

ALABAMA'S FIRST IRON FURNACE

By Richard C. Sheridan

As the pioneers moved into North Alabama, they sought to bring civilization to the wilderness and make for themselves as comfortable a life as possible. Far behind them were the Eastern mills and factories, and few early settlers could afford to send back to the East to buy even necessities. They had to use what they could find or make in their new homeland. Close behind the frontiersmen came the pioneer blacksmiths, gun makers, millers, tanners, iron masters, and all the other craftsmen necessary to serve a civilized society.

In 1815 the first settlers arrived in the areas that later became Tuscumbia and Russellville, Alabama. One of the Tuscumbia settlers was Hugh Finley, who soon opened the town's first blacksmith shop. Early in 1817, U. S. Commissioner William Barnett traveled throughout North Alabama and made a survey of its resources for the War Department. He noted that several hundred settlers were living on lands recently ceded to the United States by the Chickasaw Indians, although almost none of this land had been sold or even surveyed. Barnett also reported that a large body of rich iron ore was located near the head of Caney Creek, and that Shoal Creek abounded in iron ore.¹

Thus, it is not surprising that a Pennsylvania iron master named Joseph Heslip was attracted to the region and soon built Alabama's first iron furnace in order to supply the needs of this rapidly developing community. The furnace was located on Cedar Creek about three miles southwest of Russellville. Unfortunately, few authentic facts are available concerning the construction and operation of the furnace. Even the date of construction is uncertain; the date is variously given as 1815, 1818, and 1820, but most historians accept 1818 as the more likely date. The pioneer furnace was originally called the Alabama Iron Works but it is known today as Old Cedar Creek Furnace. The site was placed on the National Register of Historic Places in 1977.²

Joseph Heslip was born about 1784 in Sadsbury Township, Chester County, Pennsylvania, the son of Thomas Heslip, a Revolutionary War captain. The father was evidently an engineer, for, in his will, he left to his son Joseph, among other things, "my surveying instruments, books and tables thereunto belonging." In 1809, Joseph became a partner with his brother-in-law Bernard Van Leer and Anthony W. Van Leer in an iron works in Pennsylvania. In October 1812, Heslip left Pennsylvania with his wife Susan Kendig and their young son and moved to West Tennessee where he was connected with the Red River Iron Works and the Grey Iron Works. According to a family legend, Heslip made cannon balls for General Andrew Jackson during the War of 1812.³

Joseph Heslip then moved to Alabama and settled briefly on the south side of the Tennessee River near Florence. After prospecting the area for iron, Heslip probably obtained squatter rights on a tract of land located on Cedar Creek where the creek made a horseshoe bend. On November 11, 1818, he bought several hundred acres of land located in Township 7, Range 12 West, from the Government for two dollars per acre.⁴

Heslip established a partnership with two prominent Tennesseans as early as March 1819. His partners were Thomas Ramsey, of Nashville, and Jenkin Whiteside, of Davidson County, Tennessee.⁵ Ramsey was a "prominent and substantial merchant"

who operated a store near the public square in Nashville.⁶ Whiteside, the eldest son of Dr. Thomas Whiteside, a Revolutionary War veteran, was born at Lancaster, Pennsylvania, in 1782. He moved to Tennessee, settled at Nashville, and became a large land speculator and prominent lawyer. From 1809 to 1811, he served as a United States senator from Tennessee.

Joseph Heslip & Company erected its iron works in the SE 1/2 of Section 9 on the north side of Cedar Creek about one mile northwest of Rockwood. It was located at the west or lower end of a loop in the creek, which has a length of about a mile as compared with a distance of only 600 feet across the neck of land between the east and west sides of the loop. A sluice was built across this neck to carry water from the dam on the upstream side to generate the blast for the furnace.

This pioneer furnace was probably rather simple in design and similar to the other furnaces of colonial times, several of which were already in operation in nearby West Tennessee. The furnace was built of rough limestone rock and lined with some kind of fire bricks. The furnace is estimated to have been about 25 or 30 feet in diameter at the base and narrowing at a height of about 25 feet into a short smokestack.

Old Cedar Creek Furnace produced iron by burning charcoal with ore and limestone dumped in the top in measured amounts. A water wheel compressed the bellows to provide a blast of air. Iron is present in the earth's surface as an oxide (rust) mixed with other minerals. Carbon unites readily with oxygen at high temperatures. Thus, the burning charcoal provided both the heat and the carbon to take the oxygen from the iron oxide and leave molten metallic iron which collected in the hearth at the bottom of the furnace.

The limestone melted and combined with the impurities in the ore to form slag which floated on top of the iron where it was drawn off from time to time. When sufficient iron collected in the hearth it was tapped and run into troughs in the sand of the casting bed. The long piece was called a sow, and the shorter pieces running from it were pigs. Sometimes the iron was poured directly into molds to make pots and other items.

Pig iron contains about 4% carbon which makes the iron hard and brittle when cold. For tools a tough iron which would bend rather than break was needed, so Heslip erected a forge as part of his iron works. The existence of a Catalan forge at Cedar Creek was confirmed by Michael Tuomey, State geologist, who visited the site in the 1840's. "Fragments of iron scattered about show that both castings and malleable iron were manufactured here," he reported.⁹ The malleable iron was made by reheating the pig iron in the forge hearth until the carbon was consumed and the iron turned into a pasty mass called a bloom. The bloom was hammered while hot to squeeze out the impurities. The resulting bars were malleable iron from which tools could be made.

One notable feature of the plant was the large forge hammer whose weight is estimated to be 500 pounds. It was raised by water power and then dropped onto the piece of iron to be forged. The hammer was also useful in breaking up hard lumps or boulders of ore which were too big for use in the furnace. As late as 1910, old citizens recalled that the hammer ran day and night and could be heard for miles.¹⁰

Most of the iron ore was obtained within one or two miles of the furnace. In the beginning Heslip used surface ore that the farmers were glad to give away to get out of their fields. Many old pits located in SE 1/4 section 15 and near the common corner of sections 8, 9, 16, and 17 were worked to supply the furnace.¹¹ According to Michael Tuomey, this ore was of excellent quality. Large quantities of high grade limestone were also readily available nearby for use as a flux. Cedar charcoal was used as fuel, and Heslip purchased large quantities of wood from W. S. Jones who kept his slaves occupied in this manner after the crops were laid by.¹² Usually fifty cords of wood were carefully stacked, covered with wet leaves, and finally covered with a layer of clay. The wood was then ignited and carefully tended for 10 to 14 days to obtain the desired charcoal. There is an old story about one of the Negroes at the iron works falling into a charcoal pit and being burned to a cinder before help reached him.¹³



A POT FORGED AT THE CEDAR CREEK FURNACE, ERECTED BY JOSEPH HESLIP IN 1815.

Cedar Creek Furnace seems to have prospered at first. Heslip supplied bar iron to the blacksmiths and forge operators all over North Alabama. He also cast a vast amount of hollow ware such as cooking vessels, iron pots, and cranes.¹⁴ Seventy years later, many of the kettles, coffee mills, plows, etc. were still in use. One large pot was used for many years for barbecuing at Russellville; it was said to be big enough to cook seven sheep at one time!¹⁵ Much of the pig iron was hauled to South Florence or to Chickasaw on the Tennessee River and shipped by boat. Some of the iron is said to have been shipped from New Orleans to Liverpool and sold for \$100 per ton.¹⁶

A saw mill and a grist mill were also put into operation, and a number of houses were erected nearby for use by the workers. The 1820 census of Franklin County shows that Heslip owned 44 slaves. Apparently the ironworks was operated primarily by slave labor. Heslip and his partners hired a number of slaves in

Nashville for \$200 each on March 6, 1819, for a term of one year commencing on April 1, 1819. The partners agreed to feed and clothe the Negroes well, to keep them shod in shoes, and to provide medical assistance when necessary. The clothing for each slave consisted of one blanket, one hat, one pair of stockings, and three suits. Two suits were suitable for summer use while the third suit was made of woolen cloth for winter use. To feed the work crew, Heslip, Ramsey, and Whiteside purchased \$1,583.33 worth of bacon on March 13, 1819.¹⁷

An epidemic of an unidentified disease spread through the community in late 1820. There were many deaths, and the furnace was blown out and stood idle for some time. Joseph Heslip himself soon died. The date of his death is unknown but it evidently occurred in 1820 or 1821 because his widow was remarried on December 16, 1821.¹⁸

The will of Dr. Isaac Butler, of Florence, Alabama, dated April 7, 1830, relates that he married Susanna Heslip, widow of Joseph Heslip, and boarded, clothed, and educated the Heslip children from December 16, 1821. The children are listed in the will as follows: Clinton Heslip, 19; Caroline S. Heslip, 17; Andrew Jackson Heslip, 15; and Angeline H. Heslip, 13. As guardian of the Heslip children, Dr. Butler persecuted a suit against Peter Martin, administrator of the Heslip estate, for money owed to the children.¹⁹

After Heslip's death, Jenkin Whiteside moved to Russell's Valley to handle the affairs of the iron works. On June 25, 1822, he sold seven Negro slaves at the furnace to William S. Fulton, of Florence, for \$2,300. However, Whiteside also died at the iron works, on September 24, 1822, and his body was preserved in a barrel of vinegar or wine and carried to Columbia, Tennessee, for burial.²⁰

By 1823, the third partner, Thomas Ramsey, was also dead. For the next several years the estates of the deceased partners were involved in litigation as their administrators and the court struggled to settle the rather tangled business affairs of the firm.²¹

In the fall of 1824, the Cedar Creek iron works was advertised for sale in the Tusculumbia newspaper and other newspapers including the Nashville Whig. The furnace, forge, saw mill, and 16 1/2 quarter sections of land were sold to the highest bidder on December 5, 1824, under an order of the Franklin County court. Commissioners for the sale were Samuel Bell, John Hogan, Temple Seargent, William S. Jones, and David Shannon.²²

Ownership of the iron works is difficult to trace due to destruction of the courthouse records by fire, but it appears that the property was bought by Aaron Wells, a Tennessee iron master. He is thought to have operated the furnace for about two years in association with 2 or 3 other iron makers.²³

The next owner of Old Cedar Creek Furnace was Dr. Robert Napier, of Nashville. He made a number of improvements and produced a good grade of charcoal pig iron for a few years. In 1831, the iron works made some castings for the state's first railroad which ran from Tusculumbia to the Tennessee River. Then, due to bad roads and the distance from the market, Dr. Napier found that he could no longer compete with other furnaces more favorably located. Old Cedar Creek Furnace was blown out for the last time in 1832, or according to other sources, in 1836 or 1837. According to one story, the furnace was abandoned because the stack collapsed. Others think that the creek overflowed and chilled the furnace.²⁴

The huge hammer was still at the furnace site in 1890; later it was owned by C. E. Wilson, a Russellville merchant.²⁵ For many years, Wilson and Co. used the first pig cast at Cedar Creek to hold the door of their store open in the summer.²⁶ Today, the hammer and a couple of pots made at Cedar Creek are in the Allen O'Reilly collection at Russellville.

In 1938 a mural was painted in the Russellville post office lobby by Conrad A. Albrizio showing his conception of the iron works at Cedar Creek. The fresco is entitled "Shipment of First Iron Produced in Russellville." The painting was commissioned by the Section of Painting and Sculpture, an agency of the U.S. Treasury Department. Albrizio originally proposed to use the limestone quarry or an iron mine and mill as the subject of the painting, but Dr. John M. Clark and others persuaded the artist to select the old iron furnace.

Evidence of Alabama's first iron furnace may still be observed at the site. The mill race is plainly visible, a rock wall which was probably a foundation for one of the buildings is still standing near the creek bank, and the slag pile running out to the creek can be traced. The furnace itself is a pile of rock and earth bearing little resemblance to a furnace, but by climbing to the top, the firebrick that lined the furnace may be seen. The site is located on private property 3 miles west of the "Cedar Creek Furnace" historical marker on U. S. Highway 43 South at Russellville, AL

Joseph Heslip was truly "The Father of the Iron Industry in Alabama" and his efforts pointed the way to extensive iron ore mining operations and later to the great steel mills in the vicinity of Birmingham.

FOOTNOTES

1. Ellen L. Trover, Editor, Chronology and Documentary Handbook of the State of Alabama (Dobbs Ferry, N.Y.: Oceana Publications, 1972), 118.
2. W. H. Keys, Jr., "Cedar Creek Furnace," The Bulletin of the North Alabama Historical Association, II (1957), 17-20; Lorene Frederick, "Cedar Furnace Nominated for Register," Florence Times-Tri-Cities Daily, May 2, 1976; Alabama Historical Commission, News Release, September 8, 1977.
3. Mary Chalmers Hood papers in Alabama Department of Archives and History, Montgomery (Miss Hood was a great granddaughter of Joseph Heslip). Dolly Dalrymple, "Father of Iron Industry in Alabama," The Birmingham News Age-Herald (June 14, 1936).
4. Ethel Armes, The Story of Coal and Iron in Alabama (Birmingham: Birmingham Chamber of Commerce, 1910), 27.
5. Lauderdale County, Alabama Deed Record Book A-2, 29 (June 25, 1822); Lauderdale County, Alabama Deed Record Book 4, 170 (Oct. 3, 1827); Alabama Supreme Court Case 2382 (July 1828).
6. W. W. Clayton, History of Davidson County, Tennessee with Illustrations and Biographical Sketches (Nashville: Reproduced 1971 by Charles Elder--Bookseller), 199, 203, 267.
7. Penelope Johnson Allen, "Leaves From the Family Tree," Clippings from The Chattanooga Times, Vol. I, 134. (Lawson McGhee Library, Knoxville, Tenn.); John T. Moore and Austin P. Foster, Tennessee, The Volunteer State (Nashville, 1923), II, 258; Kenneth McKellar, Tennessee Senators (Kingsport, Tenn.: Southern Publishers, Inc., 1942), 121-128.
8. Armes, Coal and Iron, 28.