

a small ladleful, which he cools and hammers, then breaking it in a vice. The fracture should be finely fibrous, silky and pale salmon color.

There are three qualities of commercial copper, viz.: "Tough pitch," as produced above; "best select," a pure copper for best brasses; and "tile," a very impure copper, for hard brass.

The "best select" is made from a selected regulus, made in this way: ordinary white metal is partially roasted until some metallic copper is formed as a bottom under the regulus, copper having a greater affinity for sulphur than the other metals present; the metallic copper will contain most of these, leaving the regulus exceptionally pure; this, being stripped off from the bottom, is roasted by itself to "blister copper," which, when refined, is "best select." The impure copper, being refined, makes "tile" copper.

In addition to their extensive reverberatory copper smelting plant, Messrs. Vivian & Sons have had for many years several water-jacket furnaces in full blast, producing copper matte carrying from 50 to 60 per cent. of that metal.

This matte is crushed fine and six-ton charges of it calcined in the modern automatic "revolving" calciner,

in which a most perfect calcination is effected in about twelve hours. The calcined product is subsequently reduced to metallic copper by a special treatment. They have also in operation two of Manhè's converters in which very poor "purchase" matte, carrying 12 to 15 per cent. copper, is blown into white metal of 75 per cent. copper in about an hour; the color of the flame issuing from the converter indicating the desired pitch of the metal. Argentiferous matte from Lake George, containing 37 per cent copper, is converted into white metal in about 30 minutes.

The methods of copper assaying employed are: Cyanide, Electrolytic, Gravimetric (subsulphide), and Iodide. The old Cornish copper assay (fire-assay) is still practised by this firm.

In conclusion it may be remarked, that the success of this world-famed firm, during the last forty years is in no small degree due to the exceptional skill and ability of its eminent and genial chief chemist, Mr. Suchsland, in charge of the Hafod laboratory, where there are about twenty-five assayers and assistants employed under him, and where about sixty thousand assays of all kinds are made in the year.

## A TON OF GOLD

### NOW ON THE WAY OUT FROM THE KLONDIKE.

SKAGWAY, June 13, via Seattle, June 17.—A large amount of gold dust and nuggets was landed at White Horse Rapids last Friday, June 9th, from the first three steamers to reach that point from Dawson City. Over a ton of it was officially checked off by the officers at White Horse when making the transfer from steamer to steamer. The remainder was divided in packages ranging from 10 to 75 pounds, carried by more than 300 passengers on three boats. They were in all sorts of old packages and no attempt was made at concealment.

No. 17 Eldorado, it is said, will prove the richest of the whole Klondike. Mr. Peacock, of Quebec, who owns a half interest, had 37 men at work on it all winter, and the clean-up will be in the neighborhood of from \$1,200,000 to \$1,500,000.

### QUARTER OF A MILLION.

SEATTLE, June 17th.—Two hundred Klondikers arrived here last night on the steamer "City of Seattle." Collectively they had considerable gold dust, but their estimates of the total amount varied greatly. Purser Pope said, "About four hundred thousand dollars in actual dust is a conservative estimate, I think. I had about \$250,000 placed in my case."

### CANADA ASLEEP.

So says Mr. A. H. Halder, Reuter's special correspondent here, according to The Province:—

"If British Columbia mines, active and prospective, were in South Africa, all the world would very soon hear of their worth, and all the capitalists of the world would be interested in them." Thus spoke Major Albert H. Halder, F.G.S., who was in Vancouver recently and left on the "Charmer" for Victoria, en route to the Klondike and other gold districts of the north. Major Halder is special correspondent for the Reuter's Telegram Company for the American and Canadian gold fields. He is a mining expert of

wide fame, and his correspondence to Reuter's will be of great interest and value to investors, and will go far towards fixing definite value of the new mineral areas of the far north. Major Halder has recently been much in South Africa, including Rhodesia, where he says there are many excellent mining properties, twenty or more of which could be made dividend producers within a year. Of course Rhodesia is doing everything possible to put the value of her mines prominently before the world, being in this respect the very antithesis of Canada, where the people do not seem to realize and certainly do not emphasize the immensity of their mineral resources. British Columbia shares this characteristic of the Dominion of which she is a part. "Indeed," said Major Halder, humorously, "it seems that the Canadians take their sleeping draught three times a day with meals."

### FINANCE.

London, Eng.—A steady flow of decent new industrial companies is at hand. With regard to Whiteley's, only 4 per cent. debentures will be issued to the general public, most likely the ordinary shares being monopolized by the vendor. Owen, a rival of Whiteley, will also float his business on the sea of limited liability. The William Wallace & Co., the famous "inexpensive art" furnishers, of Curtain road, is promised as an advocate for public subscription. After about eight months of negotiations, the combination amongst Bradford's wool-combing firms seems imminent. A committee has been formed to make arrangements for pooling the interests of about 20 leading houses. The textile machinery makers are also on the move in this direction.

The net profit earned by Liptons, Ltd., in its first year of trade as a limited liability company, is \$1,088,100, being two hundred thousand in excess of last year under the old regime. Shareholders receive 11 per cent. for the year, and \$225,000 is reserved. The other big industrial flotation of last year, the Fine Cotton Spinners and Doublers Association, Ltd., has also just finished its first year's trad-

ing. This is a combine of manufacturers. The net profits are \$1,495,675. Ordinary shareholders get a dividend of 8 per cent. and \$400,000 is reserved.

### Answers to Correspondents.

SAX, Eng.—1. We cannot recommend you to buy the shares you mention. The company you refer to is existent, but development work is practically suspended, we presume from want of funds. 3. For what we know the property is a good one.

W. TIPPER, Eng.—The Company you mention has its offices in Victoria, B. C. Secretary, J. T. Bethune, 30 Broad street, Victoria, B. C. The office of the other company is 48 East Columbia avenue, Rossland. 2. We do not know whether they are actually working. We think both are dead letters. Should advise you to hold.

BARNY, Eng.—Alberni, we believe, will come out on development. Yes, you will be safe in securing at the figure you mention.

M. M.—We advise you to hold 'til the autumn. You may sell a third and make a good thing on the remaining two-thirds.

W. JACKSON.—1. Shares in the companies you mention are good; hold them. 2. Yes, a London Company, with offices in Vancouver, B. C. 3. 3-16 above par.

THOS. SCOTT.—We have heard of several copper mines, but do not trace the one you refer to. You may possibly have quoted the title wrongly. 2. Yes, our copper prospects are good and need a little cash to develop. 3. 5 or £600.

A. Z.—No. Cannot recommend them. The whole thing is boomed and the parties not a desirable quantity.

CANADA.—1. About 2½c. 2. As a sample, yes. It is true Le Rois could have been purchased, some seven or eight years since, for 1½c. 3. We don't care to go into these matters; write the secretary. 4. The best and most practical man in the Province, and, we believe, thoroughly honest.