, 155 East One Hundred and Thirteenth St.; architects, Cleverdon & Putzel.

**West One Hundred and Thirty-third St., No. 217,** three-story brick dwelling; cost, \$5,000; owner, Frank W. Blauvelt, 213 West One Hundred and Thirty-third St.; architect, Cleveland & Putzel.

**East One Hundred and Eighteenth St., No. 508,** two-story brick stable; cost, \$4,000; owner, Henry Kroese, 244 East Eighty-first St.; architect, John Brandt.

**East Tenth St., No. 407,** one-story brick workshop; cost, \$2,000; owners, Henry Van Beurden and John Donahue; mason, Christopher Mooney.

**Broom St., No. 191,** five-story brick tenement; cost, \$12,000; owner, Bernhard Kling, 137 Clinton St.; architect, F. W. Klement.

**Forty-third St., s. s. 65' e Second Ave.,** two-story brick dwelling and store; cost, \$2,000; owner, Samuel Warheim, 308 East Forty-third St.; architect, F. T. Camp; builders, Smith Bros. and Henry Ellis.

**Sixth St., No. 811,** rear, two-story brick stable; cost, \$2,000; owner, Thos. A. Anderson, 712 Sixth St.; builders, John Fish and Henry D. Powers.

**Madison Ave., n. e. cor. Fifth St.,** four-story brick and stone front dwelling; cost, \$200,000; owner, Henry Villard, 103 East Seventeenth St.; architects, McKim, Mead & White; builder, John J. Tucker.

**Eighty-second St., n. s. 5' w Lexington Ave.,** four-story brick and brownstone front flats; cost, \$11,000 and \$20,000; owner, Patrick McGuire, 117 East Eighty-third St.; architect, A. B. Ogden.

**Perry St., No. 171,** five-story brick tenement; cost, \$14,000; owner, Josephine L. Sherman, 7 East Twelfth St.; architect, Charles Reckie.

**Fifty-seventh St., n. s. 216' e Second Ave.,** 2 five-story brick flats; cost, \$40,000 and \$20,000; owner, Francis A. Croft, 1221 Park Ave.; architect, John G. Prange.

**Seventy-seventh St., s. s. 69' e First Ave.,** four-story brownstone front tenement; cost, \$9,600; owner, John D. Tencken, 1178 First Ave.; architect, Jno. C. Burro.

**West Forty-fourth St., Nos. 220 to 226,** 4 four-story brick dwellings; cost, each, \$18,000; owner, William Astor, 359 Fifth Ave.; architect, Thomas Stent; builders, Jas. Webb & Son and John Downey.

**West Forty-fifth St., Nos. 331 to 347,** 9 three-story brick dwellings; cost, each, \$13,000; owner, architect and builder, same as last.

**Greenwich Ave., junction of West Thirteenth St.,** 3 five-story brick flats; total cost, \$70,000; owner, John Glass, 293 West Twenty-first St.; architect, Geo. B. Pelham.

**Greenwich Ave., n. s. 111' 11" e of junction of West One Hundred and Thirteenth St.,** five-story brick flat; cost, \$14,000; owner, Mrs. J. L. Sherman, 7 East Twelfth St.; architect, Geo. B. Pelham.

**One Hundred and Twenty-eighth St., s. s. 125' w Seventh Ave.,** 6 three-story and basement brownstone front dwellings; cost, each, \$12,000; owner, Wm. F. McEntee, 218 East One Hundred and Fifth St.; architect, Andrew Spence.

**West St., No. 54,** six-story brick warehouse; cost, \$21,000; owner, Elizabeth F. Floyd, 53 West Thirty-fourth St.; architects, Berger & Baylies; builder, John D. Wray.

**One Hundred and Thirtieth St., n. s. 451' w Sixth Ave.,** 3 three-story and basement brownstone front dwellings; cost, \$12,000 each; owner, Emma F. Baxter, 324 East One Hundred and Twenty-fifth St.; architect, Chas. Baxter.

**ALTERATIONS.** — **West Forty-sixth St., No. 423,** church-floor lowered and roof raised, etc.; cost, \$8,000; owners, Trustees Faith Chapel, on premises; architect, Jno. Sexton.

**Sixth Ave., n. w. cor. Twentieth St.,** three-story brick extension; owner, Hugh O'Neil, 1267 Broadway, Room No. 21; architect, M. C. Merritt.

**Fifth Ave., No. 431,** two-story brick extension, interior alterations, etc.; also, new front wall; cost, \$25,000; owner, Mary A. King, Newport, R. I.; architects, McKim, Mead & White; builder, W. W. Owen.

**Christopher St., No. 81,** raised one story; cost, \$2,000; owner, D. Fink, exr., 106 West Washington Pl.; builder, Jno. Jordan.

**Twenty-sixth St., s. s. 175' e First Ave.,** four-story brick extension; cost, \$15,000; owner, Medical Department of University City, New York, 104 East Twenty-sixth St.; architects, D. & J. Jarlino.

**East One Hundred and Twentieth St., No. 422,** three-story brick extension; cost, \$2,500; owner, Hannah Michael, 422 East One Hundred and Twentieth St.; architect, A. Spence; builder, Garrett Van Cleeve.

**Sixth Ave., Nos. 161, 167 and 169,** one-story brick extension, fronts and interior alterations; cost, \$14,000; owner, trustee W. C. Rhineland, 135 West Fourteenth St.; architect, G. M. Huss; builders, H. M. Reynolds and Jno. Spence.

**Grand St., s. w. cor. East St.,** at rear, two-story brick extension; cost, \$2,000; owners, Goodwin & Co., 27 Water St.; architects, W. Field & Son; builders, Jas. Ashfield & Son and Fowdery & Murphy.

**East Thirty-first St., Nos. 141 to 152,** repair damage by fire, etc.; cost, \$6,800; owner, Rufus M. Silvers, 143 East Thirty-first St.; architect and builder, Henry Wallace.

**West Fifth St., No. 81,** n. e. cor. Sixth Ave., new bulkhead on roof, walls altered, iron-work; cost, \$1,000; owner, Henry C. Thacher, Yarmouth, Mass.; architect, Jno. McIntyre; builder, not selected.

**Madison Ave., s. w. cor. Fortieth St.,** two-story brick extension, also interior alterations; cost, \$23,000; owner, Sarah S. Morgan, 9 West Twenty-ninth St.; architect, Geo. E. Harney; builders, Jeans & Taylor.

**East Twenty-third St., Nos. 225 to 229,** raised on rear, etc.; cost, \$4,500; owners, Krauch & Bach, on premises; architect, H. J. Dudley.

**East Ninth St., No. 419,** interior alterations; cost, \$3,000; owner, Henry Binnewald, 143 First Ave.; architect, Jobst Hoffman.

**Fifth Ave., s. s. 89' w Fifty-seventh St.,** two-story brick extension; cost, \$2,500; owner, Mary Mason Jones, 1 East Fifty-seventh St.; architect, Robert Mook, builder, P. Canfield.

**Nassau St., No. 5,** remove wall in basement, iron girder, new stairs, etc.; cost, \$5,000; lessees, New York Clearing House Association, on premises; architect, Samuel A. Warner; builders, Marc Edlitz and A. G. Bogert & Bro.

**East Fifth St., No. 624,** three-story and basement brick extension, interior alterations; cost, \$7,000; owners, Hebrew Free School Society, Meyer L. Isaacs, Pres.; architect, John McIntyre; builder, not selected.

**West Twentieth St., Nos. 20 and 22,** two-story brick extension, interior alterations; cost, \$30,000; owner, Mrs. Brantley Martin, 22 West Twentieth St.; architect, R. H. Robertson; builder, Edward Smith.

**Thirty-fifth St., Nos. 222 to 230,** four-story brick extension; owners, Decker Bros, 39 Union Sq.; architect, Geo. P. Pelham.

**West Fourteenth St., Nos. 69 and 62,** three-story brick extension; cost, \$4,000; lessees, R. H. Macy & Co.; architect, James J. Lyons; builder, H. M. Reynolds.

**Cherry St., Nos. 246 and 248,** set boiler and build new chimney; cost, \$3,500; owner, G. H. Studwell, 37 West Fifty-first St.; builder, John Allen.

**Broadway, No. 922,** interior alterations; cost, \$2,500; owner, A. R. Edo; lessee, Irving Bartlett.

**Second Ave., No. 953,** three-story brick extension and interior alterations; cost, \$2,500; owner, J. H. Duttling, 491 Third Ave.; architect, Herman Kreuter; builder, not selected.

**West St., No. 341,** repair damage by fire; cost, \$3,000; owner, Elizabeth Long; builder, John D. Miner.

**East Twenty-third St., No. 178,** one and two-story brick extension; cost, \$6,500; owners, Anderson & Towler, 61 East Sixty-eighth St.; architect, John Ruddle; builders, John and G. Ruddle.

**Broadway, Nos. 346 and 348,** basement and sub-basement to be fitted up for safe deposit and storage purposes; cost, \$24,000; owner, Henry Hilton, 7 West Thirty-fourth St.; architect, Edward D. Harris; builders, J. & W. C. Spears and Thos. Overington.

**Broadway, Nos. 346 and 348,** basement and sub-basement to be fitted up for safe deposit and storage purposes; cost, \$24,000; owner, Henry Hilton, 7 West Thirty-fourth St.; architect, Edward D. Harris; builders, J. & W. C. Spears and Thos. Overington.

**West Forty-fourth St., No. 441,** take out portion of basement rear wall, interior repairs, new cornice and walls carried up 18'; cost, \$1,000; owner and builder, Wm. P. Pettit, 413 West Thirty-fourth St.

**Philadelphia.**  
**LABOR MARKET.**—Some contractors are still refusing to grant the advance asked by the carpenters, and as a consequence their operations are retarded by the continued strike, the majority, however, have conceded the advance.

**CORRECTION.**—In last week's issue the Hotel and buildings for the Roanoke Land Improvement Co., should have been under the heading of Roanoke, Va.

**BUILDING PERMITS.**—**America and Berks Sts.,** s. s. two-story grain-house, 7' x 16'; A. Beetney, owner.

**Coral St., s. s. n. of Itach St.,** two-story dwellings, 13' x 33'; Benj. Tyndall, owner.

**Walnut St., No. 511,** alteration and addition, 16' x 79'; C. D. Sipple, contractor.

**Cumberland St., n. e. cor. Oriana St.,** second-story addition to factory, 35' x 55'; H. French & Bro., owners.

**Eight St., s. e. cor. Contrell St.,** four-story factory, 30' x 15'; Thos. Leamy, contractor.

**Johnson St., No. 121,** two-story stable, 20' x 40'; Jno Doyle.

**Forty-fifth St., s. s. e. of Westminster Ave.,** 4 two-story dwellings, 16' x 44'; Lewis Smith, contractor.

**Brooklyn St., w. s. n. of Lancaster Ave.,** 3 two-story dwellings, 14' x 28'; Jno. H. Goldbeck.

**Lancaster Ave., n. w. s. of Brooklyn St.,** three-story dwellings, 16' x 30'; J. H. Goldbeck.

**Lancaster Ave., n. w. cor. Brooklyn St.,** three-story store and dwell., 24' x 47'; J. H. Goldbeck.

**Cuthbert St., No. 2321,** 2 three-story dwellings, 16' x 30'; J. Lingo, contractor.

**Seventeenth St., w. s. s. of Allegheny Ave.,** shop and foundry, 50' x 89'; J. H. Riter & Co., contractors.

**Kensington Ave., e. and w. s. between Indiana and Clearfield Sts.,** 18 two-story dwellings, 15' x 41'; Julia M. Horner, owner.

**Fin St. and Haverford Road,** one-story stable, 15' x 57'; Jno. Maulo.

**Vinona St., No. 1316,** two-story stable, 11' x 28'; A. W. Hunter, contractor.

**Mascher St., s. s. n. of Huntingdon St.,** two-story dwell., 16' x 38'; Val. Lent, contractor.

**Walrus St., No. 411,** six-story office building, 40' x 100'; H. W. Brown, owner.

**Walnut St., No. 419,** four-story insurance-building, 30' x 69'; United Fireman's Ins. Co., owners.

**Sixth St., w. s. s. of Cumberland St.,** 12 three-story dwellings, 16' x 50'; F. Helling, contractor.

**Orinholoe St., s. s. between Packawanda and Mulberry Sts.,** two-story dwell., 16' x 44'; W. W. Worrell, contractor.

**Waterloo St., w. s. n. of Huntingdon St.,** 6 two-story dwellings, 11' x 26'; Chas. Bossett, contractor.

**Waterloo St., No. 1731,** alteration and addition to dry and dye house, 48' x 18'; E. Schmidt, contractor.

**Front and Canal Sts., n. w. cor.,** three-story shop, 30' x 49'; Simon Oetzel, owner.

**Pine St., No. 2037,** fourth-story addition to building, 20' x 39'; W. S. Williamson, contractor.

**Queen Lane, bet. Scott Lane and R. R.,** two-story dwell., 15' x 45'; Edwin Sharp, owner.

**Seventeenth and Woodland Aves.,** dwell. and stable, 46' x 51'; J. A. Ogden, owner.

**Christian St., No. 431,** 2 three-story dwellings, 16' x 29'; M. N. Jennings, owner.

**Berks St., n. s. w. of Tenth St.,** 16' x 33', two-story stable; Reading R. Co., owners.

**Hutton St., n. s. e. of Fortieth St.,** 4 two-story dwellings, 14' x 33'; Forman Bros., contractor.

**Huydock St., n. s. e. of Front St.,** third-story addition to factory, 35' x 103'; H. Heston & Sons, owners.

**Smick St., s. w. s. 109' e of Ripka Ave.,** 5 two-story dwellings, 14' x 12'; J. H. Berkmeier, owner.

**Mascher St., w. s. e. of Mutter St. and n. of Cumberland St.,** 15 three-story dwellings, 15' x 49'; Henry Gill, contractor.

**St. Louis.**  
**BUILDING PERMITS.**—Forty-nine permits have been issued since our last report, but eleven of which

are for unimportant frame houses. Of the rest the worth \$2.50 and over are as follows:—

Mrs. G. I. Paul, two-story dwell.; cost, \$5,000.  
Mrs. Rebecca Gire, three-story dwell.; cost, \$16,500.  
Wm. Givignat, two-story living rooms; cost, \$5,000.  
Mrs. Schumacher, two-story dwell.; cost, \$2,500.  
Frederick Habocke, two-story dwell.; cost, \$3,800.  
Ernest Franz, two-story dwell.; cost, \$3,400.  
Chas. J. Blake, two-story dwell.; cost, \$3,500.  
Chas. H. Frank, two-story dwell.; cost, \$7,000.  
Chas. H. Frank, two-story dwell.; cost, \$3,400.  
Mrs. Martha E. Switzer, three-story dwell.; cost, \$7,600.

Mrs. Martha E. Switzer, three-story dwell.; cost, \$7,600.

St. Louis Mutual House-Building Co., No. 3, two-story dwell.; cost, \$1,875.

Anheuser-Busch Brewing Co., three-story addition to bottling department; cost, \$8,000.

John A. Holmes, two-story dwell.; cost, \$20,000.  
John C. Haas, two-story dwell.; cost, \$4,000.  
J. M. Ghiv, two-story store and dwell.; cost, \$3,000.  
Ben Von Phul, two-story store and dwell.; cost, \$2,800.

A. Klauber, two-story dwell.; cost, \$2,500.  
Charles G. Stifel Brewing Co., five-story kiln for drying malt; cost, \$3,000.

School Association of the Church of St. Mary, two-story school-house; cost, \$16,000.

**St. Paul, Minn.**  
**MERCANTILE BUILDINGS.**—Mr. E. P. Bassford, architect, has the following work in hand:—

Merriam's block, four-story, 50' x 15'; Bass block, four-story, 35' x 120'; Bishop block, four-story, 35' x 120', cor. Sibley and Fifth Sts.; cost, \$75,000.

H. P. Rugg block, Fourth below Sibley, four-story, 47' 6" x 125'; cost, \$26,000.

D. C. Shepard block, cor. Wacouta and Third Sts., five-story, 101' x 122'; cost, \$100,000.

Dawson block, cor. Fifth and Robert Sts., three-story, 50' x 100'; cost, \$16,000.

McQuillan block, Sibley St., below Jackson, five-story, 50' x 125'; cost, \$40,000.

C. D. Gliman block, Sibley St., below Jackson, five-story, 50' x 100'; cost, \$4,000.

Braden block, cor. Seventh and Pine Sts., three-story, 50' x 75'; cost, \$26,000.

Charles Miles block, Jackson, bet. Fifth and Sixth, three-story, 25' x 80'; cost, \$5,000.

John Kervin's block, Robert St., two-story, 25' x 50'; cost, \$5,000.

E. F. Barrisford's block, cor. Fifth and Minnesota, three-story, 50' x 90'; cost, \$25,000.

Robinson & Cary's Third St. warehouse, 50' x 100'; cost, \$3,000.

**HOUSES.**—Mr. A. M. Radcliff, architect, has the following in hand:—

Charles Paul, two-story frame dwell., 41' x 62', on Summit Ave., bet. Selby and Nina Aves.; cost, \$10,000.

W. J. S. Trail, two-story frame dwell., 40' x 61', on Summit Ave., near cor. of Mackubin St.; cost, \$9,000.

W. H. H. Johnston, two-story frame dwell., 31' x 52', on Summit Ave., near Mackubin St.; cost, \$3,500.

H. M. Rice, two-story frame dwell. with mansard roof, 35' x 56', on Nina Ave.; cost, \$6,500.

John Kline, two-story frame dwell., 25' x 48', at the head of Wabash St.; cost, \$1,000.

Gen. J. H. Simpson, 4 brick tenement houses, two-story with mansard roof, 50' x 65', cor. of St. Peter and Tilden Sts.; cost, \$10,000.

Gen. J. W. Bishop, 5 frame tenement houses, 2 double, 1 single, on cor. of Dayton Ave. and Arundel St., 48' x 38'; cost, \$16,000; also a dwelling-house on same block, two-story, 41' x 72'; cost, \$16,000.

Wm. Rhodes, 4 frame tenement houses, two-story, 56' x 82', on Grove St., near John; cost, \$10,000.

Peter Schumann, 5 two-story frame tenement houses, on cor. of Canada and Fourteenth St., 48' x 91'; cost, \$10,000.

John M. Gliman, improvement on his residence on upper Third St.; cost, \$8,000.

J. L. Forepaugh, improvements on his residence on Exchange St.; cost, \$3,000.

Geo. E. Salinger, improvements on his residence, the Cochran House, Summit Ave.; cost, \$3,000.

N. W. Kittson, residence on the Selby block, St. Anthony Hill, two-story with mansard roof, 82' x 96'; cost, \$100,000; and also a barn on Selby Ave.; cost, \$6,500.

J. B. Cook & Son, livery barn, cor. Jackson and Eleventh St., three-story, 57' x 125'; cost, \$6,000.

Phillip Riley, 2 tenement houses on Rice St., near Elevator B; cost, \$1,400.

J. Martin & Co., planing mill, near Elevator B; cost, \$2,500.

A. M. Radcliff, 4 two-story stores on Dayton Ave., bet. Virginia and Western Aves., 57' x 71'; cost, \$5,000; also a barn in rear; cost, \$1,500.

**General Notes.**  
**ALBANY, OREG.**—The Congregationalists are building a church costing \$1,000; J. Krambein, architect.

**ANSONIA, CONN.**—A twelve-room house is being built for Mr. John Jackson, at cost of about \$6,000; Palliser, Palliser & Co., architects, Bridgeport, Conn.

**ASBURY PARK, N. J.**—The foundations are in for the Asbury Park and Ocean Grove Library Association Building, 50' x 70', two-story; cost, \$16,000; Palliser, Palliser & Co., architects, Bridgeport, Conn.

**ASHLAND, MD.**—Chas. Walker S. Franklin is having alterations and additions made to his house at a cost of \$1,000. J. A. Dempwolf, architect, York, Pa.

**ATTLEBORO, MASS.**—G. B. Fitts, frame cottage, 30' x 40', two stories; cost, \$2,500; Palliser, Palliser & Co., architects, Bridgeport, Conn.

**AUDUBON, ID.**—Competitive plans for a county jail were received April 29, by County Auditor Wm. F. Stotts.

**BELLEVILLE, O.**—Geo. W. Brandon has begun to build a three-story business block on Columbus St.

*Continued on next page.*