The Crumwold Furnace at Emmaus was built by Robert Coleman and put in operation on October 10, 1872. It was rebuilt in 1879-80 and remodeled in 1890. In 1898 the property was sold to the Reading Iron Company, which operated it until 1923. It was dismantled in 1927-1928.

Sheet III of Topographic Map of the Durham and Reading Hills, published by the Second Geological Survey of Pennsylvania in 1883, shows a furnace about half a mile east of Vera Cruz Station at or near the place where a tunnel was driven into the hill to cut the magnetite ore bodies. Residents familiar with the region since 1865 are positive that there never was a furnace there. This seems probable, as no trace could be found of any ruins or of any slag.

These various furnaces were supplied mainly or entirely by local iron mines at the beginning of their operations. Most of them survived several years after all local mining had ceased. They were at times highly successful and found a ready market for the pig iron. Their doom was sealed, however, when in the early 1920s the larger iron and steel companies of Bethlehem, Reading, Philadelphia, and elsewhere increased the capacity of their furnaces to supply all their own requirements for pig iron and, during slack periods, to sell pig iron to others. The local furnaces could not compete and, one after another, all were closed and scrapped. Naturally the Bethlehem Steel Co. was mainly responsible for the closing of local furnaces in Lehigh County.

Numerous slag heaps, some very large, now furnish almost the sole visible evidence of the former existence of these furnaces. In recent years some of the slag has been utilized for ballast and concrete aggregate. Near Glendon, Northampton County, mineral wool was made from old slag, but no attempts have been made to utilize any of the Lehigh County slag for this purpose. At times the question of its adaptability for the manufacture of portland cement has been raised. It is doubtful whether any of the slags in this region are suitable for this purpose because of their high magnesium content. This is due to the use of local dolomitic limestones for flux.

**EARLY IRON MINES**

In the "History of Lehigh County, Pennsylvania," by Roberts et al., published in 1914, descriptions are given of the early iron mines in different parts of the county. Two of these descriptions are here quoted:

Iron ore was first found in North Whitehall about 1800, upon land originally owned by the Scheurers and the Woodrings, where Ironton now stands. It lay in lumps upon the surface, some large bowlders weighing several tons, and found in such profusion that its presence was a serious impediment to the prosecution of agriculture. Some of this surface ore was taken to the Richard and Regent Furnace at Hamburg and exchanged for pig-iron; some was turned into nails by hand at the forge of Adam Scheurer; some loaded upon four horse teams and sold at twenty-five or fifty cents a load; some taken to Mauch Chunk with teams and exchanged for equal weight of coal. Between 1812 and 1826 the ore was taken to the old David Helmbach forge at Hampton, in Milford township, and to Clarissa Furnace near Little Gap, on the Aquashicola creek, in Lower Towamensing township. About 1826 the Lehigh Furnace at the base of the Blue mountains