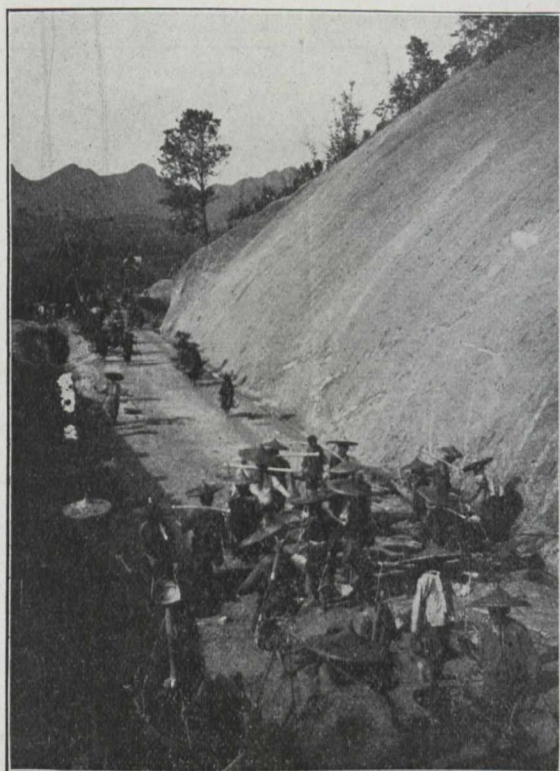


distributing same, both contractors and engineers are likely to give way.

Disturbances of this sort occurred in some cases where construction had been commenced without the right-of-way having been purchased. In other cases when the right-of-way was paid for but the natives were opposed to the building of the line. The guards of native soldiers usually proved useless in such emergencies.

The purchase and removal of graves from the right-of-way was another difficulty. As ancestor worship is part of the Chinese religion, graves are kept up for thousands of years. Consequently wherever one goes one finds graves scattered about the hillsides, sometimes in small numbers, sometimes as thickly as they can be placed. Graves of poor coolies did not cause much difficulty. The standard compensation for one of these was \$4.00 Mex. But when the line



Coolies—Men and Women Taking Out An Earth Cut.

passed over or close to the grave of some member of a wealthy family, it was likely to prove an expensive location. As much as \$4,000 Mex. was paid for the removal of a single grave, and this only after a year's delay. In one instance about 500 ft. from a tunnel portal our embankment was just clear of the grave of a noted ancestor of a wealthy land owner. The president of the railway actually recommended swinging the tunnel tangent five or ten feet and building a fifty-foot embankment partly in the Pei Ho river for 1,000 feet, in order, not to avoid this grave entirely, but to keep our slopes just clear of it, so that the spirit of the departed might not have his view of the river entirely cut off by the railway embankment! The clan concerned were content when they found the grave was five feet above subgrade and the slopes of our dump rested only on its lower terraces.

At times the construction work was seriously delayed by sickness amongst the coolies; sometimes as many as 20 per cent. of the entire force would be ill, with fever and dysentery. Of individual camps I have seen 60 per cent.

incapacitated at one time. There were very few cases of plague on the work and only one or two of cholera.

Another serious source of trouble was the brigands in the hills, and the pirates on the North river. During the winter of 1908-09 the entire work was suspended for a period of one month, on account of a series of armed robberies on the work. The offering of rewards of \$100.00 per head for every robber captured did more to stop the trouble than all the extra soldiers provided by the government.

Now the last European engineer has resigned and the work is entirely in native hands. Once more the dragon flag floats supreme over the whole length of this great road. The foreigners have come and gone, and now that the worst difficulties of construction have been overcome, the natives will no doubt be able to complete the work and assume the credit. And if errors of judgment were made in the building of the road, and if the cost was double what it should have been, and the time occupied treble the necessary time, who shall bear the blame? Who but the foreign devil! But that, of course, is part of the bargain; that is the "White man's burden."

LARGE REINFORCED CONCRETE PIER.

A pier of reinforced concrete, 800 feet long by 250 feet wide, with two-story reinforced concrete sheds, is to be built at Halifax, N.S., for the Intercolonial Railway. These structures are a part of the extensions to the railway's terminal wharf, bulkhead, and sheds. The pier is the first of four to be built at a cost, it is estimated, of about \$3,000,000. The general contractor is the Nova Scotia Construction Company.

THE BODIO POWER STATION.

The hydro-electric installation, situated between Lavorgo and Bodio, deriving its power from the River Ticino and its tributaries on the left bank, has recently been opened. The total fall utilized varies from 255 to 260 metres, and the available power during mean summer flow amounts to 38,000 h.p., but by the creation of reservoirs on the mountains it will be possible to regulate the flow during slack seasons. The works comprise the dam at the intake with strainers; a delivery channel 8,800 metres in length, with a sectional area of 6 square metres, which, in order to convey the requisite maximum volume of 15,000 litres per second, entails a velocity of flow of 2.5 metres; a head reservoir with a capacity of 6,600 cub. metres to equalize the supply, and a pressure-main, 2.8 metres in diameter, which takes the form of a circular channel inclined at an angle of 86 per cent. This tube is 2.8 metres in diameter. This main is terminated by double steel pipes, with diameters of 1.7 metres, each of which supplies two turbines of 10,000 h.p. The power house is thus laid out for 40,000 h.p., but only 30,000 h.p. will be installed at present. The turbines are direct-coupled to triphase generators working at 8,000 volts of 50 periods. Power is already being supplied to two factories—to the Diamantic works, where artificial emery is produced, and to the Gotthard works for the manufacture of ferro-silicon in large electric furnaces, and of ferro-chromium in a small one. It is intended shortly to employ the power for the manufacture of nitrogen from the air.

The Bodio power station also supplies current for the Biasca-Acquarossa Railway.