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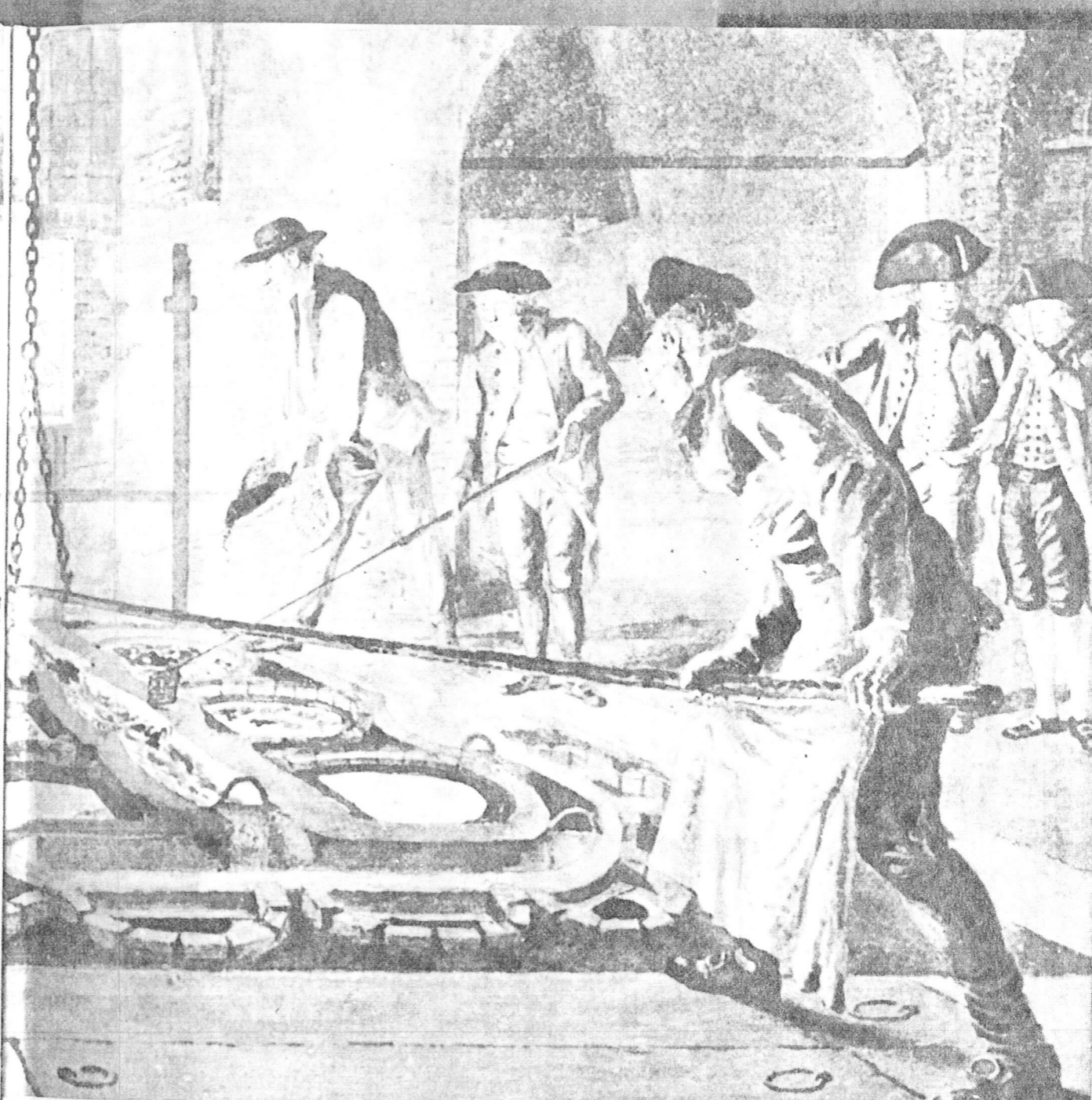
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The Verbruggens at the Royal Brass Foundry,
A Chapter in the History of Technology

DAVID & CHARLES : Newton Abbot



Eighteenth Century Gunfounding

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- 16 WO 47/88, 108, 28 August 1776. A warrant of justification was ordered for the seventy-two pieces accepted.
- 17 It is interesting to observe that it is not until 1778 that the records again contain an order for a light 3-pounder of Congreve's pattern, WO 47/91, 15, 6 and 7 January 1778. In 1782 when it was reported that, not one light 3-pounder being in store, Verbruggen was ordered to cast eleven light 3-pounders, Congreve's pattern was not specified, WO 47/99, 78, 26 January 1782.
- 18 WO 47/87, 342, 17 and 18 April 1776, and 312, 10 April 1776. An iron cylinder was actually made up conforming to the Verbruggens' design. Whether the piece was proved and what was the result of the experiment has not been ascertained.
- 19 WO 47/87, 320, 10 April 1776. This minute also refers to two smelting casualties that necessitated adopting hammered rather than cast-iron plates for covering the 'air holes of the furnace', to a complaint of the shoddy workmanship of an anvil ordered for the boring room and to a suggestion for better efficiency in the use of the casting pit by rationalising runs of ordnance. Thus rather than casting one medium 24-pounder and one heavy 24-pounder the master founders proposed to cast two heavy 24-pounders together with twenty light 3-pounders and leave the medium 24-pounders until they had an order to cast some heavy 6-pounders. The board approved the proposals.
- 20 WO 47/87, 309, 5 April 1776.
- 21 WO 47/87, 372-3, 26 April 1776. This is the only machine installed by the Verbruggens for which we have a specific location mentioned. John Barker's 'An Exact Survey... of 1749' in its legend locates the smith's shops in the Dial Square group on the right-hand side in entering, and the 'place for Turning and Graving Brass Cannon' on the left. The 'Turning and Graving' machine mentioned by Barker was, of course, the finishing lathe with which Gaschlin had trouble and which was replaced by the Verbruggens' second and shorter boring mill.
- 22 For objections to the plan to remove smiths and carpenters, see WO 47/87, 384, 29 and 30 April 1776; for minutes regarding construction of machine see WO 47/88, 117, 28 August 1776; 170, 11 October 1776 and 188, 18 October 1776.
- 23 WO 47/88, 188, 18 October 1776. By 18 October 1776 reference is still to 'where the Boring & Turning engine [sic] are to be erected'.
- 24 WO 47/88, 330, 29 November 1776. The entire procedure of the installation of the third machine is highly confusing. From the circumstances of the ordering of the third machine in April one can only speculate that the Verbruggens had already suggested its purchase directly to the master general of the ordnance. The offer of the machine to the board, noted above, might merely have been a formality for the records. Or, was it in fact, a fourth machine?
- 25 WO 47/89, 236-7, 26 February 1777.
- 26 WO 47/90, 366, 9 October 1777. The Verbruggens point out that they

Could these sets have been ordered for Waltham Abbey?

War Office Records:
 Ordnance
 Minutes of the Board of
 Ordnance in Public
 Records Office.

- are 'obliged to keep more horses for the new boring machine' and 'they would be in want of more water'.
- 27 WO 47/88, 259, 12 November 1776.
- 28 WO 47/89, 558, 12 and 13 May 1777.
- 29 Experiments were being made with French guns that had been bored up from 4-pounders to 6-pounders, WO 47/88, 336, 29 November 1776 and 363, 10 December 1776.
- 30 WO 47/90, 180, 7 August 1777.
- 31 WO 47/91, 173, 4 March 1778. The Verbruggens' interest in the design of military equipment was not confined to cannon. In April 1776 they had submitted a design of a 'new invented pallisadoe which would save a vast amount of timber, not be subject to rot so soon, a disappointment to the besiegers and a safety to the men behind them'. The board ordered a model of the 'pallisadoe' to be made under the direction of Colonel Pattison. What befell the invention is not known.
- 32 WO 47/92, 450, 22 December 1778.
- 33 Incomplete reports of proofs, irreconcilable requests for warrants of justification for ordnance ordered outside the regular channels and general gaps make it difficult to arrive at a precise picture of the foundry's activities. But such figures that can be compiled do bear witness to the extraordinary pressure under which the plant worked. The minutes of the Board of Ordnance which during the earlier war years rarely ran to more than 600 pages twice a year, had reached 1,200 by 1780.
- 34 The Verbruggens were approached by the Board of Ordnance in August 1773 to procure a new powder-grinding millstone. The millstone was delivered to the Horse & Cart powder mill at Faversham in November and its quality was such that in the following February the Verbruggens were asked to procure two pairs of runners for the same mill. Two more stones, runner and bed stone, were ordered in early 1775; another set in 1779 and finally in 1781 a further set of millstones were required for an addition to the Faversham mill. The latter request was never fulfilled simply because war had been declared by England on Holland, see WO 47/82, 9-12, 10 August 1773; 261, 16 November 1773 and 249, 16 November 1773; WO 47/83, 82, 11 February 1774; 121, 4 March 1774 and 205, 12 April 1774; WO 47/85, 216, 21 March 1775; WO 47/94, 119-20, 24 August 1779 and 257, 16 October 1779; WO 47/96, 771, 23 September 1780; WO 47/97, 90, 1 February 1781 and 369, 3 April 1781.
- 35 In June 1778 the board ordered Colonel Bramham of the Royal Engineers to prepare plans and estimates for erecting two or more water-driven boring engines for iron guns at Woolwich. The Verbruggens were appointed as advisers and the assistance of Smeaton (the great eighteenth-century engineer) was to be sought if necessary, WO 47/91, 514, 6 June 1778 and 525, 12 June 1778.

As late as March 1781 the project of building the iron-boring mill was still actively under consideration, WO 47/97, 300, 22 March 1781. There

(From Holland)

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