

boxes, from the stamps to the mills, are also lined with amalgamated copper. Beyond the riffle-boards the tailings pass by launders to

Round Buddles in an adjacent building, 24 by 45 feet, at a lower level. The form of this apparatus here adopted is that devised by Hundt, and introduced first in England and this country by Messrs. Phillips and Darlington, the well-known mining and consulting engineers, of London. A description of this buddle may be found in the *Mining and Smelting Magazine*, Vol. I. The object of this apparatus is to concentrate the pyrites by washing it free of the lighter waste with which it is associated. A circular, funnel-shaped floor, eighteen feet in diameter, is prepared with a fall to the centre of about 5° , ($5\frac{1}{2}$ inches in 8 feet.) The ore-stuff is distributed upon the outer edge by four arms, having spouts at their extremities for the discharge of the stream of ore and water, which enters at the center in a circular launder surrounding the shaft, and of which the four arms are but extensions; canvas wipers are hung from the arms to aid in the even distribution of the stuff; and when the due proportions of water, ore-stuff and velocity of rotation are observed, it is said this apparatus effects a sufficiently close separation of the heavy sulphurets from the quartz waste. The valuable portion, of course, remains near the head or outer edge of the buddle, while the waste is distributed lower down the slope, and the excess of water escapes at the open center. The English Company at Strawberry Hill in Tangier, have erected one of these buddles, and there I saw the result of an experiment of two or three days' running of the apparatus, which could hardly be esteemed a fair trial, as the mill had but just commenced operations. Such as it was, however, the result disappointed me. The concentration was very imperfect, and the separation of the pyrites quite unsatisfactory. I see, however, no reason why the apparatus should not do as good work as can be obtained in ore-dressing on this system, which, however, I do not think well adapted to this purpose.

The house has capacity for two such buddles: one only has,