

when again roasted and smelted produces black copper, which, being refined on the small hearth to *gahr* copper, is sold in Christiania or Hamburg.

The cobalt mine of Skuterud occurs on a fahlband, which has been traced about five miles, the rock being a quartzose mica schist. Layers of impregnated Lornblende and actinolite schists are also of frequent occurrence. The rocks run north and south, and have a dip nearly vertical; sometimes inclined slightly to the east, sometimes to the west. In these rocks the following metallic minerals have been observed; magnetic, iron and copper pyrites, characterising the fahlband; cobalt glance, cobaltine, cobaltiferous mispickel, magnetic iron ore, graphite, and molybdenite are found more sparingly, impregnating the fahlband at certain places. These latter minerals do not occur in veins, but they are sometimes associated with quartz. They seem to form rather a succession of small layers, running parallel with the foliation of the rock. They are by no means generally distributed through the fahlband, and it has only been by taking out the whole mass of this, that the cobaltiferous portions have been got at hitherto. The fahlband itself has a breadth of from one to five fathoms, and it seems, toward the north, to be divided into two different bands, separated from each other by a large mass of dead rock. The mines were discovered in 1772, and have since been uninterruptedly worked, notwithstanding an extraordinary decrease in the value of the products. The treatment of the ores, as at present pursued, is as follows. The rocks are broken and sorted into rich and common ores. In the treatment of the smalls by means of a fall wash-work, washed ore of a very small size is produced, besides the above sorts. The whole of this ore is so finely disseminated, that it can only be advantageously treated by stamping and washing. The stamping mill is of the construction used in Saxony. The resulting stamp meal and slimes are concentrated first on percussion and then on sleeping tables. The rich ore treated in this manner yields per ton 86½ lbs. of *schlich*, containing 17.96 lbs. metallic cobalt. The common ore yields per ton 29 lbs. of *schlich*, containing 1.88 lbs. of cobalt. The poorer *schlichs* are further concentrated by being partly roasted, and smelted with an addition of some limestone and slag. The resulting slag is set aside. The regulus (sulpharseniurets of iron, cobalt and copper,) containing about 22 per cent metallic