ACCIDENTS AND FATALITIES.

13th January, 1899.—A miner named James Allen had his leg broken by fall of coal in the face.

19th May, 1899.—A miner named Charles Woolett received injuries on the head by fall of coal in the face. He died the following day.

9th September, 1899.—John Mason was slightly injured by a fall of stone in the face.

GENERAL REMARKS.

It is noteworthy that, notwithstanding the decrease in output from Westport-Cardiff owing to suspension of operations, the deficiency was maintained by the Westport Coal Company, and at Westport an increase of 22,538 tons is shown over the preceding year. This increase may be attributed to the larger production of coal won from each working-face by the aid of coal-cutting machinery compared with hand-labour, for had it been otherwise decrease was inevitable, considering the limited areas from which the coal was mined.

Extending compressed-air installation as a motive-power for mining operations: Extensive plants were erected during the year at Coalbrookdale and Ironbridge Mines, compressed air being decided as the future power at Denniston. In short, the whole solid-work system is undercut by percussive pick-machines actuated by compressed air.

Westport Coal Company should fully maintain last year's output, and a corresponding tonnage with last returns may be expected from the Brunner mines. Blackball should also yield a substantial increase, as double shift is established at this mine.

The accident-rate shows a marked decrease—one fatality in Brunner Dip Mine. Comparing the causes of accidents in the British mines with those in the Westland mines, it will be seen that in the former the large percentage of serious and fatal accidents are due to falls on roadways, whilst in the Westland mines they are due to falls of coal and stone in the working-faces, falls on roadways being a danger unknown in our mines. One fact to be noted is that where the faces are secured wholly by and under the direct supervision of the company's officers risk is reduced to its lowest minimum, as is the case in the Westport Coal Company's mines.

FOREIGN TRADE.

The quantity of coal shipped by the Westport Coal Company from the 1st April, 1899, to the 31st March, 1900, to ports outside the colony was 6,955 tons. This statement, compared with the preceding year's shipments, shows a decrease of 3,753 tons.

I have, &c.,
R. TENNENT,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

BRIQUETTE-MANUFACTURE.

The utilisation of unsaleable brown-coal slack in various parts of the colony, and of the soft bituminous coals in parts of the West Coast district, is a question which must sooner or later be taken into serious consideration.

At the brown-coal collieries there is often a very large amount of small coal which is unavoidably lost or thrown away owing to (*a*) the limited demand for fuel of this quality, and (*b*) the absence of machinery for working it up into a marketable product. There are also several areas of soft bituminous coals in the West Coast mining district which cannot be worked, except at considerable loss, under existing conditions. This coal appears to be severely crushed by nature's forces, and owing to its very friable character it will not stand the ordinary handling and transit without being smashed up into dust. It is owing in a great measure to this characteristic that the Mokihinui and Westport-Cardiff Mines had to suspend operations. There is also a considerable area of soft coal in part of the Westport Coal Company's property at Granity Creek.

That this coal, which is now unsaleable by reason of the conditions referred to, can be worked up into a valuable fuel is evidenced by the fact that the slack produced at brown-coal mines in parts of continental Europe is manufactured into good briquettes, as is also the slack at many of the bituminous-coal mines of England, America, and elsewhere.

In order to present some information as to the methods of doing this, and of the machinery required, I have been in communication with manufacturers of briquette-making plants and others. Their replies have enabled me to give the following general particulars.

Small coal is, when necessary, still further reduced in size by suitable grinding machinery, then mixed at a fairly high temperature with coal-tar pitch or other suitable binding material. It is then run into moulds and subjected to heavy pressure, the result being a "briquette" of compressed fuel. It is claimed for briquettes that they are superior to lump coal, being really denser than the actual lump, and will burn from the outside thoroughly to the centre without decrepitating under the heat. Other claims are: Non-disintegration from atmospheric influences, cleanliness in handling, and compactness in storage; this latter feature commending itself more particularly in connection with use on steamships.

Some five years ago the manufacture of briquettes was commenced at Morwell, Victoria. Notwithstanding that the material operated on was a coarse lignite, containing (I am informed) 50 per cent. of moisture, very good briquettes were made from it, but owing to various causes—want of sufficient capital being given as the principal one—the work has recently been stopped, and the plant sold by the assignees. The machinery was built by the Austral Otis Engineering Company (Limited) of South Melbourne, and consisted of crushing-rolls, dryers, finishing-rolls for fine crushing, and briquette machine-press. Its capacity was 30 tons of briquettes in twenty-four