

agencies. We do find a J. H. Mitchell in the directory, but he is a dealer in poultry at 981 Queen street east, across the River Don. It may be, of course, that he is the secretary of this \$50,000,000 concern, but we should not think it likely. We were referred—when first we made enquiry at the office of one of these companies as to its responsibility—to the extraordinary success of building societies in Dakota. This may be true enough; there have been plenty of successful building societies in Ontario, and are now. But these do not boast about capital five millions or fifty millions, nor do they claim, as does this one of which Rev. Dr. A. Burns, LL.D., is president, that "it has special features ensuring safety, equity, larger and more constant profits than are afforded by other associations," and that "the profits are three times ordinary rates." These gentlemen, even those of them we know, do protest too much, and we cannot join in their extravagant forecasts and magnificent promises.

Building societies and loan companies in Canada are usually conducted by persons of standing in the communities where they reside. And the older ones among such concerns have responsible subscribers or accumulated funds, which enable them to enter into financial transactions with some assurance to members or shareholders that capital confided to them will be accounted for. But what guarantee do these projected concerns offer? One of the gentlemen, whose name is paraded as an incorporator of the Dominion Association, declares this use of his name to be unauthorized. Such facts as this, added to the questionable use made of the names of banks and trust companies, are calculated to make people shy of over-puffed concerns.

FIRE PREVENTION OR EXTINGUISHMENT.

SECOND ARTICLE.

Topic No. 6, namely, How should flues and fire-hearths be built? was the first of many more momentous queries submitted under modest guise by Mr. H. A. Goetz, of New Albany, Indiana. This gentleman went to the heart of things at once when he asked, "Which is the best economy, to continue present methods of building and trust to the fire departments, or put up better buildings such as will not destroy each other, but will burn individually if they burn at all?" The enquiry was suggested whether firemen ought not to take an active part in urging better, safer methods of construction, possibly framing a model building law. And finally the query was propounded: To what extent has the construction of slow burning buildings reduced the fire hazard in cities?

As to defective flues in dwellings, the experience of Chief Swenie, of Chicago, and of a dozen others, some of whom had specially investigated the cause of obscure fires, led them to the common conclusion that these are the cause of many mysterious burnings, Mr. Goetz averring that the yearly loss by fire from this cause amounts to millions of dollars. Such fires are most frequent in dwellings,

it appears, and one speaker contended that the risk of fire from this cause was even greater in towns or small cities than in the larger centres. The opinion seemed to prevail that, as fires from badly built flues continue, in spite of ordinances governing their construction in New York, Chicago, etc., firemen should be permitted to enter buildings and examine flues; owners and fire commissioners should co-operate to make flue-building safe, and more stringent regulations should be made; for, as Mr. Cornell bluntly put it, the common building laws are too often violated to meet the convenience or economy of the owners of structures.

It is better economy, undoubtedly, to prevent fires by building prudently than to trust to the cleverness and daring of firemen to subdue them. Therefore, urged Mr. Goetz—and here the American eagle screams a little—although the firemen of the United States lead the world, what is needed is better buildings, able to resist fire; "in fact the building should be so thoroughly built that it would cremate its contents before it is in turn destroyed." He adds: "Let there be no more flimsy, pasty walls. Let each building be so constructed that it will stand alone." In no two States of the American Union, these fire engineers tell us, are the building laws either uniform or intelligible. The result of an important and very intelligent debate upon Mr. Goetz's able paper was the appointment of a special committee of nine (Mr. Goetz being one) to draft a suitable inspection ordinance for buildings, and impress it upon the attention of the State or municipal authorities.

The third day's session of the Firemen's Convention at Detroit was opened by a paper on the use of electricity as a factor in extinguishing fires, followed by a dissertation on the storage and use of crude petroleum; what buildings are safest for storage of the article, and how far from other buildings they should be for safety. Boston, Chicago, St. Louis and Lewiston, Maine, were heard from in the persons of their superintendents of fire alarms. The topic for discussion by these gentlemen was the construction of fire alarms in municipalities. Mr. Chandler, of Chicago, believed the method of stringing the fire alarm wires in that city to be the best. These aerial lines are on poles owned by the municipality, and the poles are the highest in the city. This, in his opinion, is the best position for such wires: "Either have them underground, or have them above all others in mid-air. See to it, likewise, that the plant for fire-alarm purposes is the best obtainable." The speaker gave, besides, some serviceable hints as to the care and management of fire apparatus.

An electric light inspector from Chicago, Mr. Haskins, introduced the subject of the proper construction of electric wires in buildings for lighting purposes, illustrating his paper by personal experiences. The same speaker addressed himself to the problem how best harmony between fire departments and electric light companies could be brought about with a view to mutual interest. If this gentleman had been a Canadian he might have included

telephone companies in his category. It was recommended that a record of all electric light subscribers should be given the fire department. As a result of this he predicted better lines would be laid out and more general satisfaction attained. The time is near at hand, in Mr. Haskins' opinion, when all wires will be put underground.

Connecticut, Massachusetts and Michigan engineers took part in discussing the question whether local legislation on subjects germane to the suppression of fires should be vested in the chief engineers of fire departments, in conjunction with the other executive officers of municipalities. Two opinions were given favorable to investing the fire chief with such responsibility; the third was averse to the proposition. A brief exposition of "How to Fight Lumber Fire" was given by three fire experts, all from Michigan. Then four speakers championed woven fabric, two rubber and one leather on topic 17, which was entitled, "Management and Care of Different Kinds of Fire Hose." It was stated that by the use of hose towers the life of cotton hose can be prolonged fifty per cent. Mr. Landy was an advocate of the cold water treatment for rubber hose.

At the last session, that of Thursday evening, after references to and statistics of the great fire in Boston and the more recent \$3,000,000 conflagration at Lynn, Mass., discussion was begun afresh on the combustibility or otherwise of ammonia gas, used in some chemical fire engines. Said Mr. Hutson, of Chicago, on this subject: "As to the use or disuse of ammonia, will not fluorine, bromine, chlorine, and others, displace oxygen? He could dispel as much oxygen from the air with ammonia as with any other gas. Is not ammonia gas a displacant of oxygen? If it is, it is a fire extinguisher. One fire will put out another quicker than it can be put out in any other way. Hold a match under a lamp and the match will go out, because the lamp has already absorbed the oxygen of the air. If you don't believe it, try it. (Applause.) Even water will burn, as all firemen know well." Chief Engineer Leay insisted that ammonia gas was a dangerous thing; "a little of it released in this room would be death to us all." A thoughtful paper was that of J. W. Smith, of New York City, detailing some of the good work and some of the deficiencies of the fire departments of the Union. The speaker recited eleven paragraphs touching an improvement in the service. These covered water supply, engines, hose, men, and other details.

ELECTRIC STREET RAILWAY SYSTEMS.

We in Canada are not yet very familiar with electricity as a motive power. In Europe and the United States much has been done, for example, in the use of electric motors to replace small steam or gas engines. Electricity to drive street railways has found illustration, it is true, at the Toronto Industrial Exhibition and on the Metropolitan Street Railway, North Toronto. As