

SUMMARY OF DREDGES IN SOUTHERN MINING DISTRICT.

							At 31st December, 1902.
Working—							
In Otago	...	...	...	...	...	...	122
In Southland	...	...	...	...	...	...	29
							151
Building—							
In Otago	...	...	...	...	...	...	2
In Southland	...	...	...	...	...	...	6
							8
Standing—							
In Otago	...	...	...	...	...	...	27
In Southland	...	...	...	...	...	...	9
							36
Removing—							
In Otago	...	...	...	...	...	...	12
In Southland	...	...	...	...	...	...	2
							14
Wrecked—							
In Otago	...	...	...	...	...	...	2
							2
Total for Otago and Southland							211
Increase of working dredges—							
Otago	...	...	...	...	...	...	7
Decrease of working dredges—							
Southland	...	...	...	...	...	...	3

At the end of December, 1901, the total number of dredges in Otago and Southland was 228. At the end of December, 1902, this number dropped to 211. During the year there was an increase of seven working dredges in Otago, and a decrease of three in Southland. Eighteen new dredges were completed and started work, while two were in the building stage at the end of the year. A large number of companies liquidated during the year. Some of these companies were reconstructed, and the dredges resumed work on the original claims; while other dredges were sold for removal, in most cases to registered companies having no machines.

The Junction-Electric Company sustained a heavy loss through the sinking of their No. 1 dredge. The buckets had got off the bottom tumbler, and had torn a hole in a plank in the flooring of one of the pontoons.

Another serious event was the total destruction by fire of the Bendigo Gold-dredging Company's dredge.

Perforated revolving screens are principally used on dredges working clean river-gravel claims, the finer material being assorted by the screen, and distributed over tables of various types, usually having liberal spread, expanded metal with cocoanut-matting being principally used for gold-saving. The stones and coarse wash are discharged from the screens overboard, while in deep ground an elevator is provided. Should an undue proportion of fine silt in the wash prove troublesome, by reason of its filling up the paddock, an accessory silt-elevator is used, by means of which the silt is conducted to the elevator-trays and deposited on the tailings-heap. On land claims having surface deposits of clay and swamp mud overlying auriferous gravels screens have been found unsuitable, and material is discharged from the buckets into sluice-boxes, cocoanut-matting under angle-iron ripples being used for gold-saving.

Payne and Peck's centrifugal elevator having been tried and found suitable, several dredges are now being furnished with this appliance.

Five dredges are working with O'Brien's application of hydraulic power, which is found to be more economical than steam-power in districts where water is available, and especially where coal is dear. Four heads of water, under pressure of from 40 ft. vertical head and upwards, are required to provide necessary power.

The matter of freeboard has been receiving constant attention throughout the year, especially in connection with several gorge dredges.

After starting work it was found that as originally designed the ladders of a considerable number of dredges working in river gorges were not sufficiently long to enable the bottom to be reached during the somewhat lengthy periods when the rivers were high, and in a number of cases ladders have been extended by from 5 ft. to 10 ft. This having had the effect of altering the trim of the pontoons, additional or false bows became necessary on the pontoons to provide sufficient freeboard. Owing to several dredges having sunk from various causes, watertight bulkheads are being introduced, by means of which it is hoped risks may be minimised.

For the better preservation of timber in the pontoons, ventilators are fitted into the decks of many dredges. This is important where such parts of the machinery as the superheater, condenser, or steam-pipes are placed beneath the deck.