

This has now been completed, and the road taken over by the Waimea and Collingwood Counties, about nine miles and a half being within the Waimea County, and seven miles within the Collingwood County. It is a road that is laid off with good grades and is well constructed, and, with the exception of a small portion on the Takaka side of the range, it will not be liable to any large slips taking place. When inspecting this road in April last I found the portion within the Waimea County in very good order, but on the portion within the Collingwood County there were a number of small slips, boulders, and logs lying on the road. The total expenditure under this head up to the end of March last was £10,905 18s. 11d., and the liabilities at that date amounted to £191 6s. 6d.

Garston to Nevis.—There is a dray-road up the valley from the railway-station towards the Nevis for about two miles and a half, and from the end of this road to the end of the gorge on the Nevis side of the range, where the flat valley commences, is about ten miles: the road-line has been laid off over the range (which is about 2,300ft. above the level of the end of the road coming from Garston) on a gradient of 1 in 10, and instructions have been given to have plans and specifications for this ten miles prepared to let by contract in the event of the work being authorised. The high elevation at which this road will have to be constructed will render it impassable for some time during the winter months, and, although it is a much shorter route than by the Clutha Valley, it can only be a summer road for wheel-traffic. The distance from the end of the gorge, where the survey ends, is about ten miles to the Upper Nevis township: this portion is down a flat valley, which requires very little money expended to make it a passable dray-road from the upper township to the lower township, a distance of about six miles; the present road goes over some high bluffs with very steep gradients, neither suitable for dray-traffic, nor even for a passable bridle-track.

STEWART ISLAND.

Pegasus to the Remarkables.—A road-line has been laid off from Pegasus to the foot of the Remarkables, which, if constructed, would admit of supplies being taken into the country; but when returning from a visit to Stewart Island a deputation waited on me in Invercargill, and wished me to represent to the Government that a bridle-track would be of little service to them, and that a syndicate was formed to construct a tramway if the Government would give a subsidy of £300 towards its construction. The department communicated with one of the gentlemen comprising the deputation, requesting him to make an application in writing; but this never came to hand. The plans of the line of road were handed to the syndicate who proposed to construct this tramway, but no further action has been taken in reference to the construction of a horse-track or tramway.

WATERWORKS.

Laying new Mains, Thames.—The mains that have been used since the construction of the water-supply were constructed of wrought-iron and were only 20in. diameter. This size was found to be too small to deliver the quantity of water required to supply motive-power for the crushing-batteries and other machinery on the flat, and a new cast-iron main was laid down having pipes of 30in. diameter. The County Council procured all the pipes in England, and, after they were landed on the ground, made application for a subsidy of £1 for £1 towards laying them in position, giving the estimated cost of the work to be £1,500. A subsidy up to the extent of £750 was authorised, of which £285 has been paid.

WHARVES.

Coromandel Wharf.—This wharf has been constructed for a number of years, and some of the timber was getting greatly decayed; and, as the County Council represented that this wharf was greatly required to land coal for the mining companies, a contribution of £150 was paid, on the County Council paying a similar amount, towards putting the wharf in good repair.

Anikiwa Jetty.—This is for the construction of a jetty at the head of Queen Charlotte Sound, to enable small steamers to land passengers and goods for the Mahakipawa Diggings. The jetty has been constructed and approaches made to it, and it is found to be of great convenience to the people in this district; but, as there are no houses near this jetty, it requires a small shed to be constructed, so that goods can be landed from the steamers and put under cover until they can be taken away. The inhabitants complain greatly that at present they sometimes get perishable goods destroyed. The estimated cost of the works, including the erection of a shed, is £289 19s. 5d. Of this amount £96 6s. has been paid.

SCHOOLS OF MINES.

The establishment of schools of mines is beginning to have a good effect on mining, and a very large number of miners are now able to distinguish the different ores met with, and to ascertain the percentage of metals they contain. An important discovery was made last year by one of the advanced students of the School of Mines at Thames, Mr. R. Aitken, who has recently been appointed Instructor to the School of Mines at Reefton. He made an analysis of the water flowing out of what is known as the Moanataiari or Kuranui Tunnel. This tunnel or adit-level goes back into the hill for 3,000ft., and cuts a number of auriferous lodes, from which large quantities of gold have been got. Mr. Aitken first analysed a small quantity of the water, and was astonished at getting a very small button of gold. He then got a gallon of water by merely allowing the water to flow into the vessel: he did not lift it out of the drain so as to disturb any sediment, but only took the clear water, along with whatever sediment it contained. The result of the analysis of this gallon of water showed that about thirty pounds' worth of bullion was flowing away daily. On my visit to the Thames in October last I inspected this adit-level with the view of ascertaining the quantity of water flowing out of it, and estimated it at about forty-two gallons per minute, or, say, 60,000 gallons per day; but Mr. Aitken recently informed me that he based his calculations on 100,000 gallons per day. This quantity may have been flowing out of the tunnel at the time he made his experiments, but there was not that quantity flowing at the time of my visit. Allowing there is 60,000 gallons per day, this would make the value of the bullion flowing away daily