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 208

3/66 Letters to William Creighton, James Brown, 1820 (67 items)

1. Card cover.

Marked "Mr. Watt 1820."

2. Letter. James Watt Jr. (Heathfield) to William Creighton (Soho). 3 Jan. 1820. *On the same sheet:*

Two transcripts of extract of letters, as follows:

Mr. — Weston [London] to James Watt Jr. [Heathfield]. 1 Jan. 1820.

John Rennie [London] to James Watt Jr. [Heathfield]. 25 Dec. 1819.

Docketed "Copy of letter from Mr. Weston about Regent's Canal business which seems nearly concluded. Davidson Barkly & Co. cannot have mill till Mr. Rennie consults Mr. Cameron."

- **3.** Letter. James Watt Jr. (Heathfield) to William Creighton (Soho). 27 Jan. 1820. Docketed "Thinks Mr. Murdock should go to Penitentiary."
- **4.** Letter. James Watt Jr. (Heathfield) to William Creighton (—). 12 Feb. 1820. Docketed "What is wrote Mr. Weston about Regent's Canal agreement."
- **5.** Letter. James Watt Jr. (Aston Hall) to William Creighton (Soho). "5 o'clock" [Feb. 1820?]. Docketed "Date of Regent's Canal deeds to be corrected."
- **6.** Letter. James Watt Jr. (Aston) to John Murdock (—). 18 Mar. 1820. Docketed by William Creighton. Docketed "On Molson's boiler going through the tunnel."
- **7.** Letter. James Watt Jr. (Heathfield) to William Creighton [Soho]. 25 Mar. 1820. Docketed "Mr. Mosley knows nothing of Smith Lindsay & Co. Proposed to ask Henry Creighton."
- **8.** Letter. James Watt Jr. (Aston) to William Creighton [Soho]. 9 Apr. 1820. Docketed "On probable time of preparing 2 engines, 40 horse."
- **9.** Letter. James Watt Jr. (Heathfield) to William Creighton (Soho). 21 May 1820. Docketed "Directions for writing to Mr. Hudig, Rotterdam. Directions for letters to Manchester and Glasgow. Mr. J. Robison may probably call at Soho."
- **10.** Memorandum. "Superb from Mr. Watt's letter, Glasgow, July 1820." Details of the steam boat Superb, including a sketch section, transcribed by William Creighton from an enclosure sent with the letter from James Watt Jr. dated 8 Jul. 1820 (see below).
- **11.** Letter. James Watt Jr. (Glasgow) to William Creighton (Soho). 8 Jul. 1820. Docketed "Sends particulars of Scotch steam boats for Mr. Brown. Will return soon."
- **12.** Letter. James Watt Jr. (London) to William Creighton (Soho). 30 Jul. 1820. Docketed "Has given Mr. Rennie a letter for Swaffham Commissioners. Sons of Commerce out of patience. Mr. Evans' remarks on Holyhead vessels. Dimensions of 40 horse boilers wanted. Regent's Canal Co. want more men. Estimate of 30 horse boat engine wanted. Proposes 14 horse engine for Gravesend boat."

- **13.** Letter. James Watt Jr. (London) to William Creighton (Soho). 3 Aug. 1820. 2 sheets. Docketed "Post Office order engines discussion about time etc. Section of vessel given, size of boiler proposed. 2 more 40 horse engines likely to be wanted. Going to Margate by Eclipse. A companion to Eclipse proposed. Also two 14 horse engines, and perhaps for 20 horse. Wants size of boilers. Enquires about paddle wheels."
- **14.** Letter. James Watt Jr. (London) to William Creighton (Soho). 7 Aug. 1820. Docketed "Voyage to Margate and back by Eclipse. Plates wanted as many have broke. Enquire after Sons of Commerce's engines. Barge ordered for Wednesday."
- **15.** Letter. James Watt Jr. (London) to William Creighton (Soho). 8 Aug. 1820. Docketed "More enquiries about Post Office engines. Thinks boiler too small. Eclipse Co. about new boat. Gravesend larch boat proposed. Diana account wanted. Mr. Anderson wants amount of blocks. Will try and see Mr. Smirke."
- **16.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Aug. 1820. Docketed "Post Office enquire to have wheels on first shaft, on deck. Wants sketches of plan etc. Estimation of draft is 8 feet 6 inches."
- **17.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 11 Aug. 1820. *Docketed "J. Jones to have instructions in engine-keeping."*
- **18.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Aug. 1820. Docketed "Favourite and Eclipse Co. resolve on having a 3rd vessel. Diana cost received. Capt. Rogers expected."
- **19.** Letter. James Watt Jr. (London) to William Creighton (Soho). 14 Aug. 1820. Docketed "Fen engine is on order. Sugar apparatus in agitation by Craven & Bowman, prices of engines wanted. Rohde's old boiler collapsed. Complaints of new steam pipes."
- **20.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Aug. 1820. Docketed "London and Margate boats decide on new vessel and engines. Particulars of vessel. Observations on Eclipse boiler, ditto on paddle wheels. Post Office expected to be settled."
- **21.** Letter. James Watt Jr. (London) to William Creighton (Soho). 16 Aug. 1820. Docketed "Post Office engines positive order. Some particulars given. Another plan of engines wanted. Another vessel in agitation. Will apply to Mr. Rennie for Brooke's estimates."
- **22.** Letter. James Watt Jr. (London) to William Creighton (Soho). 20 Aug. 1820. Docketed "Sends sketches of Post Office boiler. Paddle wheels probably cannot be allowed 9 feet. Leaks in Eclipse boiler bottom. Shaft Post Office must be above deck."
- **23.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 Aug. 1820. Docketed "With drawing of Post Office boiler. Mr. Rennie and J. Walker absent, therefore Brooke & Co. must wait. Mr. Ranson grumbling. Regent's Canal, one engine may work in about a week state of building etc. George Taylor unwell. J. Brown and Worley at Sons of Commerce."
- **24.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 Aug. 1820. Docketed "Enquires if there is a boiler same as Rohde's 32 horse. Hodgson's pipes arrived. Sutton & Davis and Coope doing very well."
- **25.** Letter. James Watt Jr. (London) to William Creighton (Soho). 23 Aug. 1820. Docketed "Further conference with Post Office. Paddle wheels 8.0 feet wide and strong. Section of boat to be sent. Drawing of 14 horse boiler wanted. Boiler for Mr. Rohde wanted."

- 26. Letter. James Watt Jr. (London) to William Creighton (Soho). 24 Aug. 1820. Docketed "With draft of Post Office vessel. Observations on paddle wheels and length of engine room. Size of cross beams and those for the gangway. Disaster of Eclipse in Pool of London. Drafts of 2 other Post Office vessels making. Leader's boilers nearly done."
- 27. Letter, James Watt Jr. (London) to William Creighton (Soho). 26 Aug. 1820. Docketed "London & Margate new vessel contracted for by Evans. Query about paddle wheels. Wants size of boiler - 14 horse. James McMurdo considers Rohde's boiler stronger than common. Weight of Gwinn's boiler wanted. Account of money paid to Tandy's wife wanted. Enquiry after Oldham's scheme."
- 28. Letter. James Watt Jr. (London) to William Creighton (Soho). 28 Aug. 1820. Docketed "Letter from Mr. Rennie with price of sugar mills. Asks if 8 horse boiler for mud engine at Ramsgate is going on. Remarks on boiler for 14 horse. An additional boiler or larger engine recommended to Ranson's. Account wanted of men's time at ditto."
- 29. Letter. James Watt Jr. (London) to William Creighton (Soho). 29 Aug. 1820. Docketed "Regent's Canal engine ready for starting. Mains have burst. Sons of Commerce not ready for a voyage. Debtors to be looked up. Answer to give Orrell."
- 30. Letter. James Watt Jr. (London) to William Creighton (Soho). 31 Aug. 1820. The docket is on a separate sheet, which has been attached to the letter. Docketed "Some resolutions on Post Office engines. Mr. Brown proposed to see the present Irish packets. More steam way in the boiler wanted. Proposal for steam pipe." 31. Letter. James Watt Jr. (London) to William Creighton (Soho). 1 Sep. 1820. Docketed "Post Office have decided on a second vessel with 30 horse engines. Estimate of copper boiler wanted. Eclipse and Favourite boilers leak."
- 32. Letter. James Watt Jr. (London) to William Creighton (Soho). 2 Sep. 1820. Docketed "Experiment with Sons of Commerce 7% miles per hour - speed of engines and coals burnt. Velocity same as Victory. Po boat papers wanted. Enquiry about mud boiler proposed for Ramsgate."
- 33. Letter, James Watt Jr. (London) to William Creighton (Soho). 3 Sep. 1820. Docketed "Template making of section of Post Office vessel, proposals for boiler. Engines must have a hand pump. Place of paddle wheel shafts."
- 34. Letter. James Watt Jr. (London) to William Creighton (Soho). 4 Sep. 1820. Docketed "Mr. Craven orders 10 horse sugar engine and one machine. Post Office wheels proposed 14.0 feet, 2 feet 6 inches dip, connecting rod 6 feet 6 inches. Mr. Brown about leaving for Ireland. Margate Union Co. vessel."
- 35. Letter. James Watt Jr. (London) to William Creighton (Soho). 6 Sep. 1820. Docketed "Wants Mr. de Gallois' papers. Post Office vessel No. 1 considered settled as far as can in London. 2nd vessel to have iron boiler. Section to be sent here. Mr. Murdock will alter Sons of Commerce. Will write about Ramsgate Harbour boiler. Mr. William Murdock Jr. proposed to go to Dublin. Plan of Mr. Craven's premises making."
- 36. Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Sep. 1820. On the same sheet:
- Log. Experiments with the Diana. 9 Sep. 1820. Docketed "Experiments on speed of Diana. Boat appears sunk at middle. No steam to spare
- from boiler. Engines work very well."
- 37. Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Sep. 1820. Docketed "Post Office 2nd engine estimates given." Sons of Commerce to be altered by Mr. Murdock. Drawing of Post Office paddle wheels wanted."

- **38.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Sep. 1820. The docket is on a separate sheet, which has been attached to the letter. Docketed "Post Office 2nd boat engines ordered and to be 30 horse. Boiler plates not to be thinned. Broderipp and Oldham's schemes to be officially tried. Capt. Rogers gone to Holyhead. Another trial of Diana to be made fuel consumed. Has looked at de Gallois' papers."
- **39.** Letter. James Watt Jr. (London) to William Creighton (Soho). 16 Sep. 1820. Docketed "Experiment with Sons of Commerce loaded astern 7.6 miles per hour. Worley and Shakespear's wages. Design for a Leith vessel wanted."
- **40.** Letter. James Watt Jr. (London) to William Creighton (Soho). 17 Sep. 1820. *Docketed "Answer to be given Mr. de Gallois."*
- **41.** Letter. James Watt Jr. (London) to William Creighton (Soho). 19 Sep. 1820. Docketed "Mr. Brown's observations received. Instructions for Mr. Ratton's faggotts. Mr. Murdock ready to return. Regent's Canal progress. George Taylor very unwell."
- **42.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 Sep. 1820. The docket is on a separate sheet, which has been attached to the letter. Docketed "Mr. Röntgen wants various estimates of engines. Price of 60 horse boat engine wanted. Propriety of boat engine for scoops and enquiry into expense. Imagined speed of Leith boats. Performance of Sons of Commerce. Favourite broke a beam."
- **43.** Letter. James Watt Jr. (London) to James Brown (Soho). 23 Sep. 1820. 2 sheets. Docketed by William Creighton. Docketed "Observations on the Holyhead voyage wanted. Remarks on paddle wheels. On strengthening side beams. Leith packet scheme decided. Rotterdam drawings going on. Mr. Craven wants plan. On Margate new boat. Wheels of Sons of Commerce altered. Regent's Canal main burst."
- **44.** Letter. James Watt Jr. (London) to James Brown (Soho). 25 Sep. 1820. Docketed by William Creighton. Docketed "On Craven & Bowman's plan – drawings wanted. Pumps. A rough expedition on Sons of Commerce. Craven & Bowman's boiler to be strong."
- **45.** Letter. James Watt Jr. (London) to William Creighton (Soho). 27 Sep. 1820. Docketed "Paddle wheels Post Office and for Margate will do. Gravesend Consolidated Co. Necessity for getting on with more boilers. Expedition with boat orders indispensable. West Middlesex may want boilers. Mr. Murdock returning. A steam vessel from Liverpool to Lisbon talked of."
- **46.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 28 Sep. 1820. Docketed "Wants estimate of boilers for West Middlesex."
- **47.** Letter. James Watt Jr. (London) to William Creighton (Soho). 30 Sep. 1820. Docketed "Fresh trial of Sons of Commerce. John Craven Jr. is right. Materials wanted etc."
- **48.** Letter. James Watt Jr. (London) to James Brown (Soho). 30 Sep. 1820. The docket is on a separate sheet, which has been attached to the letter. Docketed by William Creighton: "Observations on Post Office No. 1 drawings. Strength wanted at paddle wheel outer necks. Time of execution wanted. Leith packet business going on. Rotterdam vessels kept back. Victory and Engineers talk of boat. Evans extending premises to build Post Office 2 and Margate 6th."

- **49.** Letter. James Watt Jr. (London) to William Creighton (Soho). 4 Oct. 1820. *On the same sheet:*
- Letter. James Watt Jr. (London) to James Brown (Soho). 4 Oct. 1820.

Docketed "Craven's machine will do. Craven's steam pipes will be sent. Post Office vessels – remarks. Leith vessels ditto. Enquires when several orders will be completed. Proposed new plates, Sons of Commerce."

- **50.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Oct. 1820. Docketed "Mr. Gibson has had estimate. No remarks on Post Office No. 2. Cannot reply to Goldschmidt's for want of questions. Goldschmidt's have furnished a copy."
- **51.** Letter. James Watt Jr. (London) to William Creighton (Soho). 10 Oct. 1820. Docketed "Sends copy of letter to Messrs. Goldschmidt & Co. Observations on letter to be sent to Mr. de Gallois. Eclipse boiler must have a new bottom to consider it. Favourite Co. irresolute, but boiler to be sent when ready. Post Office vessel No. 1, planking."
- **52.** Letter. James Watt Jr. (London) to William Creighton (Soho). 13 Oct. 1820. On the same sheet:

Transcripts of two letters, as follows:

Bingham Richards & Co. (London) to Boulton Watt & Co. (Soho). 11 Oct. 1820. Bingham Richards [London] to James Watt Jr. [London]. 11 Oct. 1820. Docketed "Po Steam Boat Co. complain that more than Tandy's wages has been taken up – complain of Tandy. Denied by Mr. Richards."

- **53.** Letter. James Watt Jr. (London) to William Creighton (Soho). 3 Nov. 1820. Docketed "Draft of Gravesend boat to be followed, price given. Leith packets 25 feet by 125 feet settled price of engines given. 50 horse engines to be designed. Scheme for boats to Calais, and time of execution wanted. Asks if 60 horse engines can be used. Brocklebank's order 2 20 horse engines about settled, also 2 more price given."
- **54.** Letter. James Watt Jr. (London) to William Creighton (Soho). 10 Nov. 1820. 2 sheets. Docketed "Progress of Post Office vessels. Eclipse Co. have had crank wheel allowed for. Brocklebank's progress with barge. Time for building Leith No. 1. Engines of 50 horses proposed for No. 2 time wanted. Packets to Calais in agitation. Mr. Rennie has a draining scheme. Boat for Moerdyk talked of. Estimated draft of Venus."
- **55.** Letter. James Watt Jr. (London) to William Creighton (Soho). 14 Nov. 1820. Docketed "Wants size of 50 horse engine house. Also time for 40 and 50 horse engines, Leith 2nd. Estimate and weight wanted. Post Office engines No. 1 to be sent when ready. Favourite boiler being taken out. Leith No. 2 to be settled soon. Mr. Rennie's scheme to drain a fen. Directions for Favourite's new boiler."
- **56.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Nov. 1820. Docketed "Lord Audley enquires about a 10 horse engine and pumps. Expects Leith No. 2 in 3 months less than supposed. Builders' calculations about draft etc. of Leith vessels. Supposed quantity of coals."
- **57.** Letter. James Watt Jr. (London) to William Creighton (Soho). 17 Nov. 1820. Docketed "Leith No. 1 built by Wigram, Leith No. 2 proposed by Wood. Boiler of ditto same surface as Eclipse proportional to size. West Middlesex want boilers inspected. Also Favourite's boilers to be examined."
- **58.** Letter. James Watt Jr. (London) to William Creighton (Soho). 22 Nov. 1820. Dated as 23 Nov. by James Watt Jr. Docketed "Weight of 50 horse boiler with single flues wanted. Also the whole weight. Supposed estimate 50 horse. 1st Post Office engine to be sent away. Leith vessel No. 2 scheming. Rohde's wish to know about boiler. Fen engine supposed in no haste."
- **59.** Letter. James Watt Jr. (London) to William Creighton (Soho). 23 Nov. 1820. Docketed "On Mr. Brocklebank's order. Order of execution. Mending of Eclipse boiler."

- **60.** Letter. James Watt Jr. (London) to William Creighton (Soho). 25 Nov. 1820. Docketed "On boiler for 50 horse engines. Thinks Mr. Rohde wants 2 boilers. Favourite's boiler worth mending. Mr. Rennie has seen Regent's Canal engines."
- **61.** Letter. James Watt Jr. (London) to William Creighton (Soho). 29 Nov. 1820. Docketed "Mr. Rohde to have only one boiler. Post Office No. 1 ready to launch in a fortnight. Engines to go. Leith section not ready. Favourite boiler sending to Soho. Brocklebank's estimate must stand."
- **62.** Letter. James Watt Jr. (London) to William Creighton (Soho). 5 Dec. 1820. Docketed "Mr. Kennedy to have answer about Orrell's affairs. Enquires about Mr. McRae. More boat engines in agitation. Boiler making must be expedited."
- **63.** Letter. James Watt Jr. (London) to William Creighton (Soho). 6 Dec. 1820. Docketed "With section of Leith boat No. 2 and observations."
- **64.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Dec. 1820. Docketed "On 50 horse engines and their connecting rod etc. Sends section of Leith No. 1. Difficulties with shipbuilders. Materials of Post Office No. 1 arrived. Death of Joseph Varley."
- **65.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Dec. 1820. *On the same sheet:*

Letter. J. Miller for John Heighington (Hatfield St.) to Boulton Watt & Co. [London]. 15 Dec. 1820.

Docketed "Order for cross bar, Sons of Commerce. They have already broke 2."

- **66.** Letter. James Watt Jr. (London) to William Creighton (Soho). 19 Dec. 1820. Docketed "On the design for Leith No. 2 paddle wheels etc. Drawings wanted for it and No. 1. Favourite boiler got into place. Post Office No. 1 not launched next Spring tide. Engine beams and cross bars to be made stronger."
- **67.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 19 Dec. 1820. Docketed "Enguires if Mr. Dagneau has had an estimate 10 horse engine."

3/67 Letters to William Creighton, January-July 1821 (60 items)

- 1. Card cover.

 Marked "Mr. Watt 1821, No. 1."
- **2.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 2 Jan. 1821. Docketed "On Chelsea estimate. Co. will want time for payment."
- **3.** Letter. James Watt Jr. (London) to William Creighton (Soho). 5 Jan. 1821. Docketed "Encloses letter from Mr. Thomas Molson. Wishes apples by land."
- **4.** Letter. James Watt Jr. (London) to William Creighton (Soho). 6 Jan. 1821. Docketed "Encloses letter from Mr. Molson. Beams and cross bars all to be strengthened. Regent engines doing well. Chelsea order has been passed. Post Office No. 1 not launched."
- **5.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Jan. 1821. Docketed "Observations on Mr. de Gallois' letter, and answer to be given his agent. On terms for Chelsea payment. Mr. Craven's job, asks if boiler was made for strong steam. Mr. Craven wants his account. Hodgson & Son's apparatus at work. Enquiry after boiler for Post Office No. 1."
- **6.** Letter. James Watt Jr. (London) to William Creighton (Soho). 14 Jan. 1821. Docketed "Estimates of engines wanted for Moerdyk ferry, Holland."

- **7.** Letter. James Watt Jr. (London) to William Creighton (Soho). 18 Jan. 1821. *On the same sheet:*
- Transcript of letter. Francis Freeling (General Post Office) to James Watt Jr. [London]. 18 Jan. 1821.
- Docketed "Enquiry from Post Office about engines for 2 steam vessels. Price, time etc. wanted for ditto. Post Office No. 1 successfully launched and engines putting in."
- **8.** Letter. James Watt Jr. (London) to William Creighton (Soho). 19 Jan. 1821. Docketed "Proposal for making boilers Leith No. 2 of copper. No account of Mr. Murdock's progress."
- **9.** Letter. James Watt Jr. (London) to William Creighton (Soho). 23 Jan. 1821. Docketed "On boiler for Post Office No. 1. Mr. Freeling has had estimate of 20 horse engines. Brocklebank talks of 30 horse engine. Estimate of 50 horse copper boiler wanted. Dutch engines."
- **10.** Letter. James Watt Jr. (London) to William Creighton (Soho). 30 Jan. 1821. Docketed "Post Office No. 1 boiler arrived. Arrangement for getting it in. Sections of boat wanted. On copper boiler for Leith No. 2. Mr. Murdock's visit to Chelsea. Regent's Canal fireplaces are about to use Brunton's scheme. Consumption of coals wanted."
- **11.** Letter. James Watt Jr. (London) to William Creighton (Soho). 1 Feb. 1821. *Docketed "Copy of letter to Mr. Röntgen sent."*
- **12.** Letter. James Watt Jr. (London) to William Creighton (Soho). 2 Feb. 1821. *The docket is on a separate sheet, which has been attached to the letter. Docketed "*Leith No. 2 to have iron boiler a sketch of it wanted. Dover packet engines not ordered. Speculation boilers. Cross bars to be strengthened."
- **13.** Letter. James Watt Jr. (London) to William Creighton (Soho). 2 Feb. 1821. *Docketed "About Henry Taylor."*
- **14.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Feb. 1821. Docketed "Leith boiler No. 5 preferred. Observations on dimensions. More men wanted. Post Office No. 2 to be launched 1st March. Post Office No. 1 boiler in vessel."
- **15.** Letter. James Watt Jr. (London) to William Creighton (Soho). 10 Feb. 1821. Docketed "Section of Leith No. 2 sent. Breadth of ship at boiler. Observations on boiler. Henry Taylor's statement is right is wanted in London. Swiftsure engines etc. wanted. Enquiry about boilers. Asks if Leith No. 2 will be done by end of April. Brocklebank's time etc."
- **16.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Feb. 1821. *On the same sheet:* Sketch plan of boiler.
- Docketed "Cleaning holes for boiler Leith No. 2. Observations on pipes, boilers etc."
- 17. Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Feb. 1821. Docketed "Mr. Lunell's boat enquiry. Leith No. 2 deep flues. On delivery of Post Office No. 2. 20 horse boilers with narrow bottoms. 15 horse engine to be expedited. Expects some more orders. Independent 20 horse engine to go on. Men not arrived, William Murdock Jr. gone to Denmark, Worley ill. Proposes Taylor for a steam boat."
- **18.** Letter. James Watt Jr. (London) to William Creighton (Soho). 16 Feb. 1821. Docketed "Leith No. 2 boat to be in Thames by the end of May. Enquiry about boiler. Leith No. 1 to have the engines etc. delivered by 24th March. Disappointment about Post Office No. 2. Gibbs Son & Bright will be drawn upon."

- **19.** Letter. James Watt Jr. (London) to William Creighton (Soho). 20 Feb. 1821. Docketed "Order given for 2 packets from Dover to Calais. Remarks on copper boilers. Taylor wished for back. Wilkinson to stand over. Porter wanted if he can be spared."
- **20.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 Feb. 1821. Docketed "Proposed boat for Queensferry and estimates given. Asks if his of 19th was received. Leith No. 2 nothing further. Post Office No. 2 need not be sent much before the boiler."
- **21.** Letter. James Watt Jr. (London) to William Creighton (Soho). 2 Mar. 1821. Docketed "20 horse independent engine to wait. Soho orders considered slow in execution. Henry Taylor may have £10 and a boat place got him. Margate vessel launched. Swiftsure engines wanted."
- **22.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 9 Mar. 1821. Docketed "Asks about 20 horse boat boilers. On alteration of 50 horse boiler. Leith feed apparatus in the way. Margate boat to be Venus. Post Office 2 waiting for boiler. Venus's hand pump wanted."
- 23. Letter. James Watt Jr. (London) to William Creighton (Soho). 29 Mar. 1821. On the same sheet:

 Memorandum. Experiments with the Lightning Steam Boat. 28 Mar. 1821.

 Docketed "Lightning steam boat experiments on speed. Boiler large for 25 strokes. Paddle casing wrong done. Design for Leith boiler No. 2 wanted."
- **24.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 29 Mar. 1821. Docketed "Wants Chelsea sketches back. A longitudinal section needed."
- **25.** Letter. James Watt Jr. (London) to William Creighton (Soho). 31 Mar. 1821. Docketed "Leith No. 1 called City of Edinburgh. Launching and draft. Lightning engines go faster. Sons of Commerce's shaft arrived. Brocklebank's goods to be sent. Woolwich Smithery doing well."
- **26.** Letter. James Watt Jr. (London) to William Creighton (Soho). 2 Apr. 1821. Docketed "Leith No. 1 coal boxes too small, new ones wanted."
- **27.** Letter. James Watt Jr. (London) to William Creighton (Soho). 4 Apr. 1821. Docketed "Chelsea will be attended to. Post Office 1 preparing for voyage. On safety valves, Leith No. 2. Wages of men in London. Mr. Zwinger wants estimate of 60 horse engine. Delays with Meteor goods."
- **28.** Letter. James Watt Jr. (London) to William Creighton (Soho). 6 Apr. 1821. Docketed "Experiment with Lightning. Stability of vessel etc. John Tandy returned. Capt. Tucksen not seen."
- **29.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Apr. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "Chelsea Water Works notes about engine and pumps."
- **30.** Letter. James Watt Jr. (London) to William Creighton (Soho). 11 Apr. 1821. Docketed "Copy of East India order wanted. Estimate of West India engines wanted. Also Mr. Zwinger's estimate."
- **31.** Letter. James Watt Jr. (London) to William Creighton (Soho). 13 Apr. 1821. Docketed "Price stated for West India 8 horse. Mr. Zwinger has had his estimate. Cannot settle Taylor's wages. Lightning experiments $9\frac{3}{4}$ miles per hour. Voyage to The Nore and time. Vessel very steady."

- **32.** Letter. James Watt Jr. (London) to William Creighton (Soho). 18 Apr. 1821. *On the same sheet:*
- Sketch. Lightning Steam Packet new rings for paddle wheels. By James Brown? Docketed "Lightning paddle wheels to have new rings, of which dimensions are sent. Order for Dover packets confirmed. Sheerness tow boat scheme. Lightning and Leith No. 1 accounts wanted."
- **33.** Letter. James Watt Jr. (London) to William Creighton (Soho). 24 Apr. 1821. Docketed "About copper boilers. Navy Board have not yet determined about steam boat. Mr. Boulton has copies of the Calcutta estimates."
- **34.** Letter. James Watt Jr. (London) to William Creighton (Soho). 2 May 1821. Docketed "Enquiry about weight of boilers. Cannot settle paddles Leith No. 2. Approves of 3 rings. Leith No. 1 will be tried in a fortnight. Some mistake about wood and iron paddles. Brocklebank's shafts are hollow. Dover boats not finally settled."
- **35.** Letter. James Watt Jr. (London) to William Creighton (Soho). 10 May 1821. Docketed "Gemmel may go to London. 40 horse spur wheels too weak. 50 to be made stronger. 40 wheels to do for Admiralty. Enquiry about wood and iron paddles. Meteor nearly as quick as Lightning, Dover vessels not settled."
- **36.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 May 1821. Docketed "Trial with Eagle, about 8 miles per hour. Spur wheels very noisy. Cranks preferred to wheels. Swiftsure launched, draft. Departure of Post Office vessels."
- **37.** Letter. James Watt Jr. (London) to William Creighton (Soho). 18 May 1821. Docketed "No letter from Mr. Zwinger. Observations on the price of cement. Swiftsure, draft and slow speed. Venus towing an India ship. Voyage of Lighting and Meteor to the Downs. Accounts wanted. Dover No. 2 to have copper boiler."
- **38.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 May 1821. Docketed "Report of voyage of Lightning and Meteor to Portsmouth. Venus promises well in speed. Correction about Swiftsure draft. City of Edinburgh afloat. Voyage of Eagle to Ramsgate."
- **39.** Letter. James Watt Jr. (London) to William Creighton (Soho). 22 May 1821. Docketed "Expense of Leith No. 1 wanted. Cost of all others wanted also."
- **40.** Letter. James Watt Jr. (London) to William Creighton (Soho). 25 May 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "City of Edinburgh tried with ½ numbers of paddles. Difficulty in keeping up steam. More experiments intended to be tried. Capacity of boilers wanted."
- **41.** Letter. James Watt Jr. (London) to William Creighton (Soho). 28 May 1821. Docketed "Experiments with City of Edinburgh. Coals burnt in ditto. More experiments proposed."
- **42.** Letter. James Watt Jr. (London) to William Creighton (Soho). 30 May 1821. Docketed "Eagle has had boiler burnt. Observations on boilers. Mr. Ewart and G. Haden report on smoke burning. Grate bars sent too long. Lightning and Meteor at Milford the 26th."
- **43.** Letter. James Watt Jr. (London) to William Creighton (Soho). 30 May 1821. Docketed "Account of experiments with Venus. Steam not very plentiful. Hero launched at Chatham. Venus's paddles answer well."

44. Letter. James Watt Jr. (London) to William Creighton (Soho). 31 May 1821. *On the same sheet:*

Transcript of letter. Francis Freeling (General Post Office) to James Watt Jr. [London]. 31 May 1821.

The docket is on a separate sheet, which has been attached to the letter.

Docketed "Post Office in great haste for the Dover packets. Time to do engines wanted.

Breakage of paddles, Irish boat. Brocklebank's weak side beams enquired into."

45. Letter. James Watt Jr. (London) to William Creighton (Soho). 2 Jun. 1821. On the same sheet:

Transcript of letter. George Henry Freeling (Holyhead) to James Watt Jr. [London]. 30 May 1831.

Docketed "Mr. Freeling's report of voyage to Holyhead. Breakage and loss of paddles. City of Edinburgh has fresh cleaning holes cut in boiler. More experiments proposed. John Taylor mending."

46. Letter. M. R. Boulton (Great Tew) to William Creighton (Soho). 8 Jun. 1821. *On the same sheet:*

Transcript of extract of letter. James Watt Jr. (London) to M. R. Boulton [Great Tew]. 6 Jun. 1821.

Docketed "Mr. Watt, London, 6 June 1821. Account of Lightning and Meteor's adventures. This copy sent by Mr. Boulton."

- **47.** Letter. James Watt Jr. (London) to William Creighton (Soho). 8 Jun. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "City of Edinburgh to set off for Leith the 20th. Paddles 24 inches. Capt. Rogers about paddles. Success of Lightning and Meteor. Mountaineer's challenge etc. Salt traps under consideration. Leith No. 2 vessel to be launched the 18th and engines must go soon in July. Mr. Murdock's return, Mr. Watt's ditto. Dover packet drawings going on."
- **48.** Letter. James Watt Jr. (London) to William Creighton (Soho). 8 Jun. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "Account of experiments on speed of City of Edinburgh steam packet. Difficulty in getting steam for the above, and also Venus. Venus chimney raising 6 feet." **49.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Jun. 1821. Docketed "Swaffham account is sent. Progress of scoop wheels and house Johnson. Syphon boxes will not do. Vessel as Mr. Walker's enquiry £6000. Mr. Austin's man to be enquired of. Paddles of Venus altered. Eclipse considered mended in speed."
- **50a.** Memorandum. "Memorandums made with Mr. Murdock, Mr. Brown & Mr. Bennett. London, 10 Jun. 1821." 2 sheets. *Kept with (b) below.*

Docketed "Mr. Watt, London, 10 June 1821. Remarks on various parts of the Lightning's engines, that are to be corrected in future."

- **b.** Memorandum. Creighton's notes on points in James Watt Jr.'s memorandum.
- **51.** Letter. James Watt Jr. (London) to William Creighton (Soho). 11 Jun. 1821. Docketed "Report of Lambeth having resolved on a 70 horse engine. Peel Williams' estimate for ditto. Mountaineer arrived in Thames. Mountaineer's tonnage and good speed."
- **52.** Letter. James Watt Jr. (London) to William Creighton (Soho). 13 Jun. 1821. Docketed "Voyage of City of Edinburgh to The Nore and back. To leave for Leith 20th. Account of Mountaineer got. Capt. Rogers wrote to about cutting the paddles. Estimate procuring for Mr. Walker. Mr. Murdock returning."
- **53.** Letter. James Watt Jr. (London) to William Creighton (Soho). 14 Jun. 1821. Docketed "On Lambeth estimate. Breakdowns, East London. Men appointed to City of Edinburgh. Worley's station and wages. John Stratford sent to Soho. Tandy's situation and wages. John Taylor getting better."

- **54.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Jun. 1821. Docketed "Will enquire about Lambeth mains. Wants expense of erection. Mountaineer gone with 20 or 30 passengers."
- **55.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Jun. 1821. *On the same sheet:*

Transcripts of three letters, as follows:

H. Hicks & Son (Eastington, near Stroud) to James Watt Jr. [London]. 7 Jun. 1821. James Watt Jr. (13 London St.) to H. Hicks & Son (Eastington). 13 Jun. 1821. James Watt Jr. (London) to George Haden (Trowbridge). 13 Jun. 1821. Docketed "Correspondence with Hicks & Sons about smoke burning and drying cloth by steam."

- **56.** Letter. James Watt Jr. (London) to William Creighton (Soho). 19 Jun. 1821. Docketed "Answer about Lambeth wanted. Conference with Mr. Cockerell."
- **57.** Letter. James Watt Jr. (London) to William Creighton (Soho). 20 Jun. 1821. Docketed "City of Edinburgh gone off. Post Office accounts ordered to be settled. No charge for new rings. Progress of Dover No. 1 proposed launch 22nd Aug. Engines for ditto to go forward. Hero nearly ready."
- **58.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 Jun. 1821. *On the same sheet:*

Transcript of letter. James Brown (London) to Mr. — Evans & Mr. — Patterson. — Jun. 1821.

Docketed "Estimate of a steam boat for Mr. Simon Walker. Mountaineer at Berwick."

- **59.** Letter. James Watt Jr. (London) to William Creighton (Soho). 22 Jun. 1821. Docketed "Will write to Lambeth Water Works. Journal of Mr. Freeling sent. Capt. Rogers' remarks sent. Launch of James Watt. Mountaineer's misfortune. Voyage of Hero to Margate. Some particulars of Hero."
- **60.** Letter. James Watt Jr. (London) to William Creighton (Soho). 23 Jun. 1821. Docketed "Lambeth Water Works have had estimate sent them. Mr. Simpson wants size of grates."

3/68 Letters to William Creighton, July-December 1821 (63 items)

- 1. Card cover.

 Marked "Mr. Watt 1821, No. 2."
- **2.** Memorandum. "Respecting the *City of Edinburgh* &c." Soho, 28 Jun. 1821. *Docketed "Mr. Watt Soho, 28 Jun. 1821. Relative to the* City of Edinburgh."
- **3.** Letter. James Watt Jr. (Aston) to William Creighton (Soho). 3 Jul. 1821. *Docketed "On hollow and solid shafts."*
- **4.** Letter. William Wager (Glasgow) to James Watt Jr. (Soho). 10 Jul. 1821. Docketed by William Creighton, so presumably kept with this bundle. Docketed "James Watt has shipped ballast and sails the 11th. City of Edinburgh about to sail. Observations on making salt in boilers."
- **5.** Memorandum. "Memorandums, 25 Jul. 1821." *In James Watt Jr.'s hand. Docketed by William Creighton. Docketed "About boat engines. Soho 25 July 1821."*
- **6.** Letter. James Watt Jr. (London) to William Creighton (Soho). 8 Aug. 1821. Docketed "City of Edinburgh made good passage. Eclipse beat Mountaineer 20 minutes from Nore."

- 7. Letter. James Watt Jr. (London) to William Creighton (Soho). 14 Aug. 1821. Docketed "City of Edinburgh alterations. Last passage 63 hours. Halbeath coal best. Progress with James Watt. Dover packet engines wanted. Dover paddles to be of fir. Mr. Röntgen not settled yet. Victory and Hero disabled."
- **8.** Letter. James Watt Jr. (London) to William Creighton (Soho). 17 Aug. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "Cost of making Navy tug with changing wheels wanted. Complaints of delay of carriers. Launch of Dover not yet known. Mr. Röntgen making arrangements. A third Leith vessel proposed."
- **9.** Letter. James Watt Jr. (London) to William Creighton (Soho). 18 Aug. 1821. Docketed "Breakages of Lightning and City of Edinburgh. Project for safety valve. Hero has broke a cross bar. Remark on sheet copper order."
- **10.** Letter. James Watt Jr. (London) to William Creighton (Soho). 19 Aug. 1821. Docketed "Dover No. 1 to be launched 7th to 9th September. More men wanted. Plan of James Watt's boiler wanted. Parts of James Watt long on the way."
- **11.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 20 Aug. 1821. *Docketed "Brought by Mr. Röntgen."*
- **12.** Letter. James Watt Jr. (London) to William Creighton (Soho). 21 Aug. 1821. *On the same sheet:*

Transcript of extract of letter. George Henry Freeling (Holyhead) to James Watt Jr. [London]. 18 Aug. 1821.

Docketed "Extract from Mr. Freeling with complaints of wheels. Cross bar George IV broke."

- **13.** Letter. James Watt Jr. (London) to William Creighton (Soho). 22 Aug. 1821. Docketed "Navy tug not yet settled. Venus Co. want wrought iron shaft, 2 solid shafts resolved on, duplicate wheels also, plummer block making in London. More men wanted. Venus shaft piecing, Mr. Rennie."
- **14.** Letter. James Watt Jr. (London) to William Creighton (Soho). 22 Aug. 1821. Docketed "Navy tug drawings wanted. Venus's shaft broke again. To be repaired by Mr. Rennie. A solid shaft to be made. Gangway beams strengthening. Orders for copper plates."
- **15.** Letter. James Watt Jr. (London) to William Creighton (Soho). 24 Aug. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "Enquiry about boiler cramps. Observations on Allingham who is to be discharged. Urgency with copper boiler and engine for Dover No. 2. Observations on the breakage of Venus. Venus's shaft nearly mended. Thomas Hughes may go to Chelsea. Mr. Simpson grumbling and growling."
- **16.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 25 Aug. 1821. Docketed "Venus repaired and gone to Margate. New shaft in great haste."
- **17.** Letter. James Watt Jr. (London) to William Creighton (Soho). 27 Aug. 1821. Docketed "Mr. Mylne wants estimate for water works, Lichfield. No accounts of Venus. City of Edinburgh arrived at 10 Saturday."
- **18.** Letter. James Watt Jr. (London) to William Creighton (Soho). 28 Aug. 1821. *On the same sheet:*

Transcript of letter. Francis Freeling (Bryanstone Square) to James Watt Jr. [London]. "Sunday" [26 Aug. 1821?].

Docketed "Letter from Mr. Freeling about steam boat paddles. Mend of Venus shaft given way. New shaft by fly waggon."

- **19.** Letter. James Watt Jr. (Aston) to William Creighton [Soho]. 3 Sep. 1821. Docketed "Has received a Post Office Firman."
- **20.** Letter. James Watt Jr. (Holyhead) to William Creighton [Soho]. 5 Sep. 1821. Docketed "Arrival of Meteor articles. Talbot has been hired. Pipes wanted for emptying cocks. Crank and barometer glasses wanted. Lightning off with reduced paddles. Duplicate shafts agreed to. Fir paddles stand best."
- **21.** Letter. James Watt Jr. (Holyhead) to William Creighton (Soho). 7 Sep. 1821. Docketed "On breakage of City of Edinburgh's shaft. Defects of Meteor's hollow shaft. Copper pipes much wanted. Paddles reducing. Lightning duplicates arrived. King weatherbound at Dunleary. On enlarging City of Edinburgh's shafts. Mr. Murdock mends."
- **22.** Letter. James Watt Jr. (Holyhead) to William Creighton (Soho). 8 Sep. 1821. Docketed "Enquires about Dover No. 2. Observations on shafts of ditto. Proposes going to Dublin and return on Tuesday. Francis Taylor returning to see wife gives great satisfaction. Carriage sent by Liverpool."
- **23.** Sketches and notes. "Meteor, Holyhead, 12 Sep. 1821." Docketed "Mr. Watt, Holyhead, 12 Sep. 1821. Dimensions of paddle shafts, cocks and air vessels, Meteor. New solid irons proposed."
- **24.** Letter. James Watt Jr. (Holyhead) to William Creighton (Soho). 13 Sep. 1821. Docketed "Passage from Holyhead to Dublin and back in the George IV [Royal Sovereign in the letter]. Meteor repairs done and vessel off. Lightning undergoing repairs. Talbot still continued indifferent. Boilers of Talbot and Ivanhoe bad. Broderip not ready for some time."
- **25.** Letter. James Watt Jr. (Holyhead) to William Creighton (Soho). 14 Sep. 1821. Docketed "Francis Taylor arrived. Orders for pipes, cocks and tools, screws etc. for Lightning. Proposal for paddles."
- **26.** Letter. James Watt Jr. (Holyhead) to William Creighton (Soho). 14 Sep. 1821. Docketed "Sovereign to have only 12 paddles. Mr. Freeling going to see Broderip. Mr. Watt proposes returning 15th. Gauges for new shafts. Copper cover and grease cocks."
- **27.** Letter. James Watt Jr. (Aston) to William Creighton (Soho). 21 Sep. 1821. Docketed "Navy tug wheels on 1st shaft. Bearing in side of ship may be had."
- **28.** Letter. James Watt Jr. (London) to William Creighton (Soho). 29 Sep. 1821. Docketed "Arrival in London and resolution of James Watt committee. Engines have been worked. Expect to make experiments on Thursday. Bars of iron proposed for paddle shafts. City of Edinburgh sailed 26th. Dasher, Dover 1 nearly ready. Progress of Sovereign. Unfavourable opinion of Mr. Freeling on Broderip's ship."
- **29.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 29 Sep. 1821. Docketed "More holes for paddle bolts in Dover No. 1 wheels."
- **30.** Letter. James Watt Jr. (London) to William Creighton [Soho]. 4 Oct. 1821. Docketed "Enquires if 2 letters have been received. Strang & Webber doubtful. Dasher and James Watt unfinished. Mr. Rennie dangerously ill. City of Edinburgh 53 hours passage."
- **31.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Oct. 1821. Docketed "Laird & Co. have contracted with Fawcett & Co. price. Sir John Tobin about 2 vessels estimates wanted. Prices of Fawcett & Co. Dasher is out of dock."

- **32.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Oct. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "Experiments of the velocity of the James Watt vessel. Tooth of a wheel broke and complaint of bad cutting. Vessel wants stability, rudder. Accident with wheel rims. City of Edinburgh to be tried tomorrow."
- **33.** Letter. James Watt Jr. (London) to William Creighton (Soho). 12 Oct. 1821. The docket is on a separate sheet, which has been attached to the letter. Docketed "Experiments on velocity of Dasher. Consumption of coals. Engines work well, paddles too deep in the water. Connecting rod wants room. Enquiry after 2 engines, 14 horse. Mr. Murdock unwell."
- **34.** Letter. James Watt Jr. (London) to William Murdock Jr. (Soho). 12 Oct. 1821. Docketed by William Creighton. Docketed "Mr. Murdock unwell. Experiments with James Watt sent. Size of 15 horse boilers wanted."
- **35.** Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Oct. 1821. Docketed "On Sovereign's shafts. Necks reported to have been hot. Another experiment with City of Edinburgh, ditto with the Dasher. Dasher sails Dover. Mr. Murdock better. Carriage for Crowley?"
- **36.** Letter. James Watt Jr. (London) to William Creighton (Soho). 17 Oct. 1821. Docketed "Dasher has broke cross bars. Duplicates of wrought iron. Mr. Brown going to Dover. Connecting rods too near frame. Strang & Webber safe for £2000."
- **37.** Letter. James Watt Jr. (London) to William Creighton (Soho). 19 Oct. 1821. Docketed "About strong cross bars. Constant disasters with boats. Dover wrought iron soon as possible."
- **38.** Letter. James Watt Jr. (London) to William Creighton (Soho). 20 Oct. 1821. Docketed "Observations on the Meteor's breakage. Mr. Murdock returning. Mr. Röntgen settles tomorrow. On breaking up cross bars. On Holyhead wrought iron shafts. New wheel on James Watt's shaft."
- **39.** Letter. James Watt Jr. (London) to William Creighton (Soho). 22 Oct. 1821. Docketed "On cross bars wrought iron, Dasher, and also the cast ones. On breaking up side beams. Design for Holyhead packet shafts wanted. West India heavy flys. James Watt ready by Thursday. Pearsall will be wanted."
- **40.** Letter. James Watt Jr. (London) to William Creighton (Soho). 23 Oct. 1821. Docketed "Mr. Röntgen's order settled and particulars of boat. Size of paddles, rudder, working gear, boiler. To be complete by 1st March. Dover No. 2 wanted soon. Holyhead packets at work."
- **41.** Letter. James Watt Jr. (London) to William Creighton (Soho). 25 Oct. 1821. Docketed "Dasher has had a disaster. Holyhead all well. Venus engages for George Rex."
- **42.** Letter. James Watt Jr. (London) to William Creighton (Soho). 26 Oct. 1821. On the same sheet:
 Letter. James Brown (London) to William Creighton (Soho). 26 Oct. 1821.
 Docketed "Mr. Watt, J. Brown. Venus's crank wheel quite done. New shaft proposed with wheels. Damage of Dasher's blow valve. Dasher to have stop pipes. Stop valves to be general. Crank wheels to be stronger."
- **43.** Letter. James Watt Jr. (London) to William Creighton (Soho). 27 Oct. 1821. Docketed "Post Office very impatient. Cross bars Mr. Röntgen. James Watt not yet ready. City of Edinburgh pipes wanted immediately. Sir John Tobin builds next year estimates wanted. Sketch of Holyhead shafts wanted. Boiler maker wanted."

44. Letter. James Watt Jr. (London) to William Creighton (Soho). 31 Oct. 1821. On the same sheet:

Memorandum. Experiments with the *James Watt.* 30 Oct. 1821. Docketed "Account of James Watt's experiments on velocity and coals."

- **45.** Letter. James Watt Jr. (London) to William Creighton (Soho). 31 Oct. 1821. Docketed "Sends copy of letter to Mr. Röntgen. Part of payment advanced. Mr. Coulthorp to build vessel."
- **46.** Letter. James Watt Jr. (London) to William Creighton (Soho). 3 Nov. 1821. Docketed "Further experiments with the James Watt. Weather bad for them. Paddle wheels thought too large. Post Office disappointed about Dover No. 2. Broderip not yet at Holyhead."
- **47.** Memorandum. "Experiments with the *James Watt*." 1 & 2 Nov. 1821. The docket is on a separate sheet, which has been attached to the letter. Sent with James Watt Jr.'s letter of 3 Nov. Docketed "Experiments on the velocity of consumption of coals with the James Watt steam packet."
- **48a.** Letter. James Watt Jr. (London) to William Creighton (Soho). 5 Nov. 1821. With (b) below attached. Dated by James Watt Jr. as Oct., but docketed by Creighton as Nov. From the content, the latter would appear to be correct. Docketed "Breakages of crank wheels. Proposal to shorten arms. Another experiment with James Watt on 7th."
- **b.** Sketch. 40 horse engine crank wheel.
- **49.** Letter. James Watt Jr. (London) to William Creighton (Soho). 9 Nov. 1821. 3 sheets. On the same sheets:

Memorandum. Experiments with the James Watt. 6—8 Nov. 1821. Docketed "Experiments with the James Watt. First: all the paddles on, immersed 2 feet 6 inches – speed 10.04 miles per hour. 2nd: half the paddles off the outer rims – speed 9.94 miles per hour. 3rd: half the paddles off each wheel – speed 9.51 miles per hour. 4th: half the paddles off the inner rims – speed 10.03 miles per hour. Comparative speed of the Dasher. Consumption of coal, ten bushels per hour. Propose carrying less coal. Intend trying a deeper immersion of the paddles. One of the crank wheels cracked. Paddle shafts of Meteor. On Mr. Delap's syphon scheme. Broderip's vessel at Holyhead. His statement of its velocity."

- **50.** Letter. James Watt Jr. (London) to William Creighton (Soho). 10 Nov. 1821. Docketed "Further observations on the James Watt's machinery. Mr. Freeling on Meteor's wheels. Observations on breaking crank wheels."
- **51.** Letter. James Watt Jr. (London) to William Creighton (Soho). 16 Nov. 1821. 2 sheets. *On the same sheets:*

Memorandum. Experiments with the James Watt. 13—15 Nov. 1821. Docketed "Further experiments with the James Watt. First: half the paddles immersed 3 feet, the other half 2 feet 6 inches – speed 9.49 miles per hour. Second: three fourths of the paddles immersed 3 feet – speed 9.73 miles per hour. Third: paddles on the inner half of the wheels only & immersed 3 feet – speed 9.17 miles per hour. Fourth: one engine only, paddles as before – speed 6.95 miles per hour. Fifth: one engine only, paddles on inner division only, immersed 2 feet 6 inches – speed 7.69 miles per hour. Sixth: one engine only, all the paddles on, immersed 2 feet 6 inches – speed 7.13 miles per hour. Seventh: all the paddles on and both engines. Difference of speed with the paddle wheels 9 feet wide and when 4½ feet wide = 0.87 miles per hour. Vessel proposed to be tried at sea."

52. Letter. James Watt Jr. (London) to William Creighton (Soho). 16 Nov. 1821. Docketed "With experiments on the James Watt. Observations on the experiments etc. etc. Tremor in boilers. Will enquire about Meteor shafts. On cracking of crank wheels."

- **53.** Letter. James Watt Jr. (London) to William Creighton (Soho). 17 Nov. 1821. Docketed "On Meteor's paddle shafts. Shafts for Navy tug. William Creighton wanted at James Watt."
- **54.** Letter. James Watt Jr. (London) to Boulton Watt & Co. (Soho). 20 Nov. 1821. *On the same sheet:*

Sketch. Framing of Royal Sovereign, showing place of breakage.

Docketed by ?

Docketed "Sketch and explanation of the fracture of the Royal Sovereign's headstock framing."

55. Letter. James Watt Jr. (London) to William Creighton (Soho). 6 Dec. 1821.

On the same sheet:

Memorandum. For the Meteor Steam Vessel. 5 Dec. 1821.

Docketed as 5 Dec.

Docketed "Order for Meteor's new paddle wheels."

56. Letter. James Watt Jr. (London) to William Creighton (Soho). 8 Dec. 1821. *On the same sheet:*

Letter. John Miller (2 Hatfield St.) to Boulton Watt & Co. (London St.). 8 Dec. 1821. Docketed "Eclipse wants estimate of new boiler, iron and copper. Arrow has been launched."

57. Letter. James Watt Jr. (London) to William Creighton (Soho). 10 Dec. 1821. *Docketed as 11 Dec.*

Docketed "Asks if May & Co. are to have discount. Remarks on paddle wheels wanted. Enquiry about James Watt's crank wheel. Crank shaft wheels for City of Edinburgh wanted for experiment."

58a. Letter. James Watt Jr. (London) to Boulton Watt & Co.(Soho). 12 Dec. 1821. *Enclosing (b) below.*

Docketed "Order for waste steam pipe, Royal Sovereign."

- **b.** Letter. J. Johnston (Engineer, *Royal Sovereign George IV*, Holyhead) to William Murdock (Soho). 4 Dec. 1821.
- **59.** Letter. James Watt Jr. (London) to Boulton Watt & Co. (Soho). 12 Dec. 1821. *On the same sheet:*

Memorandum. For the Royal Sovereign Steam Packet. 10 Dec. 1821.

Sketch. Royal Sovereign's paddle wheel. 10 Dec. 1821.

Docketed "Order for paddle wheels to the Royal Sovereign. Sketch of shaft and wheels."

60. Letter. James Watt Jr. (London) to William Creighton (Soho). 15 Dec. 1821. *On the same sheet:*

Letter. James Brown (London) to William Creighton (Soho). 15 Dec. 1821. Docketed "On strengthening James Watt's crank wheel. Particulars of Mr. Blanker's engine wanted – his credit. On strengthening City of Edinburgh's wheels with wrought iron. Mr. Mylne reckons 10 lbs. to the gallon and 54 gallons to the hogshead. Sketches of 6 and 8 horse engines wanted. Copper boiler put together."

- **61.** Letter. James Watt Jr. (London) to William Creighton (Soho). 20 Dec. 1821. Docketed "Cocks, gauges etc. sent wrong. To be advised of in future. Letters not to be sent to London as is about to return."
- **62.** Letter. James Watt Jr. (Soho) to William Creighton (Soho). 23 Dec. 1821. Docketed "Mr. Mylne thinks of single engine for Lichfield Water Works. Has got plan and levels."

63. Memorandum. Observations on crank wheel for *City of Edinburgh* vessel. Soho Foundry, 29 Dec. 1821. *William Creighton's memorandum of a meeting between James Watt Jr., William Murdock, William Murdock Jr. and himself.*