

chemically made silk has displaced the real article, but the production is now larger than the public would believe, and is increasing from year to year. A factory is in operation in the United States, and the present year sees the introduction of its manufacture in Canada. The factory at Toronto Junction is a branch of the General Artificial Silk Co., of Philadelphia, operating the Stearn process developed in England. It produces a class of silk suitable for dress goods, laces, tapestries and braid. There are two large concerns and less than half a dozen small ones which may form the Canadian clientele of such a factory, and, of course, for many years to come, and unless the present conditions of trade change greatly, the Canadian factory is not likely to gain customers abroad, where labor and the cost of chemicals are less than here. The only advantage Canada might have is in one of the raw materials, which are spruce and cotton waste, but this does not cut a large figure beside the paper industry, since a ton of spruce would go a long way to supplying raw material for a silk factory. The spruce of Canada is equal to the best in the world, and superior to that of most spruce-growing countries, but for the purpose of this individual process the pulp manufacturers of Sweden appear to be able to prepare a more suitable article. As this is only a question of the method of preparation, no doubt the Canadian and United States factories will soon be getting their pulp from Canadian mills. As already stated, the processes for making artificial silk have been greatly improved, but the imitation, except in point of cheapness, is still below the real silk in strength, elasticity, and in non-inflammability, though it has now been rendered less inflammable than cotton. There are several ways by which the chemist can readily distinguish between the two kinds of silk, but a simple means of testing is by burning. The artificial silk burns quickly in a flame, leaving but little ash, whereas the true silk carbonizes, or chars, when burnt. Further reference to the subject will be found in our news columns.

* * *

THE GREAT TORONTO FIRE.

The 19th of April, 1904, will long be remembered in the annals of Toronto as the date of the greatest fire which has ever visited that city, and the most disastrous, so far as the value of property destroyed is concerned, which has ever occurred in Canada. Between 8 o'clock on the night of the 19th, when it broke out, and 5 o'clock on the morning of the 20th, when it may be said to have been got under control, fourteen acres of buildings, containing valuable stocks, in the wholesale section of the city, on Front, Wellington West and Bay Streets, were swept away, involving a loss of about \$13,000,000, on which there was insurance amounting to about \$10,000,000. In this destruction the textile trades suffered heavily. Every wholesale dry goods establishment in the city, with one exception, was burned out, and in many of these manufacturing was carried on, so that besides the direct loss a large num-

ber of hands were thrown out of employment. Some eighty-five firms, exclusive of a number of smaller manufacturers' agents who deal in dry goods or accessories, were deprived of their business homes. Four large wholesale dry goods houses, eight millinery, two fur manufacturers, about a dozen clothing and six hat and cap houses were included in the disaster, and lost almost their entire stocks, for so rapidly did the fire spread before a high wind, and so difficult were the circumstances for saving goods, that it was well nigh useless to attempt to remove stocks. The interruption to business has, however, not been so serious as might have been expected. Most of the burned out firms secured temporary accommodation without delay, and one firm at least, the W. R. Brock Co, was in a position to fill all orders at once from its Montreal warehouse. Though a shortage was expected in some lines, with an advance in prices, such does not seem to have occurred. Most of the firms will rebuild without delay—some of them have already let their contracts and operations have commenced—and we are not aware of a single textile firm which is going out of business as a result of the fire.

This disaster carries with it some important lessons. One is that Toronto (and other cities are probably in the same position) with an efficient and fairly well-equipped fire brigade, is not in a position to cope with such a conflagration. A lesson which Toronto has learned, and it is emphasized by the recent Baltimore fire, very similar in its character to that at Toronto, is that the water pressure for such an occasion is not adequate. It stands to reason that with a large number of streams in operation the pressure is reduced, and the firemen, even with water towers, cannot reach the upper stories of high buildings. In cities with a water front, such as Baltimore and Toronto, separate mains for fire purposes only are required, with stationary engines on the water front. Such have been installed in some places already, and the Toronto city council has asked the chief of the fire department for a report on such a system, which, it is a foregone conclusion, will be in favor of it. Automatic sprinkling systems, stand-pipes and hose on the different flats of large warehouses, the enclosing of elevators and stairways within terra cotta or brick walls, the use of iron for window frames and sash, with possibly wire glass, and iron shutters, and close supervision and inspection of electric wiring are precautions which should be observed. It is thought the Toronto fire originated from an electric wire in the premises of the E. & C. Currie Co., but the fact will probably never be known.

The firm of A. A. Allan & Co. were fortunate in one respect. They had converted the area under the sidewalk, usually employed as a place for coal, into a storehouse, and had there a large quantity of valuable furs which were saved without damage.

Some of the firms which were burned out lost their books and papers, which were in their vaults, the latter having proved to be anything but fireproof. Among these was the Wyld-Darling Co., wholesale dry goods, whose books were completely destroyed.