

of the Cleveland iron trade, but has assisted the development of kindred trades and increased the general prosperity of the nation. Improvements in metallurgical processes have in many instances been brought about of necessity rather than by choice, and with a view to meeting the fierce competition of other countries.

In the early half of the nineteenth century there were thirty-three small blast furnaces at work in the Middlesbrough district, obtaining their ore from the coal measures in Durham, and to a small extent from Cleveland in the North Riding of Yorkshire. The latter was called Whitby stone, and was picked up in nodules at the foot of the cliffs near that town, having fallen from the outcrop on the cliff sides. An old authority, Bewick, says in his book that, "with a view to turning the mineral deposits, freestone, whinstone and ironstone in the vicinity of Grosmont to a good and profitable account and create traffic for the railway, twenty-four of the leading gentlemen of Whitby originated the Whitby Stone Co., and commenced working mines and quarries." In 1836 the first consignment of ironstone from Grosmont was sent by the Whitby Stone Co. to the Birtley Iron Co. In the following year serious mining operations were commenced which, with few interruptions, have continued until a few years ago. In 1837 the Wylam-on-Tyne Iron Co. took ore royalties from the Marquis of Normanby; in the following year it began working at Kettlethorpe and Staithes, and in 1839 at Grosmont. Up to 1843 there were but five furnaces in the Durham district using only Cleveland stone. In that year another firm, Losh, Wilson & Bell of Tyneside, began to use that ore. In the year 1846 Ferdinand Bolckow and John Vaughan (founders of the great firm of Bolckow Vaughan & Co.) became large consumers of the Grosmont stone, and as much as 30,000 tons were raised there in one royalty alone. After 1846 the whole of the iron works