MR NEWCOMEN'S FRIEND: DR JOHN ALLEN (1660–1741) OF BRIDGWATER

BY A. P. WOOLRICH

To most readers the early history of the stationary steam engine is probably a closed book. They will know of James Watt and possibly Richard Trevithick and if very well read may have heard of Jonathan Hornblower and Arthur Woolf. Yet men such as these were improvers of a machine which was introduced by Savery and Newcomen early in the eighteenth century. Recent scholarly attention has been directed to the very early years of the invention's history, which is beginning to bring to light information about the pioneers and their circle.

A shadowy figure in this circle was John Allen, a doctor practising in Bridgwater, Somerset. He was born in about 1660, but who his family were is not known and no details survive of his education and training, which probably occurred in a Scottish or Continental university since Oxford and Cambridge offered no training in medicine then. He first appears in the record in 1692 when he was admitted as an extra-licentiate of the College of Physicians of London. He eventually returned to Bridgwater and gained a considerable reputation. He distilled his experience in a book *Synopsis Universae Medicinae Practicae*, published in 1719. In this he printed a compendium of disease, noting the various treatments specified by the classical writers and adding more details from his own experience.

Allen's publications and a few letters are almost the only source for his biography. He was a Whig, and his politics brought him into contact with John Oldmixon, (1672–1742) Collector of Customs at Bridgwater, who had been given his sinecure as a reward for his journalism in the Whig and Hanoverian cause. They were active in Bridgwater and ran into trouble with the Mayor and Corporation—all Tories. In March 1718 both were brought before the magistrates in order to give evidence against local people who had been taking part in the 'High Church and Ormonde' troubles.[1] This was an unsuccessful movement to invade England with troops led by James Butler, second Duke of Ormonde (1665–1745) and was supported by the Jacobites.

Allen and later Oldmixon were involved with the Duke of Chandos in his building schemes in the town, in particular the construction of what today is called Castle Street, with its fine terraces of red-brick houses. (fig 1) Allen was the purchaser of one of the first completed houses in Castle Street. (fig 2) He was also involved in helping Oldmixon in his research for his historical writings.[2]

Like many educated men of his time, Allen was greatly interested in science, or natural philosophy as it was known then, and it was this interest which brought him into contact with the Newcomen circle.

When their friendship started is not known nor the events which led up to it, but a major factor which probably threw them together was the geographical location of Bridgwater (fig

Fig. 1 Dr John Allen by Van der Gucht. By courtesy the Royal College of Physicians.

3) situated midway between Devon, where Newcomen was in business as an ironmonger at Dartmouth, and the industrial midlands where the first engines were erected and from where Newcomen obtained his castings. At that time there was an extensive network of waterborne transport down the Severn to the ports of the Bristol Channel. It would have been a relatively simple journey for Newcomen to travel overland from Devon to Bridgwater, which was on a by-road of the main post road from London to the West of England which passed through Wells and Taunton. There he could transfer to one of the many small boats known as trows which sailed through the Bristol Channel and the Severn Valley as far as Welshpool, giving access to Bristol as well as Coalbrookdale and Bromsgrove where parts for the early atmospheric engines were cast.

The eldest son of Newcomen, also Thomas, was a sergemaker at Taunton, and his uncle,

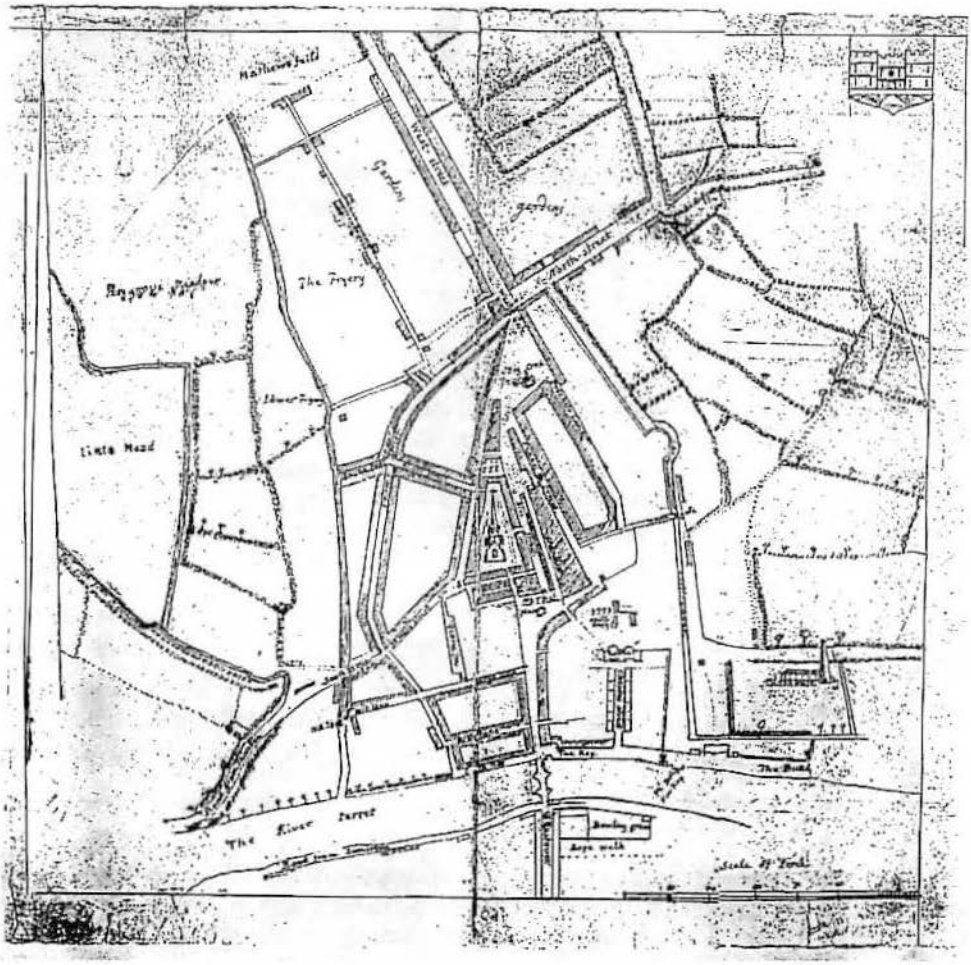


Fig. 2 Bridgwater in Dr Allen's time, c 1720. Somerset Record Office. DD/SH/C/202. Castle stocks runs up for the river in the bottom right of the map, with the castle remains above it.

John, brother to Thomas I, was an apothecary of Chard. The elder Newcomen was a frequent visitor to his family in Somerset, and it is possible he came into contact with Allen by this means, especially if John Newcomen of Chard was a contact of Allen's on medical matters.[3]

This geographical coincidence is not the only point where the Allen and the Newcomen circle met. Newcomen's engines were marketed from 1715 by an unincorporated joint stock company known as the Committee of the Proprietors of the Invention for Raising Water by Fire, whose managing committee included London merchants and leading Baptists. Its first treasurer—or managing director—was Edward Elliott, pastor at Wapping and formerly at Bridgwater from 1694–1704, who would have known Allen. On his death in 1717 his place on the committee was filled by another London pastor, Newcomen's friend Edward Wallin; and the post of Treasurer was assumed by Savery's friend John Meres, Clerk of the Worshipful Society of Apothecaries.

Another link is that Newcomen's partner, Thomas Savery, was appointed in 1705 as

Treasurer of the Admiralty's Commission for Sick and Wounded Sailors. This involved Savery acting as a travelling paymaster, visiting the various ports, such as Bridgwater, where needy sailors were given relief from the fund. The local representative of the fund was often the local doctor or apothecary, and it is entirely possible that Allen joined the Newcomen circle through his professional contacts with Savery. There is no evidence so far discovered that the Commission operated in Bridgwater, and Alan Smith is of the view that Allen and Newcomen were more likely acquainted through Newcomen's family, trading or Baptist connections with Bridgwater.[4]

Yet another link may be through the activities in Bridgwater of James Brydges, Duke of Chandos, (1673–1744). He became wealthy through his sinecure in 1705 as Paymaster to Britain's overseas forces, and invested in many of the leading money-making projects, survived the Mississippi crash and the South Sea Bubble, dabbled in theatres, coal mines, soap works, glass factories, oyster fisheries and many other projects. In 1721 he bought the site of Bridgwater Castle for house building and invested in the construction at Bridgwater of manufactories of soap, cloth, rope, glass bottles, the establishment of a shipbuilding yard and distillery. Between 1726–28 John Oldmixon was appointed by the Duke as his local agent and Allen became involved, already being a longstanding correspondent of the Duke. The Duke of Chandos was a Governor of the York Buildings Water Works, in London, and had as his chaplain Revd. J. T. Desaguliers FRS (1683–1744) Demonstrator to the Royal Society and a member of the Newcomen circle.

Allen was something of an inventor. In 1716 he sent details of a ship's log he had invented to the Royal Society, and in 1726 he developed a carriage with steel springs. *Brice's Weekly Journal*, an Exeter paper for 3 February 1727 described it:

> Dr Allen, a noted physician of Bridgwater, has invented and perfected a chariot, which goes on steel springs, and is drawn by two horses, having a door behind, will hold four persons besides the Coachman, is not liable to be overturned, but will travel with a pair of horses sixty miles a day, with as much ease as a common chariot with six can in twenty, carrying the same number of people.

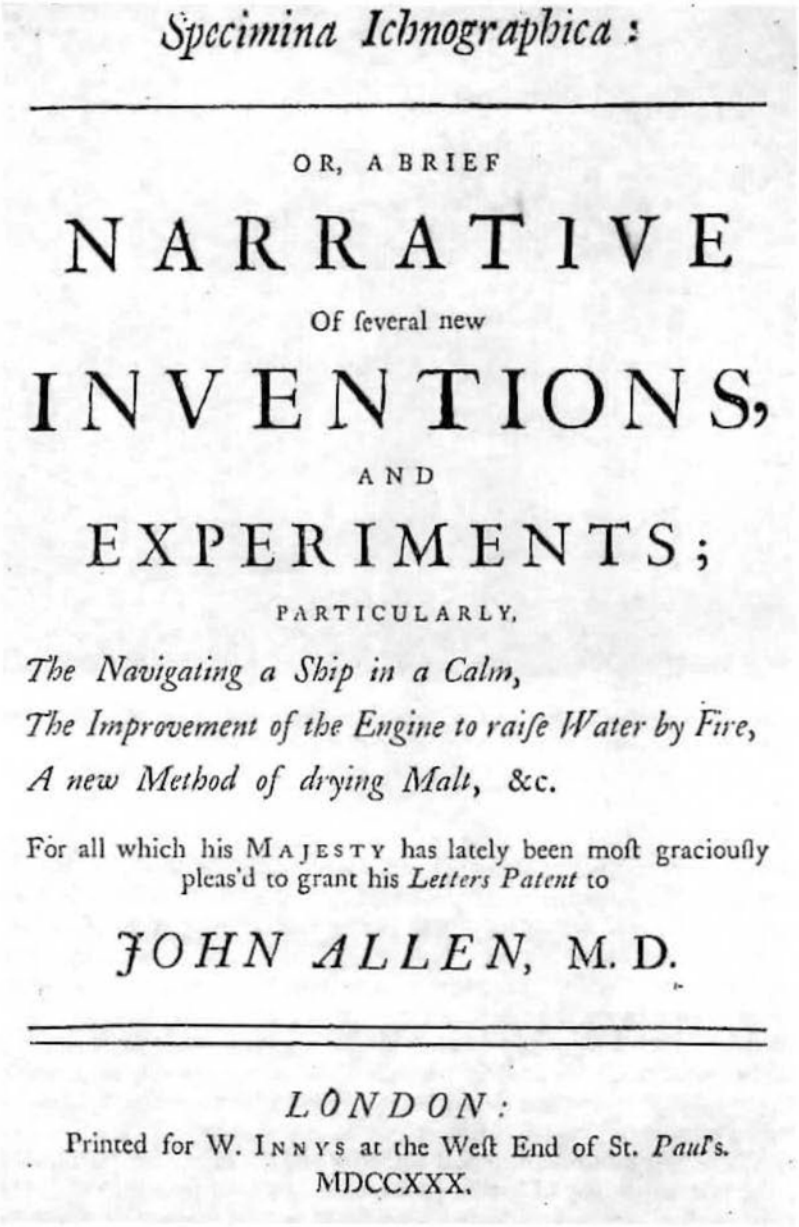
In 1729, Allen obtained a patent (No 513) for three inventions: the first was an improvement to the design of steam boilers and included a comparison with the boiler of the engines at the York Buildings Water Works; the second related to propelling ships by hydraulic pressure worked by pumps, which could be operated by hand, steam or even exploding gunpowder; and the third was a new method of drying malt to avoid damage by smoke-taint. Allen described some model tests for his second invention tried out on the River Parrett, at Bridgwater.

In 1730 he described his inventions in a book *Specimina Ichnographica*, (fig 4) and it was in this book that he described himself as being Newcomen's friend [Section 1, article 12]. It is clear from his account of the York Buildings boiler (article 7) that he had detailed personal knowledge of the construction.

Allen, living in Bridgwater, cannot have had any local experience of the atmospheric engine. The Newcomen engines were in use in the 1720's in Cornwall, the Midlands and the North Eastern coalfield. The Bristol Coalfield, about thirty-five miles away, was extensively worked, but Newcomen engines were not in use there until after Allen's death.[5]

Allen was elected a Fellow of the Royal Society in 1730 and from then on wrote a series of letters to the Society on all manner of scientific and technical matters, ranging from bridge design, gunnery, solar eclipses, geometry, to physiology.

Allen was married to Frances, the only daughter of John Gilbert who was probably the man who was elected as one of the MP's for Bridgwater in 1700, and who died in 1731. Gilbert was also mayor of Bridgwater at various times in the late seventeenth century. John Allen's wife died 29 December 1729, aged 53 and was buried in St Mary's Church, Bridg-



Specimina Ichnographica:

OR, A BRIEF

NARRATIVE

Of ſeveral new

INVENTIONS,

AND

EXPERIMENTS;

PARTICULARLY,

The Navigating a Ship in a Calm,

The Improvement of the Engine to raiſe Water by Fire,

A new Method of drying Malt, &c.

For all which his MAJESTY has lately been moſt graciouſly pleas'd to grant his *Letters Patent* to

JOHN ALLEN, M. D.

LONDON:

Printed for W. INNYS at the Weſt End of St. *Paul*'s.

MDCCXXX.

Fig. 3 Title of Allen's *Specimina Ichnographica*, 1730. By courtesy of the Royal Society.

water.[6] Little is known about their children, but his son, Benjamin, (d. 1791) was elected as one of Bridgwater's MP's in 1768 and 1774 and a grandson, Jeffreys Allen (d. 1844) was Bridgwater's MP from 1787–90 and from 1796–1804, and was Receiver-General for Somerset. A great-grandson, John Roy Allen (d 1884) was Recorder of Bridgwater early in the nineteenth century.[7]

Fig. 4 Houses at the head of Chandos Street (now Castle Street), Bridgwater. By courtesy Somerset Archaeological and Natural History Library, Taunton.

John Allen died on 16th September 1741 and was buried in St Mary's Church, Bridgwater on 29 September. His portrait was later engraved by the Dutch artist Van der Gucht. It shows him in middle age, bewigged as was the fashion. (Fig 5) As well as the house in Castle Street, Allen is thought to have owned the nearby manor of Dunwear which in 1770 was held by his son Benjamin. The property descended to his son Jeffreys Allen and was later held in trust for his son John Roy.

After his death Allen's fame was assured by the continual reprinting and translation of his medical treatise. During his lifetime translations appeared in Paris and Amsterdam, and in 1730 he published a translation himself into English from the original Latin. As late as 1762 an Italian translation was published in Venice. See Appendix 1.

In time, Allen's scientific and technical activities and his links with Newcomen became forgotten. The brief biography of him in Abraham Rees's *Cyclopaedia*, Vol 1, (1802) only mentioned his medical writings, and when John Farey, jr, was making his researches for his monumental *Treatise on the Steam Engine* (1827), which dealt exhaustively with the early history, he clearly had no knowledge of Allen's existence. By the 1830's Allen's *Specimina Ichnographica* had been rediscovered by historians, and his importance was acknowledged by the inclusion of the book by the Patent Commissioners in their series of reprints of significant writings on early technology, published in 1858. A useful biography of Allen was published by George Long, *The Biographical Dictionary of the S.D.U.K* 4 vol 1842–44, and this was clearly the trigger for his inclusion in the *Dictionary of National Biography* later on.

Allen's influence on the development of the steam engine was minimal. What is of inter-

Fig. 5 Dr John Allen—Geography.

est, however, is how much he was able to assist Newcomen through his scientific knowledge. At that time there was not the rigid division which came to exist in the following century between pure and applied science, between the gentleman and the artisan. In Allen's lifetime a common interest in technology could overcome all question of social class between men like him and Newcomen. Of even greater interest is learning how a seemingly obscure country doctor could have become personally involved with those responsible for

such a significant technical development, which laid the foundations of the Industrial Revolution, and which ultimately resulted in our modern technological civilisation.

APPENDIX—EDITIONS OF ALLEN'S MEDICAL BOOK

FROM THE DNB ENTRY BY J. F. PAYNE
Latin:
London, First ed. 1719, 8vo; 3rd edition (enlarged ed 1729), 1749.
Amsterdam, 1720, 1723, 1730 (3rd ed).
Venice, 1732, 1762.
Frankfurt, 1749, 1753.
English: London, 2 vol, 1730, Trans by author 1733, 1749, 1761.
French: Paris, 1728, 1741, 1752.
German Budissin, [Bautzen], 1726.

According to the Librarian of the Wellcome Institute no work has been done on Allen's medical writings since Payne in the 1880's, so this aspect of his life needs the attentions of a modern medical historian.

ACKNOWLEDGEMENTS

I am grateful for much help from David Bromwich, Somerset Studies Librarian, Taunton, and Philip Stoyle, Reference Librarian at Bridgwater Library. Alan Smith read an early draft and provided valuable criticism. I am grateful for the ready assistance of the librarians of the Royal Society, the Royal College of Physicians and the Wellcome Institute. The archivists of the Huntington Library, San Marino, California and Northampton Record Office provided copies of the Duke of Chandos's letters to Allen. I am grateful to the photographic unit of the Royal Society of Medicine for copying the Van der Gucht portrait of Allen.

SOURCES

1) Archives
A) Huntington Library, San Marino, California
—Stowe MSS, ST 57, Vol 18, fol 370; Vol 29, fol 48; Vol 31, fol 65

B) Northampton Record Office
—Stowe MSS, ST 57, Vol 20, fol 45, 94, 152–3, 186, 225, 266
These are all copies of letters sent by the Duke of Chandos to Allen

C) Royal Society Archives
RBC.14.229
A new model for bridges over large rivers. Read 8 May 1729
RBC.18.67
A proposition in gunnery . . . Read 21 Dec. 1732
RBC.18.77
Further comments on gunnery . . . Read 18 Jan 1732/3
LBC.20.187
Enclosing Mr Milner's observations on the solar eclipse of May 2 1773. Bridgwater [sic] 7 May 1733 to Dr Stuart

LBC.22.346
Part of letter . . . concerning the quadrature of the circle . . . Bridgwater 15 May 1736 to Mr Theobold
LBC.25.139
A relation of an extraordinary distemperature of the bones. Read 8 Feb. 1738/9. Bridgwater [sic] 24 Jan 1735/6 to Dr. Stuart.

D) Somerset Record Office
DD/X/KLT IC/277
Letter to unknown correspondent from Allen dated 25 Jan 1728 [1727–28?] Concerns his sending a design for a bridge. This may be Fulham Bridge.
D/B/bw 1980
Case against Allen and Oldmixon in the High Church and Ormonde troubles, 1718

E) Bridgwater Reference Library
T. Hedley Barry. Unpublished biography of Oldmixon. c. 1970—has some material about Allen.

2) Printed sources
Abraham Rees, *Cyclopaedia* Vol. 1, 1802 (Brief biography of Allen, no sources cited)
R. Watt, *Bibliotheca Britannica*, 1824 (Mainly his medical writings)
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C. H. Collins Baker and Muriel I. Baker, *The life and circumstances of James Brydges, first Duke of Chandos*, 1949 [Chapter X]
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Dictionary of National Biography, John Allen c1660–1741 (by Joseph Frank Payne (1840–1910), physician and medical historian)
J. F. Payne, *Munk's Roll of the Royal College of Physicians* 1866
J. P. W. Rogers, 'John Oldmixon of Bridgwater, 1717–30', *Proc. Somerset Archaeological & Natural History Society*, vol 113, 1960 pp. 86–98
J. P. W. Rogers, Oldmixon, Francis Gwynn and the Prideaux family, *Somerset & Dorset Notes & Queries*, 29, 1974, pp. 54–57
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J. P. W. Rogers, 'The first life of Admiral Blake as a source for Samuel Johnson' *Somerset & Dorset Notes & Queries*, 31, 1986, pp. 244–249
J. P. W. Rogers, 'Bridgwater Politicks (1718): Daniel Defoe and a satire on John Oldmixon', *Somerset & Dorset Notes & Queries*, 31, 1986, pp. 395–402
J. D. Alsop, 'The Bridgwater election of 1720', *Somerset & Dorset Notes & Queries*, 31, 1986, pp. 103–105
J. P. W. Rogers, 'Two notes on John Oldmixon and his family', *Notes & Queries*, August 1970, pp. 293–300
K. H. Rogers, *The Newcomen Engine in the West of England* 1976
Harold Coward, 'John Oldmixon and his family—more facts and conjectures', *Somerset & Dorset Notes & Queries*, 33, 1989, pp. 104–110
John S. Allen, 'Thomas Newcomen (1663/4–1729) and his family', *Transactions of the Newcomen Society*, 51, (1979–80) pp. 11–24
Alan Smith, 'Steam and the City: the committee of proprietors of the invention for raising water by fire', *Transactions of the Newcomen Society*, 49, 1977–78, pp. 5–20

Alan Smith, 'Edward Elliott: Fire engine Proprietor', *Transactions of the Newcomen Society*, 50, 1978–79, p. 230
Alan Smith, ' ''Engines moved by fire and water'': the contribution of Fellows of the Royal Society to the development of steam power, 1675–1733', *Transactions of the Newcomen Society* 66, 1994–95, pp. 1–25

NOTES

1. SRO D/B/bw 1980.
2. J. P. W. Rogers, 'John Oldmixon of Bridgwater, 1717–30', *Proc. Somerset Archaeological & Natural History Society*, vol 113, 1960, pp. 86–98.
3. John S. Allen, 'Thomas Newcomen (1663/4–1729) and his family', *Transactions of the Newcomen Society*, 51, (1979–80), pp.11–24.
4. Letter to the writer, December 1995.
5. K. H. Rogers, *The Newcomen Engine in the West of England*, 1976.
6. Bristol Record Office, Edmund Rack's account of the church monuments in St Mary's, Bridgwater, c 1785.
7. *Burke's Landed Gentry*, 1937 ed. Entry for Allen, late of Lyngford.

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