



The Rutter Mansion at Pine Forge

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EARLY IRONMASTERS OF PENNSYLVANIA*

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IN THE summer of 1718, the year in which William Penn died, there was much activity on the banks of the quiet Manatawny Creek, not far from the Schuylkill River. The sound of axes could be heard in the dense forest as tall trees were felled; the underbrush was being cleared along both sides of the creek; and large rectangular stones were brought to the area preparatory to being put into position for the blast furnace, a large truncated pyramid of stone. Among the workers were a few Negro and Indian laborers, but most of them were English and German who lived in Germantown or nearby. The leading spirit of the industrial enterprise on this early frontier of Pennsylvania was Thomas Rutter, who had finally succeeded in getting financial help for the venture from a number of Philadelphia merchants.

Thomas Rutter, the pioneer ironmaster of Pennsylvania, was a Quaker who had come to Philadelphia in the ship *Amity* in the same year as William Penn (1682). On his arrival, Rutter had joined the Philadelphia meeting of the Society of Friends and later the Abington meeting. He became a Quaker minister and when the schism occurred among the Quakers, led by the embittered George Keith, Rutter defended Keith and preached Keith's doctrine of Christ, the external Word, and the visible sacraments—especially baptism—as being of higher value than the “inner light.” In 1706, when Francis Daniel Pastorius resigned as chief magistrate of Germantown, Rutter succeeded him in that

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office. Rutter was a devout, outspoken man who had definite convictions; and he influenced religiously not only the Quakers of the area but also Johann Conrad Beissel who settled in Germantown, where in 1725 he founded the sect of Seventh-Day Dunkers. Ten years later, he founded the Order of the Solitary, establishing his communal settlement at Ephrata.

By occupation Thomas Rutter was an ironworker and blacksmith. For many years after coming to America, he had been attracted by the iron ore deposits of the Manatawny region. These deposits of iron had been discovered during the earliest period of English settlement, and William Penn, who had investments in English ironworks and had some knowledge of the iron industry, tried to encourage the smelting of ores at Manatawny, Durham, and elsewhere in his province where ores were known to exist. Penn even approached Sir Ambrose Crowley, the well-known ironmaster of Newcastle, England, with a proposition to build ironworks in Pennsylvania, but without success. And when Penn granted the charter to the Free Society of Traders, he expected the Society to smelt and manufacture iron, but again Penn was disappointed. In 1715 Thomas Rutter received a patent to 300 acres of land along the Manatawny, and the next year he built a bloomary or Catalan forge, which he called Pool Forge, where iron was produced in a crude manner by heating the ores and hammering the semi-molten mass into bars under a ponderous hammer operated by a water wheel. In 1718 Rutter began to realize his dream of building a blast furnace and its accompanying refinery forge, the blast furnace to produce castings and pig iron, and the forge to hammer and refine heated pig iron into bars for the purpose of making tools, implements and weapons.

Rutter named the furnace Colebrookdale after the famous ironworks of Abraham Darby in Shropshire, England, where later the use of coke as a furnace fuel was perfected, resulting in revolutionary changes in the English iron industry. The furnace on the Manatawny was lighted with appropriate ceremonies in the spring of 1720 and was active until a few years before the Revolution. During the decades that followed the building of Colebrookdale Furnace, the Manatawny region became a scene of industry which spread to adjoining areas, as they were quickly settled. Berks county, especially, for a time became the center of iron production in America.

Closely associated with Thomas Rutter in his enterprises was Thomas Potts, Jr., a Quaker businessman of Germantown, and a relative of Anthony Morris, one of the Philadelphia merchants who helped finance the early iron industry. After the death of Thomas Rutter in 1730, Thomas Potts, Jr., became the chief owner and manager of the ironworks on the Manatawny and was the founder of Pottstown. Among the names of the early ironmasters, those of Rutter and Potts stand out. Matrimonial alliances connected many families of ironmasters, as the industry spread over Pennsylvania, and unions between members of the Rutter and Potts families, extending over a period of several generations, furnish a good example of such intermarriages. Among the ironworks owned by the united Potts and Rutter families were Colebrookdale Furnace and Forge, Mount Pleasant Furnace and Forge, Pool Forge, Amity Forge, and many others.

At the time that Thomas Rutter was beginning his activities as an ironmaster at Manatawny, ironworks were being projected on the other side of the Schuylkill River. At the little village of Coventry, named after the English town made famous by Lady Godiva, Samuel Nutt began his activities as ironmaster. Nutt, the son of an English baronet, a man of culture, intelligence, and some wealth, had, like William Penn, become a Quaker and migrated to Pennsylvania. In 1718, when Colebrookdale Furnace was being built, Nutt began a bloomary forge on French Creek and, six years later, in partnership with William Branson, a Philadelphia merchant, built Rock Run Furnace, not far away from his Coventry Forge. Later the two partners built Reading Furnace, which rivaled in size and output the largest English blast furnaces of that period. The progressiveness of the earliest ironmasters can be seen also in their attempts to produce steel, a most difficult task at that time. As early as 1732, Samuel Nutt, in partnership with William Branson, began the manufacture of steel at the Coventry Works, where the first steel in Pennsylvania was produced by artisans brought from England. Samuel Nutt died in 1737 and, in accordance with his will, his wife Anna Nutt built Warwick Furnace and mansion house, a mile or so away from Reading Furnace plantation. William Branson, Nutt's partner, expanded his holdings in ironworks, establishing a steel furnace in Philadelphia, and later becoming the ironmaster at Windsor Forges.

While the first Pennsylvania ironmasters were Quakers, the group soon became a diverse one. Men of initiative and enterprise from various countries, often with little capital, ventured into the industry. Thomas Rutter, Samuel Nutt, and John Taylor represented those from England. James Morgan, Thomas Potts, and James Old were of Welsh origin. Henry William Stiegel, John Probst, and Peter Schoenberger were German. Robert Grace, Robert Coleman, and George Taylor were of Scotch-Irish descent; while Pierre Marmie and William Dewees were French. Valentine Eckert was from Hanover, Samuel McCall from Scotland, and George Anshutz from Alsace. Of course, by the beginning of the nineteenth century, most of the outstanding industrial leaders were native-born Pennsylvanians.

Although well known—for much has been written about him—reference should be made to the most colorful of the early ironmasters, Henry William Stiegel. So much fiction has grown up around the life of this eccentric but well-meaning individual that it is difficult to separate fable from truth. Certain aspects of his life, however, are definitely known. Stiegel came to America with his widowed mother and young brother from the old cathedral city of Cologne in the year 1750. Known at first as Heinrich Wilhelm Stiegel, he soon anglicized his name to Henry William Stiegel. His first employment in Philadelphia was as a clerk in the mercantile establishment of Charles and Alexander Stedman. Within two years he decided to seek his fortune in the West and set out on the King's Highway toward Lancaster. He did not reach that town, for he found work as a bookkeeper at the newly-built blast furnace of Jacob Huber, the first German ironmaster in Pennsylvania, whose plantation was not very far from the Cloister at Ephrata. Stiegel soon married the daughter of his employer and within a short time, in partnership with several Philadelphia merchants, including his former employers, the Stedmans, he took over Huber's furnace and became the ironmaster there.

Stiegel built a second furnace, which he named Elizabeth after his second wife, for his first wife had died. He acquired other property including Charming Forge. In 1763 he erected glass houses at Manheim, planning that town, and bringing skilled laborers from Germany for his glass works. Exquisite glassware was produced which today, because of its beautiful tints and expert workmanship, is keenly sought by collectors.

Stiegel lived in an ostentatious manner, for he loved show and display. He built a mansion at Manheim and furnished it richly. The platform surmounting the gabled roof of the mansion was modeled like a grandstand for his orchestra—made up of his workmen—to welcome him when he dashed there from Philadelphia, Elizabeth Furnace or Charming Forge.

Stiegel's prosperity did not last long, for during the trying period after the Seven Years' War he met with financial difficulties. He had speculated too much, expanded too rapidly, and failed to collect debts due him. He tried to sell his estates without success. The Pennsylvania Assembly voted him £150 and a lottery was held for his benefit. But his creditors pressed for payments and he was placed in jail for debt, although a special act of the Assembly finally gave him his freedom. He taught school for a time and then became a clerk for George Ege at Charming Forge which he had once owned. Elizabeth Furnace came into the possession of Robert Coleman who was to become one of the most prosperous ironmasters of the early part of the nineteenth century. Stiegel died in poverty in 1785. His memory still lives in the annual anniversary of the "Feast of Roses," an observance which grew out of the provisions of a gift of land to the German Lutheran Congregation at Manheim requiring as annual rental one red rose forever.

A topic on the eighteenth century would not be complete if it didn't mention Benjamin Franklin. Franklin was too cautious to invest money in ironworks and, because of the speculative aspects of such ventures, counseled his friends that if they made such investments, they might "only meet with disappointment." However, many of Franklin's learned contemporaries were financially interested in ironworks. James Logan, Andrew Bradford, William Allen, John Dickinson, Joseph Galloway, John Nicholson, James Wilson and Daniel Drinker were among those who furnished capital for the early iron industry. This was a period when men engaged in many differing activities. For example, Andrew Bradford was a printer, newspaper journalist and editor, general store keeper, importer, book dealer, postmaster and an active partner in Durham Iron Works.

Among Franklin's close friends were several ironmasters and he visited several of the iron plantations of southeastern Pennsyl-

vania. In his autobiography, Franklin refers to his friend Robert Grace, the ironmaster at Warwick Furnace, as a "man of some fortune, generous, lively and witty, and a lover of punning and of his friends." Grace cast the plates for the stove or fireplace invented by Franklin. Many of these were sold at the iron plantation, where they were made, and in Philadelphia. Franklin refused the patent and monopoly offered him by Governor Thomas for the invention of his fireplace, stating "that as we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others by any invention of ours and this we should do freely and generously." Franklin did not remain long in the business of selling fireplaces, but others profited by his invention as they took his ideas from his pamphlet "An Account of the New-Invented Pennsylvania Fireplaces." An English ironmonger made a fortune on the invention and, when Franklin reached France as diplomat from the United States during the American Revolution, he found his fireplaces in a number of homes in Paris. Franklin and Robert Grace were close friends, and the first meetings of the Junto and of the Philadelphia Library Company were held in Grace's Philadelphia home.

Thomas Potts, Jr., was another ironmaster who was a friend of Franklin. He was among the first subscribers to the Philadelphia Library Company, but apparently had difficulty in returning within the prescribed time limit books that he borrowed, for in the manuscript minutes of the Library Company is found an entry: "Thomas Potts, who living very remote [Pottstown], finds it impossible to comply with the time of returning books." His shares in the Company were then assigned to another. Thomas Potts, Jr., died in 1752, after thirty years spent in the pioneer iron industry.

After the American Revolution, men of initiative and ability built furnaces and forges in the Juniata Valley. Markets for Juniata iron developed down the Susquehanna in the East and at Pittsburgh in the West. In time, the iron produced in this area was known for its good qualities in Europe as well as in America. Bedford Furnace, Centre Furnace, Huntingdon Furnace, Hope Furnace, and Bellefonte Ironworks were among the first established in this region, and such men as George Ashman, Mordecai Massey, George Anshutz, Peter Shoenberger, John Patton, Sam-

uel Miles, and Philip Benner were among these pioneer ironmasters.

General Benner, as he was usually known, had learned the iron trade at Coventry Iron Works. Like many other ironmasters he had served in the militia during the Revolutionary War and after that conflict moved westward and settled in Centre county. By the beginning of the nineteenth century, he had built a blast furnace, forges, and a slitting mill. Philip Benner was a man of energy, industry, and liberality, representing the type of ironmaster who worked alongside his workmen. He arose between four and five o'clock every morning and was interested in every detail of his business, for example, examining the feet of his horses to see that they were well shod. Many stories have been told about this ironmaster, who was one of the first to use teams of four and six horses to haul iron from the Juniata region to Pittsburgh. A boastful teamster once applied to him for employment. "Well," said Benner, "my good fellow, did you ever upset your wagon?" "Upset!" replied the man, "oh no! I am too good a driver for that." "Well then," said Benner, "I do not think you will do, for you would not know what to do when you did upset. No man can drive from Rock to Pittsburgh without upsetting. You won't do at all." He didn't get the job.

Among the ironmasters of this region and period was Roland Curtin, Sr., father of the future Civil War governor. Curtin was born in Ireland of Scotch-Irish stock and migrated to Philipsburg. At the beginning of the nineteenth century, he had a general store at Milesburg. He became coroner of the county and then sheriff. He invested his savings in the iron industry, becoming a partner in a forge with Moses Boggs about 1810. He soon was sole owner and then erected Eagle Furnace. After the death of his first wife, he married Jane Gregg, daughter of Andrew Gregg, United States Senator, Secretary of the Commonwealth, and unsuccessful candidate for Governor in 1823. Andrew Gregg Curtin was born in Bellefonte, being of course named after his grandfather. The Curtin family carried on its activities in iron until the early part of the twentieth century.

Before the end of the eighteenth century, as the frontier swept westward, ironworks were built in western Pennsylvania and soon in the newly-opened Ohio country. Increasing numbers of hopeful

pioneers were crossing the mountains to the Monongahela River or its tributaries and thence traveled by boat or raft to the Ohio River. Many on reaching western Pennsylvania took up land adjacent to the waterways there; others traveled farther in their search for economic security and gain.

On this frontier, as on earlier frontiers, iron was needed for many uses. Horses had to be shod and wagon tires repaired; nails, hinges and bolts were necessary for buildings, and tools of all sorts were in demand, as were stove plates and other castings. Blacksmiths at first obtained hammered bar iron from Juniata forges which they shaped to meet frontier needs. Because of the demand for iron in the new region, enterprising men seized the opportunity to engage in iron manufacture, and furnaces and forges were built in the shadows of deep forest glades. The flames from furnace stacks forced upward by the rhythmic blast at night casting a red glare on the sky like a display of northern lights, the scintillating sparks scattered in forges as water-driven giant hammers struck the red-hot iron bars, the ringing sound of the anvils in many blacksmith shops, and the splashing of water over large water wheels—all gave the agricultural frontier a glowing tinge of industrial activity.

At first, Fayette county rather than the Pittsburgh area became the center of the iron industry. Such men as Isaac Meason, John Hayden, Moses Dillon, Robert and Benjamin Jones, William Turnbull, Jeremiah Pears, and John and Andrew Oliphant were among the outstanding pioneer ironmasters in this area. The capital to establish the industry came from the East, especially from merchants in Philadelphia. Among these was William Turnbull who became an ironmaster for a short time. Turnbull, "a counting house clerk," came from Scotland to America in 1770 at the age of nineteen. During the American Revolution, he formed a mercantile partnership with John Holker, long the French consul at Philadelphia, and Pierre Marmie, who had been Lafayette's private secretary. After independence, Turnbull, Marmie and Company bought Fort Pitt and the land upon which it stood at the junction of the Allegheny and Monongahela Rivers, although they encountered legal difficulties in getting possession of the buildings. The company also bought several parcels of land in western Pennsylvania, one property on Jacob's Creek, fifteen miles above

the Youghiogheny River. At Jacob's Creek they built a furnace and forge which began operations in 1790, and the plant was known as the Alliance Iron Works. Castings of all sorts and bar iron were produced, but the enterprise failed within a few years. Marmie had made "advances to the French Royal Marine," which were not paid, and this helped to bring insolvency.

After the failure of the Alliance Iron Works, Turnbull continued his mercantile activities and was active in land speculation, especially in Kentucky. His second wife was Mary Nisbet, daughter of the Reverend Charles Nisbet, president of Dickinson College. William Turnbull died in 1822 after a very active career.

Among the early ironmasters of western Pennsylvania Dr. Detmar Basse was perhaps the most colorful, and in some respects may be compared with Henry William Stiegel. Basse, well educated and cultured, came to the United States from Frankfort, Germany, in 1802. He purchased 10,000 acres of land in Butler and Beaver counties, and planned a baronial estate. He laid out a village which later grew into the town of Zelienople. There he built a three-story wooden castle, with towers, turrets and battlements, to which he gave the name "The Bassenheim." During the war of 1812 he put a blast furnace into operation and began the manufacture of iron. After a few years, however, he found the project too difficult, and he sold his ironworks to Daniel Beltzhoover and others, who carried on the enterprise.

The early ironmasters of Pennsylvania constituted a diverse group, for they were of many different nationalities and religious beliefs. Most of them were not of the wealthy class, although many through toil, persistence, and thrift became quite successful. Thomas Rutter had been a blacksmith and ironworker, Robert Coleman a clerk at Quittapahilla Forge, Samuel Savage a forgerman at Coventry Iron Works, David Jenkins a clerk at Windsor Forges. Some were merchants who had capital when they entered the industry. A number of ironmasters were of yeoman origin, for farmers who found ores on their property, with the aid of partners, often engaged in the industry. The close connection between iron manufacture and agriculture can be seen in many of the wills, deeds, and other documents of the period: for example, Jacob Shöffler, Berks county ironmaster, styled himself "yeoman";

and Cyrus Jacobs, owner of Pool and Spring Grove Forges in Lancaster county, described himself as "ironmaster and farmer."

It was natural that many ironmasters should become civic and political leaders. Samuel Nutt, Thomas Rutter, Jr., Thomas Yorke, Curtis Grubb, Mark Bird, George Ege, and others served in the Pennsylvania Assembly. John Potts, Samuel Potts, Isaac Meason, and Valentine Eckert represent those who sat on the bench, and many others were justices of the peace. During the Revolutionary War all the Pennsylvania ironmasters except two supported the Patriot cause, a number of them becoming officers in the militia, often leading their men to battle. George Taylor, who leased the Durham Works, James Smith of Codorus Iron Works, and George Ross of Mary Ann Furnace signed the Declaration of Independence. Valentine Eckert of Sally Ann Furnace, Mark Bird of Hopewell Furnace, and James Smith of Codorus were members of the Provincial Conference of 1776. The ironmasters were well represented on the important committees and at the meetings held in Philadelphia prior to and during the struggle with the mother country. General Daniel Udree, ironmaster at Oley Furnace, who served in the Revolutionary War and the War of 1812, was a representative in Congress.

The first part of the nineteenth century marked the transition from the pioneer ironmasters to the skilled industrialists of the present time. Many of the early ironmasters toiled with their workers; a few lived the life of the English country gentry, living in the mansion house and keeping packs of hounds to hunt the fox. But all who were successful had to take a real interest in the details of their work. They had to solve metallurgical problems largely by the trial and error process, and financial problems without the aid of commercial banks. They had to face difficulties arising from a scarcity of skilled labor and a lack of transportation facilities.

Progress in technology, banking, and transportation resulted in changes in the iron industry. Representative of the men of this transitional period were Robert Coleman and Clement Brooke. Robert Coleman, a self-made man, foreshadowed the great industrialists who were to follow him, as he expanded his interests in Lebanon and Lancaster counties to include Elizabeth Furnace, Colebrook Furnace, Cornwall Furnace, Mary Ann Furnace, and

many other ironworks, furnaces, and forges. Clement Brooke, too, represents the shrewd, calculating, and trained businessman who emerged in the first part of the nineteenth century. He was the ironmaster at Hopewell Furnace. This furnace was built by Mark Bird in 1770, although his father William Bird earlier had several forges on Hay Creek and also the Berkshire Furnace. During the years of depression after the Revolution, Mark Bird suffered financial reverses. The learned James Wilson, Bird's brother-in-law, invested money in his enterprises and became his partner, but the business did not prosper. After his failure, Mark Bird left for North Carolina. By the nineteenth century Hopewell had come into the hands of Matthew and Thomas Brooke and Daniel Buckley, all ironmasters of experience. From the beginning to the middle of the nineteenth century, Clement Brooke, son of Thomas Brooke, was active at Hopewell, managing the furnace for thirty-three years. This cold-blast-charcoal furnace remained in blast until 1883. It had continued in operation long after most of its kind had been supplanted by furnaces of more modern design.

The story of the pioneer ironmasters of Pennsylvania is one filled with incidents of interest and tales of success and failure. The charcoal iron plantations have disappeared and have become mere memories. The ruins of some of the old furnaces and ironworks remain. Many of the mansion houses in which the ironmasters lived still stand and bear witness to a fearless race of men who faced tremendous business odds in laying the foundations of a great industry which today makes Pennsylvania one of the greatest iron and steel centers in the world.