

frequent derangements of the bedstones and runners.⁹⁴

Rivafinoli felt that the Mexican arrastra (figure 11), used for grinding the ore, was an improvement over the Chilean mill.⁹⁵ He, therefore, removed the Chilean mills installed earlier by Bissel and Barker and installed arrastra mills. The crushing bed of the arrastra was composed of a circle of flat rocks over which one or more heavy boulders were dragged. This was surrounded by a coping wall which held the ore material that was to be broken and ground up. The drag boulders were suspended by hide ropes or chains from each end of a horizontal arm which in turn was supported by a central vertical shaft.⁹⁶ The arrastra was simple, cheap, trouble free, and highly efficient when compared to the Chilean mill. The only problem was its extreme slowness.⁹⁷

At the St. Catherine Mill, 12 arrastras were powered by water and 6 more were run by steam engines (figure 12) which had been installed by Rivafinoli.⁹⁸ The millhouse at the St. Catherine was perhaps the most advanced gold-milling operation of its day in the entire nation.

The exact amount of gold extracted from the Rudisill while Rivafinoli operated it is not known. However, it was reported that during one month of mining more than 850 ounces of gold were recovered⁹⁹ and that for another three-month period ending September 1831, the mine produced approximately 3,800 ounces of gold.¹⁰⁰ Official mint records did not record total production. Col. John H. Wheeler, first superintendent of the Branch Mint at Charlotte (1837 to 1841) relates that "many of the (southern gold) mines, in their most productive state, belonged to foreigners, or were leased by them; the agents, or managers,

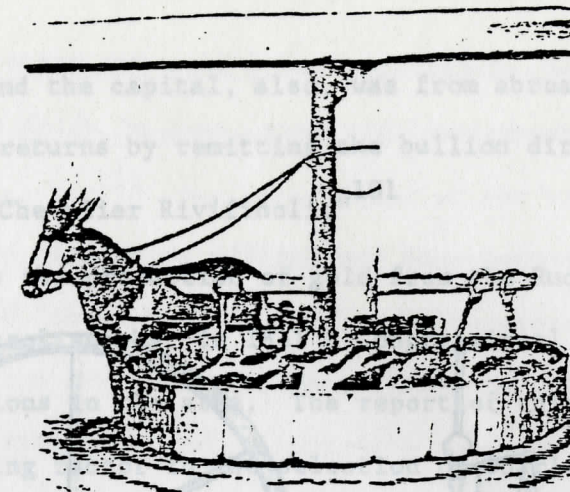


Figure 11. Two examples of the Mexican arrastra (circa 1850), a type of mill used to crush gold ore from the Rudisill lode mines during the 1830's. (Top view from H. and L. Sloane, A Pictorial History of American Mining [N.Y., N.Y.: Crown Publishers, Inc., 1970], 25.) (Bottom view from Thomas A. Rickard, Journeys of Observation, 1907.)