Robert Erskine’s letters of 1770 about the British iron and steel industry

Carol Siri Johnson

ABSTRACT: In 1770, the engineer Robert Erskine toured England, Wales and Scotland to collect knowledge about the iron industry. During this tour, he wrote a series of letters detailing the materials, processes and products that he saw. He described blast furnaces, blowing engines, forges, foundries and casting, and steel works. Erskine brought these letters with him to America in 1771, where he had been employed to manage an ironworks begun by Peter Hasenclever in 1764. The introduction includes a brief biography of Erskine and a description of his tour and correspondence and is followed by a transcription of the letters.

Background

Robert Erskine (1735–1780) was the only surviving child of the second wife of Ralph Erskine (1686–1752), a member of the well-known Secessionist Erskine family from Dunfermline, Scotland (Lachman 2004). His father was a poet as well as a minister and his mother was the daughter of a Writer to the Signet (an association of Scottish lawyers), so he came from a literate background. This is fortunate for us, since he used his literary skills to describe, as accurately as possible, the iron and steel industries in England, Scotland and Wales in 1770. As the fifth son, he did not enter the ministry but instead attended the University of Edinburgh to study engineering. He used his scientific and engineering skills as a consultant and inventor: his major patented inventions were a continual stream pump for de-watering ships and a Platometer to find latitude at sea. However, unfortunately for him and fortunately for us, he also attempted to go into business. His business efforts failed, leaving him with a burden of debt and requiring him to move into a new field, the iron and steel industry.

The American Iron Company had been started by Peter Hasenclever in New Jersey in 1764 but Hasenclever overspent and returned to Germany. Erskine was hired to take his place and manage the failing ironworks. This was the impetus for the letters, as Erskine knew little about the industry. He took a two-month tour through Wales, England and Scotland to observe iron and steel works, and he wrote down everything he saw. Erskine mailed these letters to his employer in London, who then returned them to him prior to his departure.

Erskine sailed for America a few months after being elected a Fellow of the Royal Society. The American Iron Company, built between 1764 and 1767, consisted of four ironworks villages, each with a blast furnace, forges with multiple hearths, stamping mills, coal houses, blacksmiths’ shops, houses, saw mills, reservoirs, ponds, bridges and roads (Hasenclever 1773, 1970 edn, 6). Not only had Hasenclever overspent, but he had lost control of his German workers who realized that they could make higher wages elsewhere in America. Erskine did his best to fulfil his obligations to the American Iron Company until 1777, when he became the Surveyor General to the American Army at the request of General George Washington. Thereafter, Erskine travelled the north-eastern United States, collecting and making maps, until his death from a fever in 1780. His earlier