came upon a bright zinc alloy in the narrow wall-cracks of a furnace which had been used for smelting lead and copper ores. Some zinc ore had apparently been mixed with the others to produce brass. Paracelsus, the celebrated alchemist and a contemporary of Agricola, was the first person to give the name "zinck" to the metal. Before, zinc had been called spiauter, spialter or speltrum, from which comes the name for commercial slab zinc used until recently--spelter. It was probably being imported by Dutch and Portuguese merchants from China, where it had been used for centuries to make coins and mirrors.

About 1740 Dr. Isaac Lawson, who learned the smelting process in China, opened a zinc refinery in England. By 1850 the industry had spread to the rest of Europe, but not until the close of the Civil War did intensive zinc refining begin in the United States. In a very few years, however, this country became the largest producer of zinc in the world.

The early story of zinc in America is largely the story of zinc in New Jersey. The 17th century settlers who dug for valuable minerals in the Sussex County hills knew nothing of zinc ores, nor did the prospectors who followed. Iron or copper is what they sought. About 1774 one of the early iron masters of America, William Alexander (Lord Stirling), could not identify the Sussex County zinc ore. He shipped samples to England for examination, where experts declared the strange and complex ore unsuitable for commercial purposes. Stirling abandoned his claim.

In 1810 Dr. Samuel Fowler and John Odell Ford purchased 4,000 acres of land in what is now Franklin, two miles from Ogdensburg, for less than three dollars an acre. They, too, intended to exploit magnetite, a magnetic iron ore, which they believed was on the property. A few years later the doctor bought out his partner, married the heiress to the nearby Ogden lands, and thus came into control of a locality rich in metals. Fowler toiled for years with the complex ores but had little success. He was working one of the few deposits in the world which contained approximately 100 different minerals, many unknown then and some found nowhere else even today. From the research done by Dr. Fowler and many American and foreign metallurgists whom he had interested came the groundwork for the zinc industry in the United States.

About 1830 Dr. Fowler invented a process, since lost, for producing bluish-white zinc oxide powder. From the powder he made a paint which he used on his house. The paint was not very good because of poor pigments, but it increased interest in the possibilities of using zinc as a base. A zinc base makes paint last longer.

There was a widespread demand for metallic zinc to make zinc oxide. But New Jersey mining companies found it impossible to refine zinc profitably in the small amounts demanded by the paint industries.

This important obstacle still remained when the federal government brought workmen from Belgium in 1838 to make the zinc for the first standard set of brass weights and measures. Zinc ore from Franklin was used. Eleven years later the Sussex Zinc Co. opened a plant in Newark for manufacturing zinc tableware and other articles. The newspapers of the day believed that the zinc-plated knives and forks would soon replace silver.

Meanwhile chemists and metallurgists were still looking for a good, cheap way to make zinc oxide. But while scientists worked overtime in their laboratories, a furnace tender in a Newark chemical factory accidentally hit on a method for making the compound. One day his furnace cracked. To close the hole he put an iron grate across it and covered it with a mixture of coal and pieces of zinc ore which he picked up in the yard of the zinc company next door. In a short time a cloud of white powder was rising from the grate. He carried his discovery to Samuel Wetherill and Samuel T. Jones of the zinc company, and be-