

of the application of this system are acknowledged by all the experts who have looked into its merits, but there are objections on the score of expense. In places near the coast, such as Havre, there is no difficulty in obtaining sea water in sufficient quantities to thoroughly flush all the drains and sewerage pipes, but it is evident that before the system can be applied generally in large cities, much improvement and greater economy of method will be requisite. It may be remarked, however, that a very large quantity of water at present used for this purpose would be saved, such a comparatively small amount of electrolyzed liquid being necessary in order to obtain far better results. Doubt is also expressed as to the action of the chlorine gas on pipes, and as to whether the smell of the gas would not have evil effects on persons living in the vicinity, but all these matters will no doubt have to be left for future study and investigation.

THE official report of the Canadian commissioners at the late World's Fair has been a long time coming, but it contains some points of interest to our manufacturers. Referring to our exhibit of machinery, it says: "Although the machinery hall had not so many novelties as the electrical building contained, every branch showed a marked advance over the display at the Centennial. For a young country to attract attention in such company is good evidence of the enterprise of our manufacturers and the skill of our mechanics. This department suffered more from withdrawals of exhibitors than any other from Canada, and to so great an extent that in January, when the goods should have been ready to ship, not one third of the space allotted to us had been retained. James Clarke, who had charge of the machinery exhibit at the Colonial Exhibition in London, had given great satisfaction to the exhibitors by the care which he had taken of the machinery committed to his charge. His appointment to the superintendency of the Canadian exhibit was a means of inducing some exhibitors who had withdrawn to return, and though the goods were a little late in arriving, in the end there was shown, in the language of London *Engineering*, 'a highly creditable display.' It consisted of stationary, portable, high speed, marine and traction engines, boilers, water wheels, iron and wood working tools, steam fire engine, brick machinery, brass and iron steam plumbers' fitting, power hammers, grain grinders and some miscellaneous exhibits. A new type-setting machine was shown in a section remote from the Canadian space, in order that it might be seen adjoining similar machines from other countries. It was the invention of a citizen of the United States, but was made in the shops of the Lynotype Co., Montreal, owing to the facilities they afforded for fine work. The steam engines were not of great power, but their smoothness of running, and most modern forms, elicited the praise of writers on the subject, while the exhibitors of iron and wood working machinery were solicited for drawings, catalogues and prices from users of these machines in Great Britain and the United States." The American *Machinist* pronounced the Canadian iron and wood working tools to rank next to those of the United States, while London *Engineering* said that the highly creditable exhibit "showed the manufacturing power of the Dominion," that the "transportation building was of exceptional interest," and that the mineral exhibit "was a remarkable collection."

THE thirteenth annual convention of the American Street Railway Association, held at Atlanta, Ga.,

on the 17th, 18th and 19th of October, was a pronounced success, both from a social and practical point of view. Among the chief questions discussed was: "Can the T rail be Satisfactorily Used on Paved Streets?" a report on this subject having been prepared by Strathern Hendrie. The writers' conclusions were that the T rail was recommended by questions of price, joints, quick delivery, competition, coal pile and construction, and that the old argument for the "tram-head" no longer held good in these days of rapid transit and good street pavements. While the suggestion of a T rail for use on paved streets in cities is somewhat startling to the average citizen, yet it should be remembered that the reason for this is that the mention of a rail similar to those used on steam roads suggests the idea of four or five inches of steel standing up above the street level, and accompanied by dilapidated plank crossings and half-drawn spikes. Street railway people ought to try and teach the public that just as there are several ways of supplying motive power to a car, there is also more than one way of putting a rail in a street. Asphalt or macadam can be paved as easily to a T rail as to any other. They should be laid flush, and room should be allowed for the flange by running a railroad freight car, or other car having a larger flange than an ordinary street car, over the track before it is opened for traffic. Many paving-brick manufacturers now mould bricks to fit girder and T rails, those for the latter being provided with a space for the flange of the car wheel. Another interesting report presented at the convention was one by R. McCulloch, on the transportation of freight and mail matter by means of electric street railways. In order to ascertain to what extent this service was already in use, circulars were sent out to every street railway company in North America. Only about half the number of companies replied, but from these replies it appeared the American mail was being carried on 62 electric street railways, 58 of these having Government contracts. Fifty-five roads are hauling freight and 35 are engaged in the express business, though in the former case some of the services partake more of the nature of express rather than purely freight business. This report, however, appears to have omitted any mention of those cases in which mail and freight facilities are made use of on Canadian street railways. Other papers read were, "The use of the Booster on Electric Railway Circuits," by J. H. Vail and S. H. Wynkoop; "Power-brakes vs. Hand-brakes," by E. J. Wassel; and the "T-Rail Track Construction of the Terre Haute Electric Railway," by Russell B. Harrison.

METAL IMPORTS FROM GREAT BRITAIN.

The following are the values in pounds sterling of shipments of metals, etc., from Great Britain to Canada, as shown by the British Board of Trade returns for October, and for the previous ten months, compared with the same periods of last year:

	October.		Ten months ended October.	
	1893.	1894.	1893.	1894.
Hardware and Cutlery	£ 7,769	£ 5,894	£83,064	£58,119
Pig iron.....	9,002	5,597	48,121	23,386
Bar, etc.....	2,037	797	23,918	16,993
Railroad	26,892	25,545	494,649	217,626
Hoops, sheets, etc.....	13,528	6,742	61,379	75,752
Galvanized sheets	13,032	5,962	64,326	45,631
Tin plates	44,792	35,505	183,013	172,655
Cast, wrought, etc., iron ..	115,520	6,572	205,991	59,167
Old (for re-manufacture) ..	8,034	3,626	97,895	18,295
Steel	13,902	8,011	114,930	80,651
Lead	2,061	2,789	14,782	11,180
Tin, unwrought	6,068	3,473	27,952	20,574
Cement	7,946	1,905	48,598	33,028