

MARCH 18, 1882.

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

CONTENTS.

SUMMARY:—

Current and Impending Labor Troubles.—Strike at the Bessemer Steel Works at Pittsburgh.—Smoke Consumption at Cincinnati.—Mr. Cushing and the Zuñis at Washington.—Captain Meade on the Panama Canal.—The Eads Ship-Railway Project.—M. Maspero's latest Researches in Egypt.—The Changes at the Ecole des Beaux-Arts.	121
THE FIFTH AMERICAN ARCHITECT COMPETITION.—JUDGES' REPORT.	123
HOW TO BUILD SCHOOL-HOUSES.	125
ARAB MONUMENTS IN EGYPT.	125
THE ILLUSTRATIONS:—	
Competitive Designs for a Country Hotel.	126
LEGAL NOTES AND CASES.	126
ON WALL AND WINDOW DECORATION IN DOMESTIC WORK.	127
RESTORING THE TOWER.	129
COMMUNICATIONS:—	
The White House Plumbing.—Increasing the Apparent Height of a Room.—The Tests of Porous Terra-Cotta.—Books.—Travelling Expenses.	130
NOTES AND CLIPPINGS.	131

STRIKES among workmen have begun early this year, and the summer will probably witness serious labor troubles, aggravated by the fact that no important industry seems likely to be prosperous enough to warrant any material advance in wages. The growth of the disposition of men to strike work upon any and all occasions seems to be met with an increasing impatience on the part of the public, who are intentionally made to suffer in many ways by the promoters of these industrial wars, in order to show their own power and importance. A recent attempt on the part of idle workmen at Omaha to deter others from accepting the positions which they had themselves abandoned was suppressed by an overwhelming military force, and the city government of Chicago was soon afterwards fiercely attacked by the local press for its inefficiency in putting down similar manifestations in that city. If such occurrences as have marked the past few years should be repeated, we must expect to see many of our most important industries leave the populous Northern States, and establish themselves in the South, where the uneasy and mischief-loving foreign element has not yet established itself, and mills can still be operated with a mutual confidence and good understanding between employers and employed, which the native population are disposed to maintain with all the influence they can exert. The only strike which we remember to have taken place of late years south of Mason and Dixon's line was summarily checked by the appearance of citizens of the neighborhood armed with shot-guns, who surrounded the discontented laborers, and only dispersed after all of them had resumed their work at the old wages.

THE strike of the employés of the Bessemer Steel Company in Pittsburgh appears to be one of the least reasonable, as well as the most threatening of the demonstrations of the year. The association is formed by representatives of eight rolling-mill companies, who carry on the business for their joint benefit, and employ a manager of great ability and good character, who has worked his way up from the humblest station in the business, and hitherto the relations between the proprietors and their men have been very pleasant. For mutual protection the rule of the mills has always been that three days' notice must be given in case either of quitting work by the men or of discharge by the owners, and all those employed have signed an agreement to that effect. Nothing, it would seem, could possibly be fairer than this, but within a month or two it is said that the operations of a certain well-recognized influence were observed among the men, who began to talk about their "freedom," "rights," and so on, and finally refused altogether to sign the usual agreement. It needed no great discernment to perceive that in the absence of any other ground of dispute between the owners and the men, the pretended scruples about the invasion of the "rights" of the workmen was a mere stratagem to bring about a trial of strength between the professional mischief-makers and the owners of the mill, and the latter, rather than surrender at the first fire, sent for new men to take the places of those who refused to accede to the usual stipulation. In accordance with their ordinary tactics, the "chiefs of labor" thereupon commenced a savage warfare against the men who

took the places which the steel-mill employés had voluntarily left, and this not satisfying their cruel thirst for the sight of universal misery and strife, they finally issued an order directing four thousand men, employed in the mills of the different owners of the steel-works, to strike on a fixed day, unless the operatives in the steel-mill should be previously unconditionally reinstated.

THE Cincinnati inspector of steam-boilers has made a report, after two months' service, in which he expresses the conviction that the owners of steam-boilers generally are well disposed toward the new law for the abatement of smoke, but that a difficulty is still found in obtaining a smoke-consuming appliance which will fully answer the purpose for which it is intended. Twenty-three different devices are already in use in the city, all of which he has examined, but finds none entirely satisfactory. With careful management some of them would save from seventy-five to ninety per cent of the unconsumed carbon now wasted, and improvements will undoubtedly be made in time if the demand for them continues. Four hundred owners of boilers have been notified to cease the discharge of smoke into the air, but their good-will toward the cause is such that not a single prosecution has yet been entered. The engineers and firemen, as might be expected, show the usual obstinate resistance of the ignorant to any innovation, but those who will have to pay for the introduction of smoke-consumers are unanimous in their wish to do their part toward the general good. The report only increases our conviction that in Mr. Olhaber the citizens of Cincinnati have secured an officer of remarkable ability and fitness for his difficult position.

THE story of Mr. Cushing's singular connection with the Zuñi tribe of Indians grows daily more and more interesting. It appears that after his somewhat painful induction into the warlike order of the Bow, there still remained a secret religious brotherhood, known as the Kaka, which holds possession of the sacred relics and annals of the tribe, but from which he was still excluded. As membership in this would open to him the inmost details of the Indian life and character, he made application for admission, but was refused, unless he would consent to make himself forever a Zuñi by taking a wife from the tribe. For this the young ethnologist was hardly prepared, but fortune opened another way to him. Among the sacred possessions of the tribe is a quantity of salt water from the "sea of the sunrise," which seems to be preserved in memory of some prehistoric migration. The water is kept in hollow canes, and once in four years a solemn ancestral-religious ceremonial is held, at which a small quantity is used. By many repetitions of this ceremonial, the supply of sea-water, which was brought to New Mexico more than a century ago, has become nearly exhausted, only about an inch remaining in one of the canes, and Mr. Cushing proposed, in consideration of admission into the order, to conduct a chosen party of chiefs to the shore of the Atlantic, to replenish the canes with the sacred liquid. His offer was accepted, and a party of six chiefs, under his leadership, is now on its way to Plymouth, Massachusetts, where he is to be initiated into the brotherhood, and will then assist in filling the reeds at the historic Plymouth Rock. This strange quest has attracted the attention of the whole country, and there is only too much reason to fear that the brutal curiosity of the vulgar, or the patronizing meddling of "society," will bring to an untimely end the most interesting performance which ethnologists have ever witnessed.

THAT there is no possible excuse for interfering with the devout pilgrimage of the poor Indians, and every reason for treating them and their mission with the deepest respect and regard, no one but a clown or a fanatic can deny. We have the testimony of another witness, nearly as familiar with them as Mr. Cushing, that the Zuñis and their related tribes are "the very best people on the earth;" and there is ample proof of their honesty and purity of life. To this, or perhaps on account of this, they join a deep religious feeling, which finds expression and satisfaction in ceremonies probably far more ancient than any creed of civilization, and entitled, if not to the sympathy of Christians, at least to their consideration and forbearance. An example of the devout constancy of their character was given in Washington, where on the day of the

full moon the Zuñis came to Mr. Cushing and reminded him that it was the time for making the sacrifices appropriate to the season. After some delay on his part, carriages were obtained, and together with five white men, more curious than discreet, the Indians made their way to the wooded hills north of the city, and assembled beside a little brook. It was first necessary to find an ants' nest, since, as Mr. Cushing explained, the ceremony related to strength, of which the ant is to the Zuñis the symbol, and could only be performed near its habitation. A suitable spot having been discovered, a small hole was dug in the ground, and the bottom sprinkled with sacred meal, which each chief brought with him in a little bag decorated with silver. A small stick, on which was tied a duck's feather, was also brought by each of the participants, and to this, after the sprinkling of the meal, each one addressed a prayer or ritualistic formula, finally depositing it in the cavity. After all were in place, another prayer was recited, and the hole was reverently filled. A second one was then dug near by, and the corn-husks in which the feathered sticks had been wrapped for safe transportation were placed in it and burned. This ended the sacrifice, and the Zuñis returned to the city. It is not surprising that Mr. Cushing's pleasure at returning to his friends after three years of pueblo life might have made him a little neglectful of his new religious duties, but one can hardly help regretting that the Indians should see so soon the demoralizing influence of civilization upon their favorite young chief.

SOME encouraging statements in regard to the Panama Canal come from Captain Meade, commanding the United States sloop-of-war *Vandalia*, who in an official report to the Secretary of the Navy recounts his own observations made during a recent visit to the Isthmus, and describes the work that has been accomplished since his last visit eleven months ago. In his opinion, a great deal of necessary preliminary work has been quietly accomplished, although very little of the actual excavation has been done. The entire line of the canal has been cleared of trees and underbrush for a width of three hundred yards, and he justly remarks that the removal of five thousand acres of tropical forest is of itself a good year's work. Whether American engineers would have made a greater advance he is unable to say, but all the steps of the French are taken with great care, and each new movement is submitted to the professional commission in Europe for approval. Tracks have been laid in many places for use in transporting excavated material, villages have been constructed for the use of the laborers, and work on the cutting, when once begun, can be pushed forward with rapidity which only long and careful preparation would make practicable. The reports of sickness among the Canal employes Captain Meade considers exaggerated. The local fever of the country, want of proper attention, and the carelessness of the Europeans, have been fatal to many of them; but little or no yellow fever or other epidemic disease has been observed. The contractors have been disappointed in the machinery brought from Europe, and the excavating apparatus hereafter used will probably be purchased in the United States.

THE Eads ship-railway scheme meets with a good deal of encouragement at Washington, and it is understood that his bill will be reported favorably from the Congressional committee having it in charge. Meanwhile Mr. Eads and his supporters are vilified by a large portion of the daily press in a way which seems to show, in some cases at least, a personal malice which is fortunately unusual among us. The accusations brought against him of secretly paying for the principal dinner-parties given in Washington during the winter may be safely dismissed as ingeniously incredible, and we may be confident that the action of Congress upon his application for aid will be reasonably intelligent and patriotic, as suits the rational, although perhaps over-sanguine, character of the arguments with which he supports it. The real point of weakness about the plan is the lack of definite knowledge even on the part of Captain Eads himself as to the practicability of the project in any of which he asks the public support. In the opinion of many skillful engineers, it will never be possible to transport, by the means which he proposes, vessels of the size and weight ordinarily used in ocean traffic,—still less ships of war; and he is accused of himself evading this difficulty by proposing in his present bill that the Government subsidy shall accrue upon the successful transportation of a vessel much smaller than those it

would actually be necessary to handle. It is to be hoped that the wisdom of Congress will impose strict conditions in this respect, and that while securing, if possible, the great advantages which the Eads scheme certainly appears to offer, the public money shall not be squandered upon a work undertaken without the patient preliminary study and experiment which can alone insure success.

M. MASPERO, who has been appointed to succeed the late Mariette Bey as the official archaeologist of Egypt, has undertaken the exploration of some of the pyramids which still remain unopened. Among these is one called that of Meydoun, not far from Cairo, to which no entrance has hitherto been discovered, although it is regarded as one of the most interesting objects in Egypt, not only from its singular terraced shape, indicating great antiquity, but from its connection with the beautiful statues of Ra Hotep and his wife Nefert, which were found in a tomb close by. After tapping the walls of the pyramid with a hammer on all sides, M. Maspéro found the clue to an entrance near the top of the mass, opening on a descending passage-way, which led to the central portion of the pyramid. At this point the way was closed by a mass of rubbish, which is now being removed. The structure is positively known to be at least fifty-five hundred years old, and on the walls were found scratched the names of two inquisitive antiquarians, who visited it about the year 1200 B. C., a little before the Trojan war. It was a very old building then; older to them than the Parthenon is to us, and unless they were stopped by the same obstacle that prevented the advance of M. Maspéro, it is probable that they or their contemporaries carried away everything valuable in it; but there may still be paintings or inscriptions to throw light upon that most interesting of historical problems, the life of the Egyptians in those primeval ages of which we now obtain occasional glimpses.

M. PROUST continues to urge his scheme for the reorganization of the *École des Beaux-Arts*. As the present organization of the school was established by decree, it can only be modified through the executive department of the Government, and the proposed reform will be subjected to a good deal of discussion before it is carried into effect. At a recent meeting of the council of the school the minister explained his plan at length, and it was received with general favor. Some points in it, as described in the report of *La Semaine des Constructeurs*, have not been mentioned before, so far as we know. In regard to the conditions of admission and the courses of instruction under the new régime, although no details are given, it seems likely that more importance will attach to the examination in drawing, which applicants for admission must undergo. All the matriculated students, including architects, sculptors and painters, will at first, without distinction, be required to follow a course of elementary instruction in the general principles of all the arts. On completing this, they will have special teaching, each in the branch which he has chosen, the painters, particularly, pursuing their studies in life-schools, where models will be provided for them, and after a certain time spent in this way the work of all will conclude by a final course of instruction, this time from a more advanced standpoint, in all the three sister arts.

FOR the benefit of the poorer students, who have hitherto enjoyed the advantage of gratuitous teaching in the ateliers of the school, and whose protest against the intended change seems to have produced a considerable impression, the minister proposes to set apart the sum usually appropriated for the support of these ateliers, to be divided among the students who require such aid for the purpose of meeting the expenses of their tuition in the unofficial ateliers outside. In this way the main objection to the contemplated change will be met, and by judicious management the bounty of the State may perhaps be made as productive of good results in this as in the former way. Of the benefit to be derived from combining instruction in the three arts for all the students, there can be no doubt, particularly in the case of architects. Until the present age, an architect has always been, first of all, an artist. Many of the greatest have been painters and sculptors as well as architects, and not a few of the greatest painters and sculptors have been also architects. The advent of the "practical man" into the profession as a substitute for the artist, dates only from the decadence of all the arts, and every indication of a return to the earlier practice is to be welcomed with joy.

THE FIFTH AMERICAN ARCHITECT COMPETITION.
—JUDGES' REPORT.

From the British Architect.

THE author of "Country Life" in his motto, sounds the key-note of his interpretation of the programme, and this spirit of country life which he has most clearly infused into his design is undoubtedly what the programme required. To those flying from the close confinement and crowded life of the city, the attractions

of the country lie in its light, its air, and its rest. A country hotel of the class suggested in this programme should be planned to give the most open, breezy circulation, the finest outlook, and most tranquil isolation compatible with convenient service. The total cost allowed, and the rural neighborhood call for a style of architecture dependent for its effect on a picturesque disposition of masses, rather than upon details requiring skilled city mechanics. The plan of "Country Life" at once challenges attention by the naivete of its circulation, which is direct from each of its spacious rooms, without the need of corridors or passages. At the end of the kitchen wing, which is at right angles to the main building, are placed the billiard-room and lavatory which are thus rather too far removed. The second-story plan is simply disposed, with chambers opening onto straight, well-ventilated corridors. No space is wasted in the rooms themselves which form an agreeable contrast to the eccentric forms affected by some competitors. The elevations are worthy of the plans. A picturesque effect is gained easily by the semi-quadragonal plan and wide piazzas, and this is heightened by the unbroken masses of roof. At the junction of the two wings, a huge chimney gives a vigorous accent just when it is needed, and to further gather the long wings into a single group a large open belvedere dominates the whole composition. There are no details to the building beyond the skill of a village carpenter; but the windows are carefully disposed, so as to give a happy architectural effect. Add to this that the perspective is presented with the same masterly simplicity which pervades the whole design, and it will be understood why this composition is placed first.

"Arcades Ambo" gives us¹ a plan whose general disposition is excellent, and with a few changes would be entirely convenient and practical. The entrance-hall is cheerful and ample, with an effective arrangement of stairs; the parlors and dining-room are well situated but the billiard-room has no proper access, being entered either through the dining or reading rooms. This could be easily remedied by extending the corridor from the hall past the dining-room. The lavatory for ladies is impertinently reached only through their parlor, while that for the gentleman is equally ill placed with its only access from the billiard-room. Still more study is needed to do justice to the second story, where much room is wasted in the hall; the chambers are not well arranged and lack closets; the bath-room accommodations are insufficient, for there should have been one at least for each of the sexes. The elevations have a straightforward rustic character, but without a well-considered architectural effect in the dominating feature of the high roof which gathers the long wings into one group. There is, however, a conflict of roofs back of the main parlor wing, which can only be got over by a broad deck, and this would be difficult to treat from an architectural point of view. On the whole the architecture is appropriate and picturesque. It escapes the affectations of many quasi rural designs, and has the aspect of a comfortable country inn.

"Canterbury's" perspective² indicates a straggling building not without a certain picturesque aspect but lacking unity of composition, and this defect is accentuated by its sketchy drawing. Its facility shows a practised hand, however, and a glance at the plan corroborates this, for it is cleverly disposed to give the maximum of light and air. Like the preceding designs, two wings at right

angles form a sheltered and shady lawn. The wide porch, the ample hall *en suite* with the dining-room opening onto the piazza, the ingenious arrangement of the parlor, the complete isolation of the billiard-room and kitchen, are admirably planned. There is an unfortunate indecision and weakness at the junction of wings which other competitors have cleverly emphasized by a chimney or turret. A chance for an effective staircase has also been lost by walling up the side next the hall instead of opening it directly into the latter, or merely separating it by a screen. The "ladies' toilet" is not well situated, but that over the hall is better placed. The chambers are in general airy and well placed, but we fear the roof rooms in the west wing on the second story would not be comfortable, and we do not commend the finishing of the interior of a house so rural in character in hard woods, varied in the chief rooms, as "Canterbury" is at pains to suggest. In other respects this design is thoroughly practical, and seems within the limits of cost allowed in the competition.

"Inn's" perspective³ shows us an ideal country inn. Its character is unmistakable from its charming combination of the tavern and the homestead. The long unbroken line of the roof gives value to the simplest of the architectural features below it, and they in themselves are well chosen. Unfortunately this ideal elevation would only be practicable in a hotel of half the size we require, and on turning to the plan we find this single reach of roof necessitates a woful crowding together of the rooms. The lavatory is lighted and aired by an enclosed area, while the bar-room borrows its light from the café; and this in a country hotel whose boarders expect to escape from the stifling exigencies of city life! The ladies' parlor is too small, and its large bay, as well as that of the billiard-room, lacks architectural expression. The indecision of the forms of these same bays is equally unfortunate in the bedrooms. The largest chamber on the second floor is quite insufficiently lighted, and there is throughout this floor an inexcusable want of the fresh air and light which should be the chief characteristics of such a building. This plan in a city or its suburbs would be not without merit; the arrangement of the great dining-room opening from the main hall gives a magnificent vista, and the compactness of the plan would cease to be a defect. It is unfortunate for "Inn" that having conceived so successful an elevation, he should not have thrown out a wing which would have relieved the overcrowding of the main building. The perspective is rendered with sparkling simplicity. It was, however, a mistake of composition to divide the view so nearly in halves by the large tree.

"Try" has also an L-shaped plan capable of adjustment to desirable points of the compass, and having a commendable disposition of principal rooms and subordinate offices; the kitchen is well isolated in the rear, and the billiard and dining rooms conveniently placed at the ends of different wings. The chambers and corridors of second story are excellently planned, and the decorative device in which the corridors terminate is ingenious. The water-closet and bath-room accommodations are inadequate. The elevations exhibit excellent qualities: they are ingenious without being capricious. Rural design in the modern fashion with its facile picturesqueness is tempting, and it is no small praise to a competitor to have known how to use it without abusing his opportunities. The large chimney which forms an important feature of the dining-room wing is hardly justified by its function in one small chamber only. The crowning tower is too low, both for effect and convenience, and is the worst feature in a composition of merit. "Try's" perspective, though less delicately drawn than some others, is full of dash. Its intentions are clear, and having expressed these the author has forbore to over-elaborate the details. We regret to have found this set of drawings marked *Hors Concours*.

Thus far the designs mentioned have been remarkable for their local color; they have been thoroughly American in both faults and virtues. But now we turn to a design whose chief merit lies in following closely modern English work. "Qui Tam" presents us with a plan at once so ample and so elegant that it is difficult not to yield to its aristocratic charm, but none the less must it be said that it does not look like a country hotel and is not adapted to be anything but that which it imitates, a gentleman's private mansion, by Mr. R. Norman Shaw. As a private residence it would be admirable, the plan being simple and convenient, and the elevations dignified and refined, but the conditions of a summer hotel for boarders are quite different. For instance, the dining-room here occupies less space than the parlor and drawing-room, whereas in the hotel which is called upon to accommodate large parties of transient visitors, beside the boarders, the dining-room should be far the largest; then also the bath-room accommodations are quite insufficient. The corridors of the second floor are badly lighted and the staircase too contracted. The chimneys, handsome themselves, would add an excessive cost to a design already exceeding probably the amount allotted by the programme. In spite of the shade required for promenades in summer, the piazzas, low-browed and extended, should not have been carried around all the rooms, lest on rainy and cold days the first floor be gloomy.

"Clarendon's" plan, with its two wings projecting in opposite directions from different ends of the main building, is admirably lighted and ventilated, but it requires more study to fully develop its merits. Hall, dining-room and kitchen are well provided for, but the ladies' parlor should have been nearer the main hall. The "gentle-

¹American Architect and Building News for February 11, 1882.²American Architect and Building News for February 18, 1882.³American Architect and Building News for February 4, 1882.

men's toilet" on the first floor is much too small. The billiard-room is too small and ill located, but the bedrooms are well arranged upon their open corridors. The elevations are sensible, if not ingenious, and their details safe, though commonplace. The drawing is somewhat "niggled" and does not do justice to the design, and lacks the brilliancy which gives so much animation to several drawings in this competition. A certain amount of suggestion of a sketch from nature is not to be despised, though we would caution the enthusiastic sketchers against introducing in their perspectives irregularities and unevenness of surface in roofs and walls, for this effect is not compatible with our materials or habits of building, and can never be realized in a new building. A well-made roof is straight and true, and there would be practical objections to one warped and bent as often indicated in drawings.

"Vermont." This composition has been ingeniously rather than wisely studied. Its pretensions belong to a fashionable hotel in a large seaside town. The general disposition of rooms is good, but complicated in detail, and the halls and central portions of the building are insufficiently lighted, as are also the corridors on the second floor. The oblique arrangement of the billiard-room is somewhat affected, but may be accepted perhaps as a concession to some unexplained requirements of the site rather than as a recognition of a peculiarity of some old English houses lately published. There seems to be no ladies' bath-room. The perspective is carefully and skilfully drawn, but the left-hand tower is as bald and ugly as it is unnecessary, and adds nothing but expense to a design already exceeding the cost permitted. Both the drawings and designs are full of clever work, and reveal an experienced designer and skilful draughtsman. We regret that "Vermont" has in this case slipped off the right track.

"Blue Boar" has handicapped himself from the start by assuming a restricted and insufficient lot of ground; it is not then surprising that he appears in spite of ingenious study at a disadvantage compared with his rivals who improved their privilege of unlimited building space. The long dark vestibule leading to the hall on one side, would be a cruel infliction even in the city, and the office has no direct light. The bedrooms are ingeniously arranged that each may have as much light as circumstances will allow, but there is a hopeless want of the superabundance of light and draught desirable in a summer resort. Light introduced by wells is an expensive, and in this case unwarrantable expedient, and has a dreary depressing effect. To what official generally employed about a village hotel the "butler's pantry" is consecrated is not explained. The derivation of "servery" is more evident.

The elevations are wanting in rural character, and are better adapted to the streets of a small town than to a place of retirement in the fields, but like the plans, they are well studied and handsomely presented in a style made familiar (perhaps too familiar) in the illustrations of the *Building News*. The sparkling character of the drawing is undeniable, but that something is sacrificed to this effect is evident when we try in vain to discover whether the lower story is of masonry or wood. If the former, the expense of this building could not be kept within the prescribed limits.

"Misfortune" has a good first-floor plan, well arranged in all essential respects, and free from unnecessary corridors and passages. In the upper stories, however, the corridors are not well lighted. There is an unfortunate absence of closets and insufficient accommodation for chambers, which should occupy the space improperly occupied by the billiard-room in the second story. The billiard-room would have been better placed in a wing upon the ground floor. We do not like the position of the water-closets in this nor in the majority of the plans presented; they should be as far removed from the sleeping rooms as possible, and be so arranged as to have the freest ventilation. The bath-rooms and water-closets should not be placed in the same apartment. The approach to them should be properly masked. "Misfortune's" elevations are reasonable and not without a certain elegance; they make an effective mass and show observation and practice. As is the case with the most brilliant of the competitors, a large part of the effect of the perspective could not be realized in construction, at least not until the building is dangerously dilapidated by age. On the whole, this design is to be praised for its refinement and thoughtful reserve. The piazza is especially elegant, but too costly.

"Pencil's" plan is thoughtfully studied, and the result is a comfortable, generous disposition, well lighted and airy; and this in spite of the two wings which extend at right angles from the main building being separated but by a small court. This latter, however, only gives light to bath-rooms and corridors, and the author has avoided the fatal error of some of his competitors in placing bedrooms upon such a court. The bedrooms are all well lighted and large, perhaps too large for their purpose; a larger number on a floor would have enabled "Pencil" to dispense with his third story, and thus have brought his roof down a story lower. This would have helped his elevations, which if not strikingly original, are at least unpretending and practical. The rendering is careful and rather labored, but such work forms the best foundation for the brilliancy of touch which experience gives. On the whole, this design deserves commendation and respect.

"Boz" as far as the first floor is concerned, has an intelligent arrangement, excepting too much relative space given to the parlors; but this plan gives him a thoroughly vicious disposition for his bed-

rooms, half of which face each other in a small court; furthermore, this court supplies the ventilation to his water-closets, which are most obtrusively situated at the head of the staircase! It is possible that the prominence thus given to them was considered by "Boz" sufficient to allow him to omit them on the lower floor, but their necessity is not a sentimental one. The elevations have an agreeable rustic character, which however, loses something by the height of the building. Two stories would have been more convenient than three, and we think the bedroom stories unnecessarily high in the stud. The octagonal tower has an ugly, ill-fitting roof, and some of the fireplaces shown upon the plan are not recognized by chimneys on the exterior. The drawings are presented with care and delicacy, but the perspective at least would greatly gain by a more picturesque rendering. "Boz" is marked *Hors Concours*.

The author of the design marked by an I intersecting a circle, Φ , has a first-floor plan which just fails of being excellent. The arrangement of the parlor with its reading alcove and conservatory is attractive, and the main hall is ample and convenient; the dining-room, too, is well placed, but it is unnecessary to have it open with double doors into the bar-room, and the long corridor connecting the kitchen directly with this main part of the house is a mistake. The second floor is inconveniently cut up so as to allow no light in the crooked corridors, and the small water-closets are inexcusably conspicuous at the head of the main staircase. The elevations would be suitable for a suburban hotel, but the absence of any piazza on the exterior elevations of the two wings deprives the building of the open-air life, which should characterize an establishment of this sort. The half-timbered construction is effective; there is, however, an unhappy indecision in the decorative columns used with it, for they are heavy enough in treatment to be of stone. The construction of the whole first story of brick and stone carries the probable cost of this design beyond the limit.

"Yusef" in his desire to be original has hit upon a most unfortunate arrangement. It suggests the typical prison plan with an octagonal donjon and radiating corridors and chambers. Only the necessity to overlook the whole establishment from one central point could justify the cutting up of the rooms into such irregular and uncomfortable shapes. The gentlemen's water-closets on the ground floor are lighted from a small paved area, and those for the ladies from above. This is inexcusable. The roof is too complicated. The employment of a Moorish style of architecture for this simple country hotel savors of affectation. The perspective is sketched with spirit, and there are many indications that "Pencil" is a clever draughtsman, and his failure is due rather to an unfortunate scheme than to lack of ability to develop it.

"Bison" has an intelligent, simple disposition, which in the bedroom stories develops most conveniently, and the water-closets are unusually well placed. The elevations have good proportions, and mass well about the tower, but the treatment is commonplace and uninteresting. The same mass of building, treated with refinement and some invention, could be made very effective. We recommend to "Bison" the study of details from good examples of wood construction.

"Goethe's" hotel is far too city-like. It has been studied from a wrong point of view; its classical symmetry would be well appreciated for an Italian villa, or in a more formal building of masonry. The main hall is insufficiently lighted, and the office is in its darkest corner. Instead of two narrow staircases, one, large and well-lighted, would have better answered the purpose. The long dining-room lighted only at one end would be a dreary affair. The gentlemen's waiting-room, as well as that of the ladies, is too far from the entrance-hall, and the position of the servants'-hall in the wing farthest from the kitchen, and with no covered communication, is quite incomprehensible. The kitchen accommodations are too small. The only fireplace is in the hall, there being none in dining or drawing rooms. The water-closets on the ground floor are badly ventilated. The second floor is straightforward and simple, the bedrooms well ordered on each side of one straight corridor. The architecture of the elevations may be classed as nondescript, it being impossible to tell from the drawings whether it be of wood or stone.

"Premier Pas" has been curiously successful in getting on the ground floor the most confused set of unlighted halls and corridors, and on the second floor the most immense area of dark hall which could probably be devised. There is apparently an entire absence of thought in the plan, and judging by the small scale on which it is given when compared with the perspective, it may be inferred that the *premier pas* has been in the wrong direction. Though more attention has been given to the exterior by this competitor, the best that can be said of this is that the general proportions are not bad.

"Prospero" deserves credit for his conscientious attempt to work out all the possible requirements of a hotel, but this has led him into a labyrinth of corridors and small rooms badly lighted. His baggage-room has no entrance except through the office, while the lavatory and water-closet can have no daylight and no apparent means of ventilation. On the second floor also the main hall and the corridors have no daylight, nor do the water-closets on this floor fare better. The elevations may be characterized as an extreme example of brick "vernacular" by a carpenter, and we are relieved to think it could not be built for the sum allowed.

HENRY VAN BRUNT.
EUGENE LETANG.
ARTHUR ROTCH.

HOW TO BUILD SCHOOL-HOUSES.¹

WE have received from Mr. G. P. Randall, architect, of Chicago, a pamphlet of thirty pages, devoted to the construction, heating, lighting, and ventilation of school-houses. The book is published and gratuitously distributed, as Mr. Randall very frankly says, for the purpose of advertising his business, and contains a portrait and short autobiography of the author, from which we learn that he was born in Vermont, and brought up as a mechanic, abandoning practical building for architecture at the age of thirty. Since that time he has, as he says, built a great many court-houses, colleges, universities, churches, and an immense number of school-houses, not one of which has ever been known to fall down, settle or crack, for want of proper construction. A practitioner of such experience ought to be able to give much valuable advice concerning school-buildings, and we are rather disappointed to find that the booklet contains so little. What it does contain is, however, good, and although hardly any of it is new to experienced architects, that portion of the public for whom it is intended may profit considerably by the simple rules and sound practical suggestions which it offers.

Mr. Randall's plan of heating and ventilation, for instance, shows a comprehension of the difficulties and defects of the ordinary systems, and a special familiarity with the construction and needs of school-rooms, which make it well worthy of attentive study. Like many architects of great experience, he favors the heating of ordinary school-houses by hot-air furnaces, rather than by steam, as well on account of the expense of the latter as of the danger which a steam apparatus incurs from any want of care. His usual practice is to give to each ground-floor room, with the second-story room above it, a separate furnace and smoke-flue, hot-air and ventilation flues, thus effectually preventing any unequal heating of the rooms by the tendency of warm air to flow toward the leeward side of a building, as well as insuring to every room an equal ventilation. The arrangement is very simple: just behind the teacher's platform in each room is a stack of flues, four in number in the first story, of which one is the smoke-flue of the furnace, the next is a ventilation-flue, the third is a flue carrying warm air to this room, and the last is a warm-air flue to the room above. The warm-air flue to the first-story room ends at the register, about nine feet from the floor, and in place of it the ventilating-flue, next to it, is doubled in size above this point, so as to give space for the additional flow of air from the upper room. The fourth flue, conveying hot air to the second-story room, stops at the register in that story, leaving only the ventilating-shaft and the smoke-flue to emerge from the roof together. The relative sizes of the flues are carefully arranged, and the combination strikes us as admirable in its well-considered and efficient simplicity. The foul air is withdrawn from the room through perforations in the base-board along the outer walls, from which it is conducted into a foul-air chamber under the teacher's platform, to pass thence into the ventilating-shaft, the draught of which is aided by the heat of the neighboring smoke-flue. With so simple a system of air-supply, and in rooms of moderate height, as school-rooms should always be, with two walls cooled by exposure to the external air, the conditions are peculiarly favorable for such downward ventilation, and the operation of the system in winter should be extremely satisfactory. For warmer weather a second register could easily be placed in the flue, near the top of the room. The plans which Mr. Randall gives in illustration of his remarks are economically and intelligently designed. The form and lighting of the rooms are excellent, the halls ample, and the stairways wide and properly broken by landings. Although we do not find Mr. Randall's mode of advertising quite to our taste, he is certainly justified in claiming to possess both theoretical knowledge and practical skill in this special branch, and it is as much in the interest of the coming generation in the North-west as his own that we trust the object which he had in view in publishing this little book may be attained.

HOW SUBTERRANEAN DIAMOND-DRILLED HOLES ARE PLUGGED.—It is no easy matter to plug up a diamond-drill hole from which there is a strong flow of water, frequently under great pressure. When a hole is to be plugged there are forced into it small bags of beans and flax-seed. The plug—made of dry pine and from ten to fifteen feet in length—is driven in after these bags and forces them forward in the drill hole. Also, a hole is sometimes bored into the end of the plug, which hole is filled with flax-seed. The flax-seed and beans are caused to swell to such an extent by the hot water that the hole is as compactly filled as though closed with molten lead.—*Virginia (Nev.) Enterprise.*

¹ How to Build School-Houses, with systems of Heating, Lighting, and Ventilation; By G. P. Randall, Architect, Chicago, Ill.

ARAB MONUMENTS IN EGYPT.



FROM LAKE

FROM the *London Times* is copied the following letter from Sir W. H. Gregory on the preservation of Arab monuments in Egypt. He says:—

A decree has recently appeared in the *Egyptian Moniteur*, signed by the Khedive, appointing a commission with the object of preserving the monuments of Arab art. The first duty of the Commission is to make an inventory of all Arab monuments of artistic and historic interest; the next, to examine and approve the plans suggested for the repair and preservation of the monuments, pointing out at the same time to the Minister of War any mosques or other buildings requiring urgent and immediate attention, and to inform the same Minister of any remains which in the opinion of the Commission ought to be removed and placed in a national museum dedicated entirely to the representation of Arab art. The Minister of War is supposed to take

an enlightened interest in the object indicated, and I find on the Commission, besides his name, the name of M. Baudry, the internal arrangement of whose house is the best proof of his taste and knowledge in these matters, and of Rogers Bey, whose learning in all branches of Arab art, calligraphy, numismatics, and architecture is equalled by few and surpassed by none. I regret, however, to miss the name of Yakoob Artim Bey, a gentleman well known in Cairo for the enlightened interest he takes in art, and whose presence on the Commission would have been welcomed by his colleagues as a zealous fellow-worker. There is, therefore, some hope that what is done will be well and efficiently done, more especially as I hear an annual sum will be voted in the Budget for the purpose of carrying out the recommendations of the Commission, and that for this year about 7000*l.* will be forthcoming for the most pressing cases.

No one who has visited Cairo a quarter of a century ago and at the present time can fail to see that this decree has not been issued one day too soon. I can well remember the appearance of Cairo and its environs some twenty-seven years back. In those days no city in the world was more characteristic, more unchanged for centuries, more intensely Oriental. You made your way on foot or on donkey-back through cool, narrow streets, your eye lingering at every step on the elegant tracery of the doorways, some of them, to use Captain Burton's expression, huge enough for Behemoth to enter in; just above your head were the "mush-arabias," lattices that seemed to be of woven wood; and high aloft the muezzin called the faithful to prayer from innumerable minarets, each of them worked out with the labor of love by builders who had an instinctive and unerring knowledge of graceful construction and of ingenious and various details. From a height looking down on the city the forest of these minarets seemed to vie with the forests of palms around and about them, and in the neighborhood of the city bright blue tiles still encircled the domes of the tombs of the caliphs, and below the citadel were innumerable other tombs of men of note in the palmy days of Cairo, all of them more or less beautiful in form, some of them the delight of architects and painters from their rich peculiarities of structure. But these were the good old days; hardly a tile now glistens on the domes of the tombs of the caliphs; as you pass beneath the citadel on your way to Helwan the other tombs seem, with few exceptions, to have been swept away, and the streets of Cairo are being widened with a ruthless hand to admit the streams of hackney carriages which have, with the wealthier classes, superseded the donkeys of their fathers. Straight boulevards have taken the place of the endless turns, the infinite variety of houses, now approaching, now retreating; flat, ill-made Venetians have driven away the mush-arabia lattices; the pickaxe and crowbar seem at work from morning to night in every quarter of Cairo, and its former inhabitants are flying from their demolished houses into the ugly rectangular new quarter of Ismalia. Of course Cairo cannot stand still for the sake of the lovers of art. It must, as Venice is doing, go with the times; old houses, old lattices, old mosques, old gateways must depart to meet the wants of modern civilization. All that remains for us is to sigh over the city that was "so lightly, beautifully built," and to endeavor to preserve whatever the ruthless requirements of the Egyptian architect may condescend to spare.

An admirable article appeared in the *Gazette des Beaux-Arts* of November on the subject of the wholesale destruction which is proceeding. It is written by M. Arthur Rhoné, a French gentleman well known in Cairo, and who has given much attention to Arab art. He describes the various processes of degradation to which the Arab monuments are subjected. The first is to level the old structure and then rebuild it at great expense in a style called Italian-Gothic. The next is partly to demolish the building, to sacrifice the beautiful ceilings, to disperse the inlaid wood-work, and then to patch it up till whatever is finished is spick and span in appearance,

and the rest is left to take its chance. Such is the fate of the famous mosque El Moeyyed, date 1420. About ten years ago its restoration was determined on. A contract was drawn up, and the contractor was bound to replace in the restored edifice the columns, the marble, and the cut stone, as having been consecrated, as it were by the holiness of the place. As for the beams and wood-work, they were placed at his disposal to be utilized for the reconstruction. Armed with this permission, without loss of time the ceilings were torn down, the beams extracted, and the lovely wood-work, which from its carvings and illuminations would have almost formed an Arab museum in itself, was torn from its place and cast aside. After awhile, the Government, as usual, refused or was unable to pay the contractor. A lawsuit took place, and the architect of the restoration was obliged to admit that the old roof beams so delicately worked had been employed as scaffolding for his masons, and that the smaller pieces of cabinet-work, marqueteries, panels, and stalactitic ornament had been used to light their kitchen fires, so that not a particle remained of those wonders of grace and ingenuity which had been the glory of Cairo.

Of the other mosques less celebrated and less rich, some are abandoned, others are on the point of being so. The mosque of Sultan Hassan, one of the grandest structures of Oriental architecture, is gradually falling into decay, while opposite to it was being reared by the late Khedive, though it has now come to a standstill, a huge, unsightly new mosque, which has already cost a prodigious amount of money, and will never be finished. While lavishing these sums on this wretched structure he did not think it worth his while to spend a few thousands upon the magnificent work of former ages, the ornament of his city, but on the contrary levelled a portion of it. In almost every mosque the hand of the destroyer is visible: the ivory incrustations are chiselled out of the doors and pulpits, the rich designs in colored marbles and mother-of-pearl are knocked off for visitors and curiosity-dealers, and large squares of mosaic work have been removed from the floor to decorate the palace of some pasha or amateur. The guardians of these buildings have not the slightest regard for them, and I am convinced that if I set my heart on any particular inlaid work in the greater part of the less used mosques, I could have it conveyed to my hotel at nightfall for a small consideration. But this is not all: as if to add insult to injury, in a vast number of cases the coloring of time on the stone and wood-work has offended the eye of the authorities, and the most ruthless and vile wash of cobalt, vermillion, and yellow ochre has been applied with unsparring profusion, and covers the delicate traceries and all the variety of arabesques and carvings which until recently rejoiced the eye.

As for the cupolas and minarets, with them it is not mere restoration, but all which show signs of decay are menaced. Some are levelled bodily, others have a stage or two removed, and a zinc extinguisher put in their place. Some, as M. Rhoné remarks, seem every year to sink into themselves like the divisions of a telescope, and the distinctive feature of Cairo—its forest of minarets—is gradually passing away. An Arab museum, or rather a repository of Arab art, has been established in the dismantled mosque of Hakim, and thither are daily transported from the different mosques carvings in wood and stone, metal-work, tiles, and those beautiful lamps, the origin of which is so much disputed, whether it be from Damascus or from Venice. Last year only five had been secured; but on a stricter investigation seventy-four have now been discovered in various holes and corners, under sofas, in cupboards, or lumber-rooms, where many of them had been stowed away to await the propitious hour when they could be conveyed to the expectant European dealer. The collection is already well deserving of representation, and is increasing constantly. Let us indulge, I trust, the not too fond hope that this beginning of care for Arab art will not, like so many Egyptian excellent projects, be ushered into the world with a flourish of trumpets and subsequently smothered by lazy, unhandy, ignorant officials.

I cannot conclude this letter better than with the excellent remarks of M. Rhoné:—"As we have already stated, there are still to be found in Mohammedan lands many workmen who remain imbued with the traditions of their craft. Under the direction of true architects, of artists thoroughly conversant with Arabic art, themselves under the control of a committee, these artisans would be quite able to reproduce the workmanship and to continue the works of former times, for which they alone have an instinctive and inimitable aptitude. It behooves the reigning sovereign, who loves the traditions of his country, and is deeply interested in the intellectual progress of his people, to bring about a welcome change, to make Egyptian art and Egyptian workmen abandon the sterile path they are following to-day. He has only to show a marked leaning towards the old models of the fine period of Arabic art; we should then see the national taste reassert itself, and we should be no longer the saddened witnesses of this mania for destroying what still survives and for copying Europe in her worst features."

THE ILLUSTRATIONS.

COMPETITIVE DESIGNS FOR A COUNTRY HOTEL. BY "Country Life," MESSRS. R. D. ANDREWS & H. JAUQUES, BROOKLINE, MASS.; "Qui Tam," MR. W. A. BATES, NEW YORK, N. Y.; AND "Try," MR. J. A. SCHWEINFURTH, BOSTON, MASS.

THE judges take pleasure in announcing that they have awarded the three equal prizes of fifty dollars each to the authors of the designs distinguished by the following devices:—

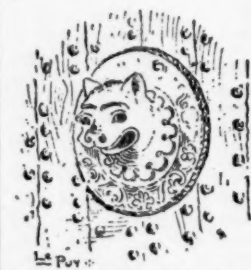
"Country Life," the joint authors of which are Messrs. R. D. Andrews and H. Jaques, of Brookline, Mass.

"Arcades Ambo," which is also due to the skill of two authors, Messrs. H. L. Warren and F. E. Alden, of Roxbury, Mass.

"Canterbury," designed by Mr. M. P. Hapgood, of Boston, Mass.

LEGAL NOTES AND CASES.

Right to Put Up and Remove Fixtures.—Liability for Damage on Removal.



THE Supreme Court of Michigan, on October 26, 1881, had under consideration a case involving the right of a landlord to damages, as against a tenant for the damage done to his property in the removal of certain fixtures which the tenant was authorized to put up and take away at the end of his term. The landlord was defeated in the trial court, and carried the case up.

Judge Marston, in the opinion, said:

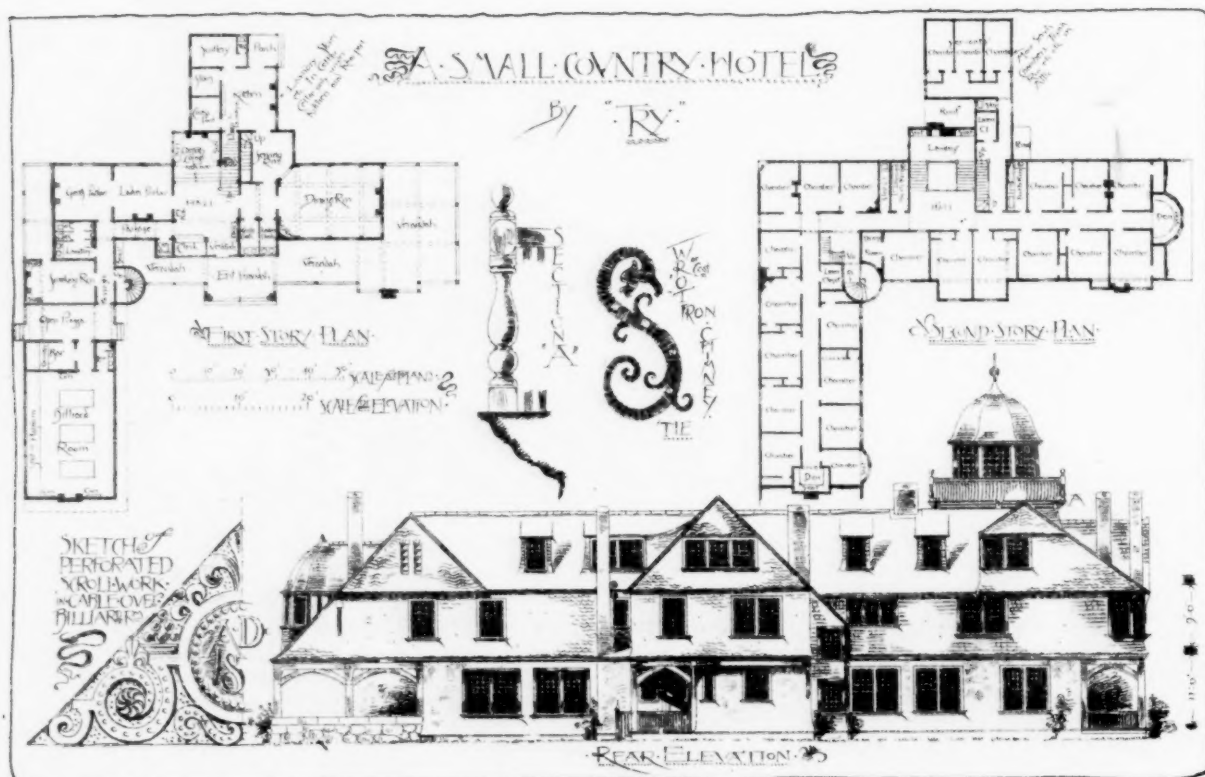
The defendant leased from the plaintiff a certain mill building for a term of five years, with a right to repair the same and put certain machinery therein, with the privilege of removing all such machinery at the expiration of his term. About the time his term was to—before it did—expire he removed the machinery, and this action was brought to recover damages for breaking and entering the mill building and for breaking, injuring, and destroying the flume and other portions of the building and for carrying away certain parts of the machinery. The court charged the jury that if the defendant took away any machinery or fixtures other than what he had placed therein he would be liable therefor; but that in this action damages done to the freehold in removing the machinery could not be recovered; and we are of opinion that the instructions so given were correct. It does not appear that the defendant took any machinery out other than what he had a right to remove under his lease, and it does not appear, nor is it charged in the declaration, that he did not exercise due care and caution, or that he did any unnecessary damage, in removing what he had a right to take out. In giving the defendant the right to remove whatever machinery he should have put in, the right to do some damage and injury to the freehold in making the removal was impliedly given also, and if he did no unnecessary damage he would not be held therefor. If he did, the complaint should have alleged it and proof thereof should have been given, neither of which have been done in this case.

H. E.

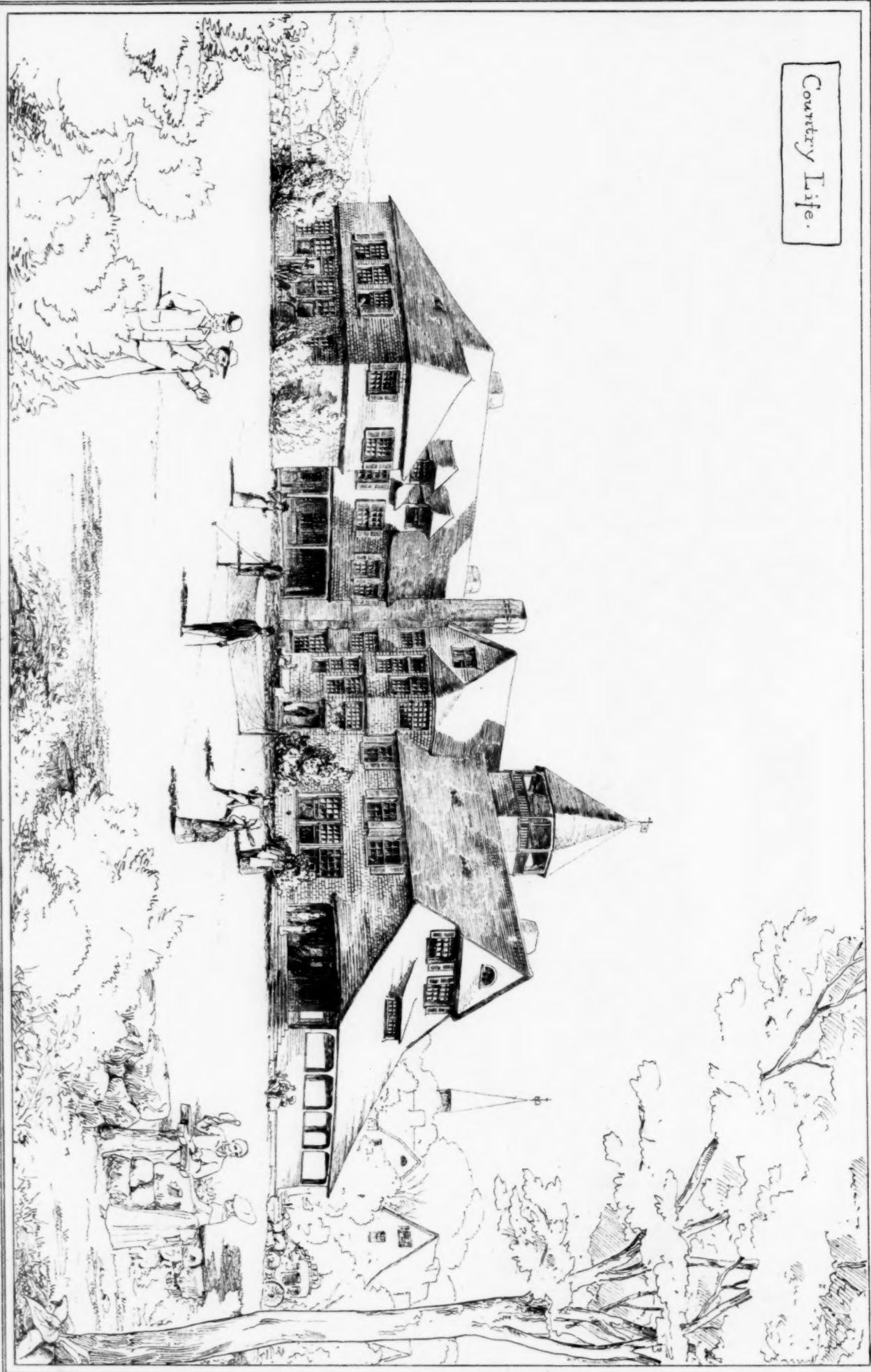
Injunction to restrain Erection of Building—Contingent Injury.

An action was brought to restrain the building of a planing-mill and cotton-gin on the grounds that the proposed use of the houses would expose the premises of the plaintiff to increased risks by fire, and that the noise of the machinery would render his house unfit for a residence. The writ was denied, and the plaintiff appealed. In deciding this case, *Dorsey vs. Allen*, the Supreme Court of North Carolina, in October, 1881, through Judge Smith, said: While it is true that a business lawful in itself may become so obnoxious to neighboring dwellings as to render their enjoyment uncomfortable, whether by smoke, noxious and offensive odors, noises or otherwise, and justify the protecting arm of the law, yet there must be the ascertained and not probable effects apprehended. When the anticipated injury is contingent and possible only, or the public benefit preponderates over the private inconvenience, the court will refrain from interfering. "When an injunction is asked," says a recent author, "to restrain the construction of works of such a nature that it is impossible for the court to know until they are completed and in operation whether they will or will not constitute a nuisance, the writ will be refused in the first instance." High on Injunc. §§ 488, 489, note 1. So, too, this extraordinary remedy of prevention will not be granted unless it shall appear that the aggrieved party has no adequate redress or reparation for his injury in an action or in a succession of actions for the recovery of damages. 2 Black, 545. "Where the injury is irreparable," declares Mr. Justice Story, "as where loss of health, loss of trade, destruction of the means of subsistence, or permanent ruin to property may or will ensue from the wrongful act or erection, in every such case, courts of equity will interfere by injunction in furtherance of justice and the violated rights of property." Eq. Jur. § 926. In like manner, Gaston, J., remarks delivering the opinion in *Barnes vs. Calhoun*, 2 Ired. Eq. 199: "But it (a court of equity) will only act in a case of necessity when the act sought to be prevented is not merely probable but undoubted, and it will be particularly cautious thus to interfere when the apprehended mischief is to follow from such establishments and erections as have a tendency to promote the public convenience." And see 5 Jones Eq. 57; 73 N. C. 232; 8 Ired. Eq. 115; Wood on Nuis. §§ 788, 789, 791, 792; 2 Dev. Eq. 38; 2 Jones Eq. 386.

H. E.

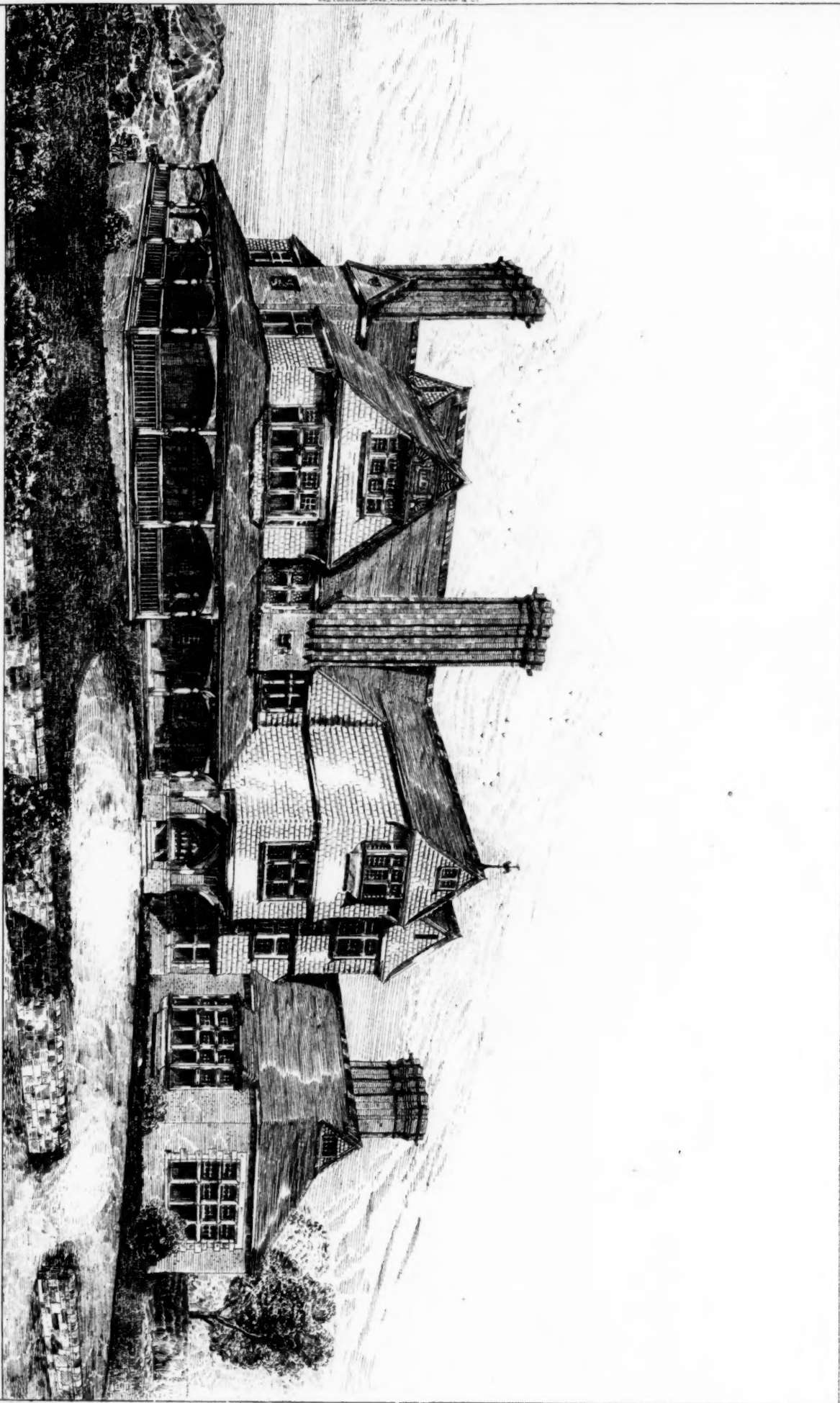


Country Life.



The Architectural Review of the 20th Century Edition.

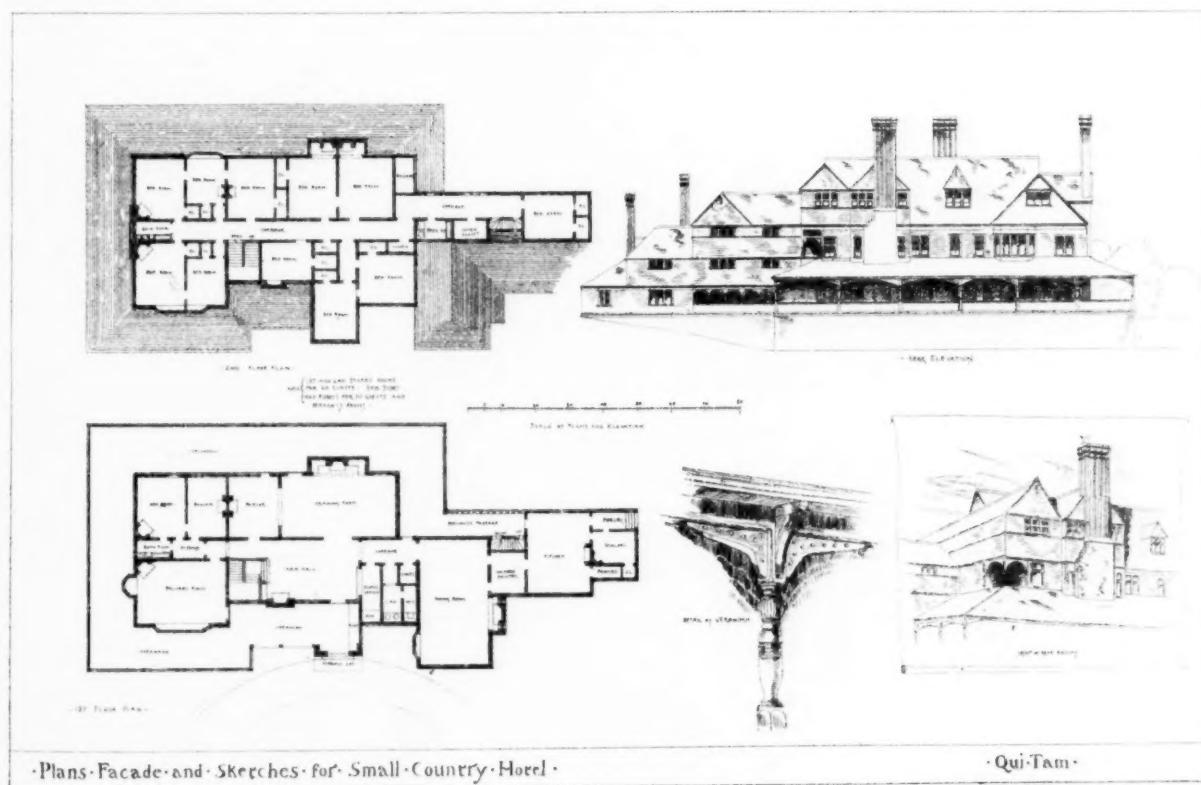
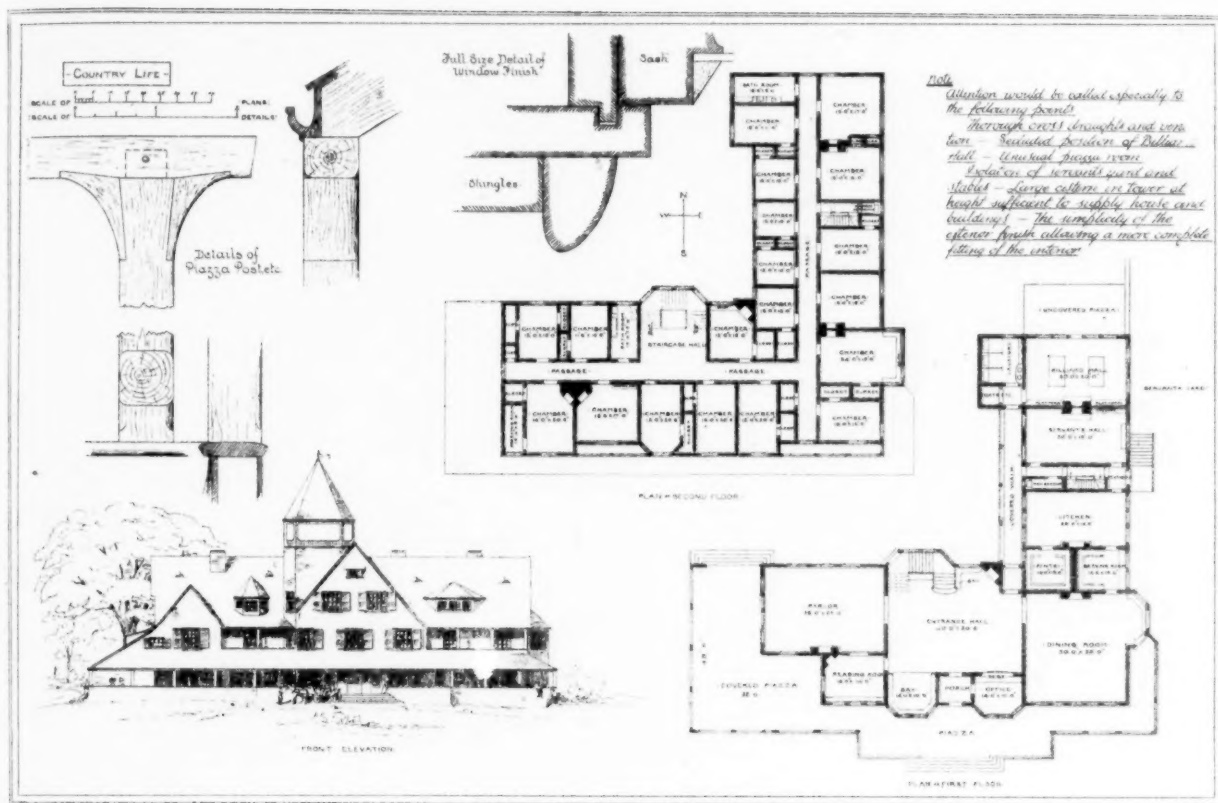
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•Perspective View •Small •County •Hotel •

•Qui •Tam •

The Architectural Drawing is the Property of the Architect



ON WALL AND WINDOW DECORATION IN DOMESTIC WORK.¹

THE large stationary surfaces presented by the floor, and to a still greater extent by the walls, of a room should be considered simply as the background of the furniture, pictures, and other portable objects to be permanently placed upon or against them.

In exact contradiction to the general practice, the less furnished a room is to be by these portable objects, the more pronounced may be the figures and color of the coverings to floor, wall and window. Where trained artistic taste, and corresponding means preside over the numerous appointments of floor, wall, table, cabinet, side-board or what-not in parlor, library, dining-room or morning-room, the wall of the billiard-room or bedroom will, as a rule, bear a more pronounced covering than those of the former, and the hall, or at least the upper hall, — for there is often an overflow of pictures and statues from the living rooms down stairs into the corridors on the same level — may be treated still more positively. This applies to elaboration of design — to demonstrativeness of figure: not to richness of fabric or color. The mistake generally made is in supposing that the two must necessarily go together.

A ceiling too, if designed by an artist and painted under his instructions by art-workmen may be considered a picture in itself, and will without danger to propriety, bear individualistic treatment, modified only, so far as the broad treatment is concerned, by the rank and importance of the room it surmounts; and, in matters of detail, by the chandeliers or other pendants which are to hang from it. It would be well worth while to start the foundations of a Sistine Chapel with single reference to the decoration of its ceiling by Michael Angelo; and where an abbess is fortunate enough to secure the services of a Correggio to decorate her walls, no one will doubt her taste and judgment if she not only accepts from his hand sham openings as lunettes to display the inimitable graces of his *putti*, but disposes everything else in the room simply as foils to them. Or if (to come to our own times) we can employ a Whistler to give us a peacock room or an Alma Tadema to duplicate the gold drawing-room in his own house, where not even one of his own canvases or one of Bourbadienne's bronzes — nothing but a narrow belt of diminutive ivory carvings, gleaming against an equally narrow background of ebony, and running around the room a few feet from the floor as a surbase, claims attention from top to bottom, and contends with the subdued splendor of its walls of beaten gold, we shall be well satisfied to dispense in at least one of our rooms with the ordinary results of the easel or the burin.

Similarly, where an interior wall, as in the mosque of Cordova is encrusted with precious stones, the whole surface becomes, as it were, a vast jewel, to be seen and admired by and for itself; and we might as well "gild refined gold or paint the lily" as use it for the ordinary hanging purposes of an inside wall. So with the mosaic wall-surfaces of some of the ancient Italian cathedrals, the exquisite mural spaces of the Alhambra or the marble traceries of some of the Indian palaces and tombs. If, too, one is the fortunate possessor of a set of genuine Gobelin tapestry of some really good period he will properly make his acquisition the be all and end all of wall-covering; for he will be apt to think it too precious even for *portière* or window curtain, as which the folds would hide and distort the design.

Again: The more pronounced in form and color the movable objects of an apartment may be, the more pronounced may be their background, and where they are designed and arranged with especial regard to luxury and splendor, the background may be worked up to high effects of general tone and, in some instances even its detail may be tolerably assertive without losing that character of subordination which is, or ought to be, a desideratum.

The background should also express those elements of repose homogeneity and continuity which are appropriate to the conception of wide, flat, immovable planes, and which are required to set off to the best advantage the individuality of the isolated objects — each having its own and generally dissimilar purpose to fulfil — which project from them. The repetition and monotony so undesirable in such objects, having any claim to high artistic expression, are what is wanted in their background; though not of course so applied as to give expression to, or even create suspicion of, these qualities, — *ars est celare artem* — for in practice the skilled ornamental designer finds that those designs for backgrounds to high-art foregrounds, if the expression may be allowed, which best pleases himself and the competent critic, are evolved as regards form by mechanical iteration over a large surface of free-hand figures in a small surface; and as regards color by the combination of such tints as harmonize into an approximate monotone. In speaking of foreground objects, I refer, of course, to the contents of a room used for domestic purposes, where the objects set against the walls are not only miscellaneous in

character, but comparatively sparse in number, leaving considerable spaces of intermittent surface uncovered. If a room or hall is to be used solely as a picture gallery, or to be shelved everywhere for the display of curios of any kind, as in a museum, there should be absolutely no attempt at wall-decoration unless in the shape of the simplest sort of frieze or surbase lines. Even if it were not intended to cover up the finished surface with pictures, the intermittent spaces should offer nothing to distract the eye from the contemplation and study of what the room is built for. Except therefore for a few lines at top and bottom forming a frame as it were to the room, the whole remaining wall should be finished in an unrelieved monotone of dark green, maroon, gray or some still more sombre neutral tint. But in a drawing-room or dining-room, cheerfulness and elegance should everywhere prevail; and the problem is not simply to secure the best background for works of art, but the much more difficult task of making the same material and pattern, on the same plane, serve the double purpose of background and decoration. Leaving out for the present the question of oil and fresco ornamentation, this is just where most wall-paper, when sought to be applied to high-class domestic decoration, fails. And where it necessarily fails — of maximum success at least — for the simple reason that in house decoration, with us — I suppose I may say always — the cart is put before the horse. The casket should be designed to fit the jewel, and not the jewel to fit the casket.

The truth is that the key-note to the general decoration of a room should be struck by the most precious work of art, large enough to arrest the eye on entrance, which it is intended shall be placed in it. Before he furnishes the designs for the surface decoration of any room, including its windows and doors, with their hangings, and sometimes its chimney finish, though occasionally the mantelpiece is itself to be the chief example of art appliance, the architect should know the contemplated *pièce de résistance* in the way of easel-painting, bronze or marble, array of ceramics or ivories or whatever else the artistic hobby of the owners may be; and every line and tint on floor, wall, and ceiling should be subservient to the production of its best aspect, for only thus can the important elements of balance and repose be secured as a foil to the salient features of the leading art-object.

Architects are indeed somewhat given to quoting various authors from Vitruvius to Owen Jones who insist that painting and sculpture as well as the minor arts should be used only as the handmaids of architecture. But this is true mainly as regards monumental structures devoted to the highest uses of ecclesiastical and civic life, or to the commemoration of the dead. It does not properly apply to the private house, and indeed under any circumstances it is a manifest absurdity that the statue into every line and curve of which the sculptor has wrought the riches of his brain and heart, or that the portrait, or historical scene, or *genre* painting which has absorbed the best powers of the master painter, should be killed by the black, vermilion, ultramarine blue, or emerald green of the frescoer's brush, or the stencilled stereotyped convolutions of the paper-hanger. If one is listening to a solo from a Lind or a Mario, it is an impertinence to have it drowned by the frame-work music of the orchestra, though we may derive much pleasure and musical profit from the orchestra's harmonies without the solo.

But opportunity so favorable to the architect, in his finishing work of decoration and furnishing, as that of knowing from the start what works of high or minor art are finally to give tone to an apartment, has rarely, if ever, been afforded in this country hitherto. To build and decorate an apartment with special reference to the disposal of the isolated work of high art, or the groups of artistic objects which are to be its most precious deposit is not very common even in Europe, where inherited taste, combined with large permanent means, is a not infrequent result of the institutions of primogeniture and entail, which more or less prevail there. The alternative that suggests itself in the exigencies of providing means for successful decoration and furnishing is of course to systematize the field into grades, and to endeavor to strike the average taste of each grade with a well-designed stock in hand. But it is by no means an easy task to accomplish even this much in a community where so many fortunes are made and lost within a decade, where the cultivation of artistic taste is so often necessarily sporadic and broken, and where the land-owner or speculative builder throws up a block of fifty "first-class houses," each for hire to the first comer who can furnish security for one or three or five years' rent; — each with precisely the same "brownstone front" that prevails in a hundred other contiguous blocks; each distinguishable from all the others in the same block only by the number affixed somewhere about the doorway, and generally in a manner so poorly contrived that the figures are useless at night; each having the same pane of glass in the pannelled vestibule-door, the same tiles in the hall, the same "black-walnut staircase," with the same machine-made newel-post, balusters and handrail, the same "elegant plaster cornice," with the frieze belt running under it, and doing duty as wall decoration, laid on with the self-same stencil from the self-same paint pot; — everything so exactly alike that the preoccupied resident of any one of the next half-dozen houses, mechanically mounting the steps with their fac-simile iron rail or stone balustrade, and using his fac-simile latch-key in the fac-simile lock may well be excused if he reaches the second or third story, and finds himself in a bedroom the slightly dissimilar furniture of which only at last convinces him that it is not his own.

¹ A paper by A. J. Bloor, F. A. I. A., read at the last Convention of the American Institute of Architects.

So far at least as relates to the higher grades of ready-made work for wall-decoration in the market one can hardly avoid the conclusion that the problem of striking average needs in an artistically satisfactory way is a hard one. One finds much that is commendable — *per se* — many admirable selections of form and arrangements of color, much that is altogether creditable to artists with no responsibility beyond the production of their own speciality, much indeed that, if the key-figure employed were disencumbered of its replicates and were cut out by itself and hung up on a wall, framed in an appropriate edging or margin would really form a better article of decoration than many a chromo, or original canvas worse than a chromo, likely to be placed on it in the parlor of the average well-to-do householder. One finds a good many samples of paper that might safely be relegated, without the individual oversight of the architect or artistically trained owner, to the hallway and staircase of the stereotyped city house, or the bedroom of the average country cottage, but one does not see many available, whether with reference to forms or tints, as a safe average paper for an aesthetically furnished room of high class. There is, indeed, a limited supply of what are called the Morris papers, the product of and named after one of the partners of an art firm in England, to which the world of taste in Great Britain, and to some degree in this country, is greatly indebted. In this unique establishment poets, painters, and architects of national reputation have combined their genius, judgment and thrift, opened a warehouse and workshops, and furnishing subordinates with designs of their own, trained them to supply the ordinary market with such furniture, upholstery, stained-glass, tiling, etc., as were before accessible only to the very wealthy. But though the thorough decorator and furnisher must (conscientiously to perform his duty of harmoniously combining in the desired result all the factors to which, probably, only himself holds the clue) in most instances, resort to a seemingly ungracious repression in the sub-decorator of that artist instinct which naturally, and so far as he is concerned rightly, leads the latter to consider his specialty as the most important of all and to give the freest play to his observation and imagination in elaborating the expression of his conceptions, there are now and then occasions when the products of the paper-hanging designer's uncurbed imagination might be employed to advantage.

The fashion in what is called high-class wall-papering has for several years been set as follows: The height of the room is partitioned into three spaces, each being covered with a different pattern: that next the floor, called the dado, rising generally to a height of three or four feet, that next the ceiling (sometimes in a high room nearly as wide as the dado) taking the place of the frieze member of an entablature and having the same name, while the space between, occupying most of the surface, is reserved for pictures, hanging cabinets, and notably, during the current craze, for more or less — quite frequently less — attractive specimens of pottery.

The third and middle division answers to what painters call the eye line, and this, with its contiguous space above and below, is of course the most desirable as hanging-surface, while the topmost space on the wall, though inferior for such a purpose, is still good enough for display of some sort. The same may be said in some degree of the bottom compartment, though that is liable to be hidden more or less temporarily by furniture set against it.

On the whole therefore the tripartite theory of domestic wall-decoration may be adjudged a correct one, based as it is on the assumption that the middle space will be used only or chiefly as a background for portable works of high art, or of minor art that is consecrated, in most people's eyes, by the reigning mode; and that the top space will be covered with something sufficiently large in design and well defined in execution to be conveniently seen from below, while both it and the third and lowest space are each according to its rank — the top space being the more important of the two — made sufficiently ornate to carry out the general motive of decoration, and sufficiently interesting to repay examination such as can be afforded from the superior claims of the objects on or near the range of the eye. Yet the system is so liable to misconception, and the results so unsatisfactory in incompetent hands, that it would be better, perhaps, to advise the amateur to stick to the old plan of one pattern in the whole height. As it is now, one constantly sees the three compartments covered with paper, all equally positive and demonstrative, though of three different patterns, and all equally unmeaning, on the only artistic theory of their use, according to which — to summarize what has already been argued or implied in detail — the main or central division should form a background, small and apparently indefinite in figure and unobtrusive in color, however rich in the general effect and however beautiful and eye-filling when examined at close quarters. The dado's colors would also be neutral, but darker, as more appropriate to the idea of strength that belongs to its basilar position, and its figures considerably larger and somewhat more salient — though the impression of subordination and repression in relation to the furniture in front of, and the pictures or what-not above it should be sufficiently emphasized — while the crowning member of the trio, the frieze, should be both lighter in tint and suggestive at once of the examples of high art beneath it, and of its own inferiority of material and of position for seeing purposes.

As regards the dado especially, the architect whose accountability embraces not only the aesthetic effect of a piece of wall-paper but the utilitarian uses of it, no less than of the rough trench-embedded foot-stone, on which the base of the wall it covers rests, will find it

difficult, notwithstanding the beauty of some of the English designs, to encourage the use of paper for dados, except on the one ground of economy. A ground which properly insists on recognition, and which in this case may be easily entertained because the custom is more easily honored in the breach than in the observance — that is, by omitting the dado altogether and carrying the main hanging all the way down from frieze to skirting board. Moreover, the paper dados offer a great temptation to the contriver of shams, and is very frequently exemplified in a flagrant imitation of the wooden wainscot so often employed on the lower wall-space of a room; and it is on the whole therefore to be even less commended to the amateur decorator, than the frieze compartment. Indeed it is to be said to the credit of French taste, which though not as apt to be so creative and strong in design, is, perhaps owing to its better training and more refined methods, a safer guide in art, and especially in minor art, than English taste — that it does not deal with the paper dado to anything like the extent that prevails among the English designers.

And this is especially the case with the latest importations from France in the shape of imitations of silk tapestry enlivened with gold and silver thread running through from side to side, and showing its gleaming fibre here and there. The importer's salesman mollifies the heated inquiries of the would-be fashionable lady, for the dado to match these French hangings, by volunteering the information that they "don't do much in dados with this style," because the paper is supposed to represent tapestry, hanging in folds from the frieze to the floor. But the answer is wide of the mark. Real tapestries when used to cover walls are very seldom now, though in old times they sometimes were, hung in folds, but are stretched out taut; and not only these latest-style French examples, but all our modern wall-papers are simply imitations of them, both as regards motive of design and manner of hanging. And real tapestries were and are more often finished above wooden wainscoting — or at least wooden surbase, supposing the main contents of the wainscot to be of stamped plaster or leather, or papier maché — than carried down to the base course, or the floor of the room.

It would be folly to subject to the risks of transportation the large pictures, or costly statues of their town, or permanent country quarters for the purpose of decorating the walls of a secluded temporary retreat by the seaside, or in the mountains. A wall-pocket or passe-partout, a photograph or engraving (or, at present, an old time kitchen plate or saucer), that drifts in during the current season is all that is likely to be hung on the transient walls. Yet if "shanty" or "box" is likely to remain in possession, and be used for a series of years, and if æsthetic tastes prevail in the family, they are not likely to be satisfied with the surfaces of the wooden frame of the seaside cot, be they planed never so smoothly, or with the "hard finish" of the shooting box, be it floated never so truly. The alternative in such cases is strictly permissible, on the severest code of wall-decoration. If the timbers, whether vertical or horizontal, which constitute the frame of the wooden "tent on the beach," and the siding which encloses it, are left exposed, — as they sometimes are in the neighborhood of Long Branch, and other watering places — it is easy to relieve the blankness and monotony by the application of some suitable body-color picked out with bright strong lines, more or less elaborated in black, white, vermillion or approximate tones.

The open frame-work and wide siding-joints which in the heats of July and August afford welcome entrance in the marine cottage to the ocean breeze (though on the other hand, when the sun beats down on the house in a dead calm one longs for the cooling interceptive coats of the old-fashioned plaster), would not be acceptable to the sportsman in his autumnal fastness; and here the paper-hanger's art may find employment relieved by trophies of the sportsman's skill — the head and antlers of the deer shot by himself in the adjacent woods or the boar's head brought from France or Germany — the rifle and the musket crossed together and slung in lieu of the fine mirror or painting, between the windows. Or better still than wall-paper, the last coat of plaster may be finished of somewhat rough texture and with some color of low neutral tint incorporated with it, and the taxidermist's work and the crossed weapons of the chase may be alternated with panels showing game-pieces either in fresco or in bronze or other metallic plaques.

Let us now glance at the subject of window decoration.

Trans-Atlantic travellers are familiar with the superb examples of stained glass presented in the windows of the cathedrals, and a few of the important secular buildings of the old world; and we are now called on to admire no mean rivals of their beauty in the recently placed windows of some of our own churches.

But if we examine the field of colored glass from the earliest examples formerly in St. Sophia, to that lately produced by the Morris Art Company, of London, if we study the records and illustrations of the art in the pages of its historians from Theophilus down to Winston, we find little — in view of the vast field open, we may indeed say we find really nothing, applicable in design to domestic work. The more the pity, for there is no appliance of æsthetic practice to the building of the dwelling-house which may be made to produce such brilliant decorative effects at so small an outlay of space and cost. The canopied saint, the Jesse window, the emblems of the Great Sacrifice, the conventional tower and column, though appropriate enough for the domestic oratory, are out of place in the dining-room or billiard-room: and even if the conventional renderings of fruit, and flower, and grain were not already appropriated

to the symbolizing of religious dogma or history, their stiff repetitive forms may well be varied and softened for the genial purposes of the drawing-room and chamber.

For purely domestic application on a moderate scale—unless we except some large staircase window—we will find it advantageous to resort to the methods of the thirteenth and fourteenth centuries, particularly in France, which were obviously studied with reference to the maximum production of light and color—in other words, of transparency and brilliancy—attained by the use of strong, positive tints, with little or no shading, and bounded by strong, disengaged black lines, rather than to the subdued tone and harmonious blending of shade lines, gained by the plentiful use of enamel and other contrivances, which mark the early work of the Byzantine and Limogian artists in colored glass, and which those of the fifteenth century endeavored by other methods—by futile attempts, in short, to treat glass as canvas—to reproduce. The “dim, religious light” that filtered solemnly through the semi-opaque masses of the immense eastern window of the mediæval cathedral, and shimmering down on the sacred symbols of the altar swept softly forward to mingle with the subdued tints from aisle window and clerestory, as they touched the bowed heads of the kneeling worshippers, exactly suited their frame of mind; but the few small panes in the upper sash of a “Queen Anne,” or “colonial” window should have only opacity enough to intercept and soften the direct rays of the sun. Let the wholesome beams of the great life-preserver penetrate every corner of the rooms dedicated to the daily use of the family, and purify the sleeping chambers for the next night’s use. What the designer and manipulator should strive for in the glass decoration of a small house-casement should be light, transparency, brilliancy, iridescence. Hand-painting, though essential where specific design and not mere mass of parti-color is to be attained, should be resorted to as sparingly as is consistent with a faithful rendering of the design; for the strong black lines—seldom less than a quarter of an inch thick—formed by the leaden bars which enclose and bind together the various pieces of glass, form an approximately sufficient foil to the colors, if properly conceived and handled. Every time the stencil, or in finer work the hair-pencil, of the manipulator touches the glass, the deposit detracts from its value as a translucent medium of light. In a drawing-room or boudoir it may sometimes be desirable to introduce a single sheet, medallion, or piece of any other desired shape, having its subject treated in soft middle tints, as if the vehicle were paper or canvas (though it will be found that such a piece will look much better against the subdued reflected light that serves an interior sash-door or window than against the full garish outside light). But a safe rule for the small outer window of a house is that the decorative panes in it shall be treated rather as a mosaic of colored glass and black bars than as a monotone picture. At certain intervals the bars should be used in greater profusion than the glass, as a foil to the latter, which, on the other hand, should be employed in very small pieces of the brightest ruby or other very rich color. There is, too, a rough, semi-opaque, pseudo-white glass, on the minute facets of which the light acts with those results of brilliant shifting color which one sees in the opal or in mother-of-pearl. An exceptionally lustrous effect is also produced by that transparent but somewhat cloudy glass which has slightly iridescent qualities, reminding one of the exquisite rainbow-hues seen in the Cernola glass-ware from Cyprus, in the Metropolitan Art Museum of New York. Scraps of these varieties of glass, judiciously set in an ample framework of the solid dark metal, present, when the sun strikes full against them, much the appearance of jewels, and greatly enhance the effects of illuminated color for which the design should strive.

I speak of the black bars forming the frame-work, not that they need necessarily be painted black. It is very often preferable to gild or silver or color them. This gives a rich finish to the metal and harmonizes well with the quasi opaque colors presented by the glass on the side opposite to that against which the light strikes. But whatever the actual surface of the bars may be, they will always, in contrast with the glass, appear black when looked at on the side opposite to that struck by the light, whether natural as in the day time, or artificial as at night.

Stained-glass has lately been produced which quite supplies the desideratum, so long felt, for vivid gem-like spots emphasizing the general ground-work. Indeed they are inserted in and project from their lower-toned surface like the veritable rubies and emeralds of some exquisite jewel, while they are at the same time transfused and homogeneous with their surroundings.

Besides this the experiments now going on seem in a fair way to meet another desideratum in glass-staining, throughout its historical period—that is, in the ability to dispense altogether with the deadening and deteriorating brown enamel heretofore used for outlining and shading, and to replace pencil lines with filaments of actual glass of different degrees of color density—but always luminous density—so interfused with the ground-work that the whole picture forms an ensemble bearing about the same relation to ordinary colored glass that the Madonna of a master does to its reproduction as a colored lithograph.

THE ERIE BASIN DRY DOCK—The dry dock in the Erie basin, the largest one in America, and one of the largest in the world, is nearly completed. It is 625 feet long, and has a capacity sufficient to take in any merchant vessel afloat. The gates shut in a composition of india-rubber and tar, and the dock becomes so nearly water-tight that a small hand-pump will keep it free from water.

“RESTORING” THE TOWER.



IT may safely be said that no city in the world possesses a monument equal in historic interest to the Tower of London. For 800 years, as palace, fortress and prison, it has been continuously inhabited. Recent discoveries have justified the ancient tradition that on this same site there stood an important Roman fortification, and the fact stands proved that important Roman works occupied the spot for a thousand years or more before Gundulf, the weeping monk of Bec, in Normandy, whom the Conqueror summoned to

act as his builder, laid one stone of the great White Tower on another. Gundulf was said to have tempered his cement with the blood of beasts, and to have watered with his tears the theatre of so many future tragedies. Probably he pounded up the old red tiles and bricks of the Romans, and so gave to his mortar the red color which the common folk regarded with so much awe.

Successive kings, notably William Rufus, who “pilled and shaved the people with tribute especially to spend about the Tower of London and the Great Hall at Westminster,” and Henry III, the first deviser of a Thames Embankment, added to the Tower of London—not without many murmurings on the part of their subjects, who saw in the Tower a standing menace to their liberties.

In the sixteenth century the Tower of London, with its outer and inner ballium, the great keep of the White Tower, and the grim portal of the Traitor’s Gate, must have been looked upon from the river as a most imposing monument of the feudal system. Unhappily under the Stuarts and their successor, the glories of the Tower were suffered to decay. On the south side the inner wall with the Lantern Tower became ruins, and during the latter part of the last century their place was filled by a huge and hideous brick building with all the unwieldy ugliness of a Thames Street warehouse, by which the view of the Tower from the river was effectually blotted out.

During the last twenty-five years better judgment and better taste have been shown in the treatment of this great standing record of the history of England. The Prince Consort was one of the first to take an active interest in the antiquities and beauties of the place. Mr. Salvin, who died last year, and who only a short time before his death visited the Tower in order to see the work that had been done and the discoveries that had been made at the Cradle Tower, was called in as consulting architect. Under his advice the Chapel of St. John in the White Tower was restored, and is now perhaps the finest specimen of Norman architecture in the kingdom, and the ruinous tumble-down Warders’ quarters were replaced by appropriate buildings in the style of the Tudors. For some time, owing to the pressure of work in other directions, little was done beyond mere maintenance and repair. Six years ago, however, the work of restoration was actively begun again. The Chapel of St. Peter ad Vincula, the burial-place of Queen Anne Boleyn, with the other illustrious victims of royal displeasure or political necessity down to the time of the Jacobite Lords of the ‘45, had fallen into a most discreditable state of decay. The interior was choked by the ugliest of modern galleries, with tall unsightly pews; a sinking of the pavement of the altar was becoming more and more apparent, and it became necessary to take immediate steps to prevent the whole building from falling into ruins. When this chapel had been repaired and purged of the monstrosities by which it was defiled, the next work of importance to be undertaken was the restoration of the outer wall on the south or river side, together with the Well and Cradle Towers. This has now been done, and in the mean time certain mean buildings on the east side of the White Tower, which were used by the Royal Engineers as stores, showed such unmistakable signs of an immediate intention of falling in bodily that they had to be swept away. On that side, therefore, the White Tower is unmasked and clear as it was erected by Gundulf. It was in course of this removal that the Roman remains, to which allusion has been made in the early part of this paper, were discovered. At the same time the dirty slums known as the Irish Barracks were cleared away, and the space between the inner and outer fortifications on the eastern side being thrown open the Salt and Broad-Arrow Towers stand fully revealed.

The great work of all, however, remains. The Tower of London is still screened from the Thames by the great warehouse of which mention has been made. Fortunately, there is a prospect that a remedy will be found for the eclipse. An arrangement has at last been come to between the Secretary of State for War and the First Commissioner of Works, by which the former will give up the warehouse, which is no longer required by the War Department, and the upper stories of which are so rotten and of such flimsy construction that no bulky goods can be stored there. The First Commissioner of Works on his part will remove these buildings, and then proposes to complete the restoration of the inner wall of the Tower and the Lantern Tower, of which, no doubt, the foundations will be found

beneath the warehouse. The whole circle of the Tower of London will thus again reappear, and the Central Tower will stand out, unincumbered by other buildings, in all its pristine grandeur. Ample authorities exist for the restoration, and though it is impossible to give back the very stones, it is easy to reconstruct an exact and authentic presentment of the old fortress as it stood in those days. Careful drawings have been prepared at the Office of Works, together with models of the Tower as it is and as it will be when the work is accomplished, and these have received the approval of some of the chief authorities on archaeology and architecture. Nor need the public fear lest they should be "pilled and shaved" for the purpose, as their forbears were by William Rufus, for the total cost of the work is only estimated at about £6,500, of which some £2,000 or more will be recouped to the exchequer by the sale of the old materials of the storehouse. — *London Times*.

THE WHITE HOUSE PLUMBING.

NEWPORT, R. I., March 13, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

LAST fall I re-arranged the interior drainage of the important parts of the Executive Mansion in Washington. Somewhat later, the work was described and illustrated in the *Sanitary Engineer*, and its editor expressed the opinion that, while the work was not what he should advise in a new house, it was the best that could be done under the circumstances, and was safe from a sanitary point of view. In the *Sanitary Engineer* for February 23, L. E. Miller, of Salem, says: "Although you state the work is in a safe sanitary condition, still, from the general tenor of your remarks, you were not at all satisfied with the arrangements that have been made." He emphasizes the importance of this work as an example to the country, and asks that the defects be pointed out. If the work is safe, he thinks that some modern requirements (of Boards of Health) are unnecessary. As there are some unventilated traps and "dead ends" in it, he thinks that some of the requirements of the health authorities might be modified, or the work should be condemned. He also thinks that work on the residence of the President should be "of the most thorough, safe, and substantial character."

The editor in reply says, substantially, that he said the house was safe for the President to live in—he thought so then and thinks so now, but that further alterations were needed in connection with the sewer and main brick drain—had the work not been of a temporary character, and had the position of the fixtures made it practicable, he would have expressed his preference for "properly ventilated siphon traps, as well as for changes in other details." "In temporary repairs of old buildings . . . compromises have to be made, and this White House work in our judgment comes under the latter head."

Not satisfied with the ambiguous position in which this discussion left me as the responsible author of the work, I sent to the paper a short explanation of the theory on which I had done that which was criticised. The editor prefers not to open up a discussion on some of the points involved at the present time. In the mean time, I am assumed to have been guilty of make-shift work in a house where, if anywhere in the country, the most conscientious thoroughness was demanded.

Will you kindly allow me to say now what your colleague would be glad to have me say later?

I cannot consent to the possible suspicion in the minds of those who do not know the circumstances, that in so important a duty as the remodelling of the drainage of the White House, even for temporary occupancy, I have failed to comply with what I believe to be the best sanitary requirements of such work. It is therefore necessary for me to say that:

1. The ventilation of traps, so urgently advocated, is, in my opinion, not only unnecessary for the protection of the traps (when the soil-pipe is properly ventilated), but is, aside from its cost, objectionable as complicating the work, and as increasing the amount of lead pipe to be used.

2. That the short "dead ends" in the White House work, arranged as they are, and thoroughly flushed as they are, are entirely unobjectionable.

3. If I had been unhampered by the injunction to work as economically as possible, and by conditions of the building which could not be changed, I should not have cared to make the new work in any essential particular different from what it is. With any other than a temporary purpose in view, I should have extended the change to the sewers and drains outside the house. G. E. WARING, JR.

INCREASING THE APPARENT HEIGHT OF A ROOM.

MILFORD, MASS., March 6, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I have a question that has been asked me by a client and I have given my opinion. Other parties on the work hold a different view. Will you please give us your opinion? The question is this: Should the stucco cornice of a room be carried out on the ceiling, or down on the wall, to increase its height apparently? Please answer in the next issue of the *American Architect and Building News*, and oblige

Yours respectfully,

FRED SWASEY.

[To increase the apparent height of the room, the cornice should come down only a small distance on the wall, and extend out on the ceiling.—EDS. AMERICAN ARCHITECT.]

THE TESTS OF POROUS TERRA-COTTA.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In your paper of January 21st, 1882, some references to the judges' report of the late test of fire-proof materials are apparently unjust.

The judges made a thorough examination of "the result of the public trial"—dissecting the remains left by the fire, removing the covering materials, and noting the condition of the constructive iron and wood work, which they were designed to protect. Messrs. Damrell and Shaw were not notified in time to be present when the test fire was burning, and had they been, could only have seen this evidence of the fact that the materials were subjected to intense heat. This, the condition of the materials after the fire, clearly indicated, confirming the statements made by Chief Engineer Green, who was present. These details were given in Mr. Kidder's report, to which they referred.

In their examination they criticised some defects in the practical applications of material, which permitted the partial destruction of portions of the wood-work, protected by the terra-cotta and wire lath.

After examining the remains of the public test, they took samples of the materials therein tested, and made personal tests, intending to make a just report of the relative values of these materials.

Setting as the standard for perfect material, the power to successfully resist disintegration by the action of fire, water, and frost, they thoroughly tested these materials, and found but one among them that could evidently be made to possess all these qualities. This fact they stated.

Defects discovered in other materials might have been detailed, but they preferred to pass them over in silence. It was expected then that means would be immediately provided for making another public test, in which a correction of some of the constructive defects in the first would secure a more perfect protection, and confirm as true all and more than they were then willing to report in favor of the methods and materials presented for competitive test.

Mr. Atkinson's absence and his inability to devote the time taken by his associates to investigate the results and test the material, was unfortunate, and the just sentiment which made it proper to draw attention to the fact that he declined to sign the report, will, perhaps, justify this attempt to call attention to the means, and time, and care taken by the other judges to fulfil their duty. The report, as the result of intelligent investigation by men whose experience and observation during many years of service, as the head of the Fire and Building Departments of Boston, entitles them and their report to attention. Very truly yours,

S. E. LORING.

BOOKS.

ST. LOUIS, MO., March 10, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Would you or some of your readers be kind enough to inform me through the columns of your valuable paper, the name of some book or journal that will teach all the particulars of plumbing and sewerage of public and private buildings in all its various branches; giving all the latest styles of water-closets, bath-tubs, wash-stands, cocks, etc., and their respective description, and treating principally of the practical arrangements of plumbing and sewerage of buildings; also a good book to teach perspective drawing? An early answer will much oblige.

A. B. DRAUGHTSMAN.

[Buy Bayles's "Water-Supply and House-Drainage," and subscribe for the *Sanitary Engineer*, 40 William St., New York. The best treatise on Perspective in English is that by Professor W. R. Ware, which appeared in our columns in 1878, and is soon to be published in book form.—EDS. AMERICAN ARCHITECT.]

TRAVELLING EXPENSES.

SAVANNAH, GA., March 6, 1882.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Will you be so kind as to inform me in your next issue, the customary practice of the profession in the following or similar cases? When an architect is engaged to design and superintend the erection of any building situated any distance from the city where he resides and practises, whether it is 5 or 500 miles, and agrees to be compensated according to the schedule of prices set forth by the American Institute of Architects, is he or is he not entitled to charge the cost of travelling expenses; also for time spent in travel in excess of the 5 per cent?

Again, when the client, for reasons of his own, employs a superintendent subject to architect's orders, is not the architect entitled to 5 per cent for full professional services, when no agreement for less than 5 per cent was made in consequence of employment of superintendent, although, the fact of the competency of the superintendent renders the frequency of the architect's visits not as necessary as if there had been no superintendent employed? C.

[The custom among architects everywhere is to charge for actual travelling expenses in addition to their regular commission. An additional charge for time spent in travelling to work at a distance is very often made by previous agreement of the parties, but is, we think, left by the Schedule for settlement in that way, instead of according to any fixed rule.

The architect's compensation is always understood to be exclusive of the salary of a clerk of the works, or local superintendent, who is, or should be, employed by the client in every important construction to watch the details of the work under the direction of the architect.—EDS. AMERICAN ARCHITECT.]

NOTES AND CLIPPINGS.

EARLY INTIMATIONS OF THE TELEGRAPH.—From some correspondence between the Abbé Barthelemy, who in the latter part of the eighteenth century was a curator in the Royal Library at Paris, and Mme. du Deffand, recently published, it would appear that the Abbé anticipated the invention, or rather the practical application eighty years afterwards, of the electric telegraph. Writing from the Duc de Choiseul's seat in the country to Mme. du Deffand, then in Paris, he seeks to excuse himself for not having let her have a letter which she had been expecting by saying that he has been engaged by some interesting experiments in physics. The passage is sufficiently remarkable to be worth quoting: "We are told that if you take two clocks the hands of which are both magnetic in the same degree, and move the hands of one, the hands of the other will follow the same direction: so that when you make one clock strike 12, the other will do the same. Supposing that these artificial magnets can be perfected so that their force will extend from here to Paris, you must have one of these clocks, and we will have another, substituting the letters of the alphabet for the hours on their faces. At an agreed hour each day we will move the hands, and your secretary will put the letters together and read out our message. The process might be simplified by making the needle (hand of the clock) strike a bell to announce that the oracle is about to speak. There is really no limit to the possible application of this process." Mme. du Deffand, evidently, did not put much faith in her correspondent's scientific genius; for in her reply she satirically observes that it would no doubt "be a very convenient invention for people who are too lazy to write."—*Philadelphia Telegraph*.

THE PRINCE OF CONDE'S STABLE AT CHANTILLY.—In Chantilly are the remains of what was once the most magnificent palace in France, with the celebrated stables of the Prince de Condé. The palace was one of the finest residences in Europe, but the Château d'Enghien, the Château Bourbon, and the Tennis Court are all that remain of that pile of buildings once so superb and so much admired. The stables, the most elegant and commodious in Europe, suffered little at the time of the Revolution; very few of the sculptured ornaments were injured by the destructive mob; they were all illustrative of subjects of the chase, but the greater number were placed high up out of reach, and thus escaped the fury and rough treatment of the people, who, while respecting the sculptured boars, stags, horses, and dogs, made sad havoc of all the ensigns of royalty and power. The shields and armorial bearings then destroyed have been replaced, but not so the famous leaden statue which surmounted the dome. It was thrown down and cast into bullets. This fine building contains stables, kennels, coach-houses, and a riding-school. The first are truly magnificent. Over the centre rises a circular dome with a gallery round its base at a great height from the ground, into which open the grooms' apartments. On either side of this building runs the avenue of the stables, right and left in a straight line. On one side were the stalls of eighty English hunters, all carefully and cleanly groomed; on the other sixty carriage-horses from Flanders. When the allied sovereigns were in Paris after the fall of Napoleon they visited the Prince de Condé at Chantilly. The Prince had the centre hung with curtains, so as to shut out all sight of the horses, and otherwise ornamented it. Therein he entertained the sovereigns at a sumptuous banquet. After dinner the Emperor Alexander told Condé it was the finest banqueting room he had ever seen. The Prince replied that his Majesty was only in the midst of his stables and among his horses. The Emperor would not believe it. Condé gave a whistle: in an instant the curtains were drawn aside and displayed 140 horses standing in their stalls with a groom in livery at the head of each. The Emperor was as much astonished as he was gratified at this sight.—*Geneva Continental Times*.

PATENTS.—The prejudice concerning patents is curious. It exists in some professions and not in others. Physicians look with supreme contempt, almost with disgust, on patents relating to improvements in medicine or surgery. The office of every dentist is filled with patented devices, some of which lie almost at the foundation of modern dental surgery. Civil engineers look askance at all patented engineering systems and processes, and they regard with suspicion any member of their profession who seeks to secure to himself the advantage of his invention; mechanical engineers, on the other hand, almost without exception patent every slightest improvement or modification of the methods and processes of their own profession. It may not be a question of cause and effect; it may be only a coincidence; but it is certainly a fact that during the past twenty-five years progress in the general practice of dentistry has been far greater than has that in the practice of medicine; and to a far greater degree is it true that the progress of mechanical engineering, especially here in America, has been much more marked than has the progress of civil engineering. It is perhaps to be regretted that human nature is not so constituted as to find its strongest incentive for effort in a desire to benefit the human race at large and one's professional brethren in particular. But it is a fact which seems to be amply proven that the incentive of personal pecuniary interest is always stronger than the more laudable philanthropic motive. The best books are produced under the protection of copyright laws. The greatest mechanical progress is in those countries where protection by patent is most easily obtained and most safely secured. In literature and in the useful arts as well, great productions have generally been the work of men who have been quick to secure to themselves the possible future profit of their creations. While these considerations should lead to the encouragement rather than the discouragement of the taking out of patents, there is another consideration that should be allowed its due weight: all inventions are to become public property eventually, and the public have at least an anticipatory interest in them proportionate to their permanent value. It seems therefore on all accounts best that the comparatively few patented devices which are worth considering should not be withheld from public description for seventeen years because of the direct pecuniary interest of their inventors or proprietors.

EXPLOSION OF A COLD AND DRY BOILER.—A recent issue of the *Locomotive* says: The mere announcement of a boiler explosion has, perhaps, ceased to create any interest, from the frequency of their occurrence; but the explosion of a boiler which took place in the mill of Schumaker & Co., of Akron, Ohio, was of so unusual a character as to merit more than a passing notice. It was, in fact, a boiler explosion at a time when there was no steam pressure on, no water in, and no fire under it. The boiler, which is of the return-flue style, was built at Pittsburgh, and has a shell of about seventy-two inches diameter. The plates immediately over the furnace, either from excessive pressure of steam alone, or aided by the deposit of scale on their interior surfaces, which prevented the water from coming in contact with the iron, became considerably bulged outward, and it was while the workmen were engaged in cutting out these defective plates that the accident occurred. They had chipped an opening of several inches at the forward end of one of the sheets, when suddenly the after end tore apart with a tremendous noise; in fact, so loud was the report that the men engaged in the mill rushed to the door, exclaiming: "There goes another powder-mill" (one having exploded only a few days before in that vicinity), and it was several minutes before it was discovered that the rupture of the boiler had caused it. One of the men, who was in the act of chipping, and had his hand hold of the chisel which was wedged in the boiler, was so completely paralyzed on one side as to be unable to move, and he was conveyed home very ill. The rupture took place in one of the transverse seams of the boiler, tearing the solid iron between the rivets about one-sixteenth of an inch apart and over one foot in length. Philosophers and experts in engineering, who have been puzzling themselves and the public by their various theories of low water and no water, high pressure, superheated steam, electricity, galvanic action, unknown and combustible gases, etc., may here find a field for further speculation as to the cause of a boiler explosion in which there was neither steam, fire, nor water. The above account was lately forwarded to us by Chief Inspector A. C. Getchell, of the Cleveland, Ohio, office. At first we thought it somewhat resembled the story of the old lady's gun, "without lock, stock or barrel," which "went off" and killed some one who was fooling with it and "didn't know it was loaded," but the letter sent by Inspector Getchell explained the matter, and showed that it was produced by natural causes, the same as all boiler explosions are. It seems that the boiler had several sheets badly corrugated or buckled on the bottom, which brought a severe compressive strain on the flues, and consequently an equal tensile strain on the shell. The workmen were engaged in cutting out the damaged sheets, and when they had cut around about a foot, the great tensile strain on the shell, concentrated at the edges of the cut, tore the shell apart. The occurrence affords a good illustration of the fact that the strain caused by steam pressure is not always the greatest that a steam boiler is sometimes subjected to.—*Iron Age*.

MANUFACTURE OF TIN AND TERNE PLATES.—An improved arrangement for the manufacture of tin and terne plates has been suggested by Messrs. Trubshaw & Leyshon, of Llanely, England. They dispense with the vessel containing melted grease (called tinman's pan), the vessel containing melted tin or terne (tinman's pot), and with the soaking and dipping pot, commonly called the washman's pot. In place of the several vessels described, and the ordinary treatment therein of the plates to be coated, they employ a vessel of a special form, and carry on the process in a very simple manner. The pot or vessel is divided into two or more compartments, and they either employ tin or terne metal in all the compartments, or employ grease in one compartment and metal in the others. The compartment in which the plates to be coated are first treated is divided by a partition extending from the top to such a distance downward that its lower edge is always below the surface of the melted metal. This compartment contains tin or terne metal, and the surface of the metal on the outer side of the division is covered with a layer of rosin and tallow or other flux. On the surface of the metal, on the inner side of the division referred to, is a layer of tallow or palm oil, and a cradle is fixed to raise the plates out of the metal, being afterward drawn through brushes fixed at a convenient height above the bath. The other compartment contains either tin or terne metal or grease, and an arrangement of plain iron or steel rolls. After the plate to be coated has been cleaned by the ordinary pickling process it is immersed in the outer portion of the first compartment; it passes through the grease or flux on the surface of the melted metal, and is then introduced into the other portion of the compartment by being passed beneath the partition dividing it. The coated plate is drawn from the melted metal in the inner portion of first compartment, and is passed into the second compartment containing metal or grease. The plate is directed so as to pass between the rolls contained therein, and on its removal requires only to be treated by the ordinary cleaning process. It is claimed that by this invention the manufacture of tin and terne plates is simplified, labor economized, and the injury to the plates, which frequently results in the ordinary method of manufacture from the long exposure of the plates to the action of the melted metal, is avoided.—*Iron Age*.

PAINTED OAK PANELLING AT WESTMINSTER ABBEY.—In the course of repairs now going on in the monastic buildings of Westminster Abbey, the canvas lining of one of the rooms was stripped off and a fine oak panelling was found behind it; and behind the panelling appeared a well-designed wall-painting of the time of Henry VIII. The discovery is an interesting one, as English wall-paintings of that date are very rare.

THE ELECTRIC-LIGHT IN FRENCH LIGHT-HOUSES.—The entire French coast is about to be lighted by electricity, which as far back as 1875 was employed in the light-houses near Havre. It is now thought that the development of the new system warrants its general use on the French coast. Forty-two light-houses are to be provided with electric-lights and with steam-trumpets for fog-signals, at a first cost of about \$1,500,000 and an annual expenditure of about \$80,000 for maintenance.

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.]

- 251,460. PIPE-WRENCH. — Matthew T. Chapman, Aurora, Ill.
 251,467. SAW-SET. — John M. Draper, Philadelphia, Pa.
 251,475. FILTER. — Jott Grant, Boston, Mass.
 251,481. LATHES FOR TURNING IRREGULAR FORMS. — William S. Huntington, Brooklyn, N. Y.
 251,489. FOUNDATION-BLOCK FOR BUILDINGS. — Matthew R. Marks, Orlando, Fla.
 251,491. FILTER. — John P. McPherson, Boston, Mass.
 251,493. EVAPORATOR FOR REGISTERS. — John F. Meyer, Baltimore, Md.
 251,496. HOISTING-MACHINE. — Frank Murgatroyd, Cleveland, Ohio.
 251,507. WRENCH. — George P. Schneider, Cleveland, Ohio.
 251,510. SASH-HOLDER. — Jacob G. Slater, Wyandotte, Kan.
 251,521. STONE-CUTTING TOOL. — John Warren, Boston, Mass.
 251,525. BRICK-MACHINE. — William Woodward and Abel B. Woodward, Nashville, Tenn.
 251,542. VARIABLE BENCH-PLANE. — Amos Fales, Denver, Col.
 251,533. AUTOMATIC FIRE-ALARM. — Isidor Kitzee, Cincinnati, Ohio.
 251,560. FIRE-EXTINGUISHING COMPOUND. — Michael Mathes, Jersey City, N. J.
 251,561. WINDOW-SCREEN. — Silas Mead, Newark, N. J.
 251,538. WOOD-BENDING MACHINE. — George H. Preston, Shortsville, N. Y.
 251,605. DOOR-HANGER. — Charles W. Bullard, Chicago, Ill.
 251,606. ILLUMINATING GRATING. — Thaddeus Hyatt, New York, N. Y.
 251,608. DRIP-TRAY FOR WATER-CLOSETS. — Henry S. Lord and Robert E. Day, Hartford, Conn.
 251,694. DOOR-STRIP. — Clarence E. Rice, Sedgewick, Kan.
 251,697. MACHINE FOR MAKING LEAD TRAPS. — John Robertson, Brooklyn, N. Y.
 251,717. EXIT FROM THEATRES. — John H. Smith, Buffalo, N. Y.
 251,733. MORTISING-CHISEL. — George R. Valentine, New Bedford, Mass.

SUMMARY OF THE WEEK.

Baltimore.

- BUILDING PERMITS.**—Since our last report thirty-seven permits have been granted, of which the more important are as follows:—
 Chas. D. Blake, 2 three-sty dwells., Biddle St., bet. Charles and St. Paul Sts.
 J. G. Uhlenberg, 2 three-sty brick buildings, Nos. 293 and 295 Bond St., bet. Lancaster and Aliceanna Sts.
 Randolph Barnard, three-sty brick building, No. 22 Myrtle Ave., bet. George and Greenwillow Sts.
 John Fox, 8 three-sty brick buildings, Division St., bet. Bloom and Prentiss Sts.
 James Musgrave, three-sty brick factory, 30' x 69', No. 103 Front St., bet. Gay and Hillen Sts.
 Geo. Kamps, two-sty brick building, in rear of No. 51 Stiles St., bet. Gough and Exeter Sts.
 Gerhardt Lebbelosen, three-sty brick building, Fort Ave., bet. Andre and Stewart Sts.
 Mrs. Mary Brown, three-sty brick building, No. 211 Frederick Ave., near City Limits.
 J. A. Schulte, three-sty brick building, n e cor. Paca and West Sts.
 Jos. and B. L. Harig, 4 three-sty brick buildings, commencing at s w cor. Hanover and Conway Sts., fronting on Hanover St.
 Jos. and B. L. Harig, 4 three-sty brick buildings, Conway St., commencing 72' w of Hanover St.
 H. E. Baltzell, three-sty brick building, n w cor. Dolphin St. and Mt. Royal Ave.

Boston.

- BUILDING PERMITS.**—*Brick.*—Berkeley St., No. 119, cor. Cortes St., Ward 11, for Edwin B. Horn, family hotel, 21' x 75', five-sty; Sampson, Clark & Co., builders.
Stanhope St., Ward 11, for N. E. Weston Electric-Light Company, electric-light station, 45' and 78' x 79' and 109', three-sty; Augustus Lothrop, builder.
Keyes St., Ward 23, for Jamaica Plain Gas-Light Company, office, work-rooms, etc., 21' and 36' 6" x 68' 6"; Nelson Curtis, builder.
Keyes St., Ward 23, for Jamaica Plain Gas-Light Company, purifying-house, 33' x 69' 6"; Nelson Curtis, builder.
Keyes St., Ward 23, for Jamaica Plain Gas-Light Company, retort-house, 33' x 73' 6"; Nelson Curtis, builder.
Albion St., near Blue Hill Ave., Ward 21, for Silas Potter, 2 dwells., 21' 6" x 36', three-sty; ell, 15' 4" x 19' 9"; also, 3 dwells., 21' x 36', three-sty; ell, 15' 3" x 19' 9"; Sampson, Clark & Co., builders.
Shawmut Ave., Nos. 708-10, Ward 19, for Shawmut Ave. Messiah Church, church, 33' x 45', one-sty hip.

- Medford St.*, near Quincy St., Ward 4, for Geo. H. Woods & Co., engine-room and boiler-house, 40' x 42'.
Wood.—West Cottage St., near Blue Hill Ave., Ward 20, for Amos D. Gould, dwell., 29' x 34', two-sty; Amos D. Gould, builder.
Unnamed Pl., from Jamaica St., Ward 23, for Melvin H. Ayres, dwell., 18' x 27', two-sty; Edward Lyons, builder.
West Sixth St., No. 68, Ward 13, for Stephen J. Maskell, dwell., 25' x 41', three-sty; P. Carroll, builder.
Hathorn Sq., No. 2, Ward 5, for N. Y. Brintnall, storage carriages, 20' x 60', two-sty.
Monument Ave., No. 13, Ward 5, for W. C. Murray, dwell., 20' x 43', three-sty; J. B. Wilson, builder.
Monument Ave., No. 9, Ward 5, for W. C. Murray, dwell., 20' 6" x 23' and 28'; J. B. Wilson, builder.
Monument Ave., No. 11, Ward 5, for W. C. Murray, dwell., 19' x 30'; J. B. Wilson, builder.
Burroughs St., near Centre St., Ward 23, for Paul Lincoln, 2 dwells., 22' x 41', two-sty mansard; ell, 10' 6" x 22'; Jos. Hammerlee, builder.
Lamar St., near Wynnan St., Ward 23, for Joseph Griffin, 2 dwells., 20' x 24'; Robert D. Ward, builder.
Wheatland Ave., near Washington St., Ward 21, for Lanvin A. Bumpus, dwell., 35' x 35' 2" x 40' 2", two-sty hip; Chas. Stinson & Co., builders.

Brooklyn.

- SCHOOL-HOUSES.**—The Board of Education is discussing the propriety of building a new school-house on York St., near Bridge, in place of School No. 7.
BUILDING PERMITS.—*Hewes St.*, Nos. 262 and 264, s s, bet. Harrison and Marcy Aves., 2 three-sty brownstone dwells.; owner, architect and builder, J. H. Hoffman, 257 Hewes St.
Quincy St., n s, 175' e Throop Ave., 3 two-sty brownstone dwells.; cost, \$3,500; owner and architect, A. E. De Baun, 510 Kent Ave.
Boerum St., No. 276, being 75' e Bushwick Ave., three-sty frame tenement; cost, \$1,000; owner, Jos. J. Froehlich, Stagg St.; architect, Th. Engelhardt; builders, W. Daffeldecker and C. Wieber.
Elbert St., s s, 100' e Bushwick Ave., two-sty frame dwell.; cost, \$2,000; owner, Henry Dornhoefer, 61 Cook St.; architect, Th. Engelhardt; builder, H. Loeffler.
Vignolia St., s s, 100' w Wyckoff St., two-sty frame store and dwell.; cost, \$2,800; owner, David Reif, 43 Bushwick Ave.; architect, S. Harbison; builder, J. Rueger.
Stuyvesant Ave., s w cor. Hart St., two-sty frame dwell.; cost, \$18,000; owner, H. B. Schermann, Pulaski St. and Lewis Ave.; architect, J. Hoffman; builders, Geo. Lehman and J. Rueger.
Union St., s s, and President St., n s, 243' e Fourth Ave., two-sty brownstone dwell.; cost, \$4,000; owners, W. & T. Corrigan, 233 Eleventh St.; architect and carpenter, Th. Corrigan; mason, Wm. Corrigan.
Adams St., 350' e Broadway, three-sty brick factory, cost, \$7,000; owner, A. Houliet, 335 Pulaski St.; architect, J. Platte; builders, G. Cutler and P. Johnson.
Sterling Pl., n s, 100' e Sixth Ave., two-sty brownstone dwell.; cost, \$6,000; owner, architect and builder, John Cunningham, 133 Sixth Ave.
Third Ave., e s 25' e Thirty-seventh St., three-sty brick store and flats; cost, \$4,000; owner, architect and mason, Charles Hart; carpenter, J. H. O'Rourke.
Spencer Pl., e s, 120' s Hancock St., 4 three-sty brownstone dwells.; cost, each, \$7,000; owner, architect and builder, Benjamin Lihikin, 216 Greene Ave.
Bergen St., No. 367, bet. Vanderbilt and Underhill Aves., three-sty brick tenement; cost, \$3,000; owner, Frank McGrath, 698 Bergen St.
Meeker Ave., No. 38, n s, 32' w Russell St., three-sty frame tenement; cost, \$1,500; owner, Patrick Doyle, 91 Meeker Ave.; architects, Sammis & Bedford; builders, C. Doyle and Sammis & Bedford.
First St., w s, bet. South Second St. and South Third St., nine-sty brick sugar-house; cost, \$100,000; owners, Havemeyer & Elder, First St., cor. South Fourth St.; architects, F. A. Havemeyer and J. James.
Elst St., w s, bet. South Second St. and South Third St., three-sty brick boiler-house; cost, \$10,000; owners, Havemeyer & Elder; architects, J. H. Havemeyer and J. James.
Green Ave., s s, 100' e Broadway, two-sty frame dwell.; cost, \$3,300; owner, Jas. B. Marsh, 992 Greene Ave.; architect and carpenter, Jas. Williamson; mason, S. Pettit.
Throop Ave., w s, 25' s Madison St., 2 two-sty brick dwells.; cost, each, \$3,500; owner, John P. Hudson; builders, P. Sullivan and F. Weeks.
Columbia St., n w cor. Bay St., one-sty frame foundry; owners, Richardson, Boynton & Co., 234 Water St., New York; architect, G. L. Morse.
Broadway, e cor. Lewis Ave., 5 three-sty brownstone flats; cost, \$7,000 each; owner and builder, Chas. G. Hall, 63 Patchen Ave.; architects, Parfitt Bros.

Chicago.

- HOUSE.**—Mr. Potter Palmer is about to build a house at the n w cor. of Bank St. and the West Shore Drive which will cost \$300,000 or more.
BUILDING PERMITS.—Two-sty and cellar dwell., 24' x 25', 60 Johnson St.; cost, \$3,000; T. Memerick, owner.
 Two-sty dwell., 20' x 66', 873 Alport St.; cost, \$3,500; John Roubik, owner.
 Three-sty basement dwell., 25' x 54', 59 Eldridge Court; cost, \$7,000; Aug. Hinz, owner.
 Two-sty dwell., 24' x 52', 158 Loomis St.; cost, \$1,500; A. Belmont, owner.
 Two-sty barn, 27' x 50', 2328 Indiana Ave.; cost, \$3,000; Benj. Allen.
 Three-sty basement and attic store and dwells., 45' x 60', Clybourne Ave. and Larrabee St.; cost, \$8,500; E. C. Jager, owner.
 Two-sty and basement dwell., 20' x 51', 613 Throop St.; cost, \$2,500; Jacob Bostik, owner.
 Two-sty dwell., 22' x 30', 3112 Lake Park Ave.; cost, \$2,500; F. C. Spaulding, owner.
 C. Erickson, three-sty additional story on building, 50' x 90', 1190 Milwaukee Ave.; cost, \$11,000.

- P. Ryan, two-sty dwell., 22' x 40', Congress and Throop Sts.; cost, \$4,000.
 B. Bernstam, two-sty dwell., 21' x 52', 215 Maxwell St.; cost, \$3,500.
 C. Nelson, two-sty store and dwell., 24' x 60', cor. May and Twenty-first St.; cost, \$3,400.
 James Todd, two-sty factory, 30' x 68', 133 Wash St.; cost, \$7,100.
 H. D. Huntington, four-sty and basement store and dwell., 47' x 55', 407 and 409 Madison St.; cost, \$21,000.
 C. Debus, two-sty and basement dwell., 21' x 46', 12 West Twelfth St.; cost, \$1,000.
 Mutual Life Ins. Co., additional on Matteson House, Wash and Jackson Sts.; cost, \$22,000.
 P. J. Casper, three-sty dwell., 24' x 70', 597 La Salle Ave.; cost, \$5,500.
 John Donnerbeck, two-sty dwell., 22' x 48', 225 Larrabee St.; cost, \$4,000.
 E. Kaseberg, two-sty dwell., 28' x 61', 771 North Clarke St.; cost, \$8,500.

Cincinnati.

- FACTORY.**—Messrs. Smith, Stoughten & Payne are to build a five-sty brick shoe factory on Pearl St., near Ludlow; cost, \$18,000; Mr. G. Brink, architect.
MALT-HOUSE.—Mr. G. W. Rapp of Cincinnati has just completed plans for a malt-house for Mr. Henry Adams, fitted with new improved kiln.
HOUSES.—Mr. Fred Vogeler is building a dwell. on McMillan St.; cost, \$5,000; from plans by Mr. Rapp.
 Mr. Oliver Kinsey is to build a double frame dwell. on Mt. Auburn; cost, \$10,000; Chas. Crapsey, architect.
 Mr. Crapsey has also prepared plans for frame dwell. for Mr. Geo. A. Smith, to be built at Carthage; cost, about \$4,000.
 Messrs. Thos. Emery & Sons are to build 16 houses on Lock St. They will be cheap tenement houses; cost, about \$3,000; Mr. Samuel Hamnford, architect.
BUILDERS' EXCHANGE.—At the annual meeting of the Builders' Exchange, held March 6, the following officers were elected to serve during the ensuing year:—
 President, Wm. H. Stewart; First Vice-President, Jas. C. Harwood; Second Vice-President, James H. Finnegan; Directors, J. M. Blair, W. H. Schubert, M. B. Farrin, Charles Crapsey, S. L. Snodgrass, Jas. Dale, H. E. Holtzinger, H. B. Lucky, T. E. Liversey, R. B. More; Committee on Arbitration, J. H. Finnegan, Z. Getchel, Benj. Tappin, D. Flaherty, Saml. Dickson; Committee on Appeals, Geo. H. Taylor, Robt. Brown, L. H. McCommon, L. D. Emert, Thos. Dillon, T. H. Curry, John Greenless, G. M. Clark. The new Board elected J. J. Pearce, Secretary, and W. H. Schubert, Treasurer.
BUILDING PERMITS.—Since our last report the following permits have been issued:—
 W. C. Kennett, one-sty brick dwell., cor. of Bank St. and Central Ave.; cost, \$1,500.
 Moritz Dooch & Bro., five-sty stone front store on Third St., near Race St.; Mr. E. Anderson, architect; cost, \$15,000.
 Nine permits for repairs; cost, \$3,800.

Louisville, Ky.

- BUILDING PERMITS.**—The following building permits have been issued since last report:—
 D. Turner Anderson, brick dwell.; cost, \$7,000; C. D. Meyer, architect.
 Zion Baptist Church, brick church; cost, \$2,500.
 Mrs. C. Henry Finck, brick dwell.; cost, \$3,500.
 H. T. Patrick, brick dwell. and store; cost, \$2,200.
 Jos. Gottrecht, brick store; cost, \$3,000.
 Falls City Jeans and Woollen Co., brick woollen mill; cost, \$15,000; D. J. Williams, architect.
 E. Scheffer, brick store and dwell.; cost, \$10,000.
 E. Scheffer, brick chemical works; cost, \$2,000.
 John Schaefer, brick store; cost, \$4,000.
 Nathan Hoffheimer, brick dwell.; cost, \$20,000; C. A. Curtin, architect.
 L. G. Crawford, brick dwell.; cost, \$5,500; C. A. Curtin, architect.
 W. R. Ray, brick dwell.; cost, \$3,100.
 Geo. H. Moore, brick offices; cost, \$10,000; C. A. Curtin, architect.
 Jos. Grossmann, brick dwell.; cost, \$7,000.

New York.

- FLATS.**—On Carmine St., a flat 25' x 65', five-sty, is to be built for Mr. Van Wort, at a cost of about \$20,000. It will be of brick, with stone finish.
FACTORY.—At the foot of Nineteenth St., East River, a factory, 60' x 75', is to be built for the United States Vulcanizing Wood & Lumber Co., from designs of Messrs. D. & J. Jardine.
ALTERATIONS.—The building on the cor. of Forty-Eighth St. and Sixth Ave., belonging to Mr. Jno. Slater, is to be altered and improved from designs of Mr. Jas. Stroud; cost, about \$1,500.
BUILDING MATERIALS are firmly held at quotations; brick again show an advance, and Portland cement, owing to increased ocean freight, is commanding higher figures.
MARKET-HOUSE.—Mr. Douglas Smythe has prepared the plans for the new Jefferson Market, which will cost about \$60,000. The fronts on Sixth and Greenwich Aves. will be of brick with terra-cotta finish. The building will be two-sty. The upper floor is to be used for office purposes.
A PROPOSED NEW BUILDING LAW.—The Board of Fire Commissioners has ordered Inspector Faterbrook to prepare a new building-law bill, which he has done. He will transmit the same to the Legislature of this State for their action in a day or two. It provides for the erection of fire-escapes or means of egress on buildings now exempt, and for more efficient means of egress in public buildings. It regulates the construction of theatres to more effectually prevent the loss of life in case of a fire or panic. The bill provides that "the roof over the stage shall have skylights equal in area to one-quarter part of said roof and that the whole shall be constructed so as to open instantly in the case of cutting or burning of a hempen cord."
WAGES.—A meeting of plasterers was held March 12, afternoon, at Central Hall, Seventh Ave., for the