

or combination of binders, and the best conditions of working—pressure, temperature, &c. Very promising results have been obtained, but it will be necessary to continue the investigations for some time longer until the best conditions for manufacture have been determined. When that stage is reached it is intended to commence systematic tests on the briquetting of bituminous coals and finally on lignites. In order to expedite the work Mr. W. H. A. Penseler, B.Sc., B.E., was appointed in December last to carry out the investigation under the direction of the Dominion Analyst.

At the present time the most satisfactory means for preventing explosions in coal-mines is the use of stone-dust for underground roadways. In order to acquire reliable information as to the relative inflammability of New Zealand coals and the amount of stone-dusting required to render the mines safe from the dangers of coal-dust explosions, arrangements were made with the British Mines Department in 1923 to carry out a series of tests on representative New Zealand coals at the Eskmeals Experimental Station. Seven samples of 10 tons each were sent, and were tested during last year. The report is now to hand, and with other data which is being obtained will be considered with a view, if necessary, to amending the present law in order to provide greater security against coal-dust explosions.

PERSONS EMPLOYED IN OR ABOUT MINES AND STONE-QUARRIES.

The following table shows the number of persons employed in each inspection district during 1924 and 1923 :—

Classification.	Inspection District.			Totals.		
	Northern (North Island).	West Coast (of South Island).	Southern (rest of South Island).	1924.	1923.	Increase or Decrease.
Gold, silver, and tungsten ore	963	535	332	1,830	2,027	Dec. 197
Ironstone and cinnabar ..	4	24	..	28	7	Inc. 21
Coal	1,347	2,480	1,042	4,869	5,000	Dec. 131
Stone-quarries under the Stone- quarries Act	1,179	234	335	1,748	1,644	Inc. 104
Totals	3,493	3,273	1,709	8,475	8,678	Dec. 203

MINING AND QUARRY ACCIDENTS.

In metalliferous mines, at which 1,858 men were ordinarily employed, there were three fatal accidents, and three persons were seriously injured.

At stone-quarries under the Stone-quarries Act, employing 1,748 men, there were four persons killed, and four persons met with serious injuries.

There were 4,869 persons ordinarily employed about the coal-mines, and there were ten persons killed and twenty-five persons seriously injured. The most marked features of the fatalities for the year were that 70 per cent. were haulage accidents, this cause usually accounting for only 25 per cent. of the fatal accidents during any one year, and, secondly, that five of the fatal accidents were to men over sixty-five years of age. All the fatalities for the year were purely accidental, and unavoidable in the sense that they were due to causes which could not be foreseen or provided against by law or otherwise. Of the twenty-five serious but non-fatal accidents a large proportion, as formerly, were eye accidents to miners at the coal-face. It is expected that as a result of the rapidly increasing use of eye-shields by the miners in the Northern District that this class of accident will be considerably reduced in future.

GEOLOGICAL SURVEY.

During the field season ended 31st May last the geological survey of the Rodney district was completed, and a detailed report on this and on the adjoining Dargaville district is now in course of preparation. The survey of the Motueka district has been carried on under considerable difficulties, due mainly to the mountainous nature of much of the country and to the lack of suitable labour. It will not be