

arrests the volatile silver and gold, and at the same time puts the ore into the best condition for the extraction of the rest of the bullion."

Mr. French has been and is at present employed on the Monowai Mine, Waiomo, Thames, where he is endeavouring to treat the ore by a special process, as the cyanide has failed to be successful in the presence of base metals. Ores containing tellurium and selenium require special treatment or else the gold and silver are lost. Tellurium and selenium are volatile metals, passing away in smoke, and carrying away at the same time the gold and silver. When the first mining operations were being carried on on the Puhipuhi field the ore was dried in kilns cut in the side of the hills, and the contents of the ore vanished into the air. To obviate this Mr. French has introduced a method by which the ore is dried and roasted. The principle adopted is that of heating with the exclusion of air, and conducting the fumes through a flue into a condensing-chamber, where a continuous shower of water condenses the fumes, and throws down the escaping metals. Mr. French's process is, briefly, as follows:—

First, the ore is (1) dried; (2) then crushed; (3) then roasted; (4) then leached in vats, where the gold, silver, and copper are separately "solved," or brought into solution, each solution being run into separate vats; and (5) each are thrown down or precipitated by certain reagents; and, finally, (6) the precipitated metals are melted into bars of silver, gold, and copper.

There seems every prospect of one or two good mines becoming permanent on this field, which will probably lead to other important discoveries in the not very distant future.

I have, &c.,

The Under-Secretary for Mines, Wellington.

R. BUSH, Warden.

## No. 2.

Mr. Warden KENNY to the UNDER-SECRETARY for MINES, Wellington.

SIR,—

Warden's Office, Thames, 30th April, 1896.

I have the honour to forward herewith statistical returns for the year ending the 31st March, 1896, and also the following report on the mining industry for the same period:—

The prophecy contained in the remarks at the end of my report for the year ending the 31st March, 1895, has been more than justified. The success attending the enterprise of the Hauraki Company at Coromandel, the Crown and Woodstock Companies at Karangahake, the Waitekauri Company at Waitekauri, and the Waihi Company at Waihi has been the means of attracting increased attention to the mining industry throughout the whole of the Hauraki mining district. The results obtained during the past year, both as regards the quantity of gold produced and the number of men employed, have been most gratifying. The value of gold won from the principal mines was as follows:—

Coromandel—

Hauraki, £97,218, £139,773 since 1894; Kapanga, £4,445.

Kuaotunu—

Kaipai-Vermont, £14,740 16s. 2d; Try Fluke, £7,055 2s. 5d; Great Mercury, £6,093.

Thames—

May Queen, £23,534 12s. 7d.; Moanataiari, £7,264.

Ohinemuri—

Waihi, £122,391 9s. 1d., £383,529 since 1890; Woodstock, £10,191 10s. 4d.; Crown, £26,310 11s. 6d.; Waitekauri, £15,600.

The wish to obtain mining properties has attained such proportions that large areas of ground have been taken up as special claims or licensed holdings.

Discoveries of a promising nature have been made in fresh places as well as in the older parts of the district.

### COROMANDEL COUNTY.

*Port Charles.*—In this district reefs carrying gold have been discovered, and several special claims taken up.

*Cabbage Bay.*—Several claims have been taken up on the Waikanae and Huruhuru Blocks.

*Kennedy Bay.*—In this district very encouraging prospects have been met with in the prospectors' claim, and extensive areas have been taken up. Large areas of both old and new ground have been taken up in the Tokatea, Paul's Creek, Waikoromiko, Karaka Block, Kapanga, Kauri Block, Pukemaukuku, Tiki, Matawai, Manaia, Matarangi, Kuaotunu, Opito, Mahakirau, Moewai, Hahei, and Boat Harbour districts.

*Kapanga and Kauri Blocks.*—Progressive works are being vigorously continued. The shaft in the Kapanga (which is now 900ft. down, and the deepest gold-mine in the colony), Hauraki, Scotty's, Blagrove's, Britannia, Welcome Find, Bunker's Hill, New Golconda, Wynyardton, Hauraki No. 2, Hauraki South, Preece's Point, and Kathleen Mines are all in full operation, steam-pumping and winding machinery being used.

*Tokatea.*—At the Tokatea, Triumph, Royal Oak, Success, Hauraki properties, and Hauraki East work on deep-adit levels is being carried on.

*Manaia.*—The Golden Hill shaft has been worked by the aid of a steam pump to drain the mine, whilst other areas are being prospected by driving tunnels.

*Kuaotunu.*—At Kuaotunu the continued good returns from the Try Fluke, Great Mercury, and Kaipai-Vermont Mines have led to the occupation of a large number of special claims, in many of which prospecting works are being vigorously carried on.

At Mahakirau, Moewai, and Opito districts there is also a considerable amount of prospecting being done.