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sible. Further, we reduce the reduction expenses considerably, first to the smaller bulk, second through the diminishing of the percentage of blende. I have seen in the veins, and have had in my laboratory very high grade of gold ores, having over 4 per cent. zinc, equal to about 6 per cent. blende, which concentrated to 14 to 16 per cent. zinc, for which we had to pay \$3 and \$4 extra reduction expenses, allowing 8 per cent and taking the plus units at 50 cents per unit. Do you not consider this a big item? Yes, I had lately average samples from a very rich vein which contained over 9 per cent. zinc, and still more lead, and the gold was only in the pyrites. And if we can increase the percentage of the copper in our gold ores, by getting rid as much as possible of the two former minerals, we increase also our receipts therefrom, being \$1 per unit. Is this not also a matter of serious consideration? And everyone of us knows how eagerly the smelters are looking for argentiferous galena for flux; would not this mineral find a ready market? Surely it would, and would also contribute to the paying of expenses. And what is true of charging the jigs with classified pulp is true also to all kinds of vanners. Now in fact the jigs act, I might say, on the same principle as the percussion table above described, they separate also by the difference of specific gravity of the gangue and different minerals.

The treatment of the fine slimes, which is so often considered superfluous in our mills, is an essential feature in the German system, and indeed it must be an annoying fact to the millman to know his tailings assay high in gold, silver or any other metal. With the buddles shown here this is greatly avoided, as they concentrate very close, and the tailings show hardly enough minerals to be worth re-handling; they take the place of the blankets in the California mills. This apparatus furnishes the products similar to the percussion tables, the headings are washed into separate boxes, from those of the middlings which are re-washed on the same tables. These machines are built of iron, the upper part of the table covered by a layer of cement, inclining towards the periphery. The slimes are fed against a cone, or ring in the centre of the buddle, and washed by a number of water jets.

Now we have seen that from the time the slimes leave the mortars of the stamps, they flow continuously from apparatus to apparatus, as long as they do not form a ready product, even the clean sands from the vanners and buddles are washed through sluices outside the mill. Only