

Co., absorbing £8,000. To transfer to reserve account, £6,148 19s. 10d., & to carry forward to the next account £189 4s. 9d. In addition to £6,148 19s. 10d., above mentioned, the directors have transferred to reserve account the surplus of premium received over the expenses of the preference share issue, £1,349 5s. 2d., bringing the reserve fund up to £12,000.

The disastrous fire at New Westminster in Sept., '98, only affected the Co. by the burning down of about ½ a mile of track equipment. The Co. donated \$2,100 to the relief fund. Owing to the large number of sight-seers carried at the time, & the large amount of building materials & general freight carried since, the receipts of the Westminster branch have suffered comparatively little, notwithstanding that the return fare between Vancouver & Westminster has been reduced from 75c. to 60c.

Although the percentage of operating expenses has been considerably reduced, compared with last year, it is not yet satisfactory, but the water power installation at Victoria is looked to to reduce the expenses, & the directors anticipate that on the completion of the works now being erected in Vancouver, the percentage will compare favorably with that of other undertakings of a similar nature. Following is a comparison with the statistics of other leading companies on the London market carrying on the same business :

COMPANY.	Receipts.	Expenses.	Profit.	Percentage of working expenses to gross receipts.	
				1898-9.	1897-8.
Montreal St. Ry.....	\$1,471,939	\$ 704,884	\$ 797,055	51.96	55.05
Ottawa Electric Ry.....	231,802	159,158	74,643	68.66	67.07
Toronto Railway.....	1,210,618	578,857	631,761	47.81	48.81
London St. Ry.....	113,811	65,665	48,146	57.61	57.66
Twin City Rapid Transit.....	2,170,716	1,019,392	1,151,323	46.96	53.18
B. C. Electric Ry. Co.....	412,368	249,708	162,660	60.57	68.01

Detailed reference is made to the lighting & power branches of the Co.'s business.

The rolling stock has been maintained in good condition, all necessary repairs have been made, & 4 new fully equipped cars with motors have been added. The road bed & track on the Vancouver & Westminster branches have been maintained in excellent condition, & on the Westminster branch works have been commenced with a view to replacing the 4 small bridges by culverts & a permanent railway embankment. This will reduce the cost of maintenance in future. The directors have decided to entirely relay the road bed of the Victoria branch, as it is not in good condition & the rails are light, & they have decided that it will be more economical & wiser to put the track in first-rate permanent condition at once than to follow the system of improvement which was commenced last year, by which the road bed & track were to be renewed over a period of several years. The Co.'s land grants & town lots have again increased in value during the year, owing to the extension of trade which has been experienced. Building operations have been on a large scale throughout the cities in order to satisfy the continued demands for business premises & residences. The population is still increasing along the line between Vancouver & Westminster, & business, consequently, continues to develop in that direction. A complete reorganization & consolidation of the plant & machinery of the Vancouver & Westminster branches has been taken in hand, & will, it is expected, be finished about Sept. 1st. When this is accomplished, with the new installation just completed at Victoria, the Co. will have throughout thoroughly efficient machinery of the latest type, with all the most recent economical improvements, whilst the old plants at Victoria & Westminster will, as heretofore, be carefully maintained for the purposes of reserve. Beyond the regular lighting extensions, the installation of a storage battery, & the reconstructions of the road bed at Victoria al-

ready referred to, there are no new improvements or extensions at present proposed or needed.

EARNINGS & EXPENSES YEAR ENDED MAR. 31, 1899.

Railway, Vancouver	\$75,166
" Westminster	84,214
" Victoria	85,672
Lighting, Vancouver.....	106,392
" Victoria	60,176
Total earnings.....	\$412,368
Expenses.....	249,768
Net earnings.....	\$162,600

The chief officers of the Co. in Canada are: General Manager, J. Buntzen, Vancouver; Chief Engineer & General Superintendent, J. M. Campbell, Vancouver; Assistant Engineer & Superintendent, R. H. Sperling, Victoria; Assistant Comptroller, E. H. Wilcox, Vancouver; Local Manager, A. T. Goward, Victoria; Superintendents of Traffic, H. Gibson, Victoria, D. A. Shiles, Vancouver.

In Vancouver the Denman St. extension & the double tracking between Davie & Georgia Sts. have been completed.

A movement is on foot to secure the building of a line from Government St., Victoria, by Humboldt St., to Ross Bay Cemetery, & another line to the Gorge, by way of Gar-

chanically we find the joints all that could be desired, the resistance being no greater than that of the solid rail; so that by using it it is possible to dispense with the usual copper bond. We have at present one furnace at work, with which we make 75 joints per night on an average. On construction work, where there is no interference from traffic, the number of joints from one furnace per day should be at least 100.

The Montreal Star thus describes the work: "Formerly plates were used at the ends of the rails to make the connection. It is claimed, however, that there is a loss of power or voltage by this arrangement. Hence the Co., to save the power thus lost, is making a solid joint or weld by placing a mould around the ends of the rails, & pouring in molten metal. This can only be done where the streets are paved. A huge portable furnace is brought near the place where the joints are to be made. A wire is thrown over the ordinary street car wire, & power is thus obtained to operate a fan which soon reduces the cast iron thrown into the furnace together with coal to a liquid state. This is run out of the spout into large metal buckets which are carried, everyone by 4 men, to where the joint is to be made. It takes just about a bucket of metal to fill the mould around each joint. The intense heat of the molten iron affects the ends of the rails, & the whole makes a perfect weld. An asbestos covering is used over the mould, & through a hole in this covering the metal is poured into the mould. A few minutes after the iron is poured in the mould is pried off & the red hot mass allowed to cool."

The Sao Paulo R., L. & P. Co.

J. Gunn, Superintendent; J. M. Smith, Comptroller; H. E. H. Vernon, Transfer Clerk; R. S. Gossett, Stenographer, all of the Toronto Ry. Co.; A. J. Sinclair, C.E., of Mackenzie & Mann's staff; A. W. Mackenzie, son of the President of the Toronto Ry. Co., & E. W. McNeill, of Blake, Lash & Cassells' law office, Toronto, have been incorporated under the Ontario Companies Act as the Sao Paulo Railway Light & Power Co., Ltd., with a capital of \$6,000,000, & head office at Toronto, the incorporators to be the first directors. The Co. has sweeping powers to operate in Canada or elsewhere, among them being power to construct & operate works for the production of steam, gas & electricity, & steam, gas, electrical, pneumatic, mechanical, hydraulic & other power elsewhere than in Canada, to obtain governmental, municipal or other authority, to construct & operate railways & branches for cars & other vehicles; also telegraph & telephone lines & works in connection therewith; & to carry telegrams, messages, passengers, mails, express & other freight by power of animals, or by animal, steam, pneumatic, electric or mechanical power; & also there to acquire & operate lines of railway, telegraph & telephone, gas-works & lines, electric light works & lines, steam, gas, electrical, pneumatic, mechanical, hydraulic & other power, works & lines, & the assets, powers, etc., connected therewith, & shares in the capital stock & bonds, debentures etc., of any company owning or operating any of the same, & to acquire real & personal property & estates & interests therein, including water-powers, lakes, ponds, streams & water-courses; to acquire rights, franchises, etc., to enable the Co. properly to exercise & carry on all or any of its rights, & powers; to enter into contracts with governmental, municipal or other authorities, bodies & private individuals, respecting the exercise by the Co. of any of its rights, etc., & respecting the acquisition by the Co. of rights, etc., to obtain from governmental, municipal & other authorities, etc., confirmation, registration & recognition of the Co. & of its rights,

bally Road. The movers want to induce the heavily interested property owners to build the lines on condition that they will be continuously operated summer and winter, with a 5c. fare.

Earnings and expenses for April :

GROSS EARNINGS.	1898.	1899.	Increase or Decrease.
Railway—Vancouver branch	\$5,620	\$6,471	\$ 851 +
Victoria "	6,426	6,230	196 -
Westminster "	6,599	6,637	38 +
Lighting—Vancouver "	6,512	6,751	239 +
Victoria "	3,524	3,819	295 +
Total gross earnings	\$28,681	\$29,708	\$1,027 +
Working expenses	\$19,327	\$19,112	\$215 -
Net profits.....	\$9,354	\$10,596	\$1,242 +
Aggregate gross earnings ..	\$28,681	\$29,708	\$1,027 +
Aggregate net profit.....	\$9,354	\$10,596	\$1,242 +
+Increase. -Decrease.			

Cast-Welded Joints.

F. L. Wanklyn, Manager & Chief Engineer Montreal St. Ry. Co., has, in response to an enquiry, given us the following information respecting these joints:—"Last autumn 1,000 joints of this kind were made by us in different parts of our tracks, some in paved areas & some where the roadbed is simply macadam, the percentage of failures, due to expansion & contraction, being very small—less than ½ of 1%, & these occurred entirely in that portion of the track running in macadamized streets. We consider the experiment so satisfactory that we are now putting 5,000 joints in. The effect of these joints on tracks which have been in service for some years is most gratifying, as it entirely overcomes the low-joint trouble, which gives so much bother in street-railway systems, & I have no doubt that the introduction of cast-welded joints, if properly made, will materially increase the life of the rails. Electrically as well as me-