

a 20 nominal horse-power compound condensing-engine, ordered from Ransome, Sims, and Jefferies, England, having two pulleys, one for driving the machinery and one for driving the 12 in. centrifugal pump. The machinery for this dredge is of heavy construction. The winch contains six barrels—one for head-line, one for ladder-line, and four for side lines, all of which can be driven independently. The engine for driving the winch is a double cylinder, vertical, by Ransome, Sims, and Jefferies. The sands from the gold-saving tables will be delivered by a shoot direct into the elevator-trays.

ACCIDENTS.

Accidents in connection with gold-mining attended with fatal results have occurred to persons employed in the various branches of gold-mining, as under:—

	Quartz-mines.	Alluvial Mines.	Dredges.
Northern district	4
West Coast district	1	*
Southern district	7	1
	4	8	1

These accidents, and a few others of a non-fatal character, were all investigated by the Inspectors of Mines for the respective districts, and are reported on by them.

OTHER MINERALS.

SHEELITE.

Messrs. Donaldson Brothers, of Macrae's, Otago, continue to extract scheelite from the quartz at their battery, the product being shipped to Europe. Some other persons who hold quartz-mining areas in the same locality are also turning their attention to this mineral. Scheelite is also identified with quartz in the claims at Top Valley, Marlborough, but so far nothing has been done to concentrate it. The scheelite-mine at Glenorchy (Lake Wakatipu) is still idle.

CINNABAR.

Operations have been continued near Waitahuna, but before very much more can be done some county work on roads is required in order to enable mining material to be got to the ground. From investigations by Mr. L. O. Beal, jun., C.E., Dunedin, it appears that early operations were conducted on a branch lode; what Mr. Beal has since found to be the main lode not having been previously known. A low-level adit has cut this at a distance of 230 ft. from the entrance. There appears to be every probability that the discovery will be one of considerable importance. I have not heard of any further steps being taken to find the lode supposed to exist near Taipo (West Coast district). An analysis of some pieces of cinnabar-ore found in the locality was given in the report of last year. Cinnabar said to be of a payable quality exists in the Kauaeranga Valley, Thames district, but no definite information as to its probable extent is yet available.

ANTIMONY.

Some work has been done near Alexandra (Otago) with a view to opening out the antimony lode there. Mr. Green, Inspector of Mines for the Southern District, refers to the work in his report.

COPPER.

Some prospecting has been done at Moke Creek, near Queenstown, but no report of results obtained are to hand.

CHROME-ORE.

A small amount of work has been done near Croixelles Harbour, Nelson. The shipment of ore for the year was 28 tons, valued at £110.

RIVETLESS PIPES FOR WATER-TRANSMISSION.

A new style of pipe which can be made up to 28 ft. in length and 30 in. in diameter has been introduced by Mr. Mephan Ferguson, engineer, Footscray, Melbourne, and is now being manufactured by him on a large scale. The peculiarity of this pipe is that it is entirely without either weld or rivet, and the consequent liability to burn the plates in the case of welded pipes, and of the weakening of the plates by drilling or punching the holes necessary for riveted work, is entirely obviated.

Each pipe is made by first having the edges of two plates thickened ("butted" or "upset") and planed for their entire length. The plates are then bent into semicircular form, and afterwards brought together to form a complete circle, the union being effected by a longitudinal locking-bar, which makes a simple yet effective plate-joint. This locking-bar (see illustration, Figs. 1 and 2) is made with its jaws or openings somewhat wide so as to admit the thickened edges of the plates, and is closed down on the latter in a cold state by powerful hydraulic machinery. Elaborate and

* One person who was on board a dredge (out of curiosity) fell into the water and was drowned.