

great savings effected. The profit so saved in a single year from the output of the principal porphyry copper mines, including the defendant's has been estimated by one of the expert witnesses as more than \$17,000,000.

"The defendant contends that there is nothing new in the employment of only a fraction of 1% of oil relative to the weight of the ore in the process of the first patent in the suit. On the whole, I am satisfied that the first patent in suit must be sustained as to claims 1 and 12, but not as to claim 9. The two former are definite, specifying and limiting the amount of oil to be used; claim 1 mentioning 'a small proportion' * * * amounting to 'a fraction of 1% on the ore' and 12 'a fraction of 1% of oil on the ore.' Claim 9 mentions 'small quantity of oil.'

"On the question of infringement of the first patent I have no doubt. It was practically admitted by counsel for the defendant in opening the defence that it had infringed the three patents in suit by its operations at Miami within four months next before the filing of the bill. The defendant in its operations also used the minute proportion of oil mentioned in the first patent in suit. It does not use acid in its process, but this fact is immaterial so far as the question of infringement is concerned for the reason that it appears both from the claims and the description of that patent that the use of acid is optional. In the plaintiff's process the separation is effected through the rising of air bubbles to which are attached the metallic particles through the mixture to the top and the formation of a froth or scum on the surface, which can by simple means be removed with the contained metallic articles. In the defendant's process the separation is effected through the rising of air bubbles to which are attached the metallic particles through the mixture to the top and the floating away into a launder of either the original bubbles to which the metallic particles were first attached or succeeding and oncoming bubbles which have caught and buoyed up to the surface the metallic particles escaping from the bursting bubbles. The defendant contends that since its abandonment of its original infringing process at Miami it has not and does not infringe for the reason that it does not in its process produce the coherent and permanent froth of the process of the first patent. It appears from the evidence, it is true, that the bubble froth in the defendant's process is not as coherent and permanent as the froth of the process of the patent; but both are mineral froths and that of the defendant is sufficiently permanent to effect through air flotation and efficient separation of the metallic particles from the rest of the mixture. The defendant further insists that its process lacks violent agitation * * * but the description (of the patents) nowhere mentions 'violent agitation.'"

Regarding the third patent involved the court says: "I do not find any element of patentability in the process of this patent."

ST. ANTHONY GOLD.

The St. Anthony Mine, of Sturgeon Lake, has been taken over by the Dominion Reduction Co., who are the owners of the "Croesus." Considerable development has been made on the St. Anthony under the management of Julius Cohen, and the superintendency of Harry Lavery, late of the Dome.

NIPISSING.

A strike of considerable importance is understood to have been made in the Meyer shaft of the Nipissing. From what can be learned the strike is very rich.

TREATMENT OF COBALT SILVER ORES.

Within the past couple of weeks an increase has been noted in the bullion shipments from the Mining Corporation. This increase is due to the addition of a high grade plant to the Cobalt Reduction Co.'s mill.

Previous to this the slimes from the concentrator have been cyanided in the low grade cyanide plant. This system, of course, is being continued, but the "sand concentrates" instead of going to the smelters as in the past, will henceforth be treated in the new plant just recently put in operation.

In addition to the concentrates of the Cobalt Reduction mill, the high grade ore from the three mines of the Mining Corporation of Canada will also receive treatment here and in a short time practically all Mining Corporation shipments will be in the form of high grade bullion going direct to London.

The new addition to the Cobalt Reduction Co.'s plant differs radically from the two other high grade plants in the camp, in that amalgamation plays no part in the treatment, nor is the ore crushed in cyanide solution. The ore is first slimed in a tube mill, and after a preliminary treatment in two stages is de-watered and washed on an Oliver filter, then given cyanide treatment and again filtered and washed on a second Oliver filter.

The silver is precipitated from the solution by the use of sodium sulphide instead of aluminum dust, and the resulting silver sulphide precipitated, de-sulphurized, pumped to filter presses, and then refined in reverberatory furnaces, to a high grade bullion ready for shipment in bars to London.

The new plant has only recently been put in operation and in the course of a few weeks will be working to full capacity.—Cobalt Nugget.

COBALT SHIPMENTS.

Cobalt, Oct. 21.—Eleven carloads of ore left the camp this week for the smelters. Nipissing led with 370,457 pounds. Three cars of nickel-cobalt residue from the Nipissing went to the Henry Wiggins Co., Birmingham, while another car from the same company went to Welland, Ont.

Right of Way again appears on the list with a car of concentrates consigned to Thorold, to which place the car from Beaver also went. The Dominion Reduction shipped to Denver. The remainder went to Canadian smelters at Welland, Thorold and Deloro. The total ore shipments totalled approximately 304,942 ounces, worth approximately \$184,554.

Ore shipments were as follows:

Shipper.	Pounds.
Right of Way	84,052
Nipissing.....	370,457
O'Brien Mine	129,828
La Rose	87,143
Dominion Reduction	88,000
Beaver Consolidated	81,536

Bullion shipments were:

Shipper.	Ounces.	Value.
Nipissing.....	132,429.67	\$91,045.40
Mining Corporation...	55,071.88	37,448.88
Crown Reserve	12,441.00	8,559.88
Dominion Reduction..	20,000.00	13,500.00
O'Brien.....	85,000.00	34,000.00

Crown Reserve, O'Brien and Dominion Reduction figures are only approximate.—Cobalt Nugget.