

of reducing the pressure in the boilers. The train afterwards returned to London. Mr. Brunel drove the engine both ways.

The principal dimensions of this great locomotive are—Cylinders, 18 in. diam. and 2 ft. stroke; driving wheels, 8 ft. diam.; supporting wheels, 4 ft. 6 in. diam.; has six wheels and uncoupled; 278 tubes, 9 ft. long and 2 in. diam.; fire-box outside, 5 ft. 6 in. by 6 ft.; inside, 4 ft. 10 in. by 5 ft. 4 in., with a partition through the middle, giving 169 ft. of heating surface, and 20 ft. for area of fire-grate; total heating surface, 1750 ft.; from level of rail to top of cylindrical part of boiler, 9 ft. 6 in.; and from level of rail to top of chimney, 14 ft. 8 in.; supporting wheels 16 ft. apart, with the driving wheels in the centre; total length of engine, 24 ft.; tender on six wheels; weight of engine, 30 tons; tender, 15 tons.

Civ. Eng. & Arc. Jour.

History of the Railway Gauge.

In England 1900 miles have been constructed on the narrow gauge, and 274 on the broad. No public railways in England are at present laid down on an intermediate gauge, those which formerly existed having been reduced to the prevailing dimensions of 4 ft. 8½ in. The mineral railways of England vary from 2 ft. to 4 ft. 8½ in., the latter only being worked by steam. In Scotland the passenger gauge is 4 ft. 8½ in. In Ireland, under the advice of a Government Commission, 5 ft. 3 in. has been adopted as the national gauge, although some short lines have been laid down on 4 ft. 8½ in. In France the railways are, under Government instructions, universally laid down on the narrow gauge. In Belgium the first series of railways laid down by Government were all on the 4 ft. 8½ in. gauge with the exception of one line between Ghent and Antwerp, which is laid down on a gauge of 3 ft. 9 in. In Brunswick the railroads are on the narrow gauge, as they also are in Saxony, Austria, and Bavaria. In Italy, between Leghorn and Pisa, there is a narrow gauge line, and those lines which are being constructed between Genoa and Turin are also on the narrow gauge. In Holland a gauge of 6 ft. 4 or 6 in. has been employed, and in Baden a 5 ft. 3 in. gauge. The railway between Basle and Strasburg is on a gauge of 6 ft. 3 in.—*The Railway System Illustrated.*
Min. Jour.

Railway Speculation in 1845.

A curious document has come to light, in the shape of a report from the Registrar-General of Joint Stock Companies to the Privy Council for Trade, for 1845. It forms a gigantic index of upwards of 50 folios to the doings in railway speculation for the past year, and can be likened, in its length and curious disclosures, to nothing else but the ramifications of a Welsh pedigree, or Homer's catalogue of ships. An interesting biography, or book, upon bubbles might be wrought out of it in the hands of a judicious selector. It is, moreover, a mirror of that memorable period of national hallucination when every bubble