

free from local bias, to which the President replied that everything would be done fair and above board, and that Doctors Workman and Buck, of Toronto, would be the experts named to decide upon the best plan. He further stated that the architects who were awarded the building never competed for it. Mr. Hollis, Secretary of the Board, proved that a resolution was passed authorizing the advertisement in the public press of Ontario and Quebec, and the names of Workman and Buck as referees. He also proved that plaintiff's plans were never submitted to said experts, and that a sealed envelope containing a builder's estimate to erect the buildings according to plaintiff's plans and specifications was opened at the meeting, although endorsed on the outside "not to be opened unless plans are accepted," that an abstract referring to the cost of the building was copied therefrom into their minutes. Mr. Hopkins, architect, swore that he paid no attention to the advertisement in the paper, that he was employed at the asylum work since 1881, and had prepared several plans for them, that he submitted no plans for the present competition, that some time after the expiration of the time allowed for the competitors' plans to be sent in, he was notified that the governors had passed a resolution asking him to allow his plans to be submitted in competition, but that he never replied to it. J. C. Wilson, M. P. swore that he passed the resolution referred to by Mr. Hopkins, because he thought that Mr. Hopkins, having been engaged for so long, would know best what they wanted. Other witnesses on behalf of the asylum stated that the plans they adopted were chosen because they were cheapest, and that they were exposed in the Mechanics' Hall to public inspection for a week. Judgment was given in favor of the defendant, the court holding that the plaintiff did not comply with the advertisement because he did not prove that the buildings could be erected for the eighty thousand dollars. The case is likely to be taken to Appeal and tried before a higher court.

The judgment above referred to, unless reversed, will form a precedent in future for all architects competing in the Province of Quebec, and in the meantime I would advise those sending in plans, where they are limited in cost, to be sure and label them "This building can be built for so-and-so," otherwise you will "get left."

CANADIAN SOCIETY OF CIVIL ENGINEERS.

The Society at its last meeting decided to hold a dinner at the Windsor Hotel on the evening of the 23rd January, at which diners will be admitted as guests, in place of the conversation as heretofore. A movement is also on foot to have a convention meet during the summer in some of our western or American cities, and a committee was appointed to report at the annual meeting.

CONTRACTORS' ASSOCIATION.

At the annual meeting of the above Association, Mr. William Rutherford presiding, Messrs. Joseph Brunet, C. T. Charlebois, F. Fournier, J. B. Draparn, M. Martin and Joseph Lambert were elected directors.

MISCELLANEOUS.

The plasterers are agitating for an increase of wages from \$2.50 to \$3.00 per day and talk of striking if they do not get it.

The building inspector and drain inspector state that the practice of using bad mortar is on the increase, and have recently taken legal action against several contractors.

The Fire Company has been asked by the Underwriters to sanction the appointment of an inspector of buildings in course of erection on their behalf, with the view of preventing structural defects which would be dangerous in case of fire. The insurance people will pay this officer themselves, but desire the city to pass a by-law to give him power to act in the direction of fire. It is altogether likely that the desired by-law will be recommended to council, as it is felt that such an officer would be of much assistance to the city inspector.

THE PERCH AS A STANDARD OF MEASUREMENT.

Editor CANADIAN ARCHITECT AND BUILDER.

SIR,—My attention has been drawn to the statement made in your columns by "Comment," that 167 cubic feet constitute a perch of stonework, instead of 24.75, as published in one of my articles on estimating. Now if "Comment" will consult Messrs. Orton & Ladler's calculation, the Normal School Arithmetic, or any practical builder in the Atlantic or Middle States, he will see the accuracy of my figures. It is however evident, that there is not a standard for the perch; as I have recently seen the question asked from Minnesota also concerning its actual dimensions. "Comment," therefore, if figuring on stonework, can calculate its quantity by 167 cubic feet, or by the whole number of cubic feet the work contains at price per cubic foot.

The system of calculating by the perch is obviously a defective one, and builders' will rarely find it in an architect's bill of quantities, for the reason that at were the architect to call for any number of perches of stone, owing to the variation of the different quantities in the perch existing (according to custom or usage) in different localities, serious complications might arise. For instance, if 50 perches of stone be required for a foundation, one builder figures it at 16.50 to a perch, another 24.75, another some other quantity. Now if the drawing be not carefully scaled, and the exact solid content found by the estimator, it follows that he who uses 16.50 will be short if the architect figured it at 24.75, and he who uses this quantity will estimate correctly. If on the other hand the architect intended, or rather if the drawing measures 50 perches at 16.50 to the perch, then the 24.75 estimator will be largely over in his calculation.

Bills of quantities are often made out roughly in architects' offices, and I would recommend all estimators to go over the plans very carefully, and if there be a mistake not to hesitate to show it to the architect. Architects are usually very honest men; besides they do not like extras, and an over quantity not called for must be put in as such.

Estimators ought, as far as possible, to make out their own quantities directly from the plans, then they are certain of their measurements.

It gives me pleasure to see questions of this kind crop up, as I have no doubt that, like a drag net, they will bring to the surface some of the snags on which many an estimator has been wrecked.

Respectfully yours,

"CATO."

PUBLICATIONS.

OUR excellent New York contemporary, *Building*, has changed its title to *Architecture and Building*, in order that its scope may be the more readily understood. The New Year number just to hand, bears a new heading of appropriate character, and embraces a couple of new departments which should further increase the interest of its readers.

We have received from Messrs. Palliser, Palliser & Co., 24 East 42nd St., New York, a copy of a work entitled "American Architecture." The aim of the work is stated in the preface to be "to present a variety of plans which, with few additions and changes, can be adapted to the requirements and individual tastes of those who build, whether living in town or country." This is a laudable ambition which many other publishers have shared, but the results of their efforts have not worked out so satisfactorily in practice in some instances as builders could have desired. The present work, bound in cloth, is sold at \$2.



STRENGTH OF LEAD PIPE.

MR. George L. Knox, of the Colwell Lead Co., in writing on the strength and durability of lead pipe, says:

"Lead pipe will sustain quite a heavy pressure if it is applied without shock, but in all practical work, in the plumbing of houses especially, the column of descending water suddenly stopped by the closing of a faucet exerts an increased pressure that will burst pipes which would stand a very much larger weight of still water. If the safe working pressures given in the table referred to were only slightly in error I would not think it necessary to call your attention to them; but my practical experience has shown that the figures there presented are very far from consistent with safe practice. Perhaps the best evidence to present in support of my views are instances that occurred in practical work.

"When aerated bread was first made in this city we were asked to furnish a tin-lined lead pipe under a inches diameter to stand a pressure of 140 pounds to the square inch, the pipe to be used for conveying the carbonic acid gas which was forced through the dough after it was mixed. We furnished for the purpose AAA pipe, but it would not stand the pressure. We then made for them a heavier pipe, but with no better results. Finally, we made a pipe that was at least three times as strong as AAA pipe, but even this did not stand the 140 pounds pressure. Of course these pipes did not give out at once and the strongest lasted a few weeks but eventually the lead swelled and burst. The parties for whom we furnished the pipe were finally obliged to use an iron pipe, tin-lined, the tin being necessary to prevent the corrosion of the iron by the carbonic acid gas. You will notice that the pressure was only 140 pounds to the square inch, and according to the table you printed the 'safe working pressure' of all the AAA pipes under 3 inches was considerably in excess of this figure."

Mr. J. C. Paterson, of Paterson Bros., Toronto, Montreal and New York, has purchased a valuable plant and mill at Portage la Prairie, Man., and will commence at once the manufacture of building paper.

On the night of the 10th inst., the Adamant Manufacturing Co.'s premises, Esplanade St., Toronto, were seriously damaged by fire. As our readers are aware, the Company only recently commenced business in Canada, and sympathy will be felt for them on account of the misfortune which so soon overtook them. With commendable pluck, however, they have undertaken the work of reconstruction, and will soon be in as good a position as before.

Mr. E. W. Rathbun, of Deseronto, in a recent address at Kingston said: "The products of our limestone, marble, granite and sandstone quarries, within this area found in variety and abundance, are called for and used in Chicago, Cincinnati, Toronto, Montreal and other cities of both countries. The vast deposits of carbonate of lime, of marl and clay, but recently miles apart, and now, through the construction of railways, brought together, will shortly yield a Portland cement, for which hundreds of thousands of dollars go out of the country yearly, and which, more than in any other section, is needed within and about this centre for the numerous locks, dams and retaining walls of our vast system of canals and hydraulic privileges. Our quarries of native cement, not forty miles from the institution of learning, are equal in quality and quantity to the famous beds in New York and Ohio, and yet are only now becoming recognized."