The approximate total quantity of coal, &c., raised from the several mines throughout the colony up to the 31st December, 1904, is returned at 20,115,663 tons.

The number of persons ordinarily employed at all the mines is returned at 763 above ground, and 2,525 below ground, making a total of 3,288. At a considerable number of lignite-pits in Otago and Southland (Southern District) the workings are open quarries, and the persons employed thereat are included in the number of persons employed above ground.

The output of coal, &c., for the year averaged 467·7 tons per person employed in connection with the coal-mining industry. As compared with coal-mining generally in other parts of the world, this average is decidedly high, but is accounted for by the fact of thick seams being the rule rather than the exception in this colony. This gives natural facilities for a higher ratio of production than is the case where thin seams are worked under infinitely less advantageous conditions.

Accidents.

Four fatalities in connection with coal-mining operations occurred during the year, all of which were duly inquired into by the Department. The proportion of fatal accidents in relation to the number of persons employed is at the rate of 1 to 822, and in relation to the tonnage of coal won as 1 to 384,459·5 tons.

Two other deaths occurred which can scarcely be classed as fatal mining accidents, and are therefore not taken into account in the foregoing comparisons. In one case now under notice a trucker slipped on a rail and hurt his knee. An operation was performed and death from blood-poisoning, subsequent to the operation, occurred some three weeks after the accident. In the other case a miner returning from his work had an epileptic fit, and died a few hours afterwards.

Taken all round, the proportion of fatalities at collieries compares most favourably with those in many other works which are looked upon as far less hazardous, and which are not carried on under such disadvantageous circumstances. This, in itself, is testimony to the careful supervision of working-conditions day by day and the provisions made for safety. Underground mining cannot be conducted with perfect immunity from accidents, but with the exercise of proper care on the part of officials and workpeople these can be, and are, very considerably minimised.

Prosecutions.

No prosecutions for breaches of "The Coal-mines Act, 1891," or special rules thereunder, have been instituted by the Department during the year.

Colliery managers have, in some instances, taken action against employees for violation of the law relating to the safety of persons employed, and in so doing have done their duty.

Ventilation of Mines.

On the whole, there is now comparatively little fault to be found in this respect. It is being recognised that good ventilation pays, and at nearly all the principal collieries mechanical ventilation by means of fans is adopted. The great advantages of fan-ventilation as compared with that by furnace are: (*a*) that the first cost is often less, (*b*) greater economy in work and maintenance, (*c*) increased safety, (*d*) better control, and (*e*) greater capacity for circulating the air-currents, and therefore more effective.

Furnace ventilation is only really effective and reasonably economical at mines working by the means of fairly deep shafts, and even under such conditions the fan is preferable. For the shallow mine-workings which are general in New Zealand, there is no question whatever as to the superiority of the fan (as compared with the furnace) in every way.

Many small mines are ventilated naturally, no power of any kind being installed. As these are non-gaseous, and only a very few persons are employed, requirements are fairly well met. At others, a small furnace, a steam-jet, or the heat from steam-pipes supplying an underground pump is found to be sufficient to induce a reasonably adequate supply of air. There are a few cases, however, where mines of the kind now referred to may be reasonably expected to extend operations, and even now are practically at the limit of real efficiency as regards their means of ventilation. To meet such requirements, a fan, with a capacity of some 20,000 cubic feet per minute (the actual volume attainable may be more or less according to the conditions existing in the mine), together with engine for driving, can be installed for a trifle over £100, foundations included. This places mechanical ventilation within the reach of owners of small mines at very little cost, assuming that steam is available. Where water under pressure can be easily obtained, a Pelton wheel may be used for driving, the wheel being keyed direct to the fan shaft if volume and pressure of water are such as will maintain a suitable speed, otherwise the connection must be made by means of belt and pulleys. In any case, the first cost would be less than for a steam-driven fan, provided that the initial cost of bringing the water to the work has not to be specially undertaken. An installation of this kind could be advantageously adopted at many metalliferous mines.

Drainage of Mines.

At the Westport Coal Company's collieries (which are at a high altitude) drainage is provided for by means of adits driven from valleys situate to the dip of the workings. This practice obviates the necessity for heavy pumping machinery, and, in the event of pumps being required in the future to drain coal-areas further to the dip than the level of the drainage tunnels, the height to which the water