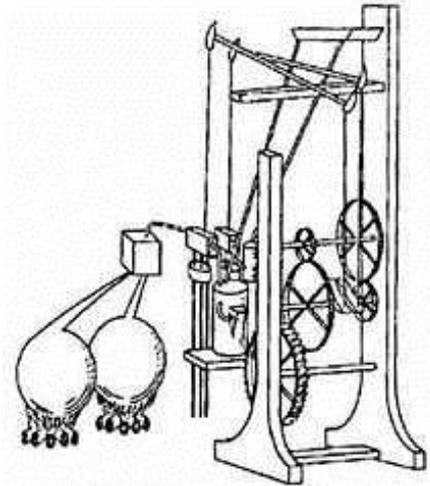


## John Barber (Inventor). Resident of Weddington Castle in the 1780s

John Barber took out a number of patents, most memorably for a gas turbine in 1791 (*sketch pictured right*).

### General

One source states that he was born on 22 October 1734 at Greasley, Notts, the son of Francis Barber (coalmaster) and Elizabeth Fletcher. Went bankrupt c.1784 and moved from Stainsby House, evidently to Attleborough, Nuneaton, where he died on 6 November 1801. Obtained his first patent in 1766. His patents of 1773 and 1792 concerned smelting, while another in 1776 related to an impulse steam turbine. His best known patent, of 1791, involved a gas turbine.[1]



Although his patents are well-documented, there is some uncertainty about biographical information. One contemporary report, which credibly relates to the inventor, gives his date of death as 1793, not 1801:-

1793 'Lately died at Attleborough, John Barber, Esq; formerly of Hansby-House [?Stainsby House], in Derbyshire. He was a man of universal knowledge. In his death the world has lost a sound philosopher, an eminent mineralist, and a great mechanic ; and who expended an ample fortune in benefiting mankind. His decease is greatly lamented by the indigent in general, as he was upon every occasion a liberal benefactor. His remains were interred at Monyash, near Buxton, in the family vault of the Goodwins, of that place, into whose family he intermarried.' [2]

### Various References to John Barber

Given the references to two different dates of death, we must recognise the possibility that there was another John Barber, concurrently engaged in similar activities in the English East Midlands. Investigation is made difficult by the broad extent of Barber's business and property interests, and his changes of location. The following references have sufficient common factors to give confidence that they relate to the same John Barber, inventor and mine owner, and that he died in 1793, not 1801.

One source identifies John Thomas Barber Beaumont, English coalmaster and inventor, and states that he was born in Nottinghamshire, but moved to Warwickshire in the 1760s to manage collieries in the Nuneaton area. For a time he lived in Camp Hill House, and later lived in Attleborough. He patented several inventions between 1766 and 1792, of which the most remarkable was one for a gas turbine. Barber was the first person to describe in detail the principle of the gas turbine, and in recent years a working model based on Barber's specification has been built. The source gives his date of death as 6 November 1801[3]

Memorial inscription: 'John BARBER, Esq, formerly Stansby House, County of Derby, married Martha eldest daughter of George GOODWIN, of Moneyash, Gent

Died 17 June 1793, 58

His widow, tenderly respected the memory of a beloved husband has caused this monument to be erected.' [4]

1771 Articles of purchase made between John Barber of Stainsby and Richard Lowe of Locko Park for Heanor and Langley Colliery, Derbyshire, 31 December 1771 [5]

In 1776 Johann Jacob Ferber, German mineralogist, toured Derbyshire. He observed two steam engines at Stainsby and Simonfield, One was the invention of Mr Barber the proprietor of the mine, which differed a little from the 'ordinary' engine. 'John Barber became bankrupt in 1784 and the whole of his Smalley estate was placed on the market. Also owning property in Nuneaton, Warwickshire he moved away from Derbyshire. Stainsby House was purchased by the Sitwell family.' [6]

1782 'On Thursday died, at his House in the Friar Gate, in a very advanced Age, Mr. Barber, Father of John Barber, Esq formerly of Stansby in this County. [7]

1783 Reference to 'Dividend Payment' by 'John Barber, of Wedington the County of Warwick, Miner, Dealer in Coals, Dealer and Chapman; at Guildhall, London.' [8]

1789 Advertisement for the sale by auction of 'A VERY VALUABLE FREEHOLD ESTATE belonging to John Barber, Esq; and situate at Smalley....' The property included land, buildings, 'A new overshot Water Corn-Mill, with three Pair of Stones, and Dresing-Mill, together with a Mill Dam and Damstead', a 'one fifth Part of the Manor or Royalty of Smalley, Morley, and Kiddersley. .... The Coal, Iron-Stone, and other Minerals, within the above-mentioned Lands, and the Wastes and Commons belonging to the said Manor, are not included in the above mentioned Lots.' For Particulars apply to ABRAHAM BRACEBRIDGE, Jun. Esq; Atherstone; JOHN BARBER, Esq; Drayton-Hall, or to Mr. OWEN, Attorney, in Atherstone. [9]

1789 Advertisement concerning Haunch-Wood Colliery near Nuneaton, advertising the sale of leasehold rights and interests of John Barber of and in coal mines at Nuneaton and Chilvers Coton. On the premises were a 'good new steam engine' with a cylinder of 4 ft bore and 9 ft stroke. Apply to John Barber at Drayton, Leics., or Mr Owen, Attorney, at Atherstone [10]

1790 'Mr. JOHN BARBER'S BANKRUPTCY. ALL Perfons having any Claims or Demands upon the Estate and Effects of Mr. JOHN BARBER, late of Weddington, in the County of Warwick, but now of Drayton, in the County of Leicester, Miner and Coal-Dealer, are desired to send a Particular thereof to Mr. OWEN, Attorney in Atherstone, on or before the first Day of May next, in order that the same may be finally adjusted and settled. Atherstone, March 20th, 1790.' [11]

1790 Advertisement: 'WANTED, at Nuneaton Colliery, One Thousand Feet of good ASH or ELM TIMBER, sawed into Scantlings of four Inches square, and delivered at the Colliery Wharf, near Nuneaton, 11 Miles from Coventry. Any Person willing to contract for delivering the same in a given Time, and to be paid for upon Delivery, may be treated with, applying to Mr. John Barber, at Attleborough, near Nuneaton, Warwickshire, either personally or by Letter. N. B. A large Quantity of good OAK. POSTS, six Feet long, are also wanted.' [12]

1817 Regarding Stanesby or Stainsby House: Sold to John Fletcher in 1712. In 1783 it was 'purchased of the assignees of his nephew and devisee, John Barber by Samuel Buxton....' [13]

1905: Regarding Stainsby: 'It afterwards became the property of the Fletchers, who were colliery owners in the neighbourhood. From them it passed to the Barbers, as appears from a mural monument to the Fletchers in Horsley Church. John Barber, living at Stainsby in 1767, was the son of Francis Barber, Esq., of Gresley, by Elizabeth, sister of Robert Fletcher, of Stainsby, who died in 1731, and the daughter of Robert Fletcher, of Kilbourne, who died in 1711.' [14]

## **Patents**

1792 'A method of smelting and purifying Fossil-Coal, Iron-Stone, Iron-Ore &c., by Steam, Air and Fire, and impregnating the same with inflammable air, thereby producing a tough metal. Dated Dec 22, 1792' [15]

## **Gas Turbine**

In 1791 Barber took out a patent (UK patent no. 1833 – *Obtaining and Applying Motive Power, & c. A Method of Rising Inflammable Air for the Purposes of Procuring Motion, and Facilitating Metallurgical Operations*) which contained all of the important features of a successful gas turbine. Planned as a method of propelling a "horseless carriage", Barber's design included a chain-driven, reciprocating gas compressor, a combustion chamber, and a turbine.

Barber's turbine was to burn gas obtained from wood, coal, oil, or other substances, heated in a retort or producer, from where the gases were conveyed into a receiver and cooled. Air and gas were then to be compressed in different cylinders and pumped into an "exploder" (combustion chamber) where they were ignited, the mixture of hot gas then being played against the vanes of a paddle wheel. Water was to be injected into the explosive mixture to cool the mouth of the chamber and, by producing steam, to increase the volume of the charge.

Barber's concept was sound, but given the technology of that day, it was not possible for the device to create sufficient power to both compress the air and the gas and produce useful work. Nevertheless, the credit for the idea that leads to the modern gas turbine can clearly be given to John Barber. In 1972 the Bonn firm Kraftwerk-Union AG showed a working model of Barber's turbine at the Hannover Fair.

### Sources of Information

[1] 'Biographical Dictionary of the History of Technology' edited by Lance Day and Ian McNeil, 1996

Leeds Intelligencer, 30th September 1793

[2]DMG-LIB website

[3] 'Some Memorial Inscriptions - Monyash, Derbyshire: St Leonard's Churchyard and Roll of Honour'

[4] DocumentRef Dr E 4/21

[5] Mapperley Village website: 'Simonfield to The Brook': Lecture and Presentation by Roger Wood, 2013

Derby Mercury, 13 June 1782

Manchester Mercury, 18 November 1783

Derby Mercury, 12 March 1789

Oxford Journal, 2 May 1789

Derby Mercury, 18 March 1790

Northampton Mercury, 25 December 1790

[6] 'Magna Britannia', Vol 5 Derbyshire, by D & S Lysons, 1817

[7] 'Smalley in the County of Derby: Its History and Legends.' London: Forgotten Books. (Original work published 1905)

[8] The Repertory of Arts and Manufactures Vol VIII, 1798

'Internal Fire; the Internal Combustion Engine, 1673-1900' by Lyle Cummins, Carnot Press, 2000