

diameter, and fitted with top and bottom keys with cover provided inside of car to admit of their removal. Spring planks are formed from 13-in. channels @ 32 lb. per ft.

The following are the general dimensions:

Gauge	5 ft.
Length over buffers (free)	46 ft. 10 3/4 in.
Length over pulling face of couplers	44 ft. 5 1/2 in.
Length over end sills	42 ft. 11 1/2 in.
Width over side sills	9 ft. 1 in.
Width over side plates	9 ft. 1 1/2 in.
Width inside	8 ft. 10 in.
Width of door opening	6 ft.
Height top of rail to top of side plates	11 ft. 6 3/4 in.
Height top of rail to top of floor	4 ft. 7/8 in.
Height top of rail to bearing face of centre plate	2 ft. 8 1/4 in.
Height top of rail over runningboard	12 ft. 10 3/8 in.
Height top of rail over runningboard hand	

rail	15 ft. 3 in.
Height top of rail over brake mast	13 ft. 5 1/2 in.
Height top of rail to centre of buffer	3 ft. 5 1/2 in.
Height inside at centre (clear)	8 ft. 2 in.
Height of side door opening	7 ft. 1 1/2 in.
Centre to centre of lamp brackets	10 ft. 2 1/2 in.
Centre to centre of trucks	30 ft. 9 in.
Centre to centre of buffers	5 ft. 10 1/2 in.
Truck wheelbase	6 ft. 3 in.
Total wheelbase of car	37 ft.
Capacity of car	80,000 lbs.
Capacity of axles (each)—38,000 lb. (Size of journal 5 1/2 in. by 10 in. M.C.B. std.)	
Diameter of wheels—41 1/2 in. (M.C.B. std. cast iron chilled tread and flange)	
Weight of wheels (each)	1,025 lb.

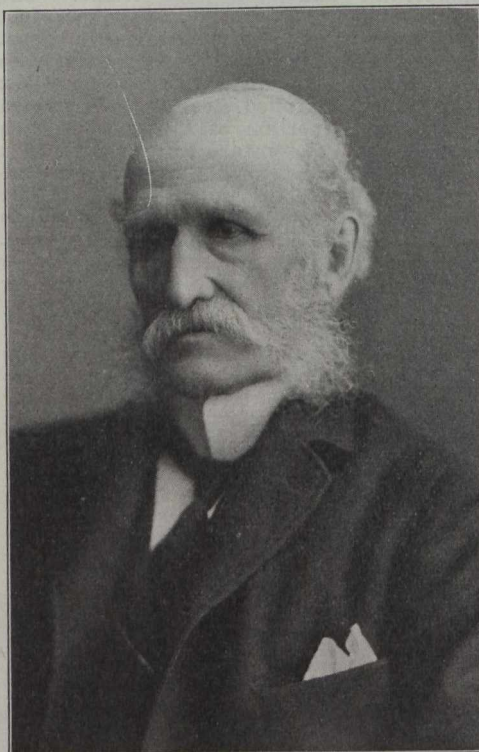
The cars are being shipped knocked down, the underframe all in one piece, with floor laid, and are routed via the Panama Canal to Vladivostok, where they will be assembled. The first vessel with 175 cars left Sept. 7.

Death of Harry Braithwaite Abbott at Vancouver.

Harry Braithwaite Abbott, M. Can. Soc. C.E., who died at Vancouver, B.C., Sept. 14, of pneumonia after only a few days illness, was the son of the late Rev. Joseph Abbott, first Anglican incumbent of St. Andrews, Argenteuil, Que., by his wife Harriet Elizabeth, daughter of the Rev. Richard Bradford, first rector of Chatham, Que. He was born at Abbotsford, Que., June 14, 1829, educated at the High School, Montreal, and at McGill University, and commenced his professional career on the engineering staff of the St. Lawrence and Atlantic Ry., now part of the Grand Trunk. On the completion of the line he was appointed resident engineer of one of the divisions. This position he resigned in 1857, to take the contract with the late C. Freer, on the Grand Trunk. Later he and Mr. Freer leased the Riviere du Loup section of the Grand Trunk, which they opened up and operated for a year. They also operated the Carillon and Grenville Ry. until its purchase by the Ottawa River Navigation Co. In 1864 Mr. Abbott assumed the control of the Brockville and Ottawa Ry., filling the position of Chief Engineer, and in 1872 he built the Carleton Place and Ottawa branch of the Canada Central Ry. He was for some time President and Managing Director of the former road, and Managing Director of the latter. In 1876 he organized the Eastern Extension Ry. Co., and was appointed Chief Engineer and Manager of Construction. His connection with the Canadian Pacific Ry. dated from 1882, when he was appointed Manager of construction of the Sault Ste. Marie Branch. After completing this work he was appointed Manager of Construction of the main line west from Sudbury. He was in charge of this division at the outbreak of the rebellion in the Northwest Territories, and the arrangements for the conveyance of the troops sent from the east for its suppression were carried out by him. After having served as Supervising Engineer, he was appointed in 1886 as the first General Superintendent of the C.P.R. in British Columbia, from which position he retired, March, 1897, when he was offered, but declined, an advisory position. He was admitted as a member of the Canadian Society of Civil Engineers in 1887, and served as a member of its council. During the Trent affair, he assisted in raising the 11th Battalion V.M. Argenteuil Rangers, and served under the command of his brother, the late Sir J. J. C. Abbott (afterwards Premier of Canada), for a considerable period, finally retiring with the rank of Major. He unsuccessfully contested Brockville in the Conservative interest at the Dominion general election in 1872, and East Algoma for the Ontario Legislature in 1886. He was a member of the Church of England. He married Margaret Amelia, daughter of the late

Mr. Justice Sicotte, and widow of C. Freer, who predeceased him by a number of years.

Mr. Abbott was one of the earliest residents of Vancouver, and as the chief C.P.R.



Harry Braithwaite Abbott, M.Can. Soc.C.E.

official there for a number of years occupied a leading position in its public and social life. He was Honorary Life President of the Vancouver Club and a member of many other local organizations. Besides being an expert rifle shot and billiard player, he was an enthusiastic fisherman, and keenly enjoyed golf. Only a week before his death, notwithstanding his 87 years of age, he attended a recruiting meeting.

The Vancouver Province says of him: "Mr. Abbott saw the townsite which he laid out grow into importance and go through those periods of sensation which may be compared to the maladies and slight fevers of childhood. He saw it grow into a city that attracted visitors and residents from all over the world, and in those days he occupied a position of leadership and much influence. Always a worker rather than a talker, he never joined the ranks of the loquacious, and he certainly never played to the gallery. He lived his life as a quiet Canadian citizen, who retained in the midst of the necessary rawness of western

conditions the manners of the old world that so well became him, and to the end of his long career retained the respect and honor of all. In the social directions in which he was interested, apart from his business affairs, he assumed with the quiet modesty which distinguished him, a role that gave those movements a stability and an influence which they would not otherwise have possessed."

Location of Emergency Valve on Passenger Cars.

G. Spencer, Chief Operating Officer, Board of Railway Commissioners, sent the following memorandum to the Secretary of the Board, Sept. 15:—

Re Mr. Barry's letter of May 5 bringing up the question of having the conductor's valve or emergency valve placed in a prominent position and stencilled or otherwise indicated, so that in the event of an accident or emergency case cropping up any person in the car might operate the valve and stop the train. This case was considered and heard at Ottawa, Jan. 7, 1913. At that time no action was considered necessary. The different companies were to send in plans, specifications and data. These we have on file. In addition, I have had investigations made and find that the number of valves, their location, and the cord attachments are by no means standard. A great many of the valves have no cord attachments and the handles for operating them do not all work the same way.

The Master Car Builders' Association meeting at Chicago, in May of this year, recommended that

"All passenger equipment cars to be fitted with one or more conductors' valves. If one valve is used it is to be connected with a cord running the full length of the car. If the construction of the car does not permit the use of a cord running the full length, two valves should be used, one located at each end of the car, with a cord as long as practical."

After discussing the matter thoroughly with the different members of the staff in this department, I am of the opinion that it is very desirable in the interests of safety that the position of these valves be standardized, and that the cord or handle in the body of the car or compartment occupied by passengers be so placed and stencilled so that it will be understood what its functions are. These valves should be placed at the end of the car and outside of it, with a handle which trainmen can use in case of necessity and a cord attachment running to the inside of the car, as stated above. On cars with vestibules, the valves should be placed at the end of the vestibule over the doorway, and non vestibule cars on the end of the car (bulkhead) handle outside, and in both cases handle to operate so that it would open by being pulled up rather than pulled down, the cord from this valve handle to go through to the body of the car in all cases, and the handle on the cord in the body of the car to be stencilled 'Emergency Valve.'

On Sept. 18 the Secretary of the Board transmitted a copy of the memo to railway companies, and asked them to submit comments on it within 30 days.

Railway Extensions in South Africa.—The Union Government of South Africa has completed railway connections with the lines connecting with Walfisch Bay, in the country formerly known as German Southwest Africa, but which has been absorbed into the Union, and has established the Government gauge throughout. The change on the last section of 32 miles was completed in 50 hours, thus constituting a South African record.