

DIE ENGLISCHE REISE 1787¹

211. Charles Greville² an Matthew Boulton³

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 170.

London, 27. Januar 1787

Empfehlungsschreiben für Stein und Zimmermann ("very intelligent and aimable gentlemen"). Steins Wunsch, mit Boulton über die Möglichkeit der Verwendung von Dampfmaschinen in Deutschland zu verhandeln.

[...] The Baron Stein, from Prussia, and Professor Zimmermann⁴, from Brunswick, have anxiously wish'd for Mr. Boulton's return from France to have the pleasure of seeing him. –

The B. Stein particularly wishes to consult on the possibility of applying the patent fire engines in the interior parts of Germany, and Mr. G[reville] has assured the Baron, if they can prevail on Mr. B[oulton] to establish them, and are liberal that Mr. Boulton will drain all their salt-works either by contract or commission. Mr. G[reville] hopes that Mr. Boulton will allow them to wait on him, as they are very intelligent and aimable gentlemen.

¹ Die im folgenden abgedruckten Korrespondenzen Steins und über Stein während seines Aufenthaltes in England waren bis zu ihrer Veröffentlichung durch Guy Stanton Ford in dem Sammelband (Festschrift) "On and off the campus" (Minneapolis 1938), in Deutschland völlig unbekannt, obgleich sie schon von Samuel Smiles für sein "Lives of the Engineers" (London 1865, IV. S. 277 f.) und von John Lord für sein "Capital and Steam power 1750–1800" (London 1923, S. 216 f.) benutzt wurden. Beide Werke lagen jedoch außerhalb der Thematik deutscher Forschung. Über Vorgeschichte und Inhalt der Publikation Fords, dem der Archivar des Assay Office die Korrespondenzen zur Verfügung gestellt hatte, orientiert nach den Angaben Fords G. Ritter in seiner ausführlichen Besprechung der Ford'schen Veröffentlichung (Göttingische Gelehrte Anzeigen, 200. Jg., 1938, S. 330 ff.). Dabei wird auch der gegen Stein erhobene Vorwurf der Industriespionage am vorliegenden Material kritisch untersucht und widerlegt, nachdem Ford selbst in seinen einleitenden Betrachtungen nicht zu einem eindeutigen Urteil gekommen war. Vgl. S. 252, Anm. 7. Neuerdings hat sich J. Carswell in seiner stark belletristischen Raspe-Biographie „The Prospector“ (London 1950) ebenfalls mit der Sache befaßt und auf Grund der Boulton-Papers (Assay-Office) Fords Darstellung um einige interessante Einzelheiten bereichert. Vgl. Nr. 230 u. Nr. 231.

DIE ENGLISCHE REISE 1787

Auf Grund seiner genauen archivalischen Quellenangaben ist es möglich gewesen, die wichtigsten Stücke der Boulton-Papers dank dem Entgegenkommen des Archivars, Mr. Westwood, für diese Publikation zu benutzen. Dabei ergab sich, daß so wesentliche Stücke wie die Nummern 225, 226, 234, 235, 238 der Beachtung sowohl Fords als auch Carswells entgangen sind. Konnte so unsere Publikation um einige wichtige Dokumente bereichert werden, so beschränkt sie sich in der Wiedergabe auf das für Steins Englandreise Bedeutsame unter Weglassung alles dessen, was nicht Bezug darauf hat. Auch die Anmerkungen bringen nur das zum Verständnis der Stein'schen Reise Notwendige. Sie folgen hierin dankbar und weitgehend der minutiosen Vorarbeit Fords.

² Sir Charles Greville war Parlamentsabgeordneter und ein hervorragendes Mitglied der englischen Gesellschaft. Näheres Ford a. a. O. S. 170, Anm. 15.

³ Matth. Boulton (1728–1809), Fabrikant von Münzen und anderen Massenartikeln in Birmingham. Nachdem er zuerst zur Verwendung im eigenen Betrieb eine Dampfmaschine aufgestellt hatte und dadurch mit Watt in Verbindung gekommen war, vereinigte er sich mit diesem zur industriellen Herstellung von Dampfmaschinen und begründete mit ihm die Firma Boulton & Watt in Birmingham-Soho. – Boulton war der Prototyp des frühkapitalistischen Unternehmers großen Stils, erst durch ihn wurde die industrielle Verwendung der Watt'schen Erfindung ermöglicht und durchgesetzt. Er war Mitglied verschiedener wissenschaftlicher Gesellschaften, u. a. der Royal Society. S. über ihn Erich Roll, *An Early Experiment in Industrial Organization: A History of the Firm of Watt and Boulton, 1775–1805* (London 1930) und H. W. Dickinson, *Matthew Boulton* (Cambridge University Press, 1937).

⁴ Eberh. Aug. Wilh. (seit 1796 v.) Zimmermann (1734–1815) wurde, nachdem er in Leyden und Göttingen Naturwissenschaften und Mathematik studiert hatte, 1766 Professor am Carolinum in Braunschweig und unternahm, mehrfach zu diesem Zweck beurlaubt, ausgedehnte Studienreisen zunächst nach Skandinavien und Rußland, 1786–88 auch nach England, Frankreich, der Schweiz und Italien. Er wurde 1801 – damals schon längst eine europäische Berühmtheit – von seiner Lehrtätigkeit dispensiert unter Ernennung zum Geh. Etats-Rat. Zimmermann ist auch als politischer Schriftsteller und Gegner der frz. Revolution hervorgetreten, deren Anfänge er in Paris miterlebt hatte. Ebenso wandte er sich später gegen Napoleon.

212. Stein an Matthew Boulton

London, 29. Januar 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 170 f.

Übersendet ihm das Empfehlungsschreiben Grevilles und bittet um eine Unterredung über die Möglichkeit der Verwendung von Dampfmaschinen auf deutschen Salinen.

Baron Stein presents his compliments to Mr. Bo[u]lton and has the honour to deliver him the inclosed letter of Mr. Greville, and desires to be favoured with an answer from Mr. Bo[u]lton and informed of the time when he can have the honour to wait on him. He desires it very eagerly in order to speak with Mr. Bo[u]lton about the application of the patent fire engine to some extensive salt works in Germany, and to clear himself from the suspicion which perhaps Mr. Boulton may have got, as if his design was to bring the steam engine out of the Kingdom in a clandestinous manner.

Duke Street No. 28 St. James

January the 29 at 9 o'clock [1787]

5. FEBRUAR 1787

213. Stein an Sir Joseph Banks¹

Assay Office Birmingham. Abschrift von der Hand Boultons. – Erstdruck Ford, S. 172f.

London, 5. Februar 1787

Übersendet ihm mehrere Exemplare seiner Rechtfertigungsschrift mit der Bitte, sie den Herren seiner Bekanntschaft und insbesondere Boulton zur Kenntnis zu geben und letzterem zu versichern, daß Stein kein Mittel versäumen werde, die gegen ihn ausgestreuten Verdächtigungen zu widerlegen. Sir Joseph Banks wird als ein Mann von Stand, Herkunft und Ehrgefühl gebeten, Boulton zur Abgabe einer Ehrenerklärung für Stein zu bewegen ("due to a stranger, who is not sprung from nothing, and who has a character to lose").

Baron Stein has the honour of presenting his respects to Sir Joseph Banks and to send him the inclosed pieces, the one to show to Messrs. Greville, Blagden² and Kirwan³ requesting at the same time the latter to show it to Sir Francis Bassett⁴, the latter to put it in Mr. Boulton's possession assuring him⁵ the same time that Baron Stein will neglect no means to destroy the suspicions which he has, or might still give birth to against him. He has not meant to compromise Mr. Walker⁶ by naming him, and he desires Sir Jos. Banks not to mention the name of the latter to Mr. Boulton. He is persuaded that Sir Jos. Banks, being a man of quality and of birth, and knowing the value which honour ought to be of to a man of that condition, will use his influence to engage Mr. Boulton to give the necessary explanations, or to make the reparations due to a stranger, who is not sprung from nothing, and who has a character to lose.

Duke Street St. James's 5th Feb[ruar]y 1787.

¹ Sir Joseph Banks (1744-1820), seit 1778 Präsident der Royal Society.

² Sir Charles Blagden (1748-1820), Arzt, Sekretär der Royal Society.

³ Rich. Kirwan (1733-1812), Apotheker, Mitglied der Royal Society.

⁴ Sir Francis Bassett (1757-1835), Bergwerksbesitzer in Cornwall. Auch als politischer Schriftsteller hervorgetreten.

⁵ „Say Mr. Boulton“ (Zusatz Boultons).

⁶ Wahrscheinlich Adam Walker († 1821), engl. Erfinder, der u. a. auch in Deutschland gereist war.

214. Pro-Memoria Steins für Matthew Boulton („Baron Steins Memorial“)
London, 5. Februar 1787

Assay Office Birmingham. Abschrift von der Hand Boultons. – Erstdruck Ford, S. 173 ff.

Ausführliche Rechtfertigung gegen den Vorwurf der Industriespionage unter Darlegung der bisher von ihm unternommenen Schritte, um sich Anschauungen und Pläne von englischen Dampfmaschinen zu beschaffen. Seine Besichtigung der Dampfmaschinen bei Barclay & Perkins in Pimlico und die Rolle des Maschinisten Cartwright. Boultons Weigerung, Stein zu empfangen als Folge böswilliger Mißdeutung seiner Schritte. Stein bestreitet nicht, daß er versucht habe, sich Zeichnungen von Boultons Dampfmaschine zu beschaffen, verwahrt sich aber gegen die Unterstellung, daß er danach in Deutschland habe Dampfmaschinen bauen lassen wollen. Er verweist darauf, daß es 1. dazu an den nötigen Facharbeitern fehle, daß er 2. von Anfang an versucht habe, mit Boulton wegen des Ankaufs von Maschinen in direkte Verbindung zu kommen und daß er 3. keinerlei persönliches Interesse am Maschinenbau besitze, sondern nur im amtlichen Auftrage handele. Zum Schluß gibt Stein der Hoffnung Ausdruck, nunmehr mit Boulton direkt ins Gespräch zu kommen und die Zweifel über seine Rolle in England zerstreut zu haben, verlangt andererseits aber auch, das Boulton den über ihn ausgestreuten Gerüchten entgegentrete.

The simple exposition of a fact, which has been represented in a very disadvantageous point of view for me, will suffice to prove the falsity of the conclusions which have been intended to be drawn from it, as if I had been intentioned to apply an invention of Mr. Boulton's in Germany and to deprive him of the enjoyment of the advantages attached to it.

Ever since my arrival in England, in the beginning of January, I have endeavoured to procure myself a drawing of Mr. Boulton's fire engine in order to have a clear and just idea of its construction, of its effects, and of the utility or use it might be of for my object.

I obtained a copy of a very imperfect design of the said engine, and a drawing of a model of an engine upon the old construction. I was assured here that there would be no difficulty to have a drawing made on the spot itself, I was shown the engine of Pimlico, and the person that did introduce me to it, informed the workmen of my aim, who made no contradiction at all.

Meanwhile I had been in the borough with the intention to see the fire engine of a brewery. I sent to ask for the permission of it to the accounting house and I entered into the house where the fire engine was with a note from the accounting house.

An inspector of the fire engine at Pimlico having *some days after refused*¹ the man whom I employed to make me a plan, I wrote to the governor of the society of the proprietors of said engine, to ask him the permission of being admitted to it; he gave that permission, and I caused the workmen at Pimlico to be informed of it by my servant, when the former advised him to address himself to a workman named Cartwright², who could give him the truest informations on the subject. He went to him, and that man

offered himself to show all the parts of the engine and to give all the informations that might be wished for, but he asked 8 days time and five Guineas, as well for his trouble as for his maintenance. *Having come to me, I promised him the one as well as the other.* I gave him two Guineas, but instead of fulfilling his engagements, he, during my absence and the time during which he was alone with my servant, laid hold of the two above mentioned drawings, under a pretence of wanting to rectify 'em, and *went off to go to Mr. Boulton* and to represent to him the fact, in a point of view the most odious and for him the most meritorious.

This happened on the 25th of January, and having been informed that same day after dinner of Mr. Boulton's arrival at Mr. Moore's³, I desired the latter to procure me his acquaintance, who desired Mr. Parker the son, to whom I gave my direction, to apprise him of it.

Not having received any answer, I asked on the 27th Mr. Greville for a letter to Mr. Boulton, to whom, after having received it on the 28th at night, I sent it on the 29th.

I accompanied it by a letter of my own in which I begged of him to fix me a time when I might see him, to converse with him on the subject of applying his fire engine to my object and to defend or clear myself of a suspicion which he had formed against me. I received no answer from him and it was in vain that I sent to him to ask for it on the 30th at 5 o'clock in the evening. I went to Mr. Moore on the 31st, exposed the fact to him, and begged he would engage Mr. Boulton to have an interview with me. This step proved equally fruitless. I complained about it to Mr. Greville the 1st of February in the evening in the Royal Society and, Mr. Boulton being set off, I heard nothing more about the matter until this morning, when I was informed of the disadvantageous light in which it had been represented to Sr. Jos. Banks and to other persons of my acquaintance.

The result of this fact is that I have endeavoured to obtain a drawing of Mr. Boulton's fire engine, but I have never had the intention of constructing a fire engine by that drawing, because I know

- 1) that a great deal of its effects depends on the perfection of the work, which could never be so well made by other workmen, than by those which Mr. Boulton employs in this object since a number of years.
- 2) I have ever since my arrival spoken to various persons of my acquaintance, amongst others to Mr. Greville and to Mr. Zimmermann, of my intention to treat with Mr. Boulton respecting the conditions on which he would construct fire engines, and the moment I learnt at Mr. Moore's that he was arrived, I caused myself to be announced to him, in order to make his acquaintance.
- 3) I have no motive of interest, nor none of ambition, my fortune consists in lands, the engine could be applied but to establishments belonging to the King.

No ambition, because it would be a puerile means to satisfy it in constructing an engine invented by another person, after plans that might have been taken of it. Mr. Boulton complains of my wanting to deprive him clandestinely of the advantages attached to his invention, and I on my part, presume that he has spread disadvantageous reports concerning me. The reasons which I have now alledged will clear me of that suspicion and will serve at least as a counterpoise to the depositions of the honest Cartwright, who has not known any other way to make himself useful to his master than that of imposture and theft. I hope that the assurance I give him of my desiring nothing more arduously, as to treat with him upon the construction of fire engines in Germany, will contribute to tranquilize him in regard to my views. But at the same time – I demand that, in case he should have doubts, he will please to inform me of it, in order to clear up the fact, or that, if there remains none more of 'em in his breast, that he will please to destroy the impression he has given (or raised) against me.

¹ Die hier und im Folgenden hervorgehobenen Stellen sind im Original von Boulton als in sich widersprüchsvoll oder sonstwie in ihren Angaben anfechtbar unterstrichen.

² Cartwright war eine der Gestalten, wie sie in der Frühgeschichte der Industrie-Entwicklung häufig vorkommen: tüchtige Facharbeiter, aber gerade deswegen im Bewußtsein ihrer Wichtigkeit oft ohne Gefühl für ihre Grenzen, leicht überheblich und häufig dem Alkohol ergeben. Auch Harkort hatte sich in seinen Anfängen in Wetter mit ähnlichen Typen herumzuschlagen, die aus England nach Deutschland gekommen waren und hier doppelt selbstherlich auftraten. – Daß Cartwright, der übrigens schon früher im Rausch Fabrikgeheimnisse ausgeplaudert hatte, sich Stein und seinen Freunden gegenüber in jedem Falle unkorrekt benommen hatte, wußte er so gut wie sein Arbeitgeber, denn er hätte die Fremden sofort melden müssen, ohne sich vorher mit ihnen auf Gespräche einzulassen. Wahrscheinlich wird er dann nachträglich aus Angst und um jedem berechtigten Vorwurf zuvorzukommen, sogleich übertrieben haben, wie es ja häufig die Art solcher haltlosen Naturen ist – „Angeber“ in jedem Sinne des Wortes. – Cartwright ist später, nachdem er sich auch weiterhin als unzuverlässig und unehrlich erwiesen hatte, von Boulton entlassen worden, lebte dann offenbar von Gelegenheitsarbeit und Diebereien, wurde im Jahre 1792 wegen Diebstahls zum Tode verurteilt, jedoch zur Deportation begnadigt.

³ Samuel Moore, Sekretär der Society of Arts, Manufactures and Commerce.

FEBRUAR 1787

215. Sir Joseph Banks an Matthew Boulton [London, 8. Februar 1787]
Soho Square

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 172.

Überreicht ihm Steins Rechtfertigungsschreiben nebst der ihm zuteil gewordenen Antwort. Äußerste Zurückhaltung der englischen industriellen Gesellschaft gegenüber Stein.

Baron Stein has transmitted to me what he calls a justification of his conduct in obtaining a drawing of your engine, which I enclose with this. To show you the line of conduct which I have taken in the business, I enclose his letter and my answer, which be so good as to return to me when you have done with them.

P. S. I have not observed the count [!] to receive any civility, farther than a bow or an answer to a question, from any of my friends since your intimation, so justly does every [one] seem to feel this conduct towards you.

216. Matthew Boultons „Statement of facts“ [London, Februar 1787]¹

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 183 ff. nach einer um zwei Absätze (s. Anm. 6 u. 8) erweiterten und mit der hier ebenfalls nach Ford wiedergegebenen Überschrift versehenen Vorlage.

Boultons Auffassung von Steins Verhalten und Vorgehen: dritter eklatanter Fall von preußischer Industriespionage nach den Beispielen von Bückling und von Eversmann, die zunächst einmal ausführlich rekapituliert werden. Eingehende Darstellung der angeblichen Machinationen Steins mit dem Mechaniker Cartwright bei der Besichtigung der Dampfmaschine in der Brauerei von Barclay & Perkins. Versuch Steins, diese Dampfmaschine einige Tage später noch einmal zu besichtigen. Als besonders gravierend wird ihm die Führung eines Decknamens angerechnet, sowie der Umstand, daß er bei seinem zweiten Besuch von der Anwesenheit Boultons und Watts in Birmingham unterrichtet sein konnte, sich aber ohne ihr Vorwissen Informationen und korrekte Zeichnungen zu verschaffen suchte. – Diesem, seinem ganzen Verhalten habe Stein auch die bisherige, weder seinem Rang noch seiner Stellung entsprechende Behandlung zuzuschreiben und deshalb keinen Grund, sich zu beklagen.

Facts.

In the year 1779 two persons from Prussia² found out Richard Cartwright (one of Boulton & Watts workmen who was then employed in erecting the steam engine at Chelsea) and endeavoured to bribe him to betray his masters, but without success. They then procured a letter of recommendation to Messrs. Boulton and Watt and one of them assumed a title, which letter they delivered to Mr. Watt (Mr. Boulton being from home).

Mr. Watt endeavoured to show them every civility in his power. He accompanied them to Soho, showed them that manufactory, he then walked several miles to show them one of the new steam engines at work upon the Birmingham navigation³, and such other particulars as were necessary to gratify the curiosity of gentlemen travelling for amusement. He then took them back again to his own house to dinner [...].

Whilst these gentlemen were enjoying the information, the protection, the hospitality, and the time of Mr. Watt, they were forming stratagems to rob him of his inventions and debauch his servants, for early on the next morning they returned to Soho and bribed a workman to take asunder some of the principal parts of an engine, as well as to show them many other things equally improper.

These gentlemen soon after returned to their own country (Prussia), and one of them undertook to erect one of the said new steam engines at Mansfeld in Germany, and during the erection he announced in one of the French periodical publications as well as in other foreign news papers that he had attraped all the secrets of Boulton and Watt's new invented steam engines, to which he said he had added many important improvements of his own invention, and that he had then nearly completed one of these improved engines at the mines at Mansfeld, which when finished he said would be equal in power to 108 horses, whereas it was not equal to 8, and moreover it did not answer in any degree the purpose it was erected for.

This very ingenious artist (whose real name we are now told is Master Assessor Bückling, Counsellor of Mines of his Prussian Majesty) finding himself mistaken, returned last year a second time to England to correct his errors, and by his usual arts obtained admittance into many of the Cornish engines erected by Boulton & Watt, where he endeavoured to seduce some of the workmen to go out of the Kingdom with him, bribed another to make models of such parts as he did not comprehend, and did actually take one of the said workmen (George Richards) with him abroad in the autumn of last year, who is not yet returned and is of little consequence, as he is good for nothing [...].

About three years ago, a Mr. Eversmann⁴ was sent from Prussia to England in quest of certain improvements, and like a faithful ambassador he intruded himself into Mr. Wilkinson's⁵ and other manufactories without the consent of the proprietors, particularly into some of the iron forges worked by Boulton & Watt's engines and he made very exact drawings thereof, which he took to Berlin, as Messrs. Boulton & Watt have been informed by a gentleman who saw them⁶.

On the 25th of last month, Richard Cartwright, one of Messrs. Boulton & Watt's articled servants, came to his said masters in London and informed them that three persons had been that morning to Messrs. Barclay & Perkin's brewery, that they had obtained a permission from one of the clerks to go into the new engine house at a time when all the workmen were gone to their dinners (except a young man who did not understand the engine). One of the persons he said passed under the name of Count Vidi⁷, and that another began to make a sketch of the engine soon after they entered. They desired the man to stop the engine, which he did. They then requested him

to empty the condenser cistern, but he replied he durst not, as he could not afterwards set it to work again, but said that Cartwright could, as he had erected the engine. They then desired him to take them to Cartwright's lodgings, which he did. They requested Cartwright to go with them, and he accordingly did go with them to their lodgings, when (he says) he was informed that the count was Baron Stein. He says the Baron flattered him much, and told him he deserved great wages, and gave him two guineas for his loss of time that day. He then invited Cartwright to accompany them into Cornwall and Staffordshire to show them all the new engines erected in those counties, and, if we are to believe Cartwright, he endeavoured to persuade him to go abroad with him. He then showed Cartwright some drawings and asked, if he could not correct them, which he readily undertook to do. As Messrs. Boulton and Watt were both in town at that time, Cartwright came to inform them of all that had passed, and though they approved of his zeal to serve his masters, yet they disapproved of his conduct in taking money, and to prevent further mischief ordered him to quit London. Although Baron Stein knew from Cartwright that Messrs. Boulton and Watt were in town, yet he applied again in the same clandestine manner to see Mr. Barclay's engine on the following Sunday, when he must know that the masters of the brewery were absent and the engine was more examinable, as it was then not at work, however he was refused. Mr. Boulton had some thoughts of waiting upon the Baron to have represented the impropriety of his conduct and to have acquainted him that he had transgressed the laws of this country in endeavouring to seduce English artists abroad, whereby he was liable to be fined £ 500 – and to be imprisoned six months. But the multiplicity of Mr. Boulton's business and engagements during his short stay in London put it out of his power. Besides as Mr. Boulton had not the honour of knowing anything of either the Baron or the Count, and as their conduct was not agreeable to Mr. Boulton's notions of honour, he therefore declined wasting his time. Perhaps it might in the opinion of the Baron be very proper to steal Messrs. Boulton and Watt's inventions, but surely it was equally as proper that Messrs. Boulton and Watt should prevent it, if in their power, and which they endeavoured to do.

If Messrs. Boulton and Watt have not shown that respect which is due to Baron Stein, he must attribute it to the improper method he took to make known unto them his character, rank, fortune, and consequence, as well as to the impressions remaining upon their minds made by his two countrymen aforesaid, and to the ungenerous treatment they have experienced from some other foreigners⁸.

¹ Zwischen dem 9. u. 13. Februar entstanden. – Am 8. Februar erhielt Boulton Steins Pro-Memoria durch Greville (s. Nr. 215), am 13. wird das „Statement of facts“ an Sir Joseph

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Banks übersandt und bei dieser Gelegenheit erstmals erwähnt. Daraus ergibt sich auch, daß die Nr. 218 nicht vor dem 13. geschrieben sein kann.

² Bückling und Waitz v. Eschen, s. unten S. 258, Anm. 3 und Ford a. a. O. S. 167, Anm. 11.

³ Der Birmingham-Kanal (Ford, S. 184, Anm. 32).

⁴ S. oben S. 167, Anm. 5, dazu Ford a. a. O. S. 185, Anm. 34.

⁵ John Wilkinson war einer der bedeutendsten Eisenindustriellen der Zeit, Erfinder einer Bohrmaschine für Kanonen, mit der auch die Zylinder für Watts Dampfmaschine gefertigt werden konnten, eine wesentliche Voraussetzung für deren Entwicklung überhaupt. Er verkaufte später selbst Watts Fabrikationsgeheimnisse ins Ausland (Ford, S. 185, Anm. 35).

⁶ Dieser Absatz fehlt in unserer Vorlage. Hier nach Ford.

⁷ Für diese rätselhafte Benennung ist bisher eine völlig befriedigende Erklärung noch nicht gefunden worden. Ford möchte annehmen, daß es sich hier wirklich um ein von Stein gewähltes Pseudonym gehandelt hat, er sieht darin die einzige wirkliche Belastung für Stein und eine Stütze der Denunziation Raspes und Cartwrights (a. a. O. S. 186, Anm. 36). Doch weist Ritter mit Recht darauf hin, daß gerade das angebliche Pseudonym selbst, das gar kein Name ist, gegen die These einer betrügerischen Namensführung spricht, und deutet die Möglichkeit an, daß es sich um einen von Cartwright mißverstandenen Sichtvermerk Steins unter einer Maschinzeichnung handelt (a. a. O. S. 334, Anm. 1). – Auch Carswell, der von Steins betrügerischen Absichten völlig überzeugt ist (s. oben S. 243, Anm. 1), stützt sich hauptsächlich auf die angeblich falsche Namensführung.

⁸ Der letzte Absatz fehlt ebenfalls in unserer Vorlage. Druck nach Ford.

217. Matthew Boulton an Sir Joseph Banks

Birmingham/Soho, 13. Februar 1787

Assay Office Birmingham. Konzept. Eigenh. – Erstdruck Ford, S. 177 ff. – Um die nicht Stein betreffenden Teile gekürzt.

Dank für die Zustellung von Steins Rechtfertigungsschrift. Boulton besteht jedoch darauf, daß Stein sich alle Unannehmlichkeiten selbst zugezogen habe und bezweifelt im übrigen auch die Richtigkeit seiner Angaben unter Hinweis auf die abweichenden Aussagen des Maschinisten Cartwright. Verdächtig erscheint ihm insbesondere, daß Stein trotz seiner (Boultons) Anwesenheit in Birmingham die Dampfmaschine in Pimlico ohne sein Vorwissen und unter falschem Namen in Begleitung zweier „Assistenten“ besichtigt habe. (I was convinced he intended to serve us as his two country men had before done“).

I feel myself very much obliged to you for the fav[ou]r of your letter and the communication of the Baron's memorial as well as for the friendly part you have taken.

If I have given the Baron any offence, it can only have arisen from the relation of matters of fact and from throwing difficulties in the way of his accomplishing his designs by means discordant to his rank.

You'll please to observe the Baron says that some days after¹ he had obtained admittance into the brewery engine by a note, he went (a 2d time) to Pimlico and was then advised to apply to Cartwright, whereas you will find it is stated in my account of facts that he applied to Cartwright the first time he went to the brewery and then took Cartwright with him,

although the Baron says in his memorial, he having come to me. Cartwright says he has told the Baron that Boulton and Watt were in town and you'll observe in his memorial he says [Cartwright] went off to go to Mr. Boulton. Hence it is plain that the Baron knew I was in town, yet nevertheless he went with a blackguard to the borough on the following Sunday, when the masters were absent and the engine not going, to examine it, but was refused.

If the Baron had gone alone, I should not have thought so much of it, but finding him with his 2 assistants² making their attacks with bribery and blacklead pencils, I was convinced he intended to serve us as his two countrymen had before done, to which I might add some other circumstances of a similar nature [...].

Als Beispiel und Parallele wird außer dem Fall Bückling noch der Besuch des Arenbergischen Technikers Faster aus Namur 1782 erwähnt, von dem sich Boulton ebenfalls gröslich getäuscht und hintergangen fühlte.

If I have anything to reproach myself of in my conduct towards strangers, it is in having been too liberal and too unguarded in showing those things which my duty to my country and to myself required more reservation in. I have no objection to your showing my state[ment] of facts or this letter to any or all the gentlemen mentioned in the Baron's memoire or whomsoever you please.

I have no time to enter into disputes and only write this for my own justification [...].

¹ Im Original unterstrichen, ebenso die im Folgenden hervorgehobenen Stellen.

² Außer dem Obersteiger Friedrich entweder, wie Ritter (a. a. O. S. 332, Anm. 1) vermutet, Zimmermann (s. oben S. 244, Anm. 4) oder, nach der weniger wahrscheinlichen Vermutung Fords (a. a. O. S. 178), Graf Gustav v. Schlabendorff, keinesfalls jedoch Reden, wie früher (Lehmann I. S. 84) angenommen wurde – ein Irrtum, den zuerst Wutke (a. a. O. S. 118) berichtigt hat. – Schlabendorff, der Sohn des Ministers für Schlesien, Ernst Wilh. v. Schlabendorff, war nach juristischen und philosophischen Studien in Frankfurt a. O. und Halle auf Auslandsreisen nach England und Frankreich gegangen, von denen ihn kein Weg mehr in seine Heimat zurückführte. Er lebte fortan vorwiegend seinen philantropischen Neigungen und Interessen, zunächst sechs Jahre in England, dessen politische, soziale und industrielle Verhältnisse ihn besonders interessierten. Daß Stein ihm 1787 in England begegnete, ist bei den engen Verflechtungen der aristokratischen Gesellschaft der Zeit nicht verwunderlich, insbes. da Schlabendorff auch technische Interessen hatte und wohl auch mit Boulton bekannt war. Jedenfalls waren Stein und Schlabendorff bei Boulton zu Gast, als dieser sich schließlich doch noch herbeiließ, Stein zu empfangen. – Stein hat den Sonderling Schlabendorff stets in freundlicher Erinnerung behalten und ihn später sogar in seine politischen Pläne einbezogen. Schlabendorff selbst war 1788 nach Frankreich gegangen. Er erlebte dort voller idealistischer Begeisterung die Anfänge der Revolution und gehörte dann in Paris zu dem Kreis deutscher Enthusiasten (Forster, Kerner, Reinhard), die trotz aller Enttäuschungen ihren Glauben an den Sieg der Vernunft und die Geburt einer besseren Welt nicht aufgaben. Während der Schreckenherrschaft wurde auch er verhaftet und entging nur durch Zufall der Guillotine. Nach dem Sturz Robespierres befreit, blieb er bis zu seinem Tode in Paris,

trotz innerer Opposition gegen das napoleonische System, das er in seiner 1804 erschienenen Schrift „Napoleon Bonaparte und das französische Volk“ kritisierte. Stein erinnerte sich seiner sehr viel später wieder. In den diplomatischen Verhandlungen des Jahres 1807/08 wollte er Schlabrendorffs Pariser Verbindungen in den Dienst der preuß. Außenpolitik stellen. 1812/13, als es ihm darum ging, das napoleonische System auch propagandistisch zu bekämpfen, regte er an, Schlabrendorffs Schrift heimlich in Deutschland verbreiten zu lassen. S. auch Band II, IV u. V dieser Publikation.

218. Matthew Boulton an Charles Greville

Birmingham/Soho, 15. [?] Februar 1787

Assay Office Birmingham. Konzept. Eigenh. – Erstdruck Ford, S. 182 f. – Kleine Kürzung.

Steins Rechtfertigung vom 5. Februar 1787. Boultons Gründe für sein Verhalten gegenüber Stein: dessen angebliche Versuche, unter falscher Namensführung Maschinisten und Mechaniker zur Untreue zu verleiten. Wenn Boulton auch noch dabei bleibt, daß die Stein widerfahrenen Unannehmlichkeiten seinem eigenen Benehmen zuzuschreiben seien, erklärt er sich nun doch bereit, ihn als Ehrenmann anzusehen und zu empfangen.

The multiplicity of letters and business which accumulated during my residence in France kept me in such a constant hurry the few days I tarried in London, that it was not in my power to pay that respect to you and the note you favoured me with as you are entitled to and my own dispositions prompt. As the affair relative to the Baron could be better explained by a verbal conversation than by writing, I called at your house [...], but was told you were not at home.

Sr. Joseph Banks did me the honour to write to me a few days ago and sent for my perusal a memoir of Baron Stein, and in return I have sent to Sr. Joseph a state[ment] of facts¹ which I beg leave to refer you to for my justification.

If Baron Stein had been introduced to me in his own character, or I had been so happy to have had the least knowledge of him, I trust I should have shown him every respect in my power. But if you ...² any place and had been told as ...², who first passed under the name of Count Vidi³ and afterwards under the name of B. Stein, had been bribing [and] seducing my workmen and had asked one of them to go abroad with him and likewise to correct his drawings and to accompany him into Staffordshire and there to show him our engines, I say you would not have treated or considered any person as a gent[lema]n, who passed under two names, who had endeavoured to debauch my workmen and whom you knew nothing of but what was to his disadvantage.

If the Baron's indiscretions have led him into a scrape, he must not blame me. I have related facts only. We have been used very dishonourably by two of his countrymen (see the letter and facts I sent to Sr. Joseph) which

...² it was not unnatural that I should draw conclusions unfavourable to the Baron. If the Baron should travel into this neighbourhood and should bring a letter from you, I shall certainly show the respect which is due to both.

I certainly shall not recall anything I have said or done respecting Count Vidi, but as to Baron Stein or any friend of yours I shall be glad to see. *Nachschrift.* The Baron has some obligations to Mr. Bückling (retrograde) and some other of his countrymen.

¹ Daraus ergibt sich die Datierung des Briefes auf den 15., nicht 5. Februar wie bei Ford S. 183. Vgl. oben S. 251, Anm. 1.

² Unleserliches Wort.

³ S. oben S. 252, Anm. 7.

219. Charles Greville an Matthew Boulton

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 189 ff.

London, 19. Februar 1787

Steins erstes Auftreten in England und sein eifriges Bemühen um eine möglichst baldige Besichtigung der englischen Industrie- und Bergwerke. Grevilles zurückhaltende Ablehnung seiner Bitte um entsprechende Empfehlungsbriefe für Besichtigungen in Abwesenheit von Boulton und Watt. Seine Warnungen und Ermahnungen an Stein, sich nicht durch Unvorsichtigkeiten dem Verdacht der Industrie-spiionage auszusetzen. Steins Verhalten als einzige Ursache seiner Schwierigkeiten.

[...] The Baron was introduced to me by Sr. Jos. Banks. – Mr. Kirwan and Dr. Blagden gave me an opportunity of seeing him at their house. He desired to see my collection and was two days with me and brought Mr. Zimmermann. On one of those days, which I believe to be prior to his tampering with your men, he expressed great desires to see the Albion Mills¹. I told him that unless you or Mr. Watt were in London, I had made it a rule not to petition that favour, being a stranger to the other proprietors, but on your return from France, I should willingly give a letter of introduction. I then stated the propriety of excluding foreigners who only came to steal inventions, which produced a conversation of some length on the subject, in which he said that he took what pains he could to instruct himself in the machinery of this country, but that it would be hard to consider him as a pirate², because he was in the service of a sovereign and managed on his account and not on his own, and that it was demonstrably cheaper to purchase an improved engine than try to steal it, in a case where very few were wanted, and he added that his particular wish was to see you to try and settle a contract for some engines to drain the salt works now drained by horses etc., and he consulted me, whether you came soon from France, for that he would go to Cornwall, if you proposed to stay long from London, and that he should regulate his

motions accordingly. He desired a letter to Mr. Moore. The B[aron] said he was equally explicit to him on your subject, but that I might not be an instrument to favour trap. When he applied for the letter to you in consequence of this conversation I had had long before, I introduced awkwardly enough the object of the Baron's application to you, knowing that it would be sufficient to put you on your guard, whether he meant fair or foul, but when I wrote the letter, the Baron was blown, which I did not know, otherwise I should not have given him a letter at all. The Baron cannot be surprised that he feels the inconveniences of his imprudence and bad conduct, as I had told him on the above mentioned conversation that I thought he should be very cautious in the means he took to inform himself among manufacturers, for although I might give credit to the real object of his inquiry, that he had no right to expect such favourable construction from any other person, or that he would [not] be distinguished from a pirate if he employed the same means they did. He therefore acted with his eyes open, and he must abide the consequences.

The only clue to the whole will be the proposals which he shall offer to you, in case you choose to contract for some engines in Silesia. So far from being the mediator, I have told the Baron that you had it in your power to prevent him seeing either manufacture or mine in England, and he feels himself so much at your mercy that I am sure he will neither attempt to go to Cornwall or Derbyshire unless you accept his explanation and credit it so far as to put the most favourable constructions on a very incredible proceeding, and if its extreme folly, equal at least to its impropriety, does not incline you of your own accord to give him an example of handsome and generous conduct. I have ever been cautious, but I shall become more so not to risque your confidence and friendship.

¹ Ein Getreidemühlenwerk mit Dampfbetrieb, das erst 1786 angelaufen war und die modernsten Maschinen seiner Zeit besaß, „ein technischer, aber kein finanzieller Erfolg“ (Ford, S. 190, Anm. 38).

² Terminus technicus für Industriespione (Ford, ebd., Anm. 39).

220. Sir Joseph Banks an Matthew Boulton¹ [London,] Februar 1787 Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 189.

Äußerstes Mißtrauen gegen alle der Industriespionage nicht völlig unfähigen Ausländer als oberster Grundsatz zur Wahrung der englischen Überlegenheit im Maschinenbau. Der Fall Stein als warnendes Beispiel.

One conduct only I shall ever think it my duty to hold in cases similar to that of the Baron, which is never to countenance a foreigner whom I do not think incapable of attempting to steal inventions from which as from

yours this nation derives its commercial importance and, if they are detected, as the Baron has been, to withdraw all assistance of every species and, as much as politeness will allow, every species of communication from them.

Nachschrift. I have not seen or heard of the Baron since he receiv'd my answer.

¹ Ein weiterer Brief von Sir Joseph Banks an Boulton vom 14. Februar 1787 (Ford a. a. O. S. 181) ist als für unsere Zwecke belanglos weggefallen.

221. E. R. Raspe¹ an Matthew Boulton London, 26. [Februar] 1787²

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 167ff. Der letzte nicht hierher gehörige Teil des Briefes ist weggelassen.

Warnung vor Stein und seinem Begleiter Friedrich als preußischen Industriespionen. Friedrichs technische Fähigkeiten und bergbauliche Karriere. Raspes Plan, ihn Stein abspenstig zu machen und diesem dadurch mit gleicher Münze heimzuzahlen.

Guard against a Baron Stein, who is soon coming to Cornwall with the patriotic intention to kidnap away what useful knowledge and men he may find in his way. His saying that he means to agree with you about your fire engine has no weight with me, nor will it I suppose have any with you. I have pressed him hard upon the subject but never saw anything like full powers. Therefore it is more probable that he means only to learn (per-et nefas) how to correct that fire engine upon your construction, which a rascal of the name of Bückling³ stole away from this kingdom some time ago, and which by his direction has been built at the expense of the Prussian government at Rotenburg⁴, not far from Hull⁵ in Saxony. It has cost them already, not to mention loss of time, a sum of 25/m Dollars or about 4000 L St. in experiments and yet it worked but poorly and stops regularly once in 24 hours.

He comes with an excellent engineer and modeller, a Mr. Friedrich or Friedrick⁶, of whose great abilities he has shown me astonishing proofs. Amongst several others I was sorry to see two excellent drawings of his of your rotative motion and of the regulator of the piston. By the Baron's account they were taken from sight at Calvert's or Thrale's⁷. This young man is a native of Clausthal in the Electorate of Hanover, the son of a very worthy comptrolling captain with whom I have been very often under ground. He seems to have been kidnaped into the Prussian service, where even the best prospect they can make him will not be above £ 150 a year.

His great abilities and practical knowledge would make him a very useful acquisition, if the Baron could be punished his own way and this young

man be prevailed upon to stay with us, together with all his drawings. I fancy I could manage that business, and should be more happy in doing it, as I am fully persuaded from what I have seen and heard of him that he would well pay for the trouble and expense, was it only by the models of the various stamps in the Harts Forrest, Saxony, and Hungary which we are not sufficiently acquainted with and which he has promised to execute for me, if further required.

He has been brought up to the practical parts of mining from his infancy; and has gone thro' all its different branches from the stamps up to the function of a carpenter, engine man, captain, and surveyor, in short he is what few men in this Kingdom are – and what many ought to be.
Sapienti sat.

In every other respect Baron Stein is a well bred, sensible and excellent young nobleman. If he thinks it a liberal exertion of patriotism to enrich his country with useful knowledge in a sly back stair way, he cannot possibly have any objection to ours, if possibly we can turn the tables upon him and send him home civilly and wiser through punished rashness. I shall not leave town until I have finished my edition of Born's Process of Amalgamation⁸ [...].

¹ Erich Rudolf Raspe (1737–1794), der Vater des „Münchhausen“, der in seiner Zeit vor allem als Mineraloge und Geologe bekannt war. Raspe hatte in Göttingen Naturwissenschaften und Philologie studiert und kam 1767 als Kurator der landgräflichen Antiquitäten- und Münz-Sammlung nach Kassel. Er wurde Mitglied der Royal Society und der Göttinger Akademie der Wissenschaften, aber aus ihren Listen wieder gestrichen, nachdem er 1775 des Diebstahls an den ihm anvertrauten Sammlungen überführt und flüchtig geworden war. Seitdem lebte er als Schriftsteller, Übersetzer und Sachverständiger für Bergwerkssachen in England.

² Nicht 26. Januar, wie Ford annimmt. Unsere Datierung ergibt sich aus dem englischen Entwurf des Boulton-Briefs an Stein vom 3. März 1787 (S. 264, Anm. 2), sowie aus Angaben in seinem Brief vom 3. u. 4. März 1787 (Nr. 228). Ein Brief von London nach Birmingham wird damals höchstens ein paar Tage, keinesfalls aber ein paar Wochen unterwegs gewesen sein. – Danach hätte also nicht Raspes Denunziation, sondern Steins eigenes unvorsichtiges Auftreten den ersten Verdacht gegen ihn rege gemacht, insbesondere wohl das Gerede Cartwrights.

³ Der spätere Oberbergrat Bückling, Erbauer der Dampfmaschine in Tarnowitz (s. oben S. 148, Anm. 3). Er war 1793 in der Bergverwaltung in Franken unter Alexander v. Humboldt (s. Bruhns, Humboldt I. S. 137 ff) und 1806 Oberbergrat beim Bergamt in Rothenburg a. S. In England war er wahrscheinlich dreimal, 1779 und 1786 sicher, wahrscheinlich auch 1788, ein Beweis dafür, daß er seinem Staat als einer der besten Sachverständigen des Maschinenbaues und der Bergtechnik galt. – Die Erinnerung an Bückling, der ihn sogleich bei seinem ersten Aufenthalt in England aufgesucht hatte, war für Boulton ein wunder Punkt, weil er sich schmählich von ihm hintergangen glaubte (s. oben S. 249 f). Die Erwähnung seines Namens im Zusammenhang mit Stein – „a clever stroke“, wie Ford mit Recht konstatiert – riß kaum vernarbte Wunden auf und rief das alte Mißtrauen im vollen Umfang wach. Vgl. über Bücklings ersten England-Aufenthalt Ford, S. 167, Anm. 11 (nach Smiles, Engineers IV. S. 250), für alles andere s. Zeitschrift

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für das Berg-, Hütten- und Salinenwesen im preuß. Staat I. S. 208 und Wutke, Schles. Berg- und Hüttenleben, SS. 261, 453, 539, 577.

⁴ Gemeint ist Rothenburg an der Saale.

⁵ Halle a. S.

⁶ Der Obersteiger Friedrich, den Stein auch sonst als geschickten Bergmann erwähnt.

⁷ Damals sehr bekannte Londoner Brauerei.

⁸ Borns oben S. 238 erwähntes Buch. Es erschien in Raspes Übersetzung unter dem Titel: "New Process of Amalgamation . . .", London 1791.

222. Richard Phillips¹ an Matthew Boulton London, 1. März 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 192 f. – Die beiden letzten, nicht hierher gehörigen Abschnitte sind weggefallen.

Neue Verdachtsmomente gegen Stein. Sein Fall als warnendes Beispiel.

I have been here since Sunday se[ve]nnight and yesterday for the first time found out the author of the inclosed² which I have perused. The intelligence is worth attending to and his acc[oun]t of Stein's companion makes the Baron a more formidable spy than otherwise he might have proved. As Raspe has informed Sir Francis [Bassett] of it, probably some steps may be taken to prevent mischief [...], because such a repetition of such visitors as the present ought to open the eyes of some which hitherto appear to have been glued together.

However, one good turn deserves another and I s[houl]d rejoice that Stein was left in the lurch.

I was today at the Albion Mill, noble upon my word, to look at, and farther I cannot say [...].

¹ Der Quaker Sir Richd. Phillips, Bergwerksbesitzer und Vorstand einer Bergwerks-Gesellschaft in Cornwall, war ein enger Geschäftsfreund von Boulton & Watt (Ford, S. 192, Anm. 40, nach Smiles, Engineers IV. SS. 259 u. 352).

² Raspe? Der erwähnte Brief liegt nicht vor.

223. Stein an Matthew Boulton London, 1. März 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 193 f.

Förmliches Anerbieten zum Kauf von Dampfmaschinen für den König von Preußen zum Gebrauch in den Salinen von Schönebeck und Unna und im Bergbau von Tarnowitz. – Angesichts des gegen ihn in Cornwall verbreiteten Mißtrauens trägt sich Stein mit dem Gedanken, auf die Reise dorthin zu verzichten.

J'ai eu l'honneur de vous informer, Monsieur, que je désire de traiter avec vous sur l'application des machines à feu dans les Etats du Roi de Prusse, sous des conditions pareilles à celles qu'on vous a fait en France. Elles pourront

être employées immédiatement à cette heure aux objects suivants, à éléver l'eau salée de la saline de Schoenebedk, près de Magdebourg, à une hauteur de 296 pieds, à quoi on emploie dans une journée 136 cheveaux, à la saline d'Unna, sur laquelle les donnés me manquent, à dessécher la mine de Tarnewitz, où il faudra éléver 80 pieds cube d'eau à une hauteur de 140 pieds. Je désirerais, Monsieur, de savoir à quelles conditions vous exécuterez vos machines, de convenir avec vous sur elles et d'être instruit des données qu'il vous faudrait pour votre information.

Je me suis proposé de faire le voyage de Cornwall pour m'instruire de l'histoire naturelle de ce pays, mais j'ai appris, Monsieur, que tels sont les soupçons qu'on a sus inspirer aux propriétaires des mines contre moi, que je ne puis même espérer de voir les mines qu'on montre d'ailleurs à tout étranger. Si le fait vous est connu, je vous prie au moins, Monsieur, d'avoir l'humanité de m'en instruire et de prévenir que je ne fasse ce voyage à pure perte, comme dans ce cas, j'y renoncerais.

Nr. 28. Duke Street. St. James.

224. Matthew Boulton an Thomas Williams¹ [Birmingham,] März 1787

Assay Office Birmingham. Konzept. Eigenh. – Erstdruck Ford, S. 198 ff. – Hier am Schluß etwas gekürzt.

Die Glaubwürdigkeit der Angaben Cartwrights über seine Unterredung mit Stein und dessen Versuche, ihn auszuholen. Steins anderweitiger Versuch, sich heimlich Maschinenkenntnisse zu verschaffen. Boultons Weigerung, angesichts eines solchen Verhaltens mit ihm überhaupt Verbindung aufzunehmen. Trotz teilweiser Berichtigung seines Urteils durch Greville und andere bleibt er entschlossen, Stein den Zugang zu den Bergwerken in Cornwall unmöglich zu machen. Seine diesbezügliche Korrespondenz mit ihm.

In reply to your favour of the 12 inst. be assured that the facts are as I represented them to you and, if you and my Lord Uxbridge² wish to go into the minutia please apply to Sr. Joseph Banks, who has a long paper of mine in answer to one he sent me of the Baron's statement, and Sr. Joseph will show it you.

It is not likely that my man Cartwright possesses any malice or revenge against the Baron, as he never saw him 'till the Baron came with his draughtsman and mining engineer to Mr. Berkley's brewery, where he began to sketch and desired the man then working the engine to stop it and empty the condenser cistern, but the man replied he could not set it to work again, unless Cartwright was there. They begged to see Cartwright and went with the man to an ale house where Cartwright lodged, from whence they took him to the Baron's lodging and offered to take him with them to see the iron works and engine in Shropshire and the mines and engines in Cornwall and also to take him abroad with them. It appears that Cartwright apparently acquiesced in their proposition, in order to

come at a knowledge of their views. They flattered Cartwright very much and gave him 2 Guineas. They showed him some drawings they had made of Chelsea and Richmond engines and asked him to correct them, which he readily undertook to do, I suppose by way of getting possession of them, for he cannot draw. This is a history of but 3 hours transactions, before which Cartwright never saw the Baron and since which he has never seen him, as he left London the next day and went into the country to erect an engine. Cartwright called upon me and Mr. Watt (being both of us then in town) and told us of these transactions and of course we were displeased at both parties. Cartwright is a low workman and a man of such sort that we will not guarantee the propriety of his conduct. The Sunday following the Baron found another greater blackguard than Cartwright and went together to see Mr. Barclay's engine, when it was not working, but they were refused, and yet the Baron knew at that time from Cartwright that I and Watt were in town.

In respect to my invitation of the Baron and to my entering into a treaty with him, I say that I received 2 notes from the Baron proposing a treaty, but I answered neither of them, as I never will correspond with a man who passes under different names, having once been told that he passed under the name of Count Vidi; at length I learnt from Mr. Greville and others that the Baron was a gentleman and a man of family and fortune. After which I received another letter from the Baron acquainting me that he proposed to make some excursions into the country and wished to enter into a treaty with me for two engines.

I wrote him an answer and told him I should be glad to see him and to promote the pleasure of his tour as a naturalist, philosopher, and a gentleman, but as an engineer he must pardon me, if I laid obstacles in his way (or to that effect). I mentioned the conduct of his countryman Bückling and let him see that I was upon my guard. As to treating upon terms for engines, I told him that before we could enter into any, it was necessary the King of Prussia should give us an exclusive privilege.

You will easily perceive my motive for this proposition. Mr. Watt is now in town and I am a stranger to anything that may have passed between him and the Baron [...].

¹ Parlamentsmitglied für Anglesey und Geschäftsführer der Parys Kupfermine.

² Henry Earl of Uxbridge (gest. 1812), Eigentümer der vorerwähnten Kupfermine.

225. Memorandum Watts

[Birmingham, Anfang März 1787?]

Assay Office Birmingham. Eigenh. mit zahlreichen Abkürzungen. Sie sind ohne Kennzeichnung aufgelöst.

Bedingungen für die Lieferung von Dampfmaschinen nach Preußen.

Proposals by B & W

1. We request that an exclusive privilege may be granted us ...¹ for the sole erection of our engines in his Prussian Majesty's dominions for the term of 15 years.
2. In consideration thereof we agree to furnish plans and directions and to provide such materials as may be necessary to be sent from this country for the erection of as many engines as may be wanted in his Prussian Majesty's dominions on the same terms on which we do this like business here. Which are, we furnish plans etc. and give orders for the materials and see that they are properly executed without any charge for the same. – Our profits arise from certain premiums that are paid to us for our troubles and the use of our invention, which are in cases of engines that work mills £ 5 sterling annually for each horse power the engine is equal to. – In engines which raise water we have $\frac{1}{3}$ of the savings of fuel by our engines when compared with the common ones, which we fix according to the quality and price of the coals and the effects produced more by our engines than the common ones in the public trials which have been made between some of our customers and us.

¹ Hier folgen einige nicht entzifferte Abkürzungen.

226. Matthew Boulton an Stein

[Birmingham, Anfang März 1787?]

Assay Office Birmingham. Konzept. Eigenh.

Bereitwilligkeit zur Lieferung Wattscher Dampfmaschinen nach Preußen. Bedingungen.

In answer to the queries you were so obliging as to put to us respecting the erection of our steam engines in the dominions of his Majesty the King of Prussia, we must beg leave to observe that, having in this country a great deal of important business and being favoured with an exclusive privilege for the sole erection of our new invented steam engines, we cannot, consistently with our interest, propose to undertake the erection of our engines in any foreign country without an exclusive privilege is granted to us there for the sole erection of such engines, as every engine erected at so great a distance would require more of our time and attention and would prevent the extension of our concerns at home. If, therefore, his Prussian Majesty should think [us] worthy of encouragement, we hope he will be pleased to

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honour us with an exclusive privilege for the sole use of engines of our invention for the space of 15 years unless his Majesty should prefer some other method of rewarding our services. – In case his Majesty should be pleased to grant such privilege, we would furnish all drawings, directions, and any such of the materials as may be wanted from this country with every other requisite for the erection of as many engines as may be wanted from time to time in the Prussian dominions on the same terms as we are paid in such cases in this country, which are, we furnish plans and directions, we take care that all the parts of the engine are properly executed and that it performs as well as our other engines commonly do, for all which we make no charge, neither do we take any profits upon any of the materials we furnish. Our sole advantage arises from our being paid annually a sum = to one third part of the fuel saved by the use of our engines for and during the term of our patent or such part of it as the engine shall be ...¹ – Many public trials have been made in this country to determine the difference of the consumption of fuel used in the old and in the new engine in raising = quantities of water to = heights and the constant result of all such trials has been that the old engine has been found to burn [?] upon the aver[age 3 times]² the quantity of coals that was consumed by the new engine. But as such experiments have been found to be troublesome and very expensive, we have for the sake of saving such trouble and expense agreed with most of our customers to estimate that our engine [works?] three times better than the old engine, i. e. when the old engine burns 3 the new will only 1.³

¹ Unlesbares Wort.

² Original beschädigt, durch Konjektur ergänzt.

³ Bricht hier ab. Unvollendet, nicht abgegangener Entwurf, an dessen Stelle dann der Brief vom 3. März getreten ist?

227. Matthew Boulton an Stein

Birmingham, 3. März 1787

Assay Office Birmingham. Konzept. Eigenh. Engl. u. frz. – Erstdruck Ford, S. 194 ff. Die zahlreichen orthographischen Fehler des Originals sind stillschweigend berichtigt.

Bedingungen für den Verkauf von Dampfmaschinen nach Preußen. Verweist ihn zur Fortführung der Verhandlungen an Watt. Erklärung der bisherigen Mißverständnisse aus dem früheren Verhalten deutscher Techniker in England. Im Hinblick auf Steins Plan einer Reise nach Cornwall erklärt Boulton, daß er ihn in jeder andern Eigenschaft ("comme naturaliste, minéralogiste ou comme gentilhomme"), denn als Techniker gern reisen sehe, daß er ihm aber als "méchanicien et ingénieur" Schwierigkeiten machen werde. Begründung dieses Verhaltens aus den schlechten Erfahrungen mit Bückling. Zum Schluß wird Stein noch einmal ausdrücklich vor dem Besuch der Bergwerke gewarnt.

J'ai reçu la lettre dont vous m'avez honoré en date du ler du courant, dans laquelle vous exprimez un désir d'ériger de nos machines à feu sur vos

salines, sous des conditions pareilles à celles dont lesquelles nous en avons érigées en France. Dès là, il est nécessaire de vous informer que le premier article de nos conditions était qu'il fallait nous octroyer un privilège exclusif pour l'érection de machines à feu sur nos principes dans ce royaume, ce qui eut lieu en conséquence et nous a été confirmé depuis peu par le ministère de France.

Je ne sais pas si Sa Majesté Prussienne adopte cette manière d'encourager des inventions nouvelles et utiles; mais comme mon associé, Mr. Watt, est parti pour Londres hier [...], vous me permettrez, Monsieur, de vous renvoyer à lui en égard à une conférence particulière sur ce sujet, et je me conformerai avec plaisir à tout ce dont vous et lui conviendrez ensemble. Je souhaite d'éviter la répétition de certaines circonstances récentes qui n'ont pas pu vous être plus désagréables qu'elles me l'ont été à moi-même, mais je ne saurais m'empêcher de dire, que, si vous étiez informé de la façon peu gentille dont quelques-uns de vos compatriotes se sont conduits envers nous, conduite qui en même temps est contraire aux lois en ce pays, je suis sûr que vous les blâmeriez plutôt que moi.

J'observe que vous vous proposez de faire sous peu un voyage dans la Cornouailles; si comme naturaliste, mineralogiste, ou comme gentilhomme, je puis seconder vos vues, j'en serai charmé. Mais en qualité de mechanicien et ingénieur, vous pardonnerez si je vous y fais des obstacles. Un ingénieur de Prusse se rendit l'année passée dans la Cornouailles¹ et y fit non seulement des dessins de machines à feu, mais engagea même un homme à quitter son pays et à se rendre avec lui à Mansfeld dans les domaines du Roi de Prusse et tenta d'en emporter d'autres, ce qui l'expose à être emprisonné pendant 6 mois et, outre cela, à une amende de £ 500 sterling. Je conseillerais par conséquent cette personne de ne jamais hazarder un second voyage dans la Cornouailles.

Je n'ai point de doute que les personnes de condition, ou gentilhommes de la Cornouailles ne vous reçoivent et ne vous traitent comme tel, mais sur certains points, ils seront circonspectes.

Comme je suis homme d'affaires et aime la vérité et la franchise, je vous prie de m'envisager comme tel et de pardonner la liberté avec laquelle je m'exprime.

Nachschrift. La lettre ci-dessus écrite, j'ai réçu certaines informations qui m'engagent à vous conseiller de ne pas hazarder un voyage parmi les mines.²

¹ Eversmann.

² Vermerk auf der Rückseite des englischen Konzepts: „*Draught of my letter to Baron Stein, wrote before I received Mr. Raspes letter.*“ Damit kann nur der Brief Raspes Nr. 221 gemeint sein, zumal dort auch von nichts anderem, als der geplanten Reise Steins nach Cornwall die Rede ist.

9. MÄRZ 1787

228. Matthew Boulton an James Watt

Soho/Birmingham, 3. und 4. März 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 196 f. – Letzter Absatz weggelassen.

Seine Korrespondenz mit Stein. Aus Konkurrenzgründen soll nun doch mit ihm über den Verkauf englischer Dampfmaschinen an Preußen verhandelt werden, und Boulton rät Watt, Stein deshalb zu empfangen („there are too many engines erected and too many drawings distributed . . .“). Gleichzeitig soll Stein auf Grund neuer Denunziationen Raspe und anderer entweder überhaupt von der geplanten Reise nach Cornwall abgehalten oder dort an der Besichtigung von Dampfmaschinen gehindert werden.

I yesterday rec[eive]d the inclosed from Baron Stein and have wrote [!] the inclosed answer¹, w[hic]h, if you approve, send it to him directly. When I consider how many of our friends and pupils will undertake to make and furnish the Baron with engines, I think it w[oul]d be impolitic to give him a flat denial and therefore think it would be proper for you to have a conversation with him.

The 4th. – So far I wrote yesterday but was prevented from writing more; I took the opportunity of sending the Baron's letter and my answer in Mr. Matthew's box last night. At the same moment I received one letter from Mr. Richard Phillips and another from Mr. Raspe by which you will see that it is desirable to prevent Baron Stein from going to Cornwall, and if he does go, every Cornish man should exert himself to prevent him seeing any of our engines and Lawson² or someone that we can depend on should accompany him every hour during his residence. Mr. Phillips, Sr. F. Bassett and Mr. Raspe should all write to Cornwall his history and intentions. But I think it would be well, if you were to see him and talk with him, as it would be infinitely better than writing to him. Perhaps by talking to him you may turn an evil into a good. If his King would give us a handsome sum in lieu or a patent, you may give them a rec[eip]t for making fire engines for 'tis impossible that we can keep the rec[eip]t to ourselves. There are too many engines erected and too many drawings distributed, but we may keep our experience and practical knowledge in a great degree to ourselves [. . .].

¹ Vom 3. März 1787.

² James Lawson (gest. 1818), seit 1779 bei Boulton & Watt. Näheres über ihn bei Ford, S. 196, Anm. 46.

229. James Watt an Matthew Boulton

Birmingham, 9. März 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 200 f. – Hier etwas gekürzt.

Bericht über seine Verhandlungen mit Stein. Stein durch Watt erneut davor gewarnt, sich englische Konstruktionspläne zu beschaffen.

I rec[eive]d your packet concerning Baron Stein and went immediately to Mr. Greville, who took upon him to mention to the Baron my being in town and to desire him to declare explicitly, whether he had any authority to treat with us. He assured him he had from Baron Heinitz, the Chief Director to the mines, to whom he would transmit any proposals we pleased to make and doubted not of our obtaining an exclusive privilege on proper terms. He referred Mr. G[reville] to the Prussian Minister¹ for confirmation of his rank in the mines and to Count Brühl² and some other gentleman for his family and connections. In consequence Mr. G[reville] appointed a meeting between the B[aron] and me this morning at Mr. G[reville's] lodgings. – I did not enlarge much on grievances, but Mr. G[reville] spoke general sentiments on the subject decidedly. I told him the terms on which we erected engines here and insisted on the pat[en]t as a sine qua non. He proposes setting out for Birmingham on Thursday next and to have a meeting with us there to receive our proposals and from that he means to go northwards, deferring his journey to Cornwall till after the meeting. I find I shall have difficulty to reconcile Sir Joseph to any compromise with the Baron on our part, shall attempt it, however, on Saturday night, meanwhile Mr. G[reville] has promised to make the neccessary enquiries after him. – I have told the B[aro]n that we must consider his or his draughtman's going into or making any drawings of our engines as an end to any treaty with us [...].

Andere geschäftliche und technische Vorfälle. B[aron] Stein wanted to see iron works. I took him [to] Wilkinson's who refused him, but gives permission to see everything about the coaleries etc. [...].

¹ Preuß. Gesandter in London war damals Spiridion Graf v. Lusi (1742–1815), ein gebürtiger Griechen, den Friedrich d. Gr. an seinen Hof gezogen hatte. Er wurde, nachdem er als Offizier im Feldzug von 1778/79 gedient hatte, 1780 Gesandter in London, wo er sich in den Unterhandlungen über den Beitritt Hannovers zum deutschen Fürstenbund bewährte. 1788 zurückberufen, wurde er 1792 Generalmajor und 1798 Generalleutnant. 1792 war er in diplomatischer Mission in Wien und Konstantinopel und wurde 1800 Gesandter in Petersburg. Mit seiner Abberufung von diesem Posten im Jahre 1802 endete seine merkwürdige Karriere.

² Vermutlich „Brühl“ – bei Ford: „Bouhl“.

230. Matthew Boulton an Thomas Wilson¹ [Birmingham,] 17. März 1787

Assay Office Birmingham. Konzept. Eigenh. – Erstdruck Ford, S. 201.

Warnung vor Stein als einem höchst gefährlichen Spion, dem nichts gezeigt werden dürfe.

I believe Baron Stein is set out to Cornwall, remember what I told you before, he is the most dangerous of all the spies that have come to Cornwall. He has an experienced miner and engineer with [him]. He must not go into our engines, particularly the modern ones².

¹ Betriebsführer der Chacewater-Bergwerke in Cornwall, außerdem Agent der Firma Boulton and Watt (Ford, S. 201, Anm. 49).

² Aus denselben Tagen wohl noch die beiden andern eindringlichen Warnungen an und durch Wilson: „*The said Baron is a rascally character and quite suitable of the dirty business he is come upon [...]. I must therefore beg you to exert your best endeavours to prevent him from going into any one engine [...]. He speaks bad English, but one of his men speaks good.*“ (Boulton an Wilson?). –“ *You cannot be too much on your guard, as he will bribe high, and use every means in his power.*“ (Watt an Wilson) – Beides nach Carswell a. a. O. S. 200 f. (fehlt bei Ford), ebd. der Steckbrief Watts, wahrscheinlich in seinem eben zitierten Schreiben an Wilson vom 17. März: „*He is in stature rather below, or about the middle size, has black eyes, somewhat pitted with the smallpox.*“

231. Matthew Boulton an John Vivian¹ [Birmingham,] 17. März 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 202.

Steins bevorstehende Ankunft in Cornwall. Aufforderung, ihm den Zugang zu allen modernen Maschinenanlagen und Stollen unmöglich zu machen, Arbeiter und Werkführer schärfstens dahin zu instruieren.

I expect Baron Stein and his assistants are gone to Cornwall, if you wish to promote the working of the Prussian mines, I recommend that you show him the engines at North Downs, at Poldice and the United Mines, with all the modern improvements, but if you are of a contrary opinion, I wish you to attend him to the mines, for he will go, and prevent him and his draughtsman from going into any of the engines and threaten every engine man or captain that dare admit them by night. You must also charge Rivers² and Blight to inform you all their motions³.

¹ John Vivian aus Truro war nach Ford (S. 202, Anm. 50) eine der führenden Persönlichkeiten im Kohlenbergbau Cornwalls.

² Gastwirt in Truro, wie wahrscheinlich auch Blight in dieser Gegend. Man sieht, mit welchen Methoden Stein überwacht wurde.

³ Wie Vivian diese Instruktionen auffaßte und weitergab, („*perhaps overstraining his instructions*“) berichtet Carswell (a. a. O. S. 205) nach den Boulton-Manuscripts: „*Vivian had told his men that a visitor who strayed from the approved route would be better at the bottom of the nearest disused shaft with a broken neck than safe at home in Germany.*“

232. Matthew Boulton an Richard Phillips [Birmingham,] 25. März 1787

Assay Office Birmingham. Konzept. Eigenh. – Erstdruck Ford, S. 202.

Steins Aufenthalt in Cornwall.

I presume Baron Stein has lately been with you in Cornwall and hope he has been shown all proper and constant attention¹.

¹ Eine im Licht der vorhergehenden und folgenden Korrespondenz recht doppeldeutige Bemerkung, sie ist offenbar auch richtig verstanden worden.

233. Matthew Boulton an John Vivian¹

Birmingham, 8. April 1787

Assay Office Birmingham. (Letterbook.) Eigenh. – Erstdruck Ford, S. 202.

*Enttäuschung Steins über die Ergebnisse seiner Reise.*Baron Stein and assistants are now here and seem much disappointed².¹ Aus dem Briefbuch.² Tagebucheintragung Boultons vom 3. April 1787: „Baron Stein and Count Slabrendorff [!] dined at Soho.“ – Danach scheint Boulton Stein doch noch empfangen zu haben.

234. Stein an Watt

[London, 5. April 1787]

Assay Office Birmingham. Eigenh.

Technische und rechtliche Vorfragen betr. die Aufstellung Wattscher Dampfmaschinen im preußischen Bergbau.

B[aron] Stein presents compliments to Mr. Watt and, in consequence of their conversation about the erection of new steam engines in the Prussian dominions, entreats him to pay particular attention in the promised memorandum to the following questions:

1. The quantity of coals consumed by a new steam engine, in proportion to the diameter of the piston. A considerable difference existing in the qualities of coals, B. Stein proposes the New Castle coals as a standard whose quality and weight is best known to him.
2. The relative power of a patent engine compared
 - a) with that of a common steam engine constructed upon the old principles. An extract of those observations and trials made by the patentees or their delegates will best explain this point.
 - b) with that of horses, or the diameter of piston and quantity of coals required to produce the same effect as a stated number of horses.
3. The absolute power of patent steam engines according to their theory and experience. A table of the effect produced by engines of very different diameter for a fixed time, like that of the Cornwall engines will best prove what may be reasonably expected.
4. The expenses in constructing patent engines of different diameters, exclusive of pumps and buildings, compared with the expenses of common engines.
5. The annual expenses in repairing or keeping in order a patent engine.
6. The condition the patentees would stipulate with the King of Prussia, if they construct patent engines in His M. dominions
 - a) in lieu of old engines or horses,
 - b) where no engine at all was used before.

21. JUNI 1787

7. It is understood that the patentees beside the construction of the engines, would take care to have them erected upon the spot, so as to produce the effect, and further that the necessary managers of the engine would be sufficiently instructed for the purpose of managing them, keeping them in order and doing such repairing as usually might be required.

Tomorrow being Good Fryday, Mr. Stein must put up his intention to visit an iron fonderie for Saturday, when he will be very glad to receive the favour of an introduction.

Thuesday morning at 12 o'clock.

235. Stein an Boulton

Bristol, 7. Juni 1787

Assay Office Birmingham. Eigenh.

Aussichten auf einen günstigen Abschluß der Verhandlungen mit Boulton. Bevorstehende Reise Steins nach Cornwall.

J'ai cru devoir avoir l'honneur de vous avertir que selon les lettres du Ministre d'Etat de Heinitz¹ à Berlin, il se trouve très incliné à passer un contrat avec vous, qu'il vous fera tenir dans peu les données nécessaires pour que vous puissiez former un plan pour la construction des machines à feu à Schönebeck, et qu'en même temps, il vous communiquera les termes auxquels il pourra accéder à une conclusion finale. J'espère de trouver tous ces objets à Londres, où je me trouverai le 21 de juin, comptant aller d'ici en Cornwall, et j'ai l'honneur d'être, en vous priant de faire agréer mes devoirs à Mr. Watt, votre très humble et très obéissant serviteur.

¹ Nicht ermittelt.

236. James Watt an Matthew Boulton

London, 21. Juni 1787

Assay Office Birmingham. Eigenh. – Erstdruck Ford, S. 203.

Mißerfolg Steins in Cornwall.

[...] Baron Stein is in Cornwall double guarded. They would not even show him the dressing of tin stuff at Polgooth.