

of this claim, for a chain in width, the bottom is the white quartz wash, and from that to the eastern side of the stream it is said to be soft pipeclay. There is a strip of shingle-beach a chain or more in width on the eastern side of the stream, but which ground, although proved to be fairly good, cannot be worked by this dredge in consequence of the extra quantity of tailings to be disposed of if working this shingle-beach. This dredge is too small to carry a tailings-elevator, which would enable it to dredge close up to the bank of the river. Pringle and party have been working a dredge on the river for nearly thirty years, and have been getting large returns, as high, it is stated, as £20 a man per month. This party now intends to have a new dredge fitted with all the modern appliances. This is at present in course of construction, and it will cost when completed about £2,500. The pontoons are made, and it is expected that the dredge will be ready for working about September next.

Brazil and Party's Dredge.—This little dredge is situated at Miller's Flat, a short distance below the ferry punt, and is now working in the east side of the stream about 2 chains from the river-bank, and only a chain from the ordinary water edge. It is evident the disposal of the tailings is a trouble to this party, as well as to others in this locality, and it is feared this dredge is also too small to carry a tailings-elevator, by which the tailings could be carried away some distance behind. The engine is a compound one of 7-horse power nominal, made by J. Anderson and Son, Christchurch. The consumption of coal is about 200 tons per annum. It is capable of dredging 30ft. deep, and the river-bottom is pipeclay. The sluicing-water is lifted by small 5-gallon buckets fixed in a wheel on the main shaft.

Richardson and Party's Claim.—This property is considered to be one of the most valuable on the river, and, when a newer and more efficient dredge than the one now in use is provided, it is expected that the returns will be considerable, as the run of gold has been traced into the bank, and showed indications of being one of the richest leads on the Clutha. The shares in this dredge have changed hands lately, and are now taken by more practical and speculative men, who intend to put on a dredge fitted up with more modern appliances. The claim adjoining this, and close to the punt, is a small one, being only a few chains in length, and immediately adjoining the punt at Miller's Flat. Some idea may be formed of the value placed upon a small section of the river when it is known that a dredge was especially purchased to work this small claim.

The Golden Treasure Dredge is working a short distance above the Miller's Flat ferry, on the east side of the river, on fairly good ground. The total cost of the dredge and plant was £3,000, and gold of that value was won during the first eight months' work. The present weekly gold returns are said to be 40oz., and the total cost per week is about 9oz. The dredge is 90ft. long, having a ladder of 62ft. in length, and forty-two buckets of $2\frac{3}{4}$ cubic feet capacity; it is capable of dredging to a depth of about 40ft., and the deepest parts yet reached have proved to be the richest. The quantity dredged when working steadily is about a cubic yard per minute. There are two men employed on each shift, and the quantity of lignite coal used is about a ton each shift. There are 32ft. of sluice-boxes 3ft. wide, and a "catch all" 12ft. long by $2\frac{1}{2}$ ft. wide. The dredge is worked by a compound engine of 16-horse power nominal, made by Marshall and Sons, of Gainsborough, England.

Miller's Creek Dredge.—The length of this dredge is 108ft., built of two pontoons of 6ft. wide each, and draws 2ft. of water. This dredge has a revolving cylinder, and 240ft. of surface on side-tables. The main box to carry away the tailings is 50ft. long by $2\frac{1}{2}$ ft. wide, and stacks up the tailings about 7ft. above the water-level. The dredge is now working at the junction of the Bengier Creek and the Clutha River. The claim extends from the river to the Roxburgh Road. All the flat to be worked is consequently above the level of the river. The quantity of material hoisted and put through the cylinders is estimated at 60 tons per hour. The depth dredged from the water-level is about 30ft. In some places the bed-rock is not reached, but the extra deep places are generally filled with a very old quartz wash and silt, which do not carry gold. The yield of gold at the time of my visit was not sufficient to pay working-expenses. The intention is to work a cut across the Bengier Flat from the south to the north terrace, in order to ascertain if there be any run of payable ground down the old Bengier bed. The engine is 18-horse power nominal, and the centrifugal pump-engine is 10-horse power nominal. The capacity of the dredge-buckets is $3\frac{1}{4}$ cubic feet, and the consumption of coal is $3\frac{1}{2}$ tons per twenty-four hours. This dredge lifts the material too high. The top gear requires to be somewhat lowered.

The Roxburgh Dredge is working in mid-stream, opposite the Hercules Sluicing Company's Claim, and is said to be on fairly good ground. It is supposed to be lifting 20 cubic feet per minute, and is capable of dredging to a depth of 37ft. The depth now being dredged is from 20ft. to 35ft., in a "pipeclay" bottom, the full width of the river. The engine is a compound one of 25-horse power nominal, and the quantity of coal consumed is about 2 tons in the twenty-four hours, which are divided into three shifts of two men each. The total length of sluice-box is 30ft. by $2\frac{1}{2}$ ft. wide, carrying perforated plates all their length, and in the first 8ft. plumb is used under the plates; from this down to the end matting is used. There is another box, 2ft. wide, running parallel with it, but below the first. In this second box the fine stuff is passed from the top box over matting covered with wire netting. There is a "save-all" box with perforated plates and matting, but the gold saved in this box bears a very small proportion to the total obtained. Very fine colours are at all times found at the tail-end of the sluice. The centrifugal pump throws about 1,500 gallons per minute.

Dunedin Dredge No. 2.—This is a small dredge compared to some lower down the river; it is 60ft. long, with a ladder 45ft. long. The quantity of stuff put through the boxes is estimated at half a ton per minute, and the quantity of coal consumed in the twenty-four hours is about 23cwt. The sluice-box is 18ft. by $2\frac{1}{2}$ ft., having perforated plates and coconut-matting all through similar to that in other dredges already described. The twenty-four hours are divided into three shifts, with one man only in each shift.

Dunedin Dredge No. 1.—This dredge had not got so much gold last year as formerly, owing to the river being unusually high, and also to the tailings from some claims on Commissioner's Flat which