

spilled, can be readily recovered, but in the three years' practice which have occurred since the installation of the plant occasion to use this has never arisen.

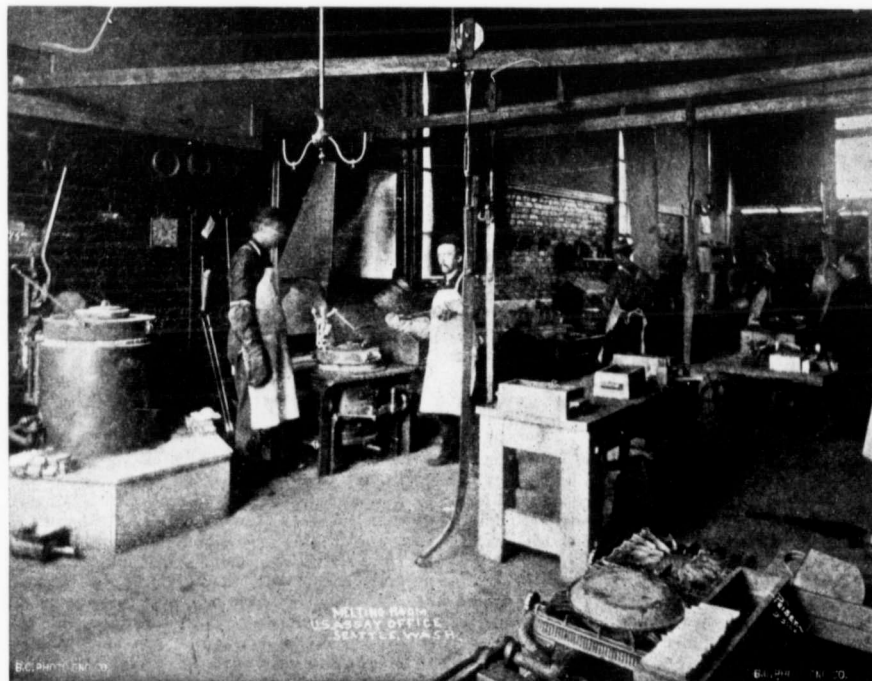
The fluxes used are nitre, borax, soda and potash and are so arranged that there is the very slightest possibility of oxygen gaining access to the gold through its glassy covering of borax and so causing loss by oxidation. That such oxidation does take place is to be seen by examination of the inside to the tops of the furnaces where the tint of "royal purple," a color only to be obtained by oxide of gold, can be seen showing that there has been a slight volatilization. The loss, however, is infinitesimal and can be recovered.

After the melting of the gold and the volatilization of the impurities the metal is poured off into moulds and allowed to cool. The slag is broken off, crushed in a

The assayers' room presents no features of unusual interest, being conducted in the usual manner.

The expense of shipping the bars of gold and silver to the United States mint is met by the Assay office which has a regular carpenter shop in the basement. The gold shipped away is invariably despatched in bars whose value is from \$20,000 to \$35,000. The largest bar produced seldom exceeds 1500 ounces as it is found that larger bars are difficult of handling. The smaller bars necessarily produced by the smelting of the smaller deposits are remelted after a certain period and formed into a brick of the usual shipping size.

Quite a large stock of gold is always on hand in the Assay office strong room where there was stored on September 10, the day of the visit of the representative of the MINING RECORD, upwards of one hundred bricks



MELTING ROOM, U. S. ASSAY OFFICE, SEATTLE, WASH.

hand crusher and panned for any gold contained in it. The resultant dust and small nuggets are placed in an envelope and accompany the brick whose size depends upon the amount of gold sent in by the depositor. The gold is then reweighed by the chief clerk and two pieces cut off the bricks from the front upper right hand and back lower left-hand corners of the brick and each sent to the assayers. Two separate assays of these must be made and must agree within 2-10 of one per cent.

After the crushing and panning of the slag the remainder which still contains a slight trace of precious metal is placed within a binn in the basement and is sold to the highest bidder once every three months.

It will be seen that the whole process is very similar to that conducted in Vancouver, great care is taken in the entire method; even the very dust of the melting room being gathered up and put through a muffle furnace.

of all sizes whose total value was considerably over three quarters of a million dollars. This was the product of three days work; the last shipment east being made on September 7. This amount of gold was stated to be the average amount always lying in the strong room.

THE GOLDEN MINING DIVISION OF EAST KOOTENAY, B. C.

By JAMES BRADY, M. E., ETC.

THIS Mining Division comprises the northern portion of the district of East Kootenay, and includes the country on either side of the Columbia river from the summit to the Rocky mountains on the north-east, to the summit of the Selkirk range in the south-