

In view of the recent fire it is to be hoped that the city council of Toronto will see the wisdom of complying with the recommendation of the architect for an extra appropriation sufficient to cover the cost of fire-proofing the roof and corridors of the new city buildings. Mr. Lennox estimates that after deducting the saving in insurance, the cost of fireproofing the buildings to the extent mentioned would not exceed \$30,000. This would mean a charge for interest of only \$1,200 per year. Surely for the sake of so small an amount, the council will not refuse to protect a building, the cost of which will run into the millions. If a wooden roof is allowed to be placed on these buildings their destruction will be next to a certainty in case of fire being communicated to them from adjoining buildings.

THE indications point to the success of the annual convention of the Ontario Association of Architects to take place in Toronto on the 15th and 16th inst. Nearly one hundred drawings and photographs of buildings erected by members of the Association have been received by Mr. C. H. C. Wright, of the Department of Architecture, who has reproduced them on lantern slides in order that they may be exhibited for criticism at the convention. It is to be regretted that the designs submitted for this purpose are not representative of the work of a majority of the members of the Association. If the result of the experiment this year should be considered satisfactory, however, a more thoroughly representative collection will doubtless be obtainable for future conventions. The CANADIAN ARCHITECT AND BUILDER for February will contain a complete account of the proceedings of this meeting.

SOME LESSONS OF THE TORONTO FIRE.

It is frequently the case that necessary public improvements come only as the result of a public disaster. The recent conflagration in Toronto is a case in point. The fact that the means for the protection of the city from fire were totally inadequate for the purpose, was well-known to the chief of the fire department and others who took the trouble to investigate the condition of affairs. The city council was urged to furnish the necessary fire equipment, but the matter was from time to time deferred, with what serious result is now seen. Since the fire, the statement has been published that Toronto is perhaps the only city of importance on the continent of America, which does not possess a number of steam fire engines. Montreal has a dozen or more. Detroit has eighteen, in addition to, besides chemical engines, while other American cities with a population only thirty per cent. that of Toronto, have from eight to twelve engines. It appears also that the water mains in the business district of Toronto are of too small diameter to furnish the necessary supply of water in case of a large fire such as the city has just experienced.

The first thing requiring to be done is to put the fire equipment of the city in a thoroughly satisfactory condition. Second in importance to this comes the necessity for a thorough revision of the city building by-law, with the object of preventing the erection of structures such as some of those which were destroyed in the recent fire, and which had so much to do with spreading the conflagration. It is not many years since the existing by-law underwent revision at the hands of the Council, but in the time which has since elapsed many changes have taken place in materials and methods of construction, so that what virtue the by-law may have possessed five or six years ago it cannot be said to possess to-day. Within the period mentioned there have been erected a number of large buildings, five, six and seven stories in height, the upper stories of which the firemen with their present appliances are powerless to reach. In the absence of a carefully prepared building ordinance, some of these high structures have been erected throughout of combustible materials. The roof of the Globe building for example is estimated to have contained not less than 20,000 feet of lumber. The interior of the Osgoodby building was wood throughout, even to the partitions and ceilings. In addition to the combustible character of these buildings, the Globe building at least, was looked upon as an unsafe structure. The upper stories, surmounting two or three stories of an old building formerly used as a warehouse, were carried on iron pillars, and the upper floors of the building were loaded with heavy machinery. It is by no means improbable that had fire not destroyed the building,

it would at some future time have collapsed and caused large loss of life. This building was a type of cheap and showy architecture erected under the supervision of a firm of American architects, who, after securing all the work they could during the period of the boom, returned to their native soil across the line.

There are other buildings still existing constructed in much the same manner, which, should a fire break out in them, would burn out as quickly and spread destruction to adjoining buildings. One amendment to the building by-law should be that roofs of buildings above four stories in height must be of metal and other fire proof materials, and where galvanized iron cornices are used, they should be backed with brick and supported on iron brackets. The method of constructing such cornices with wood backing and hung on wood brackets is a dangerous one, as in case of fire the galvanized iron becomes heated to such a degree as to set fire to the wood, and thus a path is formed for the flames around the top of the building. The combustible material such as has hitherto been employed in roofs and cornices is carried by the wind to adjoining buildings, and in some instances to distant parts of the city, thereby greatly enhancing the danger of a serious conflagration.

The present by-law does not regulate as it should the thickness of walls, nor does it limit as it should the area between brick walls. As a result, many buildings, such as warehouses, have been erected with large floor areas and walls of insufficient strength. A valuable provision would be that such buildings must be divided laterally by brick fire walls. The value of such walls was clearly demonstrated in Messrs. Buntin Reid & Co.'s building, where a twenty-four inch brick wall dividing the building was the means of staying the progress of the fire, and doubtless saved the wholesale district of the city from being swept away.

Something requires to be said also with regard to the use of iron in substitution for wood as a supporting material for buildings. It is well known to those who have investigated the subject that heavy wood beams are better capable of withstanding fire than steel girders and steel or wrought iron pillars, unless the latter are thoroughly encased in fire proof material, such as porous terra cotta. To encase merely the supporting columns, leaving the girders exposed is of little advantage. This method might be of some use in case of a fire breaking out in the basement or the ground floor, as it would be the means of keeping the floor supports intact for a considerable time, thereby giving greater opportunity for the fire to be extinguished. In the case, however, of a building taking fire in the upper stories, it becomes valueless. It is to be hoped that when the building by-law comes up for consideration and amendment, the protection by fire proof material of all structural iron work will be made compulsory.

In the present loose conditions of affairs, it has been possible for an unscrupulous architect, by offering to put up a building of larger dimensions for less money than could be done by one who proposed to carry out his work in an honest manner, to secure work which under proper conditions would find its way into the hands of the better men in the profession.

We are pleased to observe that the Toronto Board of Trade have adopted a resolution calling on the City Council to amend the building by-law, and to establish a building department, at the head of which should be a person fully qualified to judge whether or not the plans for buildings proposed to be erected have been properly designed from a structural standpoint. The head of such a department should be one fully familiar with the strength of the various materials entering into the construction of buildings, as well as the proper methods of using them. There is need also for more frequent and thorough inspection of buildings in course of erection, in order that when the by-law shall have been properly amended, its provisions may not be disregarded.

Finally, there is need for legislation such as the Ontario Association of Architects is seeking to obtain, which would make it compulsory on architects to pass a qualifying examination, and show themselves to be equipped for the proper practice of their profession.

The authorities of the Louvre have been conducting a series of experiments as to the best background for sculpture, and have now decorated the galleries which contain them with a light red colour.