THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. IX. Copyright, 1881, JAMES R. OSGOOD & Co. No. 274.

MARCH 26, 1881.

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

CONTENTS.

THE State of Georgia makes a proposition to architects which we should hardly have expected from such a source. It appears that the people of that commonwealth have so prospered of late years that they have outgrown the accommodations which once were sufficient for carrying on their government, and desire to erect a new capitol, which will last for centuries; until, we hope, the beautiful State of Georgia shall have taken that place among the richest and happiest communities of the world to which her position, her natural advantages, and the character of her people entitle her. The structure is expected to cost not far from a million of dollars, which is still a large sum south of Mason and Dixon's line, and one would naturally suppose that the expenditure of so much money would hardly be entrusted to any but the most skilful hands. What probability there is, however, that such skill will be secured may be inferred from the fact that the sum of *two hundred and fifty dollars* is offered by the General Assembly for "such plan as may be accepted," the right being reserved to reject all the designs submitted. The word "plan" is intended to mean a full set of quarter-scale drawings, including vertical and horizontal sections and elevations, with a complete specification, ready for estimates. We once heard of a "church architect" in New Hampshire who worked for two dollars a day, and perhaps the members of the profession in Georgia have means of eking out their subsistence by labors in the rice-swamp or the cotton-field which are denied to their Northern brethren, but at the rate of wages prevailing in our large cities, the sum offered would barely pay the cost of the paper and colors, and of grinding the ink, for the accepted drawings, without leaving anything whatever for the work of the designer or his assistants. No doubt plans will be submitted, — by builders, who can afford to sacrifice a few thousand dollars on the drawings for the sake of a hundred thousand profit on the contract, but for architects, who can honestly have no interest in this, it would be folly to waste time on such a competition.

A SAD accident has occurred in Denver, Colorado, about which the local journals display a gratifying amount of indignant energy. The *Republican*, in particular, will hardly rest satisfied until the responsibility has been fixed on some person, and has carried on an investigation on its own account which is interesting, not only from the zeal displayed on the part of its representative, but from the character of the evidence offered. It seems that a building of twenty-five feet front, and a hundred feet in depth, had been erected between two other structures, making use of their walls by lining them up with thirteen-inch brickwork. The first story was to be used for a store, and, to give as much opening as possible, a timber truss, consisting of upper and lower chords, two struts and three verticals, was placed across the whole front, to carry the wall above. The upper portion of the front wall was nearly completed when the city inspector of buildings observed that it was bulging just above the truss, apparently from the warping of the green timbers. He therefore in consultation with the architect, caused the truss to be anchored back to the floor timbers with strong iron rods, to keep it in position. The next day the front of the building, together with a large portion of the new side walls, fell, causing the death of one man, and severe injury to four others. Among all the theories advanced by the different witnesses examined in behalf of the *Republican* to account for the accident, there is but one which seems to us reasonable. It appears that while the work above ground was going on, a plumber was laying drains in the cellar, and had excavated a trench close to the basement wall, to a depth of two feet below the bottom of the footings. The soil is very loose and sandy, and it is, to say the least, extremely probable that the earth beneath the most heavily weighted part of the wall may have escaped laterally into the excavation, causing the immediate collapse of the superstructure. The truss was found uninjured in the ruins, apparently proving that the disaster could not be attributed to any defect in its construction, although one "practical man" thought otherwise, and felt sure that "too much theory" was the cause of all the trouble, and that if a man of "practical knowledge" had been consulted, he would have put in a post under the middle of the truss, and made it safe. A "noted analytical chemist," however, held a different view, which he explained to the reporter by an experiment. According to this sage, "pure lime, when placed in a tube with muriatic acid, will boil vigorously." "Mortar when submitted to this process will boil to a point in the tube comparative with the amount of lime which it contains." On putting some mortar from the ruined building in a tube with acid, after the method described, it dissolved without effervescence, as is the usual manner of well-burnt lime which has not had time to absorb carbonic acid from the atmosphere; but not to the satisfaction of the "reliable chemist," who thought that this indicated a "most inferior quality" in the compound.

THE coroner's jury, however, were led by the evidence to find a verdict which, as is not unusual in such cases, belabors the architect, the inspector of buildings, and the mason with great apparent fury, but defeats its own object by the loose, not to say unreasonable language in which it is expressed. The death of the injured man was due, the jury assert, to wounds received from the falling of a wall, the result of "the utterly unfit construction of the building, and the careless, reckless, and criminal manner in which all parts of the work, except the wood-work, were executed;" and the jury further find that the architect "was and is responsible for the causes above enumerated." They also find that the foundations were "faulty in every respect," and call the mason "criminally liable" for having permitted the plumber to dig a trench below the bottom of the wall. In conclusion, they "cannot too severely condemn the building of the foundation-walls without footings of some character." We would like to know how many members of the jury understand what a footing is; what is the proper method of determining whether footings are or are not necessary under a given wall; whether it is customary in building operations in Denver for the mason to give orders to the plumber; or if so, whether the plumber obeys them; and whether, when a certain man, in the exercise of his own trade, makes in the presence of a bystander who has no control over his actions, a mistake which leads to the collapse of a building, it is not the man who makes the fatal mistake, rather than the bystander, who should bear the blame?

A BILL is now pending before the New York Legislature, which professes to have in view the "prevention of the spread of fire through elevator passage-ways in buildings." The proposed enactment is to apply to all portions of the State, and is to take effect upon its passage. It provides that "Whenever in any building in the State of New York there shall exist elevators for the transportation of persons or merchandise from one floor to another, good and substantial coverings shall be provided by the owner or lessee of said building for every opening in the floor or floors through which the said elevator may pass; which covers or covering shall be so constructed as to open at the approach, and to close immediately after the passage of the elevator; so that each and every opening in the floors through which said elevator may pass shall be completely closed except when the elevator may be passing through the same." Provisions for the enforcement of the act are added.

In other words, if the bill becomes a law, every person who owns or uses an elevator in the State of New York will be immediately compelled, under penalty of having his estate sold by the sheriff in case of non-compliance, to provide himself with some form of patent automatic self-closing hatch in every floor at an expense of from five hundred to five thousand dollars, according to the number of floors in his building, the form of apparatus adopted, and the cost of making the necessary alterations in the shaft. The patentees and manufacturers of the hatches may think this a commendable enactment, but we venture to say that real estate owners will not, and it is doubtful whether the advocates of sound construction will consider the advantage to be gained commensurate with the hardship inflicted. The ordinary self-closing hatches are far from being a complete protection against currents of air through the shaft, and indeed are not intended primarily to serve that purpose, while the material of which they are made is generally incapable of resisting a continued heat. As compared with a stout brick wall around the entire shaft, extending from the basement above the roof, and accessible only by tin-covered doors, the security afforded by automatic hatches is trifling, and yet in many, perhaps the majority of cases, the brick shaft would be less costly than the other device, not only in the first outlay, but in the expense of running.

Mr. Edward Atkinson was recently invited to address a number of merchants in New York upon the subject of preventing destructive fires in cities, and securing indemnity against loss without the extravagant additional tax for the support of insurance officers and agents which is now levied upon the policy-holders. It would be impossible to do justice to a paper so important in a brief notice, and we shall shortly print copious extracts from it, assuring our readers that they will thank us for directing their attention to the printed pamphlet itself. The address referred particularly to mercantile districts, such as the tract bounded by Broadway, Worth Street, West Broadway, and Canal Street, in which the vast dry-goods business of New York is concentrated, and the precautions which experience has shown to be valuable for protecting property of that class. Briefly, Mr. Atkinson recommends that iron columns should in most cases be protected; that a new supply of water should be brought from the North River to supplement the very inadequate provision now obtained from the Croton service; that automatic sprinklers should be set to guard the upper stories of the buildings, which are very generally used for light manufacturing; and finally, that proper stand-pipes should be applied to each building, to be operated particularly from the roofs. A description is given of the extended system of connected stand-pipes and roof-hydrants which was lately urged upon the attention of Boston property-owners, with so feeble a response; and we are inclined to think, from the extent to which a somewhat similar form of protection has come in use in New York, that the improved system will be better appreciated there. Insurance forms so large an item of expense to a Franklin Street commission-merchant, with a million dollars' worth of goods under his care, that nothing relating to the subject can fail to be of interest to that class, and it need not be said that more enlightened and convincing arguments than Mr. Atkinson can furnish it is never likely to hear.

The Chicago *Tribune*, in speaking of the imminent prospect that before the year 1900 our principal sources for the supply of pine timber will have been exhausted, makes the suggestion that those who wish to realize how great a calamity a timber famine would be need only recall the experience of other countries which have suffered in the same way, and are now desert in consequence. This is worth thinking of, and although after the forests which surround the great lakes are depleted we can still fall back upon Oregon and Canada, the reckless destruction of the wealth which we now possess cannot be too severely commented on. Singular as it may seem at first glance, the citizens of New York and Boston are really the persons most deeply concerned in the wholesale ravages annually made in the pine forests of the North-west by the flames kindled either through accident or by design, whether deliberate and premeditated, as when the marauder on government lands takes that method of concealing his depredations; or merely wanton, as in the case of the shiftless squatter who burns his own and his neighbors' property to save himself the labor of gathering it. To the squatter a timber famine simply means a higher price for the stock which still remains to him; but to the owner or tenant of buildings in the seaboard districts an advance of a hundred per cent in lumber means a rise of fifty per cent in his rent; and this quite independent of general business prosperity or the reverse. In the best times rents in our cities form a heavy burden upon men of small income, and the prospect of having them increased one-half within the next ten years, which may very possibly be the case, should engage their earnest attention. A general discussion of the matter is likely to develop some plan for averting or postponing the calamity, and those who will suffer the most should be the first to raise the alarm.

The Panama Canal is fairly launched. According to a statement made by M. de Lesseps in a recent speech at Paris, there are now a little more than one hundred thousand shareholders, the great majority owning from one to five shares, while three thousand only control more than twenty shares each. Among the proprietors are no less than sixteen thousand women. The total cost of the Canal complete and open for navigation is now estimated at five hundred and twelve million francs, of which thirty-six million are allotted to the tide-lock and basin on the Pacific side, which M. de Lesseps thinks will probably prove unnecessary. Work has been actually begun, and men and materials are sent out at every opportunity, though the laborers will be, it is thought, mostly obtained from the neighboring country and the West Indies; and the enterprise will be completed, unless unforeseen obstacles prevent, in seven years. The abstruse questions regarding the "nationality" or "protectorate" of an undertaking carried out by private capitalists of all countries within the territory of a peaceful nation are in the way of being satisfactorily settled; the United States, it is said, having even acquired the inestimable privilege of building the fortifications which are to guard the neutrality of the Canal.

The Boston *Herald*, in discussing the proposed amendments to the building law of that city, asks why the benefit of legal restrictions should be confined to the towns; and why the operatives of the Lowell and Lawrence factories should not enjoy the same safeguards in the matter of stairways and fire-escapes that are made compulsory in Boston. We are glad to have the question raised, and hope that the good work which the *Herald* has done in calling public attention to the defects in the present habits of construction will be continued until some general law is enacted, applicable throughout the Commonwealth. Of course, it would be impossible to enforce any statute requiring, as the Boston regulations do, the employment of large numbers of inspectors, on account of the cost, but there are many provisions of the greatest value which would almost enforce themselves. Those relating to the protection of operatives in manufactories, for instance, would be energetically promoted by the operatives themselves, if the matter were properly set before them; and certain palpable violations of common-sense, such as the projecting of false bases on chimney-stacks where they emerge from the roof, or the use of iron pipes as chimneys; and such infractions of sanitary laws as are constantly committed in the country, would be readily detected. To correct these would alone be a great gain, and if, as has been repeatedly suggested, the chief engineer of the fire department in each town were given a certain control over building operations within his district, reforms of the most valuable character could be carried out, at little or no expense, and to the lasting benefit, in money, health, and happiness, of the community.

The agitation in regard to the filthy streets of New York still continues. At a recent meeting of the New York Academy of Medicine, Dr. A. L. Loomis called attention to the peculiar malignancy of many diseases during the past season, and expressed his conviction that the accumulations of decomposing animal and vegetable matter in the streets had been one of the most important factors of the unwholesome conditions to which the extraordinary mortality of the winter was due. In furtherance of the purpose for which he spoke, he offered resolutions, which were adopted by the Academy, warning the public against the danger of allowing the present state of things to continue, and calling for a citizens' meeting to be held the next evening at Cooper Union, to demand relief from the Legislature. The matter was taken up by other public-spirited citizens, and more than five hundred merchants, lawyers and professional men added their names to the call which was published the next day. What will be the result it is impossible to say, but undoubtedly something will be accomplished before long.

THE SECOND COMPETITION IN INTERIOR DECORATION.

The judges appointed to examine the relative merits of the competitive designs submitted in accordance with the published programme, which is reprinted below, find that the competitors are ranged in their order of merit as follows: 1. "*Quentin Durward*;" 2. "*Waverley*;" 3. "*Utility*;" 4. "*Pen*;" 5. "*L*;" 6. *Crayon*;" 7. "*Haste*;" 8. "*Chuzzlewit*;" 9. "*Stylus*;" 10. "*Appetite*;" 11. "*Try Again*;" 12. "*Bug-Eater*."

The prizes have consequently been awarded to the authors of the first three designs, who are Mr. R. Brown, Boston, Mass., Mr. J. W. H. Watts, Ottawa, Can., and Mr. M. Roche, Chicago, Ill.

PROGRAMME.

The subject of the second competition will be the dining-hall of the same small country hotel, the entrance-hall of which furnished the subject of the previous competition. It is thought desirable to impress once more on intending competitors the fact that they should strive to give to their designs the semi-private character which such a hotel, with its permanent occupants, should have. The room is intended to accommodate thirty people dining at one time, and yet not necessarily at the same table.

The size and general arrangement of the hall are left to the competitors, but it is required to introduce into the design the tables and chairs (in number sufficient to show their character), the sideboards or continuous buffets at which the waiters carve, the communication between the buttery and the dining-hall, the windows and means of artificial lighting. The introduction of an open fireplace is optional. A place of observation whence the landlord or head-waiter can overlook the room should also be provided.

It is suggested to those of the competitors in the first competition, who are satisfied with the character of their former design, that they should preserve such character as far as may be, and make the design of their dining-rooms harmonize with that of their entrance-halls.

Required: A perspective view of the dining-room, exhibiting the features mentioned above. This perspective is to occupy the whole of one sheet.

The second sheet is to contain a plan of the dining-room, and details of tables, chairs, sideboards, wainscoting, windows, etc., to a larger scale. All details are to be explained by graphic scales.

The judges also present the following specific criticisms:—

"*Quentin Durward*." Design carefully studied, architectural, and neatly rendered in outline. Good and effective plan, and the invention of detail not too much strained. There is a good feeling of proportion and indications of reserved force in this composition. The conditions of the problem are met in a direct and workmanlike manner; but the ceiling is too heavy. If the pilasters are panelled and decorated the beams which they support should certainly have been treated as lightly — not necessarily diminished in size, but decorated. Drawing and detail show a practised hand. Chandelier too small. In so large a room several hanging lamps would have been better disposed for illumination, and more effective. Sconces flanking buffet at end out of drawing. The buffet might well have had more detail, and more indications of thought; the chairs should not have low cross-braces in front. The design as a whole is eminently practicable, and the author evidently has a well-stored mind under good discipline. He knows where to stop — a great virtue — and has not sought to astonish us with new things. The best quality he exhibits is the eminently architectural quality of first conceiving a thoroughly good plan with cheerful fenestration and well adapted to its uses. This point gained, the question of the general divisions of the room in order to establish a unity of design in it and to emphasize the mutual relations of its several parts is next in order, and finally comes the invention of detail. When this order of designing is reversed, as is the case with most of these competitors, disaster is sure to follow.

"*Waverley*" gives us a design showing a practised mind seconded by a very clever manipulation. The general architectural composition is not confused by the profusion of detail. The author has been wise enough to emphasize boldly his main features of construction, leaving the minor details to take their subordinate position. There is no remarkable study or originality of composition, but what the author has committed himself to is of good character for the most part and modest. Chairs and tables are quite knowing in their way, — a little too much like the productions of the shops, perhaps,—but very neatly and correctly set forth both in geometrical drawing and perspective. The chandelier is well hung and particularly well presented in the drawing; none of the competitors approach "*Waverley*" in this difficult piece of draughtsmanship. The inevitable three-centred arch of the fashion duly appears, but the archivolt of it is too thin. The window pediment needs further study, and is not refined or elegant in conception. It is to be regretted that a room so well composed is not approached in the plan by a central doorway, for the sake of the *coup d'œil*. The design is evidently the production of a hand accustomed to such work and, more in fashion of execution, however, than in absolute merit of detail, it places most of the competitors at a disadvantage. It is difficult not to permit its elaborateness and brilliancy of exposition to prejudice the judgment in comparing it with the others as the work of an architect rather than of a draughtsman.

"*Utility*" presents a design with the fundamental merit of a wall and ceiling which belong together, and which are well divided horizontally and vertically. It is set forth in a vigorous, sturdy and straightforward fashion, and in its general features has no faults of expression. But the dumb-bell balusters in the frieze are a fatal concession to vernacular vulgarity. A student versed in the refinements of architecture should not stoop to such an invention. The other details are far more grammatical and correct. The chairs, however, sprawl badly. The chandelier is not bad in conception, but insufficient for so large an apartment and, like most of the others in this series, hung too high. The table is solidly put together and not without merit of its own. To conform to the requirements, chairs and tables should have appeared in the perspective, but their absence certainly opens the architectural features to better view. The plan is good. A more complete conformity between pilasters and beams would have been established if the soffits of the beams had been moulded.

"*Pen*." Drawing loose and scratchy, but design honestly studied; splays in perspective a little out of drawing; ceiling and walls for the most part well combined, and horizontal divisions of the latter well proportioned. Artificial lighting insufficient, and chandelier too heavy — too much detailed; should have had more lights. Upper part of buffet too heavy and massive; *fronton* over centre not architectural or elegant. Furniture has fair points, but chair should not have low cross-bar in front. There is much good and conscientious detail; but the main cornice, made up of very small mouldings, is not in general outline subordinated to a proper architectural motive. Caprice of this sort is sometimes admissible in details, but it should have reason as the basis. If the author should develop this design for execution, he gives evidence of capacity to improve it, and doubtless he would tame some of its exuberance of invention.

"*L*" has made fair use of the easy conventionalities of his chosen style, and has presented a room which might have been designed and executed in the last century, if his pilasters had been a little more slender and his ceiling in its decoration more in conformity with constructive necessities. The joists of it (or what stand for joists), alternating in direction in adjacent panels as they do, are not in accordance with usual or practical processes of flooring, and the device has no value as a feature of decoration. It would have been better to have omitted them altogether. The plan needs further explanation, and does not agree with the perspective in the width of the archway leading to the hall. The programme requires the chairs and tables to appear in the perspective, which in effect would have been greatly improved by such furnishing. They are not well bestowed in the plan. The author has presented but a meagre sheet of details, and has not sufficiently committed himself for criticism in this regard. As is the case with most of his competitors, he has not given us the elevated station for the head-waiter. This condition he might have readily met by a step in the sideboard recess, which, by the by, should have contained shelving and cupboards. To line the passage to the hall with shelving is not a happy device.

"*Crayon*." No place of observation provided for head-waiter, as required. As ceiling indicates construction, the girders are too small; opportunity for design lost in not emphasizing connection between these and the pilasters. As a full order is suggested in wall treatment, the want of a cornice in entablature is notable; it leaves frieze too wide, so as to compete with the space above impost moulding; architrave of entablature not broken in perspective over bay-window, as shown in details; form of central doors of principal buffet inelegant (see details). Perspective deficient in exactness of detail. Carving-shelf of principal buffet too low. Front legs of chairs clumsy. Main defects of design: Absence of proper proportions between horizontal divisions of wall-surface; impost moulding, while it draws attention to a certain unity in the design and a correspondence of parts which is well intended, disturbs the harmony of proportions in the wall-surface, and on the whole is an unwarranted intrusion. The composition would be better and quieter without it.

"*Haste*." Drawing too thin and weak in execution; longitudinal ceiling girder should not have bearings over door and bay-window at the two ends. There should have been two, bearing on jambs of bay, and these should have been furnished with brackets. Buffets well disposed in niches, but not sufficiently important. No place of observation for head-waiter; finials over pilasters weak and trifling. Chair inelegant. Cross-bars of table badly in the way and inconvenient. Cornice-moulding of wainscoting should have been made more important. This is an imitation of one of the worst features of old colonial work; horizontal divisions of panels should have had some relation with the imposts of arches over buffets. Not enough studied detail, and what there is of it is timid but discreet. "*Haste*" is a bad signature and too suggestive. The careful and conscientious detail of "*Utility*," "*Pen*," and "*Crayon*," and its obvious results, should teach this competitor that "haste makes waste."

"*Chuzzlewit*" gives us rather a bald room, with thin ceiling-beams bearing over openings, where they ought not to bear, and unoccupied wall-spaces perilously similar in area to the wainscot. There is but little design in the room, and this not of the best. It is, however, a cheerful apartment, and it really looks like a better sort of hotel dining-hall, but does not challenge architectural criticism. Here indeed is the expression of quaintness so easily got by the three-centred arch and by the flush panelling of our forefathers, but an architectural scholar need not have much ado to turn out such bits of cheap colonial sentiment by the mile. What we ask for withal is evidence of architectural knowledge and study. Of these qualities the present design is not entirely bereft, but it certainly is not its distinguishing feature. In several points, notably in the canopies over the fireplace and sideboard, the detail is quite illiterate and wanting in a sense of proportion and elegance, and does not agree with the geometrical studies. It is to be further noted that the style — if to be a style — demands great beams for the ceiling. Those here represented are not great, and would not sustain their own weight without serious deflections. They are not practicable.

"*Stylus.*" The fundamental defect of this composition is the division of the wall-space into two nearly equal areas, one occupied by a panelled wainscot, and the other by a wall-surface somewhat too mathematically decorated by a diaper. The wainscot should in this case have either been lowered to the level of the top of the fireplace lintel or raised to the impost line of the arches, so that some one feature of the wall-space might have been pre-eminent. A design so cut in twain could not be condoned by a much higher grade of treatment in the detail than is here set forth. In architectural character the design is bald; the pilasters in three stories are not happy, and the fireplace is wanting in elegance and refinement. It needs far more careful study in detail. The plan would have been better contrived if the space of the room had not been so intruded upon by the depth of the bays at the fireplace end. If these bays had been treated as buffets they would have had more meaning, and the whole composition would have gained in character. The furniture is very bad, and the gas-fixtures commonplace. There is no such virtue in the three-centred arch as to justify its "damnable iteration" over every opening.

"*Appetite.*" This design depends upon its possible treatment by color to be quite justified. As an arrangement of lines and masses it is respectable only. Walls and ceiling recognize one another, though not always happily, for the two central pilasters at the serving end should have been continued through the length of the room in the beams which they support. We do not object to the attenuation of these features if we are allowed to imagine refinement of detail. The horizontal lintel of the windows is too low in itself, and the same feature is carried across the three serving bays at the same level with too great insistence. The void space over it asks for some expression; the fringe of little balusters is not sufficient. Had they been placed higher and furnished with something to stand upon, instead of hanging as they do, the whole effect would have been improved; and the improvement would have been emphasized by carrying the capitals of the pilasters nearer the cornice. The dado is not at all bad nor is the furniture, though the chairs are too wide. The perspective has been conscientiously elaborated, but it is wanting in clearness and vigor of treatment. The shading is expressed by lines too crowded and confused. Some details of the sideboard are good.

"*Try Again.*" Room of ineffective shape and badly entered from parlor. No place of observation for head-waiter. Door in splay does not properly balance window opposite. Window should balance window; fenestration ill-arranged. Corners of wainscoting not properly marked by architectural features. Styles of doors too wide. Cornice of wainscoting very bad and grotesque in detail; arches in splays badly out of drawing. Detail too heavy. Frieze too loosely filled; bearing of girders not properly recognized in it. Design generally illiterate and details coarse. Front legs of chairs should not rake forward. Too great straining for originality. Better to follow accepted formulas of the orders than to design without proper groundwork of knowledge.

"*Bug-Eater,*" as he calls himself, has presented us with a truly vernacular composition with no attempt to preserve any architectural conditions of composition. In his efforts to be original (a peculiarly American trait) he becomes ungrammatical. The details of pilasters, door-casings, and dado are such as an untrained cabinet-maker might devise, but are not the production of one who knows his orders and all that they imply. This sort of work is not architectural. In his perspective the point of view is taken too high, and it is out of drawing in all its details and furnishings. If this author would compete with his fellows he must show a greater respect for architectural traditions. If his next attempt should be confined to the development of a purely academical design he would be in the safer path and the one most surely leading to success. In this design he has made a false start. If he will heed this advice the result will be far more valuable to him than if he had gained a prize over all his fellows.

CHURCH-BUILDING IN THE MIDDLE AGES.[1]

The announcement of Mr. Norton's last book was received with great pleasure by all those who especially interest themselves in architecture and the studies akin to it. It is, we believe, the first one he has published on the subject; but the position he now occupies in Harvard College, and still more the reputation he has long had as a careful and thorough student, justify the very high expectations that were aroused.

It was hard to choose a theme more replete with interest of various kinds, than the building of the three great churches of Venice, Florence and Sienna. Their very marked differences in style and in size seem to invite investigation into the causes which produced such contrasts. The influences of conflicting traditions, striving for the mastery; the character of the people and their political institutions as reflected in their church architecture; the frequent use of old materials and the sometimes curiously happy adaptation of them, and the much mooted question of the irregularities of construction, — these are but a few of the points on which we had hoped to have the benefit of Mr. Norton's studies and researches. It is, then, with considerable disappointment that we find him touching on most of them very slightly; the few words that he devotes to the discussion of the constructional irregularities are, indeed, almost apologetically set off in an appendix. He has preferred to address a much larger class of readers than the one by which these discussions would be welcomed; and the result is the very entertaining book before us, consisting principally of a lively and graphic account of the passages in history more or less closely connected with the three cathedrals.

The introductory chapter gives us a sufficiently clear though very short statement of the conditions existing in Europe at the time of the great cathedral-building period. "The two motives," says the author, "which have been most effective in the production of noble human works — religion and local affection and pride — united to stimulate energies that had long been suppressed. Either alone or in combination, these two most powerful principles of action were alike existent in their highest force." That these two motives existed in very different proportions in different countries, seems to us not to be sufficiently insisted upon. In the Italian states, civic pride, and jealousy of other states, played a much more important part than in the northern countries. We should search among them in vain for such an incident as that of the army of Norman masons who marched in 1145 to Chartres to aid in the good work of building the cathedral there, asking no pay except their subsistence.

The pictures of mediæval history which make up the bulk of the three principal chapters — the last of which, that on Florence, carries us well down into the Renaissance period — are very vivid and well written. Mr. Norton has selected many episodes which illustrate admirably the temper of the time, such as the battle of Montaperti, and Villehardouin's picturesque account of the reception of the French envoys in Venice. They would be delightful reading for the traveller in Italy. There is besides much information of a more special interest, touching in part questions of disputed dates. Many architects will be interested by details given about the mediæval building committees, if we may call them so. The means of raising money for the work is carefully investigated; and a great deal of interesting information is given in the foot-notes, their references to other authorities being especially valuable.

It is perhaps a penalty of the author's familiarity with European languages that he seems to be somewhat inconsequent in his use of foreign names and words. We imagine some of his readers will hardly recognize Aachen as Aix-la-Chapelle; and if we must say Aachen, then why not Köln instead of Cologne which we meet a few pages further on? So if we say Siena (the English form being Sienna) let us also say Venezia and Firenze. Mr. Norton has been particular to write St. Mary of the Flower and not Santa Maria del Fiore; but he allows himself to speak constantly of that cathedral as the Duomo. These are small matters, it is true, but in view of the extreme care and correctness of his style, they seem to us surprising; as is certainly the careless translation of the Latin inscription on page 64. All praise is due for the excellent index. Z.

[1] *Historical Studies of Church-Building in the Middle Ages.* Venice, Siena, Florence. By Charles Eliot Norton. New York: Harper & Brothers, 1880.

FOREST ECONOMIES AND FIRE-PROOF HOMES.

The truth of the maxim: "It is not what is made, but what is saved, that constitutes wealth," is self-evident. It is a maxim as applicable to political as to personal economy. Therefore, forest economies which tend to save the wealth of our "forests primeval" are perhaps quite as important as those which relate to the replacing of wasted forests by tree-planting.

The amount of timber consumed in the construction of residences and public and private buildings in city and country is so vast as to be well-nigh bewildering. We will not cumber this article with the statistics relating thereto. The well-known facts in reference to the consumption of our country's arboreal wealth in these departments of construction are deeply suggestive. Any one of several of those great city fires which have occurred during the last few years has annihilated the growth of thousands of acres of woodland wealth; a wealth which has been centuries in accumulating, and which only centuries to come can replace. This foolish if not wicked waste is again repeated in the consumption of a like or a larger amount of timber to rebuild. Destructible material being used in rebuilding only lays foundation for history to repeat itself again and again in tongues of flames. These general facts we deem to be a sufficient reason for selecting Fire-Proof Homes as a very important section of Forest Economies.

The popular mind has to too great an extent accepted and adopted the financial heresy that money paid for fire losses is gain. It represents instead just so much utter loss of national wealth; insurance being literally only a powerful suction-pump to draw the losses of the few from the pockets of the many. It is perhaps not necessary to enter minutely into the arguments required to show specifically, and in detail, why fire losses are not really paid by insurance, that they are absolute loss of national wealth, and therefore productive of hard times for the masses. The less the amount of floating capital locked up from circulation by insurance, the less the amount of both national and individual wealth swept out of existence from time to time by devastating fires, the more money there is available for active industry. The money paid by many a tradesman or mechanic for his insurance would, if invested in his business, make a very tangible difference in the net profit of his time and effort for the year. Just in proportion as higher fire-proof conditions can be realized in architectural construction, the greater the economy of money and material involved in the original investment, and also in the current expenses incident to industries, and of regular investments in the industries connected therewith. On the other hand the apparent

financial loss of many a fire frequently falls far short of the actual loss. This is sadly true after what may seem to be heavy insurance has been paid. When a home is consumed, those few thousand dollars almost always leave out of the count household treasures which no amount of money can replace. There is the picture of a dear one whose feet grew weary and who now sleeps. It was the only picture, but it is in ashes now. Not a cent was paid for it by the insurance companies; but it would not be easy to suggest the sum that the living would be willing to pay for its replacement. No power or wealth could restore it. So also of other souvenirs. Often too, there are manuscripts and records, deeds and wills, evidences of debt, or of payment of debt, of great value to the family, and it may be to the world. Insurance in such cases would be impossible; and even if nominally effected, would be little better than mockery. The cost of the Alexandria Library might have been some hundreds of thousands of dollars. Tens of millions, however, would not balance the loss suffered by the world in the historic, scientific and literary material annihilated by the flames when it perished. Who can tell of "all the wisdom of the Egyptians" vanished in that fire of centuries ago? The moral loss involved in insurance is often too great to be estimated. A man buys a piece of ground, and erects buildings thereon which are only tinder traps. Insurance is then by sharp practice piled on insurance till its aggregate well-nigh equals the value of ground and buildings, especially if business reverses necessitate a forced sale of the same. If there be considerable depreciation of values, this aggregate is not infrequently found to exceed the amount that can possibly be realized from the most advantageous sale that can be made. The financial pressure from which the proprietor is suffering not only may but often does tempt him to clandestinely fire his buildings, so as to realize on the insurance, provided he can cover his tracks.

Just in proportion as a high order of fire-proof qualities is realized in the homes and the schools, the churches, manufactories and mercantile houses, of any country, will there be relief from anxiety. It is no more certain that worry kills more men than work, than that whatever saves from worry is itself a very important constituent element of national wealth. Work has well-defined value in the mathematics of political economists. The work of the merchant or the manufacturer, the farmer or the miner, whose mind is free from undue anxiety, will create or accumulate hundreds, perhaps thousands, of dollars more of wealth in a year, than it will if he is struggling with or confused by undue concern about his affairs. If his buildings are so constructed as to leave little room for fear of fire, he can sleep at night, or be absent from home, relieved from at least one very serious cause of anxiety. If, when far away, his eye lights on a report in a daily paper of a conflagration in the place of his residence, he is not strained and shocked with nervous fear and anxious suspense till he can learn whether persons or interests dear to him have been damaged or jeopardized. The mother, as she sends her darlings to school, would often be saved from fears beyond the power of tongue to tell, if it were as certain in our country as it is in many parts of Europe that the school-buildings are safe from fire. It therefore becomes a question of humanity and mercy, as well as a mercenary one of dollars and cents, to secure non-flammable structures for toilers and students, and for the homes of the people.

A properly constructed fire-proof house is warmer in winter, cooler in summer, and dryer at all times than the average homes of our country; hence, of course, both healthier and more comfortable. The health element involved is basis, in an economic point of view, to more than pay for securing the same. Health has actual, tangible, money value. A family which would accumulate five hundred dollars annual cash surplus if its bread-winners are well, may lose five hundred dollars of previous earnings, as well as suffer loss of chance to earn five hundred dollars more, in any year when sickness disables the bread-winners. Such a family may consequently have a thousand dollars trembling in the balance in one year on the health question. Such a family would be a type of thousands of other families, each suffering a loss, some of more, some of less, than that sum annually. Here is a count not improbably representing many millions a year of appreciable value, besides far greater values not capable of being financially gauged. A man cannot tell how much he would give to have a dear one who has become a chronic invalid restored to health; or how much he would give to have the dead brought to life. In the health point of view, it will "pay," not only to consider, but to act on, the subject of fire-proof homes for the mass of the people.

The fire losses in our country for the one month of January, 1880, were $12,300,000. Here were several hundred thousand dollars a day for every legal working-day in that month, actually lost. The average loss of each and every hour in every one of those days represented the net result of more than the savings of an average life of a hard-working, economical man. These fire losses are a great burden on the people, — from 75 to 100 million dollars a year, thus worse than wasted. This more than equals the present yield of all the gold mines of our country. It is a tax of two dollars a year for every man, woman and child in the nation. A French insurance officer who visited America not long ago suggested that while he very much admired our skill and efficiency in fighting fires, he was equally surprised at our indifference to the subject of prevention of these conflagrations; so constructing our buildings as in very truth to invite the destroying element. Our rate of fire loss *per capita*, for a single year, is reported to exceed that of France for twenty years.

European architects have demonstrated that non-combustible structures are practicable as homes for the common people, as well as for the costlier edifices of the State and of wealthy persons and corporations. A fire-proof cottage can be built, as proved by actual practice in the old world, for less than we expend on less commodious and more destructible buildings. Insurance is, of course, from double to quadruple the rate on the latter to that charged on the former. Insurance of fire-proof buildings can, instead, almost if not quite be dropped out of account. Capitalize the amount thus saved, and it would equal a large proportion of the cost of a home, that is, the sum paid for insurance would pay interest on a sum equal to a considerable share of an amount sufficient to buy a similar home, where the house was fire-proof.

Let us now examine a few facts going to show that much better fire-proof conditions have been realized in popular architecture, at home as well as abroad, than is generally supposed, — conditions applicable to homes of poor and lowly ones as well as to those where the rich abide, or where wealthy corporations have been able to compel science to provide safety for their effects. Let us also consider some of the conditions, general and special, entering into architectural structures by which they can at once be rendered cheaply and efficiently fire-proof. The security which it is possible to realize in the way of incombustible structures had a forcible illustration in the great fire at the Smithsonian Institution, at Washington, D.C., a few years ago. We saw this terrible conflagration raging for hours, and almost moaned in spirit as we thought of the loss that science seemed almost certain to suffer. While the number of specimens in the museum there is large, it is not as large as in some others. The quality of these specimens, however, is so exceptionally fine that it is doubtful whether the equal of them in this respect could be found elsewhere in this country, or perhaps in the world. If, therefore, that museum were lost, natural history would suffer a well-nigh irreparable injury. When at last, on the following day, the flame and smoke cleared away, it was found that not a feather of rarest bird, or gauze-like wing of the most delicate insect had the slightest appearance of fire upon it. Neither had there been any damage from water. The museum section of the structure was fire-proof. A truly fire-proof structure is also substantially water-proof. In this case the most favorable circumstances may be said to have contributed to the triumph. Money without stint had been lavished in the original construction. The fire broke out at mid-day. Other conditions favored a cool and well-directed fight with the fire, there being no adjoining buildings to engage attention; no half-crazed, half-clad, frightened women and children to care for. The whole available force could be engaged with undivided attention in the work of putting out the fire. Take next a case illustrating in many respects the opposite extremes. In the early morning hours, slumberers sleep most heavily; in such an hour on the 20th of January, 1881, a fire broke out in a tenement-house in Mott Street, near Broome, in New York City. This tenement-house was known as "The Big Flat;" it provided homes (?) for about one hundred and seventy families. These families are said to have numbered in the aggregate not far from fifteen hundred souls. To aggravate matters, the fire broke out in the lower floor, so that men, women and children asleep on the upper stories were most difficult to reach. Therefore successful wakening them, and getting them safely out of the building, if anything like an average fire should be the result, would be nearly or quite impossible. The vast hive being fire-proof, enabled the police to go through halls and corridors, and rouse the sleepers, caution and encourage them to keep cool, and so to preserve better order, and prevent loss of life and limb, or breakage of furniture by hasty injudicious action. The torture of burned flesh was likewise prevented, and not a life or limb was lost. This building was six stories high, seventy-five feet front, and two hundred feet deep. The probability in this case is that, had the police and firemen known and appreciated the fire-proof nature of this structure, they would have been aware, not only that it was unnecessary to wake the sleepers, but that it would have been much better not to have done so. Such cases as these show that multiplication of illustrations is hardly necessary to prove the desirability of fire-proof structures.

"Necessity is the mother of invention;" and we find in treeless, Oriental countries that the houses are so built as not to be consumable, and that they are constructed at a low rate of cost. We have personally seen thousands of these homes in Northern Africa and in Western Asia, and do not know of one, inhabited by those "to the manor born," which could be burned. Many of them are not only sightly, comfortable and convenient, but imposing and ornamental in appearance and effect. They are not just such houses as would suit the people of Christendom, but they combine many important elements which are just the ones to incorporate into fire-proof homes. Timbers for roofs are avoided by finishing the tops of buildings in domes of masonry.

In Southern Europe, as is well-known, the buildings are so constructed that a fire could hardly begin, or gain headway. This is notably true in the cities of France and Italy. So much so that if a fire does start, there is little if any excitement. The fire department is quietly notified, and the whole affair turned over to it. The majority of the building material is incombustible, and a large proportion of the remainder is so encased in masonry, or chemically or otherwise rendered partially or entirely fire-proof, that any considerable headway for the fire is hardly possible. Therefore the fearful annihilation of

fixed capital, incident to such conflagrations as that in London, Chicago or Boston, can never occur. The London fire, in 1666, taught Europe the necessity of opposing beginnings; the old adage: "An ounce of prevention is better than a pound of cure," is essentially applicable to the subject of fire. It is perhaps sufficiently germane to the matter under consideration to remark here, in passing, that it is time a heavy hand was laid on railway companies neglecting or refusing to affix spark arresters to their locomotives; the damage they have needlessly done to the forests of the country by firing them as they dash along, is truly terrible; the loss of material thus suffered is vast. Possibly the damage to the climate is scarcely less.

There is hardly anything recorded in history more terrific than the city fires above cited. The power and skill of man, aided by the best appliances of science and mechanics, was, to a humiliating degree, proved impotent to cope with it. The cumulative power of such fires is an awful mystery. "The elements melt with fervent heat." The air seems to become flammable, and to gather power and intensity on a ratio akin to the increasing momentum and velocity of a falling body. Its blast is then even more destructive, if possible, than the direct action of the angry billowy flames themselves.

In respect to materials and methods of construction of such buildings as seem desirable to have, there is not room in this article for full discussion. Good, common burnt brick is among the very best of materials; in suitable proportions and positions, and properly combined with other materials, it will almost if not quite solve the whole question. These bricks may also be made hollow, and otherwise shaped so as to be available for other portions than plain main walls. When wood is used it should, as far as possible, be covered with masonry. *Salix fragilis* has been found, as reported on what we believe to be good authority, very difficult wood to burn; its strength and lightness adapts it to many of the wants of the kind of architecture under consideration. Timber culturists may turn their attention to it, assured the time is near at hand when there will be more demand for it than supply. Other woods can be chemically so treated as to give them a high degree of incombustibility.

The tile roofs of Europe, with or without modern improvements, would save many a fire, now invited and rendered almost certain by shingled roofs; tarred roofs are often little, if at all better than the latter. Scores of fires may thus be kindled in a half-mile radius around some central fire, if that fire happens to start in a dry time, and when a high wind is blowing. To have one of these incendiary roofs on a building in a village, and especially in a large city, ought to be made an indictable offence. Slate roofs and other styles properly made are likewise among the best means of giving relief.

Terra-cotta offers a cheap, convenient and tasteful means of supplying a large share of ornamentation, now constructed of wood; it is safe, and the means of producing it in substantially illimitable quantity and variety is continually increasing. A large proportion of substantial as well as ornamental parts of fire-proof cottages will probably be made of it, at no distant day; hollow bricks of this material make a cheap, dry wall, and it is susceptible of an endless variety of forms. Gravel and cement, laid up in cribs, is in some places by far the cheapest for main walls; this composition should be so laid up as to provide air-spaces between the inner and the outer walls, as the work progresses; this will adapt the work to putting the smooth white or tinted hard finish, or calcimining, directly on the outer surface of the inside wall, and yet allow the latter to be kept dry. The hollow structure will for the same reason make it possible to put a permanent fine finish on the outside wall; it will also promote the desirable and necessary thermal conditions and provide for perfect ventilation. Nolanum, a material from St. Louis, Mo., exhibited at the Centennial Exhibition in Philadelphia in 1876, is another material worthy of consideration for walls and partitions, and for ornamentation. French Teil is becoming more and more indispensable in these several uses, as its most excellent qualities come to be better known; it is believed to be the same as the famous mortar of the Romans; it is less than half the weight of granite, and for most if not all uses in fire-proof construction it is far superior to it. It, also, is suited to making up in form of large or small hollow bricks; its penetrability and its holding qualities adapt it to the use of nails and screws to some extent, and as a non-conductor of heat, it is remarkable. Houses can be almost entirely made of it, and they are dry and ready for occupancy more quickly than the brick-and-mortar, lath-and-plaster work in common use.

The flat arch and the truss are among the means available for the support of floors and roofs, with the minimum use of wood. These, together with other appliances well-known to architects, make it possible to construct both floors and roofs so as to secure all necessary safety from fire in the homes of both rich and poor. During the last few years several building and contracting firms have advertised to furnish fire-proof buildings covering the entire range from cottage to palace, including, of course, churches and schools, as well as warehouses, railway depots, etc.

We respectfully submit that the time has fully come for State legislatures and municipal governments to provide for boards composed of competent architects and engineers to examine and report on the various means now at hand to secure better fire-proof qualities in both public and private buildings. In the architectural literature of Europe, there is abundant material from which to gather all needed light, simply from the record of what has long been in use. Scattering the facts will create a demand which American builders will soon put in practice; they will, no doubt, as we believe some of them have already done, make very valuable improvements on many of these old-world discoveries. We believe the time has come to be so "terribly in earnest" in this matter that laws shall be passed making it a criminal offence to erect a building, in either town or country, which endangers human life by fire. Civil damages should not be the only ones to which an incompetent or dishonest architect or contractor may be liable if he puts in defective flues, or is otherwise blamable for loss of property by fire, or for human beings being broiled. A few vigorous legal enactments provided under this head, and then *vigorously* enforced, would reduce the death-rate and the fire losses in a decade to an astonishing degree. Sending a commission to Europe at the expense of any great American city to examine and report on building inspection and police regulation relative to fire prevention would be a first-class investment, — one much more likely to produce results satisfactory to tax-payers than the way much of their money is now spent by "ringsters."

Another point especially worthy of consideration is for humane men of wealth to offer splendid premiums to those who shall contrive the best plans for fire-proof homes, churches and schools, especially cheap cottages, which shall be adjudged by a competent board of examiners to most perfectly combine the needed conditions of both efficiency and economy. The grade of premium should rise rapidly in value in proportion as the price of a cottage is brought below one thousand dollars. A "fund" for a number of such premiums could be created by a large number of small subscriptions. The same field would be an inviting one for the great international expositions. Let these and State agricultural societies offer such premiums. A tithe of the money some of these societies have worse than wasted on horse-racing thus spent would do more good than some of them have ever yet been known to do.

We are proverbially a wasteful nation. This subject is one among many demanding a "new departure." Save the grand old forest trees by ceasing to sacrifice them and human life together. If the humane and æsthetic reasons involved are not sufficient inducement to do so, then let the foregoing proofs that such a course will "*pay*" secure such action.

George May Powell.

THE ILLUSTRATIONS.

COMPETITIVE DESIGNS FOR A HOTEL DINING-ROOM. BY MR. R. BROWN, BOSTON, MASS., AND MR. J. W. H. WATTS, OTTAWA, CAN.

For description see the remarks of the jury elsewhere.

THE AMERICAN PERMANENT EXHIBITION BUILDING, RIO DI JANEIRO, BRAZIL. MR. EDWARD DE LAPLANDE, ENGINEER.

The American Permanent Exhibition of Brazil is an undertaking on the part of prominent citizens of Rio di Janiero for the special purpose of presenting the manufactures of the United States under the most favorable circumstances. The design for the building by Mr. de Laplande, as shown in this issue of the *American Architect*, is the one adopted by the committee, and preparations are already commenced for its erection. The location is very convenient, in the immediate vicinity of the Custom-House, and with every facility for the prompt discharge of goods. The programme comprises the exhibition of all articles manufactured in the United States, by sample, with the price of each clearly marked, any sales to be made from a reserve stock which will be retained in a bonded warehouse till needed. The commission in charge of this exhibition is presided over by the Comte d'Eu, son-in-law of the emperor, and is composed of prominent and influential men. The subscriptions to the stock amounted to over $150,000, at the last date, and there is sufficient guaranteed to pay all the preliminary expenses. The commission propose to pay all expenses of freight from seaboard cities in the United States, and sales will be made upon a small commission to inure to the benefit of the Exhibition. As the United States pays annually a sum of $40,000,000 in cash to Brazil, it would certainly seem desirable for our manufacturers to take advantage of an opportunity of reaching a large nation of consumers under such favorable circumstances. Mr. Edward Arthur is the Managing Director in Rio di Janeiro, and Gen. C. B. Norton has been appointed Special Commissioner for the New England States.

LEGAL NOTES AND CASES.

Negligence. — Stairways on Sidewalk. — Open Gateway.

In an action against a city for injuries suffered from falling through an open space leading down a stairway abutting upon the sidewalk, the court said: "It is very frequently essential to the convenient and proper use of hotels and other business houses, sometimes of dwellings, adjacent to streets in city and villages, that they be constructed with stairways on the street sides leading downwards to the basements and cellars, or upwards to the front entrances of such buildings. Structures of this character which do not encroach upon the sidewalks are lawful. The existence of such a structure, however, imposes upon the municipality in which it is situated the duty of providing proper safeguards to prevent the happening of accidents, by reason of its proximity to the sidewalk, to persons travelling thereon with ordinary care. In the present case the stairway where plaintiff was injured was constructed parallel to and abutting what the defendant claims to be the sidewalk. If it did not encroach upon the sidewalk we think the defendant city performed its duty by maintaining a sufficient barrier between the sidewalk and the stairway. A barrier or gate placed at the entrance to the stairway would in many,

No. 274 AMERICAN ARCHITECT AND BUILDING NEWS. MAR. 26. 1881.

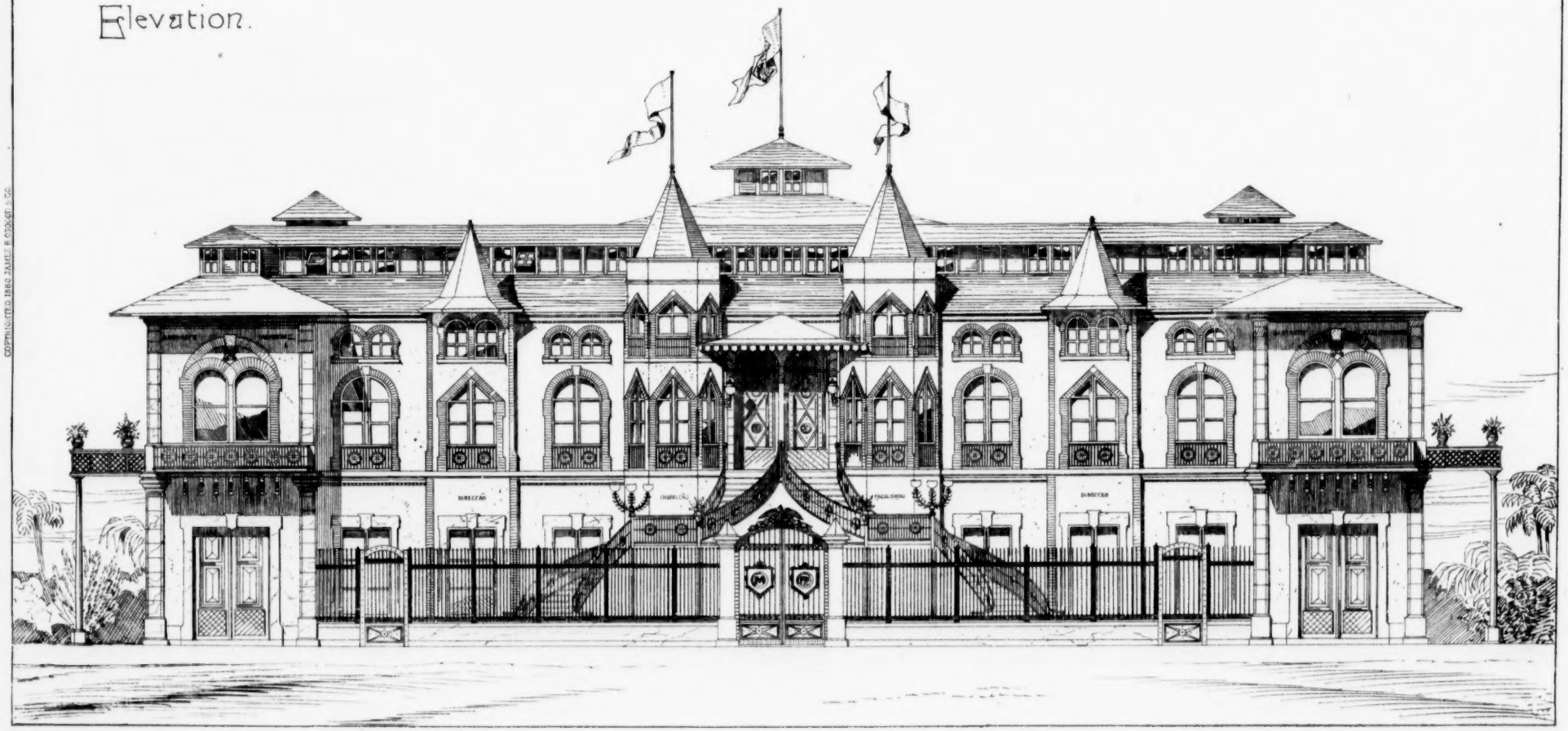
Permanent Exposition Building

Edward de Laplande Engineer

Rio De Janeiro. Brazil. S.A.

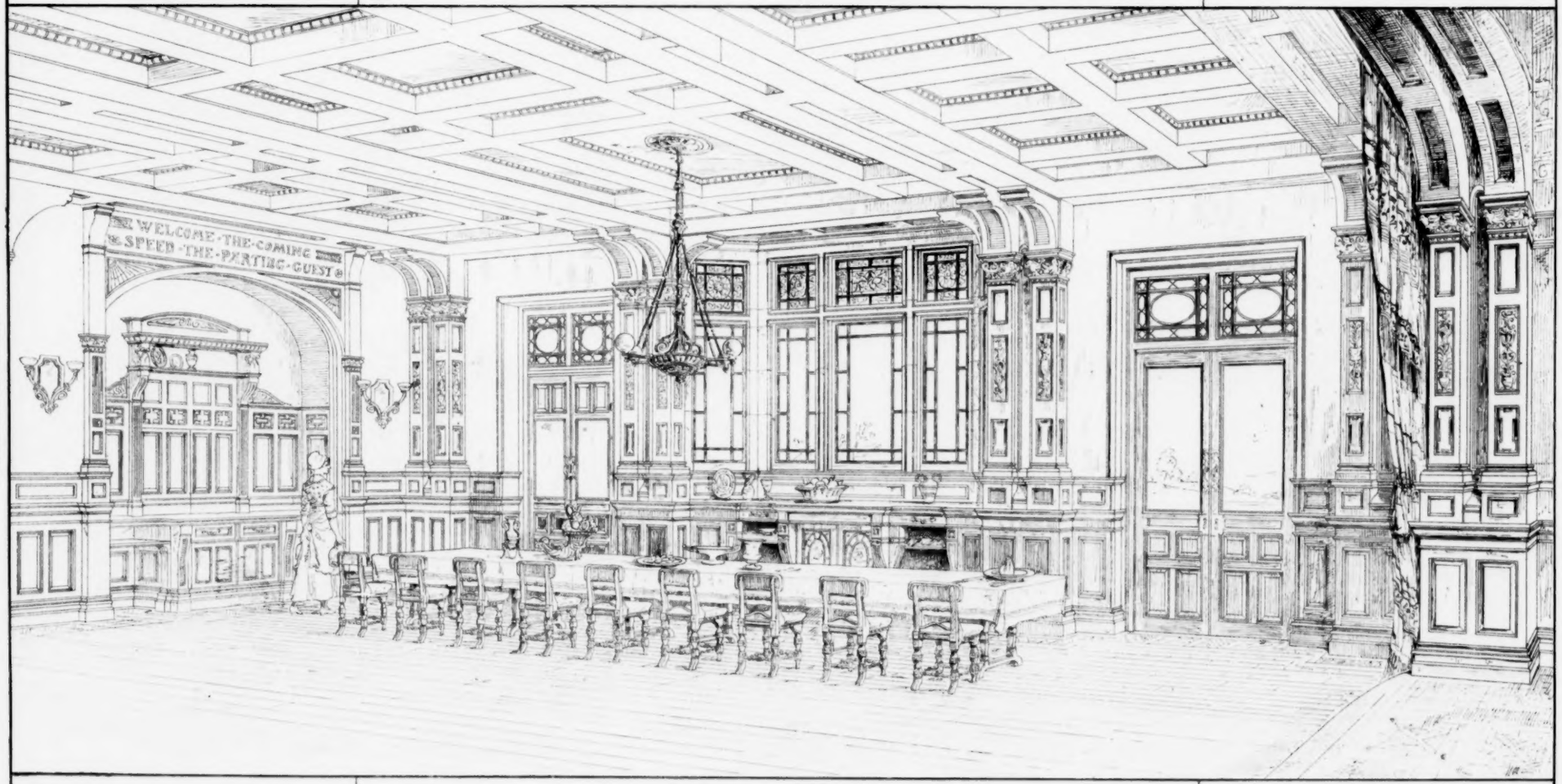
Scale of 1 2 3 4 5 6 7 8 9 10 Metres

Elevation.

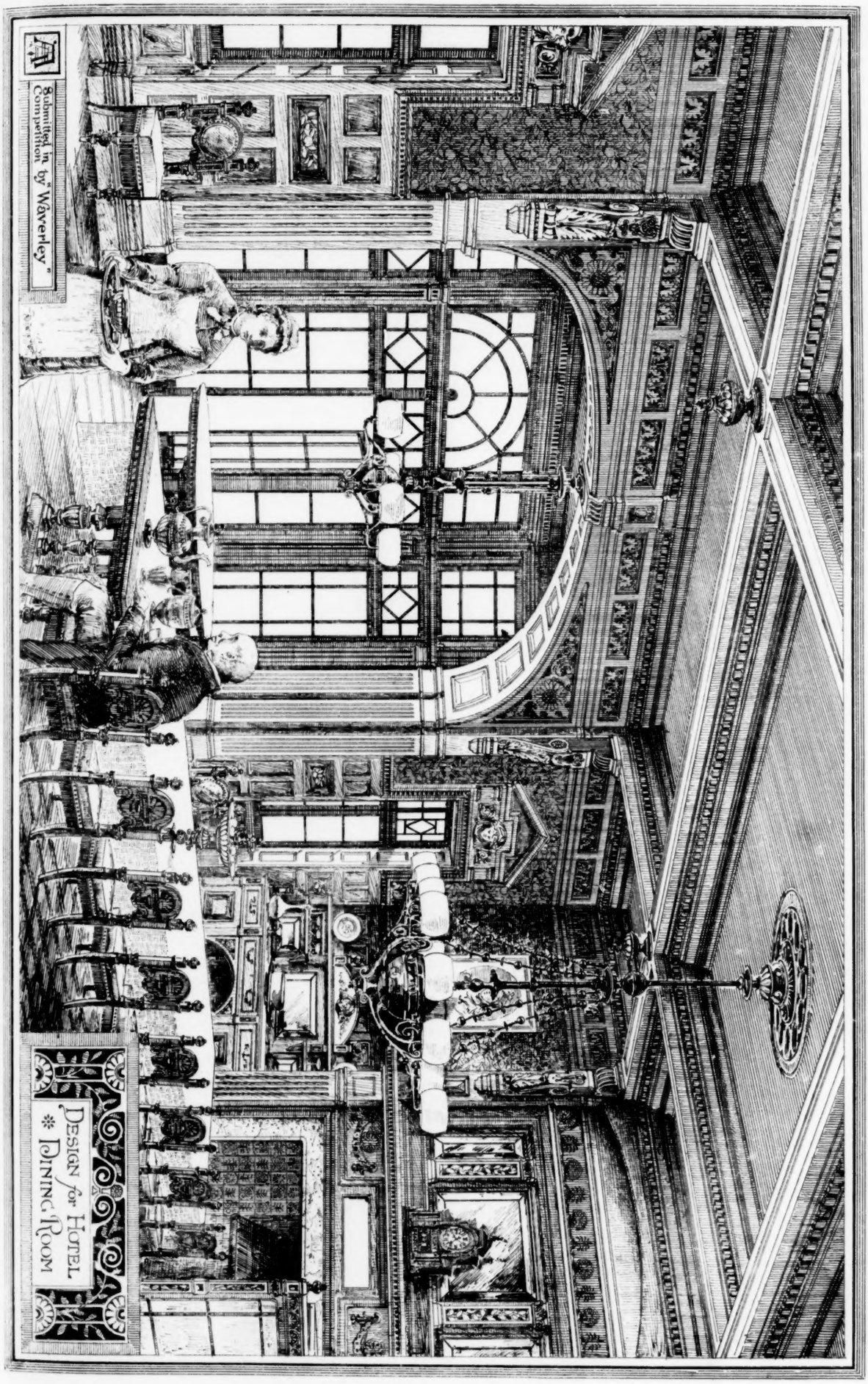


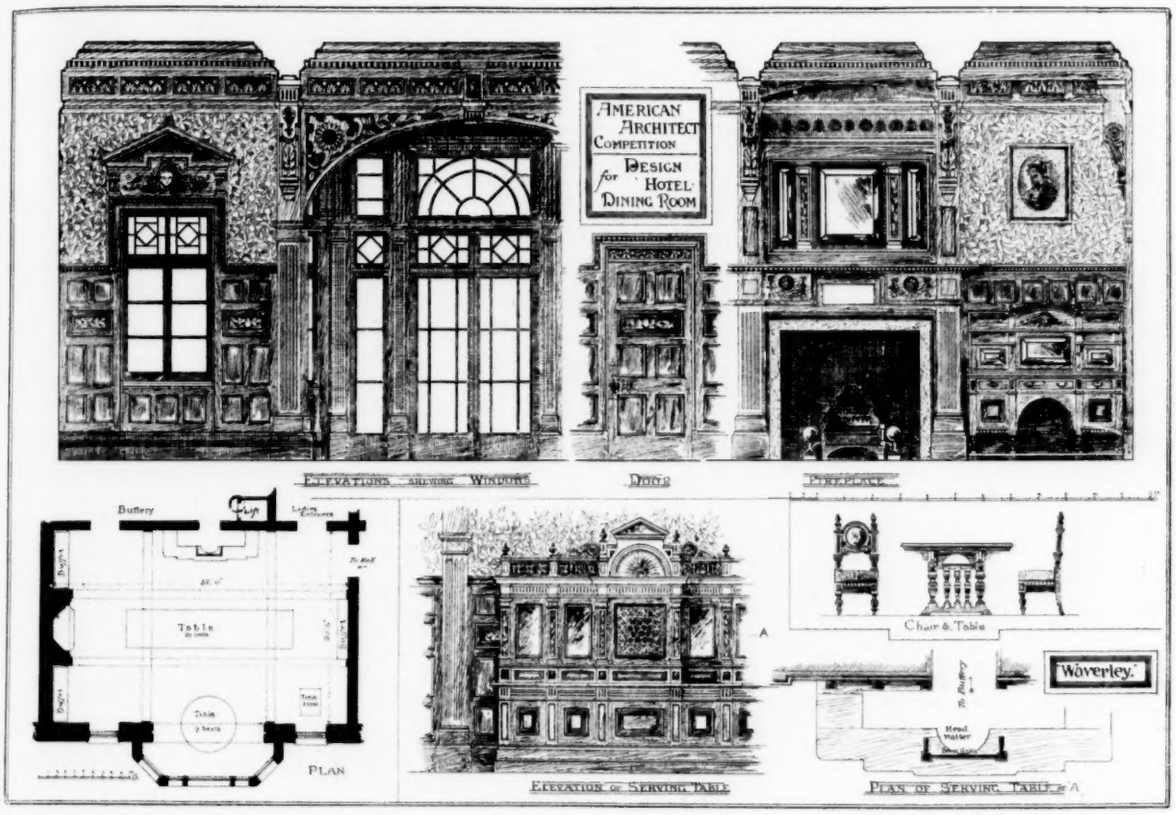
No. 274 AMERICAN ARCHITECT AND BUILDING NEWS MAR. 26. 1881.

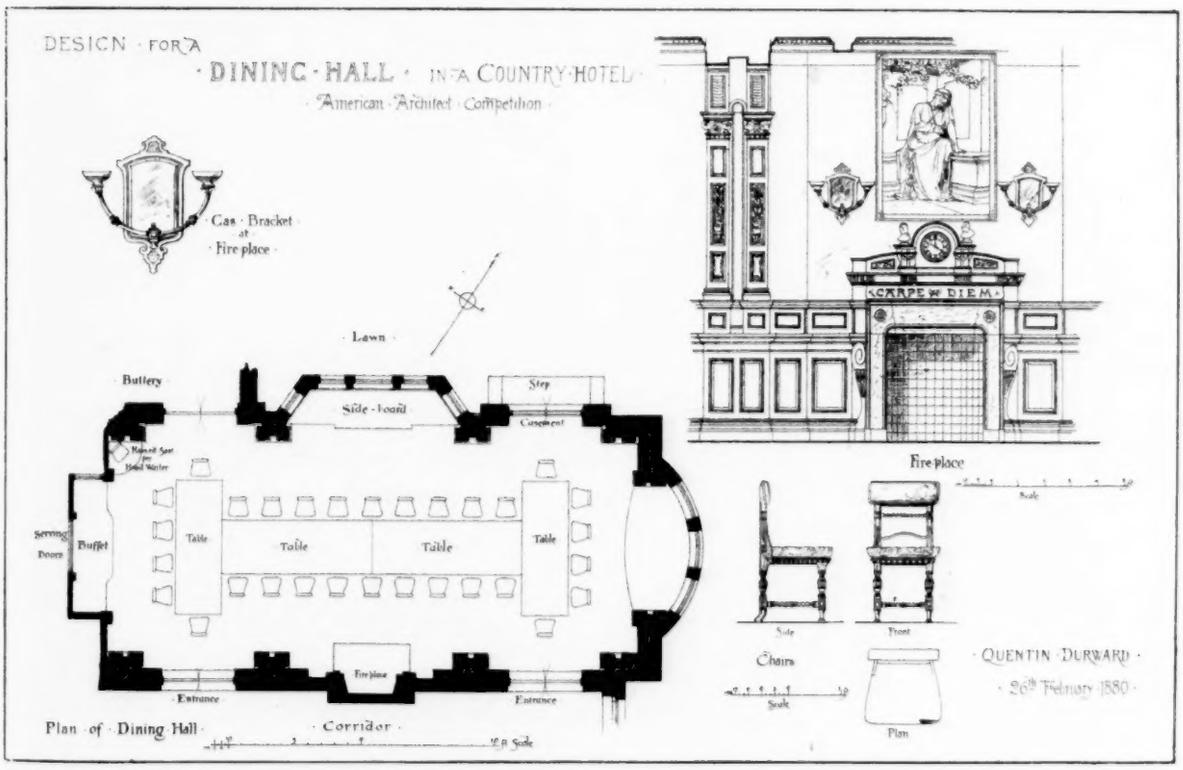
· Design · for · a · | ⊛ DINING · HALL ⊛ IN · A · COUNTRY · HOTEL ⊛ | American · Architect · Competition ·



26th February · 1881 · | ⊛ Perspective · View ⊛ | ⊛ QUENTIN ⊛ DURWARD ⊛







perhaps in most cases be very inconvenient, and would, or might, seriously interfere with the lawful use of his premises by the owner. On the facts of this case we think it would be unreasonable to require the municipality to maintain such a safeguard at the entrance to the stairway in question, unless it was within the limits of the sidewalk. The city, therefore, was guilty of no neglect of duty unless the stairway was within the limits of the sidewalk ordinarily used and travelled by the public." *Fitzgerald vs. Berlin.* Supreme Court of Wisconsin, January, 1881. H. E.

Mechanics' Lien. — Delivery of Materials at Contractor's Shop. — Death of one Contractor.

In a proceeding upon a mechanics' lien for lumber furnished for a certain building, the affidavit of defence stated that A who was named in the claim as the contractor was not the contractor, but that the contractors were the said A and B, and that before the completion of the building B died; and that the lumber upon which the claim was made had not been delivered upon the ground, but at the shop of the said A. The court below entered judgment, being of opinion that the defence was not sufficient, and said: "It has been frequently decided that materials furnished for a building, though not used or delivered at the building, may be made the subject of a lien, and in the absence of any allegation of fraud in the affidavit there seems to be no reason why in this instance a judgment should not be entered. It is matter of common practice for building materials to be prepared long before a house is commenced; and to strike down this lien for the reason assigned would be to destroy a right incident to the very nature of the business which it is the avowed object of the lien law to protect. We are also of opinion that the contractor is properly named. After the death of one of the contractors, as the proceeding is *in rem*, it would be improper to substitute the personal representatives of the deceased contractor; and while it would possibly have been better to have named the living contractor as the survivor, yet we do not think the omission is fatal to the validity of the lien." And on a writ of error to the appellate court, the judgment was affirmed. The court said: "The survivor of two joint contractors is rightly named as sole contractor in the claim filed. He had the power as such survivor to bind the building, and so far as the owner is concerned it mattered not whether the materials were furnished at the shop of the contractor before or after the building was begun, provided they were furnished on its credit. We think the opinion of the learned president of the court below fully sustained both on principle and authority." *Dick vs. Stevenson.* Supreme Court of Pennsylvania, January 17, 1881. H. E.

Apartment-Houses are Private Dwellings. — Water-Meters. — Cutting off Water-Supply.

Apartment-houses and tenement-houses are "private dwellings" in the opinion of Judge Van Brunt, in *Purdy vs. The Commissioners of Public Works*, rendered in the New York Common Pleas, on March 17. In that case Purdy sued for an injunction to restrain the commissioner from cutting off the water from his apartment-house, "The Osborne," upon his refusal to attach the Worthington water-meter to the pipes, upon a notice to do so, at his own expense, under Chapter 383 of the Laws of 1870, which required water-meters to be placed "in all stalls, workshops, hotels, manufactories, public edifices, at wharves, ferry-houses, stables, and in all places where water is furnished for business consumption, private houses excepted." The injunction was issued; but the right of the city, at its own expense, to put on the water-meter to measure all extra consumption of water, which by law applied to all buildings, was set out in the injunction order. H. E.

Party-Wall. — Easement. — Injunction.

In *Heinrichsdorf vs. Lewis*, in the Superior Court of Cincinnati, on March 12, an action for an injunction to restrain the tearing down of an alleged party-wall, the plaintiff claimed an easement in the entire wall for the support of his building, and set out that his building would be destroyed if the defendant should carry out his intention to tear down that part of the wall which is on his land. Judge Force granted a temporary injunction to restrain Lewis until the cause could be tried, and required the plaintiff to give a bond for $1000 as security for any damages the defendant might suffer by reason of the suit. H. E.

Landlord and Tenant.

At Greenwich County Court was tried the jury case of *Currey vs. Linders*, being an action to recover £50, — £40 for rent paid in advance, and £10 the expenses of removal consequent upon the dampness of a house. The plaintiff alleged he was induced to take a house in the Brockley Road, New-cross, on a three years' agreement, at £40 per annum, paying the first year's rent in advance, on the representation of the defendant that the house was dry and healthy. After he had been in the house a few days he had occasion to go to Paris, and on his return was surprised to find water in the cellar, and the paper on the drawing-room walls peeling off through the damp. He suffered much from rheumatism whilst in the house, and was compelled to leave it. The defendant admitted that the house was damp, and denied that he ever told the plaintiff it was dry; in fact, he was not asked whether it was dry or damp. The judge, Mr. J. Pitt Taylor, told the jury the law of England did not compel a landlord to say whether a house was fit for habitation, but in the present case they had to consider whether the defendant had fraudulently represented the house to be dry, when he knew it was damp, for the purpose of letting it, and whether it was fit for habitation by a family man. The jury returned a verdict for the plaintiff for £50 and costs. — *The Builder.*

SMOKE PREVENTION. — I.

It is now two hundred and twenty years since John Evelyn called attention to the evils of the smoke of London. In 1661 he published a tractate, with the title: *Fumifugium, or, the inconvenience of the Air and smoke of London dissipated, together with some remedies humbly proposed by J. E. Esq.* It bears on the title-page a motto from Lucretius: —

"Carbonumque gravis vis, atque odor insinuatur
Quam facile in cerebrum!"

— a truth which all who have to work with their brains now in London will have no difficulty in acknowledging. The book is dedicated to the king, as a lover of noble buildings, gardens, pictures, and all royal magnificence, and His Majesty is appealed to with confidence as one who must needs desire to be freed from the prodigious annoyance, then only beginning seriously to invade the metropolis. But Charles the Second loved other things more than the objects of fine taste, on behalf of which the author of *Sylva* appealed to him, nor was public opinion then ripe for listening to wise counsels and solemn warnings on such a matter. In vain was it pointed out how the pernicious nuisance could be reformed, and how the whole city, with its great natural advantages, might be made one of the sweetest and most delicious habitations in the world. At that time London had extended but little beyond the boundaries of the city proper, the nobility still dwelt in it, or in the Strand, and there were abundant open spaces about their houses; yet Evelyn complains that the gardens would no longer bear fruit, giving as the reason for this the increase of coal-smoke, and he mentions orchards in Barbican and along the river, which were observed to have a good crop the year in which Newcastle was besieged (1644), because but a small quantity of coal was brought to London that year. He calls the smoke one of the foulest inconveniences and reproaches that can possibly befall so noble and otherwise incomparable a city, and claims that it should be relieved from what renders it less healthy and more offensive, and which darkens and eclipses all its good attributes; and this is nothing else but "that hellish and dismal cloud of sea-coal." . . .

What was bad two hundred years ago has become enormously worse in our own times. The area of London has increased to something like one hundred square miles, its inhabitants may be estimated at four millions, and the number of chimneys emitting smoke at probably three or four millions, consuming a vast quantity of coals annually, of which a fourth part is wasted in the shape of smoke. It is certain also that, with modern notions of comfort and desire of greater warmth, more fuel is now burnt in proportion to the number of chimneys and inhabitants than was formerly the case. . . .

The increase of mortality during the fogs which, more or less, were prevalent in London from November, 1879, to February, 1880, has been discussed by Dr. Arthur Mitchell, and the results published in the Journal of the Scottish Meteorological Society — and it must never be lost sight of in dwelling upon them, that the mischief done is not due to the fog alone, which outside of a smoke-laden atmosphere might be innocuous, and that whenever in such accounts we encounter the word fog, it really means fog *plus* smoke. The increase in the death-rate during this murky and dismal period was indeed frightful. The mortality in the seven weeks ending on the 21st of February, 1880, as taken from the Registrar-General's reports, shows an addition of many thousands to the average and normal rate of death. Sufferers from asthma were the chief victims, and in their case the mortality increased to 220 per cent above the average, during the week of the most oppressive fogs. The deaths from bronchitis rose at one time to a total which was 331 per cent above the average. The number of fatal cases in pneumonia, pleurisy, and other lung diseases was largely added to; and, as may be easily understood, the mischief did not cease with the disappearance of the fogs, but frequently must have remained with greater or less malignity, ending in early death, or in constitutions permanently enfeebled and deteriorated. The rise in the number of fatal cases of whooping-cough was also remarkably great. Dr. Mitchell's paper received able notice in *Nature* in December last (from which the above figures are taken), a periodical which, as becomes its high scientific reputation, has sustained a prominent and most useful part in the campaign now being carried on — in the combat between suffering humanity on the one hand, and the destroying smoke-demon on the other. . . .

Turning to the region of art, the calamities and evils of a smoke-laden atmosphere are indeed serious and manifold. In time of actual fog the painter cannot see to paint, nor is the lover of pictures able to see them. The life of a painter and amateur of his art in London during the winter is one of patience, trials and constant disappointment. At all times valuable pictures in London require such protection as is not needed elsewhere. The responsible custodians of public picture-galleries, as well as private owners, are compelled to resort to the expedient of covering their most treasured canvases with glass, which is equivalent to destroying a large proportion of the advantage and pleasure to be gained by looking at them, but is a measure of absolute necessity if succeeding generations are to inherit our present possessions in a state of fair preservation.

The buildings of London are blackened, and the very stones with which they are faced are decomposed, by the erosive and destructive

qualities of some of the ingredients of coal-smoke, and other products of combustion. The finest architectural effects are thus spoiled, as may be seen notably in St. Paul's Cathedral and the Palace of Westminster. The unhappy statues in the open air are melancholy objects, enveloped in a black and furry coating of deposited soot. All objects of art are exposed to constant injury and deterioration. Books which in the library of a country house would retain the freshness of a new binding for almost a lifetime, lose it in London in almost as many weeks as it would take years to destroy it if beyond the reach of the arch-destroyer. . . .

Last, but not as the least evil, must be mentioned the baleful effect of smoke upon the parks and gardens of London, and on all vegetation exposed to its influence. A letter from the Rev. Septimus Hansard, rector of Bethnal Green, addressed to the joint Fog and Smoke Abatement Committee of the National Health and Kyrle Societies, and read at one of their meetings in last December, explains very clearly the extent of this mischief, but also happily gives good hope of a remedy, if only it is sought for with patience and perseverance. Sixteen years ago, when Mr. Hansard took possession of this rectory, he was told that not a blade of grass would live upon his lawn, and he was laughed at for thinking of growing flowers. Altogether he had to deal with nearly four acres of open ground, but surrounded by houses, and in close proximity to eight manufacturing chimneys, all of low elevation. He availed himself of the Smoke Nuisance Act, and enlisted the sympathy of his poorer neighbors to assist him, and especially asthmatic invalids, and women who had clothes to put out to dry, and other individual sufferers. By steady continuance in this course the result is, that Mr. Hansard now has a lawn fit to play croquet or lawn-tennis upon, for which he challenges comparison with any lawn in the most distant suburbs of London. He can now grow no less than thirty-nine annuals; lilies of various kinds flourish with him, and gardeners will not fail to appreciate the improvement obtained, upon learning that Mr. Hansard can now boast of his specimens of asphodel, his Greek acanthus, his Indian pinks, and his *Phlox Drummondii*. The rector of Bethnal Green points out that what has been done in one parish can be done in another, and that the police, if duly kept acquainted with infringements of the law, which they cannot be expected in every case to notice for themselves, are always willing to do their duty. His experience further enables Mr. Hansard to say that the owners of offending chimneys are, for the most part, ready to do the right thing when due attention is called to them. That it is clearly for their pecuniary interest to consume the fuel which is so largely and absolutely wasted, and thrown away in the shape of smoke, needs no demonstration. Every particle of coal which is driven off as smoke, and is not burnt in the furnace or fireplace as flame, is so much good combustible matter lost to the person who has paid for it, and all the labor and time occupied in putting it into the furnace, or onto the fire, is just so much labor and time altogether lost and rendered unproductive.

Having now gone over the various counts of a most formidable indictment for nuisance, it is certainly strange to have to remark that evils of such magnitude and persistence as those arising from London smoke should have been allowed to continue with so little effort made to check them. It is true that legislation has not been wholly neglected in the matter. In 1847 a general Town Regulation Act contained a provision for factories to consume their own smoke. The Act for smoke abatement passed in 1853, and extended in 1856, has done something for the relief of the metropolis. The Sanitary Act of 1866 prohibits black smoke issuing from chimneys in such quantity as to be a nuisance. Nor were similar prohibitions omitted from the Public Health Acts for Scotland, England, and Ireland, passed respectively in 1867, 1875, and 1878. But chimneys of private dwelling-houses are exempted from the operation of all these statutes.

When Lord Palmerston was at the Home Office he applied his vigorous common-sense to the due enforcement of the earlier acts, which, however, as has just been mentioned, applied only to manufacturing fires and furnaces. For many years past indifference or misplaced toleration has led to considerable neglect in using the legal powers which exist to prevent smoke. A long interval was allowed to elapse during which little or no action was taken, and with the growth of the metropolis the smoke has also grown, and become the monstrous incubus pressing upon it, against which a suffering population has for so long been almost helpless.

Recently, however, a combined effort has been made towards endeavoring to obtain a better state of things. The National Health Society, which made its seventh annual report in 1880, has taken the matter up, and, in conjunction with the more recently formed Kyrle Society, is now organizing a movement from which much may be expected. The objects of the first-named society, as its name imports, are to promote the means of averting preventible disease, and to diffuse the knowledge essential for healthy life in the community. Under its auspices lectures have been given on such subjects as House Architecture, Workmen's Homes, Food, Cookery, Fresh Air, Elementary Physiology, and other cognate matters. The smoke prevention question seems to fall strictly within the scope of this society's operations, and it is allied in its present enterprise with the Kyrle Society, whose general intentions are of a more æsthetic character, but to which this question also properly belongs in its efforts to render more happy the existence of the people at large, to assist in any work which will tend to procure for them greater enjoyment of the open spaces of London, to render easier the cultivation of flowers in private gardens and windows, and to preserve works of art from premature and avoidable destruction.

A joint committee of the two societies has been appointed, and is actively at work. The co-operation of the authorities of the Science and Art Department at South Kensington has been secured, and arrangements have been made for an exhibition to take place in this year, to advance the cause of economy of fuel and bright skies, against the predominance of waste and gloom. The resources of South Kensington for such a purpose are unrivalled for exhibiting apparatus, and for conducting experiments upon fuel, and contrivances for its most beneficial consumption. Improved fire-grates, furnaces, kitcheners, cooking and warming apparatus of all kinds for avoiding smoke, or burning smokeless coal, will be collected and experimented upon; so also will be brought together and practically examined different varieties of coal and other fuels. Experiments will also be invited and encouraged upon a large scale at the premises of proprietors of furnaces and factories who will permit their being made; and all this will be conducted under the direction of a skilled committee of experts. The results to be hoped for and expected will be, for the future, a more scientific and economical employment of coal; improvements in the domestic fireplace; a more complete knowledge of the various available kinds of coal, and their suitability for different purposes; practical suggestions for the amendment or extension of the existing Acts for the regulation of smoke-producing furnaces, etc.; and reports upon the use of gas as a means of supplying heat, and generally to test inventions for the avoidance of smoke, and the economical use of all kinds of fuel. . . .

It is not intended in this place to pronounce any opinion upon the vast number of ingenious contrivances invented and in progress of invention for the prevention of smoke in trade and manufacturing furnaces. This is so for two reasons: one, because the vast volume of London smoke now escapes from domestic fireplaces; the other, because it is clear that the existing Smoke Prevention Acts, if properly worked, together with some future possible extension of their provisions, may be made almost entirely to cure the existing evil so far as they can be made to bear upon it. The main principle of all inventions for smoke-consuming furnaces is the same — namely, to keep the interior of the furnace as hot as possible, and secured from unnecessary intrusion of cold air, and to insure a gradual supply of fuel; or, in other words, to provide good mechanical and automatic stoking. But all require more or less personal attention, and it is rather to the want of knowledge and diligence on the part of the attendants, than to any want of power to consume smoke in the various inventions, that their frequent failure must be attributed. Ignorance and indolence in using them lead to the same mischief as they do when human attention alone has to be entirely relied on in stoking. The same caution has to be observed in both cases — that is, not to introduce more fuel at a time than can be at once, or almost at once, made to burst into flame, and so that it shall not continue to give out black smoke for more than a few moments. In the instances where the attention of the owner is sharply called to the neglect of the persons employed by him, through a police summons under the Smoke Prevention Act, it generally turns out that the apparatus is not in fault, and it is thereupon made to do its duty.

In attempting to deal with the domestic fireplace many things ha e to be carefully recollected. If an Englishman's house is his castle, the domestic fireplace is the keep of the castle, the very centre and citadel of the stronghold. If any way could be devised of improving the grates of our living-rooms and the ranges of our kitchens, by anything at all approaching to coercive legislation, the matter would be one of great difficulty for the government which might be so bold as to undertake it. At present, persuasion, example, and an appeal to motives of self-interest seem to be the only methods open to adoption; but a good deal may fairly be expected by endeavors made in these directions. Few people would be inclined to give up the habitual open fireplace, with its cheerful blaze and good ventilating powers. It has many charms and advantages, and after all that can be said in favor of other modes of warming a room, the radiant heat from an open fire has merits with which nothing else can compete when all things are taken into consideration. Certainly it is wasteful of fuel, expensive, and makes a great deal of dirt; but we cling to it and love it all the same. No sudden or immediate change can be expected; there is no heroic remedy to be recommended or administered, but patient insistence on the benefits to be gained in health, comfort, and pocket may gradually do much, if not everything, to remove the reproach of the misfortune which now weighs upon the capital of England. — *Sir W. F. Pollock in the Nineteenth Century.*

A CASE OF DRY ROT.

As I never remember to have seen any clear description of "dry rot," it may perhaps be considered of sufficient interest to describe a case of this sort, which I have lately met with, with some minuteness. As the external appearances presented by dry rot are very slight in comparison with its fearful ravages where out of sight, it is important that the slightest indication of its presence should be quickly recognized. A painted surface appears never to be attacked until the last; therefore where wood-work is painted the whole internal portions, and even large timbers, may have been destroyed before it is seen externally. The first indication will be transverse cracks appearing upon the surface, every inch or two apart, and at right angles to the grain of the wood. These, after a time, will extend

through the paint. Cracks such as these were seen a short time ago in a small portion of the capping and boarding on the inside of the south gallery front, next the east wall, in the Church of St. Mary, Somers Town. It had somewhat the appearance of having been burnt, except that it was of a light brown color instead of being black. It crumbled away at the least touch.

It should be understood that the gallery-front is formed of lath and plaster upon deal stud-work, lined with horizontal deal-boarding within, and finished with a deal-capping at top. Upon pulling down some of the boarding the nature and the character of the dry rot was at once seen; and when first brought to light it was a vegetable curiosity. I have seen other cases, but never one so developed as this, or so easily examined. It consisted of one enormous plant in the form of a rapidly-growing fungus, with long branches and almost endless ramifications, which adhered closely to the wood-work, and had destroyed its very nature wherever it clung. So much so, that large handfuls of the timbers, measuring four inches by four inches, could with ease be broken away and pulled out. In appearance the plant had a central stem, which was strong and tough, with a very thin lamina of a light brown color on each side of it. It had somewhat the appearance of the seaweed called *fucus serratus*, but much thinner and papery. As it ran along it forked to the right and left until it extended and covered the whole surface of the wood-work. In some parts it crossed and recrossed upon itself, and so prolific was its growth that it extended along the timbers, and completely enveloped the whole of the wood-work, for a distance of ten feet each way from the point where it first appears to have commenced.

This, however, describes the appearance of the plant where it had done its work, and looked to be dead. Upon tracing the stems to their extremities, it could be at once seen that there it was still all alive and growing. These extremities were perfectly white, thick, sticky and clammy, and were advancing with a rounded edge, like a stream of treacle. It had the well-known smell of all funguses. It was growing in the dark, as all funguses do, between the boarding on one side and the plastering on the other, and the confined air evidently promoted its growth. The laths, timbers, and the inside of the boarding had all perished wherever the plant extended. What could it be feeding upon unless it was the turpentine which existed in the fir? — for it appeared to be confined to that wood. The oak book-board which was attached to the perished capping was untouched and uninjured.

How the plant first germinated is an entire mystery. The church has been built over fifty years, and the gallery-front is of the same date. We know that the capping must have been sound last Christmas twelvemonth, because some of the Christmas decorations were at that time nailed to it. Yet so rapid is its progress, that in the July following ten feet at least of the whole front is discovered to be quite rotten. It evidently commenced from the east wall where the timbers of the gallery-front entered it, and from this point it also extended, right and left, along two courses of bond timber built into the wall, one at the top and one at the bottom of the gallery-front. It also attacked the lintel of the vestry window below. Not only that, but in connection with the gallery-front there is the column supporting the wooden groined ceiling. This column is formed by four deal shafts, six inches diameter each, placed round a central iron core. Of these deal shafts it had destroyed five feet or six feet in height, and if not stopped when it was, it no doubt would soon have communicated itself to the wooden groining above. Curiously enough, there was an open bolt-hole in the central cast-iron column, and the fungus had entered by this hole and had grown inside in the hollow part to such an extent that portions of the plant were pulled out one foot and eighteen inches in length.

It is, perhaps, useless to say that the only remedy was to cut out and remove every portion of the wood-work that had been attacked by fungus, and to wash with a solution of nitric acid all the surrounding parts, to endeavor to kill any germs of vegetation which might still be in existence.

As to its cause, I can only venture to offer a suggestion. The point where it commenced is not less than ten feet or twelve feet above the level of the ground, and the wall is about two feet thick (say two bricks and a half) and is apparently perfectly dry. But near the point there passes a flue from the vestry. Is it not possible that the heat from this flue, combined with a slight amount of dampness in the wall, may have generated the plant? And yet how is it that this has not occurred before? The flue has always been in use in the winter-time, and if the wall was damp probably it has been in the same state for years past. On the opposite side of the church the gallery is precisely similar, and there is a similar vestry and a flue from the fireplace, but this is never in use. Here not the slightest trace of the fungus is to be found, and the wood-work is as sound as when first put up. It cannot have arisen from any seed or spawn contained in the timber, or it would have been propagated years before. It, therefore, must have been generated by some peculiar state of the materials, — something communicated from the bricks to the wood-work. Probably if the wood-work had been open to the air and properly ventilated it could not have arisen. — *James K. Colling in the Builder.*

A MINERS' MENU.

NOT the least happy of the committee's devices for adding interest to the banquet of the American Institute of Mining Engineers was the bill of fare, Orientally entitled "The Institutes and Ordinances of Menu," and printed in a little book, which constituted an amusing memento of the feast. We copy it entire.

ANNUAL MEETING
OF THE
AMERICAN INSTITUTE OF MINING ENGINEERS.

SUBSCRIPTION DINNER HELD AT THE UNION LEAGUE HOUSE, PHILADELPHIA, February 17th, 1881.

"Leave hops behind, all ye who enter here!" — *Old Song.*

HAUT SAUTERNE.

"The Juice it is! To be tested in a beaker." — *Fresenius.*
"Thoroughly matured and well expressed." — *The Nation.*

SHERRY — AMONTILLADO.

"Decant carefully and without precipitation." — *Roscoe.*
"Spanish shore. Preferred for Bessemer Pigs." — *Rural New Yorker.*

OYSTERS — BLUE POINTS.

"Economy lies in the direct use of raw material." — *Dr. C. W. Siemens.*
"Showing semi-conchoidal fracture and mother-of-pearl lustre. Prognostic characters well-known. Preferred by collectors to those which occur in quartz." — *Dana.*
"Removable shells. My patent." — *A. L. Holley.*

SOUP — A LA REINE.

"The whole charge may be poured at one operation."—*Sir Henry Bessemer.*
"A ladle-like washer subject to royalty." — *Webster on Patents.*

PATE — A LA FINANCIERE.

"The financial operation at this stage is more important than the chemical one." — *I. Lowthian Bell.*
"A pay-streak cooked for capitalists." — *Obscure Author.*

HOCK — NIERSTEINER. LEIDEN.

"The old acid process will always have a place." — *P. von Tunner.*
"Standard solution for problems in volumetric analysis." — *Mohr.*
"Found near the extremities of a *horse*." — *Prime's Cotta.*

BORDEAUX — CHATEAU MARGAUX.

"This produces a good bloom." — *Captain William R. Jones.*
"Run out, puddled, and brought to nature. Good enough for any bar." *John Griffin.*

ROCK FISH — AU GRATIN.

"A Siemens product." — *G. J. Snelus.*
"Phosphorus may be added if the charge is deficient." *E. Windsor Richards.*
"A fissure-lode." — *Prof. J. S. Newberry.*

POTATOES — A L'HOLLANDAISE.

"A Dutch plant above, with a Root blower." — *J. Miller.*

ROAST — FILLET OF BEEF WITH TRUFFLES.

"You can't put in too much good material." — *John Fritz.*
"Taken from a cross-cut and improved by roasting and dressing." *Rittinger.*

POTATO CROQUETTES.

"Piled, rolled, and reheated." — *W. E. C. Coxe.*
"Balled in the Krupp Rotator." — *The Young Punster's Assistant.*

FRENCH PEAS.

"A kind of settler operated by agitation." — *Annales des Mines.*
"Remains of a shelled deposit." — *J. W. Dawson.*

CHICKEN — A LA ROYALE.

"A burd'n not to be re-fused." — *Wedding.*
"Plucked for the benefit of experts." — *Denver Tribune.*

ROMAN PUNCH.

"The flow of solids is made apparent by the application of our cold punch." *William Sellers.*

CHAMPAGNE — DRY MONOPOLE. JAUNAY.

"Unless the lining material is dry, explosions will occur." *Capt. R. W. Hunt.*
"The Landsman's gas producer." — *W. P. Shinn.*
"The only formation in which Carbonic Acid is in place." *Prof. T. Sterry Hunt.*
"Care should be taken, lest the charge blow out the tamping, causing a waste of force." — *H. S. Drinker.*

TERRAPIN.

"A kind of tortas got from slimes." — *Raymond's Glossary.*
"Hanging and foot-walls are well-defined, the vein matter easily detached, and well worth working." — *Clarence King.*
"The most powerful jaw-crusher in the market."— *Prof. W. P. Blake.*

CELERY — A LA MAYONAISE.

"A sort of mixed pickle brought to grass." — *C. La Neve Foster.*

CHEESE — ROQUEFORT AND BRIE.

"Blende with other things." — *Quenstedt.*
"Reduce the burden gradually." — *Edward William.*

CHARLOTTE RUSSE.

"A deposit between well-defined walls with slickensides and a good gouge." *Leadville Report.*
"A foreign lady transplanted hither by the blandishments of the Barker expedition." — *New York Herald.*

MERINGUE — A LA CREME.

"A fine suite of the kind." — *Prof. T. Egleston.*
"At this stage of the process the cinder is very light and fluffy." *Dr. Percy.*
"Bomb-like concretions filled with foreign substance." *Frazer's Weisbach.*

ICE-CREAM AND WATER-ICES.

"Surface condensation protects the boiler from corrosion." *Bourne's Catechism.*
"Pulp from a Chili mill." — *J. Arthur Phillips.*

FRUITS.

"The best products of blooms." — *William Metcalf.*
"Grows on hanging, but frequently found near the foot." *Oscar J. Heinrich.*

COFFEE.

"Adit." — *Prof. Warington Smyth.*
"Digest the whole with a strong infusion." — *Dr. Charles B. Dudley.*

LIQUEURS.

"Dissociation occurs at this stage." — *Dr. T. M. Drowne.*
"After Damp." — *Eckley B. Coxe.*

TOASTS.

"The success of the process depends very largely upon the after-blow, during which the remaining phosphorus is eliminated." *Sidney Gilchrist Thomas.*
"At this point the bosh begins." — *T. F. Witherbee.*

MEETING OF THE BOARD OF TRUSTEES, A. I. A.

New York, March 22, 1881.

At a meeting of the Board of Trustees of the American Institute of Architects held in New York on the 19th inst., the Treasurer and Secretary reported cases on the reinstatement of old members and the application of a number of candidates since the diminution of the financial obligations at the last convention. Reference was also made to correspondence in relation to the formation of a new Chapter proposed by architects in San Francisco. Mr. D. Knox Miller of Pittsburgh, Pa., and Mr. Albert M. West of Des Moines, Iowa, elected Associates at the last meeting, were reported as having qualified, and being placed on the roll of the Institute. A letter was read from Mr. Joseph Thatcher Clarke, dated at London, *en route* for Assos, Asia Minor, returning thanks for his election as Corresponding Member of the Institute, and promising, in time for its next convention, a paper on his proposed archæological work there.

The Secretary read the following minute, prepared by him in accordance with instructions at the last meeting of the Board, in relation to the decease of Henri Martin Lefuel: —

The decease, on the last day of the past year, of the eminent French architect, Monsieur Henri Martin Lefuel, for a number of years an Honorary Member of this Institute, and of many other societies connected with architecture, has been widely recorded in the public prints, and the melancholy intelligence was brought to the official notice of the Board of Trustees representing the American Institute of Architects, at its last meeting, by means of a '*faire part*' letter, received by Mr. President Walter from the widow, family and relatives of Mons. Lefuel. The death of a man so distinguished, alike as a practitioner in some of the most important public works of his country, as an instructor of aspirants to the profession, and as the recipient of many merited honors from abroad, calls for special notice; and this Board, on behalf of the whole Institute, which is not at present in session, desires to place on its minutes its recognition of the deplorable loss sustained by the world of architecture in his death, and its appreciation of his high professional character and career. The Boards begs to tender to his widow and his family and relatives the expression of the Institute's sincere sympathy in their affliction, and desires the Secretary to transmit this minute to Madame Lefuel."

A vote of thanks was passed to Mr. R. M. Hunt, for a donation to the Institute of ten photographs of Dutch engineering work.

A. J. Bloor, *Sec'y.*

THE DENVER BUILDING ACCIDENT.

St. Louis, March 16, 1881.

To the Editors of the American Architect: —

Dear Sirs, — Presuming that Denver papers may not be among your regular exchanges, I send a late copy of the *Republican* of that city, which gives in the usual newspaper style a long account of a fatal building accident, resulting in the loss of two lives, and in serious injury to several others.

As nearly as can be gathered from this account, the truss seems to have been amply strong to carry the weight upon it, although if the building was twenty-five feet wide, and the truss but twenty-four feet long, it must have had a scanty bearing on the twelve-inch side walls.

A Denver correspondent, who visited the ruins soon after the accident, thinks that the trench dug by the plumbers near the side wall and eighteen inches below it was the cause of the accident. He says that the foundation and all above it have gone. He adds that Denver builders often excavate but a few inches deep for foundations and omit the usual footing courses entirely.

I presume that the method of chemical analysis of lime mortar, elicited and published by the Denver paper, will be new even in Boston. In this respect the vigilant reporter can modestly claim, in newspaper vernacular, to have "scooped" all previous writers on the subject.

The Denver building inspector seems to have been faithful in his attention to this weak structure, but to have been unable to secure good material, or to prevent the digging of the trench. If, indeed, all the responsibility connected with a new building is to rest upon the inspector, it will be necessary to have as many inspectors as buildings. Would it not be much better to limit the inspector's duties to the condemning of faulty plans and to passing upon complaints of bad building whenever made, leaving to owners, architects and contractors the whole responsibility for incapacity, neglect, or the employment of careless or inferior workmen? C. E. Illsley.

[Mr. Illsley's suggestion is well worth considering. — Eds. American Architect.]

The Odors of Paris. — H. Sainte Claire Deville has analyzed samples of the dark soil which immediately underlies the pavements of Paris, and finds that the odors which arise from it are in nowise injurious, on account of the empyreumatic and antiseptic products which are constantly introduced by the illuminating gas that escapes from the street mains. This is not the case, however, with the sewage material, from which disagreeable odors are constantly exhaled in many parts of the city and its environs. He anticipates from Pasteur's investigations some early discoveries which will relieve them from their cholera-producing and typhoid tendencies. — *Comptes Rendus.*

NOTES AND CLIPPINGS.

Attempt to Transmit Electricity Through Rivers. — During the investment and siege of Paris by the German armies, in the winter of 1870–71, M. d'Almeida took a prominent part in certain attempts to re-establish telegraphic communication between Paris and the provinces, using the River Seine as a conductor. This suggestion originated with M. Bourbouze (of galvanometer fame) who was, after the war, created a chevalier for his suggestion. It was proposed to send powerful currents into the River Seine from batteries at the nearest available point outside the German lines, and to receive in Paris, by delicate galvanometers, from the river, such a portion of these currents as might not have leaked into the earth. After some preliminary experiments had been made between the Hôtel de Ville and the manufactory of M. Claparède, at St. Denis, by Profs. Desains, Jamin, and Berthelot, it was decided to make the attempt, and accordingly on December 17, 1870, M. d'Almeida was dispatched by balloon to the provinces, in order to try to establish this novel mode of telegraphy without wires. The balloon descended after sundry perils in the Arcadian solitudes of Champagne, outside the Prussian lines. Thence he proceeded, *viâ* Lyons and Bordeaux, to Havre. Not finding suitable appliances and apparatus, there was again a delay in sending to England for the necessaries, which on arrival were conveyed to Poissy, where M. d'Almeida regained the banks of the Seine on January 14, 1871. Here, however, the frost proved inimical, the river having been frozen hard since the beginning of December. The attempts at communication were, however, to have been made on January 24, when the armistice was proclaimed. It was too late, and the world missed a famous scientific exploit from among those which made the siege of Paris notable beyond all other sieges of history. — *Nature.*

The Ghetto, Rome. — Another relic of mediæval narrow-mindedness and bigotry is about to vanish from the face of the earth. It has at length been resolved by the Municipality of Rome that the venerable Ghetto shall be levelled with the ground, in order that a number of stately houses may be erected upon its site. The huge group of sordid buildings thus sentenced to destruction is the most ancient of its kind in Southern Europe. It existed long before the reign of Julius Cæsar and during that of the Emperor Augustus was occupied by nearly eight thousand inmates. The originator of the Ghetto is stated to have been King Herod, who caused a palace to be built near the Pons Janiculensis, for the accommodation of his sons and diplomatic envoys when visiting Rome. When the Apostles Peter and Paul came to the Eternal City, there to preach the gospel, they abode in the Ghetto. Ten centuries later it was the residence of the celebrated Israelitish jeweller, Elkanan Diodato, who became a Christian, and whose grandson, under the name of Anaclete II, occupied the Papal throne from 1130 to 1138. The Ghetto has long been a physical as well as historical reproach to the Italian capital, and its demolition is one of the many modern reforms and improvements in that magnificent city upon which its municipal rulers may unreservedly be congratulated. — *London Telegraph.*

Bad Effect of Heat on Books. — Mr. A. R. Spofford, Librarian of Congress, has made some interesting statements before the American Library Association with reference to the destructiveness of heat on books stored in the upper rooms or galleries of libraries. He described the condition of the books in the fourth gallery of the Congressional Library, and said if the books were animate and intelligent beings they would cry aloud from their sufferings. Their shrivelled and parched appearance showed plainly enough the destructiveness of heat, and yet there is no heat from gas-burners nor coal-gas; these are excluded from the precincts of that library. A discussion followed upon the action of heat upon the different bindings of books, the opinion being pretty general that Russia leather bindings are the very worst kind and should be discarded altogether as the most susceptible to damage from heat. The red dust so common to libraries is simply the combustion from gases produced by the heat, and shows the necessity of getting rid of heat influence in the progress of library architecture and construction. — *Washington Star.*

Anecdote of Stephen Girard. — It is related of Stephen Girard that he had a favorite clerk, and he always said he intended to do well by Ben Lippincott. So when Ben got to be twenty-one he expected to hear the governor say something of his future prospects, and perhaps lend a helping hand in starting him in the world. But the old fox carefully avoided the subject. Ben mustered courage: "I suppose I am now free, sir?" said he, "and I thought I would say something to you as to my course. What do you think I had better do?"

"Yes, yes. I know you are," said the old millionaire, "and my advice is to go and learn the cooper's trade."

This application of ice nearly froze Ben out; but recovering his equilibrium he said if Mr. Girard was in earnest he would do so.

"I am in earnest."

And Ben forthwith sought the best cooper in Spring Gardens, became an apprentice, and in due time could make as good a barrel as the best. He announced to old Stephen that he had graduated, and was ready to set up in business. The old man seemed gratified, and immediately ordered three of the best barrels he could turn out. Ben did his prettiest, and wheeled them up to the old man's counting-room. Old Girard pronounced them first-rate, and demanded the price.

"One dollar each," said Ben, "is as low as I can live by."

"Cheap enough! Make out your bill."

The bill was made out, and old Stephen settled it with a check for twenty thousand dollars, which he accompanied with this little moral to the story: —

"There, take that and invest it in the best possible manner, and if you are unfortunate and lose it, you will have a good trade to fall back upon, which will afford you a good living." — *Industrial World.*

Berlin. — Berlin has 3,239 sets of apartments without a fireplace or chimney, and half the population lives in dwellings with only one fireplace.

BUILDING INTELLIGENCE.

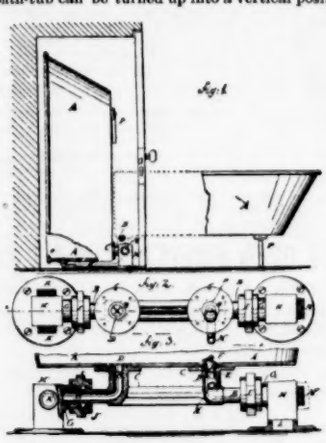
[Reported for The American Architect and Building News].

[*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.*]

237,494. FOLDING BATH-TUB. — George Damen, So. Brooklyn, N. Y. The object of this invention is to construct bath-tubs in such a manner that they can be raised into a vertical position when not required for use. A represents a bath-tub, to the foot of which are attached the upper ends of two bent pipes, B, the bends of which are connected by a bar, C, cast in one piece with the pipes, B. The ends of the pipes, B, pass through the bottom of the bath-tub and are flush with its inner surface. The inner end of the inlet-pipe, B, is provided with a strainer, D, and the outlet-pipe, B, at a little distance from its inner end, is provided with a strainer, E. The outer ends of the pipes, B, are inserted in nipples, G, formed upon the inner sides of the studs, H, the lower ends of which are flanged to receive the screws that secure these studs to the floor. The pipes, B, and studs, H, thus form a hinge for connecting the bath-tub to the floor, so that the bath-tub can be turned up into a vertical position



when not required for use. The cold-water pipe is connected with one of the nipples, K, and the hot-water pipe with the other; or the hot and the cold water pipes can be connected with a single pipe, and the single pipe connected with one of the nipples, so that hot and cold water can be introduced through a single nipple. The stud, H, connected with the discharge-pipe, B, has an opening, L, in its bottom, with which the waste-pipe can be connected; or the opening, L, can be closed with a plug and the waste-pipe coupled to a nipple, M, upon the side of the stud, H. The nipple, M, is closed with a screw-cap when the waste-pipe is connected with the opening, L. N is the overflow-pipe, the upper end of which is connected with an aperture in the upper part of the foot of the bath-tub. The lower end of the overflow-pipe, N, is connected with an aperture in the discharge-pipe, B. The upper edge of the bath-tub, A, has a ledge, O, formed upon it to prevent any water left in the bath-tub from trickling upon the floor when the bath-tub is turned up. With this construction the bath-tub can be arranged in a small closet, into which it can be shut, as shown in Fig. 1, and through the door of which it can be lowered into a horizontal position when required for use.

238,753. WEATHER-STRIP.—Chester L. Bell, Maple River Junction, Ia.

238,756. AUTOMATIC ELECTRIC ANNUNCIATOR. — Addison Bradford, Brooklyn, N. Y.

238,758. CROSSCUT-SAW HANDLE. — William E. Brooke, Trenton, N. J.

238,761. PIPE-WRENCH. — Jeremiah J. Carmody, Brooklyn, N. Y.

238,762. ELEVATOR. — George W. Clayton, Cleveland, O.

238,768. GAS-VALVE. — J. C. Drucklieb and W. Fels, Paterson, N. J.

238,775. EXPANSION JOINT. — William Forman, Bradford, Pa.

238,797. GLASS BUILDING-BLOCK.—Christopher W. McLean, Chicago, Ill.

238,798. WINDOW-BEAD FASTENER. — Francis Miller, Downer's Grove, Ill.

238,805. BURGLAR-ALARM AND DOOR-BOLT.—Reuben M. Patchin, Wayland, N. Y.

238,833. ELECTRIC CALL-BELL. — Alex. G. Bell, Washington, D. C.

238,836. WATER-CLOSET.—August F. Biesch, Columbus, O.

238,855. FAUCET. — John Clifford, Chicago, Ill.

238,858. CEMENT ILLUMINATING-TILE. — John M. Cornell, New York, N. Y.

238,872. SAW-FILING MACHINE. — Eugene P. Ellis, Emporia, Kan.

238,875. SAWING, GROOVING AND PLANING MACHINE. — G. M. and N. Fay, Eureka, Cal.

238,876. SASH-FASTENER. — Henry Fellows, Bloomington, Ind.

238,877. WEATHER-STRIP. — John C. Fiester, Reading, Pa.

238,881. REVERSIBLE COMBINATION VISE. — F. T. Forsaith, North Troy, Vt., and D. L. Hildreth, Philadelphia, Pa.

238,888. EARTH-AUGUR. — Jacob H. Gould, Atwater, O.

238,925. CURTAIN-FIXTURE. — Benjamin Landon, Canton, Pa.

238,959. ADJUSTABLE TOOL-HANDLE. — Simon B. Parker, Brooklyn, N. Y.

238,960. SAW-HANDLE. — Harvey W. Peace, Brooklyn, N. Y.

238,967. WINDOW-SCREEN. — John Reardon, Ione City, Cal.

238,990. DRAUGHTING INSTRUMENT.—Thomas Tasteim, Council Bluffs, Ia.

239,007. ROOF-TILE. — John J. Williams, Fair Haven, Vt.

SUMMARY OF THE WEEK.

Baltimore.

BUILDING PERMITS. — Twenty-nine building permits have been issued since the last report, the following only being of sufficient importance to be mentioned:—

Casper Melcher, three-st'y brick building, No. 242 Light St., between Montgomery and Hugh Sts.

Geo. S. Trott, 2 three-st'y brick buildings, Nos. 7 and 8 Lexington St.

Samuel Black, 9 three-st'y brick buildings, n e cor. John and Lanvale Sts.

Samuel Black, 8 three-st'y brick buildings, on John St., between Lanvale and Dolphin Sts.

C. S. Mallory, one-st'y brick building, on Block St., near Falls Ave., 36′ x 80′.

INSURANCE OFFICES. — Work on the new building for the American Fire Insurance Company will be begun at an early date. The work will not be done under contract, but under the supervision of Messrs. Bernard Clark & Son, the company furnishing all materials; Mr. Chas. L. Carson, architect.

HOUSE.—Dr. S. W. Seldner is about to build a three-st'y house, on the corner of Caroline and Eager Sts., 17′ x 70′, of pressed brick, with stone and terra-cotta finish; Mr. Chas. L. Carson, architect.

Boston.

BUILDING PERMITS. — *Brick.* — *Ferdinand St.*, junction of Fayette St., for John S. Hobbs, dwell., 18′ x 56′ 8″, three stories; Joshua Dyer, builder.

No. 150 *Marlboro St.*, for John L. Thorndike, dwell., 26′ x 63′, three stories and mansard; C. E. Clark, builder.

Lancaster St., near Merrimac St., for Sylvester Bowman, mercantile building, 55′ x 75′, five stories.

Wood. — *Foundry St.*, near Division St., for John J. Hallahan, stable, 25′ x 50′, two stories.

Wilmont St., Nos. 16 *and* 18, for Chas. A. Dean, 2 dwells., 20′ x 40′, two stories, pitch; Charles H. Blodgett, builder.

Warren St., near Quincy St., for Thomas Parker, dwell., 34′ x 38′, two stories, pitch; Chas. H. Blodgett, builder.

Virginia St., near Bird St., for Edward McKechnie, dwell., 30′ x 33′, two stories, hip; Edw. McKechnie, builder.

Liverpool St., near Central Square, for Wm. L. Sturtevant, storage of lumber, 35′ x 62′, three stories; Samuel Y. Chase, builder.

Adams St., near Butler St., for James H. Bourne, dwell., 31′ x 31′, two stories, pitch; J. H. Bart & Co., builders.

Brooklyn.

BUILDING PERMITS. — *Lafayette Ave.*, s s 255′ w Bedford Ave., 2 four-st'y brick flats, 23′ 6″ x 65′; cost, each $13,000; owner, Paul C. Grening, 420 Gates Ave.; architects, Parfitt Bros.; builder, J. A. Thompson.

Graham Ave., w s, 75′ n Meserole St., three-st'y frame store and tenement, 25′ x 55′; cost, $4,500; owner, Chas. Kiehl; architect, Jno. Platte; builders, Geo. Lehrian and D. Kreuder.

Park Place, s s, 99′ e Sixth Ave., 4 four-st'y brownstone dwells., 18′ 9″ x 48′; owner and builder, John Thomas, 32 Park Place.

De Kalb Ave., n s, about 300′ e Nostrand Ave., three-st'y frame store and dwell., 25′ x 40′; cost, $2,800; owners, Messrs. Duffy, 635 De Kalb Ave.; architect, Mr. McMahon.

Hewes St., s s, between Wythe and Bedford Aves., 5 two-st'y brick stores and dwells., 19′ x 43′; owner and builder, Richard Healy; architect, J. D. Reynolds.

Woodbine St., No. 68, e s, 200′ n Bushwick Ave., three-st'y frame dwell., 22′ x 32′; cost, $3,000; owner, R. Cornell, 70 Woodbine St.; builder, R. Wright.

Carroll St., n s, 70′ w Sixth Ave., 8 four-st'y brownstone tenements, 20′ x 50′; owner, architect and builder, Geo. W. Brown, 728 Fulton St.

Fulton St., s s, 360′ e Franklin Ave., 4 four-st'y brownstone tenements, 20′ x 50′; owner, architect and builder, same as last.

Bedford Ave., w s, 20′ s Hancock St., 2 four-st'y brownstone tenements, 20′ x 50′; owner, architect and builder, same as last.

Bedford Ave., s w cor. Hancock St., four-st'y brownstone store and tenement, 20′ 6″ x 50′; owner, architect and builder, same as last.

Calver St., n s, 275′ from Guernsey St., 3 two-st'y frame dwells., 15′ x 40′; cost, $3,000; owner, D. W. L. Moore; builder, D. Miller.

North Fourth St., No. 119, three-st'y frame tenement, 25′ x 47′; cost, $4,200; owner, Fr. Maas, 551 Third St.; builder, John Rueger.

Thirty-Ninth St., s s, 400′ w Third Ave., 3 two-st'y frame dwells., 16′ 8″ x 30′; cost, each $2,800; owner, John G. Burke, 321 East Twenty-Seventh St., New York; architect, etc., J. H. O'Rourke; mason, Jas. Hart.

Columbia Heights, w s, between Poplar and Vine Sts., three-st'y brick factory, 24′ x 70′; cost, $6,000; owner, Thos. Messenger, Pierrepont St., cor. Willow St.; architect. Mr. Provost; builders, D. P. Ledyard and F. D. Norris.

Stockton St., No. 266, three-st'y frame tenement, 21′ x 40′; cost, $3,500; owner, S. Schientlar.

South Ninth St., No. 208, s s, 140′ from Seventh St., three-st'y brick dwell., 19′ 9″ x 56′; owner, Frederick Ellmess; architect, A. Herbert.

Seabring St., n s, 350′ w Richard St., one-st'y brick shop, 50′ x 50′; owner, Angus McLaughlin, 119 Oak St.

De Kalb Ave., n s, 305′ e Lewis Ave., 6 three-st'y brick flats, 20′ x 45′; cost, each $3,500; owner, C. F. Skelton, 454 Herkimer St.

Jefferson St., s s, 220′ w Bedford Ave., 3 three-st'y brownstone flats, 21′ x 56′, gravel roofs, wooden cornices; owners, Brown & Sheldon, 401 Wyckoff St.; builders, J. M. Brown and C. B. Sheldon.

ALTERATIONS. — *First St.*, s e cor. South Sixth St., add two stories; cost, $2,500; owner, F. Umstie, on premises; builders, W. & T. Lamb, Jr.

Fulton St., s e cor. Yates Ave., alter stairs; cost, $2,500; owner, August Imming, Chauncey St., cor. Patchen Ave.; builder, J. Kane.

Hoyt St., s e cor. Butler St., two-st'y brick extension, 20′ x 20′; cost, $2,000; owner, Thos. Fitzpatrick, on premises; architect, J. Mumford; builders, Daly & Hudson.

Columbia Heights, e s, 75′ n Clark St., two-st'y brick extension, 17′ 4″ x 28′; cost, $2,000; owner, H. C. Bowen; builder, James P. Miller.

HOSPITAL. — The site for the new hospital, for which George I. Seney has given $240,000, is on high ground, near Prospect Park, and is bounded by Seventh and Eighth Aves., and Sixth and Seventh Sts. Among the trustees are Judge George G. Reynolds, the Rev. Dr. J. M. Buckley, W. M. Ingraham, Commissioner John French, ex-Mayor Booth, James M. Taft, and the Rev. Dr. D. A. Goodsell, of Brooklyn; Oliver Hoyt, of Stamford, Conn.; and Chancellor Runyon, of New Jersey. The plan under consideration for the structure is to erect several separate buildings, instead of one large one.

Buffalo.

WAREHOUSE. — Four-st'y brick warehouse, corner of Broadway and Oak St.; cost, $13,000; architects, Holmes & Little; owner, D. Ullman.

HOUSES. — Frame dwell., Richmond Ave., near the Circle; cost, $5,000; architect, B. W. S. Clark; owner, James Crooker, Esq.

Three-st'y brick dwell., 21′ x 65′, Buffalo pressed brick and sandstone, cor. Washington and Mohawk Sts.; cost, $12,000; owner, Dr. F. C. Longuecker; architect, Geo. J. Metzger.

NEWSPAPER OFFICE. — Mr. M. E. Beebe is the architect of the new seven-st'y building for the *Courier*, which is to be built on Main St., at a cost of $50,000.

CHURCH. — The new Prospect Ave. Baptist Church is to be built by Mr. F. W. Caulkins; cost, $30,000.

Chicago.

BUILDING PERMITS.—Garritt Biblical Institute, four-st'y brick store, 20′ x 82′, 234 Lake St.; cost, $6,000.

Alston Manufacturing Co., three-st'y brick factory, 60′ x 88′, Currier and Crittenden Sts.; cost, $2,500.

W. H. and J. J. West, two-st'y brick dwell., 23′ x 51′, Harrison St. and Hoyne Ave.; cost, $7,000.

John Stinson, three-st'y brick factory, 40′ x 80′, 99 and 101 Monroe St.; cost, $7,000.

G. N. Noyes, two-st'y brick building, 20′ x 48′, 2335 Michigan Ave.; cost, $9,000.

F. Bluer, three-st'y brick factory, 26′ x 100′, 123 La Salle St.; cost, $8,000.

J. McGiven, additional story, 45′ x 50′, 29 and 31 Hubbard St.; cost, $2,000.

G. W. Higgins, two-st'y brick dwell., 18′ x 35′, 403–11 Van Buren St.; cost, $7,000.

C. D. Martin, two-st'y brick dwell., 20′ x 40, 15 Taylor St., cost $1,500; same, 20′ x 78′, 217 Third Ave., cost $3,000; same, 20′ x 40′, 221 Third Ave., cost $1,500; same, 20′ x 40′, 222 to 227½ Third Ave., cost $6,000.

Norton Frog Co., one-st'y brick factory, 25′ x 100′, 66 Pacific Ave.; cost, $2,000.

F. Lander, three-st'y brick store and dwell., 25′ x 72′, 36 Canalport Ave.; cost, $6,000.

N. Kuhner, three-st'y addition to factory, 20′ x 60′, 215 Superior St.

J. C. Haskins, two-st'y brick dwell., 21′ x 34′, 21 Lincoln Place; cost, $3,500.

P. Herbert, three st'y brick dwell., 25′ x 56′, 633 North Wells St.; cost, $4,000.

OFFICE-BUILDINGS. — The Chicago, Burlington & Quincy Railroad have had plans prepared for an office-building on the corner of Adams and Franklin Sts. It will be of brick and stone, will be five stories high, and will cost $200,000.

Mr. Cyrus Wilcox will build, at the corner of Jackson and State Sts., a four-st'y brick building for offices; cost, $20,000.

APARTMENT-HOUSE. — On the corner of Halsted and Lake Sts. will be built a four-st'y brick building, 50′ x 100′, to be used for stores and flats.

New York.

BUILDING PERMITS.—*Sedgewick Ave.*, w s, being Morris Dock, Harlem River, 3,000′ n Highbridge, two-st'y frame dwell., 20′ x 28′; cost, $2,800; owner, W. Sponable, Grand Central Depot; architect, C. D. West.

Pearl St., No. 504, three-st'y brick shop, 20′ 2″ and 21′ 5″ x 86′ and 89′; cost, $4,000; owner, Dennis Shea, 59 Park St.; architect, Julius Boekell.

Ninth Ave., No. 659, five-st'y Connecticut brownstone tenement, 28′ 4″ x 59′ and 63′ 6″; cost, $15,000; owner, August Greff; architects, Thom & Wilson.

Fourteenth St., No. 333 w, four-st'y brick tenement, 25′ x 94′; cost, $17,000; owner and builder, P. Herrmann, 340 West Fourteenth St.

Marion St., No. 48, five-st'y brick factory, 25′ x 72′ and 96′; cost, $12,500; owner, Thomas Weathered, 46 Marion St.; builder, J. Sexton; carpenter, C. Callahan.

Fifty-Eighth St., s s, 141′ 5″ w Ave. A, one-st'y brownstone tenement, 20′ x 60′; cost, $10,000; owner and builder, James F. McManus, 326 East Sixty-Sixth St.

One Hundred and Thirty-Fifth St., n s, 225′ e Willis Ave., 3 three-st'y brick dwells., 16′ 8″ x 45′;

(*Continued on next page.*)

Publishers' Department.

The American Architect and Building News.

PUBLISHED EVERY SATURDAY BY

JAMES R. OSGOOD & COMPANY

211 Tremont St., Boston, Mass.

New York Office, 21 Astor Place.

An Illustrated Journal of Constructive and Decorative Art, devoted to the Interests of Architects, Builders, Decorators, etc.

15 cents per copy; $7.50 per year; $6.00 in advance; 12 Monthly Numbers, with Detail Sheet, $1.75.

☞ Payments should be made *directly* to the publishers, either by draft or post-office order.

JAMES R. OSGOOD & CO., *Publishers*,
211 Tremont St., Boston, Mass.

New Advertisements.

TO SUBSCRIBERS.

The publishers respectfully refer subscribers who have not yet paid their subscription for 1881, to the notification printed at the head of their respective bills, and desire to remind them that the time within which subscribers *who pay in advance* can benefit by the discount of $1.50 on the subscription price ($7.50) has elapsed.

WALL-PAPERS.

The sale of wall-papers during the last two years has increased to such proportions that all the leading manufacturers that get their own designs, and have kept up with the times in the richness and elegance of their patterns, are working night and day to fill their orders. Wall-papers, both for side walls and ceilings, are so elaborately made at the present day and withal so cheaply that painting in oil is largely done away with, and papering substituted therefor, even in the most costly and elegant homes and mansions, where all the changes in such decoration as fashion dictates are regularly made. Handsome paperings "furnish" a house and add to its attractiveness as much as chairs and tables, and can be made to harmonize with the upholstering and draperies of apartments. One of the largest houses in New York and in the United States whose advertisement appears on page vi, Fr. Beck & Co., corner Twenty-ninth St. and Seventh Ave., have just placed one of the largest printing machines in the world, capable of printing twelve colors at once, on the ground floor of their factory, in full view of all visitors, and are pleased to show the working of the same to all comers. They take the entire charge of refitting houses and decorating them from ceilings to floors inclusive, and would be glad to send to any one samples of their workmanship.

AN EXPLANATION.

During the past two years we have introduced in the leading cities of the country the various forms of "The Hellyer Water-Closets," and with such success that the demand for them is steadily increasing.

In the sale of these appliances we adopted a plan hitherto never resorted to, and one that has, for the time being, in many cases, placed us in a false position, and lost us many sales.

We allude to the invariable rule *not to sell these water-closets to the Wholesale Dealers*, but only to those who are to *use* or *fit them up*. In taking this position it was done after careful deliberation and with no desire to prevent our cotemporaries from making a profit in handling our specialties, but solely because we realized the fact that when sold to the Wholesale Dealer we could not communicate with his customer, and consequently could not satisfy ourselves that our water-closets would be so fitted up as to insure the satisfaction to the householder that he was entitled to have by reason of the prices that our goods command.

As the efficiency of the "Hellyer Closets" is greatly dependent on the manner they are fitted up, and as we make various forms of this apparatus, some of which, while admirable for many places, are entirely inappropriate for others, it is our rule to ascertain the conditions under which it is proposed to use them. And when an unsuitable application is selected for the particular duty required, we explain the fact *and decline to sell it.*

It will be obvious that this course has led to misunderstandings, misrepresentations and temporary loss of sales, while on the other hand the reputations of our water-closets that have gone into use has been established, and the persons who have paid for them are abundantly satisfied. As might be expected, appliances are offered to the public similar in appearance and by dealers said to be as good, and which as a matter of course, they will endeavor to sell whenever ours are called for. The purpose of this notice, therefore, is to inform *architects, householders* and *plumbers*, that when any information about the Hellyer Water-Closets is wanted, they should communicate directly with us, when we will cheerfully furnish it.

We trust this card will not be taken as in any way a reflection upon our competitors in the wholesale trade, who, when our goods are asked for, only naturally do what might be expected, under the circumstances, namely, try to sell something else; at the same time we trust our explanation will, in the estimation of every one, be a justification of our methods of doing business in this particular.

Henry C. Meyer & Co.

New York, March 25, 1881.

BUILDING INTELLIGENCE.

cost, $5,000 each; owner, P. H. Slattery, Fourth Ave. and Fifty-Third St.

One Hundred and Twenty-Fifth St., s s, 150′ w Sixth Ave., 2 four-st'y Connecticut brownstone flats, 20′ and 30′ front, 17′ and 24′ 6″ rear x 85′; cost, $15,000 and $20,000; owner, Cath. Fettretch, 32 West Thirty-Ninth St.; architect, F. T. Camp.

Ave. A, Nos. 1417 *and* 1419, four-st'y brick store and tenement, 34′ 1″ x 60′; cost, $16,000; owner, Richard Allen, 1421 Ave. A; architect, F. T. Camp.

Thirty-Eighth St., s s, 205′ w Second Ave., three-st'y brick school, 60′ x 67′; cost, $24,000; owner, City of New York; architect, D. I. Stagg.

Fifth Ave., e s, 560′ s Sixty-Eighth St., four-st'y brownstone dwell., 17′, 23′ and 40′ rear x 67′ and 100′; cost, $26,000; owner, A. C. Downing, 20 West Fifty-Second St.; architect, Wm. H. Smith.

One Hundred and Eighteenth St., No. 514, rear, three-st'y brick shop, 25′ x 30′; cost, $3,500; owner, Chas. Schneider, 167 East One Hundred and Twenty-Third St.; architect, Wm. Graul.

Front St., Nos. 353 *and* 355, three-st'y brick marble factory, 40′ x 80′; cost, $6,000; owner, C. Maxwell, 405 East Fifty-Sixth St.; builders, F. Merck and H. Westphal.

Forty-Sixth St., s s, 100′ w Third Ave., five-st'y Connecticut brownstone apartment-house, 40′ x 85′; cost, $28,000; owner, Bernard Spaulding, 527 Lexington Ave.; architects, Thom & Wilson.

Forty-Sixth St., s s, 140′ w Third Ave., 8 four-st'y corner brownstone dwells., 15′, 16′, 17′ and 18′ x 55′; cost, each $12,000; owner, B. Spaulding, 527 Lexington Ave.; architects, Thom & Wilson, builder, not selected.

Fifth Ave., s e cor. Sixty-Seventh St., four-st'y brownstone dwell., 30′ x 85′; owner, H. O. Armour, 145 Broadway; architects, Lamb & Wheeler.

Fifth Ave., e s, 30′ s Sixty-Seventh St., four-st'y brownstone dwell.; owner, Hugh Lamb, 145 Broadway; architects, Lamb & Wheeler.

Fifth Ave., e s, 70′ s Sixty-Seventh St., four-st'y brownstone dwell., 30′ 5″ x 107′; owner and architects, same as last.

Sixty-Seventh St., No. 4 e, four-st'y brownstone dwell., 30′ x 100′; owner and architects, same as last.

One Hundred and Twenty-Eighth St., Nos. 151 *and* 153, n s, between Third and Lexington Aves., three-st'y brick mill, 45′ x 60′; cost, $4,000; owner, David Wakeman, Southport, Conn.; architect, J. H. Valentine.

Eightieth St., n s, 152′ w Second Ave., 2 four-st'y brownstone dwells., 25′ x 73′; cost, $14,000; owner and builder, Jas. H. Slocum, 117 Bowery; architect, J. C. Burne.

Eighty-Second St., s s, 106′ w Ave. B, four-st'y brownstone tenement, 25′ x 69′; cost, $14,000; owner, Thos. H. Walker, 177 East One Hundred and Fourth St.; architect, J. C. Burne.

One Hundred and Eleventh St., cor. Lexington Ave., five-st'y brownstone apartment-house, 25′ x 68′; cost, $17,000; owner and builder, John Bannen, 17 East Forty-Seventh St.; architect, J. C. Burne.

Sixth Ave., n w cor. One Hundred and Twenty-Fifth St., 4 one-half-st y brick stores and tenements; cost, each $12,000; owner, Alva S. Walker, 43 West One Hundred and Thirtieth St.; architect, T. E. Thomson.

Fifty-First St., No. 219 e, two-st'y brick stable, 20′ x 116′; cost, $4,000; owner, John Rush, 831 Third Ave.; builders, E. D. Connelly & Son.

Fifty-Ninth St., s s, about 200′ e Ninth Ave., 5 five st'y brownstone tenements, two 32′ x 68′, and three 20′ x 68′; cost, $21,000 and $30,000 each; owner, Frederick Heerlein, 312 West Ninth St.; architect, Jos. M. Dunn.

Alterations. — *Nassau St.*, s e cor. Beekman St. raised to eight stories, also eight-st'y extension, 19′ 10″ x 34′, interior remodelled, etc.; cost, $98,000; owner, W. H. Vanderbilt; architect, J. B. Snook.

Eighty-Fifth St., No. 70 e, raise 9″; also two-st'y brick extension, 22′ 6″ x 24′ 6″; cost, $2,500; lessee, C. McClosky; builder, C. M. Clark.

Broadway, No. 714, raised one story; cost, $2,500; owner, Jno. N. Hayward, 243 East Seventeenth St.

Fifth Ave., No. 426, two-st'y brick extensions, 18′ 6″ x 34′ 9″, and general repairs; cost, about $10,000; owner, George W. Cullum, 315 Fifth Ave.; architect, S. Hamilton, Jr.

Eighty-Ninth St., No. 118 e, s s, 150′ w Lexington Ave., raised two stories, also four-st'y brick extension; cost, $3,000; owner and builder, J. B. Squires, 55 East Seventy-Ninth St.

Desbrosses St., No. 24, front alteration; cost, $2,000; owner, J. W. Dimick, 268 Canal St.; builder, J. H. Whitehead.

First Ave., No. 261 *to* 269, inclusive, four-st'y brick extension, 17′ x 20′, front alterations; cost, 25,000; agent, J. G. Attridge, 242 East Houston St.; architect, Chas. Sturtzkober.

Second St., No. 78, carry rear wall up, also three-st'y brick extension, 20′ x 29′; cost, $2,500; owner, Miss Emilie Sauer, 82 Second St.; builders, J. Steinech and J. Muhl.

Fourteenth St., No. 8 w, four-st'y brick extension, 25′ x 36′ 9″, interior and front alterations; cost, $16,000; owner, J. H. Wright, 140 Pearl St.; architects, Wm. Field & Son.

Forty-Fifth St., No. 163 w, three-st'y brick extension, 10′ x 17′ 2″; cost, $5,000; owner, W. P. Langworthy, 324 West Forty-Eighth St.; architect, A. B. Ogden; builder not selected.

Twenty-Ninth St., No. 7 w, two-st'y brick extension, 29′ 1″ x 74′, etc.; cost, $25,000; owner, Association of Bar, New York; architect, C. C. Haight; builders, Robinson & Wallace and Smith & Crane.

One Hundred and Fifty-Second St., n s, 124′ w Boulevard, two-st'y frame extension, 15′ x 37′, gravel roof, wooden cornice; cost, $2,150; owner, A. Trageser, 447 West Twenty-Sixth St.; architects, J. & J. T. Kirby.

Sixth Ave., Nos. 970 *to* 978, *and Nos.* 982 *to* 988, inclusive, fronts altered; cost, $9,000; owner, Jonathan Edwards, 27 Pine St.; architect, J. M. Forster.

Fifty-Sixth St., Nos. 239 *to* 245, inclusive, three-st'y brick extension, 35′ x 85′ 6″; cost, $3,000; owner, James Williams, 242 East Fifty-Fifth St.; builders, Pugh & Stewart.

Broome St., Nos. 43, 45 *and* 47, s e cor. Lewis St., raised one story, interior alterations; cost, $10,000; owner, E. Jones, 21 West Twenty-Third St.; architect and builder, E. Smith.

Twenty-Sixth St., No. 3 e, raised two stories; also seven-st'y brick extension, 36′ x 50′, interior alterations; cost, $32,500; lessees, Mitchell & Kinsler,

(*Continued on next page.*)