

MS 3147/3/485
SPECIAL SUBJECTS & CORRESPONDENTS
AIMÉ ARGAND, THE HYDRAULIC RAM
1785—1787; 1797—1799

INTRODUCTION

Letters from Aimé Argand from 1785 to 1787, and letters and papers concerning his hydraulic ram, from 1797 to 1799. Aimé Argand (1755—1803) was a Swiss physician. His first connection with Soho was over his lamp, which he patented in 1784 and which Matthew Boulton manufactured at Soho, although the patent was later declared invalid. In 1797 Argand and Montgolfier invented a “belier hydraulique”, a hydraulic ram for raising water from the sea or rivers. Argand offered the invention to Boulton & Watt, and they took out a patent for it. A few rams were manufactured at Soho, most notably for the town of Falmouth on Jamaica (see 3/494, drawings in Portfolio 5/1109), while Matthew Boulton installed one in the grounds of Soho House in 1798 (drawings in Portfolio 5/1441).

The letters and papers in this bundle relate to the invention of the ram and the subsequent patent. However the bundle also contains letters from Argand dating from before the ram’s invention. These letters discuss his lamp and other business matters, and may have been added to the bundle from the series of Incoming Correspondence.

1. Bundle wrapper.
Marked “Letters & Papers relative to Argand’s Ram.”
2. Letter. Aimé Argand (London) to James Watt (Harper’s Hill). 15 Dec. 1785.
3. Letter. Aimé Argand (London) to Boulton & Watt (Birmingham). 26 Aug. 1786.
4. Letter. Aimé Argand (Paris) to James Watt (Harper’s Hill). 13 Sep. 1786.
5. Letter. Aimé Argand (Paris) to James Watt (Harper’s Hill). 2 Oct. 1786.
6. Letter. Aimé Argand (Paris) to Boulton & Watt (London). 22 Oct. 1786.
7. Letter. Aimé Argand (Paris) to Boulton & Watt (chez Monsieur Dessaint, Calais). 11 Jan. 1787.
8. Letter. Aimé Argand (Paris) to James Watt (6 Green Lettice Lane). 13 Mar. 1787.
9. Letter (in French). Aimé Argand (Paris) to Boulton & Watt (Soho). 14 Oct. 1797.
Docketed “Invention of the belier hydraulique by him and Montgolfier. His anxiety to procure a patent for it in this country. Offers it to us.”
10. Letter. James Watt (Soho) to Ambrose Weston (38 Fenchurch St., London). 20 Nov. 1797.
The letter includes a rough sketch of the ram.
Summarised by Hazleton “Concerning the drafting out of a patent, for the hydraulic ram in conjunction with Argand.”

11. Letter. J. Poole (Patent Office) to A. & J. Weston (Fenchurch St., London). 2 Dec. 1797.
On the same sheet:
Transcript of affidavit of Robert Barclay of Southwark, brewer. 1790.
Docketed "Barclay's petition." Concerning an invention for making punches by Francis Bailey of Philadelphia. Boulton and Watt were probably interested in this as an example of an overseas patent in Britain.
12. Letter. James Watt (Soho) to Ambrose Weston (38 Fenchurch St.). 4 Dec. 1797.
Summarised by Hazleton "Concerning the new invention for raising water (the hydraulic ram I presume) and drawing up the patent, and whether it is desirable to have Argand's name in it. Remarks upon Trevithick and Murdock."
13. Letter. Boulton & Watt (Soho) to David Duval (London). 4 Dec. 1797.
In James Watt's hand.
Letter of introduction for Ambrose Weston as their solicitor.
- 14a-d. 4 receipts for Matthew Boulton's expenses concerning the patent, as follows:
 - a. Privy Seal Office. Dec. 1797.
Marked "Paid."
 - b. At the Solicitor General's Office etc. Dec. 1797.
Marked "Paid J. W. [J. Weston?]"
 - c. Signet Office. Dec. 1797.
Marked "Paid."
 - d. Patent Office, stamps etc. 30 Dec. 1797.
15. Letter (in French). Aimé Argand (Paris) to Boulton & Watt (Soho). 29 Dec. 1797.
Docketed as 28 Dec. The docket is on a separate wrapper.
Docketed "Receipt of our letters of 3 and 24 Oct. Drawing and description of his model. Ideas of further improvements. Interview with James Watt Jr. [?] Intentions of coming to England when the road by Calais is opened."
- 16a-h. Set of drawings of the hydraulic ram, as follows:
This set of drawings was used for the preparation of the patent specification.
 - a. Pen & wash drawing. Fig. 1. Belier hydraulique simple, avec ses deux soupapes, vû en coupe.
 - b. Pen & wash drawings. 2 drawings on the same sheet, as follows:
Fig. 2. Plan d'un Belier hydraulique avec un Réservoir d'air.
Fig. 3. Coupe du Réservoir d'air.
 - c. Pen drawing. Fig. 4. Plan d'un Belier hydraulique double, pour le flux & reflux de la mer.
 - d. Pen & wash drawing. Fig. 5. Coupe d'un Belier hydraulique en syphon établi sur une colline où il prend l'eau pour la porter plus en haut.
With pencil alterations, and renumbered as Fig. 7.
 - e. Note referring to improvements shown on the above drawing.
 - f. Pen & wash drawing. Fig. 6. Belier hydraulique circulaire, vû en coupe.
With pencil alterations, and renumbered as Fig. 9.

- g.** Pen & wash drawing. Fig. 7. Not titled.
Drawing of a ram in a river.
- h.** Memorandum (in French). Explanation of the above drawing.
By Argand. With a sketch of valves and pipes in the ram on the same sheet.
- 17.** Draft specification. Draft of the patent specification for the hydraulic ram. Circa Dec. 1797? 20 sheets.
In James Watt's hand. The draft has undergone considerable alteration and revision. Refers to drawings, possibly those above.
- 18.** Letter (in French). Aimé Argand (Paris) to James Watt [Soho]. 16 Jan. 1798.
Letter continued on 3 Feb. 1798.
- 19a.** Letter (in French). Aimé Argand (Versoix, near Geneva) to Boulton & Watt (Soho). 6 Jul. 1798.
Enclosing (b) below.
- b.** Memorandum (in French) & drawing. Mémoire sur le Belier hydraulique à Veine contractée. 5 Jul. 1798.
Signed by Argand for himself and Montgolfier, at Versoix.
- 20a.** Letter. Aimé Argand (Geneva) to Boulton & Watt (Soho). 22 Feb. 1799. 2 sheets.
The docket is on a separate wrapper. Enclosing (b) below.
Docketed "Enclosing a letter from Messrs. Bordier Frères et Co. Copying machines. Wishes a couple to be sent on speculation. Has received no answer to his last letter upon the belier à veine contractée. State of his health. Description of an improvement upon Rumford's fireplaces. Wishes us to take out a patent for it. His fortune lost by the Revolution etc."
- b.** Letter. Bordier Frères (Geneva) to James Watt & Co. [Soho]. 22 Feb. 1799.
On the same sheet.
Letter. Aimé Argand [Geneva] to James Watt & Co. [Soho]. 22 Feb. 1779.
- 21a.** Letter. A. & J. Weston (Fenchurch St., London) to Matthew Boulton (13 London St.). 17 Mar. 1799.
Enclosing (b) below.
- b.** Account. Matthew Boulton for M. Argand's patent, debtor to A. & J. Weston. 1798. 2 sheets.
- 22a.** Letter (in French). Aimé Argand (Geneva) to Boulton & Watt (Soho). 25 Dec. 1799.
Letter sent to 13 London St., but directed inside to Boulton & Watt at Soho. Enclosing (b) below.
Docketed "Recapitulation of the invention which he has transmitted to us. Importance of the pyro-belier. Renews his request for an advance of £1000. Wishes us to sell his scheme for improving chimnies. Improvement upon the water belier."
- b.** Sketches. Two sections of Argand's improved chimney, with notes on them.
- 23.** Paper model of a valve for the ram?
Made from paper and playing cards.

MS 3147/3/486
SPECIAL SUBJECTS & CORRESPONDENTS
RICHARD ARKWRIGHT
1777; 1785; 1789—1790

INTRODUCTION

Letters from Richard Arkwright from 1777, 1785 and 1790. All the letters concern the engine that Boulton & Watt supplied for Arkwright's Nottingham mill except the first two. The first of these earlier letters is an enquiry about the steam engine made not long after Boulton & Watt had gone into business together. Most of the letters are written on Arkwright's behalf by his clerks.

This bundle is an artificial one. The letters were almost certainly removed from the various series of general incoming correspondence. The two early letters were placed on display in cases in the Watt Room at George Tangye's Cornwall Works, and they were probably on display in the Watt Room at Soho Foundry before that. It was decided to bring the scattered letters together into one bundle.

1. Letter. Richard Arkwright (Cromford) to Matthew Boulton (Soho). 21 Nov. 1777.

"Dear Sir,

When last I saw you at Soho you was pleas'd to say you would engage to throw up a certain quantity of water a given height with a fix'd q^{ty} of coles. The question below — shall be obliged to you to favour me with a line setting forth therein the expense of Erecting such an engine.

I am S^r. your mo. H^{ble} ser^t.

Rich^d. Arkwright

What is the expense of throwing up 6 ton of water pr. min. 29 f^t high."

Boulton has used the sheet for calculations and a draft of his reply. Under Arkwright's letter he has written "Q^y if our Soho could not on this occasion be converted into Money. I'll come in Morn^g to you."

2. Letter. Richard Arkwright [Birmingham] to James Watt (Harper's Hill). "Sunday morning" [30 Jan. 1785].
Sorry he has not been able to wait on Watt. Mr. Watson will show him anything necessary at Bromsgrove. Arrangements to meet at Cromford.
3. Letter. Joseph Fletcher for Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 20 Jun. 1789.
How quickly could Boulton & Watt erect an engine to work Sir Richard's mill in Nottingham.
4. Letter. Joseph Fletcher for Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 26 Jun. 1789.
Sir Richard wants them to send a man over to discuss the proposed engine with Mr. Stretton the builder. Can they send someone as soon as possible.
5. Letter. Joseph Fletcher for Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 23 Feb. 1790.
Ordering a 12 horse engine for the mill at Nottingham. Can the drawings be sent.

6. Letter. G. Truman for Sir Richard Arkwright (Nottingham) to Boulton & Watt (Birmingham). 12 Mar. 1790.
Receipt of the drawings. Sir Richard wants Boulton & Watt to send all the cast parts and wants the engine to proceed "with all expedition possible." The millwright is Thomas Lowe.
7. Letter. G. Truman for Sir Richard Arkwright (Nottingham) to Boulton & Watt (Birmingham). 17 Mar. 1790.
Thomas Lowe enquires the number of strokes the engine makes and when it will arrive. The height from the bottom of the well to the fly wheel shaft is 52 feet.
8. Letter. Joseph Fletcher for Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 5 Apr. 1790.
Sir Richard agrees to the payment for the engine, but has never heard of an engine being more than eight or nine horses.
9. Letter. Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 10 Apr. 1790.
*In Joseph Fletcher's hand.
Boulton & Watt should proceed with the 12 horse engine as it is partly made, but it will be more powerful than required. Business has prevented him seeing Boulton and Watt.*
10. Letter. G. Truman for Sir Richard Arkwright (Nottingham) to Boulton & Watt (Birmingham). 16 Apr. 1790.
Arrival of various parts. Progress with the engine house and framing.
11. Letter. G. Truman for Sir Richard Arkwright (Nottingham) to Boulton & Watt (Birmingham). 29 May 1790.
They are ready for the engine – can it be sent as soon as possible.
12. Letter. G. Truman for Sir Richard Arkwright (Nottingham) to Boulton & Watt (Birmingham). 8 Jul. 1790.
Can the rest of the engine and an engine erector be sent as soon as possible. Everything is ready.
13. Letter. Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 8 Sep. 1790.
*In Joseph Fletcher's hand.
Sir Richard has received the deeds. Wishes to know if Peels of Warrington pay the same for their engine.*
14. Letter. William Gibson Jr. for Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 16 Sep. 1790.
Returning the deeds. The engine has stopped once or twice – this may be the fault of the attendants. Sir Richard wants the account and may want an engine at Wirksworth.
15. Letter. William Gibson for Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 29 Oct. 1790.
Has received the account for the Nottingham Mill engine. What discount do Boulton & Watt allow.
16. Letter. Sir Richard Arkwright (Cromford) to Boulton & Watt [Soho]. 23 Dec. 1790.
*The letter is unsigned, and in the hand of an amanuensis.
Enclosing a bill of exchange. The engine at Nottingham has cost more than he expected – can Boulton & Watt make enquiries.*

17. Letter. Richard Arkwright (Cromford) to James Watt [?] [Soho]. 30 Dec. 1790.
In an amanuensis' hand, but signed by Arkwright.
The people who worked the Nottingham mill have been dismissed, including the son who worked the engine. He refused to train anyone else, and may have done something to the engine. Can someone be sent to instruct a new engineman.

MS 3147/3/487
SPECIAL SUBJECTS & CORRESPONDENTS
WILLIAM BEDFORD
1795—1799

INTRODUCTION

Letters from William Bedford, from 1795 to 1799. William Bedford was a Birmingham attorney who was regularly engaged by Boulton, Watt and the various firms at Soho. He was hired for work such as purchase of land, drawing up of apprentices' articles, etc. These letters include references to the purchase of the land for Soho Foundry in 1795 and 1796, and Boulton & Watt's dispute over the Harborne Poor Rate in 1799. The letters were found among the General Incoming Correspondence 1829—1843 and seem to have been kept as a small separate bundle.

See also 2/65, Miscellaneous Legal Papers, for a bill from Bedford for legal work from 1785 to 1786.

1. Letter. William Bedford (New St., Birmingham) to James Watt Jr. (Soho). 19 Aug. 1795.
2. Letter. William Bedford (Birmingham) to James Watt (Soho). 25 Aug. 1795.
3. Letter. William Bedford (Birmingham) to James Watt (Soho). 6 Nov. 1795.
Passed to James Watt Jr.
4. Letter. William Bedford (Birmingham) to James Watt (Heathfield). 29 Feb. 1796.
Docketed "About our making and keeping the fence of Whateley's land."
5. Letter. William Bedford (New St., Birmingham) to M. R. Boulton (Soho). 31 Dec. 1798.
Docketed "Mr. Clarke in town tomorrow – wishes to be called on about poor rates."
6. Letter. William Bedford (Birmingham) to James Watt or Gregory Watt (Soho). 28 Mar. 1799.
Docketed "Intention of serving Timmins with notice of appeal, but has not been able to meet with him."
7. Letter. William Bedford (Birmingham) to James Watt (Heathfield). 3 Jun. 1799.
Docketed "On the mortgage of Thomas Wilson's property."
8. Letter. William Bedford (Birmingham) to James Watt [?] [Heathfield]. 6 Jul. 1799.
Docketed "With the mortgage for Mr. Wilson and others."
9. Letter. William Bedford (New St., Birmingham) to Boulton & Watt (Soho). 30 Nov. 1799.
Docketed "Recommends indentures of apprenticeship for Mr. Hutton in preference to articles of agreement."
10. Letter. William Bedford (New St., Birmingham) to Boulton & Watt [Soho]. 9 Dec. 1799.
Docketed "With indenture for Mr. Hutton and articles of agreement for his father."

MS 3147/3/488
SPECIAL SUBJECTS & CORRESPONDENTS
BIRMINGHAM WATER WORKS
1829–1830

INTRODUCTION

Letters and papers relating to the Birmingham Water Works, 1829 to 1830. The Water Works planned to employ steam power to pump water to the city. Boulton Watt & Co. were invited to provide an estimate, and the engineer William Chadwell Mylne prepared a report on the proposals drawn up by the Water Works' engineer Mr. Rofe. Many of the letters and memoranda are by William Creighton, the head of Boulton Watt & Co.'s Drawing Office.

- 1.** Memorandum. Particulars of quantity of water required, and the height, from Mr. Rofe, Engineer. Calculation of size of Engines. 18 & 21 Sep. 1829.
By William Creighton.
- 2a.** Letter. Thomas Wright, Clerk (Birmingham) to James Watt Jr. (—). 11 Mar. 1830.
Kept with (b) below.
Docketed "The directors request a conference with Mr. Watt upon the subject of their steam engines."

b. Letter. Thomas Wright, Clerk (Birmingham) to James Watt Jr. (—). 12 Mar. 1830.
Not summarised. [Messrs. Harding and Belles of the Water Works Co. will wait upon James Watt Jr. tomorrow.]
- 3a.** Memorandum & Sketch. Sketches &c. for conference. 12 Mar. 1830.
Kept with (b) below.
By William Creighton and ? Sketch showing levels of reservoirs, canal summit, aqueducts etc.

b. Calculations. Not dated [Mar. 1830?].
In James Watt Jr.'s hand.
Calculations for the Birmingham Water Works engine based on a previous engine for West Middlesex.
- 4.** Memorandum. A Conference with a deputation of the Directors, respecting their Steam Engines. 13 Mar. 1830. 2 sheets.
James Watt Jr.'s meeting at Aston with Harding, Meredith and Belles.
- 5.** Memorandum. Birmingham Water Works pipes laying. 12 May 1830.
By William Creighton.
- 6.** Letter. William Chadwell Mylne (New River Head) to James Watt Jr. (Soho). 26 Mar. 1830.
Docketed "Will be at Birmingham to inspect the water works on Monday. Mr. Rofe has brought the plans to him."

7. Letter. William Chadwell Mylne (New River Head) to James Watt Jr. (Soho). 28 Apr. 1830.
Docketed "After some delay has received the plans from Birmingham Water Works. Is going to give a report on it. New River bill to go before a committee on Monday."
8. Letter. William Chadwell Mylne (New River Head) to James Watt Jr. (Aston Hall). 1 May 1830.
On the same sheet:
Transcript of letter. William Chadwell Mylne (London) to the Company of Proprietors of the Birmingham Water Works. 1 May 1830.
Docketed "Sends a copy of report made to the Birmingham Water Works. NB the copy is on this paper."
- 9a. Letter. William Chadwell Mylne (New River Head) to James Watt Jr. (Soho). 8 May 1830.
Enclosing (b) and kept with (c) and (d) below.
Not summarised. [Sending his plan for dividing Birmingham into three 'delivering levels' for water supply. Thinks two 65 horse engines should do the work. What is Boulton Watt & Co.'s price for a 20 horse engine for a flour mill.]
- b. Map and table of Mylne's division of Birmingham into three districts.
- c, d. 2 sketch cross-sections of Birmingham from Bordesley to Hockley.
These two sections are by William Creighton and were not sent by Mylne. They show the rivers Rea and Tame, St. Philip's Cathedral, proposed location of engine etc.
10. Letter. William Chadwell Mylne (New River Head) to James Watt Jr. (Soho). 13 May 1830.
Docketed "Does not see any objection to the 3 delivering levels. Mr. Rofe has called with letter from Mr. Stroud – one main 22 inch resolved upon."
11. Letter. William Chadwell Mylne (New River Head) to James Watt Jr. [?] "Saturday" [15 May 1830].
Docketed "Rofe is to proceed to lay his 15 inch pipe. Proposes being here on Saturday Mr. John Kennedy approves of the engine at Broken Wharf. New River bill. Necessity for new engines proved."
12. Memorandum. List of the Directors of the Birmingham Water Works. 17 May 1830.
13. Memorandum. William Chadwell Mylne at Soho – Birmingham Water Works. 25 May 1830.
Notes and calculations on Mylne's proposals. Partly in William Creighton's hand.
14. Memorandum. Birmingham Water Works. Memorandum of Engines communicated to Mr. Mylne at Soho. 22 May 1830.
In James Watt Jr.'s hand.
15. Report. Copy of Report on the Birmingham Water Works. William Chadwell Mylne (London). 5 Jun. 1830. 6 sheets.
Marked "Soho 19 Jul."

16. Letter. Thomas Wright, Clerk (Birmingham Water Works Office, Cherry St.) to Boulton Watt & Co. (Soho). 15 Jun. 1830.
Docketed as Birmingham Water Works. On the same sheet:
Note by William Creighton: "Information from Messrs. Wright & Rofe June 1830".
Docketed "Ask for estimates of 60 inch cylinders with 20 and 18 inch pumps."
17. Letter. William Creighton (Soho) to James Watt Jr. (London). 17 Jun. 1830.
On the same sheet:
Copy of the estimate for 2 engines 40 horse – A. Prinzig, Bordeaux, 8 Mar. 1830.
Transcript of letter. Thomas Wright to Boulton Watt & Co. 15 Jun. 1830.
Docketed "Reduced estimate of boat engines for 2 40 horses. Birmingham Water Works apply for estimate."
18. Letter. William Creighton (Soho) to James Watt Jr. (London). 21 Jun. 1830.
Docketed "Birmingham Water Works have applied for estimates in various quarters. One engine only to be erected at present. Doubts about number of air vessels and sluices. Answered 24 June."
19. Sketch. Birmingham Water Works – Proposed plan of pumps &c. 28 Jun. 1830.
By William Creighton.
20. Transcript of letter. Boulton Watt & Co. (Soho) to the Directors of the Birmingham Water Works (—). 29 Jun. 1830.
Not summarised. [The estimate cannot be fully completed in the absence of the principals. It is usual to supply a boiler. They cannot undertake the erection but usually send an experienced workman to direct and assist. If the water works assent on these two points the estimate can be prepared.]
On the same sheet:
Transcript of letter. Thomas Wright (Birmingham) to Boulton Watt & Co. 30 Jun. 1830.
Not summarised [The directors assent to the two points in Boulton Watt & Co.'s letter.]
21. Letter. Thomas Wright, Clerk (Birmingham Water Works, Cherry St.) to Boulton Watt & Co. (—). 30 Jun. 1830.
Docketed "Agree to terms for boilers and erection."
22. Letter. William Creighton (Soho) to James Watt Jr. (London). 1 Jul. 1830.
Docketed "Estimate of strong steam boiler 30 horses for Mr. James Walker (Scott & Co.). Birmingham Water Works agree to boilers being included and to the erection being done as usual. Estimates to be delivered next Wednesday. About thickness of pumps and air vessels."
23. Letter. William Creighton (Soho) to James Watt Jr. (London). 2 Jul. 1830.
Docketed "Estimate for Birmingham Water Works with one air vessel."
24. Letter. William Creighton (Soho) to James Watt Jr. (London). 4 Jul. 1830.
Docketed "More about the estimates of the Birmingham Water Works."
25. Letter. William Creighton (Soho) to James Watt Jr. (London). 5 Jul. 1830.
Mis-dated as 5 Jun.
Docketed "More about the estimates of the Birmingham Water Works. Particulars of Leader & Co.'s shaft and fly wanted."

26. Letter. William Creighton (Soho) to James Watt Jr. (London). 11 Jul. 1830.
On the same sheet:
 Transcript of letter. William Creighton for Boulton Watt & Co. to the Directors of the Birmingham Water Works. 6 Jul. 1830.
 Transcript of letter. — (Soho) to Mr. Chalmers (—). 9 Jul.
 Summary of memorandum re pipes for Aberdeen Water Works.
Docketed "Copy of letter to Birmingham Water Works with estimate. Ditto to Aberdeen Water Works about trying pipes and sending off materials. Jauberry & Co. had no estimate."
27. Memorandum. Rofe, Birmingham Water Works at Soho. Memorandums of what passed with him. 6 Jun. 1830.
By William Creighton. Copy sent to Watt Jr. in London in Jul.
28. Wrapper.
Marked "Mr. Creighton's letters to Mr. Watt in London June & July 1830 on the subject of the Birmingham Water Works."

MS 3147/3/489
SPECIAL SUBJECTS & CORRESPONDENTS
BOMBAY MINT
1821–1824

INTRODUCTION

Letters and papers about the Bombay Mint, its machinery and the steam engines supplied by Boulton Watt & Co., from 1821 to 1824. Boulton Watt & Co. also made some of the mint machinery at Soho under their name, but the rolling mill was supplied by the Rennies, and the melting and refining equipment by Maudslay Sons & Field. The mint was established by the East India Company at the same time as the Calcutta Mint. For drawings of the Bombay Mint see portfolios 5/708a—c.

1. Bundle label.
Marked "Bombay Mint 1821, 1822, 1823, 1824. Mr. Watt's private papers."
2. Memorandum. Estimates for Bombay Mint. London, 25 Jan. 1821.
3. Letter. M. R. Boulton (Soho) to James Watt Jr. (London). 9 Jan. 1821.
Docketed "Estimates of engines and machinery for the Bombay Mint."
4. Letter. M. R. Boulton (Muddiford) to James Watt Jr. (13 London St.). 26 Aug. 1821.
Docketed "Estimate of a 40 horse engine with 3 iron boilers for the Bombay Mint. Agrees that the estimates should not be delivered until asked for. To apprise Mr. Robinson of the state of the affair with Maudslay. Wishes me to act for him in the affair of the third vessel for the London & Edinburgh Co."
5. Letter. M. R. Boulton (Muddiford) to James Watt Jr. (13 London St.). 28 Aug. 1821.
Docketed "Extra cost of copper boilers for 40 horse engine, Bombay Mint. Upon Capt. Hawkins' interview with Mr. Robinson. Will repeat his invitation to Capt. Hawkins and Mr. Forbes to Tew. Answered 30 Aug."

6. Memorandum. Estimate for the Bombay Mint. 5 Jul. 1822.
In James Watt Jr. 's hand.
Docketed "General Estimate for the Bombay Mint."
7. Memorandum. Revised Estimate of Steam Engines, Coining & Cutting Out Machinery for the Bombay Mint. 5 Jul. 1822. 2 sheets.
In James Watt Jr. and M. R. Boulton's hands.
Docketed "Revised Estimate of steam engines and of the old Soho Machinery for the Bombay Mint."
8. Memorandum. Computation of the Articles of the Melting Houses & Refinery for the Bombay Mint, extracted from Maudslay's Estimate of the Calcutta Mint. Circa 5 Jul. 1822?
Not dated or docketed. In James Watt Jr. 's hand.
- 9a. Memorandum. Estimate for the Bombay Mint. Soho, 6 Jul. 1822.
In M. R. Boulton's hand. Kept with (b) below.
Docketed "Revised General Estimate for the Bombay Mint. 7 Jul. 1822"
- b. Memorandum. ~~Estimate of~~ a New Rolling Mill by the Messrs. Rennie of half the power of that for the Calcutta Mint. Circa 10 Jul. 1822?
Watt Jr. sent the Rennies' estimate on 10 Jul. 1822 – see his letter of this date.
10. Transcript of letter. Boulton Watt & Co. (Soho) to the Chairman, Deputy Chairman etc. of the East India Company [London]. 6 Jul. 1822.
Docketed "With estimate of coining machinery, rolling mill etc. etc. for the Bombay Mint. Delivered to Capt. Hawkins the 10 Jul. See a later letter and estimate of 24 Dec. 1822 amounting to £40,016."
11. Memorandum. Estimate for the Bombay Mint. Soho, 6 Jul. 1822.
Docketed "General Estimate and Specification of the machinery of the Bombay Mint, dated 6 Jul. 1822."
12. Transcript of letter. Boulton Watt & Co. (Soho) to the Chairman etc. of the East India Company [London]. 6 Jul. 1822.
In M. R. Boulton's hand. This is the same letter as the one above dated 6 Jul.
Docketed "Accompanying the estimate for the Bombay Mint."
13. Transcript of letter. James Watt Jr. (Norfolk Hotel) to George & John Rennie [London]. 8 Jul. 1822.
Docketed "Appointing to call with Capt. Hawkins to confer about their estimate for the Bombay Mint."
14. Letter. M. R. Boulton (Soho) to James Watt Jr. (13 London St.). 9 Jul. 1822.
Docketed "Reasons for thinking a 24 horse power engine sufficient for the coining and cutting out machinery of the Bombay Mint. Extra cost of a 32 horse engine."
15. Letter. M. R. Boulton (Soho) to James Watt Jr. (13 London St.). 9 Jul. 1822.
Docketed "Farther explanations of the sufficiency of the power for the Bombay coining and cutting out engine."
16. Transcript of letter. George & John Rennie (Stamford St., London) to Boulton & Watt [Soho]. 9 Jul. 1822.
Docketed "Containing estimate for the rolling mill, triturating mill etc. of the Bombay Mint."

17. Letter (press copy). James Watt Jr. (London) to M. R. Boulton (Soho). 10 Jul. 1822. 3 sheets.
The docket is on a separate wrapper.
Docketed "With letter from Messrs. Rennies containing their estimate of the rolling mill etc. for the Bombay Mint. Also copies of the letter and general estimate to the Chairman of the East India Co."
18. Letter (press copy). James Watt Jr. (London) to M. R. Boulton (Soho). 12 Jul. 1822. 2 sheets.
The docket is on a separate wrapper.
Docketed "Capt. Hawkins' interview with the Chairman and devlivery of our letter and estimate of the Bombay Mint. His conference with Mr. Money on the same subject."
19. Letter. M. R. Boulton (Soho) to James Watt Jr. (13 London St.). 6 Aug. 1822.
On the same sheet.
Draft of letter. Boulton Watt & Co. (Soho) to Joseph Dart [London]. 6 Aug. 1822.
Docketed "Enclosing letter to the Secretary of the East India Co. requesting an advance of money on account of the Calcutta Mint."
- 20a. Letter. M. R. Boulton (Soho) to James Watt Jr. [London]. 16 Aug. 1822.
Enclosing (b) below.
Docketed "Enclosing copy of two letters from the East India Company relative to the appointment of Mr. Ross as deputy to Mr. Forbes. Wishes Mr. Forbes' and my opinion upon them. Intends being at Tew on Monday."
- b. Transcripts. Transcripts of two letters, as follows:
Peter Auber (East India House, London) to "Boulton Watt & Co. and Messrs. Rennie". 27 Jun. 1822.
Joseph Dart (East India House, London) to Boulton Watt & Co. 15 Aug. 1822.
21. Letters (press copies). Press copies of two letters, as below. 2 sheets.
(i) James Watt Jr. (London) to M. R. Boulton [Great Tew]. 16 Aug. 1822. 3 sheets.
(ii) James Watt Jr. (London) to M. R. Boulton (Great Tew). 17 Aug. 1822. 4 sheets.
The docket is on a separate wrapper.
Docketed "Capt. Hawkins and Mr. Forbes – conferences with the Chairman etc. at the India House. Thomson at work again with Maudslay's estimates of the Bombay Mint. The Deputy Chairman averse to having the old Soho machinery. Forbes' appointments not settled. Receipt of his letter with copies of those from the India House relative to Mr. Ross. Conferences with Forbes and Mr. Robinson upon that subject. The Chairman and Deputy to visit Soho with Mr. Canning. Arrival of the James Watt at Leith with the Royal Squadron."
22. Letter. William N. Forbes (27 Stamford St., London) to James Watt Jr. (Norfolk Hotel, London). 28 Aug. 1822.
Docketed "Sends Mr. Rennie's comparative estimate. Cannot find ours. Conference with Mr. Ross."
23. Letter. Capt. John Hawkins [London] to James Watt Jr. [London]. "Sunday" [17 Nov. 1822].
Docketed "About to proceed to Soho with farther estimates from Maudslay etc. of the Bombay Mint."

24. Transcript of letter. Peter Auber (East India House, London) to Boulton Watt & Co. [Soho]. 2 Dec. 1822.
Docketed "Capt. Hawkins' plan of the Bombay Mint is thought too extensive. Sends another plan of a mint on a smaller scale for our consideration. Wish us to send a revised estimate of the total machinery, the engines having copper boilers. Iron flooring to be used in the melting houses. The whole to be undertaken by us and executed under our responsibility. To be ready for delivery by the end Dec. 1823."
25. Transcript of letter. Boulton Watt & Co. (Soho) to Peter Auber [East India House, London]. 12 Dec. 1822.
Docketed "Opinion of the plan for the Bombay Mint sent from the India House, compared with that of Capt. Hawkins. Expect to be able to submit a revised estimate in a few days. Are willing to undertake the whole and to be responsible for it as in the case of the Calcutta Mint. Doubt our being able to complete the whole in less than 14 months."
26. Memorandum. Explanation in regard to the Estimate, to be obtained from Messrs. Rennie, to meet the observations which may be addressed to BW&Co. upon the comparative sum of it and the Moiety of that of the Calcutta Mint Estimate. 28 Feb. 1823.
In James Watt Jr.'s hand. On the same sheet:
Remarks upon the Specification of Rolling Mill machinery etc. to be furnished by Messrs. Rennie.
Docketed "Mr. Boulton's remarks upon Messrs. Rennie's specification and estimate for the Bombay Mint."
27. Letter. M. R. Boulton (Soho) to James Watt Jr. (13 London St.). 12 Mar. 1823.
Docketed "Cannot get a supply of copper. The rise supposed £20 per ton. Letter from Thompson at the India House enquiring if the packages were ready for inspection. Drawings of the dredging machine sent off."
28. Transcript of letter. James Watt Jr. (London) to M. R. Boulton [Soho]. 17 Mar. 1823.
Docketed "Have received and forwarded per coach George Rennie's revised estimate and specification of the Bombay Mint with explanation of estimate. Have also his revised estimate of Calcutta dredging machinery and propose delivering estimate of the whole to the East India Co. Am waiting for another account for the Portsmouth & Arundel Canal Company. New River Co. have not yet decided about the construction of their 66 inch engine. Fly wheel at Southwark Water Works casing with wood. Remarks on another now fitting at Foundry. Nothing more from Comptroller – Admiralty satisfied with Perkins' scheme etc."
29. Transcript of memorandum. Explanation required by Mr. Boulton from the Messrs. Rennie to meet the observations which may be addressed to Messrs. Boulton & Watt upon the comparative sums of it and of the Calcutta Mint estimate. 17 Mar. 1823.
In James Watt Jr.'s hand.
Docketed "Copy of George & John Rennie's explanation of their estimate of the Bombay Mint rolling mill etc. etc."
30. Letter. M. R. Boulton (Soho) to James Watt Jr. (13 London St.). 18 Mar. 1823.
Docketed "Capt. Boulderson's visit to inspect the Calcutta Mint. Thompson's proceedings at the India House. Haden's illness and incapacity. Projected robbery of the premises at Soho."

31. Letter. M. R. Boulton (Soho) to James Watt Jr. (13 London St.). 2 Sep. 1823.
On the same sheet:
 Transcript of letter. George Rennie (Holland St., London) to M. R. Boulton. 30 Aug. 1823.
 Transcript of letter. Boulton Watt & Co. (Soho) to George Rennie. 2 Sep. 1823.
Docketed "Copy of correspondence with the Messrs. Rennie, who wish to turn over the execution of the annealing furnaces and tools for the Bombay Mint to Maudslay."
32. Letter. M. R. Boulton (Worthing) to James Watt Jr. (Aston Hall). 23 Oct. 1823.
Docketed "Upon the reply to be given to Mr. Thompson respecting the men to go with the Bombay Mint. Thinks two men may not be sufficient for the rolling mill. Going to London to get the order for the coinage expedited. Proposes seeing Mr. Barrow on the subject of the Rennies' memoir of their father. Mrs. Boulton better for sea bathing."
33. Memorandum. Bombay Mint – List & Designation of workmen. 27 Oct. 1823.
Docketed "List of workmen for the Bombay Mint with designation, wages and advances of cash."
34. Letter. Gilbert Hamilton (Soho) to James Watt Jr. [Aston Hall]. 13 Mar. 1824.
Docketed "Encloses a letter from Capt. Hawkins stating that he has recommended to the East India Co. that one of the enginemen to the Bombay Mint should be instructed in the working of engines."
35. Memorandum. Charges for the Bombay Mint. Soho, 23 Mar. 1824.
Details the amounts due to George & John Rennie, Henry Maudslay & Co., S. Walker & Co., M. R. Boulton, and Boulton Watt & Co.
Docketed "Memorandum of charge to the India Company. Ditto of division of the amount. Ditto of cost of the steam engines from the entries in BW&Co.'s books for the year 1824."
36. Letter. M. R. Boulton (Great Tew) to James Watt Jr. (13 London St.). 23 May 1824.
Docketed "Messrs. Walker & Co. apply for a payment of a £1000. Wishes Teasdale & Symes to be consulted about payments to Rennies, Maudslay etc."
37. Letter (press copy). James Watt Jr. (London) to M. R. Boulton (Great Tew). 24 May 1824.
 2 sheets.
The docket is on a separate wrapper.
Docketed "Acquainting him that I have received payment of the money for the Bombay Mint."
38. Letter. John Mosley (London) to James Watt Jr. [Soho]. 3 Jul. 1824.
Docketed "Mr. Boulton has had some interviews with the Chairman of the India House about the sending off the Bombay Mint."
39. Letter. John Robinson (Soho) to James Watt (Aston Hall). 6 Sep. 1824.
Docketed "The workmen going to erect the Bombay Mint want a farther advance of money."
40. Transcripts. Two transcripts on the same sheet, as follows:
 Memorandum. Capt. — Boulderson. 10 Sep. 1824.
 Letter. Sir George Robinson (73 Pall Mall, London) to M. R. Boulton. 11 Sep. 1824.
Docketed "Memorandum of demurrage of the Florentia on account of non-arrival of part of the goods of Bombay Mint. No accounts received lately of Mr. Forbes."

41. Letter. M. R. Boulton (Tew Park) to James Watt Jr. (Aston Hall). 22 Nov. 1824.
Docketed "Has received copy of Mr. Dart's letter charging us with demurrage on the machinery of the Bombay Mint. Remarks on their proceedings and sketch of letter to them. Has heard nothing farther from Mr. Weston or Mr. Sharp."