

was constructed. I think that building comes nearer to being fire-proof than any building that I know; but such construction is, as yet, too expensive in this country to be applied to mills and commercial warehouses. It has, however, been adopted in Spain for textile manufactories, bleacheries and print works."

WHEN a metal beam or bar is subjected to a shock, there is a tendency to change the form or to bend the beam. When the load is removed or the shock is over, the beam will assume its original position unless the strain produced by the load or shock has been in excess of what is sometimes termed the elastic limit. It may be repeated an infinite number of times and yet there will be no evidence of any weakening of material, but if it be in excess of the elastic limit, it has only to be repeated a sufficient number of times to break the beam. However, there is another feature of the action of the metal which must not be overlooked. It is that the limit of elasticity is not constant throughout the succession of shocks required to break the beam. After the load has been several times applied and removed, it is found that a greater weight is required to produce the same amount of bending, that is, the limit of elasticity has been increased. It is, however, a question whether or not the safety of the beam has been increased.

A REVOLUTION is taking place in the methods of preparing stone for the various purposes which it is required to serve in building construction. In Chicago a great deal of the work formerly done by the skillful hands of the workman is now being accomplished in much less time and consequently at greatly reduced cost by improved machinery recently designed for the purpose. A gentleman who witnessed its operation states that the *modus operandi* is very similar to that to which lumber is subjected in passing through a planing mill—the material in its rough state entering at one end of the establishment and passing out at the other end in almost finished condition. Stone-cutters viewed the introduction of these machines with alarm, but the experience of the last two years is said to have shown that there is as great demand for skilled workmen as ever. The reduction in cost effected by the use of machinery has brought stone into use to a greater extent than before. There is likewise noticeable a tendency to indulge in more elaborate ornamentation. The employment of machinery would no doubt have lessened very materially the time and expense on the construction of the new Parliament, city and university buildings, Toronto.

THE difficulties incident to the erection of the Toronto Board of Trade's new building are not yet at an end. The limit set for the cost of the site and building was \$350,000. The calculations regarding interest to be paid and probable revenue to be derived from tenants indicated that it would be possible to put aside annually the sum of \$5,000 to establish a sinking fund for the redemption of the bonds on the building. There is little reason to doubt that had the construction of the building been entrusted to local architects, it would have cost little if anything more than the sum fixed as the limit. The secretary and Mr. H. W. Darling, a former president of the Board, were apparently very desirous that an American architect should be employed, and the upshot of the matter was that the work was given to Messrs. James & James, of New York. After a time rumors began to circulate that there were serious flaws in construction due to defects in the plans. The secretary of the Board positively denied that there was anything wrong, but eventually when this journal with the aid of sketches and figures taken from the work, printed the true facts of the case, it could no longer be concealed that blunders of a serious character had been made. The architects were dismissed, and another American architect employed to complete the work, as it would never have done to have admitted that a mistake had been made in passing by competent local men. The mistake is none the less apparent in the fact, however, that the building required to a large extent to be reconstructed, and in consequence the limit of cost has been exceeded by \$120,000. This extra cost has wiped out the possibility of devoting \$5,000 a year to a sinking fund without increasing the fees of the members. As the only way out of the difficulty, it is now proposed to amend the by-laws to permit of doubling the amount of the annual membership fee. As a

result of this proposal we have recently heard members asking one another what advantage was derived from their connection with the Board, and the answer was that the benefits to members other than those belonging to the grain section, are nil. Under these circumstances it is not surprising to hear members offering to sell out. "You will never be able to pay off the debt on that building in the world!" was the statement made by a member to one of the trustees of the Board the other day in the writer's hearing. "I know it," was the discouraging reply, and this was followed by the suggestion that it was useless to expect of economy as long as the Board had a secretary whose economic ideas were so ill-defined.

O. A. A. CONVENTION.

THE second annual convention of the Ontario Association of Architects will meet on Tuesday, the 2nd of February, at the School of Practical Science, Queen's Park, Toronto, at 2:30 o'clock, p.m. It is to be hoped that the proceedings will be of more interest than usual. We would strongly urge on every member of the Association to be present and take an active part in the proceedings.

Members who do not attend the annual meetings cannot justly make any complaint as to the manner in which the interests of the Association are conducted. If any member feels that some question which specially interests him should be considered, he should attend and bring the matter up, otherwise there may be no one present to bring it before the meeting.

This is a critical period in the existence of the Association, and it will require the assistance of every member to tide it over the next few years. If the members are loyal to the Association its success is assured. But if the members grow indifferent and careless, it will require all the energy and perseverance of its active workers to carry the Association until it has made for itself a solid foundation on the ability and loyalty of its younger members who will have come in by passing the examinations.

There are members who complain that the Association has not benefited them because they cannot obtain 5 per cent. commission, other members being prepared to work for less. The Association is unable to make rules or regulations which will bind the members except to a very limited extent, and certainly it is unable to force its members to charge any definite commission, even if such a course were advisable. When a man does not value his services at the regular rate of commission, but at a rate much lower, nothing can be done that will cause him to value his services at a higher rate. His services may not in reality be worth more than he is willing to receive, or he may be forced by circumstances to take what he can get.

It is a question if it would not be better for each man to settle for himself what his services are worth. A fixed rate of commission on all work of the same character to be paid alike to the competent or incompetent architect is unfair and unjust alike to the architect and the client. The client, if he knows what is best for him, will go to the most competent man that he can find, as he would not pay any more for his services than he would for those of an inferior man, except that a competent man will insist upon the work being thoroughly done, thus increasing the cost to the proprietor. This and similar questions could be brought up and discussed at the convention with benefit to all.

The testing machinery which has been recently erected in the School of Practical Science will be exhibited, and tests will be made of the building stones in use in the province of Ontario. Five well known members of the Association have consented to exhibit plans of houses and describe them, giving their reasons for arranging the plans as shown. These descriptions and the discussion which will follow will probably be of great interest.

There will be a number of valuable papers read, which, with the discussions upon them, should be of interest to every member. It is hoped that some members will come prepared to discuss the papers. Every member may not have the opportunity nor be able to take an active part in the work of the Association, but each member is able and should take sufficient interest in the progress of the Association to cause him to do all that may lie in his power, be it much or little, to assist and encourage those who are taking an active part. The member who does nothing to aid in the advancement of the Association