

the separated metallic minerals, and middlings are handled and carried on a tramway to the store-rooms or the latter back to the machines. The muddy slimes, which really constitute the tailings and come from the Spitz-kasten, represent no larger volume than perhaps a quarter of a pound in a cubic yard of water. But should they still have a certain value they are directed into settling pits as I showed in the plan, and also those yet recovered. We see these tailings do not consist, as in the American system, of an immense bulk, but of such a small amount that their after-treatment will cost only a trifle. Fifty per cent. of the water which comes from the concentrators can be used right over again without intermitting settling tanks.

By the arrangement of this mill manual labor is reduced to a minimum, consequently also the expenses. A few men only are necessary to watch the work of the machines, and the number of those carrying the products to the dryers, or store-rooms, depends on the proportion of the metallic minerals in the ore. I could have made the whole operation in this mill automatic, by flushing the ready products through sluices in the storing room, where they had to be unwatered by a suitable arrangement. Also the middlings could have been fed automatically on the reserve tables. In a country like ours, where water is plentiful almost everywhere, it would have saved a considerable expense, but I omitted here and showed the hauling of the products by a tram-road.

Gentlemen, before concluding this paper, permit me to occupy your attention for a few minutes longer for the purpose of describing to you an amalgamator, which may interest you not only through its ingenuity, but also on account of its efficiency, because where it is in use it has proved to amalgamate from 20 to 40 per cent more gold from the slimes than any other apparatus so far in practical use. It is known as the Laszlo amalgamator, and consists of an iron dish contracted at the bottom. On top of it, fastened to a vertical shaft, rotates free of the former an iron casting with a hopper and open circular rings, three on the larger, and two on the smaller apparatus. Between these stand two, respectively, one iron ring, and at the lower ends are fastened a number of scrapers. When the apparatus are in operation and the ore fed into the hopper the little scrapers move the pulp very closely and in ever-growing circles over the quicksilver toward the periphery and bring so the free gold particles in contact with the former. Through the frequent revol-

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