

Remodelling of the C.P.R. Place Viger Station and Yards, Montreal.

Most of the work of remodelling the C.P.R. Place Viger station and yards with a view to increasing their capacity and making them more convenient, has been completed, and the new arrangement in the immediate proximity of the station is shown in the accompanying plan. The new arrangement of the terminals and trackage is shown solid, and the old arrangement, now replaced, is shown dotted.

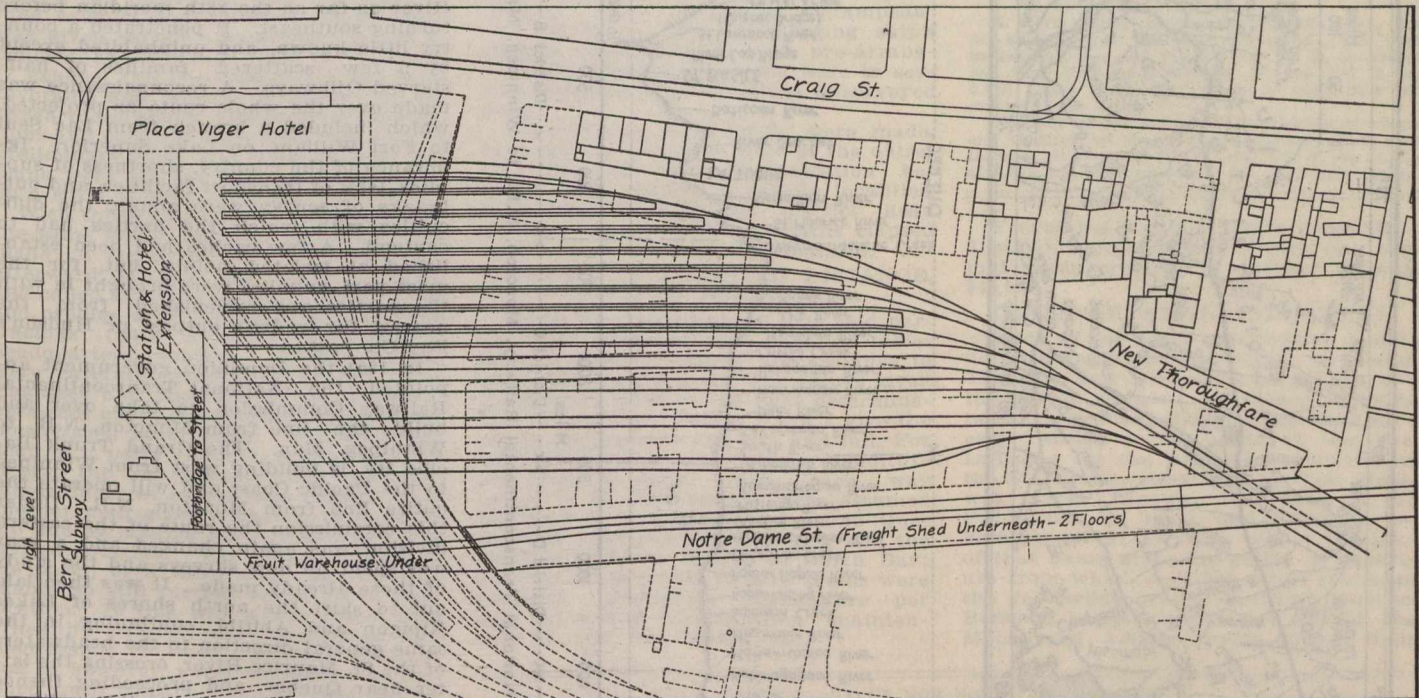
Formerly, the tracks entering the terminals from the right along the water front, branched off at an angle of about 45 degs. into the station yard, this arrangement taking up a great deal of ground without the best utilization of the space occupied. The station tracks were likewise not at all convenient to the waiting room. The freight shed space to the south, below Notre Dame street, was also very much cramped, and was not utilized to the best advantage, from the fact that most of the tracks were short spurs.

When the excavation had been completed, tracks were laid from the east end of the yard towards the then existing tracks, from which the traffic was then diverted. The old tracks being removed, the new ones were extended to the station building extension, which projects south from the old combined station and hotel. The station is now entirely separate from the old building, which is used solely for hotel purposes.

In the passenger terminals there are 10 tracks, with 10 platforms, accommodating 80 cars. A four track car storage yard provides for 48 more. Between the car storage tracks and the Notre Dame street bridge there are four freight tracks with a capacity of 83 cars, used for team freight. Under the bridge there is located a long 2 story shed for freight and fruit. This shed is served by a roadway on the north side and trackage on the south, which becomes a part of the new freight yard with terminal sheds at present under construction to the south of the bridge. This 2 floor shed under the bridge is used for bonded freight. It is 800 ft. long, and has windows and continuous sliding doors on the track side, and 20 separate

The Diesel Locomotive.

In a recent address before the American Society of Mechanical Engineers, wherein he described the progress being made with the acceptance of the Diesel engine as a standard means of developing power, Dr. Rudolph Diesel, the inventor of this type of internal combustion engine, described a locomotive constructed the early part of this year in Germany in which the Diesel engine is the motive power. The locomotive in outward appearance closely resembles an all-steel car, and weighs 85 tons. The wheel arrangement is of the 4-4-4 type, two Diesel engines set at an angle of about 45 degs. at the centre of the car driving on to a jackshaft between the two pair of drivers, this jackshaft being the crankshaft of the engine. Connecting rods from the jackshaft drive the driving wheels. Between these two inclined cylinders, there are two scavenging air pumps driven from the same shaft. Two horizontal air cylinders on the floor in front are driven from two small vertical Diesel engines, this com-



Old and New Arrangements of Terminal Facilities at C.P.R. Place Viger Station, Montreal.

The plan of enlargement made a radical change in the terminals, it being determined that the best arrangement under the circumstances would be to bring the tracks in parallel to Notre Dame and Craig streets, for which purpose considerable property surrounding the yards had to be purchased, the extent of this land absorption being indicated by the dotted blocks in the illustration.

Notre Dame street originally ran along the crest of a rise in the ground parallel to the shore line, between the shore line and Craig street. In the old arrangement, the tracks came through from the shore line to the Craig street level by cutting through this mound, and carrying the highway across on a bridge. The new arrangement necessitated the reduction of the ground level over the whole area of the new terminals, to the level of the former trackage, so that Notre Dame street is now carried across the lowered yards on a viaduct, beneath which are freight sheds. Notre Dame street was temporarily diverted while the excavation work was being pushed forward. The street on the viaduct is at practically the same level as before.

sliding doors on the team side. The sides are galvanized iron, supported on a steel frame. The fruit shed at the west end of this freight shed is built under the old portion of the bridge, and is heated, so that fruit shipments can be properly handled both winter and summer.

The freight yards to the south of the bridge, which are now nearing completion, will contain long freight sheds parallel to the street, occupying the ground right down to the Harbor Commissioners' property, the whole yards occupying a space nearly three times as great as that portion shown in the illustration above Notre Dame street.

W. J. Chapman, formerly assistant timekeeper at the C.P.R. freight sheds, Fort William, Ont., has been charged with the theft of \$1,017.51, by means of irregularities in the pay rolls. He was arrested in San Francisco.

H. W. D. Armstrong, M. Can. Soc. C.E., Chief Engineer, Fredericton and Grand Lake Ry., Fredericton, N.B., writes,—"I must congratulate you upon the increasing volume and value of the Canadian Railway and Marine World."

pressed air being used to increase the power of the engine by increasing the area of the indicator diagram, the process being new. The air is stored in cylinders near the other end of the car, where are also located the cooling water tanks. A large muffler in the top of the car subdues the blast of the exhaust.

Dr. Diesel gave what in his opinion are some of the reasons for the slow adoption of the Diesel engine in America. The causes assigned include cheap coal, cheap engines, lack of capital, and generally good profits without undue thought concerning economy. These reasons stand out prominently in comparison with Europe with its world competition.

An obstacle to the use of the internal combustion engine for hauling trains has been the impossibility of accelerating the train from standstill with an engine of normal size and of maintaining any considerable overload at any speed. A petroleum electric locomotive is now proposed, in which the prime mover is an internal combustion engine, using crude oil, kept continuously running to drive an electric generator, which in turn delivers electrical energy to four 220 h.p. polyphase motors.