

and smooth is the effect that, whether the weight be 100 pounds or 1,500 pounds, or more, there is not the slightest shock on the mechanism, and in this respect it constitutes a very great improvement on the sledge-hammer upward blow delivered by a cam. When the cylinder and the stamp head have completed the up-stroke, the cylinder descends, under the control of the crank, at a velocity exceeding that at which the stamp head would fall under the influence of gravity; so that, not only is there no retarding friction, but the cylinder, travelling the faster of the two, actually assists gravity, increasing the velocity, and, consequently, the force of the blow. It will thus be seen that while the lifting of the stamp is controlled by the crank, the falling and the crushing effect are due to gravity, assisted by the friction of the driven cylinder. The quick knapping blow in the Morison mill granulates rather than pulverises, so that the sluices are far less than with the cam mill. This is an important consideration, as the cyanide liquid will more readily permeate through the pulp, and more complete absorption and easier leaching will result, increasing the percentage of gold recovered.

From this type of mill, then, the crushed ore from the Dorotha Morton mine

will be conveyed direct to settling tanks (the three tanks as shown in the third and fourth illustrations), each of which is 20 feet in diameter and 7 feet 6 inches deep, and furnished with distributors to ensure the mixing of the fine and coarse sands. These tanks are fitted with bottom discharge doors, through which the tailings will be dropped into cars and can be dumped into any one of the six tanks below, where the tailings will be treated with cyanide for six or nine days. After treatment the tailings will be sluiced through the bottom of the tanks to a launder, which will carry them into the sea.

The three large tanks 20 feet in diameter and 10 feet deep, at the bottom will contain the cyanide solution. These cyanide tanks were built by the Royal City Mills, Vancouver. The power for the battery compressor engines is supplied by 3.50 h.p. locomotive boilers. These were supplied by the Hamilton Manufacturing Co. Crushing was started towards the end of the present month, and the results of Mr. Lang's enterprise and the application of cyanide in the treatment for the first time of this class of ore in the Province should soon be made public.



General View of Plant from the Water.

NEW GOLD FIELDS AT ATLIN LAKE.

WHILE at the present time it is impossible to secure any information of a strictly scientific nature respecting the richness, extent and permanence of the gold discoveries which have been made within the last three months to the extreme north-west of the Province, near Atlin Lake, there is yet sufficient evidence of the existence of gold in payable quantities in this locality to warrant the indulgence of the most sanguine expectations with regard to the future possibilities of these new diggings; and, owing to the accessibility of the country, it is very probable that next spring will witness there a repetition—of course, in a mild form—

of the Klondike excitement of this year. If so, it will be some satisfaction to the unfortunate among the gold-seekers to experience very few of the hardships which necessarily rendered disappointment so much more acute to those among the pioneer Yukon prospectors whose quest proved fruitless.

To reach the Atlin gold fields, one, after arriving at Bennett by the usual route, takes the steamer on the lake to Taku Arm—a journey of only one hundred and twenty-five miles—when it is necessary to land and pack one's supplies through a sort of rolling prairie country, over which a good waggon road has