

To crush 40 tons of ore I selected 15 stamps of 900 lbs. each ; this not only will furnish me the desired amount, but will also solve the second consideration—as well as it is possible to be done with stamps ; a uniform and at the same time coarse-crushing, in using 30 meshes phosphor-bronze wire cloth.

The mortars of the stamps have to be provided with copper plates for retaining the coarse and as much as possible of the fine gold ; but for the amalgamation of that part of fine gold going out of the mortar with the slimes, I used Krupp's improved amalgamating tables.

To increase the capacity and enable the concentrating tables to do better and cleaner work, I put Spitzluten or hydraulic classifiers in front of the former, and to separate the components of the ore I used Bilharz percussion table. Further to concentrate also as closely as possible, I added two buddles, and put in a number of settling pits to save every valuable mineral that should escape from the tables and spitz-kasten.

I had further in view that the ore should be handled as little as possible, from the time that it is dumped into the bin which feeds the crusher.

The accompanying sketch indicates the construction of the mill sufficiently. I might mention only that the crushing part of the works is separated from the building to avoid a rattling and shaking of the whole structure.

I can also pass over an exhaustive detailed description of the arrangement of the machines, as this is readily recognized. Instead of this let us follow the onward movement of the ore, as it passes from machine to machine, until it leaves the mill either as ready products or as tailings.

The ore after being dumped into the upper bin is fed automatically into the crusher, by a very ingenious arrangement, of which O. Luhrig, in Dresden, possesses the right of introduction. This feeder consists of a shoe which moves the ore from below the pointed end of the bin gradually forward on a grizzly, which again moves and feeds that part of the ore coarser than the space between the staves, slowly and regularly into the crusher. The automatic action of this shoe, which can be regulated at will, allows of a reduction of over half of the attendance where several crushers are in use. The smaller parts of the ore which are separated by the grizzly overhead and by the one below the bin relieves