Colebrook's Involvement With the Iron Industry 1770-1810

Iron has been extracted from ore since prehistoric times. The earliest, of course, would have been metal residue found in the ashes of a fire that had burned in an enclosure consisting of rocks containing iron oxide. The carbon in the burning wood combined with the iron oxide and formed a metal that looked entirely different from the ore.

Unbeknownst to the fire tender, two processes were taking place in his primitive campfire. The burning charcoal, which extracted the iron would inevitably carbonize some lumps of it, sometimes turning it into brittle and relatively useless cast iron, and some only far enough to convert it to steel, strong and very useful in its unhardened state. It is therefore almost certain that much of the earliest iron was in fact steel.

There must have been a very long time between the discovery that this cold material from the campfire could be beaten into shapes after it had cooled; until the time it was discovered that it was much easier to beat it into shape while hot.

The next step would seem to be the discovery that if this freshly beaten shape were suddenly cooled, it became hard and brittle. That knowledge would be taken to the next level by the discovery that gently re-heating this hard, brittle object would leave it hard, but remove the brittleness.

Up until the 14th century in Europe, when a deposit of iron was discovered, the local smith converted it with the charcoal of the surrounding forest into wrought iron. Many farmers had their one little forges or smithies to supply iron for their tools.

This was not a very efficient method, but it was simple, and there seemed to be an endless supply of trees to convert into charcoal. As time went on and the forests became depleted, the simple, but wasteful methods were replaced by more complex and economic ones. It all began unintentionally in the attempt to save fuel and labor, by increasing the size and especially the height of the forge, as well as by driving the bellows by means of waterpower.

It was the use of water power that provided pressure strong enough to force the air up through the longer column of ore and fuel, thus enabling the height of the forge to increase, thereby enlarging the scale of operations and save costly fuel and labor.

At some point, these forges evolved so that they could be termed blast furnaces that have one function – to provide pig iron in bars, as opposed to the forges, which could produce a finished, marketable product.

The evolution of the iron and steel industry in northwestern Connecticut began at this period. There were operable blast furnaces in New England, and for a period of time from the 1730s to the 1780s, both the blast furnace and the bloomery forge extracted iron.

Richard Smith's forge in Robertsville was a bloomery forge. There were compelling reasons this forge was built where it was. First, it was located down stream from a rock outcrop that created a vertical drop of 12.7 feet. The stream (Still River) was fed in part by the outflow from Long Pond in Winchester, now known as Highland Lake. This body of water, especially after the construction of a four-foot high dam in1772, guaranteed a steady flow of water during drought conditions.

Secondly, it was built in an unincorporated township, one that was not to become an organized town until 1779, meaning that no taxes and other types of paperwork had to be dealt with, and third, it was on a more or less direct route between the furnace in

Salisbury and Hartford. The majority of the output of Robertsville was transported to Hartford for sale or reshipment; the products manufactured at Salisbury were mainly sold at Red Hook, a port on the Hudson River.

There is some confusion about the active involvement between the Salisbury furnace and Smith's forge. There have been persistent stories about Salisbury ore being transported to Colebrook in saddlebags. We had come to the conclusion that these tales were completely erroneous, but Walt Landgraf uncovered a document dated 1781 containing a plea from Jacob Ogden to the Connecticut General Assembly for assistance in immediately rebuilding the fire-destroyed forge. His argument was that everyone knew the important role the forge had played during the War of Independence, and in addition, he had a supply of Salisbury ore that he did not want to go to waste. Our feeling is that ore may have been transported in oxcarts (not saddlebags) at the late date of 1781, but not earlier for the following reasons: Ore Hill ore produced between 2000-2500 tons of iron for each 5000 tons of ore (less than 50%). The cost of transportation was .15¢ to .20¢ per ton per mile. Total production costs of Connecticut furnaces in the Salisbury area were $4.00 - $5.00 per ton. It is approximately 27 miles from Ore Hill to the site of the Robertsville forge. I think we can safely say that during the early years of the war at least, no Salisbury ore came to Smith's forge.

Another rumor still bandied about is that some of the chain that was deployed across the Hudson River in the vicinity of West Point was manufactured in the Robertsville forge.

Here are the circumstances surrounding those chains: The American military strategists ordered heavy iron chains to be deployed across the Hudson to prevent British warships from ascending the river to threaten Albany and the whole of the Mohawk and Hudson River Valleys. These chains, consisting of 18" links, were to block access to the upper Hudson at West Point and at Fort Montgomery. Most of the Fort Montgomery chain (1500 feet out of a total of 1800 feet) had been forged for use on the Sorel River (since re-named the Richelieu River that flows from Lake Champlain to the St. Lawrence River) from Ticonderoga iron at that location. Robert Livingston furnished the additional 300 feet, and much of the work was done at Poughkeepsie, but it is quite possible that part, if not all of the iron came from Livingston's Ancram, New York furnace. Salisbury had nothing to do with the West Point chain, for the original contract with the firm of Noble, Townsend & Co.. on file at the N. Y. State library in Albany, required that the chain be made of Stirling Mine iron. It was forged at the Stirling furnace. At the time, this was in Bergen County, New Jersey, but now, because of a boundary change, is in New York State. The chain was shipped to West Point in sections, and assembled there.

C.F. Stotts, who for so many years was Colebrook Town Clerk, storekeeper and State Representative from Colebrook, had one of those links. He also had a three-pound cannon ball that was alleged to have been made in Robertsville, but alas!, once again we struck out; neither was the cannon ball made in town, it turned out that the owners of the forge had purchased a load of unused balls after the War of Independence was over for use as scrap, but never got around to using them. A classic case of misinterpreting the facts; here is an old forge, they made goods for the Continental Army, here is a pile of cannon balls: obviously the were made here.

It's a wonder that any links of chain or cannon balls survived, because for many years following the War of Independence, with our currency virtually worthless, iron was

given a value of $4.44 for 100 pounds, and was for all intents and purposes, the same as money.

The cannon balls that were found at the Robertsville forge caused quite a stir among the students of the three schoolhouses in town when they were uncovered by students from the Forge School during 1944 or 45. Each school had conducted scrap drives throughout the course of the war, with the school achieving the greatest weight promised a reward. (It was an 8 mm projector, if memory serves me.) The Center School had built up what we felt was an insurmountable lead when members of the Forge School stumbled across that hoard. From that point on, there was no doubt who the champion was going to be.

It is strange to consider that scrap collected by school children for the defense of the nation during WWII was intended as ammunition to defend us 163 years earlier.

The Rockwells built their first iron works in 1793, although teamster's invoices from 1768 indicate that Salisbury iron was being delivered to Colebrook Center. Apparently the 1793 date reflects the year the Rockwells leased (for 999 years) land from the town for a site on which they built a larger facility. The first location was behind Samuel Rockwell's house, now 561 Colebrook Road. To this day, land titles refer to this land as "the iron lot", but there is nothing to indicate any structure was ever erected there. Eventually there was in Colebrook Center two forges and one reverberatory furnace. By 1803 these had all ceased operations

The Rockwells produced a superior grade of steel in the reverberatory furnace, attested to by the contract they had with the U. S. Armory in Springfield, Massachusetts that manufactured rifles for the U. S. Government. Only the finest quality steel could be used for this purpose. These bars of steel were 2' wide, ¾" thick and about 15' long. The reverberatory oven was 15' long by 5' by 5'.

Rounding out Colebrook's involvement with the iron industry was the forge built by the Phelps family on Brummagem Brook on the Norfolk-Colebrook town line; this was in operation from 1788 – 1807.

During the first decade of the 19th century, as our international trade took shape, high grade steel was able to be imported from Sweden and Germany cheaper than our domestic product, thus sounding the death-knell for Colebrook's bloomery forges.