INDUSTRIAL REVOLUTION: A DOCUMENTARY HISTORY

Series One: The Boulton and Watt Archive and the Matthew Boulton Papers

from Birmingham Central Library

Part 12: Boulton & Watt Correspondence and Papers (MS 3147/3/1-79)

DETAILED LISTING

REEL 199

3/4 Letters to James Watt, 1780 (44 items)

Letters from Matthew Boulton to James Watt from 1780. The bundle also contains three letters from Logan Henderson to James Watt.

- **1.** Letter. Matthew Boulton (York) to James Watt (Birmingham). 8 Mar. 1780. Summarised "Concerning the signing of Fenton's articles. Also the copying business. Boulton going to Newcastle."
- **2.** Letter. Matthew Boulton (London) to James Watt (—). 6 Apr. 1780. *Mis-dated by Boulton as Mar. Summarised "York Building Water Works require an engine. Smeaton's failure with wooden piston. Concerning the copying scheme."*
- **3.** Letter. Matthew Boulton (London) to James Watt (Birmingham). "Saturday night" 8 Apr. 1780.

On the same sheet:

Memorandum. "York Building Western Engine. Query respecting the Erection of a new engine to raise 55,600 cubic feet in 8 hours." 7 Apr. 1780.

Summarised "Calculations of size of York Buildings engine. Dr. Roebuck almost insists that his son becomes partner. Copying scheme."

- **4.** Letter. Matthew Boulton (London) to James Watt (—). 10 Apr. 1780. Docketed "About Mr. Wiss's affairs." Summarised "Copying scheme. York Building Water Works calculations. Concerning dividing money matters."
- **5.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 17 Apr. 1780. *On the same sheet:*

Letter. James Keir (London) to James Watt (Birmingham). 17 Apr. 1780. Summarised "Letter from Keir with information re. copying scheme, and the naval metal. Boulton with Sardinian ambassador. Will see Lord Dartmouth."

- **6.** Letter. Matthew Boulton (—) to James Watt (Birmingham). 19 Apr. 1780. Not dated date taken from the postmark. Summarised "Concerning the shares in the copying scheme. Cornish mine Wheal Union in trouble likely to close."
- 7. Letter. Matthew Boulton (London) to James Watt (Birmingham). 23 Apr. 1780. Summarised "Boulton with the King and followers. The King heads the list of subscribers for copying machines, wants a copying machine. Boulton's sketches and suggestions. Boulton speaks well of Watt to the King. The King interested in Watt's adventures."
- **8.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 28 Apr. 1780. Docketed "Shadwell engine." Summarised "Boulton's Hockley Brook farm rent £40. Desires Watt to send up machines as fast as possible. Chelsea and Shadwell engine returns. Concerning taking shares in Cornish mines. Boulton dines with nobility."

- **9.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 1 May 1780. Summarised "Boulton's ideas for a table copying press and complaints of springs. Duke of Northumberland requires an engine. Angry with Cornish ways. Wants more presses to show in the House of Lords and Commons."
- **10.** Letter. Matthew Boulton (London) to James Watt (—). 14 May 1780. Incomplete. This letter is marked "To be continued", but the continuation is now missing. Summarised "Boulton before Lords and Commons. Lengthy correspondence concerning copying scheme. Shadwell engine affairs to settle."
- **11.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 17 May 1780. Summarised "Settled money matters with lawyers. To show the copying press to several Lords."
- **12.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 3 Jun. 1780. Summarised "Boulton with the lawyers. Thinks Watt not acting properly towards him, would wish him in London. Chelsea people offer £1000 premium."
- **13.** Letter. Matthew Boulton [London] to James Watt (—). 12 Jun. 1780. Not dated date taken from the docket. Summarised "Legal arrangements settled. Watt to take with him to London several writings."
- **14.** Letter. Matthew Boulton [London] to James Watt (Birmingham). "Thursday Night" 15 Jun. 1780. Summarised "Boulton tries to settle Chelsea Water Works affairs with the Directors. Clynton conquered Charlestown and 7000 prisoners."
- **15.** Letter. Matthew Boulton (London) to James Watt (—). 16 Jun. 1780. Docketed "Enclosing his own draft on Mr. Matthews at 6 weeks for £100-." Summarised "Requires 4 printed circulars for working the engine. Also political news."
- **16.** Letter. Matthew Boulton (London) to James Watt (—). 7 Jul. 1780. Summarised "Concerning materials for the copying press. Remarks upon the King's press."
- **17.** Letter. Matthew Boulton (London) to James Watt (—). 8 Jul. 1780. Summarised "Derangement of legal matters. Boulton very strong in his views."
- **18.** Letter. Matthew Boulton (Plain an Gwarry Green) to James Watt (Birmingham). 31 Aug. 1780.

Summarised "Viewed above 50 ships off Falmouth. Also John Westley preaching to 5000. Boulton visits the Cornish mines. Speaks well of Ale & Cakes. Sir Francis Bassett wants copying press."

- **19.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 2 Sep. 1780. Docketed "Concerning Gregory Mine." Summarised "Yatestoop and Gregory atmospheric engine to be the standard. Boulton questions their being better than Smeaton's improved engine. Cornish engines wanted, trusts Watt will hurry with drawings."
- **20.** Letter. Matthew Boulton (Plain an Gwarry) to James Watt (Birmingham). 7 Sep. 1780. Summarised "Cornish affairs. Wilkinson wants shares. Proposes to coat the pumps with asphaltum inside. Mentions Coalbrookdale. Will try to convert iron into steel."
- **21.** Letter. Matthew Boulton (Plain an Gwarry) to James Watt (Birmingham). 9 Sep. 1780. Summarised "Concerning the position of balance beams in the Cornish mines. Hopes Watt will consider this matter."
- **22.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 11 Sep. 1780. Summarised "Watt to inform Boulton of the lowest limit for the annual price of engines."

- 23. Letter. Matthew Boulton (Plain an Gwarry) to James Watt (Birmingham). 14 Sep. 1780. 2 sheets. Dated as 1728 by Matthew Boulton, as 14 Sep. 1728 was his first birthday. Docketed "Calculations about Wheal Chance engine." Summarised "Boulton's age and birthday at the end of the letter."
- **24.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 18 Sep. 1780. Docketed "Account of United Mines boilers." Summarised "Concerning Cornish money affairs. Re. boilers and chimney improvements. To persuade the Coalbrookdale Co. we are their friends. Watt to prevent absurdities at Soho. Re. cutting out presses."
- **25.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 23 Sep. 1780. Docketed "About Jonathan Hornblower, William Murdock and Wheal Virgin engine." Summarised "Jethro Hornblower's bill £105. Six new engines required. Concerning Hornblower and Murdock Murdock requires higher wages. 20 guineas present given to him, he being well spoken of both sides."
- **26.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 25 Sep. 1780. Docketed "Concerning meeting of Wheal Virgin proprietors." Summarised "The French pirates take our vessels. Concerning the design of balance bobs. Boulton proposes a better system of conducting Cornish affairs between the proprietors. He is in fine spirits."
- **27.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 30 Sep. 1780. Docketed "Account of the Wheal Virgin resolves." Summarised "Boulton meets a large body of mine proprietors. He is saddle-sick. Watt low-spirited. Murdock mentioned. Re. cylinder bottom. Will send some of the proprietors to the Devil if Watt don't save them."
- **28.** Letter. Matthew Boulton & Logan Henderson (Redruth) to James Watt (Soho). 2 Oct. 1780.

This letter was begun by Boulton and finished by Henderson. Docketed "Henderson concerning proposed alterations in engine tables." Summarised "Cornish – table of savings hath muddled the mine proprietors. The tables to be less complicated. Table of savings given for example. Letter from Henderson concerning the tables and richness of mines."

29. Letter. Logan Henderson (Redruth) to James Watt (Soho). 4 Oct. 1780. *On the same sheet:*

Letter. Matthew Boulton [Truro] to James Watt (Soho). Undated [5 Oct. 1780]. Docketed "Concerning them losing Poldice drawings." Summarised "Henderson's letter saying he has lost drawings of Poldice New engine. Jethro Hornblower says he never had them. William Murdock says he saw him with them. Proprietors wish to pay a yearly sum of £2500. Watt to send remarks."

- **30.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 7 Oct. 1780. Docketed "Respecting the offer of £2500 by Wheal Virgin." Summarised "Concerning receiving an annual amount for Cornish engines. Gives Watt hints to write back, that he may show the Adventurers to prove they have the best of the bargain. Thinks the arrangements are excellent for low spirits."
- **31.** Letter. Matthew Boulton (Redruth) to James Watt (Soho). 11 Oct. 1780. 2 sheets. *On the same sheet:*

Letter. Logan Henderson (—) to James Watt (Soho). "Thursday" [12 Oct. 1780]. Docketed "About Wheal Chance and Wheal Virgin." Summarised "Concerning the removal of a Cornish engine. Captains try to expose use, have settled peaceably. Henderson's model of a beam, cylinder and pumps. In company with Sir and Lady Bassett. Proposes taking shares to make us masters instead of servants. Names of erectors for engines. Could not iron be used for boiler flues instead of copper. Lack of smiths. William Murdock mentioned."

32. Letter. Matthew Boulton (Truro) to James Watt (—). 19 Oct. 1780. Summarised "Business well settled. Gives sizes of Cornish engines and length of strokes preferred."

- **33.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 21 Oct. 1780. *Docketed "Wheal Virgin affairs."*
- Summarised "Concerning Cornish mine affairs. Murdock and Bouge want to go partners. Requires smiths and carpenters. Orders for copying presses for French royal family. Annual amounts of engines considered."
- **34.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 24 Oct. 1780. 2 sheets. Summarised "Cornish men at their elections cry for Parliament to relieve them of Boulton & Watt's impositions. Boulton prefers to mix with high society. Boulton cannot ride for boils. In distress for forgings. Concerning erectors. Boilers and their making. Rule for chimneys. Watt figures them too low."
- **35.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 6 Nov. 1780. Docketed "Enclosing Mr. Motteux's letter and the questions put to Capt. Martin." Summarised "Copper boiler flues never want cleaning on the outside. Smiths' work to be got at any price. Pool boiler to be a Bouge boiler. Captain Lye in respect to depths. Watt's principle on shorter lever at pump end considered impractical. Proprietors' printed forms to be filled up by an agent. Racks to be of wrought iron [?] and teeth milled out. Concerning the powers of engines."
- **36.** Letter. Matthew Boulton (Truro) to James Watt (Birmingham). 11 Nov. 1780. Docketed "Invoice of tin." Summarised "Engine wanted at Comb Martin, West Devon. Concerning the quantity of tin for Soho. Fothergill to look the matter up. Thanks Watt for his medical advice. Surgeon advises him to be careful. He is much better. Gilbert Meason should be asked for money."
- **37.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 13 Nov. 1780. Docketed "Cusgarne house." Summarised "Will get writings engrossed. Calculations laid before Hitchens the astronomer. Improvements upon engines not to be paid for. Boulton or Watt to attend the engine starting. Concerning castings for pump work. Boiler covering to be like steam cases. Has started a lengthy table of boiler work. Boulton taken Cusgarne House."
- **38.** Letter. Matthew Boulton (Plain an Gwarry) to James Watt (Birmingham). 16 Nov. 1780. Summarised "Boulton's illness. Watt's remarks. Boulton endeavours to correct certain Captains. William Murdock's trial of Poldory boiler. Mine proprietors will not employ engineers, we must. Boulton speaks of his wife's birthday."
- **39.** Letter. Matthew Boulton (Plain an Gwarry) to James Watt (Birmingham). 18 Nov. 1780. 2 sheets.

Boulton continued this letter on 20 Nov.

Docketed "List of Wheal Virgin pumps." Summarised "Mentions Hornblower. Requires drawings for smiths. No smiths' tools arrived. Re. design of pump rod joints. Bouge's boilers do well. Does not care for Hornblower's. 64 bushells put into 70. Proposes to have matters settled before sending materials. Pump information."

- **40.** Letter. Matthew Boulton (Redruth) to James Watt (Birmingham). 23 Nov. 1780. Docketed "About signing Wheal Virgin agreements." Summarised "Cannot get the documents signed. Tired with the delay. Want cost reduced. Watt to obtain forgings, he will get chains."
- **41.** Letter. Matthew Boulton (Dolcoath) to James Watt (Birmingham). 25 Nov. 1780. Summarised "Received Watt's drawings concerning forgings and smiths' tools. Bought bellows at Hayle. Sizes of bolts and holes."

42. Letter. Matthew Boulton (Plain an Gwarry) to James Watt (Birmingham). 26 Nov. 1780. *On the same sheet:*

Transcript of bill of exchange. T. Kevill to Matthew Boulton, on Biddulph Cocks Eliot & Praed, Bankers in London. 24 Nov. 1780.

Letter continued from Truro on 27 Nov.

Docketed "A payment from Dolcoath of £161.18.4 and the signing of Dolcoath and Pool agreements." Summarised "Bill for £161.18.0. Business to be settled before signing documents, several settled. Birmingham manufacturers and merchants form a copper works with £50,000 and request Boulton to manage it. Concerning the wheel and crank and patents. To watch for patents."

- **43.** Letter. Matthew Boulton (Cusgarne) to James Watt (Birmingham). 11 Dec. 1780. *Mis-docketed as 7 Dec. Docketed "Account of money received." Summarised "Has received moneys. On the consumption of coals. If Fothergill asks after my business here tell him it is a secret. Likes being at Cornwall."*
- **44.** Memorandum by Matthew Boulton. Not dated [1780?]. This note by Boulton appears to have been sent to Watt with the draft of a letter. It was written in Cornwall, as it goes on to discuss various Cornish engines and the potential advantages to Boulton & Watt if they are kept in good working order.

3/5 Letters to James Watt, 1781 (62 items)

- 1. Letter. Matthew Boulton (London) to James Watt (Birmingham). 28 Mar. 1781. Summarised "Perier and the Paris Water Works engine. Smeaton comes to Town, asks if Watt has anything to say to him. Boulton re. a journey to France concerning Jary's engine."
- **2.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 29 Mar. 1781. Summarised "Information concerning the copying machine costs etc. Playfair upon New River Head drawings. Mentions Smeaton. Guards Watt against the North East Wind."
- **3.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 10 Apr. 1781. Summarised "Snow Hill Co. (re. crank patent) want £20,000 for licence. Should not discharge Cartwright, his evidence will be useful. Engines wanted in London, will see lawyers before settling. Boulton & Fothergill's business not prospering during his absence distresses Boulton. With Sir Francis Bassett who purchased a Cornish estate value £19,000. Tries to borrow money."
- **4.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 11 Apr. 1781. *Mis-dated by Boulton as 10 Apr. Docketed "Tidy & Spence's engine." Summarised "Messrs. Tidy & Spence require an engine*

to enable them to roll lead for Government. Boulton proposes Watt stays at Soho when he is away. Mr. Wasbrough and his engine and the patents, runs down Boulton & Watt engine."

- **5.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 14 Apr. 1781. Summarised "Boulton has lost the agreement with Shadwell Water Works. Requests Watt to send another."
- **6.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 16 Apr. 1781. Summarised "Navy Victualling Office require an engine for grinding corn. Wasbrough recommends his rotative motion and abuses Boulton & Watt's engine. They visit our Chelsea and Shadwell engines and are satisfied with us. Glad to hear Watt is about designing rotative motions. The enemy shows fight, as we will not back. Recommends Watt to pray."

- 7. Letter. Matthew Boulton (London) to James Watt (Birmingham). 19 Apr. 1781. Summarised "The Navy Victualling Office commissioners require our engine, with Wasbrough's pretended patent crank, at which I declined business. What can we do? Has been in Wasbrough's company, he wants all the profit of the crank end. Query if there is any advantage from the perpetual vacuum at Chelsea and Shadwell. Business requires a counting house in London. Fothergill unkind in remarks to Boulton. Has not charged his travelling expense. Will leave money matters in Watt's hands."
- **8.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 20 Apr. 1781. Summarised "Concerning the crank engine for the Navy victualling yard. Recommends Smeaton, and spends the evening with him. Proposes adopting Watt's early scheme to avoid the crank. With Wasbrough who endeavours to come to terms. I refuse for the crank is not his."
- **9.** Letter. Matthew Boulton (London) to James Watt (—). 23 Apr. 1781. Summarised "Crank. Meeting of Wasbroughs and Steed and Boulton. The invention... [part of the summary note has been torn away]."
- **10a.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 26 Apr. 1781. *Enclosing (b) below.*

Summarised "Erecting the large engine for the Navy Victualling Yard will gain us experience. To accompany Smeaton to the mill. Mr. and Mrs. Fothergill ill treat Boulton severely."

- **b.** Memorandum. Rough draft of Submission Boulton & Watt and Snow Hill Company. *In Matthew Boulton's hand.*Summarised "The Crank Question. The engine for the Navy Victualling Yard. Boulton asserts Watt's priority of invention. The matter to be laid before two gentlemen for arbitration."
- **11.** Letter. Matthew Boulton (London) to James Watt (Harper's Hill). 28 Apr. 1781. Summarised "Vessel with Pool engine to be ransomed if taken. Boulton with Smeaton, and what he can grind into corn per hour. Boulton proposes to raise water for wheels to grind corn and not have a crank engine. Account of Wasbrough's model."
- **12.** Letter. Matthew Boulton (Birmingham) to James Watt (Cusgarne). 16 Jun. 1781. Summarised "Watt's journey into Cornwall. Rotherham people require a blowing engine. Gives information of engine. Concerning copying press agents."
- **13.** Letter. Matthew Boulton (Soho) to James Watt [Cornwall]. 19 Jun. 1781. Summarised "Disposal of castings in the boat, to lessen the ransom if taken by the French. Made trials with rotative motions. Watt to take out patents for the whole family of spiral and eliptical horizontal wheels. Afraid we shall lose what we have if not patented, will be at the expense myself. Mentions models."
- **14.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 21 Jun. 1781. Dated "Soho the longest day not long enough 21 June 1781." Summarised "Asks Watt not to vex himself, if the engines cannot be erected. Mentions the different rotative motions and argues for a patent. Many mill engines wanted and we ought to go in for them. Watt to do the best he can."
- **15.** Letter. Matthew Boulton (Birmingham) to James Watt (Cusgarne). 23 Jun. 1781. Summarised "Concerning Mrs. Watt and family. About insuring goods for Cornwall. Great number of French and American privateers in St. George's Channel. Lords and foreign visitors. Concerning the supply and market for copper and copper companies."
- **16.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 26 Jun. 1781. Summarised "Sorry Cusgarne has painters etc. Many foreigners Boulton tired of receiving them, wishes he was at Land's End. Obliged to be merry etc. and attend to business with Fothergill though little to do."

17. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 28 Jun. 1781. *On the same sheet:*

Transcript of letter. James Spedding (Whitehaven) to Boulton & Watt [Soho]. 22 Jun. 1781. Memorandum of letters received at Soho from Francis Thompson (Ashover) and David Watson (Glasgow).

Summarised "Messrs. Spedding & Co.'s account of Poldice engine. Concerning a boring machine better than Coalbrookdale. G. Matthews' rolling mill begun. Another engine invented – Hanley to search the Patent Office monthly. Concerning rotative motion and models. Boulton in company with Dr. Adam Ferguson the author. Tells Watt no-one shall see his letters."

18. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 1 Jul. 1781. *Mis-dated by Boulton as 1780.*

On the same sheet:

Transcript of letter. James Woodmason (London) to James Watt & Co. [Soho]. 29 Jun. 1781. Summarised "Private thoughts to Watt. Boulton & Watt's accounts to be kept separate from Boulton & Fothergill's. The Cornish proprietors to pay the erectors and insurances. Concerning Boulton's scheme and models for rotative motions."

- **19.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 3 Jul. 1781. Summarised "Concerning the great rotative engine and eliptical and rotative models. Trial of the Great Model, Boulton wishes to patent it. About different erectors and engines. Boulton at the Lunar Society. Nothing new but his ore."
- **20.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 10 Jul. 1781. On the same sheet:

Transcript of letter. John Scott (Shrewsbury) to Boulton & Watt [Soho]. 9 Jul. 1781. Summarised "Copy of Scott's letter concerning "Bog" engines. Speaks of the model with the crank. About Cornish mine affairs in strong language. About motions to patent including the double crank. Boulton has a model of a rolling mill. Wilkinson desires to erect one, will Watt leave it my hands — I will do him credit."

- **21.** Letter. Matthew Boulton (Birmingham) to James Watt (Cusgarne). 14 Jul. 1781. Summarised "Visits Bradley to look for castings. Sees a new forge at work. Thinks Boulton & Watt can make very good steam forges and with the assistance of pit coal and by canals, will alter the iron trade and overset the old iron masters."
- **22.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 17 Jul. 1781. Summarised "Desires to show kindness to mine proprietors by sharing with them. Hopes the vessel with engines will arrive. Order Book to be kept. Concerning forge hammers, mills etc. with sketch [within the text] showing application of the double cylinder."
- **23.** Letter. Matthew Boulton (Soho) to James Watt (—). 21 Jul. 1781. *On the same sheet:*

Transcript of letter. William Moore (Penryndee) to Boulton & Watt [Soho]. 9 Jul. 1781. Abstract of letter from John Threlkeld, 19 Jul. 1781.

Summarised "Boulton gives a sketch [within the text] and lengthy correspondence concerning taking out a patent for a new system of producing a vacuum – is greatly concerned thereat. Watt can have the honour if he can have the profit. Penryndee mine will close. Thinks he had better examine the Patent Office to hold to rotative motions if the engine goes."

24. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 24 Jul. 1781. Docketed "Terms for North Downs."

Summarised "Glad the vessel has arrived with the castings. Hornblower and the new air. Concerning copper companies. No danger of having a law suit about cranks. Mentions a double crank. To take shares in Cornish mines."

- **25.** Letter. Matthew Boulton (Birmingham) to James Watt (Cusgarne). 26 Jul. 1781. Summarised "Dr. Priestley's experiments upon the new airs, and their failure for use. Boulton rejoices and incites Watt not to fear the Hornblowers, they will bring the trouble upon their own heads. Cannot have law suits with the Snow Hill Co. about double engine forge we only make the engine and work. Wilkinson makes and uses the forge."
- **26.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 28 Jul. 1781. On the same sheet:

Transcript of account. Paper sent to Redruth by Bromwich Isherwood & Bradley of London. 15 Jun. 1781.

Docketed "Invoice - reams paper."

Summarised "To take a patent for the double crank. Valuable letter from Boulton concerning Hornblowers' intended infringement. Boulton endeavours to comfort Watt thereon, and speaks at great length about the engine invention."

27. Letter. Zaccheus Walker (Birmingham) to James Watt (Cusgarne). 29 Jul. 1781. *Walker writes on Matthew Boulton's behalf.*

Docketed "Desire to mention proposals to the Horners."

Summarised "Boulton's scheme to obtain information of and prevent Hornblower using his engine."

- **28.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 30 Jul. 1781. Summarised "Concerning mill hammers and Boulton's mill model. Pickard's deceit. In company of philosopher Walker, ridicules his invention of putting the cylinder in the boiler and speaks about vertical tubes in boilers, the use of second-hand steam and any other little object ought to be patented. Mentions Hornblower."
- **29.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 7 Aug. 1781. 2 sheets. *On the same sheet:*

Transcript of letter. John Turner (Bersham) to Boulton & Watt. 1 Aug. 1781.

Transcript of letter. Hugh Jones (Chester) to Boulton & Watt. 1 Aug. 1781.

Docketed "Return from Derbyshire and sundry other subjects."

Summarised "Gregory engine too expensive." Boulton proves their error. Yatestoop engine to be erected 1000 fathoms underground. Arkwright loses the day, his revenge. Boulton says he had no right to patent, for he had seen such mills 40 years prior to Arkwright's use of them. Shadwell piston rod breaks. Engines wanted. Experiments upon the expansive principle at Soho. Lengthy correspondence concerning Hornblower.

- **30.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 9 Aug. 1781. Docketed "Concerning Mr. Edwards' mill." Summarised "Concerning Henderson's bad behaviour cannot he assist you with drawings for a gin engine. Concerning the cylinder in the boiler and Hornblower. Rolling and forging mills, also rotative motion etc."
- **31.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 11 Aug. 1781. Docketed "About Yatestoop mine." Summarised "Desires Watt to put his schemes on paper and have models made, also to advertise in papers all his previous schemes, of all sorts, to avoid patents. Wishes to prevent engine people going into Cornwall. An engine 100 yards underground. Will do all I can to prevent Yatestoop pulling me under."
- **32.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 12 Aug. 1781. With a postscript by William Withering. Docketed "Calculations about Yatestoop mine." Summarised "Comments and calculations concerning placing the engine under the surface of the ground at about 100 yards down in the mine. Southern mentioned. Directions for copying drawings wanted for the printer. Keir and Boulton for some arrangement. Dr. Withering's p.s."
- **33.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 14 Aug. 1781. Docketed "Calculations about Yatestoop." Summarised "Corrects his previous calculation. Desires Watt to boast about his engine to quiet the Hornblowers. Gives his views upon the surface condenser and asks Watt to thoroughly consider the question."

- **34.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 16 Aug. 1781. Docketed "About allowance to Kestal and to Wheal Chance." Summarised "Henderson's influence over Murdock to be superceded by Watt's. About the air in condensers. Re. mine speculation. Hockley Pool green grass. The philosopher Walker with me. I send you his drawings. Have now sent George Mynd home, he is too bad."
- **35. Letter**. Matthew Boulton (Soho) to James Watt (Cusgarne). 18 Aug. 1781. Docketed "About experiment on the quantity of? in water and tube condensers." Summarised "Boulton's trials and remarks about the tubular condenser, and concerning Watt's first model of one. Thinks Hornblowers make this their point since Henderson divulged. Do not care for plates in preference to tubes. Will watch Onions if he bores any cylinders with his new mill. Re. Arkwright's invention. Re. red hot steam etc."
- **36.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 21 Aug. 1781. Docketed "Scheme of heating steam." Summarised "John Steed examines the inside of our engine I think he is of the gang of robbers. Sketches [within the text] and ideas concerning the superheating of steam in answer to Watt's remarks."
- **37.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 25 Aug. 1781. Docketed "About Mr. Ewer's schemes." Summarised "Concerning Mr. Ewer's invention. Boulton with him. Sends sketch [within the text] of his engine to Watt. Does not care for it."
- **38.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 27 Aug. 1781. Docketed "About an engine intended to drive a corn mill at London." Summarised "London does not suit Mr. Boulton, therefore he must return before finishing business. Corn mill engines wanted. Steed has one and us the other. Speaks of the eliptical motion and equalizing machine."
- **39.** Letter. Matthew Boulton (Birmingham) to James Watt (Cusgarne). 1 Sep. 1781. Docketed "Return from London." Summarised "Two caveats entered against engine by Ewer and another? Hornblower. Watt to lie still with his scheme about gases. Likes and wishes to push the equaliser and the expansive engine. In trouble with Fothergill and banker. About Arkwright's improved engine. Patents to be obtained."
- **40a.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 4 Sep. 1781. Enclosing (b) and (c) below. Docketed "About expansive engine. Enclosing letter from Mr. Matthews." Summarised "On equalising beams, Watt's notion of pump velocities. Boulton proposes to alter his proportions of pump work for the experimental engine. Would like Watt to collect money to enable him to face his bankers. Letter to Perier, pressing him and then asking for money."
- **b.** Letter. William Matthews (6 Green Lettice Lane, London) to Matthew Boulton [Soho]. 28 Aug. 1781.
- c. Letter. William Matthews (—) to Matthew Boulton [Soho]. 1 Sep. 1781.
- **41.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 6 Sep. 1781. *On the same sheet:*

Transcript of letter. Matthew Boulton (Soho) to Thomas Williams. 20 Aug. 1781. Transcript of letter. Thomas Williams (Llanidan, Anglesey) to Matthew Boulton. 29 Aug. 1781

Docketed "Letters to and from Mr. Williams and about Mr. Morris' engine." Summarised "Letters concerning the Anglesey Copper Co. Trial of Watt's early inventions. Mentions Hornblowers and Henderson. About the engine for Wales. Has visited a large rolling mill at Coalbrookdale."

42a. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 11 Sep. 1781. *Enclosing (b) below.*

Docketed "Drawings of new work shop." Summarised "Makes experiments upon equalisers. Cannot see why one cylinder cannot be more economical than two, if double the length. Sends sketch of water course at Soho for Watt to study, re. the erecting of engine shops on Boulton's land, not Boulton & Fothergill's. About Colclough's engine." Enclosing (b) below.

- b. Sketch plan of proposed new engine workshops at Soho Manufactory.
- **43.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 13 Sep. 1781. *On the same sheet:*

Memorandum of goods sent from Soho to care of Prichard & Barlow, 31 Aug. 1781. Docketed "Invoice of counters, barometers and steam gauges. Dimensions of Soho engine." Summarised "Bill for counters, steam gauges and barometers. Other models to make. Expansive engine will compress air. Gives size of Soho engine and pump. Concerning Yatestoop engine, also Ireland. Fothergill v. Boulton. Wilkinson's forge. Harper's Hill."

- **44.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 16 Sep. 1781. Summarised "Bills paid. About a new metal with the Anglesey ore. Boulton's remarks. Troubled with the Hornblowers. Fothergill keeps out of his way. About Chelsea and Shadwell agreements. Re. the sale of copying presses. Experiments upon the engine at Soho. Watt should write the history of his engine and publish it in all the controversial papers, that they may know he is the true inventor."
- **45.** Letter. Matthew Boulton (Soho) to James Watt (—). 25 Sep. 1781. 2 sheets. *Marked "Derbyshire and Yorkshire."*
- **46.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 27 Sep. 1781. *On the same sheet:*

Memorandum of pipes sent from Bradley for Poldice mine.

Docketed "Account of Poldice pumps and of experiments on little engine." Summarised "List of pipes and other work. Proposes to publish in the Bristol paper an account of engine. About expansion. Trials with the equaliser. Wages for an erector. The new shops at Soho are begun, cost £131. Expansion now the fashion."

47. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 2 Oct. 1781. *On the same sheet:*

Transcript of memorandum. Insurance on cast iron pumps per the *Portreath Trader*, Bristol to Portreath.

Transcript of letter. J. Motteux & Co. (London) to Boulton & Watt. 27 Sep. 1781.

Transcript of letter. James Spedding (Whitehaven) to Richard Dearman . 27 Sep. 1781. Docketed "Copy James Spedding's letter."

Summarised "Insurance accounts. Concerning bad iron and Spedding's letter thereon. Watt requires drawing paper. Watt's bellows scheme will do. Gives expansion and other power diagrams combined. Another engine wanted, and proposes to apply it to the equalising beams."

- **48.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 6 Oct. 1781. Summarised "Boulton with his bankers. Concerning the copying press and failure of its ink to copy. Has an application for corn mill engine."
- **49.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 9 Oct. 1781. 2 sheets. Summarised "Boulton with the lawyer concerning patents. Valuable information during conversation. We should bring up a youth to assist us, will sound young Southern. About his banker. Irish business."

- **50.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 12 Oct. 1781. *Docketed "About Mr. Drake's engine."*
- Summarised "Thinks the Soho little engine suffered in the fire. Shadwell works well. About the free use of a crank. Little engines required, could sell many if designed. With Fothergill and family."
- **51.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 13 Oct. 1781. Summarised "Desires Watt not to trouble about other people and to either swear damnably or laugh. About drawing for Irish patent. Hornblower's specification not delivered. Fothergill grows foolisher. To settle and close Boulton & Fothergill account. From Fs and Ks good Lord deliver us."
- **52a.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 16 Oct. 1781. *Enclosing (b) below. On the same sheet:*

Transcript of letter. Richard Dearman (Birmingham) to Matthew Boulton (—). 10 Oct. 1781. Transcript of letter. P. Colclough (Anvill) to Matthew Boulton (London). Not dated. Docketed "Mr. Drake's plan. Copies – Mr. Dearman about subterraneous engine and Mr. Colclough's 2nd letter."

Summarised "Mentions Murdock and Bouge. About Mr. Drake's water supply. Enclosed is a very neat sketch of Boulton's. About the rascally Sohoites. Copies of Irish letter about Colclough's engine, also about subterranean engine."

b. Sketch (press copy). Matthew Boulton's proposals for a pumping engine, wells etc. for Mr. Drake.

Titled "Drake Esq., at Hamesham, 11 miles from Uxbridge."

- **53.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 23 Oct. 1781. Summarised "Boulton goes on with the double cylinder engine. Pleased to hear Hornblower uses steam to press down the piston. Could not Henderson make Colclough's drawings. Boulton and Fothergill at variance, William Matthews to be arbitrator. Playfair severs his connection with us. Mentions several youths etc. suitable for draughtsmen and recommends bringing one up to the profession."
- **54.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 27 Oct. 1781. *On the same sheet:*

Memorandum of insurance for goods on the Mary, Bristol to Portreath. 25 Oct. 1781. Summarised "Concerning copying ink. Disputes with Copper Co. Trials at Soho with Protius. Boulton hopes to rid himself from slavery and Fothergill. His case is sound. Trials at Soho to be made."

- **55.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 30 Oct. 1781. Summarised "A large stock of ink powder. The double engine ready to erect. Playfair is going to roll silver spoons. Watt must relieve himself of drawing and have two draughtsmen. Re. Colclough's engine. When the time of 4 months is up he will obtain Hornblower's specification. Wasbrough dead. Remark of (injustice) Boulton's concerning his dissolution of partnership with Fothergill and about Fothergill's unkind behaviour. The new shop is built up to wall plate."
- **56.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 1 Nov. 1781. Summarised "Boulton intends dissolving partnership. About money matters in relation to Fothergill, and the one-wheel clock, and his other partners. Fothergill lies. Accounts of the money possessed by both parties. About scales and weights."
- **57.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 3 Nov. 1781. Summarised "About Fothergill's lies. Boulton intends taking in partners, mentions their names. Watt's patent passed the seal. Hornblower's specification not enrolled. Yatestoop mine drawings by Southern he will certainly be useful, if he will agree to terms. About crank, expansion engine and corn mill engines."

- 58. Letter. Matthew Boulton (Soho) to James Watt (—). 13 Nov. 1781. Summarised "About winding up of Boulton & Fothergill's affairs and Boulton's generosity towards him. Playfair upon patent drawings. Thinks Hornblower's two-cylinder engine comes about through Boulton mentioning it to Wilson about two years ago that had this scheme in reserve when the mines were so deep as to load the single cylinder too much, thereby enabling you to use second-hand steam. About the two-cylinder model. Boulton's sketch of a boiler [within the text], also other useful information."
- 59. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 17 Nov. 1781. Docketed "Dimensions of Wheal Crenver cylinder." Summarised "About drawing and model of the pipe condenser. Also the introduction of steam in the piston, may keep the atmosphere from cooling. Will have his business settled and can then devote time to engine trade. Perier never mentions Watt in France - takes all the honour."
- **60.** Letter. Matthew Boulton (Soho) to James Watt (—). 20 Nov. 1781. Summarised "Desires Watt not to fear the Hornblowers' impudence and insensibility to honour. Gives the outline of action to take. Will soon be in Cornwall. Henderson and the Irish engines."
- 61. Letter. Matthew Boulton (London) to James Watt (Cusgarne). 25 Dec. 1781. Summarised "Boulton visits Bath to see engines Hornblowers have erected. The double cylinder will be at Radstock. Saw one pumping water and grinding corn by means of a crank. About the Irish patent. Perier says that our patent is not valid in France and that they will not pay."
- 62. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 29 Dec. 1781. Docketed "On his arrival at Soho." Summarised "About Henderson and his conduct, and Peggy. Re. drawings of engines for specification. About the equaliser being placed underground and the working of pumps by cranks. Sketch of the eliptic [within the text] worked by a sector off the great beam."

3/6 Letters to James Watt, 1782 (47 items)

- 1. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 6 Jan. 1782. Mis-dated by Matthew Boulton as 1781. Summarised "Henderson to leave Cornwall. Boulton troubled with Fotheraillian plaques. Concerning Hooper's mill and the size of engine. Sends specification and drawings for Watt to correct."
- 2. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 9 Jan. 1782. 2 sheets. On the first sheet:

Transcript of letter. John Turner (Bersham) to Matthew Boulton [Soho]. 7 Jan. 1782. Summarised "About Fothergill and Boulton's conduct and allowances. Thinks the sun and planet motion should be included in specification (first mention of S & P). Ketley engine at work. Will cast nozzles ourselves. Likes Watt's scheme for making all working parts of tempered steel and cutting out of teeth by machinery. Boulton's water wheel. About patents and drawings. Boiler burst, miners ill treat the erector. About Colclough's engine and Hooper's and Wilkinson's."

3a. Letter. Logan Henderson (Plain an Gwarry) to James Watt (Cusqarne). "Saturday morning" [12 Jan. 1782?]

Kept with (b) below. On the same sheet:

Memorandum by Matthew Boulton on Mr. Hooper's mill.

b. Memorandum. Items Matthew Boulton wishes Logan Henderson to bring back from

With notes and a rough sketch of Mr. Hooper's mill on the other side. Passed by Henderson to James Watt.

4. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 13 Jan. 1782.

Mis-dated by Boulton as 1781.

Docketed "The revolving motion." Summarised "Valuable information re. sun and planet motion, with Boulton's sketch [within the text]. Boulton calculates the dimensions of a fly wheel. Concerning the crank and tube condenser. Watt's discovery of acid of galls and sugar, and other remarks. Re. Mr. Keir."

- **5.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 18 Jan. 1782. Summarised "Concerning the sun and planet motion and its application to corn mills. Henderson intends to build a house near Soho."
- **6a.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 19 Jan. 1782. *Enclosing (b) below.*

Docketed "Sir J. Louther. Coal engine by revolver." Summarised "Watt's last motion (S & P) Boulton's favourite. With Sir James Louther. Have killed robins with fixable air. James and Matthew are making a model of Savery's engine. I have given them Henderson's water wheel model and they are trying it on the Duck Pond. Boulton's sketch [within the text & enclosed] of the application of a sun and planet motion for coal winding engines, with his remarks."

- b. Press copy of Boulton's sketch.
- **7a.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 22 Jan. 1782. *Enclosing (b) below.*

Docketed "Coal engine by eliptic." Summarised "Boulton troubled at Henderson wasting his time. The rotative specification passed the seal. Watt's drawing will do. Likes his idea of working up and down and with a fly wheel. Prefers the S&P motion. Gives his sketch [within the text & enclosed] of an eclipse arrangement. Fire at Woodmason's and concerning the loss to the Copying Co."

- **b.** Press copy of Boulton's sketch.
- 8. Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 4 Feb. 1782. 2 sheets. Docketed "About Mr. Fothergill and reciprocating fly engine." Summarised "Lengthy correspondence about Boulton and Fothergill's business relationship. Concerning Soho workmen. The new canal scheme. Salmon asks us to refuse making his neighbour an engine. The up & down engine and Hornblowers. The advantage of circular over oval wheels. Watt to boast about inventing the double cylinder engine. Sketch by Boulton [within the text]."
- **9.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 9 Feb. 1782. Docketed "With abstract of his answers to Mr. F." Summarised "Damage to copying presses by fire etc. About winding engines. Has made a wheel of ecliptick. New engine cheaper than old. Concerning the distribution of erectors and workmen. Lord Mahon requires an engine. Enclosed are Boulton's valuable remarks concerning his private business position." The enclosure is now wanting.
- **10.** Letter. Matthew Boulton (Soho) to James Watt (—). 14 Feb. 1782. Docketed "Offer of resigning the cash to my care." Summarised "Permanent elastic vapour of the London visitor. Walker refuses cylinders. The partners in the engine trade and Boulton and Fothergill's disputes. Books to be examined. Boulton offers all the engine trade profit to assist Watt in clearing up his debts. He will have to trudge uphill most of his life."
- 11. Letter. Matthew Boulton (London) to James Watt (Cusgarne). 19 Feb. 1782. Summarised "Concerning specification drawings. Boulton with Lord Dartmouth re. the new canal branches. Expansive principles give the maximum power of the steam. Should make models of equalisers (re. many cylinders). With Lord Mahon. If Boulton enters into fresh partnership with Fothergill it will be from year to year and will permit him to devote all his time to engine business."

- **12.** Letter. Matthew Boulton (London) to James Watt (—). 23 Feb. 1782. Summarised "Boulton's 'trial' of two days ended, is acquitted of all wrongdoings with Fothergill. Has seen specifications of patents properly entered. Irish patent gone to Ireland for the seal."
- **13.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 26 Feb. 1782. Summarised "Concerning the settling of Boulton and Fothergill's partnership, and the sums of and the arrangements agreed to, also the amount of Fothergill's debt, with Boulton's remarks."
- **14a.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 28 Feb. 1782. *Enclosing (b) below.*

Docketed "Messrs. Garbett and Foreman's award." Summarised "Difficulties which prevent the settling of Boulton and Fothergill's agreement. Would rather be troubled with mechanical movements. We had better assist the miners than go against them. Perier over from France to steal all the ideas he can. Concerning John Wilkinson and the copper trade. Enclosed is Foreman and Garbett's award re. Boulton and Fothergill."

- **b.** Transcript of memorandum. Resolution of meeting of Messrs. Vere, Foreman and Garbett "as mutual friends of Messrs. Boulton & Fothergill." London, 23 Feb. 1782.
- **15.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 7 Mar. 1782. Docketed "About abatement to United Mines." Summarised "Boulton with Ambassador and others from abroad. The declining state of United Mines, Cornwall their wasteful ways, do not care to abate our claims. Watt makes his patents too expensive. Boulton has a key of a mountain against the Cornish copper trade."
- **16.** Letter. Matthew Boulton (London) to James Watt (Cusgarne). 9 Mar. 1782. Summarised "Copies of patents being made in Birmingham for Cornwall. Hears the United Mines have stopped working. The price for little engines. Mylne wants an engine. With Smeaton, who has erected a forge on the River Don, Yorkshire. Boulton sad over his business with Fothergill, he is tyrannized over and nearly broken down in spirits. Matthews to assist him."
- **17.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 12 Mar. 1782. Summarised "Boulton with Low Vere Williams concerning Boulton and Fothergill's affairs and his strong remarks thereon. The Lunar Society dine with him. Playfair seduces Wilson the dyesinker, modeller and draughtsman. Sends drawings by a carpenter. Concerning bank failures. Workmen found drunk. Bog engine removed."
- **18.** Letter. Matthew Boulton (Soho) to James Watt (—). 21 Mar. 1782. Summarised "Boulton with Baron Reden and co., Perier, Wilkinson. Visits forges around Wolverhampton. About Dr. Priestley's inventions of metal and sulphur. List of engines erected out of Cornwall. Remarks upon Boulton & Fothergill's business. Sketch [within the text] of the Hartz pump rods."
- **19.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 26 Mar. 1782. Summarised "Replies to Watt's remarks to keep good spirits. The copper trade. When Cornwall fails we must go in for mills. Bad state of men in smiths' shop. No money coming in. Hall the erector working for other firms. Watt not to leave Cornwall, it will leave the enemy in full command. Wish the Radstock engine would start then we should know how to act."
- **20.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 27 Mar. 1782. Summarised "Boulton considers it proper for Watt to return from Cornwall, to accelerate the specification business and the experiments on the two small Soho engines, to counteract the designs of their enemies."
- **21.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 2 Apr. 1782. Docketed "About United Mines and Wheal Virgin." Summarised "Boulton complains of Watt's

orders re. payment of moneys. Will borrow till Russia pays her debts. Knows people in Cornwall who open their letters. Boulton's ideas of assisting old mines to continue through bad days. Dispatches a man to watch the new engine of Hornblower's. If they use our engine they cannot thereby hurt us, if they do we must go to law."

- **22.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 3 Apr. 1782. Docketed "Proposal for regular method of compounding with losing mines." Summarised "Boulton's dealing with the Cornish mine adventurers when the mines are losing. Fothergill calls to see Boulton, who refuses to see him."
- **23.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 6 Apr. 1782. Boulton completed this letter on 10 Apr. Docketed "Enclosing one from Mr. Fenton." Summarised "Re. the losing mines. Boulton not competent to fight all Cornwall. Trouble with workmen and prices of nozzles. Mr. Fenton's letter and affairs about copper trade. Dirty state of engines. Nozzles to be ground on top by a leaden lap, also drill to be turned by mill power."
- **24.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 13 Apr. 1782. Summarised "With Mr. Fastre, who requires engines for Vedrin accompanies him to Coalbrookdale. Concerning the rating of engines for mine during the bad times. JH's report upon Hornblower's engine at Radstock, and will make sketches for Watt most parts like ours."
- **25.** Letter. Matthew Boulton (Soho) to James Watt (Cusgarne). 19 Apr. 1782. Letter re-directed to Watt in Birmingham. Summarised "Boulton proposes copper wire for joints. Trouble with men in smiths' shop. Thinks some of the work can be done by machinery. Wilkinson makes an engine for France, Boulton annoyed thereby. List of inventions to patent."
- **26.** Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 23 Sep. 1782. Docketed "His arrival in Cornwall." Summarised "Boulton's arrival in Cornwall. Messrs. Hornblower offer to alter our engines in Cornwall to their system at slight costs. Boulton in great trouble and hardly knows how to act. Thinks the engine at Radstock should be stopped."
- **27.** Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 25 Sep. 1782. 2 sheets. Boulton completed this letter on 26 Sep. Summarised "Concerning Hornblowers' offers to the Cornish mine adventurers and their engine at Radstock. Mentions Murdock."
- **28.** Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 28 Sep. 1782. The address and docket are on a separate sheet. Docketed "Wheal Virgin account." Summarised "Urges the completion of the expansive rotative engine. Boulton attends a meeting of mine adventurers with Hornblowers, gains information, gives none himself and acts very cautiously."
- **29.** Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 30 Sep. 1782. Summarised "Speaks very highly of Murdock's industry. Remarks upon Hornblowers' principles. Boulton gives ideas of improved pump work. Thinks Smeaton should be called to Soho to examine all the schemes of Watt, and then we can form an idea if a law suit can be commenced."
- **30.** Letter. Matthew Boulton (Whitehall, Chacewater) to James Watt (Harper's Hill). 7 Oct. 1782.

Docketed "The crushing of the tubes of Ale & Cakes boiler." Summarised "Accident with Ale & Cakes boiler. Boulton attends Gwennap church. Hornblowers tubular metallic cold surface would not answer (they made it of lead) – put in lieu thereof a copper diaphragm, called a splash pan. If we proceed it must be for pressing with steam a piston. (Shorthand first noticed.)"

- **31.** Letter. Matthew Boulton (Cusgarne) to James Watt (Birmingham). 10 Oct. 1782. Docketed "Trevascus Account." Summarised "Boulton abused by Capt. Halse, he makes no reply. About Hornbowers and their engine. Mentions Murdock. Boulton hurries the signing of documents. Attends meetings of mine adventurers. Thinks the up & down rotative engine four times better than Hornblowers', and the ne plus ultra of steam engines."
- **32.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 12 Oct. 1782. Summarised "Concerning the course to pursue against Hornblowers. Pleased Smeaton is coming to Soho, should show him and gather from him his ideas of your invention before letting him know of our intended law suit."
- **33.** Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 17 Oct. 1782. Docketed "Buying of Mr. Harris' shares of Poldice." Summarised "Truro will always be the mining capital. Sir Frederick Bassett thanks for the pair of vases. About business with the adventurers and buying of shares, and concerning the keeping on of the mine, also the adverse balance. Pleased to here Smeaton's visit was a pleasant one."
- **34.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 19 Oct. 1782. Summarised "Boulton calculates the quantity of coals and steam the Hornblowers' engine consumes, and compares it with Watt's. The little cylinder is filled with steam each stroke. Does not think the splash plate in condenser an infringement."
- **35.** Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 24 Oct. 1782. Extensive shorthand on the outside of the letter. Part of the letter has been cut away. Summarised "Boulton considers it necessary to publish Watt's invention in the Bristol papers and gives the outlines, under five headings. Mentions Newcomen of Dartmouth. Hornblowers say it is no matter how the steam is used, whether on a piston or otherwise. Meets Mr. Townsend. Miscellaneous affairs in Cornwall."
- **36.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 28 Oct. 1782. Summarised "Boulton sees an opening to make the Radstock gentlemen our friends. Smoke from the boilers at different mines. The Hornblowers are going down, down with them to the Devil. Thinks the advertisement should appear in the Bristol papers."
- **37.** Letter. Matthew Boulton (Cusgarne) to James Watt (Soho). 2 Nov. 1782. Summarised "About Ale & Cakes boiler. Boulton complains of being pent up. Boulton's sketch [within the text] of a double acting pump, and proposes up & down engines, and the pump rods to force water, and not to have such large masses in motion. Murdock mentioned. Want £500 pounds off us for Wheal Busy."
- **38.** Letter. Matthew Boulton (Cusgarne) to James Watt (Soho). 4 Nov. 1782. Summarised "About Radstock engine. Money wanted for continuing Wheal Busy. With Mr. Fenton. Boulton's list of headings for a monthly book [and has sent engine statistics]. The duty of three engines. Henderson and his damned curious disposition. The Coalbrookdale engine will not bring much money. Ale & Cakes paid us 80 guineas per month."
- **39.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 7 Nov. 1782. Summarised "Boulton loses himself in his way home at night, upon the Cornish wastes. Boulton & Watt, Wilkinson and Wedgwood propose taking shares in Polgooth mine."
- **40.** Letter. Matthew Boulton (St. Austell) to James Watt (—). 11 Nov. 1782. On the same sheet:

 Memorandum. List of the shareholders and adventurers in Polgooth mine.

 Docketed "List of Polgooth adventurers." Summarised "The erectors finishing their work, Mure [Muir], Pierson [Pearson] and Murdock will stay. Hornblowers propose erecting an engine at Wheal Unity. The Captains imagine the Hornblowers will be chief engineers to Cornwall.

therefore treat us with insolence. List of Polgooth adventurers."

41. Letter. Matthew Boulton (Cusgarne) to James Watt (Harper's Hill). 13 Nov. 1782. Boulton completed this letter on 14 Nov.

Summarised "Introduces Mr. Martyn. Boulton wishes he could attend all the meetings to flank the Hornblowers. Cornishmen love their country without one exception. Poldice trial – 21,783,244 pounds raised 1 foot. Murdock saves Poldory engine."

42. Letter. Matthew Boulton (Cusgarne) to James Watt (Newhall, Birmingham). 16 Nov. 1782.

Summarised "Lawyer Rashley speaks in our favour at a meeting and condemns the introduction of Hornblower's engine. Soho experiment gives 350,000,000. About mine affairs. Complains of the position of Cusgarne House and speaks highly of another in a better position offered by Count Warren."

- **43.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 28 Nov. 1782. Summarised "Watt visits the Radstock engine. Boulton proposes to give Murdock a better position and let him keep a house. Boulton is ill. Sees little of Murdock for he has so much to do, amongst so many strange engine men."
- **44.** Letter. Matthew Boulton (Hayle Copper House) to James Watt (Newhall, Birmingham). 2 Dec. 1782.

Summarised "All the 5 engines at work at Wheal Virgin. Boulton's horse falls and hurts his back. Concerning power for grinding corn. If Hornblowers start their engine again we must prosecute them."

- **45.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 5 Dec. 1782. 2 sheets. Summarised "Boulton rides 10 miles out of his way, is very ill and faints away. With Murdock who is a valuable man. Re. pump rods and balance bobs. Cornwall going to petition Parliament for to rid them of Boulton & Watt. Boulton still presses Watt to get on with the up & down engine. Our people will not mix with Trepol and Pen's. Bottoms of cylinders are colder than the tops."
- **46.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 7 Dec. 1782.
- **47.** Letter. Matthew Boulton (Cusgarne) to James Watt (—). 12 Dec. 1782. Summarised "Chesterfield or Derbyshire leather for clacks and buckets. Safety gear to be applied. Accident at East Wheal Maid. Murdock appointed chief of the mines engines. Hornblower in the Co. Money affairs. Boulton prepares to return to Soho. Prospect of an engine for drainage purposes. Murdock well liked in the county."

3/7 Letters to James Watt, 1783 (26 items)

- 1. Letter. Matthew Boulton (London) to James Watt (Birmingham). 11 Feb. 1783. Summarised "Must settle what kind of rotative motion to apply to the up and down. Prefers long cylinders, short ones may do for little engines. About corn mill and engines wanted for them. West Ham Water Works. Concerning the non-payment of the Paris Water Works account. Radstock colliery belongs to Lord Walgrave. Ireland expects much from Lieut. Logan Henderson."
- **2.** Letter. Matthew Boulton (London) to James Watt (Harper's Hill). 14 Feb. 1783. Summarised "Shadwell Water Works Co. require a new engine. Received Perrier's account. Wilkinson has engine lying at Bersham for Perrier to be erected at St. Domingo. Put not your trust in founders. Shadwell ask if the accounts of Hornblower's engine are true."
- **3a.** Letter. Matthew Boulton (London) to James Watt (—). 15 Feb. 1783. *Enclosing (b) below.*

Summarised "Trouble with workman Robert Cameron. Mr. Jones requires engines for sugar plantation. Boulton's remarks upon Watt's specification and tests its soundness. Shadwell new engine. Sends Irish newspaper about A. & P. Colclough's engine." The summary is attached to (b) below.

- **b.** Letter. Matthew Boulton (London) to John Buchanan (Soho). 15 Feb. 1783. Summarised "Boulton's letter to John Buchanan about Robert Cameron's trial of an engine adverse to Mr. Watt's notions, and Boulton wishes him to go to the West Indies."
- **4.** Letter. Matthew Boulton (London) to James Watt (—). 23 Feb. 1783. 2 sheets. Summarised "Boulton & Watt refuse to assist the Captain against the Adventurers. Birmingham people petition against the exportation of brass. Engines wanted for mills. Boulton's sketches [within the text] and remarks. Remarks upon Watt's specification and his workman's new engine (Robert Cameron's). Van Liender hears of Hornblower's engine. Boulton urges for making rotatives speedily. Shadwell new engine."
- **5.** Letter. Matthew Boulton (London) to James Watt (Newhall, Birmingham). 25 Feb. 1783. Summarised "Lieut. Logan Henderson's conduct is most diabolical. Thinks he intends to start our trade in Ireland. Well will send Robert Cameron to frustrate him. Will have a Northern gentleman at Soho who is going to succeed Smeaton and everybody and everything else. Accounts of the English new ministry."
- **6.** Letter. Matthew Boulton (—) to James Watt (Newhall, Birmingham). 28 Feb. 1783. Docketed as 27 Feb. Summarised "New land for the Great Corn Mill. Engine required for Anglesey. In company with Lord Dartmouth. Smeaton taken up his abode in London for 4 months and is active in getting orders in his profession."
- **7.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 16 Apr. 1783. Summarised "Boulton's name has been published in the paper as inventor of the engine. Watt rather troubled thereby and Boulton will show him all letters etc. when he returns, for he does not require laurels but £.s.d."
- **8.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 19 Apr. 1783. Summarised "Stood godfather for a new mill at Caseorton. With owners of sugar plantation in Jamaica. Dines with one of the Blackfriars millers. Mentions having the order to erect a corn mill at Blackfriars Bridge. Mr. Fenton our first Cornish and Yorkshire customer. About Poldice. Boulton not so much the Spaniel dog to kiss the foot that kicked."
- **9.** Letter. Matthew Boulton (London) to James Watt (Harper's Hill). "Saturday" [17 May 1783].

Docketed as 18 May, which was a Sunday. Summarised "Boulton requests Watt to send him a list of the taxes on the Cornish miners, i.e. such expenses as would be saved if the mine was at the surface. Cannot persuade Robert Cameron he was not ill used by us. The above is for Boulton when on the copper question at the Bar of House of Commons."

- **10.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 19 May 1783. Summarised "Anglesey v. Cornwall upon coal. Mr. Myle visits Anglesey for Sir F. Bassett and speaks before the House of Commons, saying if it was not for Mr. Watt's engines, they would not be troubled with the dispute, but as the engines were becoming numerous, they might guess why the duty was wanted off the coal."
- **11.** Letter. Matthew Boulton (London) to James Watt (—). "Monday night" [19 May 1783]. Docketed as 20 May, which was a Tuesday. Summarised "Anglesey v. Cornwall. Boulton requests Soho to send him the cost of coals at the Cornish mines. He is at the House of Commons."
- **12.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 24 May 1783. Summarised "Boulton to give evidence at the Bar of the House of Commons, concerning the taxes and expenses attending the working of mines. The brass question is folly and madness. Letter to Robert Cameron, will have no connection with him whatever."
- **13.** Letter. Matthew Boulton (London) to James Watt (Birmingham). "Wednesday night" 28 May 1783.

Summarised "Boulton returns home from the House of Commons – the evidence and results

- of the meeting. Robert Cameron offers his engine cheap. Boulton with sugar planters. Will frustrate Robert Cameron."
- **14.** Letter. Matthew Boulton (London) to James Watt (—). 31 May 1783. Docketed "Account of payment made to Low Vere & Williams." Summarised "We shall carry our point with Cornwall v. Anglesey, and remarks thereon. About Robert Cameron and his offers to Newcastle collieries. Mining not profitable. Boulton prevented from returning home as he is wanted again at the House of Commons."
- **15.** Letter. Matthew Boulton (Dublin) to James Watt (Birmingham). 27 Aug. 1783. Summarised "Boulton's arrival at Dublin. Visits several mines upon his way. Has a sick voyage."
- **16.** Letter. Matthew Boulton (Dublin) to James Watt (Birmingham). 1 Sep. 1783. Boulton completed this letter on 2 Sep. Summarised "Boulton with Lord Arran at his lodgings 132 Mr. Bull's, Capel Street. Visits a friend who through his great skill became bankrupt. This is a violent country. About the value of patents and how parliament affects them. Several pieces of information about Ireland with Boulton's remarks."
- **17.** Letter. Matthew Boulton (Dublin) to James Watt (—). 17 Sep. 1783. 2 sheets. Summarised "Boulton visits P. & A. Colclough and their engine. Lengthy remarks upon the value of mines etc. Is in company with many eminent persons. Checks the bad feelings wrought by Lieut. Henderson."
- **18.** Letter. Matthew Boulton (Stranraer) to James Watt (Birmingham). 8 Oct. 1783. Summarised "Boulton returns from Ireland to Scotland. Thinks his visit has done us great service, and that money can be made there. He has been well received by the chief men of Ireland."
- **19a.** Letter. Matthew Boulton (Dumfries) to James Watt (—). 9 Oct. 1783. Enclosing (b) and (c) below. Summarised "Boulton encloses the newspaper about his puff in the Irish paper, and draft of his answer to David Melvill, endeavouring to quiet that gentleman. Also Mr. Henderson's letter concerning the above. Boulton considered the advertisement to unfairly expose his character as a great quack."
- b. Draft of letter. Matthew Boulton (Dublin) to David Melvill (—). 25 Sep. 1783.
- c. Letter. Logan Henderson (Dublin) to Matthew Boulton (—). 28 Sep. 1783.
- **20.** Letter. Matthew Boulton (Carron) to James Watt (Birmingham). 16 Oct. 1783. Docketed as 18 Oct. Summarised "Boulton in company with eminent gentlemen in Scotland Dr. Black, Dr. Ferguson, Sir Thomas Dundas, Dr. Roebuck, Lord Dondonnal etc. Visits Mr. Sandeman's bleach field. There will be a total change in the Carron ministry."
- **21.** Letter. Matthew Boulton (Carron) to James Watt (Birmingham). 28 Oct. 1783. Summarised "Boulton approves of Watt buying Cornish shares. Will not inform Hornblowers when we shall proceed against them. Boulton's views upon cotton mill engines for Manchester. Boulton visits many friends of Watt and wishes Mrs. Watt to hear her father, mother and sisters are well. Re. business at Carron."
- **22.** Letter. Matthew Boulton (Edinburgh) to James Watt (—). 8 Nov. 1783. Summarised "Boulton detained in Scotland to attend to the Carron affairs, when the fate of that company will be finally settled."
- **23.** Letter. Matthew Boulton (Edinburgh) to James Watt (Birmingham). 17 Nov. 1783. *Mis-docketed as 8 Nov. Summarised "Boulton speaks of the hospitality of the Scotch people. With Dr. Black and Dr. Hutton, Dr. Cullin, Dr. Hope, Dr. Schwediaur, Dr. Cooper, Dr. Walker, Dr. Gregory, Adam Smith, Prof. Robinson, Prof. Ferguson, Lord President, Lord Braksfield and Lord Elliock (Lords of Sessions), Duke and Duchess of Bucclough, Duke of Montague, Sir T. Dundas, Lady Hopton and many others."*

- **24.** Letter. Matthew Boulton (Newcastle) to James Watt (Birmingham). 23 Nov. 1783. With shorthand notes on the outside of the letter. Summarised "Boulton visits Newcastle. Sorry N. Down is going to work, as I fear the copper trade will be over-done. Always endeavours to cultivate acquaintance with his children by every means in his power, so refuses Watt's visit at Christmas."
- **25.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 19 Dec. 1783. Summarised "Perrier will pay, at least he says so. Boulton arrives in London, will see to the patents. Mr. Mylne very kind in setting out the ground for the Albion Mill. We have got another partner who is a man of large fortune, but wants an establishment for one of his sons."
- **26.** Letter. Matthew Boulton (London) to James Watt (Birmingham). 22 Dec. 1783. Summarised "Mr. Richmond's new scheme and his let-down. Concerning the Albion Mill building. About the Cornish mine affairs. Williams of Anglesey revengeful. Knows no more about patents and has not heard of Henderson or Cameron."