

apparatus, such as have been demonstrated to be of sufficient usefulness & merit, in the protection of life & property, to all rolling stock, including locomotives, passenger cars, & freight cars, makes the fact of the Westinghouse works having been established here of great & special importance to the railway companies of the Dominion. From the fact of the Westinghouse Air Brake having become a recognized standard, not only of the American continent, but of the world, and that it has already been applied to more than 550,000 freight cars in Canada & the United States, in addition to all the passenger cars & the majority of the locomotives, it becomes almost imperative that the same system must be generally adopted in this country, as the successful operation & maintenance of an apparatus of this character can only be secured by having it absolutely uniform & interchangeable. It is an undoubted fact that the reason why the railways of the Dominion have been somewhat tardy in regard to the general adoption & application of air brakes to their rolling stock, has resulted from the other fact that the apparatus was not manufactured in Canada, & that to import it meant to them, on account of the customs duty on this class of material, an increase in cost over that paid by the railways in the United States of 30 per cent., or practically \$12 a car. This obstacle has been entirely removed by the Westinghouse Co. establishing its works in Canada, & in addition to this, the Co. is furnishing employment to a large number of Canadian artisans.

The original Westinghouse Air Brake Co. was organized in Pennsylvania in 1869, & its early patents contained all the elements of novelty & real merit, of what is now known as a science, & which enabled it to secure the patents which then formed, & which are

now, in some modified form, better adapted to present requirements, & contain all the elements that go to make up a satisfactory & efficient air brake apparatus.

The development of the air brake business has been most carefully pursued, & additions & improvements have been made from time to time, until it would almost appear as though the acme of perfection had now been arrived at, & that we have to-day, in the Westinghouse Air Brake, one of the best & most important mechanical safety devices of the age.

The air brake business is not by any means confined to America, but has extended to England, France & Germany, in each of which countries there have been established for some years large works for its production, the markets of China, Japan, Russia & South America, being supplied with the apparatus by the home company in Pittsburg, Pa.

Occasionally is seen here and there some paragraph emanating from persons badly informed upon the subject, that the Westinghouse Co. is more or less of a monopoly. Assertions of this kind, however, cannot be well sustained, from the fact that whenever the question to its title to the rights which it now enjoys has been presented before the courts in any matter of litigation, the Company has invariably been sustained; & in addition to this it might be well to note that, without in any way being coerced by competition, it has constantly, on account of its improved methods & special machinery, been enabled to reduce the price of the apparatus to about one-half of that which it originally cost the railroad companies. Every care is being exercised by the Company to maintain & care for the general efficiency of the apparatus, & it annually spends large sums of money for the instruction of trainmen in the proper care & manipulation of the brake apparatus, & by

furnishing inspectors at its own expense, the services of whom are, at all times, at the disposal of any railway company, for such purposes as they may be required.

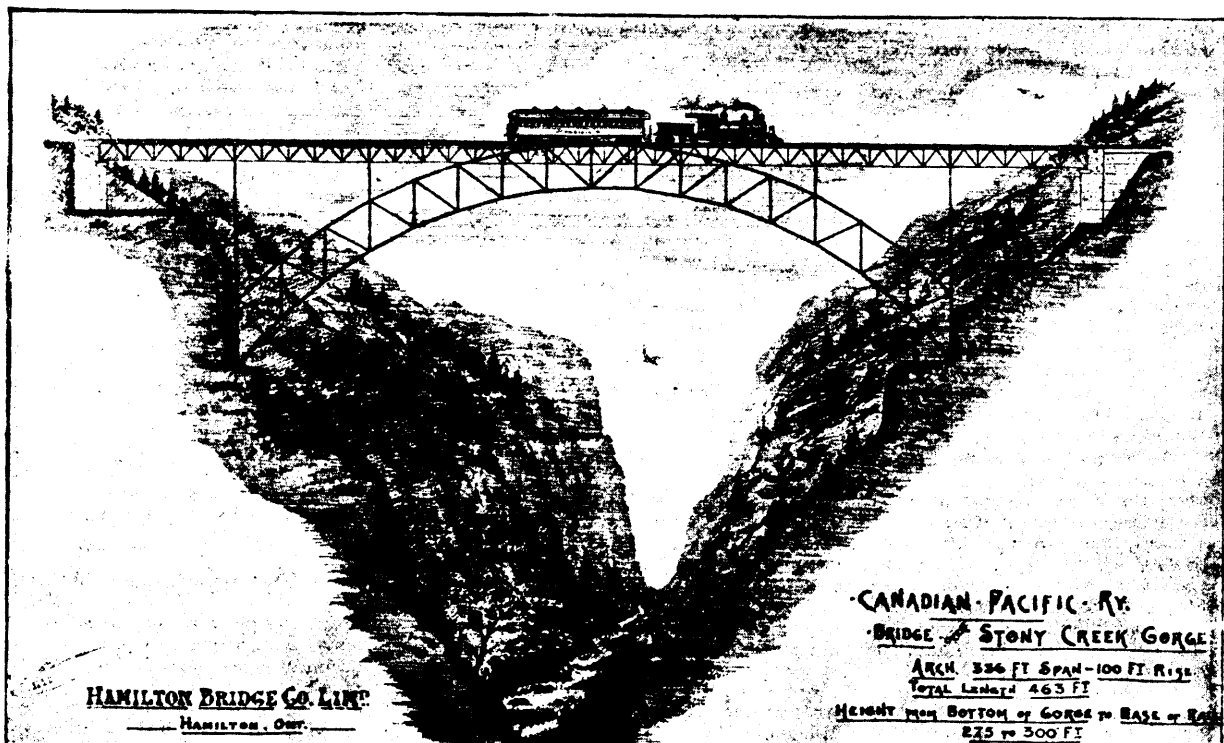
The more important business of the air brake companies at present is, & for some time in the future will be, the equipping of freight cars. Recent statistics show that some 550,000 cars have been equipped in Canada & the United States, which is probably about 35 or 40 per cent. of all the available cars at present in use in North America.

The increased weight of the modern locomotive & car has made it absolutely necessary that a power brake should be used to control them, & the fact of their being so controlled practically increases the capacity of the railways which have their rolling stock so equipped. It is well known that the old time schedule for freight trains was from 15 to 20 miles an hour, whereas, at the present day, it is not at all unusual to run heavy through freight trains on comparatively passenger schedule. This fact can only be attributed to the other fact, that these through trains are air-braked throughout, thus placing their control entirely in the hands of the engineer, & the entire handling of the train is similar in every respect to that of the ordinary passenger train equipped in the same way, with which most readers are quite familiar.

The capacity of the Hamilton works is quite equal to all the requirements of the railways in the Dominion, & they are kept actively engaged by the trunk lines, including the Grand Trunk, Intercolonial & Canadian Pacific, in the manufacture of freight brakes, & other apparatus of a similar character; it being the intention of these companies to have their entire rolling stock equipped as fast as possible.

The Hamilton Works, as a manufactory, is quite a model machine shop. The machinery,

## The HAMILTON BRIDGE WORKS CO., Limited, ✱ Hamilton, Canada.



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