

composed of from 100 to 110 loaded wagons, without an engine, which goes through the station without stopping.

The transfer-station of the Cambrian and the Festiniog Railways is at Mynford Junction, where the lines cross each other by one passing above the other.

The Festiniog is the higher road, and it has laid out a branch line which descends in a curve of very slight radius, and divides into three lines to accommodate itself to the gauge of the Cambrian.

The peculiar traffic of the line renders necessary three sorts of transfer.

First; for the slates; on account of their fragility, they are transhipped by hand, and to simplify the process, the level of the road has been arranged so that the sides of the Festiniog slate-waggons shall be of the same height as those of the great Cambrian ones.

Next; the coals; the transfer is managed by means of a turn-table, moving on two axes, which admits of one ten-ton Cambrian wagons being emptied into five two-ton Festiniog wagons, in five minutes.

For freight; the goods are wheeled on barrows from one wagon to another, the bottoms of the wagons being on the same level, and a travelling crane manages easily the loading of the heaviest packages.

The arrangement of this station may serve as a model for the most important lines; so we must not forget that all railroads transfer almost invariably their freight at the end of their network of lines; and those who oppose narrow gauge lines on account the difficulty occasioned by the necessity of transhipment when they cross a broad gauge, either deceived themselves knowingly, or sin through ignorance.

Having described the station, let us now look at the rolling stock.

When experience had proved the extreme strength of the carriages, they were built on the same model as those of the great companies; that is to say with the benches, or seats, like an ordinary vis-à-vis; but recently, the American cars

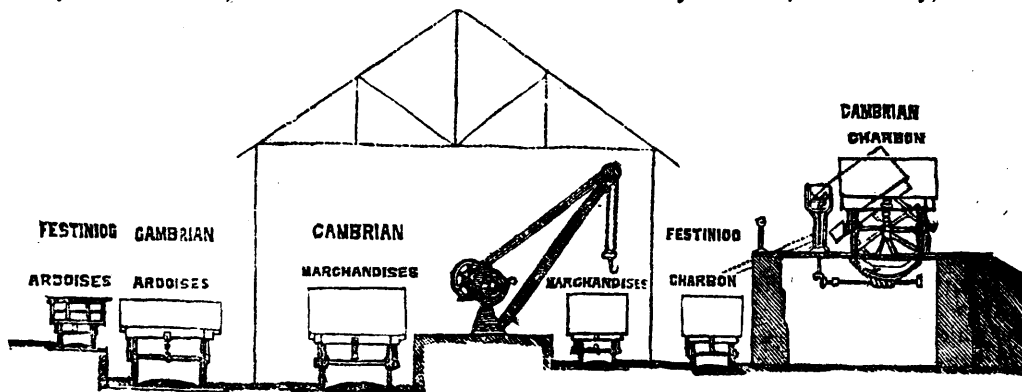
have been introduced, holding 50 passengers, (the others hold 12 in each compartment, 3 on each seat), but instead of the entrance at each end, with a passage in the middle, these cars

have 7 separate compartments. All the wagons have wheels of 45 centimètres, and are of steel. They run on greas-boxes, and spiral springs, and they are secured by a central tampon as are also the springs.

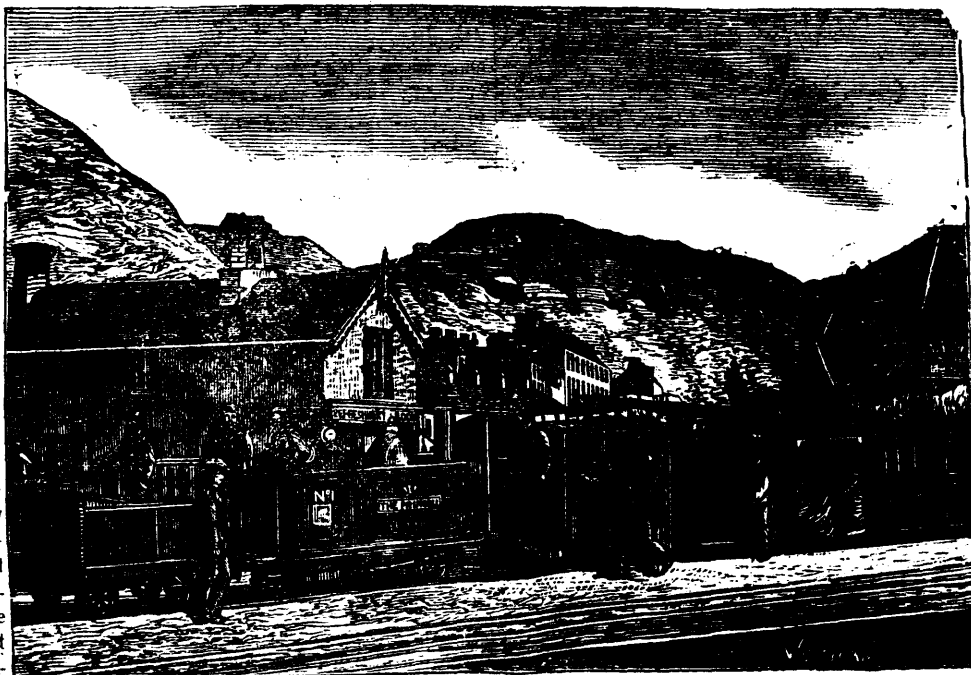
Few travellers by ordinary gauge lines of the second class are as comfortably situated as on the Festiniog railway, for the former frequently neglect their road, whereas the most perfect care of their line is as necessary to the Festiniog company, as the speed and the powerful draught of their trains.

A celebrated French engineer, M. Vignes, who was at Festiniog in 1877, thus expresses himself:

“ Thanks to the solid strength of the road and its careful, management we can say that no tremulous movement was felt in trains going at the rate of 40 to 50 kilometres an hour, not even a jerk of the coupling. We travelled often by the slate wagons, empty and full, up and down the slopes; they have no suspension spring; still there is no shock, and it is almost impossible to feel the passage



Mynford Junction.



The Princess machine.—Duffords Station.

over the joinings of the rails. Not the least advantage in this 23½ inch gauge, is the difference between the amount of paying and passenger freight drawn by each horse power, compared with the heavier engines on other line.

Thus the first car, back to back, weighs 1300 kilos and holds 14 passengers; the second sort weighs 1200 kilos and holds 12 passengers; the newest, the American, weighs 6000