A very simple but effective method of using water under pressure for working river-bed beaches has been introduced on the Shotover River. By this means ground much too wet and deep for the ordinary methods of ground-paddocking is now being worked, and, in consequence of the success which has attended the operations of those diggers who have adopted this system, the river-bed has been pegged out for several miles by persons who intend to work in a similar manner. Chinese diggers are to be found scattered throughout the district, but their number is gradually decreasing.

Dredge Mining.

This system of working river-beds and alluvial flats for the gold therein contained is a most important one, and the industry is rapidly expanding. On the 31st March last only four dredges were actually at work in the Marlborough and West Coast Districts, but, owing to the success which has attended this method of mining in the South, the attention of investors and speculators has been turned to other centres, and at the present time there are probably not less than seventy dredges actually in course of construction for various parts of the districts referred to, some of which are fast approaching completion. The results obtained by the first new machines put to work at places hitherto untried by dredging will be awaited with anxious interest. Claims, intended to be worked by dredging, have been taken up in large numbers on the rivers and flats of Marlborough, Nelson, and Westland. Otago, the home of the gold-dredging industry, has experienced quite a boom during the year, and investment in other branches of mining has received very little consideration. This remark is equally applicable to the West Coast District at the present time. Magnificent returns have been made by a few dredges, and notably by the Hartley and Riley, which obtained no less than 1,187 oz. in one week. This has, however, been very recently eclipsed by the phenomenal return of 1,234 oz., obtained by the Lady Ranfurly dredge at Kawarau Gorge, near Cromwell, as the result of a single week's work.

Still, returns like these do not justify the wild excitement and mad rushing to peg out claims and float companies such as have been experienced during the past year. There is every reason to believe that many of the new ventures will prove satisfactory, but others have been put on the market which are not at all likely to come within that category.

The number of dredges actually working in Otago and Southland at 31st March last is returned at 81 out of a total of 97, with 101 others under construction. Apart altogether from the men employed in dredge-building, each dredge is estimated to be responsible for the average direct regular employment of at least eleven men (including coal-miners, carters, &c.), and contributes in an indirect manner to the farming, wagon-building, and other industries. The importance of gold-dredging to the public welfare may be somewhat gauged from the above statement.

In parts of Otago, but more especially in Southland, large areas of auriferous flat land, in the neighbourhood of rivers or streams, have been taken up for dredging, and several dredges are in operation. It is found that the land so worked is, as a rule, rendered practically valueless for agricultural purposes, and where the gold is fine a considerable proportion of it is carried away by the subsoil and clay, as these, together with the auriferous gravels, are mixed in the sluice-box or screen.

This damage to land, and the loss of gold referred to, are two important considerations which are engaging the attention of the Mines Department with a view to some satisfactory method being devised—and, if possible, of being made applicable to most existing dredges—for first stripping the surface soil and clay and depositing them on the tailings well behind the dredge, thus enabling the land to be fairly well restored, and the gravel to be treated for the extraction of its contained gold without the mixture of surface clay