

It only remains for me now to give you the plans and means of working the auriferous beds.

As I have described the several different states in which the gold is found, I am also obliged to employ different systems of working according to the different localities.

I shall divide the works into—

1. Excavation.
2. Washing and picking upon the spot.
3. Concentration of the auriferous substances.
4. Separation of the gold.

1. Excavation will be divided into two categories ; excavation by means of the shovel and pickaxe, and excavation by means of powder.

2. Washing and picking on the spot.

1. Washing by means of pumps which will obviate the necessity of carting useless substances, and prevent the incumbrance of them around the machines for the concentration of the auriferous substances.

2. Picking of the stones which contain mineral substances, such as gold, platina, silver, lead and pyrites.

3. Concentration of the substance.

Reducing the sand remaining from the washing and containing gold, to its perfect purity.

Afterwards the grinding and the separation of the mineral substances from the rocks which have been picked.

4. Separation of the gold.

By means of water, based upon the nature of the density, gold and platina, the sand to be separated for the purpose of being melted or sold in its natural state.

Gold pyrites,

Silver lead,

to be set apart for the purpose of being melted or sold in their natural state.

#### *Excavation.*

This mode of operation is so generally known that it is useless for me to give a description of it.

#### *Washing and Separation.*

Washing upon the spot is requisite, particularly where the schist is, the gold being between the cristalline lamina and the lines of cristallisation, therefore by breaking the lamina the small grains of gold are found sticking to the aluminous matter produced by the decomposition of the schist. The larger grains of gold become detached and fall into the cavities which are made by a separation of part of the stratification, and which cause a division in the lower part. As the ground always naturally contains water which constantly fills up the excavation, the pumps used to remove the water from the spot where the work is carried on, should also be used for washing, which will do away with the necessity of scraping and washing each separate piece of schist and other stone, and will also facilitate the separation of the different mineral products,