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CONTENTS.

SUMMARY:—

The Proposed World's Fair at Boston.—The Michigan University Library Competition.—The Progress of the Edison Electric-Light Company.—The New York Bill for Licensing Plumbers.—Dr. Le Plongeon's Discoveries in Yucatan.—The New-Found Inscriptions at Sakkarah.—Cable Tramways for Philadelphia.—Canal Navigation between the Mississippi and the Great Lakes.—A Kansas Architect's Contract-Form, and its Defects.	229
THE MECHANICS' LIEN LAW OF RHODE ISLAND.	231
LEGAL NOTES AND CASES.	233
THE ILLUSTRATIONS:—	
Designs for a Village School-House.—Doorway of Seville Cathedral.—Interior of a Hall.—A View in Rouen, France.	234
SETTLEMENTS.—I.	234
WILLIAM BURGESS, ARCHITECT.	236
MEETING OF THE TRUSTEES OF THE A. I. A.	237
CEMENTS AND GLUES.	237
COMMUNICATION:—	
Mrs. Holmes's Embroideries.	238
NOTES AND CLIPPINGS.	238

THE project for a World's Fair in Boston four years hence attracts much attention throughout the country, and meets with very general approval. The *Boston Transcript*, however, makes the characteristic observation that there would be "very many difficulties" in the way of holding an international exhibition, and suggests that a "complete national exhibition" would be "big enough for a start." Such modesty as this, while it might be commendable in a town like Springfield or Buffalo, is a little ridiculous when applied to Boston, which not only possesses unrivalled facilities for receiving and displaying foreign exhibits, but has more to gain than any other American city from the successful management of such an enterprise. To regain its reputation as a seaport, Boston needs most of all that general foreign acquaintance with its advantages of accessibility and situation which only an international exhibition can give; while as the capital of manufacturing New England, it is evident that its paramount interest would lie in calling together all the citizens of other countries that could be induced to come, in order to display to them those goods for which they would be the best customers, as well as to give them an opportunity to exhibit the products which they could give in exchange. There can be no question that with a little enterprise in providing dock room and proper accommodations for passengers, the first-class steamers despatched to Boston for the temporary purpose of conveying visitors to the New England exhibition would be succeeded by permanent lines for the transportation of those who found the shortness of the voyage and the facility of transfer to the land routes running in all directions as conducive to their personal comfort as they are now found advantageous for freight traffic; while no extraordinary effort would be necessary to persuade Germans, Russians, South Americans, Australians and Africans who had once had an opportunity of meeting face to face the manufacturers of the staples which they consume that it would be easier and more profitable to deal directly with them than through the medium of English middlemen or irresponsible speculators.

A CORRESPONDENT in Detroit sends us a copy of the advertisement issued by the University of Michigan, inviting competitive plans for a new Library building, with his comments upon the terms offered. These are certainly objectionable in many ways; the prizes are extremely small; no expert is employed to judge in regard to the merit of the designs; the competitors are required to relinquish all ownership in their plans, and the Regents of the University hold themselves at liberty to carry out the building in any way they see fit; and our correspondent is undoubtedly right in saying that no architect of the best class would think of accepting them. Nevertheless, there will probably be, as in other similar cases, a certain number of builders, who can afford to pay for having plans made, for the sake of future profit on the contracts; of recently emancipated draughtsmen, to whom the slightest prospect of a commission opens a long vista of golden hopes; and of "inside" architects, who regard the amount of the premium as of trifling importance, their hopes of adequate compensation resting

mainly on the influence, direct or indirect, which they can bring to bear upon the interested parties; so that designs will not be lacking at the appointed day. The promoters of building enterprises know all this well enough, and our correspondent's protest itself shows his fear that their expectations of profiting by the lavish hopefulness of inexperienced architects is not unfounded, and so long as this is the case, appeals to their sense of honor to refrain from offering temptation are rather worse than useless. If any better understanding is to be arrived at in these matters, the arguments should be addressed, not to the officials, who only make such terms as they believe that the market will bear, but to those architects who are willing to bring degradation and loss upon themselves and the profession to which they belong by accepting them. Whatever compensation an architect may be disposed to content himself with in his private business, it is the plain duty of all to refuse their countenance to public tenders of inadequate or degrading terms. They can lose nothing by so doing, for it is obvious that if competitive designs cannot be had for less than five per cent, those who want them must pay the five per cent, or else go without them, and it is equally obvious that as no important building can now be built without plans, the architects who furnish them have it in their power to fix their own price; so that the willingness of what appears to be a respectable portion of the profession to catch at any terms offered them strikes the average business man as resembling very closely the conduct of the old ladies at auctions, who bid frantically against themselves after all competition has ceased. The auctioneer smiles quietly, and brings down his hammer when his customer has gone high enough to suit him; and the public is hardly to be blamed for a similar willingness to take advantage of the eccentricities of another class.

THE Edison Electric-Light Company seems to be very little disposed to allow its active competitor, the United States Company, to get any serious advantage over it. For some months its principal office, in the Fifth Avenue, below Fourteenth Street, has been conspicuous to all frequenters of that busy locality, and it has now secured quarters in the lower part of the city, and is rapidly introducing the incandescent lamps throughout its district. Already two hundred and thirty buildings have been fitted, and new ones are added at the rate of twelve a day. To guard against the risk of accident from the contact of the wires conveying the feeble current employed in the incandescent lamps with those used for supplying the carbon points of the arc lights, each supply-wire under the Edison system is fitted, at the point where it enters the building, with a "safety-key," consisting of a little piece of lead wire, interposed in the circuit. The lead, being a poor conductor, is quickly heated by any unusually strong current, and as it is also very fusible, a moment only is needed to melt it off, breaking the connection effectually. The current of the incandescent lamps themselves is so feeble that no danger is to be feared from the handling of the wires. Mr. Edison says that he often invites visitors to grasp the two thick copper wires which convey the entire supply of electricity for the seven hundred incandescent lamps at Menlo Park. By thus interposing the body in the current a slight shock is felt, but the effect produced by the current of a single lamp would be barely perceptible.

THE bill for licensing plumbers, which has for some time been pending before the New York Legislature, is likely to become a law, and the newspapers, both technical and secular, are discussing it with interest. The *Metal-Worker*, one of the best of the former class, denounces it as useless, and predicts that it will soon be observed only as a cloak for corrupt practices of various kinds. The bill requires that the names of all licensed plumbers shall be published once a year in the *City Record*, which the *Metal-Worker* regards simply as a printing "job;" while the provision that the Board of Health shall approve plans for plumbing before they can be executed it condemns on the ground that the members, even of the present Board, cannot be expected to judge of the merits or demerits of an intricate piece of work, and under a corrupt administration too much opportunity would be given for extorting money by the exercise of this discretion. The daily papers, on the contrary, hail the bill as a means of deliverance from all sanitary ills, and

denounce in unmeasured terms those who oppose its passage as enemies of their kind. Probably the most judicious attitude would be about midway between these two. While no legislation can do much to improve the workmanship of the careless and ignorant, there are some grosser faults which can be prevented, if the administration of the law is efficient and honest, and this is no small gain. Great as has been the outcry about bad construction in New York, it is unquestionable that contractors as well as architects have a wholesome respect for the building law, and that for every case of criminally bad workmanship which is brought to light, a score are prevented by the inspector's warnings; and there seems to be no reason why a similar amelioration in the average character of drainage work should not be effected by analogous means.

IN YUCATAN some discoveries have been made, of a very interesting character, mainly by Dr. Le Plongeon, the agent of the American Archaeological Institute, who has excavated the ruins of Mayapan, once the capital of the Mayas, a powerful tribe among the aboriginal inhabitants. The later history of this important town is well known; for less than a century before the arrival of the Spanish invaders the king of the tribe had been murdered by his nobles, his followers dispersed, and the royal city destroyed, so that the objects brought to light by Dr. Le Plongeon's exertions find their place immediately as historical documents. Among other things, portrait sculptures of the unfortunate king have been discovered, which are at once recognized as similar in face and figure to bas-reliefs at Chichen-Itza, the metropolis of Yucatan, where the lords paramount of the country held their court, and where the king of the Mayas is represented as doing a sort of homage to his suzerain. This coincidence seems to point to a period of special artistic development throughout that region, when pictorial or sculptured representations of the affairs of daily life had become somewhat habitual. Further proofs of enlightenment are found in astronomical instruments, such as stone dials of accurate workmanship, which were found still standing on a smooth platform of stone, covered only with a few inches of vegetable mould. Various observations were made in regard to the religious emblems discovered, but beyond a strong resemblance of some of them to those of Eastern Asia, no extraordinary developments are made. Dr. Le Plongeon's accounts show a remarkable and interesting continuity of language, family names, and even of habits, between the ancient inhabitants of Yucatan and their modern descendants. It has been well said that all archaeological discovery originates in the endeavor to investigate traditions, which survive after stone and brick have crumbled to dust; and it is very probable that further acquaintance with the friendly and civilized natives may furnish clues to discoveries of great importance.

ANOTHER archaeological discovery is reported from Egypt, which, as usual, surpasses anything hitherto brought to light. The little pyramids at Sakkara, containing the tombs of the kings of the fifth dynasty, have been opened, one after another, and it appears from a despatch to a New York paper that the "mortuary chapels" of each king contain about eighty square metres of "the smallest and most closely written texts," "giving the precise details of the religious belief of that age." The despatch further explains that "it is a complete *coup de grace* to 'Osieris.'" We supposed that "Osieris" had received his *coup de grace* about five thousand years ago, but if he is still capable of doing mischief, we are glad that the means has been found for finally disposing of him. What is more serious is the announcement that "the Masonic theory and all previous conceptions are entirely upset;" not that the "Masonic theory" was ever, so far as we are aware, so clearly defined that inversion would make any particular difference in it, but the expression "all previous conceptions" includes a great deal that is still dear to mankind. Next month we are promised that the texts will be published. However it may be with Osiris and the Freemasons, we shall be glad to see a "precise detail" of the religious belief of the age of the Sakkara pyramids, or indeed of any other epoch. According to the correspondent's story only himself, Signor Maspero, who conducted the excavations, and "the American archaeologist" were admitted to the "mortuary chapels," and that they should have been able to read eighty square metres of "closely written" hieroglyphics within the time afforded by a hasty visit speaks well for their attainments in the most difficult of sciences. Probably their success was due to the presence of the

reporter, who would be unworthy the name of journalist if his imagination could not supply any deficiencies of erudition.

PHILADELPHIA, like Chicago, is about to follow the example of San Francisco in applying steam-power to street-cars, through the medium of a cable, moving in a trench placed below the middle of the track, and clutched or disengaged at will by the driver of the car. The Union line will make the first experiment on a portion of the Columbia Avenue track and if this is successful, the system may be extended to its whole road, comprising nearly a hundred miles of track. The cost of the cable lines in San Francisco is said to have been fifty-five thousand dollars per mile, but at the lower rates of wages prevalent in the East, it is estimated that the Philadelphia tracks could be completely fitted for less than half that amount, while the saving in operating expenses would be sufficient to pay a liberal interest on the outlay. The most serious question in regard to the new device seems to be whether snow and ice will not interfere with its use in winter. In the uniform climate of the Pacific coast no regard need be paid to this, but for New York, Philadelphia or Boston it would seem that the inconveniences which the street-car lines already suffer in winter would be increased tenfold by the substitution of a narrow trench, which, owing to the presence of the cable, could be cleared out only with difficulty, for the ordinary pavement. Whether the similar experiment begun in Chicago last year had progressed far enough to furnish adequate information on this point we do not know.

It is a little singular that after slowly losing favor for so many years, canal navigation should have become the subject of a renewed and earnest interest. The latest scheme is one which has, it is true, been long discussed, but hitherto no adequate efforts have been made to carry it into execution. The water system of the Great Lakes is at present connected with the Mississippi River by a canal, which, although costly, is totally inadequate to the needs of navigation, and a convention, to represent all communities and private individuals interested, has been called at Davenport, Iowa, to devise means for deepening and enlarging the channel, so as to render it possible for fleets of barges, towed by steam, to pass through it. The new canal, for a part of it is, as we understand, new, will reach the Mississippi at Rock Island, and the grain-fields of Minnesota will then be within easy reach of the elevators at Chicago and Buffalo. Within a few months the Welland Canal will be open for navigation, and great changes are likely to follow in the methods of freight transportation from the North-west. However these changes may affect the present centres of traffic, Minnesota, Dakota and the Red River country must be benefited by any increase in their facilities for communication with the rest of the world. It is estimated that by means of the new canal wheat can be delivered in New York at half the rates now charged for railway transportation, and that the transit to New York will be shorter and cheaper than to New Orleans, which now exports large quantities of wheat from the upper Mississippi, thus effecting a material saving in its cost at Liverpool, and placing the northern farmers on an equality with those of Kansas in regard to foreign markets.

A CORRESPONDENT in Kansas, noticing our review of Messrs. Palliser's published form of contract, sends us a copy of those printed for his own use, inviting us to comment upon it. As the document is not, like Messrs. Palliser's form, a publication intended for sale, we can hardly notice it in the same way, but it is at least interesting. Besides the usual contract between owner and builder, which is by no means the best we have seen, three other papers are sent, one containing a form of agreement between the architect and his client, while the other two comprise a bond for the fulfilment of the building contract, and a guaranty, with places for four signatures, promising that in case of the award of a given contract to the party mentioned, the signers of the guaranty will execute a suitable bond for its fulfilment. This triple guaranty seems rather cumbersome, but such forms are often required in public work. The idea of a contract between the architect and owner strikes us unpleasantly, and we hope that this example will not be generally followed. Anything is to be regretted which tends to obscure the confidential relation between the person about to build and his professional adviser, and although it may sometimes be difficult for architects to get proper remuneration for their services without the help of some preliminary agreement, we think most of them will desire to make this as informal as possible.

THE MECHANICS' LIEN LAW OF THE STATE OF RHODE ISLAND.

It has long been a subject for discussion: What shall we do with the "jerry" builder, and how shall we protect the honest contractor from loss of work when brought into competition with unscrupulous opponents?

Many articles have been written upon this subject, embodying various schemes, most of which have proved to be wholly impracticable when put to the test of actual service. Other writers, while lamenting a state of things which they know not how to change, content themselves with the discussion of existing evils, without offering anything in the way of improvement. The architects, who of all others are the best qualified to take up the subject, should set themselves firmly against the tricks and dodges of the "jerry" builders. Having at their command all the advantages of influence and education, they should endeavor to direct public opinion in this matter, and avail themselves of every opportunity to discountenance practices which are a discredit to the building interests. The capitalist, about to erect buildings, naturally looks with suspicion upon the whole fraternity of contractors, and visits upon the heads of all alike the sins of a few "jerries," who, secure in their impunctiosity, continue under the present law to go on and prosper, while in truth they are the direct cause of a demoralizing state of things. They destroy, by their unscrupulous undertakings, the balance which should exist between capital and labor; such balance being clearly set forth in the old saying, "honest pay for honest work."

It is my purpose in this paper to offer for consideration a few comments upon the Rhode Island Lien Law as it at present exists, together with some suggestions for its improvement. I do not offer these suggestions in the belief that I have discovered a cure for the evil, but rather to call out the criticisms and comments of others who may be in any way connected with building enterprises, either as owners, architects, contractors, sub-contractors, journeymen, or dealers in building materials and appliances.

Before proceeding further, I should define what is meant by a "jerry" builder. The term is of English origin. As generally understood, it applies to a class of contractors who, without capital and with little or no credit, are ever ready to take contracts at figures much below the market-value of labor and materials. They scamp the work as much as is possible, and then throw the loss upon the shoulders of their creditors. Safe in their inability to meet their obligations, they lap along, paying a little here and there to quiet the most urgent demands, until a sudden falling off in the number of their contracts precipitates a failure. The creditors are the losers, and the contractor, with a clean slate, commences anew in some other town.

The total suppression of the evils consequent upon the contract system is beyond the power of any class of men; but I believe, from the experience of some years and a close observation of men and methods, that a judicious revision of our lien law, followed by its firm and just execution, would greatly enhance the standard of honest labor, and exhibit, barefaced, the undercurrent of scamped and slovenly workmanship.

To explain more clearly my views, I will briefly recapitulate the points covered by the present law, setting forth its operation, or, rather, its want of operation.

The Lien of Mechanics, as established by the General Statutes of Rhode Island, Chapter 166, page 357, *anno* 1872, consists of twenty-three sections. The first five sections deal with general contractors and their relations to the owner of the building, canal, turnpike, railroad, or other improvement upon which the contractor is employed; also, when the contract is made with a tenant or with any parties owning less than a freehold: the contract being either written or verbal.

These sections seem just to all parties, and I have never heard them complained of. I would therefore leave them as at present on the statute book. In the sixth section I would change the wording as described further on, and I would insert a new seventh section to protect the interests of the "material men." The other sections, re-numbered, and slightly amended to enforce the operation of the sixth and seventh sections, would remain as at present.

The sixth section reads as follows, the italics being my own:—

Section VI.—No person who shall do work or labor in the construction, erection, or reparation of any building, canal, turnpike, railroad, or other improvement, at the request of any person who had entered into a contract, whether in writing or not, for such construction, erection, or reparation, shall have any lien therefor, unless such person shall, *within thirty days after commencing the work*, give notice in writing to the person against whose estate or title he claims a lien *that he has commenced the work*, and that he shall claim the benefit of the lien created by this chapter; and the lien thereby created shall be wholly lost, unless such person having the same shall, within four months from the time notice shall be given as aforesaid, commence legal process, as is hereinafter provided, to enforce such lien.

At the first glance the above section seems to be clearly in the interest of the property-owner, and to the disadvantage of the sub-contractors, journeymen, and laborers. In truth, they are all sufferers; but the heaviest loser is the "material man," who is not recognized at all, except in the first five sections, where he furnishes materials direct to the owner.

The "material men" at their own risk furnish the innumerable articles which are wrought by mechanics into a finished building. Under the present system they are heavy losers, and it seems but jus-

tice to attempt such reforms as will protect them from the unprincipled "jerry," who reaps the harvest, if there is any, or if not, leaves his creditors to their fate.

The owner is a sufferer, but in a different way. He is naturally ignorant of the methods employed by builders and of the cost of materials. In the majority of cases he is unable to detect the difference between good and bad workmanship, unless the discrepancy is glaring. Desirous of having his work executed at the lowest market-rate, he often, against the advice of his architect, who he thinks is prejudiced, and is looking rather to his five per cent than to cheapening the work, contracts with a "jerry" builder. In several cases lately brought to my notice, contracts have been signed for finished work for less than the cost of the materials. These owners expect to get workmanship equal to that of a higher cost; they even pride themselves upon their shrewdness in contracting for less than their neighbors paid for the same class of work. It is like buying cigars for a dollar and a half per hundred, when others, just like them in appearance, are sold for ten dollars.

The objects to be attained by the "jerry" builder in underbidding may be enumerated as follows: 1. To obtain a payment on the new contract, to keep urgent creditors quiet, and enable him to negotiate a new bill of materials; 2. To make a desperate attempt to scamp all he can and leave out all work and materials which are not absolutely necessary to make his work hold together; and finally, with the knowledge that if he makes anything it is his own gain, and if he loses, it falls on others. Several such careers have ended disastrously in Newport. One contractor failed some years since for \$25,000. He left the State, and the loss to his creditors was total. Other men are now on the road to a like ending, the date of failure being determined by their ability to keep up this lapping-over system.

Of all the thirty-eight States and Canada, Rhode Island alone requires that a sub-contractor's or journeyman's lien must be filed, by a written notice to the owner, before the work on which a lien is claimed is finished, that is, within *thirty days after commencing work*. This, on an extended contract, is a practical exclusion from the benefit of the law. "Material men" are not recognized by name at all. The laws of all the States in connection with chief contractors are about the same; the only difference of any moment being in the dates for filing liens and commencing legal action. In Rhode Island, a chief contractor must file his lien within four months after the completion of the contract, in the case of a written agreement, and within six months after commencing the work in case of a verbal one. These sections protect the contractor amply. The instances where an owner shirks payment are few in number, and the laws of lien and attachment cover all such cases. The journeyman and laborer, although the law in their case should read "so many days after the completion of their work," are practically protected. They are not capitalists, like the dealers in materials, but require their wages as often as once in two weeks. This claim there is no dodging, save in exceptional cases. The journeymen and laborers are a necessity to the contractors, and if they do not receive their wages regularly they quit work and thus practically end the matter.

Between October 12, 1874, and April 7, 1880, the date of the last lien put upon record, there were filed in the clerk's office of the city of Newport four liens by contractors, amounting in the aggregate to \$3,135.49, an average of \$783.87½. The only sub-contractors' and laborers' liens on record are one dated August 26, 1873, for \$47.15, and seven dated February 24 and 25, 1873. These latter liens were all against one building, and represent a total amount of \$153.69, an average of \$21.95. The earlier records show about the same intervals between the dates, and the amounts claimed are in the same proportion.

Next to the "material man," the sub-contractor may be the greatest sufferer. He is debarred from putting a lien on the building after thirty days from the date of commencing work, while his contract may run for the whole term of the general contract. This is a still more serious burden when the chief contractor comes from some other State, and without divulging the amount of his contract, engages some local contractor to take a portion of the work under him. Unable to touch the chief contractor's property, even if he has any, which is often more than doubtful, the sub-contractor must trust his chief for payment.

A case lately brought to light in my own practice fully illustrates the attempts of the "jerries" to secure contracts. Fortunately the owner saw through the scheme, and understanding men and motives, did not fall into the trap. This owner was about to build a dwelling-house in Newport. He invited proposals from a number of competent builders, and while waiting for their figures was approached by a builder from another city, who told the owner that he wished to build the house. He dilated upon his facilities for carrying on an extensive job, spread to view his reputation for doing good work cheap, and closed with saying that he did not care to see the plans and specifications, but would take the contract ten per cent lower than the lowest bidder. With such a chief contractor, living in another State, what chance would a local sub-contractor have for fair dealing, and how could he protect himself from serious loss under the present law? Another case has lately transpired where a contractor offered to take a contract for \$1,000 less than any bids which the owner might receive from others. This offer was accepted, the owner thus practically endorsing the system, in the hope of a saving in the cost of building. Whether the result will be fully satisfactory time will show. The above examples illustrate phases of "jerry"

contracting which are of frequent occurrence. They demoralize owners, and prove ruinous to sub-contractors and "material men."

How would the several parties to a contract, direct and indirect, be affected by a more stringent law?

The owner who now employs the "jerry" builder at a saving of the difference between the cost of his work and a more honest interpretation of the specifications will be obliged to discriminate between men as well as prices. He will find that the additional cost will be fully compensated by the higher grade of labor and materials employed, and he will not be put to the necessity of early and frequent repairs. The first-class contractor will have no liens to look after, and the retention in the hands of the owner of certain percentages of the amount of each payment claimed by the contractor, until proof is furnished that the work is free from liens, will protect the owner from the creditors of the unscrupulous builder. I am constantly called upon to make repairs and alterations, often extensive, upon buildings, where the defects are directly chargeable to this scamping system. The losses by fire, caused by defective chimneys, four-inch brickwork and wooden hearths, generally occur in work of this description. Recently I have had occasion to take down four defective chimneys (three of them in one house, and one of them had set the wood-work on fire) and am now taking down another, built in the same unscrupulous manner.

The proposals of honest contractors, tendering for work under a revised law, would be based upon the market-value of materials and labor, with due allowance for waste and a reasonable margin for profit. Knowing that their property, real and personal, is within the reach of attachment, they are as a class extremely careful, and there are enough of them, all eager for employment, to dispel any fear of collusion or fraud in estimating. To several of the more prominent of these men and to several owners I have spoken in this connection, and I find they are, one and all, in favor of a more stringent law. As the builders themselves express it, "it will not injure us, as no one has occasion to put liens on our work, and the more the 'jerries' are hampered in their ruinous course the better for the public."

Now let us look at the matter from the standpoint of the "material man." As the law stands, he suffers the greatest loss by the scamping system. He has a lien upon the building of an owner who buys directly, or upon a contractor who has capital. The "jerry" is beyond his reach, and when once he becomes the creditor of such a contractor, he is forced to keep on supplying materials on small advances, hoping, vainly, for a final settlement, which as a rule never comes. He receives \$100 to-day on the old debt, and gives credit for \$250 to-morrow, and so on, until the final crash, which although for a time deferred will come at last, demoralizing the whole local building interest. The "material men" will welcome any change in the system by which they can sell for approved credit; for few contractors, even those with capital, can go into the market with ready cash when conducting numerous contracts of any magnitude.

In connection with the above, the question has been asked, Why should not the "material men" insist upon receiving cash for materials advanced, or an order on the owner to the amount of the bill? The first half of the question has been answered in the preceding paragraph, and the second will not work except in a limited number of cases. Material men dislike to demand an order from a buyer whose credit may be shaky through no fault of his own, and the "jerry" would probably refuse to give one, preferring to run his chance of getting goods from other dealers. Even if the order is obtained, it is worthless without the owner's acceptance. This acceptance is frequently refused by owners, who do not wish to be troubled with two sets of payments; they recognize the contractor as the only party having claims upon them which they are bound to respect, and leave the material men to look out for themselves.

How should the law be worded, and how enforced?

A law to be effective should be concise and clearly worded; it should require as little machinery as possible. This is particularly the case when a law is intended to protect the interests of numerous persons of various degrees of intelligence, but who are all interested in the same way, either as employing capitalist, as contractor, sub-contractors, furnishers of materials, journeymen and laborers, who, while dealing directly with the contractor, are yet in reality serving the capitalist, whom they expect to pay them through the contractor. In case the contractor fails to meet his obligations, and has no attachable property, the law is expected to furnish a means of collection from the capitalist, who should be protected by the same law from extortion, false returns of materials and in the time allowed for the filing of liens and the commencement of legal action. Moreover, in signing a contract, the capitalist should take into consideration the requirements of the law, and see that ample provision has been made in the clauses of the contract for the retention of certain percentages of each payment, until ample assurance has been received by him that the works are free from all liens chargeable to the contractor.

The actual wording of an amended law is more the province of a lawyer than of an architect, and to the skill and knowledge of the legal profession I propose to leave it. I will, however, offer some suggestions touching the details covered by a building contract, and which are to be considered in connection with any proposed amendment of the lien law.

These details, owing to the many and complicated interests at stake, become far more general in their application than in the case

of a contract for sale, or for labor performed for an owner on his direct order.

A building contract necessarily covers a considerable period of time. In a contract where all the parties previously referred to are concerned, the shortest time which should be allowed in estimating is three months, and the work may be prolonged as many years. During this period the contractor receives payment by instalments, varying in number from two to ten or more. The dates for these payments, although set forth in the general contract, are seldom made known to the subordinates or "material men," nor is the true amount of the whole contract often made known to the public.

The sub-contractors and "material men" are thus prevented from forming their own estimate of the value of the work, and the chances of there being money enough coming to the contractor to satisfy the numerous claims. These men must therefore trust to chance, and look to the future for a remedy.

This remedy, while protecting the secondary parties to a contract, should not bear adversely upon the owner or the general contractor. Several of the States limit the responsibility of an owner under the lien law to the amount of funds remaining in his hands at the time of serving a notice upon him; the parties holding the claims sharing the amount *pro rata*. This saves the owner some delay in the final settlement, at a slight additional expense; but it is unfair to the sub-contractors and to the material men. It puts them in the same position as under the Rhode Island law, by putting a premium upon cheap contracting. With such a clause, if there should not be money enough in the contract to pay the just demands of the contractor's creditors, the owner cannot be made liable. The claims of journeymen and laborers come round as often as once in two weeks; they are for small amounts, the payment of which would not seriously embarrass a contractor. By giving these subordinates twenty days after the expiration of a pay-day to file their papers, their claims can be adjusted without hindrance to the work in progress. Few men of these grades of labor are in a position, or are willing, to exceed this limit before taking steps to recover from the owner. The last man upon the works would have an equal chance with all the others, as the last payment due the contractor should be held back thirty days, as is the usual case in contracts drawn by architects.

The most serious difficulty is to protect the sub-contractors and material men, without embarrassing either the owner or the contractor. A sub-contractor is often interested to an amount nearly if not quite equal to that of his chief. Take, for instance, a dwelling-house contracted for by a carpenter-builder, in which the mason-work is sub-let. The house being built of stone, the mason-work is a heavy item and runs through nearly the whole term of the general contract. It may be claimed that the best way to prevent the difficulty is to give to each trade a separate contract and independent pay. This is good in theory, but it does not work well in practice. Owners, as a general rule, prefer to make but one contract; many of them believing that by so doing they get their works executed more cheaply. It is also much easier, when but one contractor is employed, to get the works finished without extras, those bugbears of owners and architects. It has been my experience that when several contracts are awarded on one job there is no one to come in at the last and finish up all the odds and ends. Some one breaks the plastering, and the mason says that he did his work all right and is not willing to make any repairs. Glass is broken by that mysterious individual, nobody, and who is to make good the loss but the owner? If we give the sub-contractors the right to a lien on a building or improvement at any time, from the commencement of the works until twenty or thirty days after the completion of the contract, we seriously embarrass all the parties concerned. The owner would be obliged, in self-defence, to retain an amount of money sufficient to meet all such claims until after the expiration of the contract and days of grace. The most judicious course seems to be for the law to require that, within twenty days after the performance of the works for which payment is demanded, the sub-contractor must give the owner written notice that he intends to claim the benefit of the lien law, accompanying the notice with a schedule of the various items comprised in such works, and the dates when they were performed, together with the bills for materials furnished. With this notice and schedule before him, the owner would know how to act in the premises, and if the accounts are extravagant they can be adjusted before payment is made. In this way all interests are protected, and the contractor receives his instalment on time. If deemed advisable, a contract may be so worded that the owner may have power to retain a percentage of each instalment until a certain number of days after it has become due, thus guarding the owner against any lien filed at the last moment. If such a custom were a general rule, a builder, in signing a contract, would see that proper allowance was made to cover the necessary delay.

The material men may be treated in a somewhat similar way. Within twenty days after furnishing any materials at the request of a contractor, they should send a written notice to the owner, accompanied by a regular priced bill of quantities, describing all the goods furnished the contractor for the benefit of the owner. These accounts can be easily adjusted, particularly when an architect is connected with the works. The bills made out as above will also prove advantageous to the owner's interest in another way. The jerry would be in constant fear that a bill would be sent to the owner, setting forth in black and white the various qualities and brands of materials furnished for the works. These materials are frequently

entirely different from those contemplated by the specifications — are a regular "give-away," in fact.

To protect the owner, the notices should be sent to him through the office of the city or town clerk, as the case may be. The notices should be made out upon printed forms, and bear the signature of the clerk, and of even date with the application for a lien. A false claim for benefit under the law would be at once discovered. The contractor, if he had already paid the claim in full, could easily prove the same, either by receipts or witnesses, and the laws covering the rendering of false accounts would take care of the applicant. To protect the interests of an owner residing in a distant city or State, the notices should be sent to his architect or resident agent, who in the premises exercises the authority of an owner. The several parties to a contract protected as above, or in some other way having in view the same end, the last payment could be made over to the contractor thirty days after the completion of the contract, without danger of any future claims upon the owner.

A jerry builder, tendering for work under such a system, must make his proposal high enough to cover all honest demands upon him and leave a fair margin for profit, or he must do his work as best he may, and when he applies for a payment he will perchance find that the whole amount is already covered by liens.

To further protect himself from annoyance and from liens in excess of the amount of the contract, the owner must, as I have said before, discriminate between men as well as prices. Before entering upon an important work, he should acquaint himself with the standing of all the parties concerned. No greater obstacle could be thrown in the way of a confirmed jerry than a perfected lien law, protecting alike the interests of the owner, contractor, sub-contractors, material men, journeymen, and laborers. The passage of such an act by the General Assembly of this and every State would be hailed with satisfaction by the great mass of honest contractors and long-suffering material men. "Honest pay for honest work," should be the motto of all professions and trades. Whatever we can do to enhance such a state of things will be time and labor well expended.

GEO. C. MASON, JR., F. A. I. A.

LEGAL NOTES AND CASES.

Compensation of Architects. — Offers and Prizes for Plans. — Prize awarded. — Superintendence of Plan adopted. — Ownership of Plan, after Acceptance. — Evidence. — Custom of Architects. — Services.

THE Supreme Court of the United States, in March, decided the case of *Tilley vs. The City of Chicago and County of Cook*. The points involved are clearly set out in the following report of the case:—

Thomas Tilley, an architect, sued the city of Chicago and the County of Cook, in the United States Circuit Court, N. D. of Illinois, in an action of assumpsit, upon the following account:—

The County of Cook and the city of Chicago to Thomas Tilley, Dr. For services as architect in preparing plans, drawings, specifications, diagrams, estimates, and details for the new court-house and city-hall, and superintendence of erecting the same, 5 per cent on \$2,909,629, the estimated cost of the building, the plan being that known as "Eureka" \$145,481.45

The defendants pleaded the general issue. The County of Cook owned Court-House Square in Chicago, upon which a city-hall and county court-house was to be built; and the County Commissioners and City Council, in July, 1872, each adopted a resolution authorizing the building committees of the several boards to "offer a prize of five thousand dollars (\$5,000) for the best plan, two thousand dollars (\$2,000) for the second, and one thousand dollars (\$1,000) for the third best plan for a court-house and city-hall, to be erected jointly by the County of Cook and the city of Chicago, upon the public square in the city of Chicago, the said plans to be submitted to respective boards, in conjunction with the Board of Public Works of the city of Chicago." In August, 1872, the City Council and the County Commissioners each passed an order providing for a joint contract for the erection of the building, and this contract was executed by the city and county authorities. Under this contract the general exterior design of the building was to be of such uniform character and appearance as might be agreed upon by the respective boards. The contract further provided as follows: "3. That portion of the said building situate west of the north and south centre line of said block shall be erected by the city of Chicago at its own expense. 4. The city of Chicago shall occupy that portion of said block west of the said centre line for a city-hall and offices incidental to the administration of the city government, and for no other purpose whatever, except as hereinbefore provided. 5. Each of the parties will heat, light, and otherwise maintain and furnish its own portion of said building." In November, the building committees advertised for designs, and in the advertisement declared that, in order to secure suitable designs, the city and county offered the following premiums: for the best design, \$5,000; for the second best, \$2,000; and for the third best, \$1,000; and it provided:—

"Each design must have a device or motto marked on each drawing, and be accompanied by a sealed letter giving the name of the author, which will be opened after the final award is made, only for the purpose of ascertaining the names of the successful architects and for the return of the unsuccessful drawings to their authors. Each competitor

will give the cubical contents of his building, and an estimate of the cost of the same complete."

Designs were submitted by a large number of architects, and the building committees of the City Council and the Board of County Commissioners made a report awarding the prizes. The plaintiff in error, who had adopted for his drawing the word "Eureka" as the device or motto to distinguish it, was awarded the third prize, of \$1,000. On August 4, the County Board, and on August 18, 1873, the City Council, adopted the following resolution:—

"That the report of the majority of the joint committee awarding the prizes for plans of court-house and city-hall shall be concurred in and the award confirmed, provided that nothing herein or in said report contained shall be construed as indicating a preference for either of said plans as to which shall be finally adopted, from which the said building shall be erected."

The plaintiff in error was paid the thousand dollars awarded to him as a prize. Afterwards, on August 25, the County Commissioners, and on October 10, 1873, the City Council, adopted the following resolution:—

"That the plan known as 'Eureka,' or number 5 (five) in the collection, submitted for court-house and city-hall, be, and is hereby, selected and adopted as the plan after which to build such court-house and city-hall (the Board of Commissioners of Cook County concurring), subject to such change and modifications as may hereafter be determined upon by the Common Council of the city of Chicago and the County Board, provided the estimate of the architect who presented said plan as to the cost of construction of the building shall be verified."

Upon the trial of the case, the testimony tending to establish the facts above recited having been given in evidence by the plaintiff, he was sworn as a witness in his own behalf, and testified that he was an architect of fifteen years' standing, that he had made the design designated by the word "Eureka," and that, after the passage by the City Council and Board of County Commissioners of the resolution last above mentioned, he had verified the cost of the construction of the proposed building in the way customary and usual with architects, which was made up at the rate of thirty-five cents per cubic foot for the building, and was endorsed by fourteen or fifteen architects. The plaintiff produced before the jury all his plans for which the prize had been awarded him. He offered to prove their value, and offered to prove the time employed and expense incurred in the preparation of them. The court excluded the evidence so offered.

The plaintiff further offered evidence to establish that by the usage and custom of architects, in the absence of a special contract, the superintendence of the construction of a building belonged to the architect whose plans were adopted. This was also excluded.

The plaintiff also offered evidence to prove that by the usage and custom of architects, where prizes for plans were offered, the plans of the successful competitors belonged to them, and, if subsequently adopted as the plans to build by, were always paid for in addition to the prize itself. To this defendants objected, and the court sustained the objection.

The plaintiff also offered evidence to establish the value of the services rendered in verifying the cost of the proposed building according to the "Eureka" plans, to which the defendants objected, and the court sustained the objection.

This was all the evidence given or offered to be given in the cause. The plaintiff then rested his case; whereupon the court directed the jury to find for the defendants. The jury so found, and judgment was entered for the defendants. Tilley thereupon carried the case to the Supreme Court of the United States to reverse this judgment.

Judge Woods delivered the opinion of the court as follows: It will be observed that no evidence was introduced or offered to show that the plans of the plaintiff were used by the defendants, or either of them, or that the building for which they were used was ever erected. It is clear that if the plaintiff has any right of action it must arise on the resolutions adopted by the Board of County Commissioners, August 25, and the City Council, October 10, 1873. All that had taken place before those dates was the making of a contract between the city and the county, by which they agreed to join in the erection of a public building in the Court-House Square, each party to build and pay for its own part of the structure; an offer by the city and county of three prizes for the best plans; an award of the prizes by which the third prize, of one thousand dollars, was given to the plaintiff in error, with the distinct notice that "the award should not be considered as indicating a preference for either of said plans as to which should be finally adopted from which the said building should be erected," and the payment to and the receipt by the plaintiff of the prize awarded him. By the payment to the plaintiff in error of the prize, the defendants discharged every obligation due from them to him arising out of the preparation of plans for the proposed building. Upon that payment being made, no contract whatever, either express or implied, existed between the plaintiff and the defendants. If, therefore, the plaintiff had any right of action against defendants, it must have arisen by reason of the adoption of the resolution just mentioned and what was done by plaintiff after its adoption. The resolution was the voluntary act of the City Council and County Commissioners. It was not a proposition, but simply the expression of a purpose to build their structure after the plans of the plaintiff, subject to such changes and modifications as might thereafter be determined upon by the Common Council and the County Board. The resolution was not adopted at the instance

or suggestion of the plaintiff. Suppose that the day after its adoption the resolution had been reconsidered and rescinded, would the defendants nevertheless have been liable for the value of the plans and for five per cent on the estimated cost of the building for superintendence, amounting in the aggregate to near one hundred and forty-six thousand dollars? Suppose a private person should announce his purpose to build a house after a design which he had seen in an architect's office, but before he begins the execution of his purpose changes his mind, never calls for or uses the plans, or even builds the house: is he liable to the architect for the value of the plans and for superintendence? In such a case there certainly is no contract between him and the architect upon which a recovery can be based. The claim of the plaintiff is that by the adoption of the resolution by the City Council and the County Board, without any act done or assent on his part, they were bound to go on and erect the building on his plans and expend \$2,909,000, its estimated cost. The resolution did not bind the plaintiff to furnish his plans and superintend the building. There was no mutuality, and, therefore, no consideration — both of which are essential to a contract. Notwithstanding the resolution, the plaintiff might have said, I will not furnish my plans, and I will not superintend the building, and the defendants would have had no claim on him.

If one does not accede to a promise as made, the other party is not bound by it. *Tuttle vs. Loe*, 7 Johns., 470. When A signs a writing by which he declares he will sell to B his house at a certain price, this is a mere proposition and not a contract. *Tucker vs. Woods*, 12 Johns., 189. In *Wood vs. Edwards*, 19 Johns., 205, where A wrote that he had agreed to a substitute for an existing agreement which he would execute, Spencer, C. J., said the proposition of A to execute the new agreement was not binding on him, as well on the ground of want of consideration as want of mutuality, since the plaintiffs on their part were not bound to execute the agreement. In the case of *Kingston vs. Phelps*, Peak, 227, the plaintiff proved that the defendant consented to be bound by an award to be made on a submission by other underwriters on the same policy, but the witness proved no agreement on the part of the plaintiff to be bound by the award. Lord Kenyon held there was no mutuality, and, therefore, the defendant's agreement was a mere *nudum pactum*. An offer of a bargain by one person to another imposes no obligation upon the former unless it is accepted by the latter upon the terms on which the offer was made. Any qualification of or departure from these terms invalidates the offer unless the same be agreed to by the party who made it. *Eliason vs. Henshaw*, 4 Wheat., 225; see, also, *Welch vs. Alton*, 5 Gil. (Ill.), 225; *McClay vs. Harvey*, 90 Ill., 525. In this case, there being only an expression of purpose by one party to erect a building according to plans antecedently made by another, and no obligation entered into by the other party, and no plans used or building erected, there was no contract between the parties, either express or implied. If we are correct in this conclusion, then all the evidence offered by the plaintiff to prove the value of the plans, and the time employed, and the expenses incurred in their preparation was irrelevant and immaterial. The only purpose for which such evidence could be admitted would be to prove the damage sustained by the plaintiff by the breach of his alleged contract with the defendants. But if he had no contract, express or implied, he was entitled to no damage, and could show none.

It is complained that the evidence offered to prove the custom of architects was excluded. We think it was rightly excluded. Proof of usage can only be received to show the intention or understanding of the parties in the absence of a special agreement, or to explain the terms of a written contract. *Hutchinson vs. Tatham*, 8 L. R., Common Pleas, 482; *Field vs. Lelean*, 30 L. J. Ex., 168; *Baywater vs. Richardson*, 1 A. & E., 508; *Robinson vs. United States*, 13 Wall., 363. In all cases where evidence of usage is received, the rule must be taken with this qualification, that the evidence be not repugnant to or inconsistent with the contract. *Holding vs. Pigot*, 7 Bing., 465, 474; *Clark vs. Roystone*, 13 M. & W., 752; *Yeats vs. Prim*, Holt N. P. R., 95; *Truman vs. Loder*, 11 A. & E., 589; *Blivin vs. New England Screw Co.*, 23 How., 420. The inference from these principles is inevitable that unless some contract is shown evidence of usage or custom is immaterial.

The plaintiff in error says he was ready to prove a custom of architects, that when prizes were offered for plans of a building, the successful competitor remained the owner of his own designs, and if they were adopted he was entitled to compensation therefor in addition to the prize, and that, by the same custom, the adoption of his plans entitled him to superintend the erection of the building, and to the usual remuneration therefor. He claims, therefore, that in view of this custom, the adoption of his plans by the passage of the resolution referred to by the city and county boards amounted to a contract, on the part of the defendants, to pay for the plans and employ him to superintend the erection of the building, and pay him therefor. The offer of the plaintiff in error to prove certain facts having been rejected, he must be presumed to be able to prove what he offered to prove. We must, therefore, assume that the custom which he offered to prove did, in fact, exist. But what was that custom? Clearly, that if the building was erected according to the successful plans, the architect was entitled to pay therefor. That was such an acceptance and adoption of his plans as would give him the right to compensation therefor, and the right to superintend the erection of the building and receive the usual remuneration. The custom certainly did not bind the party who offered prizes for plans, after having

paid the prizes, to pay also for plans that he never used, and for superintendence of a building that he never erected, merely because he had selected a particular plan and announced his purpose to build in accordance with it. If such were the custom and usage of architects in Chicago, it was an absurd and unreasonable custom, and therefore, not binding. *United States vs. Buchanan*, 8 How., 83; 3 Wash., 149.

If the plaintiff in error had offered to show that after the passage of the resolution by which his plan was accepted, the defendants had erected their building according to his plans, then the evidence of the custom would have been pertinent. But he made no such offer, and it is to be presumed no such fact existed. The evidence of this custom was, therefore, properly excluded.

The plaintiff in error complains that he was not allowed to prove the value of his services in verifying the cost of the proposed building according to his plans. We think the court was right in excluding this evidence. There was no proof nor any offer of proof to show that the services of the plaintiff were rendered at the instance or request of defendants or either of them. From all that appears, the services were voluntarily rendered by the defendant, and no use whatever was made of the results of his investigation. The law, therefore, does not imply a contract to pay for them, and proof of their value was quite immaterial.

The evidence rejected was properly excluded on another ground. The defendants were charged in the declaration with a joint liability, but there was no privity between them, either by law or contract. The evidence offered was to show a joint liability. So far as it went it failed to do this; on the contrary, it was made to appear that each of the defendants was building its own part of the structure at its own expense and for its own use. After the award and payment of the prizes they assumed no joint liability, as the evidence admitted clearly showed. And the evidence offered did not tend to establish a joint liability. It did not, therefore, support the case made in the declaration, and was properly excluded from the jury. As the plaintiff asked no leave to amend, this ruling of the court is not a ground of error.

We find no error in the record. The judgment of the circuit court must be affirmed.

THE ILLUSTRATIONS.

ARCHITECTURAL LEAGUE COMPETITION PROBLEM: A VILLAGE SCHOOL-HOUSE, BY MESSRS. D. W. WILLARD, W. A. BATES, C. H. JOHNSTON AND A. E. BARLOW.

The design of Mr. D. W. Willard is to be commended for having one governing roof, with a simple and unbroken ridge. The projection in front is rather large, and the greater projection of upper part of gable for clock and bell gives an overhanging which is scarcely in keeping with the low eaves and high ridge of main building, especially as the roof runs very low in the rear. The shape of main roof gable is not agreeable, the more so as it has so large an arched window in it.

The roof in the design of Mr. W. A. Bates is also to be commended in so far as it gathers the different parts of the house together in one mass: but the combination of hipped roof and gables is an experiment which is very rarely at all successful. The various sizes and heights and positions of gables, and variety of windows and porches, make the design restless, and leave it without any centralizing feature whatever, excepting the shorter ridge of main roof. The chimneys of the exterior would be impossible with the accompanying plan.

The long ridge in the design of Mr. Clarence H. Johnston again is the best feature: but the gable at one end of it and hipped octagon at the other are not in place. The arrangement of main roof and lesser ones suggests the idea of a large building "coped" (to use a carpenters' phrase) over two smaller ones.

The three roofs in the design of A. E. Barlow have no particular relationship to each other; and the tower roof is out of keeping with the rest of the building, and too heavy for the posts supporting it. The chimney shown on the plan is not shown on the exterior view, and we are left in doubt as to how it and the tower would get on together.

G. F. BABB.

A CORNER IN ROUEN, FRANCE. SKETCHED BY MR. W. D. CHAMBERLIN, CAMBRIDGEPORT, MASS.

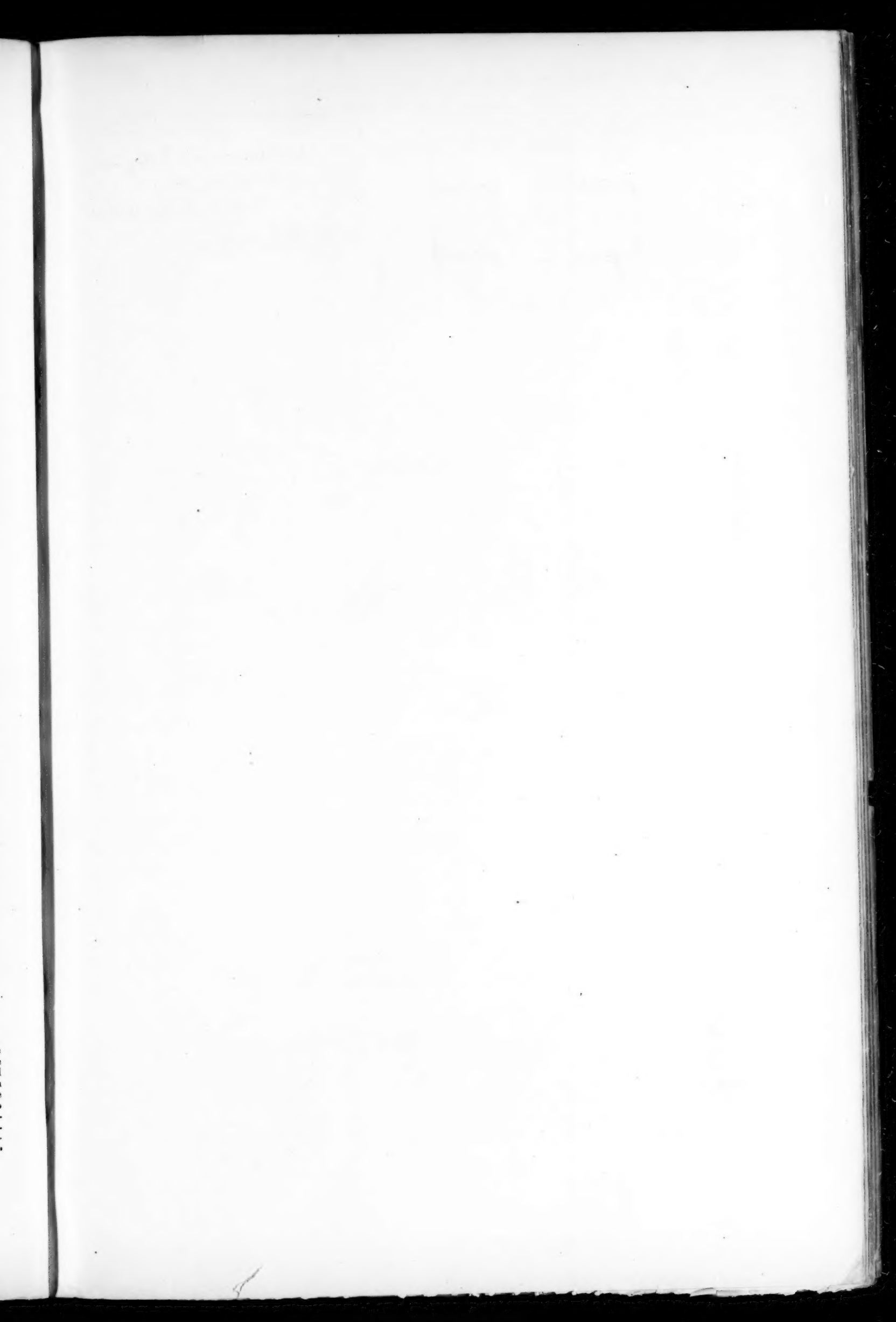
A DOORWAY OF SEVILLE CATHEDRAL, SPAIN. REPRODUCED FROM THE ARCHITECT.

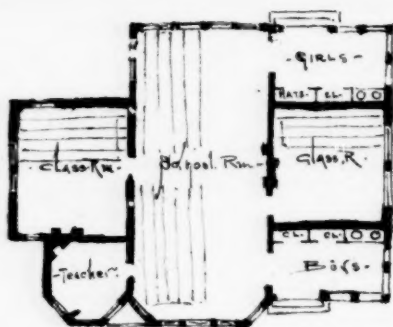
AN ENTRANCE-HALL. MR. CARL PFEIFFER, ARCHITECT, NEW YORK, N. Y.

SETTLEMENTS.¹ — I.

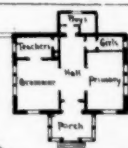
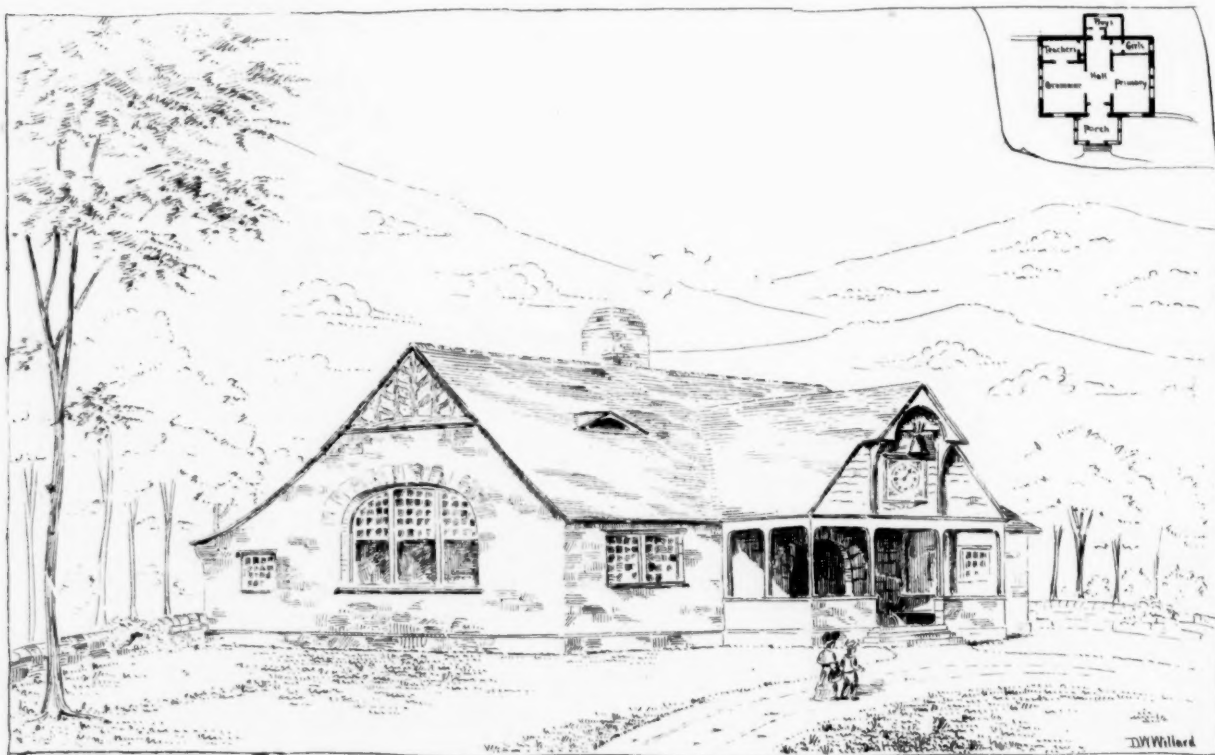
I ADMIT that my title is ambiguous, and that it may be taken as referring either to the structural or to the financial meaning of the word. A paper on structural settlements by some one well up in the subject would, I know, be interesting to many. I think we can call to mind more than one member of our profession who would snatch a fearful joy from frank confession of failures in foundations; of the perverse conduct of piers; of the obstinate refusal of thin walls to conduct themselves as though they were thick, or of the lighter scantlings of timber to behave as do the larger. In confessing my own in-

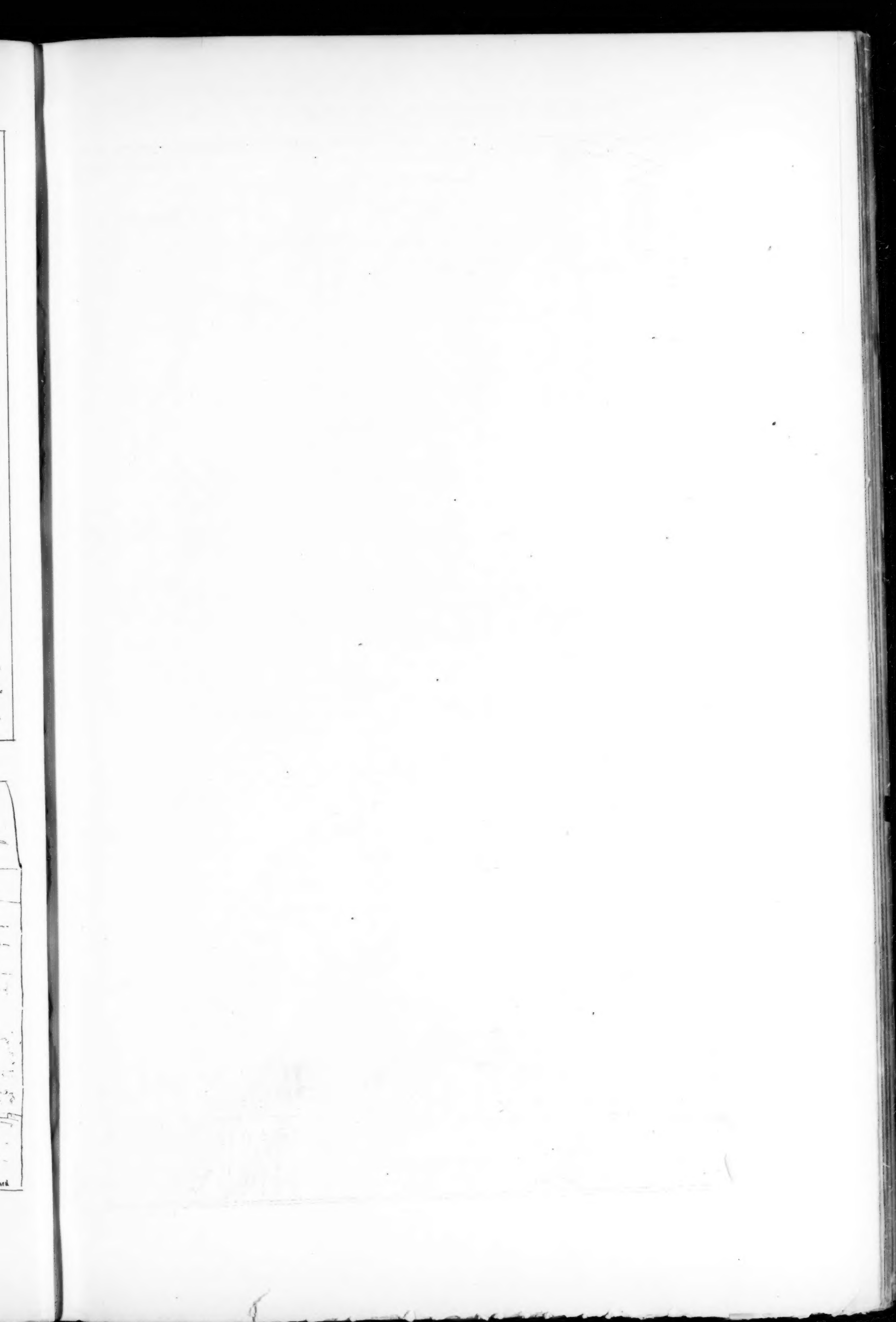
¹ A paper read before the Architectural Association by Mr. L. C. Riddett, April 1.



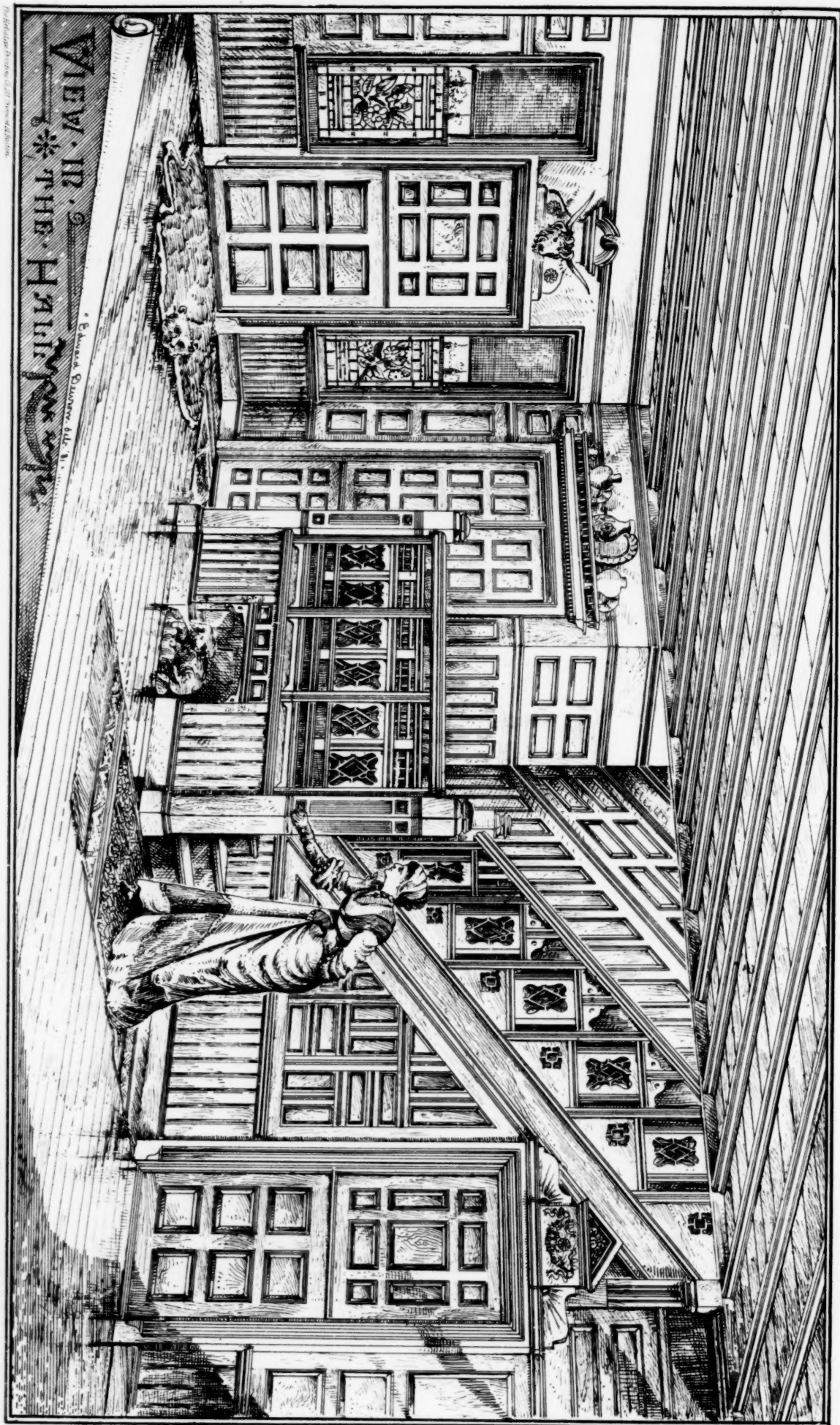


- Architectural League.
Sketch for -
Village Schoolhouse.
A.E. Barlow, Archt.
- 111 Broadway -

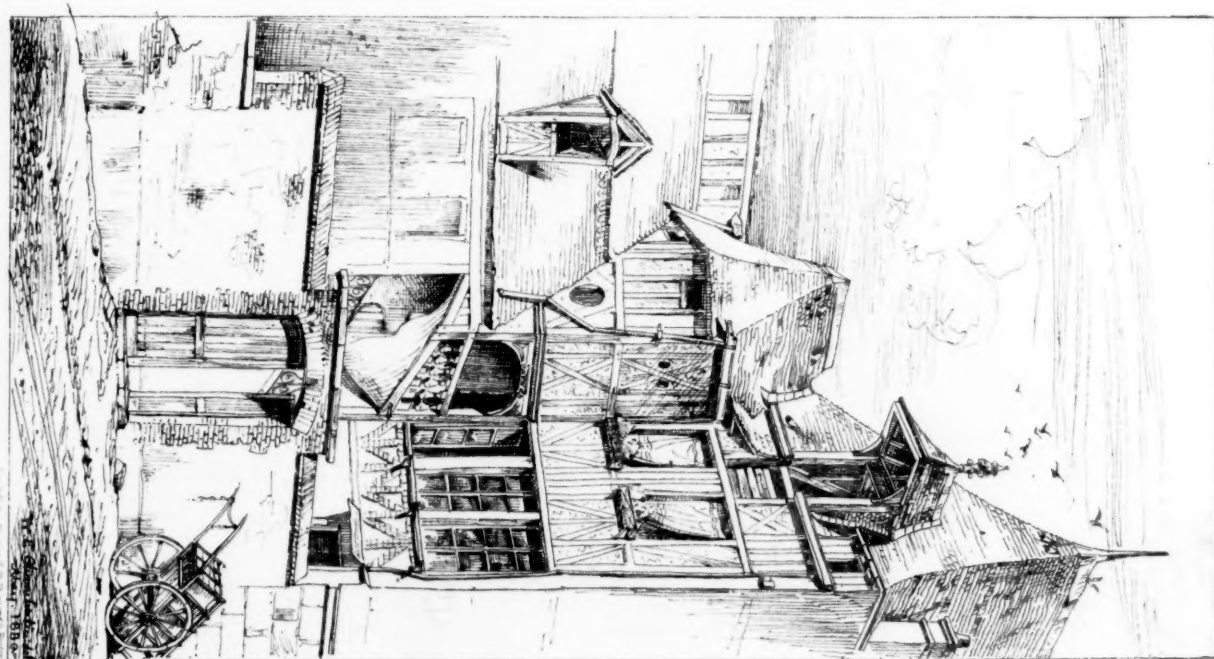
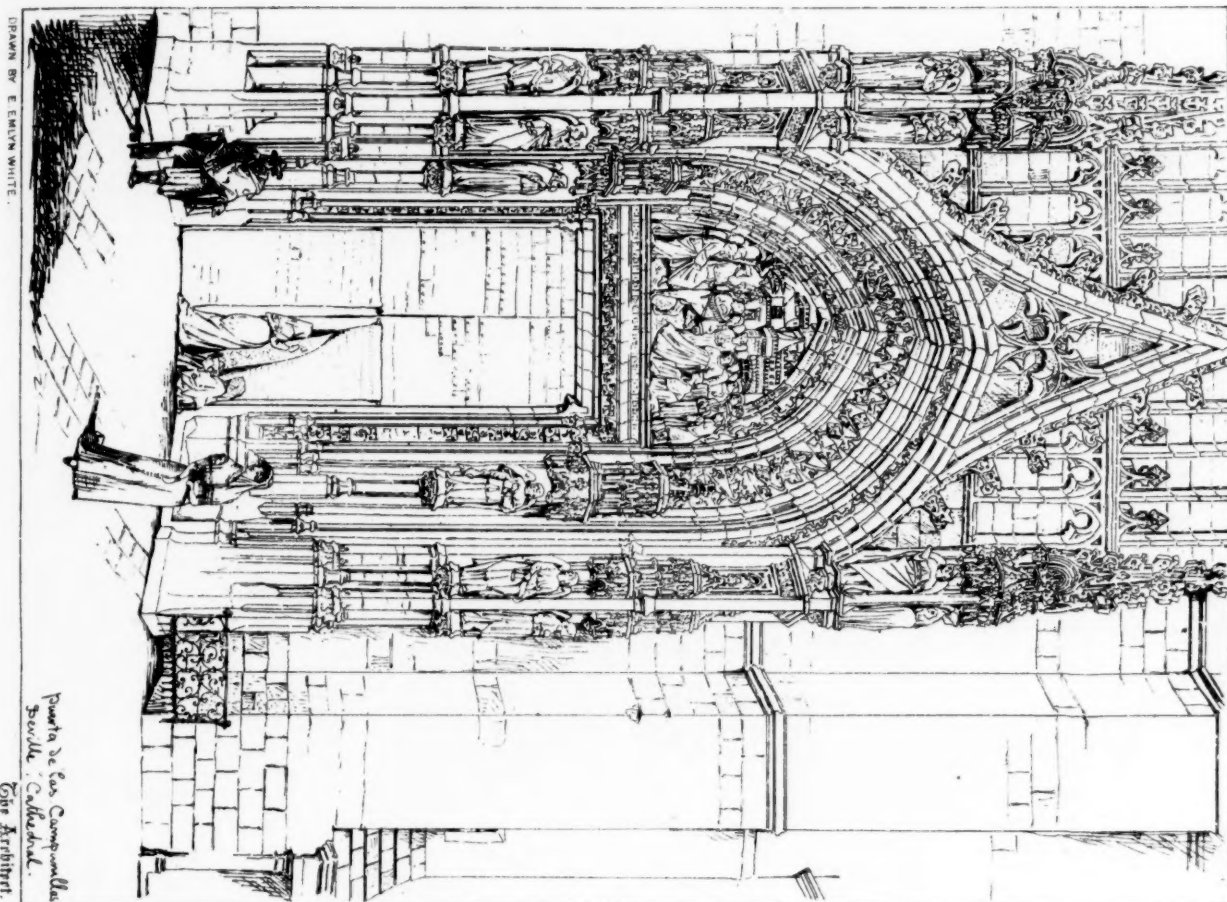


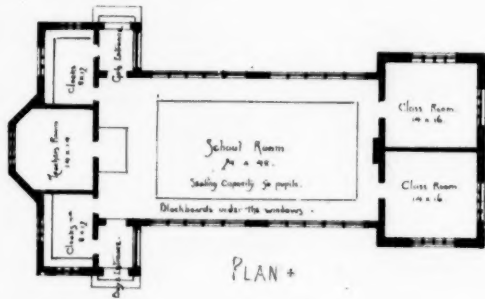


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CARL PFEIFFER ARCHITECT N.Y.

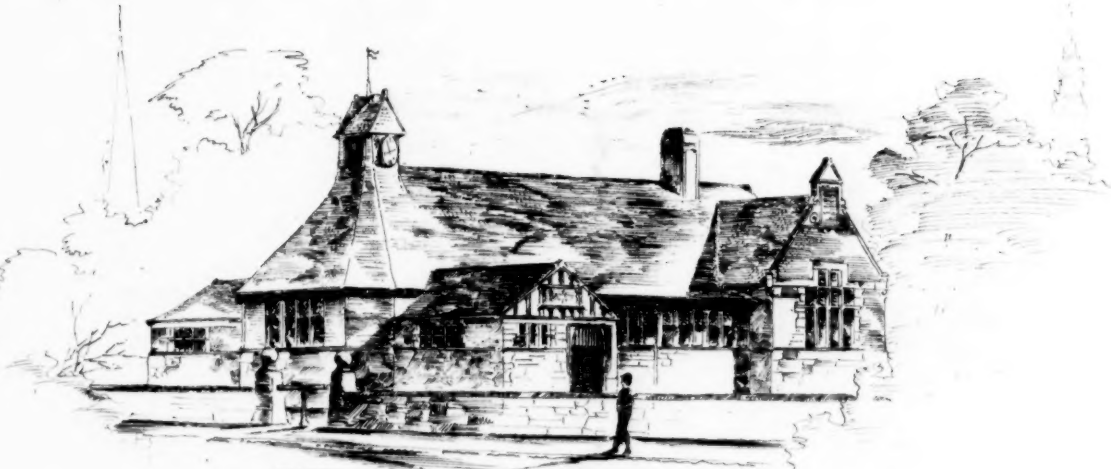




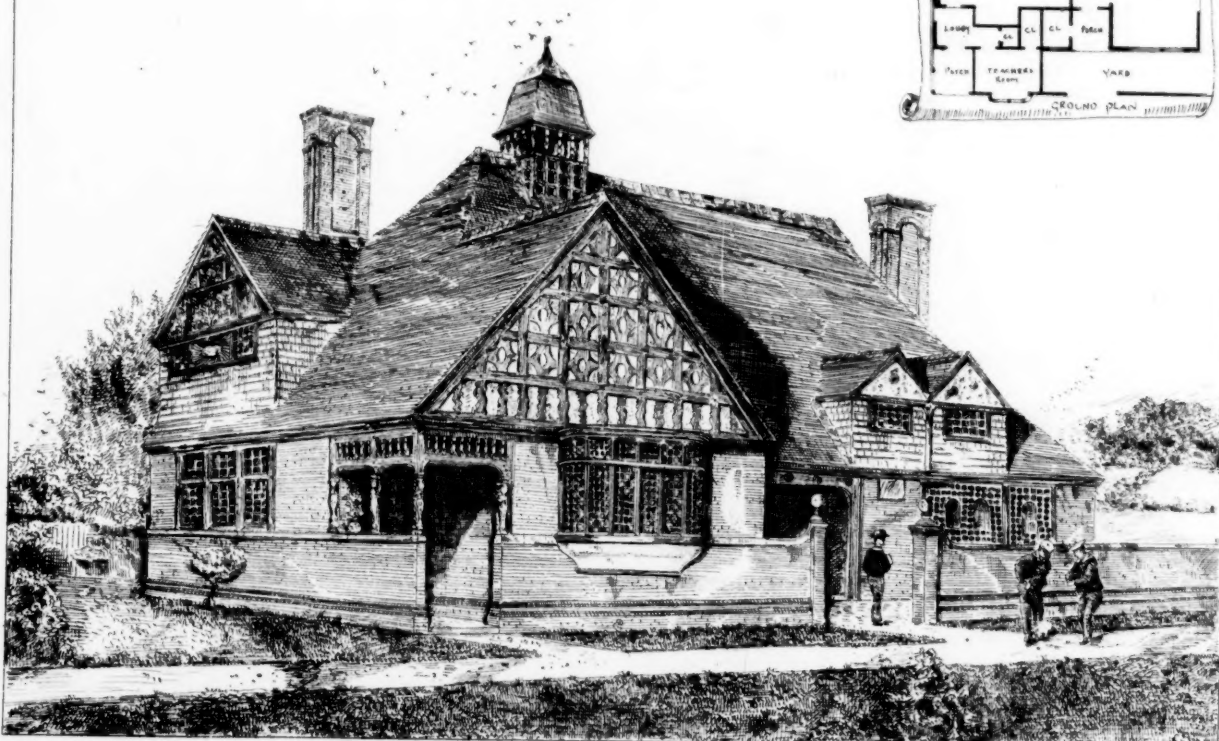
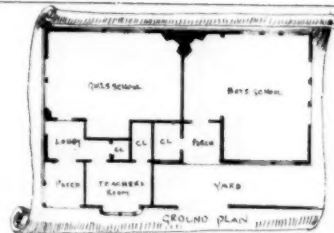
ARCHITECTURAL LEAGUE OF NEW YORK

PROBLEM II

"A Village School House".



Clarence H. Johnston del. 1881



The Architectural Drawing Co. 111, Broadway, N.Y.

A Village School

Architectural League, New York

W. A. Bates

ability to share such pleasures, I will hope that I have not been guilty of alluring to this meeting any who may have attributed the more ghastly meaning to my title.

It is of financial settlements that I wish to speak. These must occur in connection with most of the buildings which come through your hands; I think these, therefore, should be of general interest. From the other sort I will hope that you may, with reasonable care, be delivered. If, however, you should not, you will find a few hints as to financial settlements all the more useful.

What can be more distressing than to hear the ordinary views held by the outside public as to the financial powers of the architects whom they employ? Who cannot call to mind many instances of works where difficulties of plan, of design, and of construction, and even of the contract sum, had all been happily surmounted, but where the breakdown came with the bill of extras? Where the alienation of the client was accompanied by a suggestion that the swollen outlay was not so pleasing to him as it was to the gentleman who took five per cent on it? Where the unhappy architect was somehow or other credited with an innocent incompetency to fight a bill of extras, and, at the same time, with a kind of criminal adroitness and direct interest in causing it to come into existence?

The opinion entertained by an ordinary outsider on the subject of extras seems to be that if any of his friends be about to build, they must make up their minds to an increase of say one hundred per cent upon the contract sum; but that if he himself enter on any building enterprise, his own case must be the exception by which the rule shall be proved. The outside public has received some little confirmation of its views in this matter by the recent experience of the Corporation of the city of London. It will be many years before it will let architects forget that one may start to spend £5,000 on a griffin and his surroundings, but ultimately find that he costs double that sum.

As to the circumstances which usually give rise to disputes about extras, I will quote Chief Justice Erle, who said:—

"It constantly happens that in the course of the performance of a contract certain deviations and additions are required, and it almost as constantly happens that the contract contains a clause that the party who asks for these deviations and additions is not to be liable to pay for them, unless some condition is performed, which is to operate as a security for the price to be charged for them. But again, almost as constantly, the party who executes such order, trusting to the spoken words of the other, takes no care to see that the condition is performed which is necessary to entitle him to payment."

This "condition precedent" is, of course, the order in writing, always supposed to be the grand condition upon which extras will be allowed.

This "order in writing" seems to be most systematically neglected in many cases,—perhaps from the sheer impossibility of keeping up any system of written orders. One often finds that, in the early stages of the job, they have been given with punctilious care; but, as the work goes on, can it be that the zeal slackens? Or that it is found impossible to say, off-hand, what is or what is not an extra? I think the latter cause may have a good deal to do with the difficulty.

Still, I think that the order for a "variation" might be given without having on the face of it an admission that an extra is to be incurred.

I have seen more than one kind of lithographed form on which to order variations, the architect retaining the counterfoils; certainly a step in the right direction, and of great utility at the final adjustment. I have never seen any of these forms advertised by the law-stationers, but if brought out in some well-devised shape I think they would command a sale. I shall have something more to say about the ordering of extras later on. I would here only point out that it is well to be consistent in this particular, if you can.

I will now deal with some of the most frequent causes of extras. The most frequent causes may, I think, be summed up as follows: Want of foresight on the part of the architect; defects in his drawings and specification; defective superintendence; the client's interference. The first three seem to be avoidable causes; it would be too much to say the same of the last.

Among extras caused by want of foresight I have observed the following chief offenders. Doubtless many others will suggest themselves to you.

First an insufficient survey of the site. This is one of the items for which an additional charge is recognized by the Institute scale, but in practice it is, I believe, very frequently thrown in with the five per cent. Perhaps on that account it is rather liable to be shirked.

When building on an open site the levels are too often taken by guess. The buildings consequently are found to be too high or too low, to the extent of perhaps only a few inches, but just sufficient to cause an aggravating increase of expense, in making up surrounding levels, in finessing with drains, in getting into difficulties with the damp course, or in facing at the finish, and at serious extra cost, some parts of the external walls which were not originally intended to appear above the ground.

When building on a site covered with or surrounded by existing buildings, plans, sections, elevations, and in some cases photographs of what already exists, can scarcely be too carefully or plentifully made before anything is pulled down. If these be shirked, and difficulties as to right of light, or air, or other easements spring up, these difficulties are much more troublesome to settle. It may be that the building either stands still or is modified in its design, causing griev-

ous disturbance of the contract and claims for all kinds of extras. The cost, too, of the lawyers whose aid has been sought by or thrust upon the client and his neighbors, are sure to be reckoned as "extras," and so they are. I think the record of buildings which are to be replaced by the new can scarcely be too perfect. And while on this subject I would say that where additions and alterations of existing buildings are intended my remarks apply with equal force.

Another cause of extras is want of foresight in finding out the nature of the soil. Too often it is assumed to be just like that of some adjoining owner. The evidence of a laborer who once saw a well dug out, or a sewer driven through, in the vicinity of the site, is trusted to. When you come to build, you find, perhaps made ground, perhaps springs, perhaps a seam of clay where gravel was expected. A few trial-holes would have solved the question,—good deep ones, going lower than the level at which it may be intended ultimately to stop, so as to know all about the subsoil. In our metropolis particularly, where it is often necessary to reach the London clay at a very great depth, this precaution is specially useful. A case occurs to my mind where the trial-holes revealed the existence of a portion of a disused burial-ground, and great, indeed, would have been the difficulties of the settlement but for this discovery.

Foresight in getting information as to local building regulations, which are sometimes more rigid than those of the metropolis, may save a good deal of expense. Foresight, too, as to the level of public sewers seems too obvious a matter to refer to. Yet, quite recently, I heard of some houses which could not be drained, except at heavy after outlay, because the architect had either not tried to discover the level of the sewer, or, which is quite likely, had been misinformed with regard to it.

Then as to the trouble caused by defects in the preparation of the drawings. I do not believe that the blame is to be altogether, or even chiefly, visited on the architect, although he is, of course, actually responsible for them. Given unlimited time and unlimited staff, and there would be very little trouble arising from this source. Hurry is the bane of the architect, and is generally forced upon him by his client. It is strange to see some sober citizen, who, in all ordinary affairs of life, acts with the greatest deliberation, who will watch and wait upon a market with untiring patience, will invest his money only after the most mature reflection, will, even in the selection and purchase of the site, show the most perfect self-control; but who, having selected and paid for it, appears in quite a new light. From that time forth until the house is up, he is in what I have heard well defined as a "jackass hurry,"—an expression which seems to commend itself as a kind of expletive which escapes the charge of profanity. One does not observe the existence of this passion until a man comes to deal with bricks and mortar; but the cases are quite rare, in my experience, where it is not developed by building operations.

But there are other defects in drawings which I think lead to trouble at the finish, not due to hurry so much as to bad style of preparation. Drawings in which the power of drawing would seem to have been exercised chiefly for the concealment of the intentions of the draughtsman; drawings where artistic power is largely developed in the direction of skirtings, of architraves, of tile pavements and enrichments, to the neglect of the weightier matters of construction; drawings which, on the other hand, show too little, and where, from lack of knowledge or of enthusiasm, the sections are artfully taken through the least interesting portions of the plan; drawings prepared for the purpose of a competition, but not subsequently reduced to the level of common-sense; drawings without figured dimensions, and which yet do not yield accurate results on the application of the scale; drawings made by much subdivision of labor, but at the cost of harmony between plans, sections, and elevations; general drawings deficient in large-scale details,—and even in some cases details deficient in general drawings! All these and many other sorts of defects lend themselves to the manufacture of extras, because they all tend to make the basis of the contract shadowy and insecure.

As far as my experience goes in the matter of drawings, I have noticed the best results ensue where the general drawings have been made to a small scale and left in pencil, while the details to larger scale are being made. The small-scale drawings are then corrected wherever the making of the details has revealed some needed alteration (as it generally does), and the whole become part of the contract. I know how difficult it is to carry out this method in many cases, but I have certainly found it to be the best. I do not say that perfect drawings are a safeguard against extras, but we all know that they go a very long way to prevent them.

As to defects of specification, I have less to say on this head. No doubt, defects in this document do largely conduce to cause doubts and difficulties, which (in spite of some ingenious and inequitable clause to the effect that all matters omitted are to be considered as included) are sure to have their influence on the settlement. But the author of really good drawings will not, I think, break down over his specification, provided that he has worked on the lines of some good model, and, having adopted a system, consistently followed it up and improved on it.

There is a style in specifications just as there is in drawings. Conciseness is dearly gained at the sacrifice of clearness, and clearness is imperilled where there is great verbosity. This sounds very commonplace; but I think it contains the general principle involved, which is all that I have space to set forth within the limits of my paper.

Defective superintendence of the works, especially where the works are at a considerable distance, where, moreover, there has been a little display of the weaknesses above referred to, and where the builder is not clever or possessed of a clever foreman, is another cause of extra. The blunders accumulate, and have to be corrected, and the settlement for extras such as these is not rendered the more agreeable by reason of their generally forming the subject of the familiar "voucher," with its mysterious prodigality in the matter of pecks of plaster, and bushels of cement, and hods of mortar, and much painful evidence of the small amount of work that can be done in an hour by a British workman, notwithstanding the advantage of a steadily-attendant laborer to stand by and see him do it.

Difficulties under this head do not, of course, arise where the job has the benefit of a good clerk of works. He can generally ward them off; but if by chance they do crop up, I cannot say that I have often found him able to exercise any very accurate control over the voucher. Perhaps his time is too much taken up with other matters. Perhaps, if it were not, the task would exceed the powers of a man who might be an excellent judge of work, but not good at checking accounts. When he is good at both he is a very strong man, and I am afraid you will not be able to secure his services until you have got some way beyond the stage at which I venture to advise you.

The foregoing causes of extras are, as I have said, avoidable. The other cause, the client's interference, can hardly be included in the same category. I speak of the ordinary client. There are some (very rare birds indeed) whom one gladly calls to mind as brilliant exceptions.

An eminent architect (who has visited and addressed us here) has often said, in my hearing, that the most satisfactory results he had achieved were in cases where the client saw least of the work as it went on. Perhaps it is only an eminent architect who can take that line. Younger ones may not be so experienced at seizing or interpreting their client's requirements, or so sure of his seeing their work through rose-tinted spectacles at the finish. But as to the financial result, I think there can be very little doubt that a tour on the Continent during the progress of the job would be very beneficial, both to the client and to the contract, where expenses is a matter of supreme importance. Where clients exist in the form of a committee or body corporate, the idea of temporary expatriation is hardly feasible. In such cases I need scarcely point out that the authority for extras and alterations is apt to be questioned by the authors, and that the record cannot be too carefully preserved if the architect is to escape the blame, or if the builder is not to escape the payment for them.

This brings me to another part of my subject, — the authority of an architect to order extras. Under the terms of the contract with the builder he is generally entitled to order them, and one rarely sees a contract in which his powers in this direction are expressly limited. I have seen a contract containing a clause to the effect that the signature of the proprietor was to be a necessary addition to all orders for extras; but I happen to know that it became a dead letter as the works comprised in the contract went on, and therefore in this instance it cannot, perhaps, be said to have been fairly tested. There is no need for me to refer to decided cases bearing on this point, because they are so readily accessible to any one who cares to peruse published works bearing on the question. Perhaps the most recent, and at the same time the best, of such works is Mr. Jenkins's little "Legal Handbook for Architects," published seven or eight years ago. I think every young architect ought to study it. Probably most of us have done so; but I will venture to quote Mr. Jenkins on the point in question. He says: "Should the extras be ordered by the architect, it must be proved that he was authorized by the employer." But he goes on to say: "It will be sufficient to prove that he was impliedly authorized." An implied authority does not sound like a very difficult matter to establish.

Quoting the same authority, I will here point out that orders for extras should not be retrospective. "The want of a previous order will not be supplied by one given subsequently to performance; and also that the verbal order of the employer himself is insufficient to establish a claim for extras.

In the conditions of contract issued by the Royal Institute of British Architects there is the usual clause as to ordering extras in writing, but with the modification that "any plan or drawing expressly given and signed or initialled by the architect as an extra or variation" shall have equal force. And this seems fair enough up to a certain point. But is it quite fair to put the onus of discovering the discrepancies between detail and contract drawings upon the builder? This seems to me a subject for discussion. If all the chief detail drawings of the work can be made before the contract is signed, then the task of checking and comparing any subsequent drawings on their arrival might not be very heavy. But where, as is often the case, the detail drawings are called into existence as the work goes on, how can the builder be expected to say by mere inspection whether they contain more than was included in his contract or not? It seems to me that in the latter case, at any rate, such a clause as this, if inserted, should be very tenderly used.

In adjusting contracts where a clerk of works has been employed, one often notices a tendency on the part of the builder's agents to fix on him the responsibility of the extras, or a good many of them. No doubt, in many cases there would be very little harm in giving a clerk of works a certain discretionary power of ordering variations in construction which may be rendered necessary by some unforeseen cir-

cumstances, and which must be promptly dealt with. But where any such power is given, there is, of course, just a possibility of weakening the power to exclude unjust claims at the settlement.

When the work comprised in the contract is finished comes the question whether the account shall be prepared jointly by the architect (or his surveyor) and the builder, or whether the latter shall send it in for the approval of the former. I think that in most cases the jointly-prepared document leads to least difference of opinion. However honestly the builder or his agents may have intended to frame the account, their unassisted knowledge of the variations is seldom sufficient to enable them to render one which shall be quite free from criticism; and we all know how much more unpleasant it is to strike out than to prevent a claim.

But architects, although perhaps expected by their clients to possess an equal taste for art and science, are very seldom good at both. I think that if Charles Dickens had known a little more of the inner working of the profession he would have managed to say in his well-known ode to a member of it that he was "Architect, artist, accountant, and man." On the other hand, he would have been sure to have made capital sport of Mr. Pecksniff with a five-foot rod and a heavy bill of extras: so the eulogy would have been a good deal qualified, after all.

WILLIAM BURGESS, ARCHITECT.

THE death of Mr. William Burgess, at the age of fifty-four, takes from London society one of its most characteristic figures. Apart from the high professional standing of Mr. Burgess, his personality was so original that he could not fail to be a marked man in a community where eccentricity is at a premium, and where true originality of feeling rarely breaks the monotony of affectation. This independent turn of mind seems early to have prompted him to break through conventional routine in the study and practice of architecture. Nothing will illustrate this better, and show also the narrow range of the architectural horizon twenty-five years ago, than some quotations from the volume of drawings which Mr. Burgess published in 1870. No surer testimony to the high esteem in which the author was held by his professional brethren could be given than the list of subscribers to this work, for it includes the names of nearly all the architects of repute throughout Great Britain.

In his introduction the author says: "Some twenty years ago, when a pupil, I was taught that the proper way to study was to draw rough perspectives in a little sketch-book, accompanying these rough perspectives with small drawings of the details and a few measurements. The great object in a month's excursion was to fill the sketch-book, and then on our return to town the perspectives were to be drawn out more carefully in pencil upon yellow-tinted paper, with an occasional shadow in Indian ink. . . . After my pupilage I went abroad for several autumns with sundry of my friends, who made exceedingly pleasing sketches upon the spot, but unfortunately these were only one degree better than those produced under the former process, for each of us tried how many more sketches he could make in a day than his companions. . . .

"I am ashamed to say how many scrap-books I filled with the sketches made during a few autumns, and at this point under ordinary circumstances I should have stopped. I had passed my pupilage, I had taken my foreign travel, and I should have gone into practice with these sketches as my stock in trade. Luckily for me, my cynical friend did not cease to ask why I drew this sketch. Of what practical good was that detail? Why I had not drawn the full-size curves of some particular moulding? And in fact he asked me so many questions, and such embarrassing ones to answer, that at last I was obliged to confess that the sketches had been drawn for the vanity of making pretty pictures. . . . At this period, it so happened I had an opportunity of seeing Italy and of being absent from England for a year and a half. I forthwith made up my mind to turn over a new leaf, and to take this opportunity of measuring and, as it were, dissecting the best French architecture of the thirteenth century I could find. . . . The excellent Dictionary of M. Viollet-le-Duc was not published, nor indeed was it even begun, and it was therefore not very easy to ascertain where the best examples of thirteenth-century architecture were to be found. What I set myself to do was this: to write a sort of grammar of thirteenth-century architecture, and to illustrate it with carefully measured details. I more-over resolved, when I did measure details or buildings, to do the part I wanted, and not to waste time by trying to make a finished drawing by means of the surroundings. The plan of the book fell through, for I had scarcely been at work two months before the advertisement of M. Viollet-le-Duc's Dictionary appeared, and I then continued the drawings for my own instruction and without any intention of publication."

The drawings are worthy of the author's courage and enterprise; those of Beauvais Cathedral are done with extraordinary patience and intelligence, plans and sections being given through the parts where difficulties of construction concentrate, and which therefore are most interesting to the architect, yet which from difficulties in measuring and in delineation are almost never drawn. Of no less interest are the large-scale drawings of the spire of Amiens Cathedral; its elaborate timber construction being shown and the dimensions figured throughout. The large-scale details of these and various other thirteenth-century work are drawn with a Gothic sentiment which surpasses even the spirited drawings of Viollet-le-Duc. This Gothic sentiment was a most marked characteristic of the man; it was not

the result merely of close study of that style, but sprang from a strong natural sympathy for everything mediæval. No one could be with Mr. Burges without being struck with the curiously mediæval spirit which animated him, and tinged his tastes and views. Others of his contemporaries are as vigorous, and more intolerant partisans of the Gothic style, but they are so for reasons more or less excellent, while the restorer of Cardiff Castle was so full of quaint conceits and sentimental crotchets, and above all so strangely naïf that he seemed as one born and bred upon the roof of some Gothic cathedral amid its crockets and gargoyles rather than the product of modern London. His naïveté and childlike simplicity was as charming as it was amusing to his friends, but joined also to extreme artistic sensibility made him almost unfit to cope with the trying exigencies of a large practice. Add to this the fact that he was not dependent upon his profession for his livelihood and we have an explanation why the number of his executed works are so few in comparison with those of Mr. Waterhouse or Mr. Street, — rivals with whom he successfully competed in several great competitions. However irregular the awards were in the case of the Law Courts, Mr. Burges's design was the one generally approved by the profession at large. But his fastidious sensibility — as ready to devote to a single detail the energy which should suffice for the whole building — was no match in great practical issues for the wide grasp of mind which distinguishes Mr. Waterhouse, nor for Mr. Street's tremendous executive power.

Like a goldsmith of the olden time, Mr. Burges would lavish his energies at times upon the design of some costly table ornament or upon the decoration of some piece of furniture, and these he has wrought out with the most exquisite finish. He delighted to illustrate proverbs or old legends such as the "Romance of the Rose" with quaint devices. He was at his best in decoration, and treated the most difficult problems with consummate skill, as shown in his decoration of Worcester College, and other works. In spite of his love for quaint devices, he could see things broadly and simply when forced to it, as was shown in his scheme for the decoration of St. Paul's when it was confided to him, but he impetuously threw up the whole affair in disgust at some interference from the supervising committee. He was, however, more fortunate with Lord Bute, who gave him in rebuilding Cardiff Castle full sway to indulge his mediæval love for splendor of color and sumptuous ornamentation. It is safe to say that the magnificence of this restoration is without a parallel, the results attained by Viollet-le-Duc at Pierrefonds in the way of color decoration being meagre in comparison. In general, Viollet-le-Duc's work, in spite of his vast knowledge and profound analysis of Gothic art, never caught the real poetical spirit of the middle ages. Everything was correct in detail, but the impression was cold and unsympathetic. It was the intelligent archaeologist and not the artist who had been at work. So also with Mr. Street; he misses the true mediæval flavor, or perhaps he does not seek it; for with him there is no lack of the artistic sense; his work is that of an architect thoroughly animated with the spirit of this century, who chooses to use Gothic forms as the most convenient means to attain his end. But Mr. Burges's work, though by no means closely following actual thirteenth-century examples, is so full of their spirit, so full of their humor and poetry, their spontaneity and entire unconsciousness, that future archaeologists will be sorely puzzled in being obliged to ascribe it to the nineteenth century.

His own house, described in a former number of this journal, was situated amid the little colony of artists who have built on a portion of Holland Park, and here he has been for years devoting his leisure to working out with color and sculpture his quaint fancies. These designs it was their author's purpose ultimately to publish, but we fear this undertaking was hardly under weigh at the time of his sudden death.

He was very short-sighted, and this seems to have curiously affected his designs for large buildings, for they are often too massive and lack height and lightness. And yet curiously the cathedral which he most admired was Beauvais, where lightness was pushed to the extreme limit. Though designing with details of the thirteenth-century Gothic, his proportions are rather those of the twelfth, and frequently appear stunted. This was the chief defect in Cork Cathedral, whose massive style and heavy mouldings would have harmonized better with the round arch, but the building, though not large, is impressive.

In spite of the jealousy of cliques which runs very high in London, Mr. Burges's death will be universally felt, for he was as sincere and honest in his opposition as he was warm in his friendship. The profession loses in him an artist of rare temperament and remarkable ability.

ARTHUR ROTCH.

MEETING OF THE TRUSTEES OF THE AMERICAN INSTITUTE OF ARCHITECTS.

A QUARTERLY meeting of the Board of Trustees of the American Institute of Architects was held at the quarters of the New York Chapter, 335 Broadway, on Thursday, the 14th ult., President T. U. Water in the chair.

In addition to executive and routine business, action was had as follows: —

Mr. Stanton M. Howard, of Wheeling, W. Va., and Mr. Thomas D. Evans, of Pittsburgh, Pa., were elected associate members. Professor Charles Eliot Norton, of Cambridge, Mass., and Mr. John H. B. Latrobe, of Baltimore, Md., were nominated for honorary membership.

Thanks were voted for donations as follows: To Professor Gottgetreu, Honigheim, Munich, Bavaria, for his work — with accompanying atlas — entitled "Lehrbuch der Hochbau-Konstruktionen." To Mr. William T. Hallett, New York, for his work entitled "Specifications for Frame Houses." To Messrs. Palliser, Palliser & Co., for their formulae of specifications and agreement.

The Secretary, producing a recent note from the Librarian of the Young Men's Christian Association, calling, with some appreciative remarks, for copies of the Proceedings of the Institute for several years back, to make a complete set with those previously received, referred to a similar letter received by him some time ago from Mr. Spofford, the Librarian of the Congressional Library at Washington, and noted the facts as instances of the growing public interest in national architecture and its representative body, and of the necessity of meeting such interest in a worthy manner.

The Secretary reported that the new edition of the By-Laws containing the amendments made at the last convention had just been delivered by the printer, and that the Fourteenth Proceedings were ready for the covers.

A. J. BLOOR, Secretary.

CEMENTS AND GLUES.

At a recent meeting of the Polytechnic Club of the American Institute, Dr. John Phin read an interesting paper on cements and glues which is condensed as follows: —

Cements are to be divided into four classes, according as they dry, congeal by oxidation, harden by cooling, or "set" by other chemical changes. First are those which harden by evaporation. Under this head may be classed paste, mucilage and their varieties. Glues to a certain extent dry.

The second class includes the oils. These are said to dry, but it is not by evaporation. They lose nothing, but absorb oxygen from the air. The cement weighs more after hardening than when first applied. Cements which congeal by oxidation cannot be treated in the same way as those of the first class. They require a longer time to handle. The hardening goes on from the outside inward. For example, mend a piece of porcelain with one of these cements. Test it in a few days, and although the outside will be hard the inside will not appear to have dried in the least, and will have no tenacity. Leave it for six months, and it will be very strong.

Thirdly, we have those cements which harden by cooling. These, instead of gaining their strength slowly, like those of class two, become hard at once. Shellac is a good example of a cement of this kind. China put together with melted shellac is extremely strong.

A fourth class of cements may be represented by plaster-of-Paris. This is the type of an extensive class, including the whole line of mortars and hydraulic cements, on which depend our great engineering works and even the houses in which we live. It forms a chemical compound combination with water first, and then more slowly hardens by drying, a part of the water evaporating.

In order to use a cement successfully we must know to what class it belongs, and treat it accordingly. Next, we must know how to put it on. In no case should it be used in a large quantity. The less the better is a good rule to follow.

In mortar we mingle sand, which makes the actual thickness of the lime between the stony surfaces in all cases very slight, however much mortar we may employ. In the use of glue this is not practised or necessary. The joints made by carpenters are good examples of the minute quantity of a cement which is necessary. Place a well-made glued joint on the edge, and it is almost impossible to find the lines of glue. Its position is mainly discovered by the direction of the grain of the wood.

Intimate contact between the cement and the edges is necessary. This is not easy, on account of the layer of air which adheres to all bodies. This layer of air is what causes needles to float when carefully placed upon the surface of water. When an object is warmed the film of air is easily moved. The hot needle sinks, and to the hot body the cement will adhere easily. It is faulty for this reason, that in gluing it is needful to have the work warmed. The rubbing of the surfaces together gets rid of the air, and then not only with glue, but with all cements, the surfaces must be pressed closely together.

Common glue has enormous strength and adhesive powers if it is good. But to be good it must not have been injured in the making by decomposition; not only is the glue itself liable to be injured in this way during the process of manufacture, but the animal matters such as skin, offal from the slaughter-houses, hoofs, etc., are peculiarly liable to decomposition. When this happens the quality of the glue suffers in proportion. In the process of manufacture itself, which is a kind of jelly-making on a large scale, there are numerous accidents which are liable to injure the quality. All of them seem to be forms of decomposition; in fact, glue is not free from danger in this respect until it is entirely dry. The best glue will be pleasant to both taste and smell, and if it is not so its strength has been impaired. If in no way offensive either to taste or smell, it may be trusted to hold wood more firmly than its own fibres adhere to each other.

The strongest known glue is that made from the skins and sounds of fishes; this is known under the name isinglass or fish glue, and the strongest glue of this kind is made by the Laplanders from the skin of a kind of perch. The Laplanders use it in making their bows, which are both strong and durable. In making it their cold

climate is greatly in their favor; here a fish-skin will begin to undergo decomposition before it can be dried.

In making it, the skins are put into a bladder, which answers for a water-bath, and heated in water until a sort of glue results. This glue is, as may be imagined, very elastic. Isinglass is very liable to be spoiled in making by overheating.

MRS. HOLMES'S EMBROIDERIES.

NEW YORK, May 5, 1881.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Having very little knowledge in matters of needlework it is but just, perhaps, that I should supplement my remarks on Mrs. Holmes's embroideries, published in your paper of April 30, by quoting some criticism of a different kind which I have from a much-to-be-respected source. Not many days ago I asked a lady who is perhaps the best authority in the country on embroidery of all kinds what she thought of Mrs. Holmes's work. "It shows great cleverness," was the reply, "but it is mistaken art and very bad needlework." Her explanation of these words may be summed up something as follows: "Every art has its own purpose to fulfil and its own ends to serve. Needlework must, absolutely, be useful as well as ornamental. A piece of embroidery that cannot be used is a contradiction in terms. It may have been conceived by a clever brain, but it has been executed by an unskilful hand. This, it seems to me, is the case with Mrs. Holmes's work. The long stitches and rough surfaces you admire make her embroidery totally unfit for use. I see a clever intention as clearly as you do in her work, but the manner in which it is carried out is as distressing to my eye as a good pictorial idea executed by a slovenly brush would be to yours. Individuality is a good thing in every art, of course,—when it does not answer a given purpose less well than long practised methods would have done. I do not quarrel with Mrs. Holmes's effects because they are 'naturalistic,' but those effects might have been equally well secured, better secured, I think, had she gone about her work in a different way. And far from agreeing with you that her example will have a salutary effect upon our average workers, I absolutely shuddered when I saw her specimens. Every one knows that it is the bad points and not the good points of an artist's work that are copied. I knew how every tyro would think this work of Mrs. Holmes's 'so easy.' I knew how delighted each would be with the new idea that good needlework was not necessary to make good embroidery. And I shuddered to think of the surely-coming flood of reckless atrocities done by women without Mrs. Holmes's instincts,—without her accomplished drawing, and fine sense of color and delicate taste."

There is truth in all this, very evidently, though truth of a sort that appeals more forcibly, of course, to one acquainted with the technique of needlework, if I may so say, than to an outsider. It is because I have so high and exclusive a respect for technical, experimental knowledge that I have quoted this lady's opinions, confessing at the same time that the work does not affect my eye as unpleasantly as it does hers, though in her fear of silly imitations I can fully share.

It is distressing, however, even to a non-expert in the art, to learn that admirers of Mrs. Holmes's work should be in the habit of treating examples as though they were pictorial art, properly so called—of framing and hanging them, that is, as pictures are framed and hung. That such was to be its fate had not occurred to me. While agreeing with my friend that it is not "useful" as is other needlework, I had imagined many services to which it might be put without coming into fatal rivalry with brush-work. I had conceived that it might be very effective used as panels near the top of curtains where it would not be subject to injury, and as fire-screens, and as wall panels—inserted, for example, over doors. And if used in such ways it does not seem to me that it would be in any sense of the word "bad" or "mistaken" art.

M. G. VAN RENSSLAER.

NOTES AND CLIPPINGS.

THE MANUFACTURE OF PLATE GLASS.—To cast, roll, polish and burnish plate glass requires machinery of peculiar construction, and a "plant" that is costly by reason of its complex nature. The pouring of liquid glass from the furnace upon the cast-iron plates, and the subsequent rolling, are processes comparatively simple. Any housekeeper who has used a rolling-pin on a batch of pie-crust dough, performs an operation very similar to this stage of plate-glass making. It is the succeeding processes of grinding and polishing and final burnishing that require time and costly mechanism. After leaving the rolls and bed plate the glass is rippled and rough, and only fit for gratings or skylights. Each plate must be transferred to machines that resemble the turn-tables of a railway. On the revolving platform the glass is cemented into a bed of plaster of Paris, and the machine started. Bearing heavily on the surface of the glass are blocks of metal, and while in motion, the surfaces are kept supplied with sharp sand and a constant stream of water. The next stage of the glass-grinding process is the same as to machinery, but instead of sand, coarse emery is used. Then finer emery is used in another revolving table, and so on for half a dozen times. The final polishing is done by heavy reciprocating devices, fed with red lead, and maintaining a constant back and forward motion, and also a lateral movement over the surface of the crystal. All this requires the assistance of a large force of men, many of them skilled laborers. After going through these different grindings and polishings, the plate that measured an inch in thickness is only three-quarters of an inch thick, has lost all its roughness and is ready for the show-window of the purchaser.—*Pittsburgh Telegraph.*

SANTA FE SANCTUARIES.—A correspondent writing the *Philadelphia Bulletin* from Santa Fe, N. M., says: The most entertaining of all old landmarks are the churches, the oldest of which is San Miguel's, the erection of which native tradition places in the year 1597. But if Bancroft is taken for authority, it occurred in 1582, which would give us two hundred and ninety-nine years as the present age of the walls, as they remained after the destruction of the town by the Pueblo Indians in 1680. This is a very reasonable supposition, in view of the fact that the Pueblo, like the Mexican, is none too fond of the hard labor incident to tearing down the thick, heavy walls of adobe. The truth is, undoubtedly, that after burning everything inflammable in the building, including the roof, they considered their work of destruction complete. The siege of the town lasting for fifteen days, gave the besieged ample time for the collection of all their personal effects, which, as a consequence, were saved. The old church was restored by the Spaniards under Governor De Vargas, in the year 1710, at which time it is supposed the two oil paintings of the "Annunciation," together with much of the paraphernalia of church service, were brought back and placed in their old positions. The authenticity of the paintings is shrouded in mystery; but that they date back to the very early paintings in oil is unquestionable. One of the Christian Brothers, a member of the society which is still using the chapel, when taking down the pictures some time since to dust them, discovered upon one the following inscription: "N. E. A. D. 287." The most plausible translation being that N. E. are the initials of the painter, while A. D. 237 indicates Anno Domini 1287, as it is well established that it was customary to omit the thousands. There is but little doubt that they were brought from Spain by missionaries who accompanied Antonio de Espino to this country in the year 1582. The beam supporting the gallery will also claim attention. It was evidently brought from Spain, as its size would indicate a cedar-tree of much larger dimensions than its species is known to grow in this country. It is very elaborately carved and bears the following inscription: "The Marquis de la Penuela erected this building. The Royal Ensign, Don Augustine Flores Vergara, his servant, 1750." The date, it will be observed, corresponds with the date of restoration. The seeming discrepancy is explained on the following hypothesis: The Ensign no doubt combined the profession of architect with that of soldier, and his presumption was perfectly natural that greater honor would be granted both to him and his master by future generations should they nominate themselves builders, rather than restorers. Every indication points to the following dates as correct: either the year 1582 (Bancroft) or 1597 (native tradition) as the date of erection; the roof destroyed by Indians in 1680; restored by the Marquis de la Penuela in 1710; the present age of the gallery and beam over the chancel, 170 years. There are also two other churches which will repay the trouble the visitor incurs in their examination. The first is St. Francis. It is a huge pile composed of adobe in the shape of a cross, having three altars, one occupying a large alcove at the head of the main hall or building, with another at the end of what would constitute the arm of the cross. The altars are embellished with the usual paraphernalia of the Catholic service, together with many unique designs of artificial flowers in wax, the work of devout, dark-eyed señoritas who seek the blessings of religion, kneeling upon the bare hard dirt floor. The walls are decorated with thirty oil paintings of considerable worth and evident antiquity, the most noticeable being "The Homage of the Wise Men of the East," "Christ Blessing Little Children," and "The Ascension." A group of fourteen presents a complete study of the vicarious sufferings of Christ, from the agony in the Garden of Gethsemane to the one vividly portraying the surprise and fear of the soldiery "when the stone was rolled away" and they beheld the "Resurrection and the Life." I could obtain no satisfactory data by which to determine the age of either paintings or building. The building has four beautifully toned bells, inscribed, "In honor of St. Joseph," mounted on the mud roof in much the same manner that a backwoods Missourian would hang his home-made grindstone, with no protection from the weather, and in the most slipshod manner imaginable. This "old-timer" edifice, however, will soon lose its identity. It is being surrounded by an elegant stone structure, which has already been in process of erection for sixty years. The time of contract extends yet in the future for forty years. It is fairly presumable that the original contractor will not be present at the dedication.

ONE WAY OF SELLING AN OLD CHATEAU.—Have you ever heard of a chateau being sent stone by stone on the railway from one place and sold at auction at another? This is what has happened. The chateau of Jeanne de Balzac d'Entragues, Dame de Montal, was transported from the Department of Lot to Paris, and is to be sold under the hammer by Mr. Pillet. The charges for freight were sixty thousand francs. The present proprietor resorted to this extraordinary manner of getting rid of the Renaissance pile because it was in so dilapidated a condition and because he could not sell it on the spot. Mr. Jules Claretie, hearing of the projected sale, hurried to take a look at the old castle, and thus gives his impressions: "You find there marvels of exquisite grace. The portraits of the Dame de Montal, of her husband, of her relations, have all the characteristics of naturalism and life. And then how seductively beautiful is the mantelpiece of the guard-room, the work of Master André Amy, or Lamy, who called himself with simplicity a mason: 'Master Amy, stone-cutter.' You see in every detail of this crumbling chateau a sort of funereal melancholy. You guess in a moment that the grief of a widow has presided over this masterly pile. In rude Gothic characters you read here, there, and everywhere 'Plus d'espoir!' Between two lifelike busts a headless personage stands, and like St. Denis holds his head in his hand, but in this case, by a most fantastic caprice, he has a bony skull—a death's head. Madame de Montal cannot have been the gayest of creatures."—*Parisian.*

THE ANCIENT CYPRESS NEAR SPARTA.—The celebrated cypress-tree that had stood near the city of Sparta, Greece, for over 2,800 years, and was described by Pausanias 400 years before the coming of Christ, has been destroyed by a band of strolling gypsies, who camped beneath it, and left their fire burning. It was 75 feet high and 10 feet in diameter near the ground. The people of Sparta greatly mourn its loss.

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.]

- 240,803. ELEVATOR.—Cyrus W. Baldwin, Chicago, Ill.
 240,811. DOOR-SPRING.—Zenas Cobb, Chicago, Ill.
 240,813. WATER-PURIFYING APPARATUS.—Sidney E. Collins, Marion, S. C.
 240,815. DOOR-SPRING.—Levi M. Devore, Freeport, Ill.
 240,828. DOOR-SPRING.—Samuel Jarvis, Westerville, Ohio.
 240,863. DOOR-SPRING.—Daniel C. Stover, Freeport, Ill.
 240,868. PAPER-DOME.—Elisha Waters, Clarence W. Waters, and George A. Waters, Troy, N. Y.
 240,899. SLATE-ROOFING PAINT.—Jacob L. Fauss, North Bristol, Ohio.
 240,901. LIGHTNING-ARRESTER.—John L. Finn, Elvira, Ohio.
 240,908. DEVICE FOR REMOVING SEDIMENT FROM CISTERNS.—John H. Keller, New Orleans, La.
 240,933. ARTIFICIAL STONE OR BUILDING BLOCK.—Jas. H. Thorp, Baltimore, Md.
 240,938. METALLIC JOINT FOR WOODEN STRUCTURES.—William B. White, Quincy, Mass.
 240,962. COMPOUND WATER-COCK AND SEWER-GAS CUT-OFF.—William Cahoon, Jr., Chicago, Ill.
 241,017. SHUTTER-WORKER.—Lafayette Huntoon, Natick, Mass.
 241,018. SELF-CLOSING FAUCET.—John B. G. Hüpfel, New York, N. Y.
 241,019. CROSS-CUT SAW HANDLE.—Bernard A. Husbands, St. Louis, Mo.
 241,026. SASH-FASTENER.—W. Haskell King, Athol, Mass.
 241,059. KNOB ATTACHMENT.—Edward L. Phipps, Milford, Mich.
 241,068. MANUFACTURE OF PERFORATED BLOCKS OF TERRA-COTTA, ETC.—Augustus Reeve, Camden, N. J.
 241,111. AUTOMATIC ELEVATOR-GATE.—George Woods, Cambridgeport, Mass.

SUMMARY OF THE WEEK.

Baltimore.

- BUILDING PERMITS.**—Twenty-seven building permits have been issued since the last report, the following only being of sufficient importance to be mentioned:—
 Henry Spieker, three-story brick building, Riverside Ave., between Fort and Randall Sts.
 Andrew Hamilton, two three-story brick buildings, Cumberland St., near Woodyard St.
 Chas. Reissig, addition and improvement to dwell., Harford Ave., near Lanvale St.
DWELLINGS.—Mr. A. A. Reinhard is about to build 30 new dwellings on both sides of St. Paul St., between Mankin and Brown Sts., to be 20' x 75' each, three stories high, of brick and marble; cost, about \$6,000 each. Mr. Reinhard is at present building 16 houses on Bolton St., between Mosher and McMechen Sts.
PAVING.—The company to whom the contract for repaving Calvert and Gay Sts. with the Belgian pavement (Camp's process), at \$93,000, will begin work at an early day.
SCHOOL-HOUSE.—A lot, s w cor. Chase and Ann Sts., 82' x 223', has been leased by the city, for the purpose of erecting thereon a building for the use of German-English school No. 4, \$15,000 being appropriated for the building.
ENGINE-HOUSE.—The mayor has approved the ordinance for the erection of an engine-house for No. 4 Engine Company. Work will be commenced at an early day.
BANK-BUILDING.—The National Exchange Bank has purchased the property on the north-west side of German St., running through from Liberty to Sharp Sts., with a front of 46' on Sharp St., 53' on Liberty St., and 90' on German St., on which they propose to build a bank-building.

Boston.

- BUILDING PERMITS.**—Brick.—No. 521 Dudley St., for Mrs. Chas. Rohde, store, 21' x 65'; M. M. Brown, builder.
 Newbury St., near West Chester Park, for Geo. P. King, stable and dwell., 30' x 85', three stories; Webster & Dixon, builders.
 Stable and dwell., for Francis L. Higginson, 32' x 85'; also stable and dwell., 32' x 85'.
 Stable and dwell., for Charles Fairchild, 32' x 85'.
 Sewall Place, from 16 Milk St., for Kilder, Peabody & Co., banking-house, 41' x 78' and 54' x 54'; Thos. J. Whidden, builder.
 Chambers St., near Cambridge St., for Estate of Daniel Henchman, store, 30' x 31'; Joshua Swanburg, builder.
 Wood.—Nos. 20 to 30 Wabon St., for David H. McKay, 6 dwellings, averaging 26' x 36', two stories; David H. McKay, builder.
 No. 2862 Washington St., for Maria L. Currier, store, 32' x 43'; John Edwards, builder.
 Whitney St., near Tremont St., for John Fay, dwell., 22' x 50', two stories; Allen McDonald, builder.
 Rear of 1164 Tremont St., for J. E. Piper & Co., coal-shed, 62' x 135'; Alex. McLean, builder.

- Allston St., near Brighton Ave., for John W. Hollis, dwell., 24' x 32', two stories; Jacob W. Berry, builder; also 4 dwellings, 20' x 30'.
 Orchard St., near Boston St., for Wm. B. Trask, dwell., 21' x 28', two stories; Wm. Eadie, builder.
 Mather St., near Dorchester Ave., for Lucius H. Foster, dwell., 35' x 40', two stories; W. H. Bowker, builder.
 No. 101 Longwood Ave., for Michael Kelly, dwell., 24' x 33', three stories; R. D. Ward, builder.

Brooklyn.

- BUILDING PERMITS.**—Hall St., s e, 50' x 2' s Park Ave., one-story brick factory; cost, \$5,000; owner, A. G. Jennings, Park Ave., cor. Hall St.; architect, G. L. Morse; builders, E. P. Crane and T. Hanlon & Sons.
 Madison St., s s, 200' e Tompkins Ave., 5 two-story brownstone dwellings; cost, \$20,000; owner and builder, Chas. Kennedy, Jr., 107 Norman Ave.; architect, F. Weber.
 Greene Ave., n s, 175' w Bedford Ave., 6 three-story brownstone dwellings; cost, each \$7,000; owner and builder, John H. Townsend, 60 Putnam Ave.
 Seventh Ave., n e cor. Ninth St., 6 three-story brownstone tenements; cost, each \$7,000; Henry Lausdell, 433 Ninth St.; architect, C. B. Sheldon.
 Sterling Place, s s, 172' w Seventh Ave., 3 three-story brownstone dwellings; cost, each \$7,000; owner and builder, Thos. Fagan, Grand and De Kalb Aves.; architect, H. Dixon.
 Nostrand Ave., cor. Butler St., two-story frame car-stable; cost, \$4,000; owner, Atlantic City Railroad Co.; builder, J. W. Smith.
 Meeker Ave., No. 137, three-story brick tenement; owner, Frederick Gerhard, on premises; architect, Th. Engelhardt; builders, J. Schoet and A. Walker.
 Skillman St., w s, 150' s Flushing Ave., five-story brick malthouse; cost, \$20,000; owner, Geo. Malcolm, Flushing Ave., Skillman St.; architect, W. B. Dittmars; masons, W. & T. Lamb.
 Lincoln Place, s s, 90' e Seventh Ave., 2 three-story brownstone dwellings; cost, each \$10,000; owner, Wm. Flanagan, 355 Ninth St.; builders, Codey & Shanley.
 Hancock St., s s, 70' e Bedford Ave., 3 three-story and basement brick dwellings; cost, \$6,500 each; owner and builder, S. E. C. Russell, 556 Grand Ave.
 Penn St., n s, 252' e Marcy Ave., 5 three-story brick dwellings; cost, \$6,500 each; owner and builder, James Sheridan.
ALTERATIONS.—Columbia Heights, No. 200, raised one story, also three-story brick extension; cost, \$6,000; owner, W. P. Clyde, on premises; builder, S. C. Whitehead.
 Monroe Place, s w cor. Clark St., raised one story, etc.; cost, \$5,000; owner, Mrs. Lucy A. Jessup, Monroe Place; architect, J. Mumford; builders, C. Cameron and W. C. Booth.

Chicago.

- BUILDING PERMITS.**—Charles Roth, two-story brick dwellings, 26' x 46', 167 and 169 Lincoln Ave.; cost, \$6,000.
 P. Simon, three-story brick dwell., 25' x 68', 497 Dearborn Ave.; cost, \$12,000.
 C. Seipp, five-story stores, 60' x 170', 238 and 240 Randolph St.; cost, \$50,000.
 J. Krose, two-story brick dwell., 21' x 46', 169 Rumsey St.; cost, \$2,500.
 L. Z. Leiter, additional story, 54' x 146', 199 and 201 Madison St.; cost, \$6,000.
 Alvin Hubert, 3 three-story brick stores and dwellings, 58' x 74', Lake St., near Lincoln St.; cost, \$18,000.
 J. Pearsons, additional story, 24' x 80', Madison and Franklin Sts.; cost, \$3,000.
 Mrs. Schmidt, two-story brick dwell., 22' x 55', Hubbard St., near Paulina St.; cost, \$3,000.
 R. W. White, two-story brick dwell., 22' x 40', 3442 Prairie Ave.; cost, \$3,500.
 P. McEwan, four-story brick store and dwell., 38' x 90', 93 and 95 West Madison St.
 C. W. D. Railway Co., three-story car-shop, 92' x 125', 124 West Washington St.; cost, \$22,000.
 Same, two-story brick barn, 90' x 100', Stanton and Park Aves.; cost, \$13,000.
 C. B. & Q. R. Co., 2 one-story warehouses, 50' x 655', and 60' x 672', between Harrison and Polk Sts.; cost, \$50,000.
 B. G. Wheeler, two-story brick store and dwell., 30' x 70', 16 Quincy St.; cost, \$5,000.
 J. S. Iverson, two-story brick dwell., 21' x 55', 2951 Prairie Ave.; cost, \$3,000.
 F. Gund, two-story brick dwell., 23' x 60', 521 Clark St.; cost, \$6,000.
 J. W. Brooks, three-story brick dwell., 31' x 60', 293 Ontario St.; cost, \$12,000.
 D. K. Pearson, 6 three-story brick dwellings, 20' x 65', State and Scott Sts.; cost, \$45,000.
 J. F. Wollmsak, five-story brick store, 20' x 80' x 90', 225 Lake St.; cost, \$15,000.
 H. Thorn, two-story brick dwell., 24' x 64', 486 Wells St.; cost, \$4,000.
 Cribben & Sexton, five-story brick building, 100' x 150', Erie St., near Kingsbury St.; cost, \$25,000.
 M. Johnson, three-story brick dwellings, 26' x 50', 294 Chicago Ave.; cost, \$6,500.
 G. Reishold, four-story store, 20' x 100', 179 West Madison St.
 J. Kummer, three-story store, 25' x 75', 503 West Twelfth St.; cost, \$10,000.
 G. W. Cobb, four-story store, 80' x 80', 559 to 565 State St.; cost, \$40,000.
 L. B. Dixon, 2 two-story brick and stone dwellings, 50' x 67', 3228 and 3230 Wabash Ave.; cost, \$14,000.
 City, four-story brick school-house, 84' x 84', 1287 Jackson St.; cost, \$40,000.
 City, four-story brick school-house, 63 Evergreen St.; cost, \$40,000.
 E. B. Smith, three-story brick store and dwell., 26' x 75', 572 State St.; cost, \$75,000.
 S. E. Beers, 5 two-story brick dwellings, 22' x 31', 3529 Honore St.; cost, \$5,000.
 E. Otis, three-story brick dwell., 24' x 64', 357 La Salle St.; cost, \$11,000.

- J. W. Nicholson, two-story brick dwell., 25' x 74', 2966 Prairie Ave.; cost, \$7,000.
 J. W. Wettenberg, two-story brick dwell., 22' x 50', Oak St.; cost, \$6,000.

Cincinnati.

- BUILDING PERMITS.**—E. Morgan & Co., two-story brick, 608 St.; cost, \$3,000.
 C. M. Holloway, three-story brick, 304 West Fourth St.; cost, \$2,500.
 Crane, Kelly & Co., one-story frame; cost, \$2,000.
 Twelve permits for repairs; total cost, \$6,150.

New York.

- BUILDING PERMITS.**—One Hundred and Twenty-second St., s s, 155' e Second Ave., four-story brick tenement; cost, \$12,000; owner, Ellen Hyde, One Hundred and Twenty-first St. and Third Ave.; architect, John Rogers; builder, J. Hyde.
 One Hundred and Twenty-seventh St., n s, 225' w Seventh Ave., 10 three-story brownstone dwellings; cost, each \$9,000; owner, A. A. Teetz, 208 West Twelfth St.; architect, W. W. Gardiner; builder, P. Teetz.
 Stanton St., s s, 41' x 8' w Pitt St., three-story brick convent; cost, \$25,000; owners, Capuchin Fathers, Pitt St., s w cor. Stanton St.; architect, W. Schickel; builders, S. Nieuwenhouse and C. Lehmann.
 One Hundred and Eighteenth St., n s, about 260' w Harlem River, two-story brick stable; cost, \$5,000; owner, T. F. Treacey, One Hundred and Thirty-third St., near Sixth Ave.; architect, Chas. Baxter.
 Forty-first St., s s, 125' w Seventh Ave., three-story brick stable and tennis court; cost, \$35,000; owner, Francis H. Weeks, 120 Broadway; architect, E. T. Littell.
 Fourth Ave., s w cor. Sixty-ninth St., 5 four-story brownstone dwellings; cost, each \$25,000; owner, Wm. A. Hankinson, 213 West Thirty-first St.; architects, Lamb & Wheeler.
 Fifty-fifth St., s s, 56' w Second Ave., four-story brick tenement; cost, \$9,000; owner, Geo. Reichart, 314 East Twentieth St.; architect, W. Graul.
 Ninety-third St., n s, 90' e Third Ave., 3 four-story brick flats; cost, each \$8,000; owner, C. M. Trimble, 118 Suydam St., Brooklyn; architect, F. T. Camp.
 Fifth Ave., No. 997, four-story brick and brownstone dwell.; cost, \$90,000; owner, John Sloane, 655 Broadway; architect, R. H. Robertson; builders, P. T. O'Brien & Son and Hoe & Co.
 Seventh Ave., s e cor. One Hundred and Twenty-seventh St., five-story brick apartment-house; cost, \$28,000; owner and builder, Isaac E. Wright, 153 East One Hundred and Twenty-eighth St.; architects, Thom & Wilson.
 West St., No. 166, s e cor. Murray St., five-story brick hotel; cost, \$23,000; owner, Wm. R. Kenwick, 226 Greenwich St.; architect, G. M. Huss; builder, H. M. Reynolds.
 Fifty-fifth St., Nos. 434 to 442 w, one-story brick church; cost, \$11,000; owner, Church of Sacred Heart, 457 West Fifty-first St.; architect, W. E. Townley, Jr.; builders, W. McBurnie and S. McMillan.
 Grand St., Nos. 109, 111 and 113, six-story brick and stone store; cost, \$130,000; owner, Wm. Astor, 23 West Twenty-sixth St.; architect, Thomas Stent; builder, M. Eidlitz.
 Twenty-first St., No. 345 w, five-story brick dwell., 25' x 84' 6" tin roof, iron cornice; cost, \$14,000; owner, G. H. Hardy, 304 West Thirty-second St.; architect, J. I. Howard.
 Fifty-fifth St., s s, 54' w Third Ave., four-story brick tenement; cost, \$7,000; owner, W. H. Kednan, 130 West Twenty-third St.; architect, A. B. Ogden.
 Leonard St., Nos. 14, 16, and 18, 3 seven-story brick stores; cost, each \$20,000; owner, Helen Juilliard, 62 and 64 Worth St.; architect, J. M. Slade; builders, J. Smith and J. Downey.
 Franklin St., Nos. 86 and 88, six-story iron store; cost, \$50,000; owners, I. W. How and W. P. Draper, Nahant, Mass.; architect, J. M. Slade; builders, J. H. Masterton and J. Sniffen.
 Hudson St., s e cor. Leonard St., seven-story brick store; cost, \$85,000; owners, R. & O. Goetel, 261 Broadway; architect, E. H. Kendall; builders, R. Deeves and C. F. True.
 University Place, s e cor. Eleventh St., six and seven-story family hotel; cost, \$100,000; owner, A. S. Rosenbaum, 165 Water St.; architect, H. Fernbach.
 Thirty-first St., Nos. 149, 151, and 153 w, three-story brick store and apartment-house; cost, \$18,000; owner, L. Marcotte, 29 East Seventeenth St.; builder, John Banta.
 Twenty-ninth St., No. 513 w, four-story brick tenement; cost, \$6,500; owner, Samuel Philips, 238 West Nineteenth St.; architect, J. C. Burne.
 West Houston St., No. 104, five-story brownstone store and tenement; cost, \$10,000; owner, Louis P. Dexheimer, 155 Thompson St.; architect, Wm. E. Waring.
 Eighty-second St., n s, 300' w Ninth Ave., 8 three-story brownstone dwellings; total cost, \$65,000; owner and builder, Geo. S. Miller, Tenth Ave., cor. One Hundred and Thirtieth St.; architect, R. S. Townsend.
 Third Ave., n e cor. Third St., four-story brick store and tenements; cost, \$16,000; owner, Michael Ryan, 347 Bowery; architects, Babcock & McAvoy; builders, B. Sheridan and T. Overington.
 Thirty-ninth St., No. 452 w, four-story brick tenement; cost, \$10,000; owner, Dennis Kelly, on premises; builder, R. Auld.
 Twenty-sixth St., Nos. 318 and 320, between Eighth and Ninth Aves., 2 five-story brownstone dwellings; cost, each \$9,000; owner and builder, R. Auld, 246 West Forty-seventh St.
 Thirty-fifth St., n s, 100' e Tenth Ave., 2 five-story brownstone tenements; cost, \$15,000; owners, I. C. and Cath. P. Boylan, 411 Tenth Ave.; architect, J. Sexton; builders, Van Dolsen & Arnott.
ALTERATIONS.—Fifth Ave., No. 49, four-story brick extension, interior alterations; cost, about \$20,000; owner, F. M. Parkin, New Brighton, S. I.; architect, G. E. Harney.

(Continued on next page.)

Publishers' Department.

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New Advertisements.

Q. U. EVANS (New York), Steam Heating. Page vi.
TOTTEN & COMPANY (Philadelphia, Pa.), Artistic
Bricklaying. Page 240.
J. L. MOTT IRON WORKS (New York), Plumbers'
Iron Goods. Page xii.
HARVEY & POWNALL, (Brooklyn, N. Y.) Stained
Glass. Page ii.
I. SERVEN, (New York) Grates. Page vi.
WANTS: Draughtsman. Page 240.

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BUILDING INTELLIGENCE.

Fifty-fourth St., No. 4 w, four-st'y brick extension;
cost, about \$12,000; owner, Mrs. B. D. Worsham, on
premises; architect, G. K. Harney.
Waverly Place, Nos. 11 and 13, n w cor. Mercer
St., four-st'y brick extension, interior rearranged,
etc.; cost, \$60,000; owner, Estate of D. H. Haight,
86 Beekman St.; architects, Hatfield; builders, A.
A. Andrus & Son and Haight & Monnia.

Fourth Ave., s w cor. One Hundred and Twenty-
fifth St., interior alterations; cost, \$5,000; owner,
W. Dobler, Fourth Ave.; architect, R. Hoffman.
Thirteenth St., Nos. 105 and 107 e, raised one story,
one-st'y brick extension, etc.; cost, \$8,000; lessees,
A. Johnson and W. J. A. Hart, 71 University Place;
architect, J. L. Howard.

Lexington Ave., n w cor. One Hundred and Fifth
St., four-st'y brick extension; cost, \$50,000; owner,
Mayor, etc., New York; architect, D. J. Stagg;
builder, E. Gustavson.

Fifty-first St., No. 14 w, two-st'y brick extension;
cost, \$3,600; owner and builder, H. Sidenberg, 16
East Fifty-first St.

Suffolk St., No. 18, one-st'y brick extension, front
and interior alterations; cost, \$3,000; owner, J. C.
Stecher, 14 Suffolk St.; architect, J. Kastner.

Cedar St., No. 55; cost, about \$8,000; owner, C. E.
Gross, trustee, Hartford, Conn.; architect, W. T.
Hallett.

CHAPEL. — The corner-stone of the new Methodist-
Episcopal Chapel, in Seventy-first St., near Ninth
Ave., was laid April 26. The new chapel is to be a
two-st'y brick building, 39' x 80'. The cost will be
\$20,000.

HOTEL. — Mr. Geo. E. W. Harding, who has removed
to 40 Exchange Place, has completed the plans for
the addition to the Hotel Brunswick, extending
from Twenty-sixth to Twenty-seventh Sts., 50' x 200',
eight stories high, and costing probably about \$250,-
000. This will make the Brunswick the largest res-
taurant in the world.

BUILDING MATERIALS. — Rosendale cement is very
firmly held at 1.10 @ bbl. by cargo in New York, and
\$1.00 at Rondout. It is rumored that some inferior
brands have been offered at less money, but the
tendency amongst the leading manufacturers is for
higher prices.

Philadelphia.

BUILDING PERMITS. — Arch St., No. 523, two-st'y
stable and warehouse, 22' x 238'; Stacy Reeves &
Son, contractors.

Brandywine St., w Fifteenth St., two-st'y stable,
36' x 65'; Stacy Reeves & Son, contractors.
North-west Cor. Front St. and Susquehanna Ave.,
5 three-st'y stores and dwell., 18' x 72'; A. A. Cata-
nach, contractor.

South-east Cor. Twenty-sixth and Jefferson Sts.,
three-st'y school-house, 58' x 98'; C. O'Neill, Jr.
Richmond and Kirkbride Sts., "Bridgesburg," 2
three-st'y dwell., 16' x 44'; A. W. Linn, contractor.

Church St., between Richmond and Howell Sts.,
three-st'y dwell., 16' x 40'; A. W. Linn, contractor.

North-west Cor. Twenty-third and Oxford Sts.,
one-st'y church, 68' x 72'; A. L. Kohl, contractor.

Richmond St., No. 1926, three-st'y store and dwell.,
17' x 48'; Chas. Fay, contractor.

Hutchinson St., No. 1437, three-st'y shop, 38' x 45';
L. Rodenhaus, owner.

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American Architect, Boston. 282

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By his Attorney and Counsel, GEORGE HAYES.
JAS. H. WHITELEGGE, 71 Eighth Ave., N. Y.
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65' x 300'; Pennysylvania R. R. Co., owners.
Tuckahoe St., between Oxford and Gillingham
Sts., three-st'y dwell., 16' x 46'; Jas. Bowers, owner.
Oxford St., e Twenty-fifth St., 15 three-st'y dwell.,
16' x 50'; Jno. L. Carre, owner.

Twentieth St., n Dickerson St., 7 three-st'y dwell.,
18' x 40'; Alex. Wilson, owner.
South-east Cor. York Road and Butler St., two-st'y
store and dwell., 16' x 48'; H. W. Rossler, owner.

North-west Cor. Passyunk Road and Peirce St., 4
two-st'y stores and dwell., 16' x 44'; M. J. Conroy,
owner.

Allegheny Ave. and Fisher St., three-st'y store and
dwell., 16' x 50'; J. Elmer, contractor.

Pearl St., No. 1005, three-st'y dwell., 16' x 21';
Thos. McCarty, contractor.

Haines St., Nos. 138, 140, and 142, 3 three-st'y
dwell., 14' x 41'; M. H. Freas, owner.

Wallace St., No. 2318, two-st'y stable, 24' x 60'; R.
Whiteside & Son, contractors.

Oregon St., between Lancaster Ave. and Forty-
third St., 2 three-st'y dwell., 16' x 43'; J. F. Meyer,
contractor.

Fifth St., s Rising Sun Lane, three-st'y dwell., 17'
x 48'; N. Molitor, contractor.

South-west Cor. Norris and Moyer Sts., 2 three-st'y
dwell. and two-st'y stable, 20' x 50'; Jos. Steel, con-
tractor.

Seventeenth St., n Tioga St., 6 three-st'y dwell.,
12' x 49'; S. T. Roberts, owner.

HOUSE. — Residence for L. Dock, Esq., n w cor. Broad
and Poplar Sts., three stories, to be of Philadelphia
pressed brick and Wyoming Valley stone; Hazle-
hurst & Huckel, architects.

CLUB-HOUSE. — The following architects have been
invited to submit plans for the Union League
"Annex" building: John McArthur, Jr., Theophil-
us P. Chandler, and J. H. Windrim.

LABOR MARKET. — Members of the Stone-masons'
Protective Association have resolved to stop work
an hour earlier on Saturday, May 14, than usual,
and have decided to work for no employer who re-
fuses to give them the usual additional hour on
Saturday afternoon.

St. Louis.

BUILDING PERMITS. — Forty-eight permits have been
issued since our last report, 16 of which are for
frame structures of slight importance. Of the rest,
those worth \$2,500 and over are as follows:—

OWNERS' NAME.	USE.	Sq. ft.	Cost.
W. E. Hess,	Dwell.,	2 5	\$3,000
H. Carroll,	4 Dwell.,	332	16,000
Smith, Heggs & Rankin,	Foundry,	1 1	12,500
Smith, Heggs & Rankin,	Store-House,	2 2	4,000
Fred Vurenning,	Dwell.,	212	4,000
S. A. Coalept,	Dwell.,	314	16,500
A. Shulte,	4 Dwell.,	324	5,800
E. Reno,	4 Dwell.,	224	4,000

Washington, D. C.

BUILDING PERMITS. — L. Sands, 5 three-st'y brick
dwell., 20' x 35', Twenty-first and P Sts., n w; cost,
\$15,000.

BUILDING INTELLIGENCE.

John T. Lenman, three-st'y brick store, 25' x 90',
New York Ave., between Fourteenth and Fifteenth
Sts.; cost, \$7,000.
Thos. Sommerville, three-st'y brick dwell., 30' x
40', Thirteenth St., between G and H Sts., n w;
cost, \$9,800.

Christ Church Chapel, 30' x 60', M St., between
First and One-half Sts., s e; cost, \$4,000.

Gen. Hazen, three-st'y brick dwell., 44' x 46', K
and Sixteenth Sts., n w; cost, \$24,000.

General Notes.

BARRYVILLE, CLARK COUNTY, VA. — For Mr. Mc-
Cormack, a \$6,000 house is to be built from designs
of Mr. Geo. E. W. Harding, of New York.

The same architect has also designed plans for a
\$3,000 cottage for Mr. A. K. Ogden.

CANANDAIGUA, N. Y. — Mr. N. Aldrich is to build a
warehouse east of his hotel, 36' x 72'.

CIRCLEVILLE, O. — E. E. Beck is to build a new store.
DEKENTOWN, N. J. — The corner-stone of the Church
of St. Monica was laid May 4.

DOVER, MASS. — Dover and Foxcroft propose to build
a common town-hall, at a cost of \$12,000.

EAST HAMPTON, CONN. — Alterations are about to be
made in the Congregationalist Church; T. W. Sillo-
way, of Boston, architect.

EAST PROVIDENCE, R. I. — P. A. Monroe, N. F. Burr,
and W. H. Barney are a committee to raise funds
for building a Universalist Church.

GERMANTOWN, MD. — The corner-stone of the new
Baptist Church, cor. of Main and Upsal Sts., was
laid May 2. The church will cost \$30,000.

GARFIELD, COR. — Hon. B. H. Eaton is building a large
brick villa, from designs prepared by R. S. Roesch-
laub, architect, Denver; cost, \$20,000.

HARWINTON, CONN. — President Huntington of the
Central Pacific Railroad will rebuild the Congrega-
tional Church.

LEE, MASS. — The contract price to build Baird &
Benton's Block is \$15,000.

LOUISVILLE, KY. — The following building permits
have been issued since last report:—

Hugh Stafford, frame cooper-shop; cost, \$2,520.
Dexter Belknap, brick dwell.; cost, \$9,000.

Geo. W. Swearingen, brick warehouse; cost, \$28,-
500; C. J. Clark, architect.

Geo. W. Swearingen, frame stable; cost, \$7,000.

McCarthy & Wood, tannery; cost, \$11,500.

The Newcomb-Buchanan Co., brick warehouse;
cost, \$50,000.

MAPLEWOOD, MASS. — Improvements in the Baptist
Church are anticipated; Mr. T. W. Silloway, of Bos-
ton, architect.

NASHVILLE, TENN. — There is a movement to build
another dormitory for Fisk University, in addition
to Livingston Hall, now building.

NEW HAVEN, CONN. — At Yale College a new library
for the Divinity School is to be built, at a cost of
about \$10,000, from designs of Mr. Ed. E. Raht, of
New York.

NEWTON, MASS. — Plans are now being drawn for a
two-st'y wooden house for Mr. Samuel L. Powers, on
Arlington St.; cost, \$9,000; Messrs. G. R. & R. G.
Shaw, of Boston, architects.

A frame dwell., on Centre St., is being built for
N. L. Ripley; Mr. S. J. F. Thayer, architect, Boston;
cost, about \$6,000.