

FIG. 4—CROSS SECTION THROUGH BOILER AND FIREBOX, CANADIAN PACIFIC LOCOMOTIVE.

C.P.R. Betterments, Construction, Etc.

St. John, N.B., Terminals.—Application has been made to the city council for a section of the market slip 180 by 12 ft. It is proposed to build a pile wharf, with warehouse, to be used for the local import and export trade, using the Sand Point warehouses for through traffic only.

A warehouse 200 ft. by 40 ft. is under construction on the Rodney wharf, and is expected to be completed this fall. D. C. Clark has the contract. Additional yard space for about 400 cars has been provided at the Bay shore yards. (Aug., pg. 270.)

Switches on Atlantic Division.—About 135 sets of southern pine ties were used in renewing ties on the switches on the Atlantic division this year.

McAdam Jet. Station.—We are officially informed that there is not the slightest foundation for the press report that the name of this station is to be changed to Van Horne Jet.

Sherbrooke, St. Guillaume and Newport Sections.—New bridges, consisting of masonry abutments and steel spans, are being completed at Richford, Stevens' Mills and East Richford, to replace lighter or wooden structures.

A siding has been put in between Sutton Jct. and Sutton to help trains that have to double the grade at this point; a siding, half-

a-mile long, has been put in between St. Philippe and L'Acadie, and the sidings at St. Constant, St. Philippe, Quebec Southern Jct., Cowansville, Mansonville, Newport, Foster and Eastman, have been lengthened by about 1,000 ft. each.

The work of double-tracking the line between Brigham Jct., and Farnham, 6 miles, was commenced on Oct. 2, and on Oct. 10, two miles of road-bed had been graded and ties laid ready for tracklaying and ballasting. The work, which is being done by day-labor under the supervision of the Co.'s officers, was expected to be completed by the end of Oct. The object of providing the double track is to facilitate the movement of traffic in and out of Farnham yard, as the haulage capacity of an engine between Farnham and Newport, and Farnham and Megantic, is 40% less than between Outremont and Farnham.

Increased accommodation for the storage and handling of freight has been provided at St. Guillaume, St. Pie, Eastman, Magog and Mansonville by additions to the freight sheds. The shed for storing flour at Richford, 80 by 360 ft., is being doubled; a new station and freight shed has been erected at Bulwer; the coal chutes at Farnham and Megantic have been increased to nearly double their capacity, and a new engine house is being built at Stanbridge, to replace one destroyed by fire last winter.

The line from Brigham Jct. to Sherbrooke, 58 miles, is being relaid with 80 lb. rails.

Montreal Shops.—The new locomotive and car shops are to be located in the eastern part of Montreal, adjacent to the Co.'s Quebec line. The grounds are about 350 acres in extent, being about 4,500 by 2,000 ft. The purpose of these shops is the concentration in one plant of a large part of the repairing of the locomotives and passenger coaches used on the road, at the same time making large provision for the manufacture of locomotives, passenger and sleeping coaches, as well as freight cars. The total floor space of the buildings planned for immediate construction, and shown on the plan on page 379, is about 750,000 square feet, or over 17 acres. The buildings will be of pressed brick on rubble stone and concrete foundations. The trusses will be combination trusses on steel columns for the shops of the car department, and steel trusses for the locomotive shops, the blacksmith shop and the foundry. The hot blast system of heating will be used throughout. The passenger car shops, when completed, will be able to turn out 100 new cars a year, and repair 900 old ones. The freight car shop will have a capacity of 25 to 30 new cars a day, and will be able to repair 100 cars a day. The locomotive erecting and machine shop and the boiler shop will have a capacity of 75 new locomotives a year, and will

be able to repair 400 a year. The wheel foundry is designed to turn out 250 wheels a day. The details of the power house and the power equipment have not yet been worked out, but electric transmission of power will be used throughout the individual machine and group motors in the several shops. The sizes of the buildings are as follows:—

Freight car shop	540X107 ft.
Planing mill	500X127 "
Cabinet shop	290X62 "
Hardware storage and upholstering shop (two stories)	290X62 "
Passenger car paint shop	672X100 "
Passenger car erecting shop	672X100 "
Truck shop	432X82 "
Car machine shop	288X130 "
Blacksmith shop	610X130 "
Grey iron foundry	380X125 "
Machine and locomotive erecting shop	900X160 "
Boiler shop	300X120 "
Wheel foundry	170X110 "
Frog shop	250X100 "
Drying kiln	250X100 "
Power house	100X120 "
Office	110X60 "

Contracts have been let for seven of the buildings, and work has already been started. Lessard & Harris, of Montreal, are erecting two buildings for the construction of passenger cars, one for freight cars, and the planing mill, and Loomis & Sons, of Sherbrooke, are erecting three buildings for the furniture and upholstery shops. (Aug., pg. 270.)

Northern Colonization Ry.—Construction on the extension of this line from Labelle to Nominiguet, Que., about 26 miles, was commenced in July, and it was expected that tracklaying would be commenced in Oct. D. R. McDonald & Co., Williamstown, Ont., are the contractors. (June, pg. 270, and Oct., pg. 333.)

Ste. Agathe and Beaconsfield Stations.—New stations have been completed at Ste. Agathe and Beaconsfield, Que. Both are larger buildings than the old stations, and have been equipped with enameled iron station name plates by the Acton Burrows Co., Toronto.

Main Transcontinental Line.—Sir Wm. Van Horne, who recently returned from a trip over the C.P.R. to Vancouver, his first for three years, says that the line was in fine condition throughout. Practically all of the original temporary structures have disappeared and the greater part of the main line has been relaid with rails of the heaviest description. Extensive additions have been made to the sidings, and there is every facility for handling traffic. The extent to which this work had been done was given more specifically by Sir Thos. Shaughnessy in a recent interview. He said that 80% of the line from Montreal to the Pacific coast had been transformed into a permanent road, millions of dollars having been spent in replacing the temporary structures; and that by the end of 1903 the whole

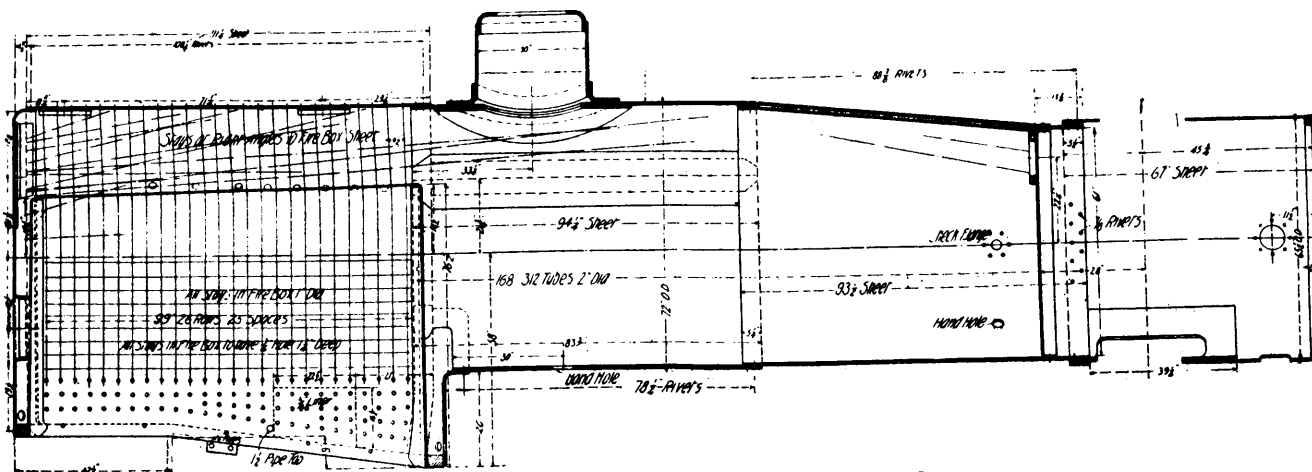


FIG. 3—LONGITUDINAL SECTION OF BOILER, CANADIAN PACIFIC LOCOMOTIVE.