

"In other districts there has also been a certain amount of work done. Of these districts Portland Canal is worthy of mention on account of the tunnel driven by the Portland Canal Tunnels, Ltd., of Victoria, which has proceeded far enough to show that the work and money spent on this enterprise has been justified. The Omineca district, owing to rumors of a projected railway, has had considerable attention paid to it, in connection with hydraulic leases.

"There are not any new developments in the several coal fields of Northern British Columbia. Most of these districts will take considerable time to develop.

"Considering financial conditions, which are always a large factor in governing development work in mining areas, Northern British Columbia from a mining point of view is showing a steady improvement in its position, and it is a matter of satisfaction to be able to say that there is no doubt that eventually Prince Rupert will become one of the recognized mining centres of British Columbia."

U. S. BRASS MILLS ARE ABSORBING COPPER.

The extraordinary efforts being put forth by the brass mills of the United States to expedite deliveries on big orders received for account of foreign countries, have commenced to be reflected in clearances from American ports. Figures show that all previous records have been broken, particularly in the exportation of bars, plates and sheets.

Furthermore, those sceptics who have been unable to reconcile extremely heavy copper sales with small exports of the metal, even after making allowances for the fact that Germany has taken no copper since last August, will find partial answer in data concerning our exports for the month of March just at hand.

In that month exports of brass, including scrap and manufactured bars and plates, amounted to 11,772,727 lb., against 7,624,026 lb. in the preceding month and 3,363,089 lb. a year ago. During the nine months ended with March, covering the period to date, exportations of brass in all forms amounted to 35,747,415 lb., against 23,270,975 lb. in the same period of the preceding year.

The significance of the growth in these shipments was not so much in the total of 36,000,000 lb. as in the fact that an 18,000,000 lb. gain was recorded in the shipment of finished brass as bars, plates and sheets. Heretofore the principal form of brass exports has been as scrap fit only for remanufacture.

Comparative figures are appended:

	1915.	1914	
Brass exports (lb.)			
January.	5,216,028	2,776,661	
February.	8,624,026	2,547,250	
March.	11,772,727	3,363,089	
Nine months (lb.)—	1915.	1914.	1913.
Scrap and old . . .	12,795,716	19,108,419	13,503,640
Bars, plates etc.	22,952,699	4,162,556	5,792,543
Total.	35,747,415	23,270,975	19,296,183
*Total value . . .	\$8,727,397	\$5,691,280	\$6,330,264

*Includes articles made from brass in addition to scrap and bars.

As brass constitutes 75 per cent. copper and 25 per cent. spelter, the relation of these figures to the copper industry may be readily seen.

Exports of copper in March, according to the Government returns, amounted to 66,583,350 lb., against 96,519,947 lb. last year. Up to March 31 there had been exported in the fiscal period 508,369,337 lb., against 728,767,917 lb. In the period under review,

however, shipments to Germany had dropped to 22,-253,505 lb., whereas in the previous like period there had been exported to that country 239,919,180 lb. Consignments to Holland, chiefly for German consumption, also fell off heavily, the total being but 30,589,-939 lb., against 128,374,858 lb.

With brass mills doubling their capacity in this country and every one of these plants now running three 8-hour shifts, copper is being consumed as never before, and with enlarged capacity will soon be in position to handle a greater tonnage of the metal than ever before in our history. —Boston News Bureau.

The introduction of the tube mill in 1904 had much to do with the development of heavy stamps. Until that time fine crushing in the battery was necessary, in order to secure good recovery by amalgamation and cyaniding; but with the advent of the tube mill it became possible to use screens of coarser mesh, the limiting factor being the coarseness permissible for good amalgamation. It was obvious, therefore, that if battery amalgamation plates could be dispensed with, the only factor limiting coarse crushing would be the size of particles permissible in the tube-mill circuit. The removal of battery plates was therefore the next step toward attaining maximum stamp duties; and now in all the newest mills amalgamation is only carried on after tube milling. We thus find the function and scope of the stamp quite altered; it is now recognized as a crushing device pure and simple, hampered in capacity by tube-mill limitations only; so that, beginning with duties of a few tons from 900-lb. stamps when screens of 900 mesh were necessary, we are now obtaining duties of approximately 30 tons, with 9-mesh screens (0.27 in. aperture) from 2,000-lb. stamps. There is still, however, a considerable range in weight and duty of stamps on the Rand. Many older plants still retain battery plates, and are not provided with the same tube mill facilities as newer mills. This is because capital expenditure on old plants is not always warranted by the life of the mine and the financial position of the company.

Mills on the properties of other groups are obtaining stamp duties as high as 20 tons per day, from 2,000-lb. stamps, with 9-mesh and 4-mesh screens; but the highest duty yet recorded is that of the 2,000-lb. Nissen stamps at Modderfontein B., 29 tons through 9-mesh screen.

EXPLOSION-PROOF MOTORS.

Among its investigations dealing with the means of lessening such dangers as attend the use of electricity in the mining industries, the U. S. Bureau of Mines has undertaken one that has for its purpose the establishment of permissible explosion-proof motors for use in places where an electric spark or flash might ignite inflammable gases or dusts.

Technical Paper 101, "Permissible explosion-proof Electric Motors for Mines; Conditions and Requirements for Test and Approval," which has just been issued, mentions the details of construction that the bureau considers essential for satisfactory service, and describes tests of an explosion-proof mining machine motor and its accessories approved by the bureau. The author of the paper is H. H. Clark, electrical engineer.

The U. S. Bureau of Mines has applied the term "Explosion-proof" to motors constructed so as to prevent the ignition of gas surrounding the motor by any sparks, flashes or explosions of gas or of gas and coal dust that may occur within the motor casing.