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HISTORY OF THE COAL AND IRON BUSINESS

FROM

CLEVELAND AS IT IS, 1872.

By COL. CHAS. WHITTLESEY.

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It will be sufficient for the present purpose to give statistics for periods about ten years apart, omitting most of the intermediate annual returns. The city and its industries have been in existence long enough, and are extensive enough, to develop a law or rate of increase. Returns of the receipts of coal by canal, from the commencement of the business in 1828, are given officially. This work was opened to Akron on the 4th of July in that year, and at least thirty tons of coal were shipped to Cleveland soon after. Philo Scovill, who was then proprietor of the Franklin House, was induced to put in grates and make an experiment with it, paying two dollars per ton. Coal was discovered in Tallmadge, a mile west of the Centre, as early as 1810.

It was visible in a small ravine on the land of Justus Barnes, where for many years blacksmiths from the adjacent county came and dug it from an open pit. The late Jotham Blakeslee, of Tallmadge, who only recently died, has often told me that he had procured it there from 1810 to 1819, and that no other coal was then known in Northern Ohio. As early as 1755, mineral coal had been discovered near Bolivar, in Tuscarawas county, by its being seen on fire, smoking and slowly burning in the ground, but I am not aware that it was dug or mined for use as fuel, in this part of the State, prior to 1810. My recollections of the place extend to 1819 or 1820, when my father, Asaph Whittlesey and Samuel Newton, purchased the property of Barnes, and soon drove an entry into the bluff. The seam was four feet thick, and from this time was regularly mined. Francis H. Wright not long after opened a mine on his land half a mile north, at the eastern base of Coal Hill. About 1826 or 1827, Henry Newberry, of Cuyahoga Falls, opened a bank at the Corners, half a mile farther north.

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In the year 1838, Coal Hill, which was owned principally by Asaph Whittlesey, Daniel Upson and F. H. Wright, was put into a corporation under the name of the "Tallmadge Coal Company." A tram railway to the canal furnished most of the coal brought to Cleveland until 1845. As soon as the canal was made navigable to Lock 19, north of Akron, in 1828, Whittlesey and Newton took coal there with teams to be shipped, and the business was continued until 1832, when the canal reached the coal fields near Massillon, which were on its banks, and were worked by Cyrus Mendenhall. Professor Newberry, of the State Survey, has repeatedly claimed orally and in print, for himself and his father, the merit of originating the coal business of Cleveland. The late Mr. Newberry, of Cuyahoga Falls, took coal by teams to the canal in 1829, possibly in 1828, but was neither the originator, or a large operator, in that line, or any other branch of the coal business. He did not reside in Ohio prior to 1824, when the learned professor was about eight years of age; and even in 1828-9 was certainly too young to engage largely in such operations.

With the assistance of the late D. H. Beardsley (so long the collector of canal tolls at Cleveland), in 1853, I made and published a tabulated statement of the receipts of coal up to that year. That table is reproduced below, showing from what mines it was sent, and the annual amount of the business. No coal had then been brought in by railways.

STATEMENT OF THE AMOUNT OF MINERAL COAL RECEIVED AT CLEVELAND FROM THE
YEAR 1828 TO 1852, INCLUSIVE.

Year.	From what mines taken.	No. tons.	Year.	From what mines taken.	No. tons.
1828	Tallmadge	30	1845	Tallmadge, Clinton, Middlebury and Youngstown	31,136
1829	Tallmadge	708	1846	Tallmadge, Clinton, New Castle and Youngstown	28,133
1830	Tallmadge	178	1847	Tallmadge, Clinton, New Castle, Youngstown and Zoar	44,401
1831	Tallmadge	294	1848	Tallmadge, Clinton, New Castle, Youngstown, Zoar and Rochester	66,551
1832	Tallmadge	431	1849	Tallmadge, Clinton, New Castle, Youngstown, Cuyahoga Falls, Girard and Rochester	66,801
1833	Tallmadge and Massillon	1,719	1850	Tallmadge, Clinton, New Castle, Youngstown, Cuyahoga Falls, Girard and Rochester	83,850
1834	Tallmadge, Massillon and New Castle	3,347	1851	Tallmadge, Clinton, New Castle, Youngstown, Cuyahoga Falls, Girard and Rochester	107,135
1835	Tallmadge, Massillon and New Castle	1,776	1852	Tallmadge, Clinton, New Castle, Youngstown, Cuyahoga Falls, Girard and Rochester	137,926
1836	Tallmadge, New Castle and Trenton	2,944	Total		662,862
1837	Tallmadge, New Castle and Trenton	6,421			
1838	Tallmadge, New Castle and Trenton	2,496			
1839	Tallmadge, New Castle and Trenton	4,901			
1840	Tallmadge, New Castle and Trenton	6,028			
1841	Tallmadge, Trenton and Middlebury	16,742			
1842	Tallmadge, Trenton and Middlebury	16,339			
1843	Tallmadge, Trenton, Middlebury and Youngstown	13,574			
1844	Tallmadge, Clinton, Middlebury and Youngstown	18,901			

In Cleveland, the entire machine power is derived from steam, and the fuel for this and all iron manufactories is coal. The consumption of

mineral coal is therefore a fair index to, and runs parallel with, iron business. By deducting from the returns of receipts by canal and railway, the exports foreign and coastwise, the balance represents very nearly the consumption within the city. Until 1838, when it was shipped only in small quantities, the receipts alone represent the consumption. It was not until after this, and after the Briar Hill coal began to reach here in 1843, that lake steamers could be induced to use it, and then after much persuasion and experiment. Firemen and engineers were decidedly hostile to it. Since 1845, it has supplanted wood on the steamers of the lower lakes. What is taken on board at our docks as fuel for them, cannot be separated from the consumption of the city.

Until 1845, the entire trade of the lakes in bituminous coal was in the hands of Cleveland dealers. About this time, possibly a year or two earlier, Erie began to ship coal, the joint receipts from the interior of the two places being only 45,136 tons. These two ports have hitherto had a monopoly of the the trade by lake, but it will soon embrace several other lake towns. Toledo, Sandusky, Black River, Fairport and Ashtabula have roads in construction, leading to the mines, the principal object of which is to bring out coal. What the present receipts at Erie are I cannot say, but in 1857 the amount was 126,159 tons. At Cleveland, in 1870, it was 901,600 tons, or three times that of 1857. If the business at Erie has increased at the same rate, her receipts should be now about 400,000 tons. When the other lake towns shall be engaged in the business, a still more rapid increase of the trade will accrue, and with it a general diminution in its cost.

By consulting the government census returns, the reports of the State Commissioner of Statistics, the annual exhibits published in our papers during thirty-five years past, of the commerce of Cleveland by canal, railroad and lake, *Leslie's Iron Manufacturer's Guide*, and the more complete publications of the Cleveland Board of Trade, a reasonably correct view of our general business progress can be obtained. Pig metal or cast iron is the basis of all forms of iron manufacture; but in regard to the article in this form, there is little local information. It is brought from so many directions and places, that it is difficult to trace out what is consumed here. We have every ten years, in the census, an account of its production throughout the state, of which I conceive one-third eventually enters this market in some form, either raw or manufactured.

As the *ratio of increase* for population, for the consumption of coal and the manufacture of iron go nearly together, having a mutual dependence on each other, I shall present all of them together from their origin,

or from an early period, to this time. The census returns are the only reliable source of information in these particulars. As these returns appear only once in ten years, I have selected periods of comparison about ten years apart, for our local statistics.

GENERAL COMPARISON OF THE INCREASE OF COAL AND IRON BUSINESS IN OHIO,
AND AT CLEVELAND.

Date.	Tons of coal mined in Ohio.	Tons pig metal made in Ohio.	Population of Cleveland.
1850.....	320,000	52,658	20,984
1860.....	1,356,700	105,500	43,838
1870.....	4,000,000	309,053*	93,718

Date.	Manf'd iron at Cleveland—tons.	Tons of mineral coal consumed at Cleveland.
1848.....	57,438
1858.....	21,950	93,219
1868.....	73,270	353,105

*Of the pig metal made in Ohio, about one-third was made in Northern Ohio. The figures for 1870 show that 152,307 tons were made in Northern Ohio.

It is evident from this exhibit that throughout this State the business of mining coal increases at the rate of 200 to 300 per cent. from one census to another. The increased product of pig metal is very uniform, at about 100 per cent. in ten years. Cleveland augments her population at about the same rate. In manufactured iron and the consumption of coal, the rate is much more rapid. In 1869, the last year of the Trade Reports, the consumption of coal was 524,555 tons, and manufactured iron 92,425 tons.

Coal will soon be delivered at other points on the lake shore, and all business depending upon it will be materially enlarged in Northern Ohio. The table of distances which I here present, showing the principal lines over which it will be brought to the lake, is worthy of consideration. Hitherto, the only resource for *furnace coal* has been over one road into the Mahoning Valley. It is found at Massillon and near Steubenville in limited quantities, but has not been carried away from those places, to melt the ores that come into Ohio from Lake Superior. An inexhaustible field of furnace coal has recently been reached in the south part of Perry county, which before long will be a competitor with Mahoning Valley block coal. Although the distance is great, it has a dollar a ton in its favor in the expense of mining. Several roads are now being built connecting these mines with lake navigation. Of all the projected routes to the Perry county coal, the one by Zanesville is the shortest.

DISTANCES FROM LAKE PORTS BY RAIL TO THE PRINCIPAL COAL FIELDS.

Cleveland to

Miles.		Miles.
Coventry.....	45	Salineville..... 88
Canton.....	64	*Steubenville..... 121
Silver Creek.....	60	Sandy Lake by Ashtabula..... 115
Millersburgh.....	87	*Youngstown..... 66
*Massillon.....	63	Sharon, Pa..... 80
Massillon by Grafton.....	74	*Straitsville, Perry County, by Zanesville 176
Atwater.....	56	

Toledo to

Miles.		Miles.
Silver Creek.....	124	Youngstown..... 179
Massillon.....	139	*Sunday Creek..... 176

Fairport to

Miles.	Miles.
Youngstown.....	65

Ashtabula to

Miles.	Miles.
Sandy Lake.....	64

Sandusky to

Miles.		Miles.
Silver Creek.....	79	Youngstown..... 128
Massillon.....	96	Shawnee Run by Newark..... 160

Eric, Penn., to

Miles.		Miles.
Greenville.....	63	*Sharon..... 71

Black River to

Miles.		Miles.
Silver Creek.....	58	Youngstown..... 101
Millersburgh by Wooster.....	76	Straitsville..... 170
Massillon.....	76	

*Furnace coal.

These distances are not in all cases taken from surveys or railway guides, and may be subject to slight corrections.

ORIGIN OF THE IRON BUSINESS.

The enterprising settlers of the Western Reserve were also the pioneers of the iron business of this State. Clendenin, Montgomery & Mackay, of Youngstown, built the first furnace in Ohio, at the mouth of Yellow Creek, on the Mahoning, in 1808, within ten years after the settlement of that region. Before that time all the castings and all the bar iron required on the Reserve was, like the grindstones, brought from great distances, at a heavy expense. Iron was almost a precious metal. This establishment was what is called among iron masters a "pocket furnace," eight feet across the boshes, and about thirty feet high. It stood like all the old furnaces, against a bluff, and was charged over a bridge built from the bank to the top of the stack. Its ruins are still visible a short distance below the Mt. Nebo mine. It was, of course, a charcoal furnace, with cold blast, driven by water power, producing only a ton and a half

to two tons per day. In 1809, James Heaton* built a refining forge on Musquito Creek, where is now the prosperous village of Niles, in Trumbull county, for the manufacture of bar iron with charcoal, from the pig of the Yellow Creek furnace, and which produced the first hammered bars of the State. The second furnace in the State was erected on Brush Creek, Adams county, near the Ohio river, in 1811. In 1812, James Heaton built a furnace at Niles. Daniel Eaton & Sons, in 1813 purchased the Yellow Creek furnace, and also built another on the same creek, at the falls, two or three miles above. Thirty years afterwards the business of making iron, with bituminous coal, in a raw state, in the United States, originated in this vicinity. The history of this great industry is worthy of attention. About 1816, Aaron Norton, of Middlebury, near Akron, put a charcoal furnace in blast, using a water power half a mile above the village. In 1819, Asaph Whittlesey built a forge on the Little Cuyahoga, a mile and a half below Middlebury, where the present railways cross that stream.

The new business soon began to develop rapidly in the Lake Shore region. Along the northern slopes of the sand ridges, which lie near to and parallel with the shore, are frequent beds and bunches of bog iron ore, deposited from springs that issue from the ridges. It is a lean ore of about 25 per cent., but makes a soft and valuable metal, especially for castings. Most of it was run into stoves, kettles and other hollow ware for domestic uses. These establishments are now in ruins, and their localities have passed from the public remembrance. As most of their proprietors needed capital, and however energetic they may have been most of them were unfortunate in the results, I will do something to preserve their memories, by inserting a condensed abstract of the owners and situations of the old charcoal furnaces of the Reserve. They were not then, as iron works are now, a presage of personal wealth and position. With the pioneer iron men it was an experience of toil, perplexity and risk, that more often ended in pecuniary ruin:

STATEMENT OF THE EARLY COLD BLAST FURNACES AND FORGES, OF THE WESTERN RESERVE, OHIO, WITH THE DATE OF ERECTION, LOCATION, NAMES OF BUILDERS AND OWNERS, AND WHEN ABANDONED.

ERECTED.	ABANDONED.
1808—Yellow Creek, Trumbull county, Mackay, Montgomery & Glendenin.	
1809—Musquito Creek (forge), Niles, Trumbull county, James Heaton	1845.
1812—Musquito Creek (fuanace), Niles, Trumbull county, James Heaton	1857.
1813—Yellow Creek Falls, Dan. Eaton & Sons.....	1833.
1816—Middlebury, Portage county, Aaron Norton.....	1842.
1819—Little Cuyahoga (forge), Asaph Whittlesey	1850.
1824—Geauga Furnace, Painesville, Incorporate Company, in operation till recently.	

* Heaton was the son of Eaton.

ERECTED.	ABANDONED.
1825—Concord, Lake county, Incorporate Company, destroyed by fire.	
1825—Perry, Geauga county, Thorndike & Drury.....	not known.
1825—Madison, Lake county, Root & Wheeler.....	“
1832—Madison, Lake county, Clyde Company.....	“
1832—Elyria, Lorain county, Herman Ely.....	1835.
1832—Conneaut, not known.....	not known.
1832—Elyria (forge), Norton & Barnum.....	“
1834—Dover, Cuyahoga county, Barber & Hoyt, Cuyahoga Steam Furnace Company—run until recently.	
1834—Florence, Huron county, Ford, Wilkinson & Co.	1840.
1835—Mill Creek, near Youngstown—net known.....	1850.
1835—Middleburg, Cuyahoga county, near Berea, D. Griffith & Co.....	1850.
1840—Akron, Ford, Todd & Rhodes	1855.
1840—Valley Forge, below Cuyahoga Falls, D. J. Garrett & Co.....	1845.

CHANGE FROM CHARCOAL TO MINERAL COAL.

In July, 1845, Himrod & Vincent, of Mercer county, Pa., blew in the Clay Furnace, not many miles from the Ohio line, on the waters of the Shenango. About three months afterwards, in consequence of a short supply of charcoal, as stated by Mr. Davis, their founder, a portion of coke was used to charge the furnace. Their coal belongs to seam No. 1, the seam which is now used at Sharon and Youngstown, in its raw state, variously known as free burning, splint or “Block Coal,” and which never makes solid coke. A difficulty soon occurred with the cokers, and, as Mr. Himrod states, he conceived the plan of trying his coal without coking. The furnace continued to work well, and to produce a fair quality of metal. It was either a happy accident or a fortunate experiment.

At the same time Messrs. Wilkinson, Wilkes & Co. were building a furnace on the Mahoning, at Lowell, Mahoning county, Ohio, intended to use mineral coal from seam No. 1, on which they owned a mine, near Lowell.

A sharp correspondence occurred, in 1869, between the partizans of the Clay furnace, and those of the Lowell furnace, as to their priority in the use of raw coal. The credit of making the first iron with raw bituminous, or sem-bituminous, coal, in the United States, belongs to one of these firms. An account of the blowing in of the Lowell furnace, on the 8th of August, 1846, may be seen in the *Trumbull Democrat* of Warren, dated August 15, 1846, where it is stated that to “these gentlemen (Wilkinson, Wilkes & Co.), belongs the honor of being the *first persons in the United States* who have succeeded in putting a furnace in blast with *raw bituminous coal.*” According to Mr. Wilkes, writing from Painesville, April 2, 1869, this furnace was run with coke several months, but at what time he does not state. It is admitted that Mr. David Himrod, now of

Youngstown, produced the *first metal*, with raw coal, about the close of the year 1845, and has continued to use it ever since. The friends of Wilkinson & Co. claim that it was an accident, and a necessity, while their works were built and intended for raw coal. Without attempting to settle the question to whom belongs the most merit for this first success, all iron masters, and every one who takes an interest in the enormous business which has risen from the enterprise and intelligence of these firms, must feel willing to regard them as public benefactors. There are said to be at the present time thirty-seven (37) furnaces, nearly half the number there is in Ohio, working on that fuel, on the waters of the Mahoning and the Shenango. Most of them have business relation with Cleveland. The metal produced is largely from Lake Superior ore; and, for variety of uses, has not its equal in quality in any part of the world, excepting only iron made with charcoal, from similar ores. That made with coke must, of necessity, be inferior in grade; but for rails and many other uses, there is a large market for second and third class metal.