

method is very ingenious, yet simple, and as I made a detail drawing in section, and reported specially on it, in all probability a full description will appear in the report of Mr. Wilson, the Inspecting Engineer. Several river-bed claims are now being worked on the principle inaugurated by Messrs. Smith, and others are about to commence.

Croydon, near Gore.—(6/5/98) : Mr. John Nicholson has a prospecting area of 180 acres on Crown lands at Croydon, near the eastern base of the Hokonui Range, and has got a small face open, showing fine gold. His present water-supply is somewhat limited. The wash is in two divisions. The upper part is of small quartz pebbles and sand ; a trial wash gave 20 colours to the dish, the lower wash (which is of coarse river-bed pebbles) showing about double the foregoing prospect. Some prospecting operations have also been conducted between this claim and the Charlton Flat. Fine gold has been proved, and from what I saw of the ground, and the prospects obtained, there is little doubt that dredges of medium size could work the ground to advantage.

Waikaia.—(21/12/98) : At the landslip there have been workings on a small scale for several years. About eighteen months ago an attempt was made to form a company to work the ground by hydraulic sluicing, and a considerable sum spent in preliminary expenses, laying off water-races, &c. As the flotation was not successful, the working of the ground is being resumed on the old lines, by tunnelling and trucking out the wash-dirt. One party of two men has already made a start, and another party is also making preparations. The best gold is got on a sandy bottom, and is said to have yielded as much as £1 10s. per day per man, when worked prior to the attempted flotation.

Waikaia Gold-mining and Water-race Company, Scrubby Terrace.—(21/12/98) : The company not finding this claim so good as anticipated, it has recently been let on tribute, and is being worked much on the same lines as detailed in my last report.

Argyle Hydraulic-sluicing Company, Waikaia.—(21/12/98) : At my visit the elevator was being moved at the lower claim and sluicing operations were in hand at the upper claim.

Winding Creek Gold-mining Company (Limited), Waikaia.—(21/12/98) : This company is now carrying on the work at what used to be known as the "Break-'em-all Claim," at Winding Creek (referred to in my last report as being taken up by the Otago Syndicate, Limited). About twenty-five miles of water-races have been constructed to bring in fifty heads of water from the Big and Little Leithan Creeks, the upper branches of the Waikaka, Winding Creek, and other smaller streams. The smaller or branch races supply a main race capable of carrying the full fifty heads. A considerable length of the race is through rocky country, covered with heavy bush. The hydraulic plant consists of about a mile of steel pipes, of from 15 in. to 30 in. in diameter, and two elevators. The cost of the works is given by Mr. R. Hay, C.E., of Dunedin—under whose charge the water-supply and installation have been carried out—at upwards of £10,000, the capital being raised in England. At my visit I noticed that the water-supply was short, and, from what I could learn, it may be somewhat intermittent. Since my previous inspection, a lot of ground has been sluiced away near where Kennedy and party were then working, and at this date an elevator is ready for work near where the old bucket-elevator formerly stood, and preparations are in hand for sluicing at the opposite side of the creek.

Round Hill Gold-mining Syndicate (Limited), Round Hill, Southland.—(11/10/98) : In consequence of a fatality at this company's works on the 6th inst., I attended the adjourned inquest and inspected the workings, all of which appear well managed. Accident reported on to Hon. Minister of Mines under date of 13th October. (See "Accidents.")

DREDGING.

The interest taken in this method of gold-mining continues to increase, and at the end of the financial year (31st March) the number of dredges in work in Otago and Southland was upwards of seventy ; four are undergoing removal, nine are standing for various reasons, and (approximately) not less than thirty new dredges are either in course of construction or projected. There is an all-round tendency to build dredges very much larger and more powerful, recent examples being the Magnetic and Electric No. 3 dredges at Cromwell, the Earnsclough No. 2 and Golden Point dredges at Alexandra ; but much larger dredges even than these are under consideration. This is no doubt a step in the right direction under certain conditions, but what has very forcibly struck me in several instances is that, in my opinion at least, whilst great attention is being paid to increased lifting capacity, the arrangements for saving the gold, especially where the latter is very fine, do not keep pace with the demands which a greater quantity of stuff appears to require, and, this being so, it naturally follows that gold is being lost. That this has been so in more cases than one I can vouch for. In some parts of the district very large dredges are not needed ; in fact, where the ground to be worked is not more than 20 ft. deep, does not carry any big boulders, and is away from a swift current, it will be found that a very moderate-sized dredge will answer all requirements.

In my last year's report I expressed the opinion that some of the flats in Southland were well worth attention for dredging purposes. This is now being fully recognised, and during the year dredges have been built at Gold Creek, near Gore, and Waimumu, near Mataura, whilst others are now being built in other parts of the district. Additional dredges are being built at Waikaka, one is in course of construction on the Mataura River near Gore, and others are proposed to be built some twelve miles above Waikaia and also near Round Hill.

Inch Valley.—During the year, the dredge formerly at work near the landslip at Waikaia has been removed to Inch Valley, on the Shag River, some six or seven miles above Palmerston, and another has been built at Macrae's Flat ; new dredges have been built at Chatto Creek and at Ophir, whilst dredging operations are about to commence at Matakaui. All these districts—Ophir excepted—are, together with Gold Creek and Waimumu, new fields for the dredging industry.