

## **THE JOSEPH BRAMAH EXHIBITION**

### **THE BEST OF LOCKS, THE POWER OF WATER AND THE BIRTH OF PRECISION**

#### **A Celebration of Joseph Bramah in the Hawley Tool Collection and Sheffield's Kelham Island Industrial Museum**

A year-long exhibition devoted to Joseph Bramah (1749-1814) opened on the 21st April. This exhibition was made possible due to generous support from the Newcomen Society in its centenary year; major contributions have been made too by Bramah Security Equipment Limited, the Royal Institution and Barnsley Museums.

Joseph Bramah, Stainborough born and baptised at Silkstone Parish Church, was the son of a tenant farmer and ex-coachman on the Wentworth Woodhouse estate. He trained as a carpenter and went on to be an *“engineer and inventor whose lock-manufacturing shop was the cradle of the British machine-tool industry”*. He tramped to London where he was employed by a master carpenter making surrounds for new water closets. Deciding that the WCs he came across were badly made and did not work well, he decided he could do better.

Between 1778 and 1796 Joseph Bramah invented: the first water closet that flushed efficiently, an ultra-secure, revolutionary lock (manufactured by Bramah Security Equipment Limited today), the first fire engine that delivered a constant, effective hose pressure and the hydraulic press. Hydraulic power has been adapted constantly ever since and enjoys a multitude of uses.

Several Bramah treasures are on show. Possibly one of Bramah's biggest hydraulic presses, supplied to the infant Ordnance Survey (then part of the Board of Ordnance) circa 1795, is complemented by one of the smallest Bramah presses (a loan from the Royal Institution) used by Michael Faraday in 1825 to isolate benzene.

Visitors can inspect one of only two Bramah fire engines in existence (a loan from Barnsley Museums); the other survivor is in a Rouen museum.

A wide range of Bramah locks are displayed. Joseph Bramah's magnificent 1787 brass commemorative lock, plus its original iron key (courtesy of the Bramah Trust) is complemented by an eclectic selection of historic Bramah locks and related artefacts. On display too are a selection of modern Bramah locks, bringing the Bramah story up-to-date.

Visitors in need are unable to use a Bramah water closet at the exhibition. Fortuitously a largely unaltered, early 19th century Bramah WC survives in nearby Sheffield city centre. Its details can be studied at the exhibition and it can be visited in situ; sadly, it is no longer in use.

No Bramah exhibition would be complete without the inclusion of the work and influence of Bramah's foreman and collaborator, Henry Maudslay (1771 – 1831). It was the perceptive Joseph Bramah who employed the 18-year-old Maudslay. Maudslay made the machines that turned Bramah's lock making business into an economic production-line success. Bramah's innovative lock mechanisms and their equally innovative keys had to be made to exact, extremely accurate specifications. Maudslay, of course, went on to great things in his own account, not only as engineer and inventor, but as employer and encourager of some of the early 19th century's best scientists and engineers.

Bramah and Maudslay, between them have a strong claim to have introduced British industry to precision engineering.