

treatments were being tried.

Dr. Carl Adolph Thies of Germany came to the Charlotte area at the beginning of the Civil War at the invitation of the Confederate Government to assist with "the development of its lead and copper resources".¹⁸⁸ At the close of the war, he stayed in the United States to work in the gold mining industry. In 1879 Dr. Thies erected a plant at the Phoenix mine in Cabarrus County, North Carolina to treat pyritic (sulfide) gold ore by chlorination. During his work at the Phoenix mine, Thies greatly improved the process. Later he successfully operated the famous Haile gold mine in Lancaster County, South Carolina using his improved chlorination process that is now universally known as the "Thies process".

The leaching of gold from sulfide ores by the use of cyanide was tried on some ores from the Gold Hill mines in 1892 and at some other southern gold mines in the 1890's, but results were not very satisfactory.¹⁸⁹ There is no record of cyanide being used at any of the gold mines in the Charlotte area at this time although it was used in gold recovery at the Howie mine in Union County during the 1930's.

"The Designole process, which consisted of treating the roasted ore with corrosive sublimate in iron vessels, was only moderately successful. . . It was worked for a time, during 1882-83, at a custom plant near (4 miles south of) Charlotte, N. C...."¹⁹⁰

A number of custom mills and gold ore refineries had been established at one time or another in the Charlotte Area. Humphry Bissel's mill on Sugar (Irwin) Creek was one of the first. Mint records indicate that the New York and North Carolina Reduction Works were in operation at Charlotte in 1880, and two smelting

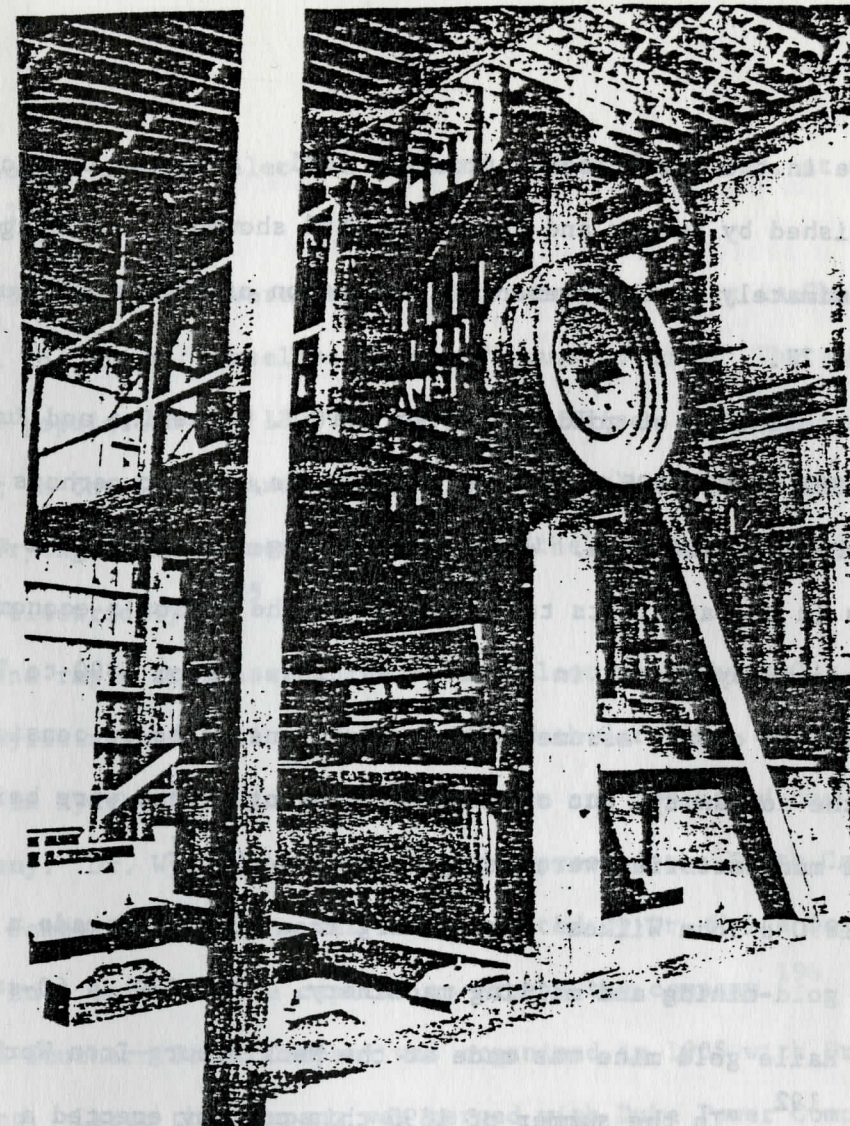


Figure 22. Mecklenburg Iron Works Stamp Mill (circa 1899) with Close-up View of Stamps (bottom). (Photo taken at Reed Gold Mine by Henry M Singletary, 1978.)