

*The Montgomery Advertiser*  
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Editorial Staff and Correspondence.

ALL ABOUT SHELBY IRON WORKS.

The Locality and Improvements.

SHELBY IRON WORKS, May 24.

**COPIED "AS PRINTED" FROM THE NEWSPAPER  
BY BOBBY JOE & DIANE SEALES**

5 miles from Columbiana, on the Selma, Rome and Dalton road are located Shelby Iron Works, which are connected with it by a branch road built and operated by the company to secure facilities of transportation. The branch road train makes two trips each day to and from the works. This is a grand enterprise and a splendid property, and the first impression produced on the mind of the visitor is astonishment and its extent and magnitude. The location is beautiful and attractive and surrounded by romantic and picturesque scenery. In the midst of umbrageous groves here and there are located many elegant and commodious residences, with fine gardens, and set off with flowery yards and shrubbery and beautiful lawns clad in the verdure of the season.

A fine two story brick building, erected by the company at a cost of about \$12,000 answers the combined purposes of a church, public hall, and male and female school. The church and school are in charge of Rev. F.J. Tyler, an accomplished gentlemen and thorough scholar who devotes himself to his duties con amore. All denominations represented at the works worship at this church and as it by common consent, nothing is permitted to sow discord and contention. The church is supplied with an organ and with arm chairs for about 300 people. The pulpit is a model of architectural neatness.

The spacious school rooms on the first floor are devoted to the primary and academic departments, and are supplied with black boards, globes, and other apparatus not found and many school rooms of the State. Upwards of 100 pupils are on the roll with a large daily attendance, and for their convenience room, which is among the best furnished in the State, is supplied with the latest style of desks through the best furnished in the state, is supplied with latest style of desk with folding seats attached to each.

**ADVERTISEMENT: *The Shelby Sentinel*, dated June 10, 1880, "CASE INSTITUTE (Male and Female.) Rev. F.J. Tyler, Principal, Shelby Iron Works, Alabama. Course of Study: English, Latin, Greek, Mathematics, Book-Keeping, Penmanship and Music. Our new and spacious brick building will be in readiness by the beginning of the next term, September 7<sup>th</sup>, 1880. Capacity, 100 Students. For HEALTHFULNESS of locality. THOROUGHNESS of instruction. GOOD MORALS and LOW TUITIION - \$1.50 per month – Case Institute cannot be excelled by any institution of like grade in the State."**

The colored people also have a church, similar in appearance though less costly, and a flourishing school.

On the grounds is a hospital erected and maintained by the company for the benefit of sick or wounded colored employes, principally for indigents who have no family or home.

The sanitary arrangements are good, and the locality being without any predisposing cause of sickness, good health is the rule. Dr. J.A. Thompson, late of Columbia, Tenn., is engaged by contract to do the practice at the works. Each single man or head of a family pays one dollar per month for himself or each member of his household, as the case may be, whether any sickness prevails or not for which they receive all required medical attention.

Besides the improvements mentioned are a neat little brick hotel (Do not confuse this "Brick Hotel" with the Dannemora Hotel, also referred to as the Shelby Hotel. The *Shelby Sentinel*, dated June 26, 1879 indicates "Mr. F. Newman has opened his hotel on the corner, lately occupied by Mr. Church. It is to be known as the "Brick Hotel." This is an addition to our village that has long been much needed." The 1880 census indicates Ferdinand "Fred" Newman, also spelled Neumann, and his wife Theresa "keeping hotel" in Shelby Iron Works. He was born in Bavaria, Germany.), and one or two private boarding houses, a market house, a large depot, telegraph and express offices, a neatly arranged post office, and a store conducted under the company's supervision. The last named is regularly replenished with a general line of dry goods, groceries, and provisions, adapted to the demands of those connected with the works and the people of the surrounding country. On Saturdays, when the employees are paid off, and the people of the vicinity come in with their carts and wagons, bringing country produce for sale or barter, the grounds present a lively and animated spectacle.

Everything betokens energy, enterprise and prosperity.

### THE FURNACES.

Shelby Iron Works are conspicuous among the twelve kindred enterprises located on or near the Selma, Rome and Dalton road, between Selma and the Georgia lines. The original furnace and rolling mill were erected by Horace Ware, of Shelby County, in 1862, when the Shelby Iron Works Company was organized. The destruction of these works and the branch road on the 31st of March 1865, was among the vandal triumphs that marked the course of Wilson's calvary raid, on the heel of the late war. It was selected for destruction because of its supposed manufacturer of iron, etc., for the Confederate States and many interesting reminiscences of the famous raid are related by the older residents of the locality.

The company was reorganized in 1868, when the railroad and Furnace No. 1 were rebuilt. The latter was supplied with new machinery modernized in its important features, and its height increased to 56 feet, which was regarded a doubtful experiment by charcoal furnace men of that time.

The Phoenix never rose more splendidly from its ashes than did the new works that have supplanted the old.

In 1872 Furnace No. 2 was built under the direction of Walter Crafts, manager at the time. This has been appropriately termed the Queen of American charcoal furnaces, and is regarded as the largest charcoal furnace in the world.

It should have been stated that after the destruction of the original works by the calvary raid, the stockholders, all, or the majority of whom were southern men, were unable to rebuild. At any rate they disposed of the property to Northern men of means. Among the original stockholders were Messrs. John W. and Jas. W. Lapsley, John Kenan and Horace Ware.

The dimensions of the two furnaces are as follows: No. 1 – height 56 feet; 12 feet bosh; diameter of crucible or hearth 5 feet; 5 tuyeres; and an average capacity of 25 tons per day of warm blast car wheel iron. No. 2 – the new furnace – height 60 feet; 14 feet bosh; 7-1/2 feet hearth; and an average capacity per day of 35 tons of the same quality of iron, making the average daily capacity of the two 60 tons.

There are three large vertical steam lowing engines that supply the furnaces with blast, and are of the following dimensions: No. 1 – diameter of steam cylinder 28 inches; of blast cylinder 60 inches; stroke of cylinder 54 inches. No's 2 and 3 - diameter of steam cylinder 36 inches; of blast cylinder 84; stoke of cylinder 48 inches. Each engine is supplied of course, with two ponderous wheels.

Each one is equipped with two hot blast stoves of 24 pipes, the ordinary temperature of the blast used being 300 to 375 degrees.

#### **CHARGING THE FURNACE AND CASTING.**

Both the furnaces are operated with closed fronts, and have a bell and hopper and steam hoist for raising the coal, the ore and limestone to the top, for putting into, or charging the furnaces, as it is termed. The coal is dumped into the furnace first, then the ore and lime rock in proper proportions. This process is never stopped, day or night, except when a cast of the molten iron is made, and being run throughout the 24 hours relays of hands are required every 12. About every eight hours a cast is made by each furnace. To receive the melted iron, neat beds of sand are made under the sheds, with indentations to fit the shape of ordinary bars, or other form of casting as maybe designed. When these receptacles are full they are covered lightly with sand and the heat gradually evaporates until the bars are cool enough to be taken up and carried off to their common place of deposit, when they are ready for shipment.

A cast by night is to the novice a beautiful and fascinating spectacle. The bright stream of molten iron running out from the bottom of the furnace boiling and throwing off myriads of sparks; the forms of the grim sons of toil flitting in the bright light; and the darkness without rendered more intense by the contrast, all form a weird, fascinating scene, more suggestive than anything else, of the locality so graphically depicted by those supposed to entertain rather ultra views of eternal punishment. It forms a splendid pyrotechnical display.

The casting is done under the direction Mr. J. P. Christian, an experience foundryman.

#### **THE ORE AND ITS ANALYSIS.**

The company own 33,000 acres of ore and timberlands in Shelby, Bibb and Chilton counties, and the supply of ore adjacent to the furnaces is inexhaustible. The ores developed thus far are brown hematites, which lose from 10 to 15 per cent of their weight by previous roasting, which gives a marked economy and blast furnaces. This class of ores predominates, and goes almost in a crude state into the furnace. It is cheaply mined and readily smelted. The deposits

of ore now being worked have not been traced but are supposed to extend probably four miles to the nearest point on the Coosa river.

Five analyses have been made of the Shelby ore, the first showing 49.12 of metallic iron; the second, 51.94; the third, 52.68; the fourth, 61.44; and the fifth, 60.01.

The iron produced is largely used in the manufacture of car wheels, and is considered to be of a superior quality. It is shipped to all sections of the United States, wherever car wheels are manufactured. At present the demand for car wheel iron is very limited, causing a stagnation in the trade. The Shelby Iron Works sell their iron direct to the manufacturer, thus dispensing with the services of middle men, and creating closer relations with the buyer.

The ore is supplied from the diggings in a hill immediately back of the furnaces, as well as from another 300 yards or more distance. During a walk over the entire premises could be seeing "blooms," or pieces of ore, and other unmistakable surface indications of the rich deposits beneath.

### **COALINGS AND NARROW GAUGE ROAD.**

To economize timber the company employ coal ovens or kilns. There are about 45 of these, each one of 45 cords capacity. Ten ovens are located near the furnaces, the remainder located along the companies narrow gauge railroad running into a heavily timbered section. Each of the kilns yield from 45 to 48 bushels of coal per cord. Economy is also consulted in the use of cross-cut saws for cutting timber instead of axes, thus saving many cords that are lost in chips. An estimated savings of 10 percent is thus made. The coal is transported to the furnaces in open top box cars.

Shelby and Tecumseh are the only iron works using ovens for carbonizing wood. The quality of the coal thus made is very good and as above stated, the yield per cord is large. For furnaces use kiln coal is much preferred to meiler coal.

The company's narrow gauge railroad referred to is eight miles long and runs to the Coosa river, and within 1 and a half miles of Talladega Springs just across the river. Near the terminus is Sulphur mountain and from its summit the iron works, twelve miles distant are plainly discernible. There are large deposits of lime rock near the terminus of the road which is quarried and crushed by a machine called the Blake Crusher, into pieces as small as a walnut. The reader will of course, understand that the function of the lime rock is that of a flux; and when a cast is made, while the melted iron runs out into the beds prepared for it, the refuse, or silica in the ore, passes off while the lime through another aperture, from the furnace.

### **OFFICERS.**

The company is efficiently officered by the following gentleman: Newton Case of Hartford, Conn., President and Treasurer; Robert E. Day, Vice President, Hartford; C.J. Hazard, Secretary; E.T. Witherby, Assistant Secretary; Col. J.F. Black, Superintendent. The three last resides at the works. Mr. Hazard who is well known in our city, is a gentleman of long experience in the business, and his prudence and financial ability render his services at indispensable as they are invaluable to the company.

## MISCELLANEOUS.

Shelby Iron Works are worth an extended description from their magnitude as well as their value in developing and adding value to the mineral resources of the State. Visitors to the works are cordially received and hospitably entertained.

Mr. W.R. Carter, in charge of the transportation department, is an energetic man, who place could not be easily supplied. So, also, is Mr. J.P. Christian, the foundrier, to both of whom the writer is indebted for attentions that enabled him to secure much of the data for this communication.

Connected with the works is a steam fire engine, and the water is supplied from a reservoir near the furnaces, containing many thousand gallons. The water is brought in iron pipes half a mile from another large reservoir, in the ground, at the bottom of which the water bubbles up from a never failing spring. The water is forced through the pipes by an engine near this reservoir. On another part of the grounds is located a natural well, which is reserved for the purpose of supplying the Wash Mill, through which the ore passes after being taken from the diggings.

As to the cost of the production of iron it was a question of doubtful propriety and I refrained from inquiries. The iron, however, is sold at about \$30 per ton.

The furnaces have been in blast continuously since '69. No. 1 having continued nearly four years at one time.

This grand property is well worth a visit from Columbiana, five miles distant, and forms an imposing monument to the energy and enterprise of its projectors, as well as the corporation by which it is now controlled.

R.J.Y.

