

plate, is of the Flamme-Rongy type, permitting of separate or simultaneous movements of the two reversing shafts by means of steam gear. The cab, chimney, safety-valves and other fittings are of the Belgian State standard designs. Among other details are the Westinghouse quick-acting brake operating on all wheels, Friedmann injectors placed on the firebox front, Gresham-Craven compressed air sanding apparatus, and steam heating for the train; Bourdon mechanical "telescopompes" are employed for lubricating the cylinders. These engines, which are provided with the new standard tender, weigh 71 tons 12 cwt. in working order, of which about 35½ tons are available for adhesion. No. 3311 has been in service for upwards of six months on express trains between Brussels and Ostend, while No. 3312 was exhibited at the Liège Exposition.

Luxembourg line, and frequently haul 400 ton trains on the Paris-Brussels service, between Brussels and Quevy, and between Brussels and Antwerp on Bourse days.

(To be continued.)

NEW TANK LOCOMOTIVES, HIGHLAND RAILWAY.

FOR the working of short branches, and the several light railways which have of late years been opened in the North of Scotland, Mr. Peter Drummond, locomotive superintendent of the Highland Railway, has designed an exceedingly neat class of tank locomotives illustrated herewith. These engines, several of which are to be built at Lochgorm works, have the following



Photo by

FOUR-COUPLED BOGIE TANK LOCOMOTIVE No. 25 "STRATHPEPPER," HIGHLAND RY.

S. A. Forbes.

The other type of de Glehn compound introduced on the lines of the State Rys. is known as Type 8, and is shown in the accompanying Fig. 5. In respect to cylinders, boilers, mechanism and details, these engines are identical with the "Atlantic" type already described, but they have six-coupled wheels 5-ft. 11-in. in diameter, and their weight in working order is 72 tons 17 cwt., of which about 53¾ tons rest on the coupled wheels. There are now 42 locomotives of this class in service, Nos. 3313-3354, built by the Société Metallurgique of Tubize, the Société St. Léonard of Liège, the Société des Couillet and Haine, St. Pierre, and the Société Franco-Belge of La Croyère. They work main line express trains averaging about 300 tons, with frequent stops and a maximum speed of about 60 miles per hour between Brussels and Arloy on the

dimensions: cylinders, 14-in. by 20-in.; diameter of coupled wheels, 4-ft. 6-in. and of bogie wheels, 2-ft. 6-in.; boiler barrel, 8-ft. 2-in. long and 3-ft. 10¼-in. in diameter; heating surface, tubes 652 sq. ft., firebox 67.5 sq. ft., total 719.5 sq. ft.; grate area, 13 sq. ft.; working pressure 150 lbs. per sq. in. Capacity of tank 900 gallons, and of bunker 26 cwt. of coal; weight in working order 35 tons. For modern engines the above dimensions seem very small, but the work for which they are designed is of a light nature. Two are at present at work, No. 25 "Strathpeffer," and No. 40 "Gordon Lennox." They are painted the standard Highland dark green, without lining of any description, with the name in gold letters on the tank sides. The number plate, which is of cast brass, is a new pattern for the Highland Railway.