

Keeping up with the Dixons: The inscribed garden wall bearing the name George Dixon and the date 1784, where Dixon first hung his gas lights in what may have been the first example of one-upmanship between neighbours

From star-gazing to canal digging

POSSIBLY the most remarkable job interview ever took place before the Royal Society's astronomers at the Royal Woolwich Academy in 1760.

They were looking for a bright young man, well-qualified and deeply studied, to send to the Far East with some of their best brains to study the orbit of the planet Venus.

Before them sat 27-year-old Jeremiah Dixon. He may even have been wearing his shirt back to front – Jeremiah's mind was so full of complicated theorems that he could not be bothered with the humdrum chore of doing up buttons – with his legs in a sack (trousers, too, were far too mundane for a chap like Jeremiah).

"Did you study mathematics at Oxford or Cambridge?" asked the academics.

"At neither place," replied Jeremiah.

"Then at what public school did you get your rudiments?" countered the experts.

"At no public school,"

Echo Memories looks at the achievements of the eccentric Dixon brothers, whose influence spread from Cockfield Fell to the New World

Jeremiah. He got the job, and soon set sail aboard HMS Seahorse to scan the heavens from the eastern seas.

Jeremiah (1733 to 1779) came from a long line of Dixons who had been settled in the Cockfield area since early in the 15th Century.

His great-grandfather, George (1636 to 1707), was one of the first converts to Quakerism. He also suffered, for it, being imprisoned and fined in 1662.

His grandfather, George (1671 to 1752) was steward of seneschal – or butler – to Gilbert Vane, the second Lord Barnard, at Raby Castle.

He, too, was a Quaker, and being abstemious he regularly refused to bring his lord and master more refreshment if he felt his lordship had imbibed excessively.

One evening, Lord Barnard's guests were amazed to hear of such a non-servile servant. They bet

in his humble garb. Around his head was the legend: "An Israelite, indeed, in whom there is no guile."

At the foot was a quote from Horace: "Responsare cupidinibus contemnere honores, Fortis & in seipso totus teres atque rotundus" ("strong to restrain

education came from Cockfield Fell, dabbling in the River Gaunless and experimenting in their father's pits.

Jeremiah's mind took a mathematical bent, and he got guidance from the legendary

Famous name: The signature of Jeremiah Dixon (1733-1779)

immoderate desires, lightly esteeming public honours, a self-reliant and courteous man").

The painting was last seen in Raby Castle shortly after the First World War. It seems to have left with a maid to Newcastle and then made its way in the direction of Bath.

Jeremiah's father was another George (1701 to 1755), and he owned coal pits

sundial manufacturer William Emerson, of Hurworth (see Echo Memories past).

It might even have been Emerson who provided Jeremiah with the reference which got him the interview at the Royal Woolwich Academy.

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One evening, Lord Barnard's guests were amazed to hear of such a non-servile servant. They bet £200 that it was not the case. Lord Barnard summoned the butler and demanded more wine. But George politely refused and retired.

To pay off their debt, the guests commissioned leading artist Sir Joshua Reynolds, to paint a portrait of George

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Jeremiah's father was another George (1701 to 1755), and he owned coal pits in Bishop Auckland and Cockfield.

Jeremiah's brother was yet another George (1731 to 1785), and the two boys were educated at John Kipling's Academy in Barnard Castle.

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sundial manufacturer William Emerson, of Hurworth (see Echo Memories past).

It might even have been Emerson who provided Jeremiah with the reference which got him the interview at the Royal Woolwich Academy.

Jeremiah left aboard HMS Seahorse in the autumn of 1760. The mission was under the direction of Nevil Maskelyne, who later became Astronomer Royal. It also included the brilliant Charles Mason, with whom Jeremiah became intimately acquainted.

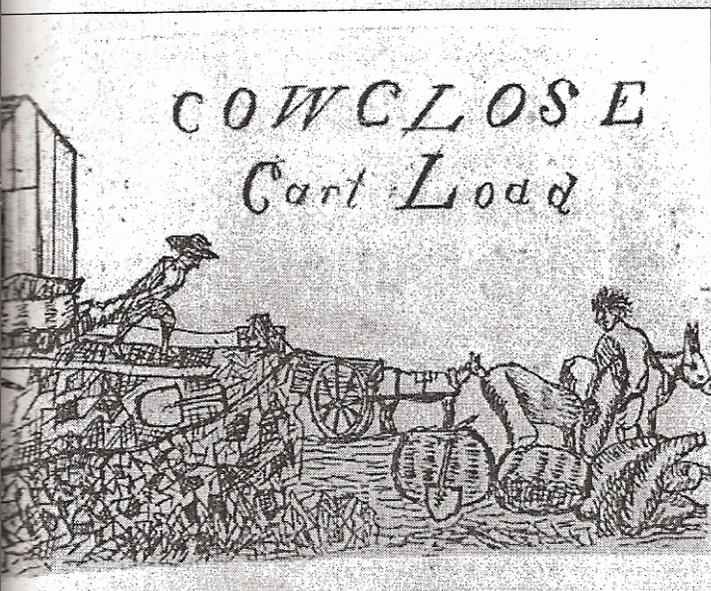
But as soon as they left Plymouth, the brave

to put back to sea until the Royal Society demanded its £800 advance back and said that his name would forever be sullied in astronomical circles.

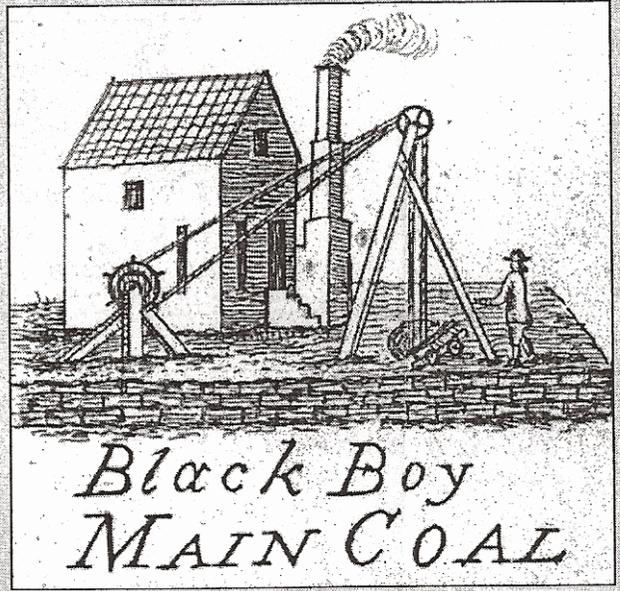
He set out again, but because of the delay there was not time to reach Sumatra, as planned, and the astronomers ended up in the Cape of Good Hope to observe Venus pass in front of the sun.

Clever calculations told them much about the respective sizes of the planets and, more importantly, the curvature of the Earth, so that longitude and latitude could be determined more accurately.

After this success, in August 1763, he set out with his new friend Mason to survey the disputed boundary between the states of Pennsylvania and Maryland, in America. Pennsylvania was a free state; Maryland was a slave-owning state. Following the 39° 43' line of latitude, they



Artistic record: Drawings believed to be by Jeremiah Dixon, possibly showing the collieries owned by his family. Black Boy was probably at Eldon, in the Dene Valley



English girls were beaten hands down, even when they arrived for what they expect- ed to be a gentle football match. Her parents, Chris and daughter's dedication to the

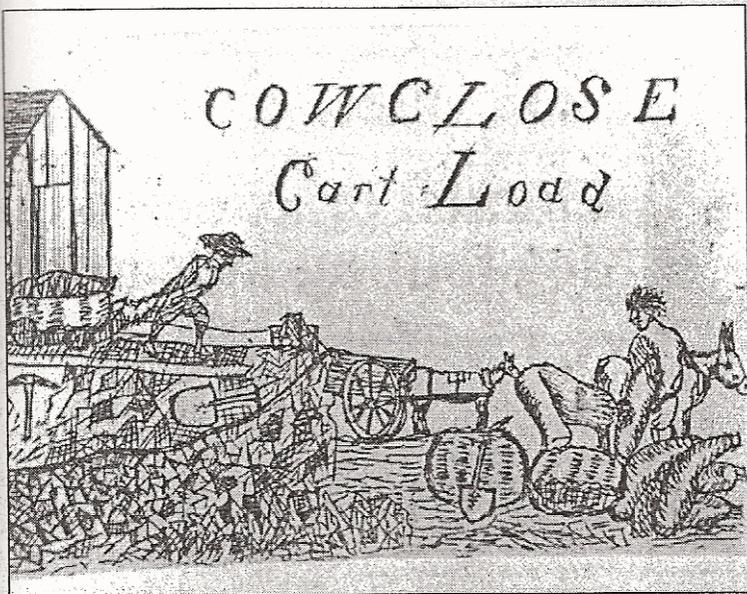
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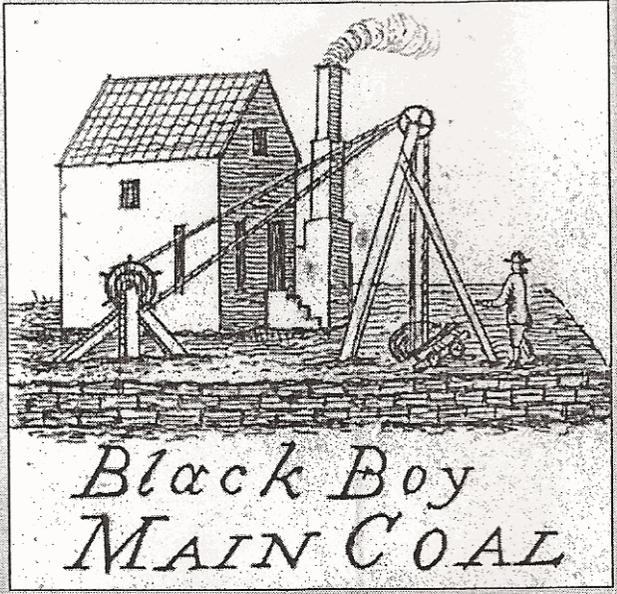
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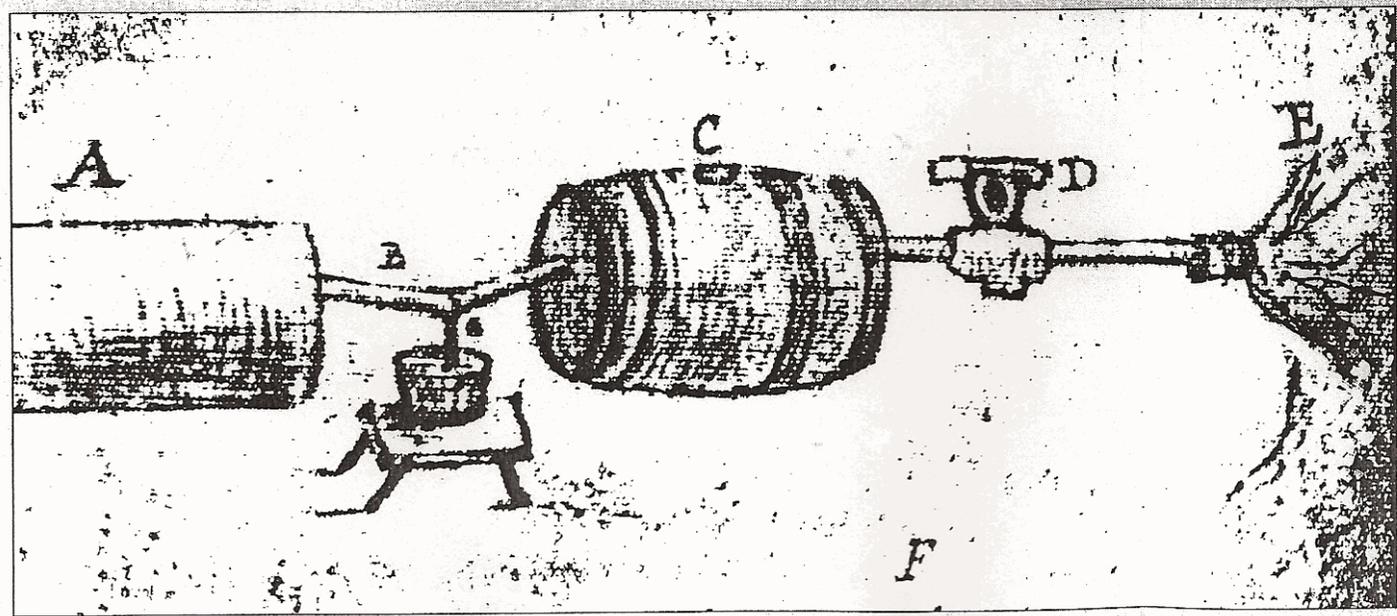
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Pilot project:
Above, the
reed-lined
remains of
George
Dixon's 1766
canal
experiment
can still be
seen on
Cockfield Fell



**Advanced
design:**
Right, a
diagram
showing how
George Dixon
produced
'inflammable
gas' from
coal in about
1760



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Light fantastic? Garden House, Cockfield, which may well have been the first house in the world illuminated by gas. George Dixon did his experiments here in the cellar

ECHO MEMORIES



BY CHRIS LLOYD

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astronomers came under attack from a French frigate which killed 11 and wounded 38 of their crew, and drove Seahorse back to port.

Sore afraid, Dixon refused to put back to sea until the Royal Society demanded its £800 advance back and said that his name would forever be sullied in astronomical circles.

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Clever calculations told them much about the respective sizes of the planets and, more importantly, the curvature of the Earth, so that longitude and latitude could be determined more accurately.

After this success, in August 1763, he set out with his new friend Mason to

drove an eight-yard wide swathe through the forests, marking each mile on the boundary with a stone.

The boundary between the states is 312 miles long, but Mason and Dixon only surveyed 240 miles before they were driven away by hostile Indians in November 1767.

They had done enough, however, and the Mason-Dixon Line became the axis around which the American Civil War (1861 to 1865) was fought.

To the negro slaves in the South, the free land to the north of the line was known as Dixie's land. They sang "I wish I was in Dixie", and their new form of music became Dixieland jazz.

It is easy to say which side of the line Jeremiah was on. While going about his surveying, he came across a slave driver mercilessly beating a poor black woman. "Thou must not do that!"



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"Thou must not do that!" he shouted. "You be damned! Mind your own business," came the reply.

"If thou doesn't desist, I'll thrash thee!"

Tall and powerful, Jeremiah seized the slave-driver's whip and gave him a sound thrashing. When he returned to Cockfield, the whip came too, and was one of the Quaker family's treasured possessions.

Jeremiah had one last overseas adventure, in 1769, when he sailed to the island of Hammerfest, to the north of Norway, for more observations of the transit of Venus.

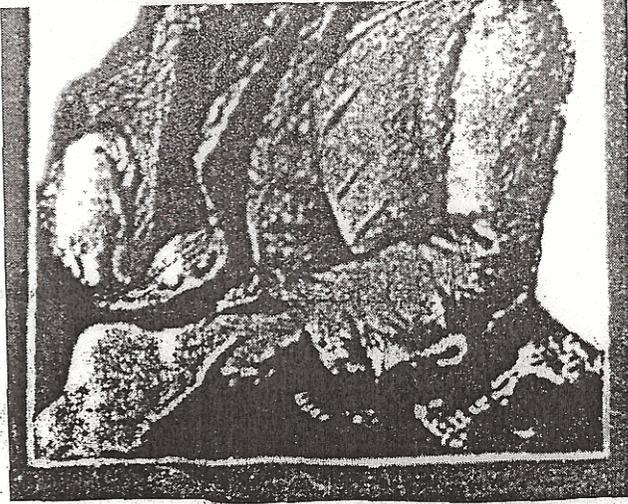
Then he retired to Cockfield. He kept his eye in, surveying the park of Auckland Castle and Lanchester Common. But he died, unmarried, aged 46, still wearing the red cloak of the Royal Woolwich Academy that had replaced his back-to-front shirt and sacking trousers when he got his first job in 1760.

AS FASCINATING as Jeremiah is, it is his brother, George, who is more pertinent to Echo Memories' series on Cockfield Fell.

George's wanderlust took him as far as London, where he earned a living painting high-quality china in Chelsea.

He seems to have returned around the time of his father's death, in 1755, to take over the family's pits. He began experimenting with new markets for coal, and his first development involved mixing coal with water and then distilling it to make coal tar, which he sold to the shipbuilders of Sunderland, who used it to make their boats watertight.

A by-product of this was that he noticed that when coal was boiled in water it gave off a gas. In the cellar of



Inventive mind: George Dixon (1731-85), of Garden House, Cockfield

running in "pipes" around his room. He made pinpricks in the pipes and lit the gas with a candle.

This event, in 1760, was probably the first time anywhere in the world that gas had been used for illumination. It was not until 1792 that William Murdock, of Redruth, Cornwall, patented the invention of coal gas lighting.

Today, Murdock is hailed as the father of the gas industry, not George Dixon, who history has quietly put on the back-burner.

Anyway, George had had a nasty experience with his invention.

He had dreamed of lighting his collieries and so devised an experiment with huge metal kettles boiling the coal and large pipes running the gas about Cockfield Fell. Soon he had a large illuminating gas flare coming from a hole in a pipe.

"To extinguish this," wrote his nephew and eyewitness John Bailey, in 1810, "he struck at it with his hat. The flame was driven inwards, the gas in the inside of the apparatus took fire as quickly as gunpowder and exploded with a report like a cannon, driving a wooden plug to a great distance and exhibiting a cylindrical body of fire several yards in length. The heavy cast-iron metal pumps were removed from their places.

"From this time he considered his project of lighting collieries and rooms with gaslights as very dangerous, and I record this experiment with a view that it may probably be a useful hint to those who are at present engaged in similar projects of lighting manufactories and great towns with a material so subject to explosion."

Instead, George exercised his mind with transport

Canal mania was growing in Britain, and George started digging a trial stretch on the top of Cockfield Fell.

He sailed a flat-bottomed barge on it, and was so excited he called his landlord, Lord Barnard of Raby Castle, to have a look.

George's dream was to connect Cockfield by canal with the River Tees, near Winston. But Lord Barnard would not stump up the cash, so George called a meeting of entrepreneurs in the Post House, in Darlington.

That meeting came up with a plan for the Winston to Stockton canal, with a huge docks at Cockerton, and a branch up to Cockfield. Money prevented it ever being dug, but for the next 50 years various similar schemes were proposed to get South-West Durham's coal cheaply to the sea.

One, in 1818, even suggested draining the Gaunless and creating a huge reservoir near Cockfield which would feed the locks of a canal system. Another, around the same time, suggested joining Evenwood with Rushyford and then digging a trench east to Stockton.

But all these watery ideas became history when, in 1818, another plan was aired suggesting that a railway would be a better, more permanent way. Cockfield Fell was one of the first places to be connected.

OF COURSE, so much history from so long ago is apocryphal. While it would be nice for Cockfield Fell to claim that one of its sons was the inspiration behind Dixieland jazz, played by Louis Armstrong and Jelly Roll Morton, the derivation

campsite - trailers and all - with their bare hands. After a second week spent climbing one of the country's highest mountains, Murlanje, "It was really touching to further questions. Some of the group who had been being approached by mummies they were visiting a ragged sleeves in school buildings - if they had them. One community did not. "I've ne pleased. But Caroline said: "Because the following day, they were really touching to further questions. Some of the group who had been being approached by mummies they were visiting a ragged sleeves in school buildings - if they had them. One community did not. "I've ne pleased.

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A by-product of this was that he noticed that when coal was boiled in water it gave off a gas. In the cellar of Garden House - which still stands - he connected the hollow stalks of a giant hemlock plant to his kettle, and soon had the gas

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Expensive transport halted his trade of coal tar to Sunderland and it prevented him from selling his coal as far afield as he wanted.

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Lasting tribute:
The Dixon memorial in the centre of Cockfield. The stone trough was removed from Cockfield Fell in 1983