

works in that city within the next two weeks, and the erection of the buildings will follow as fast as possible. It is expected that at least a thousand employees will be serving the company within a year as soon as the plant is completed.

When it is considered that the Westinghouse Mfg. Co. alone has had sales in the Dominion amounting to about two million dollars annually, the importance of this addition to Canadian industry cannot be overestimated. With George Westinghouse as the mainspring and directing power, all the Westinghouse companies have grown to large proportions and without doubt the same will prove true of the Canadian company. It is bound to become one of the largest manufacturing establishments in Canada, and in the not distant future should rival in size and importance the other companies across the border.

The output of the aggregated manufacturing of the Westinghouse companies in the United States alone is over fifty million dollars per year in actual shipments and it is confidently expected that the establishment of this Canadian company will increase this amount considerably as it is to be a Canadian company for Canadians.

It will be remembered that in addition to his American undertaking, George Westinghouse has successfully established large companies in Europe, the largest of which is the British Westinghouse Electric & Mfg. Co., capitalized at about \$15,000,000, and employing 5,000 workmen at Manchester. This company has constructed most of the important electrical installations in Great Britain, such as the underground railways of London, and the electrification of the Mersey railway. In addition there are the Westinghouse companies of France, Germany and Russia, each with large and prosperous manufacturing establishments.

The business in Canada of late years has grown to such proportions that in line with the policy of George Westinghouse to establish works in the countries served, this Canadian company was essential to the proper care and conservation of the demands and interests of the Dominion.

At the annual meeting of the stockholders of the Westinghouse Air Brake Co., held in Wilmerding, near Pittsburgh, Pa., October 7, President George Westinghouse outlined a plan for the consolidation of all the Canadian interests of the corporation, together with those of the Westinghouse Electric & Mfg. Co., each of which is now being conducted individually in Canada. Their plan is to have the air brake company dispose of its Westinghouse Mfg. Co., Limited, Hamilton, Ont., to a new corporation, which was formed recently and known as the Canadian Westinghouse Co., of the same place. The \$650,000 stock of the older company is to be sold at par and paid for in stock of the new company. In addition, the Air Brake Co. is to underwrite \$200,000 in stock in the new company for Canada.

The Westinghouse Electric & Mfg. Co., which has been carrying on an extensive business in Canada from the

local plants, will also underwrite \$450,000 in stock of the new Canadian company, and will sell its business rights and patents to the new company for \$500,000 in stock of the new corporation, thus making the two local companies own \$1,800,000 of stock in the Canadian company. The new Canadian company is to be capitalized at \$2,500,000, and the remainder of the stock has already been sold to Canadian corporations and capitalists. The plan was ratified by the Air Brake Co. stockholders.

AN UNUSUAL ELECTRICAL CONTRACT.

Messrs. Woodman Bros., electricians, Hamilton, Ont., have undertaken an important and somewhat unique contract from the Hamilton Cataract Power, Light & Traction Co., that city. It consists in changing the wiring on the line from Decew Falls to Hamilton, a distance of 35 miles 174 yards. The change, which is one of the largest of its kind ever undertaken in Canada, has become necessary owing to the growth of the company and the demand for electric power made by new companies becoming established in the city.

Some idea of the rapid strides made in the adaptation of electric power in this locality may be had when it is stated that six years ago four wires transmitted all the power needed. Two years ago, by the use of a system not known six years ago, one wire less transmitted one third more power than previously.

By the system at present being constructed twice as much power can be transmitted as could be done by that installed two years ago. Thus if the unit of power six years ago were 1,000 by four wires, two years ago on three wires it would show 1,333, and by the one under installation it would indicate 2,666. This last change is being put into effect by the substitution of aluminum for copper wire.

The importance and risk of the undertaking may be understood when it is stated that Grimsby, which is half way on the line, is guaranteed a 24 hours' service, uninterrupted, of 24,000 volts while the work is being carried on, and Beamsville, six miles nearer the powerhouse, is to have a night service of the same voltage. To provide for this high voltage transmission it has been necessary to install special apparatus for manipulating these high tension currents.

Portable telephones are necessary on the work both to facilitate the construction and to guard against accidents; for while every man employed has had special training and experience, every step forward is a challenge to danger, which is avoided by the interception of every message along the length of line from Decew Falls to Hamilton. At Grimsby are situated a number of marble slab, high voltage switches where this interception takes place, and if a wrong message is sent it is blocked and correct ones only allowed to pass.

The electricians are under contract to allow the full current to be turned on the whole line in receiving one hour's notice, and under no circumstances is there to be

any interruption of transmission. When it is understood that the same poles are being used, the same insulator cross bars, that the old wires are to remain, until the current can be turned on the new, and that the barbed lightning arrestor wire is not to be taken down some idea can be formed of the care necessary to prevent confusion and loss in life and property.

The wire is being drawn along the line through porcelain insulators by a team of horses, which, by the way, are also veterans in the business, and is nipped up by men following, while a gang proceeds ahead to bore the cross bars and attach the insulators.

The three wires, each 35 miles 174 yards long, mean the stringing of 185,322 feet of wire over 2,000 poles, with the ever present possibility of being electrocuted.

THE EXPORT TRADE OF TORONTO.

The full importance of Toronto's export trade is not always recognized. This trade has been steadily on the increase for a number of years, and Toronto may now be fairly said to occupy an important position in the British Empire as purveyor of manufactured articles to British and colonial markets, and to those of several other foreign countries as well. No statistics are available to show the total exports from this city, but as Toronto is one of the two chief manufacturing centres of Canada, its exports may be taken to bear a fair proportion to the exports of manufactures from the Dominion. For the fiscal year, 1903, Canada exported altogether \$20,624,967 worth of manufactured goods. This, compared with \$2,432,750 in 1871, and represented an increase since then of not less than 750 per cent. Truly a remarkable growth, and one shared in a large measure by the city of Toronto! There is just one reason why Toronto manufacturing concerns are not doing even more than they are in the way of export: the fact that they are too busy supplying the expanding home demand.

In order to form somewhat of a comprehensive idea of the export trade of Toronto, it will be well to survey briefly some of the leading lines exported and note what is being done in each.

Starting with bacon and hams, Toronto packing houses, including William Davies & Co., Park, Blackwell & Co., and Gunns, Limited, are doing a large and increasing export business, chiefly in Great Britain.

Toronto biscuits form an important item of export. Those of Christie, Brown & Co. have found their way not only to Great Britain, but to such diversified markets as Japan, Australia, New Zealand, India and the British West Indies. The great variety of samples offered and the purity and excellence of the goods enables them to win their way wherever they go.

The Canada Furniture Manufacturers, Limited, whose head office is in Toronto, have done considerable export trade. This concern has the advantage of being able to specialize in its different factories