Boulton and Fothergill silver.

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BOULTON AND FOTHERGILL SILVER

by

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ABSTRACT OF THESIS

This thesis is about the silver business of Matthew Boulton and John Fothergill at their Soho Manufactory near Birmingham. Their partnership lasted from 1762 until 1782.

A rounded discussion of the topic is attempted. Within the contexts of industry elsewhere and Soho's other activities, successive chapters cover the early development, marketing, production, design, and later decline of the partners' silver.

Silver plate was prestigious and, untypically for Boulton, he concentrated on sales to the public rather than trade customers. To attract orders he made modest charges. This was viable where mainly machinery was used to make plate, even though sales were not high, since the expense of machinery was substantially covered by the larger sales of non-silver items. However, where Boulton relied to a greater degree upon hand methods, he lacked technical means to compensate for low profit-margins. Moreover, inefficiency and the firm's lack of capital which led to substantial bankers' interest charges on payment for bullion, particularly when customers paid late, caused losses. These problems applied particularly to silver plate and were mainly responsible for the decision to reduce production drastically; however, the manufacture of a large range of small items remained relatively consistent.

The thesis includes appendices. Some contain new information about annual totals for the following aspects of the business: the volume of assay silver; each type of article; pieces sold on commission; and sterling silver supplies. Other appendices provide details about the partners' silversmiths and extracts from a Soho inventory.

This thesis involves a more detailed use of sources than previous studies of the topic. Apart from the silver itself (which is selectively illustrated), the Matthew Boulton Papers and statistics derived from The Birmingham Assay Office provide the main sources. Manuscripts covering silver production elsewhere provide contextual material for understanding the partners' silver business.

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LIST OF ABBREVIATIONS

Abbreviations in addition to those listed below are used for some primary and secondary sources in the Notes; these abbreviations are given immediately after the first full use of the title.

A.J.C.	Andrew J. Cabrit, a clerk at the Soho Manufactory
B.A.O.	The Assay Office, Birmingham
B. & F.	Boulton and Fothergill
B.M.A.G.	Birmingham Museum and Art Gallery
B.R.L.	Birmingham Reference Library
B.W.C.	Boulton and Watt Collection
C.W.	Charles Wyatt, a clerk and later a partner with B. & F. in button manufacture
G.H.L.	Goldsmiths' Hall, London
J.F.	John Fothergill
J.H.	John Hodges, a clerk at the Soho Manufactory
J.S.	John Scale, manager of the Soho Manufactory
J.W.	John Wyatt, a clerk at the Soho Manufactory and later a London agent for B. & F.
M.B.	Matthew Boulton
M.B.P.	Matthew Boulton Papers
S.A.O.	Assay Office, Sheffield
VAM	Victoria and Albert Museum, London
Z.W.	Zacchaeus Walker, B. & F.'s accountant

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DECLARATION

During the preparation of this thesis I have published two articles on Boulton and Fothergill silver. These are 'Boulton and Fothergill Silver: Business Plans and Miscalculations', *Art History*, Vol.3, No.3 (September 1980), pp.274-94 and 'Boulton and Fothergill Silver: an Épergne Designed by James Wyatt', *Burlington Magazine*, Vol.CXXVIII, No.999 (June 1986), pp.417-21. A copy of each article is contained in a pocket at the end of the thesis.

GLOSSARY

annealing	softening silver by alternately heating and cooling it to overcome the resistance of metal to further work
argyle	gravy-warmer in the form of a teapot or coffee-pot
bazel skin	thick leather (used as an apron)
Bill Account	an account with a banker or merchant who accepted bills of exchange on behalf of their clients in return for a commission. When Boulton and Fothergill referred to their Bill Account they meant their deficit on this account
brazier	worker in brass
burnishing	smoothing the surface of metal by compression
calliper	compass with bowed legs for measuring curved surfaces
cassolettes	perfume-burners
chapes	the back-pieces of buckles attaching them to straps
chasing	modelling the surface of metal with hammers and punches
cheese-toaster	utensil for toasting cheese on bread before an open fire
chocks	chuck for use on a lathe
cratches	racks for storing filings
diet	samples scraped by assayers from silver to assess its quality
épergne	centre ornament for dinner-table, with candle-branches and bowls for fruit, flowers, or sweetmeats
escutcheon	pivoted key-hole cover
filigree	ornamental work of fine wire
foot-lathe	a lathe rotated by a treadle
forces	copper sheets for protecting silver during the stamping process
French plating	plating usually copper or brass, with silver foil by pressure and heat
gadrooning	decoration of convex curves
gravers	tools for engraving
guilloche	a pattern made from interlacing bands forming a plait
japanning	painting usually in imitation of oriental styles
joint-candlestick	hinged candlestick
laps	rotating discs for grinding and polishing metals

lemel	scrap from filings
lever spoon-scraper	scraper for smoothing the bowl of a spoon
mandrel	a shaft on a lathe to which work is attached while being turned; cylindrical rod of metal for tube-drawing or for making rings or chains
mazarine	fish-strainer
monteith	bowl filled with ice for cooling wine-glasses
muffineer	small castor for sprinkling spices
ormolu	ornaments of gilt base-metal (especially brass, bronze or copper)
pannikin	small drinking-vessel
pickle	a mixture of hydrochloric acid and water in the ratio of 10:1
pinchbeck	an alloy of copper and zinc resembling gold
pole-lathe	a lathe alternately rotated by a treadle and a spring from an overhead pole
repoussé	deep relief surface created by working on metal from the back and front
riddle	sieve
rifler	file
rotten-stone	decomposed siliceous limestone used as a polishing powder
sconce	wall-mounted branched candlestick
scratching-lathe	used for cleaning silver prior to gilding
Sheffield plate	wares made from copper covered on one or both sides with silver
stamp	machine with hammer-head and dies for stamping metal
sterling (or standard) silver	contains 11oz.2dwt. of fine silver and 18 dwt. of alloy in each troy pound
swage	pair of hinged jaws used for imposing a pattern on the edge of articles
tea-kitchen	tea-kettle
'toys'	a wide range of mainly small items such as trinkets, tweezers, and seals
venison-lamp	a lamp to warm a venison-dish

CHAPTER 1

THE FORMATION OF THE BOULTON AND FOTHERGILL PARTNERSHIP AND THE INTRODUCTION OF SILVERSMITHING

Matthew Boulton made a highly important contribution to the history of silversmithing during his partnership with John Fothergill which lasted from 1762 until 1782.[1] Boulton pioneered mechanical methods of production[2] and was amongst the earliest English silversmiths to adopt the Neo-classical style.[3] Although small silver items had been made in Birmingham before, Boulton was both the first in the area to manufacture silver on a large scale and produce services of plate;[4] moreover, his initiative was largely responsible for the establishment of The Assay Office, Birmingham, in 1773.[5] Boulton provided the foundation for what was to become one of the most important silver-producing centres in England, which thrives to the present day.[6]

Although small silver articles were made throughout the partnership and although Boulton intended to make silver plate at least as early as 1763,[7] it was not until the mid-1770s that silversmithing occupied a very significant part of the firm's activity.[8] This was due to a number of factors: the lack of an assay office in Birmingham, the firm's preoccupation with many other products, and to the time spent in establishing the partnership and organising the firm during its early years. These points form the basis of this chapter, which also places Boulton and Fothergill's firm within the contexts of Birmingham and its industry.

Boulton was born in the town in 1728 and attended a school run by the Reverend John Hausted in Deritend.[9] Boulton later joined his father's business in Birmingham, which was located in Steelhouse Lane until 1731 when it was moved to Snow Hill.[10] The business also had the use of Sarehole Mill, to the south of Birmingham, as a rolling-mill.[11] Matthew Boulton Snr was described in 1751 as a 'toy-maker'.[12]

'Toy' making denoted the production of an almost limitless variety of small items in a wide range of materials and this was a dominant part of Birmingham's industry in the eighteenth century. Brass, iron and steel were widely used,[13] though non-metals such as tortoise-shell were also employed. The range included toothpick-cases, smelling-

bottles, seals, tweezers, snuff-boxes, inkstands and trinkets[14]. By 1759 this industry was said to be employing 20,000 people in Birmingham and its district.[15]

Many other products were made in Birmingham. In 1770 there were forty-four buckle-makers and eighty-three button-makers.[16] The range of materials was enormous; for buttons, it included gilded metal, lacquered metal, platinum,[17] glass, ivory and pearl.[18] Tools, instruments, guns, and nails were all made in large quantities.[19] Brassfounders were also prominent: in 1770 thirty-three were listed and their work ranged from furniture fittings to cloak-pins.[20]

Boulton Snr's firm produced small steel items[21] as did many other firms in Birmingham. Articles produced there in steel included buckles as well as corkscrews, boxes, snuffers, watch-chains, stay-hooks and sugar-nippers.[22] Boulton Snr may have produced all of these articles but his range certainly included buckles.[23] By the age of seventeen Boulton Jnr introduced to his father's business improvements in the manufacture of buttons, watch-chains, trinkets, and invented inlaid steel buckles.[24]

Apart from steel articles, the firm probably also made small silver articles and in doing so, reflected a growing trend amongst Birmingham's 'toy-makers'. One nineteenth century source, in touch with Boulton's grandson, stated that Boulton Snr was in business as a silver stamper and piercer.[25] While there is nothing to confirm precisely that, silver was used by the firm. During the period 1751-9 Boulton Jnr noted a recipe for silver solder[26] and, probably towards the end of the 1750s, he purchased silver from Samuel Garbett.[27] In 1750 Garbett and Dr John Roebuck formed a partnership for refining gold and silver in Birmingham and at Prestonpans in Scotland.[28] In 1756 there was mention of silver being rolled at Duddeston Mill, near Birmingham on the River Rea.[29] In the mid-eighteenth century small silver 'toys' were widely made by Birmingham's manufacturers,[30] and by 1770 gold and silver 'toy' making was regarded as a separate branch of the industry, producing such items as trinkets, toothpick-cases, snuff-boxes and smelling-bottles. They also made filigree pieces including toilet-sets, tea-chests and inkstands.[31]

Export was important to Birmingham's industry. The annual production of 'toys' in Birmingham and adjacent towns in 1759 amounted

to £600,000 of which five-sixths was exported.[32] Some of the larger firms not only made goods but also sold other manufacturer's goods on commission; for example, John Taylor, a major Birmingham manufacturer of 'toys'[33] was also a merchant.[34] Boulton Snr's firm fitted into this pattern: in 1757, T. Thornbury, a merchant at The Hague, was supplied with items made by Boulton Snr, who also obtained for Thornbury further goods from William Carless in London.[35]

Boulton Jnr strengthened his personal position in the 1750s and early 1760s. He increasingly occupied an important role within the business: by the mid 1750s he was making payments on the firm's behalf.[36] In 1759 he inherited the business following his father's death.[37] At about this time there were changes in Boulton Jnr's marital position which in time enormously benefited his financial situation. In 1749 he married Mary Robinson but she died in 1759.[38] In 1760 he married Mary's sister Anne.[39] Marriage to a deceased wife's sister was illegal since it was contrary to the Table of Kindred and Affinity in *The Book of Common Prayer*,[40] but an impoverished cleric, the Reverend James Penfold, performed the service at St. Mary's, Rotherhithe.[41] The extent to which Boulton benefited financially from the Robinson family has led to confusion amongst scholars;[42] according to Boulton, his second wife's fortune was £6,000 at the time of their marriage.[43]

Following the changes in his private life about 1760, Boulton began to establish the Soho Manufactory. By February 1761[44] he paid £1,000 for the lease on a piece of land in the parish of Handsworth, about one and a half miles north of the centre of Birmingham. He purchased the lease and buildings on the same site from Edward Ruston and John Eaves[45] who had obtained the lease from John Wyrley in 1757 for a term of ninety-nine years. At that time, Ruston and Eaves agreed to erect one watermill, a house, some other buildings, and to construct a canal to supply extra water to Hockley Brook, which fed the watermill.[46] Boulton spent £500 on finishing both the house and garden. He also built some dwellings for workmen, a warehouse, several workshops and, because he was dissatisfied with the mill, rebuilt it. Work on these buildings was not completed in 1761 and was resumed in the following spring.[47]

At about this time Boulton and Fothergill became acquainted, but their relationship did not have an auspicious start. In January 1762

Fothergill approached Boulton with proposals for a partnership following a separation between Fothergill and his employer Mr Duncombe, a Birmingham merchant.[48] Initially, Boulton declined Fothergill's proposal, but after repeated applications[49] the partnership began on 24 June 1762. For reasons that are not clear, no articles of partnership were ever signed. About a year later, Fothergill wished to dissolve the partnership and left. However, two months later he returned and the partnership resumed.[50] The reasons for the uncertain start to the partnership were not stated but they almost certainly relate to financial disagreements.

Boulton was keen to form a partnership in part to provide additional capital. The expenditure on Soho was preventing the introduction of new products[51] and Boulton's financial position was weak. Fothergill later claimed that at the beginning of their partnership, Boulton had a Bill Account;[52] this term was used by Fothergill to denote the firm's debts. The partners financed the firm's bills in the following way: they relied upon four merchants or bankers in London to accept bills of exchange on their behalf (in return for a commission) and as these bills fell due, the partners were expected to finance them by cash or alternative bills. The term Bill Account was used by the partners to denote the difference between the bills accepted on their behalf by these bankers and the inadequate amounts the partners remitted to meet these bills.[53] It is not clear that Boulton did have a Bill Account when the partnership was formed (he claimed that it originated a few years later)[54] but he was in some financial difficulty: in 1763 when Fothergill left, Boulton had to sell a farm for £600[55] to maintain production.[56] Fothergill also later claimed that Boulton withheld the true state of the firm's finances until after the partnership was formed.[57] This was quite possible: Boulton later attempted to withhold similar information from another potential partner.[58]

Fothergill's financial position led to difficulties both for himself and the partnership. Initially, he raised capital with difficulty. In 1762 Boulton was informed by Fothergill that he hoped to raise £2,000 on the security of a part of his wife's fortune,[59] obtain £1,000 on his stock security at five per cent and receive a further loan of about £500 in the following summer.[60] How successful these negotiations were is unclear, but he was unable to raise

enough capital to meet the partners' agreement. The proportion of capital they agreed to advance at this time is not certain and was later disputed: according to Fothergill they were to contribute the same amount but in Boulton's recollection Fothergill agreed to advance £1000 more since Fothergill was entering a trade established by Boulton.[61] Whichever was the case, Fothergill failed to meet his commitment since in 1763 (the first year for which accounts were made up) Boulton's capital was £6,206 17s. 9d. as against Fothergill's £5,394 16s. 0½d.[62]

Boulton's choice of Fothergill as a partner was probably influenced by the latter's international contacts and international background which were assets that Boulton largely lacked. Fothergill was probably born in Kăliningrad, Russia[63] (then Königsberg, East Prussia) since he was once an apprentice to a relation there.[64] Fothergill later visited Kăliningrad on behalf of the partnership.[65] While working for Duncombe in Birmingham Fothergill acquired knowledge of most of the merchants trading in hardware in Italy,[66] where the partners were later to have commercial links.[67] Fothergill knew a Danish financier, H. F. Bargum,[68] who later made Boulton a loan.[69] Boulton's understanding of foreign languages extended only to a reading knowledge of French.[70] Fothergill could speak French and German;[71] the latter was invaluable since half the letters the firm received from abroad were in German.[72] (Despite Fothergill's expertise, however, the partners also relied on the linguistic ability of a clerk, Andrew J. Cabrit,[73] and used translators.[74])

Boulton and Fothergill travelled to build up their market. Fothergill's strengths were used from an early date. Immediately before the partnership began Fothergill worked in London on Boulton's behalf; while there, Fothergill wrote to customers abroad, showed pattern cards to merchants and shopkeepers,[75] and sent back orders.[76] Later, Fothergill supplied Boulton with a list of merchants to visit in London; these merchants had trading links with Italy, America, Germany, Spain, Russia, and Holland.[77] The links that Fothergill brought to the partnership supplemented Boulton's; for example, the latter regularly visited Nathaniel Jefferys[78] (Cutler to His Majesty [79]) in the Strand who sent the firm orders.[80]

Letters played an important part in the development of the firm's marketing. Occasionally, the firm introduced itself to customers

abroad through correspondence[81] and it was necessary to keep established customers up-to-date with the increasing range of the firm's products.[82]

As early as 1763 the firm claimed recent improvements in both the quality[83] and variety of its articles.[84] The range included the following: chapes (the back-pieces of buckles attaching them to straps);[85] inlaid buckles and buttons; platinum coat, breast and sleeve buttons; platinum watch-chains, belt-locks, watch-keys, watch-hooks, tapestry-hooks; metal buttons; steel watch-chains; platinum buckles, and enamelled buttons.[86]

It is likely that small silver articles were made at the beginning of the partnership. The production of such pieces was not inhibited by the lack of an assay office in Birmingham. By the Act of 12 Geo. 11. c. 26 (1738) certain articles were not required for assaying: a specified range including such items as jeweller's work, thimbles and clasps; fine items which might have been damaged by assaying or hallmarking; and any articles weighing less than 10 dwt.[87] Although there are no documented[88] (or surviving) examples from this period, this probably reflects the limitations of the archive rather than the lack of production.[89] During the period between July 1762 and July 1763[90] the partners purchased bullion worth £60 5s. 2d.; it is not clear what proportion of this was for silver but some certainly was.[91]

Sheffield plate (which the partners regularly called 'plated ware'[92]) was produced by the partners by 1764.[93] The term Sheffield plate denotes wares made from a sheet of copper covered with silver on one or both sides.[94] The material was introduced by Thomas Boulsover of Sheffield in 1743[95] for buttons, but from the late 1750s[96] it was used by others in Sheffield for tablewares.[97] The partners initially produced only Sheffield plate candlesticks[98] but by the early 1770s they also produced a wide range of tablewares.[99] They used fine silver for this purpose[100] and this is reflected in the increasing sums spent on bullion: £367 6s. 6d. for 1763-4 and £989 15s. 4d. for 1764-5.[101]

The earliest sign that Boulton intended to make silver plate was in 1763. Indeed, he went as far as to buy a licence to sell silver plate[102] and claimed to be making a variety of articles, including candlesticks and tablewares, in large quantities for trade customers in London and offered to send samples to an agent.[103] There is no

evidence that the offer was taken up and the claim can best be regarded as an unfounded boast of a kind that Boulton was quite capable of making.[104]

Thoughts of making silver plate at this date were premature. Although turnover was improving (£7,000 for 1763 and £10,000 for 1764)[105] the firm had a number of difficulties which inhibited expansion. It could not cope with the demand for buttons: the lack of workmen led to delays and capital had to be found to make further workshops for this article[106] at a time when the partners were hard pressed. In 1764 (the first year for which a profit and loss account was made up) each partner lost over £1,914.[107] Losses were caused in part by the inefficient division of production between Snow Hill and Soho;[108] moreover, these premises together did not provide enough space for the planned increase in business.[109]

These circumstances completely changed as the result of two events. Boulton's wife inherited at least £16,000 following the death of her brother in 1764.[110] This prompted Boulton to embark upon a programme of expansion at Soho which began in 1765[111] and which was substantially complete in 1767.[112] The production that had been carried on at Snow Hill was fully transferred to Soho in 1766.[113]

These substantial additions to the Soho Manufactory were made by the Wyatt family of architects and builders which consisted of Benjamin and his sons, William, Samuel, John, James, and Benjamin.[114] The partners corresponded with the father[115] and some payments were probably made to him, though since these refer to Benjamin they could also refer to his son.[116] Other payments were made to the Wyatts[117] though one was specifically made to John.[118]

The design of the Manufactory has been attributed to different members of the Wyatt family;[119] the confusion is due to the ambiguity of certain references which merely refer to drawings by William's brother (without specifying which)[120] and to a Mr Wyatt.[121] However, most of the responsibility must be attributed to William: Boulton stated that William was consulted over the additions,[122] William corresponded over the lighting of the workshops and the plans of small dwellings at Soho,[123] and it was to William that Boulton complained about delays in completing work and the high cost of the Manufactory, which exceeded the estimate.[124]

During this period of expansion, substantial additional capital

was put into the firm and this came from a variety of sources. Quite apart from his wife's capital, Boulton borrowed sums during the period 1759-1767 that came to more than £18,150, which was far more than has hitherto been realised.[126] The firm also made profits in the mid-1760s and Boulton's share was as follows: 1765 £201 9s. 1d.; 1766 £952 18s. 8d. and for 1767 £1,450 12s. 6d. To what extent he used each of these sources to provide extra capital for the firm is not clear but his contribution increased substantially: 1764 £8,212 16s. 3d., 1765 £9,696 6s. 9½d., 1766 £10,375 10s. 5½d., and for 1767 £14,789 5s. 11d. Following early losses in the firm Fothergill's capital dropped to £3,330 in 1764. His contribution increased but to a much smaller extent than his partner's: 1765 £3,345 9s. 11¼d., 1766 £5,203 7s. 1½d. and for 1767 £6,868 10s. 5d. The increase was probably in part made possible by his share of the firm's profits which was the same as Boulton's up to 1767; however from that year (to Fothergill's dismay[127]), profits were distributed according to capital, so that Fothergill received only £725 6s. 2d., which was half of his partner's.[128] A large part of Fothergill's capital derived from a £2,000 loan by Boulton, who was able to provide this because of his wife's capital, and was willing to do so since he wanted Fothergill's capital to be clearly superior to that advanced by a new partner,[129] J. H. Ebbinghaus, a merchant of Iserlöhn, Westphalia, who provided £2,000[130] in 1766 and £500 more the following year.[131] Although Fothergill had contacted Ebbinghaus about a partnership in 1764[132] the decision to involve him was Boulton's; at least at a later date, Fothergill resented the decision because it was taken while he was away on business.[133]

The firm's capital and the designs of William Wyatt made Soho an impressive manufactory. The façade (Plate 1) was elegant, though this concern with the appearance of factories was true of other manufacturers in the second half of the century. For example, Samuel Oldknow's cotton-mill, Mellor Mill, Derbyshire was given the appearance of a classical country house when constructed in 1790.[134] A plan of the Soho Manufactory (Plate 2) shows that behind the front block were a series of workshops around courtyards, a rolling-mill, and dwellings for employees.

Boulton and Fothergill were amongst the largest employers of the

period, though there is doubt about the size of their work-force: in 1765 Fothergill predicted that Soho would hold 400 at most[135] but in 1770 Boulton claimed (in a boastful letter) that it was 700 or 800.[136] Most firms in Birmingham were much smaller,[137] but the 'toy-maker' John Taylor employed 600 in 1759.[138] Some larger firms emerged, particularly in the iron and textile industries, as the Industrial Revolution developed: the largest cotton printers in England, Livesey Hargreaves & Co. of Blackburn employed up to 1000 before 1788[139] and the Shropshire ironmaster Abraham Darby employed a similar number in 1776.[140]

The move to the Soho Manufactory was associated with a decision about the rôles Boulton and Fothergill played in the firm. Boulton wanted to be in charge of the manufacturing side of the business: he felt that only he had the necessary understanding of production problems, and the capacity to manage and make quick decisions. At the same time, the partners agreed that Fothergill's principal rôle would be the superintendence of the commission business,[141] even though Boulton had misgivings about the continuation of that branch of their business. Although the commission business was part of the firm's activity at the beginning of the partnership,[142] it was abandoned in 1763;[143] this was probably connected with Fothergill's abrupt departure at that time,[144] but Boulton felt that a merchant's business was incompatible with the firm's manufacturing rôle.[145] However, the commission business was resumed by 1766.[146]

The decision about the partners' rôles determined the occupancy of Soho House. In 1766[147] (at about the time production was entirely transferred to Soho) Boulton moved to Soho House from Snow Hill.[148] This forced Fothergill from the home he had rented from the beginning of the partnership, first from Boulton, and later from the firm. Ownership reverted to Boulton[149] in 1766 and he asked William Wyatt to make substantial improvements.[150] Fothergill bitterly resented this move; this may be judged from Boulton's strenuous defence of his position by maintaining that he always intended to live there and that Fothergill neglected both the house and garden. It was essential, in Boulton's view, that he lived close to the Manufactory (which was just a short walk from Soho House) to oversee production.[151]

Fothergill worked at the firm's warehouse in Birmingham,[152] initially at 38 Snow Hill,[153] but later at New Hall when business was

moved there in 1777.[154] The warehouse was important since it was more centrally situated than Soho and therefore more convenient for deliveries and more likely to attract passing customers.[155] Here too Fothergill looked after the firm's general accounts[156] with the assistance of the firm's accountant, Zacchaeus Walker.[157]

The Birmingham warehouse was at the centre of the commission business, which rapidly prospered. This part of the firm's activities had a turnover of £8,000 in 1767.[158] The range of factored goods was very wide though they came mainly from manufacturers in the West Midlands. These goods included mainly iron and brass wares,[159] ceramics,[160] cutlery,[161] and (although the partners had a substantial manufacture of these items[162]) certain types of 'toys'[163] and buttons.[164] Particularly when the firm built up its own range of products later in the partnership, it was possible to combine these with commissioned goods; on one occasion a London merchant[165] received iron and brass (both of which were probably sold on commission[166]) with Sheffield plate and vases made at Soho.[167] Apart from merchants in London the firm also sold factored goods to their own agents abroad.[168] Customers paying within six months were charged a commission of five per cent but none was payable in the event of immediate payment.[169] These terms were possible because the firm was given a discount by its suppliers.[170] All of the partners' customers (for factored goods) had to pay for carriage[171] and insurance.[172]

The new commission business and the increase in the firm's manufacturing capacity required a new marketing effort. In 1765 Boulton spent a month abroad[173] visiting Calais,[174] Ostend, Dunkirk, Lille, Paris, and Versailles.[175] As a direct result of this trip, he obtained four large orders (one for factored goods and the rest for Soho's goods) and negotiated trading links with two or three more agents.[176] Between 1766 and 1768[177] Fothergill visited northern Europe taking in Hamburg, Lübeck and Kăliningrad, went on through Denmark and Sweden to St. Petersburg and returned via Riga, Kăliningrad, Danzig, and possibly Amsterdam.[178] He sent back substantial orders during the spring and summer of 1767.[179] Trade abroad was also built up by sending details of the firm's products and terms.[180]

Trade expanded in England, but particularly in London. Boulton visited merchants and shopkeepers in the capital[181] and in the late

1760s he reckoned to travel there twice a year.[182] Customers had the use of trade directories covering Birmingham; the first was published in 1763.[183] The earliest surviving directory, *Sketchley's Birmingham, Wolverhampton and Walsall Directory...*, third edition, (1767) sold in those towns and London[184] and included Boulton and Fothergill.[185] The partners were also regularly included in other directories.[186]

While the Soho Manufactory was still under construction Boulton increased the firm's range of products. About 1767 articles made from gilt metal on its own (such as watch-chains) or, with tortoise-shell inlaying (such as snuff-boxes and instrument-cases), were introduced.[187] Various dates have been given by scholars for the introduction of silver plate[188] but according to Samuel Garbett it was first made from about 1766[189] and the first recorded order - six pairs of candlesticks - was in that year.[190] However, this is the only evidence of silver plate production at this time and although the archive is limited for this period[191] and although some pieces were produced which might have been made from silver,[192] it is likely that production was not considerable: there are no surviving examples of work by the partners and if the volume and range of production had been substantial at this time it is unlikely that Boulton (who later bought his silver from Soho)[193] would have bought his own silver plate from London in the 1760s.[194] As a manufacturer, Boulton's involvement with silver plate was confined to candlesticks: in 1765 he noted the name of a silver candlestick maker in London,[195] perhaps with a view to forming a connection, and in the following year thought he should acquire patterns for silver candlesticks.[196] At this time the partners began to produce gilded brass: the first recorded order was for a set of five escutcheons (pivoted key-hole covers) and door-knobs, in 1765.[197]

The production of these particular items was not new in Birmingham; however, Boulton's use of silver and gilded brass was in time to develop to an extent which greatly exceeded traditions in the town. Although a few manufacturers there registered at assay offices elsewhere,[198] and although they made both candlesticks[199] and 'toys' in silver before Boulton, none of his predecessors or contemporaries produced services of plate, or artistically ambitious items, or the volume of silver, produced at Soho.[200] Birmingham's brassfounders,

who used gilding from time to time, went no further than such items as door furniture, candlesticks and furniture mounts;[201] in time, Boulton's range was to include not only these but also sumptuous ornaments in gilded brass, either on its own or with other rich materials, which collectively he and his contemporaries called ormolu.[202]

Boulton's ambitions extended far beyond those of the ordinary Birmingham manufacturer. He was determined to overcome what he described as '... the prejudice that Birmingham hath so justly established against itself'[203] which led to the term 'Brummagum' being coined in the mid-eighteenth century as a derogatory description of its products.[204] The addition, particularly of silver plate and ormolu to his firm's range, led him to claim it was more extensive than '... any either in the hardware 'toy' articles in Europe'.[205] There was a strongly patriotic element particularly in the promotion of ormolu: he was irritated by the way in which the French bought cheap vases in England, ornamented them and re-sold them in London;[206] he hoped to sell large quantities in France[207] so that '...large sums may be prevented from being sent abroad for the purchase of a foreign commodity...'.[208] The production of fine metalwork appealed to facets of Boulton's character which were noted by his friend James Keir: a determination to pursue lofty ambitions which might bring fame and the attention of important members of society as well as financial reward.[209]

Ormolu production built up rapidly from about 1768[210] and during the early 1770s Soho was almost certainly the largest producer in England.[211] Three auctions were held at Christie and Ansell's saleroom in Pall Mall, London. The first sale was in 1770.[212] The second, in 1771,[213] contained nearly four hundred items, in two hundred and sixty-five lots; of these only eight items (four lots) were not either of ormolu or mounted with ormolu.[214] The 1772 sale was even larger and Boulton thought the work higher in standard than the previous year;[215] purchasers included the Prince of Wales, the Duke of Manchester, and the banker Robert Child.[216]

During this period a range of ornaments was made with ormolu, usually in combination with other expensive materials. The most frequently used was 'blue john'; this is a type of fluorspar, usually with bluish or purple bands between lighter colours.[217] At

Soho it was often used with ormolu mounts to make vases for a variety of purposes: to hold candles or watch movements, for burning perfumes or just as ornaments.[218] Other items included ice-pails,[219] candelabra (Plate 3), candlesticks,[220] furniture-mounts;[221] and picture-frames.[222] Amongst the most ambitious pieces were tripod perfume-burners[223] and clock-cases, such as the 'King's' clock-case (Plate 4) completed for George III in 1771.[224]

Despite the impressiveness of ormolu production, it was nevertheless a financial failure. The 1771 sale brought in about half the money Boulton hoped for. Even though many items were reduced for the 1772 sale, a large proportion (including two clocks valued at about £180 and £275) remained unsold.[225] Ormolu proved to be too expensive to attract a sufficient number of customers for the large-scale production Boulton envisaged.[226]

The partners were extremely disappointed by the failure. After the 1772 sale, Boulton resented the amount of time spent on organising the sales and was bitter about the public's lack of appreciation of the design of the firm's ormolu.[227] Fothergill felt that they should have concentrated on their staple products[228] and that the ormolu business had taken up too much time, was detrimental to profits;[229] and complained that customers at the 1772 sale were too slow at paying.[230] As a result of all these difficulties, the production of ormolu was sharply reduced from 1772.[231]

During the late 1760s and early 1770s ormolu production largely fulfilled Boulton's ambition to produce expensive metalwork and he was unable to devote much attention to the development of silversmithing.[232] Yet even during this period silversmithing was on his mind: in 1768 he noted the need for a pair of silversmiths' scales[233] and in the following year he listed the wide range of silver from 'toys' to tablewares and ambitious items such as sacramental plate, that he might make.[234] Slowly the firm built up production. The earliest surviving silver, two pairs of candlesticks (Plates 5 and 10), were made in the assay year 1768-9 and three more candlesticks were made in this period. In the following assay year four pairs of candlesticks (plus an order for an unspecified number), one mazarine (a fish-strainer[235]), a set of mounts for a tea-urn, a tea-urn, a filigree tooth-pick case, two 'sets' (what was meant by this is unclear) as well as two pairs of buckles were completed. In the

assay year 1770-1 the volume of production hardly increased though the range included cups.[236] Although production may have been a little greater than these details suggest,[237] production was not very considerable.

One of the difficulties of producing silver plate in Birmingham was the lack of an assay office there and this had been on Boulton's mind at least since the mid-1760s. In 1766 the Earl of Shelburne wrote that it was hard on the town's manufacturers to be obliged to send silver for assay elsewhere particularly when other provincial towns, such as Chester and York, were permitted an assay office. These remarks were almost certainly prompted by Boulton: shortly before, Shelburne had spent four days in Birmingham, and commented on Boulton's enterprise.[238] At this time the two men corresponded.[239] In 1769 Boulton took advice on the means to obtain an assay office in Birmingham. He was told that a Royal Charter would be required;[240] in fact, an Act of Parliament was necessary.[241]

Boulton did not return to the problem until 1771; his renewed interest was probably prompted by the failure of the ormolu business which, as we have seen, was becoming apparent at that time. In 1771 he wrote to Shelburne: 'I am very desirous of becoming a great silversmith yet I am determined never to take up that Branch in the large way I intended unless powers can be obtained to have a Marking Hall at Birm^{m}'.[242]

Boulton's motives for wanting an assay office in Birmingham were based in part on convenience and in part on pride. A local office was not absolutely essential for Boulton to build up a silver business: firstly, some provincial silversmiths were prepared to supply the trade in London with pieces on which those customers both placed their makers' mark and attended to the hallmarking;[243] secondly, as we shall see, early pieces by the partners were sent elsewhere for assaying. Boulton was not content with either option: the latter was awkward and both offended his pride. As Fothergill wrote to his partner in 1773, when contemplating the outcome of Boulton's efforts to secure an assay office, '... certainly the requisition will procure you great honor in this Country'.[244] However, in the public campaign to obtain the assay office, Boulton constructed an argument which was mainly based upon the delays and damage involved in sending silver elsewhere for hallmarking.[245]

Until 1773, Boulton sent much silver to Chester for hallmarking which though the closest assay office to Birmingham was about seventy-two miles away[246] and this caused delays. These delays varied in length. A consignment sent to Chester on 23 January 1772[247] was received back at Soho on 5 February.[248] This delay was probably longer than usual: one consignment sent from Soho on 14 April 1772[249] was sent back from Chester on 18 April 1772[250] and another sent on 13 May 1772[251] was returned on 20 May.[252] Exactly when these two consignments arrived back at Soho is not clear but the partners once put the average delay involved in sending pieces to Chester at a week.[253]

Boulton frequently exaggerated these delays when writing to customers, partly to disguise the amount of time it took to make silver at Soho. Candlesticks ordered on 20 June 1771 by a customer in London[254] were not sent to Chester until 30 July.[255] When Soho received them back is not clear but, after final modifications and polishing they were sent to London on 13 August when their lateness was blamed entirely on the need to send them to Chester,[256] despite the fact that the delay in making them was several times longer. Several other letters show that the delays in sending pieces to Chester were used as an excuse for lateness.[257]

The truth about delays is more clearly revealed in letters to agents. There was not a single instance of Boulton complaining to James Folliott (who arranged for the assaying of silver in Chester) about unnecessary delays in returning silver, though on one occasion Folliott was urged to ensure that there would be no delay.[258] James Stuart designed and obtained an order for a tureen from the Admiralty (Plate 14). It was ordered on 19 February 1771.[259] Boulton apologised for delays in manufacture on several occasions[260] and the tureen was sent to London only in October.[261] Earlier, in passing, Boulton wrote that the tureen would be detained for just four days through sending it to Chester.[262]

It is also likely that Boulton's public claims that sending silver to Chester for assaying caused considerable damage were considerably exaggerated. There is not a single letter to Folliott complaining about damage to a consignment, even though an extensive correspondence with him survives from February 1771 onwards.[263] However, slightly earlier Boulton claimed that it was necessary to make new parts for

two pairs of candlesticks for Lord Shelburne because poor packing at Chester led to damage. There is nothing to confirm, or deny, this claim but it was made in the context of excusing a delay in completing them and linked to the need for an assay office.[264] Since Shelburne was a potentially valuable ally in Boulton's campaign to secure an assay office, Boulton was making strenuous efforts to highlight difficulties; however, this was not the only customer who was told that the efficiency of Soho's service would only improve if Birmingham was granted an assay office.[265]

In correspondence to customers Boulton often implied or firmly stated that all the firm's silverplate was sent to Chester[266] but this was not the case. In 1772 Lord Boston was advised to get his tea-urn assayed in London because the partners lacked the time to send it to Chester.[267] Henry Meredyth, of Dublin, was asked in 1772 if he wanted his candlesticks assayed;[268] whether the partners did have them assayed later is unclear. There are several instances where there is no evidence that silver plate was sent for hallmarking. In 1772 Patrick Robertson of Edinburgh was sent two pairs of drinking cups[269] but there is nothing to suggest that they were sent to Chester. Since on at least one later occasion, Robertson was supplied with candlesticks which were not assayed,[270] it is quite possible that this happened in 1772 as well. There are other instances where there is no evidence that the partners' silver plate was assayed at this time.[271]

Boulton's production of silver was gradually becoming more impressive. Silver plate made at Soho during the assay year 1771-2 included the following types of articles that he had not made before: candlestick-branches, coffee-pots and coffee-pot stands, escutcheons and door-knobs, plates, sugar-baskets as well as a tea-canister, a fish-trowel, and the elaborate tureen for the Admiralty (Plate 14).[272] The range of small and filigree articles also increased during that period.[273]

Boulton was above all keen to establish a reputation for producing silver amongst the most influential members of society. He obtained commissions from, amongst others, Sir Harbord Harbord[274] and Lord Kerry.[275] Boulton told the Duke of Richmond that he was prepared to make silver at a lower price than his competitors[276] and informed Sir

Robert Murray Keith (from whom Boulton hoped to obtain a commission for tureens) that he was above all concerned about the reputation, not the profit, he might gain.[277] When it was discovered in 1771 that the price stipulated by the Admiralty for their tureen had been exceeded through the inexperience of Soho's silversmiths, Boulton, anxious not to offend, was prepared to make a loss rather than charge in full.[278]

Boulton had established arguments and a reputation for silversmithing which helped to strengthen his case for an assay office in Birmingham, but in the first half of 1773 spent much of his time obtaining further support. For most of January and February,[279] and again in May, he spent so much time lobbying members of the Houses of Parliament in favour of a Bill to establish an assay office, that he had little time for other business.[280] Boulton obtained support from, among others, the Earls of Dartmouth and Shelburne, the Duke of Richmond,[281] and Thomas Gilbert, M.P. for Lichfield.[282]

Boulton's campaign gained further strength from Sheffield's silversmiths. They too wished to found an assay office and in 1772 proposed to join forces with Boulton.[283] He promised them his support but encouraged them to make a separate petition.[284] Sheffield's silversmiths had the support of Yorkshire M.P.s such as Edwin Lascelles and others including the Duke of Norfolk.[285] Petitions were presented by Sheffield on 1 February 1773 and by Birmingham on the following day, to a committee of the Commons under the chairmanship of Thomas Skipwith, M.P. for Warwickshire, who was well-acquainted with Boulton.[286] The petitions dwelt upon the inconvenience of not having assay offices in their towns which impeded the development of the industry.

These petitions were supported by Boulton's *Memorial Relative to Assaying and Marking Wrought Plate at Birmingham* (1773), which was circulated to M.P.s to give them a succinct statement of arguments he deployed during the campaign of the previous few years. He stressed that any silversmith in Birmingham could only succeed if he produced better silver at a lower price than competitors in other towns. Boulton made the most of the delay, damage, and expense of sending silver elsewhere for hallmarking. He also claimed that rivals had access to designs when pieces were sent to distant assay offices.[287]

London's silversmiths firmly resisted demands for assay offices in Birmingham and Sheffield. The Worshipful Company of Goldsmiths

presented a petition to Skipwith's Committee, dated 17 February 1773. Openly fearing a reduction in their own trade, the London silversmiths concentrated discussion on four issues. Goldsmiths' Hall was held to regulate the London trade with integrity; it was doubted whether assay laws would be properly adhered to in new provincial offices. Secondly, they pointed to the traditionally large production of silver in London, which they felt was quite sufficient to meet the country's needs and highlighted limited production in Sheffield and Birmingham. Thirdly, stress was placed on the quality of plate in London in contrast to the limited number of skilled silversmiths in Sheffield and Birmingham. Finally, the capacity of silversmiths there to make silver more cheaply was doubted.[288]

The last two arguments were contradicted in a counter-petition, the *Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths and Plateworkers of the City of London and Places Adjacent.* The petitioners criticised the design and workmanship of silver made in London, and claimed that the price of silver plate produced there was unnecessarily high and therefore limited the number of people able to buy it.[289]

One of the Londoners' other points was met with more substantial arguments. Although production in London was, and remained, far larger than in either Sheffield or Birmingham, and although in the latter much silver was used only for 'toys', Skipwith's committee was shown that substantial amounts of silver had been used in Sheffield and Birmingham for several years. Samuel Garbett, called as a witness, stated that Boulton and Fothergill has been making silver plate for about seven years and bought several thousand pounds worth of silver from him each year.[290]

Far more damaging to the London plateworkers' cause was the discovery that they, unlike the silversmiths of Sheffield and Birmingham, regularly produced plate which was below the legal limit for sterling silver: 11oz. 2dwt. of fine silver and 18dwt. of alloy in each troy pound.[291] A petition from the merchants and manufacturers of Birmingham, dated 25 February, maintained that Goldsmiths' Hall passed pieces containing only 11oz. of silver in each troy pound.[292] This allegation was confirmed by two of London's refiners in a pamphlet, *Observations Relative to the Standard of Wrought Plate.*[293] Another committee, chaired by Thomas Gilbert, was appointed to examine

the practice of assay offices[294] and upheld the charge against Goldsmiths' Hall.[295] Moreover, John Scasebrick, the Assay Master at Chester, testified that he had never received any silver from either Birmingham or Sheffield that was below standard and that Boulton and Fothergill's silver had generally been 2 or 3 dwt. above standard.[296] This committee which first met on 8 March, reported on 29 April 1773.[297]

Events moved rapidly in favour of Boulton and his allies. On 12 March Skipwith's committee reported its decision that the Bill to establish assay offices in Birmingham and Sheffield should go ahead.[298] From 13 May it was debated in the Commons and passed on 18 May; after its passage through the Lords it was given the Royal Assent on 28 May 1773.[299] The Assay Office, then situated in New Street, Birmingham, opened its doors for the first time on 31 August 1773.[300]

Fothergill's attitude to The Assay Office and silversmithing during 1773 was ambivalent. In February he wrote to Boulton:

I am glad to hear you are likely to succeed obtaining a Marking Hall...and I hope [it] may turn out [to be] beneficial.[301]

On another occasion Fothergill wrote to Boulton:

I am sure it is impossible to support our Business any longer wthout enlarging the [Bill Account], especially if you continue to gett up plate orders, w^{ch} observe increase upon us.[302]

Fothergill's fears about developing the silver business were based upon the firm's general financial difficulties; in his view the principal problem was the size of the Bill Account.[303] In 1773 this stood at over £10,000[304] with their four London bankers: William Matthews, John Motteux, John Baumgartner, and Raymond Lowe, Vere & Co.[305] The exact cost of supporting the Bill Account at this time is not clear[306] but in 1782 it was between seven and a half per cent and ten per cent (in interest and commission charges) on the total sum in advance.[307] In April 1773 Motteux was urging the partners to reduce their Bill Account with him[308] and in May 1773 Matthews would allow no further increase.[309] The firm's accounts indicated a progressive deterioration in the partners' position from 1768 following years of profitability in the mid-1760s. In 1768 Boulton's share of the losses was £354 1s. 0d. and Fothergill's was £177 0s. 0d. Accounts were not balanced again until December 1772 and these put Boulton's share of the losses over the previous four years at £4,216 16s. 6d.

and Fothergill's at £2,729 10s. 11d. In 1773 the position was even worse since just for that year Fothergill's losses were £855 15s. 9½d. and Boulton's were £1,380 4s. 0½d.[310]

Although these figures are a guide to the firm's mounting problems they underestimated the seriousness of the position because they (unlike the Bill Account figures) did not fully take into account bad debts.[311] It was this which led the manager, John Scale to claim that the true losses for the few years prior to December 1772 were about £10,000[312] i.e. about £3,000 more than the accounts suggested. In 1773 the partners were owed £7,744 15s. 3d. and of this £5,054 3s. 4d. were due from abroad.[313] J.A. Müller had been sent to Poland and Russia, probably from the late 1760s,[314] to collect orders on the firm's behalf. Quite apart from his travelling expenses of £1,200 he sent back several thousands of pounds worth of orders which were never paid for.[315] According to Boulton, the decision to send Müller was Fothergill's.[316]

The firm's financial difficulties partly derived from inefficiency at Soho. While Fothergill was convinced that his commission business gained £600 per annum in the early 1770s,[317] he put the blame for losses at Soho entirely on Boulton's shoulders since he insisted on being in charge there.[318] Fothergill also accused Scale of misappropriating the firm's money for his own use. Scale denied the charge (and there is no evidence to support the accusation) but since he was responsible for Soho during Boulton's absences (in 1772 for example, these amounted to about twelve weeks)[319] Scale found it necessary to defend his own management. He primarily blamed Boulton for Soho's inefficiency which derived from a lack of control; however, Scale also felt his position was weakened as a manager by Fothergill's habit of humiliating him in front of workmen over whom he was expected to exercise control.[320]

The firm's financial predicament was also caused by expenditure on Soho and this became a further cause of dispute between the partners. With this dispute in mind, Boulton later wrote that William Wyatt estimated his plan '... would cost £2,000 ... building began in 1765 and finished in 1767, but instead of £2,000 it cost nearly ten ...'.[321] This summary was an attempt by Boulton to acquit himself of Fothergill's charge that Boulton was responsible for the excessive expenditure: Fothergill bitterly remarked that too much

(£1,900)[322] of his own capital and too much of their joint capital had been spent on the Manufactory.[323] Boulton's summary deliberately created several false impressions. Firstly, although in 1766 he did complain to Wyatt about exceeding the estimate,[324] it is difficult to believe that the cost could have multiplied five times without Boulton's knowledge and acquiescence. Secondly, Boulton's summary implies that work finished in 1767 and came to no more than £10,000. In fact that sum had been spent by 1767[325] and more work took place since the Wyatts were paid further sums of £100 in 1768,[326] £89 16s. 0½d. in 1769,[327] and £300 in 1772.[328] Thirdly, Boulton's summary also omitted the cost of tools, equipment and materials which rose rapidly: in 1767 these were put at £2,000 - £3,000,[329] and at the end of 1771 at £17,000 (though the latter figure included stock).[330] Early in 1772 the value of buildings, equipment and materials was £7,000 higher than it had been two years earlier.[331] Boulton's later summary was an attempt to conceal both his enthusiasm for creating a large and impressive Manufactory and his responsibility for excessive expenditure. Even though Boulton once wrote that this expense brought about '...the fatal Bill Account'[332] which acknowledged the seriousness of the situation, it is likely that he did so to undermine Fothergill's claim (which we have already noted) that Boulton had a deficit on his Bill Account when the partnership began.

Boulton and Fothergill's difficulties had increased through a dispute with Ebbinghaus. In 1768 Boulton asked him to advance another £1,000 but he refused to do so.[333] In 1772 Ebbinghaus wanted to withdraw all of his capital by Christmas both because of the other partners' suspicious failure to supply accounts and his need for further capital in his own business.[334] Since Ebbinghaus originally agreed to give one year's notice before any capital was withdrawn, he was only offered £500 more or less immediately out of the £2,791 6s. 4d. he put into the partnership.[335] No correspondence about the matter exists after 1772 and it is not clear when he recovered his capital.[336]

In the late 1760s and early 1770s Boulton and Fothergill borrowed large sums. By 1773 Fothergill had put over £6,000 into the partnership which he borrowed from Mrs Swellingrebel, a friend of Dutch and Indian parentage;[337] in 1773 he borrowed £2,900 more from her.[338] By 1768 Boulton secured £500 from the Danish financier

H. F. Bargum[339] and in that year raised £8,000 by mortgaging some of his wife's property.[340] In 1769 a loan of £8,000 was arranged through a banking house in Amsterdam which was secured by a mortgage deed and bill of sale on the assets of the partnership; this should have been repaid by 1772[341] but that was not achieved until after the partnership.[342] The partners took out another loan of £2,500 in 1773.[343]

Financial difficulties occupied much of Boulton's time in the early 1770s. In 1767 a demand for immediate repayment in full for a loan from Jacob Tonson in 1764[344] was not met; further repayments were still being made in 1771 but more were deferred because of the partnership's problems.[345] When that loan was repaid is not clear. In 1772 Boulton sold his Packington Estate near Lichfield for £15,000,[346] paid off a mortgage of £4,000 and deposited £5,000 in a London bank for the use of the partnership.[347] The bank stopped soon afterwards because of its heavy and unsuccessful speculations in East Indian stocks.[348] Boulton retrieved some of the deposit (but how much is uncertain)[349] and survived the crisis.[350]

Boulton, unlike Fothergill, made little of the firm's financial problems. This was partly due to what James Watt (Boulton's later partner in steam-engine business[351]) described as Boulton's '... active and sanguine disposition' which served to override '... despondency and diffidence ... '.[352] Boulton's attitude was also due to his wealth. In 1772 his own and his wife's capital amounted to £28,300[353] of which only £17,478 14s. 4d. was used at that time in the partnership.[354] Boulton could have wiped out the firm's Bill Account but he chose not to do so. Instead, Boulton used some of his capital to speculate on outside ventures. About 1765 he had entered a partnership to work a mine supposedly containing silver but nothing came of it and he lost money.[355] In 1765 he purchased £600 worth of shares in a scheme for the construction of a canal from the Trent to the Mersey but later sold them, at a loss.[356] Boulton subscribed for ten shares for the Birmingham Navigation (formed to construct canals in the area) which was profitable; consequently he was able to borrow £1,000 upon his shares to assist the partnership.[357] (Boulton sold the shares in 1770.[358]) Fothergill resented Boulton's speculations[359] and Fothergill's financial plight strongly contrasted with his partner's: in 1772 Fothergill's capital in the partnership

amounted to £10,186 17s. 10d.[360] and that, as we have seen, was substantially borrowed.

Boulton's strengths ensured that the silver business would proceed despite both Fothergill's opposition and fears about the financial consequences.[361] Boulton had not only successfully masterminded the initial stages of the silver business, but he had gradually assumed during the first decade of the partnership control of its manufacturing part and by 1773 Fothergill took the view that Boulton dominated the whole firm.[362] Fothergill's attitude to the silver business recognised his partner's strengths, for although Fothergill dwelt on the possible financial difficulties, he never went so far as to demand its end.

The silver business was to be essentially Boulton's personal venture, but Fothergill was to have a strong influence on the way that business was conducted. Fothergill had earlier allowed Boulton to expand the Soho Manufactory and the manufacturing side of the business much as he wished, but Fothergill's extreme dissatisfaction with his partner's recklessness, which was expressed in the strongest possible terms during particularly the summer of 1773,[363] helped to ensure that the silver business was not to be conducted in quite the same manner as ormolu production had been. Moreover, although, as many writers have emphasised, the silver business was also essentially a prestigious one,[364] it was nevertheless based on evidence of a substantial demand.

NOTES

Unless otherwise indicated, the references to manuscripts are to the Matthew Boulton Papers in Birmingham Reference Library. A number of abbreviations are used in the notes which are included in the List of Abbreviations. In the notes, the first reference to a source is given as in the Bibliography, but in many cases the reference is subsequently abbreviated. These abbreviations are indicated when the source is first used. In the notes, as in the text, quotations have been left as they occur in the source except where (on a limited number of occasions) punctuation has been changed and words added in square brackets for the sake of clarity.

CHAPTER I

THE FORMATION OF THE BOULTON AND FOTHERGILL PARTNERSHIP AND THE INTRODUCTION OF SILVERSMITHING

1. [Private] Letter Book M., M. Boulton, 1781-1783 (hereafter cited as Letter Book M), p. 304, M. B. to [William Matthews?], 21 June 1782.
2. See pp. 104-16.
3 See pp. 163-4.
4 See pp. 23-4.
5 See pp. 26-31.
6 Kenneth Crisp-Jones, *The Silversmiths of Birmingham & their Marks 1750-1980* (1981), p. 49 (hereafter cited as Crisp-Jones, *Silversmiths of Birmingham*).
7 See pp. 18-9.
8 See pp. 79-80.
9 H. W. Dickinson, *Matthew Boulton* (1937), p. 26 (hereafter cited as Dickinson, *Boulton*).
10 Joseph Hill, *The Book Makers of Old Birmingham* (1907), p. 117.
11 R. A. Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century', *University of Birmingham Historical Journal*, Vol. IX., No. 1 (1963), pp. 64-91 (pp. 81-2), hereafter cited as Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century'.
12 John Dyott, apprenticed to Matthew Boulton, 'Toymaker', 2 February 1751, five years premium, £30 (*Warwickshire Apprentices and their Masters 1710-1760*, edited by K. J. Smith, Dugdale Society Publications, Vol. XXIX (1975), p. 44, hereafter cited as Smith, *Warwickshire Apprentices*).
13 *Sketchley's Birmingham, Wolverhampton and Walsall Directory...*, third edition (1767), p. 16, hereafter cited as *Sketchley's Birmingham etc. Directory* (1767).
14 *Sketchley's and Adams's, Tradesman's True Guide: or an Universal Directory for the Towns of Birmingham, Wolverhampton, Walsall, Dudley...*, fourth edition (1770), p. 54, hereafter cited as *Sketchley and Adams's, Tradesman's True Guide* (1770).
15 H. Hamilton, *The English Brass and Copper Industries to 1860* (1926) p. 138 (hereafter cited as Hamilton, *English Brass and Copper Industries*).
16 *Sketchley and Adams's, Tradesman's True Guide* (1770), p. 14.

17 Donald M^c^Donald and Leslie B. Hunt, *A History of Platinum and its Allied Metals* (1982), pp. 13-15. Platinum began to reach Europe from the Spanish colonies in South America in the mid-eighteenth century. Spaniards called this metal 'platina' which was a derogatory diminutive of 'plata', their word for silver. The word 'platina' was used in the source (see note 18 below) for the information in the text.

18 *Sketchley and Adams's, Tradesman's True Guide* (1770), p. 14.

19 Maxine Berg, *The Age of Manufactures: Industry, Innovation and Work in Britain 1700-1820* (1985), p. 287 (hereafter cited as Berg, *Age of Manufactures*).

20 *Sketchley and Adams's, Tradesman's True Guide* (1770), p. 10.

21 B. R. L., Manuscript Number 82934, Samuel Timmins, Collection of Original Letters, Newspaper Cuttings, Portraits etc., relating to Matthew Boulton, James Watt and Soho Part 1 1760 etc. (hereafter cited as B. R. L., Timmins, Collection of Original Letters, Part 1). A letter from J. E. Vale to Samuel Timmins states that before the Soho Manufactory was built the Boultons' firm produced steel toys. Vale was well placed to know about Boulton Snr's activities since his father, grandfather, and great grandfather, worked for the Boulton family. Vale also worked at Soho.

22 *Sketchley and Adams's, Tradesman's True Guide* (1770), p. 54.

23 Box S1 Sa to Sime (hereafter cited as Box S1), item 215, William Shenstone to M. B., 30 September 1758.

24 Samuel Smiles, *Lives of Boulton and Watt...* (1865), p. 164 (hereafter cited as Smiles, *Boulton and Watt*). Although these remarks by Smiles cannot now be verified they must be taken seriously since on p. V., Smiles makes it clear that he knew M. B.'s grandson, Matthew Piers Watt Boulton, and had access to manuscripts at Tew Park, Oxfordshire, the home of M. B.'s descendants.

25 ibid., p. 164.

26 [M. B.] Notebook 1, 1751-9, p. 53.

27 Box P1 Pa to Pin (hereafter cited as Box P1), item 335. This is a draft letter from M. B. to Mr. Pinchbeck and an account of M. B.'s with Pinchbeck from 1758 to 1759. On this letter M. B. noted the purchase of silver from Garbett.

28 Garbett, Samuel and Garbett Family, 1765 to 1785, 1 of 3 boxes (hereafter cited as Garbett, Samuel 1), item 80, 'Jottings of Mr. Garbett's case layed before J. Campbell', August 1783.

29 Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century', p. 75.

30 Boulton M. Biograph. Memoir. Decease. Funeral. Prints. Medals (hereafter cited as Boulton, Biograph etc.), item 112, James Keir, 'Memorandums for the Memoir of M. B.', 3 December 1809.

31 *Sketchley and Adams's, Tradesman's True Guide* (1770), p. 54.

32 Eric Robinson, 'Boulton and Fothergill 1762-82 and the Birmingham Export of Hardware', *University of Birmingham Historical Journal*, Vol. VII, No. 1 (1959), pp. 61-79, (pp. 62-5), hereafter cited as Robinson, 'Boulton and Fothergill'.

33 Berg, *Age of Manufactures*, p. 290.

34 *Sketchley and Adams's, Tradesman's True Guide* (1770), pp. 40-1.

35 Letter Book [A], Boulton and Fothergill, 1757-1765 (hereafter cited as Letter Book A), p. 4, M. B. to William Carless, 30 May 1757.

36 Box B1 Ba to Baz (hereafter cited as Box B1) item 35A, payment by M.B., 1 June 1756, for rent of a mill at Yardley (Sarehole Mill). Another receipt (Box B1 item 35B) was for a payment by M.B. dated 29 November 1756.

37 Dickinson, *Boulton*, p.30.

38 ibid., p.30.

39 Eric Delieb and Michael Roberts, *The Great Silver Manufactory: Matthew Boulton and the Birmingham Silversmiths 1760-1790* (1971), pp. 18-19 (hereafter cited as Delieb and Roberts, *Silver Manufactory*).

40 Dickinson, *Boulton*, pp. 34-5.

41 Delieb and Roberts, *Silver Manufactory*, pp. 18-19.

42 J.E.Cule, *The Financial History of Matthew Boulton 1759-1800*, (unpublished Master of Commerce thesis, University of Birmingham, 1935) p.2 (hereafter cited as Cule, *Financial History*). Cule implies that Anne brought an addition of £28,000 to M.B.'s fortune at their marriage but in fact most of that came at a later date (see p.19). Dickinson, *Boulton*, p.36 states that each of M.B.'s wives had fortunes of £14,000.

43 Letter Book M, pp.134-5, M.B. to William Matthews, 31 August 1781.

44 R.E.Schofield., *The Lunar Society of Birmingham* (1963), p.26. (hereafter cited as Schofield, *Lunar Society*). Schofield quoted a letter from M.B. to T.Hollis dated 3 February 1761 in which M.B. stated that he had recently purchased the mill.

45 Fothergill, John (Boulton and Fothergill) and Fothergill Family (hereafter cited as Fothergill etc.), item 9, Case between B.& F. [c.1782]

46 B.R.L., Manuscript Number 324197, Lease entitled 'John Wyrley to Mr.Ruston and Mr. Eaves for ninety-nine years from Lady Day 1757.' M.B. wrongly thought that Ruston and Eaves had taken the lease in 1756 for one hundred years (Fothergill etc., item 9, Case between B. & F. [c.1782]).

47 Fothergill etc., item 9, Case between B. & F. [c.1782]

48 Fothergill etc., item 9, Case between B. & F. [c.1782] M.B. wrote 'Duncumb' which is presumably a phonetic spelling of Duncombe.

49 Fothergill etc., item 9, Case between B. & F. [c.1782] This document was written by M.B. but a letter from J.F. to M.B. in 1762 confirms M.B.'s account that J.F. pursued him. J.F. wrote of his wish '... to promote a mutual happiness' (Fothergill etc., item 3, J.F. to M.B., 7 May 1762).

50 Letter Book M, p.205, M.B. to James Watt, 3 November 1781.

51 Letter Book A, p.33, B. & F. to Stemann Otte and Klotz, 6 November 1762.

52 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.

53 Cule, *Financial History*, pp.11-12. The merchants and bankers who accepted bills on the partners' behalf were: John Motteux, merchant; John Baumgartner, merchant; William Matthews, merchant, and Raymond Lowe, Vere & Co., bankers.

54 See p.33.

55 [M.B.] Notebook 11, 1775, p.40.

56 Boulton and Fothergill, 'Partnership with [J.] F.' [c.1782].

57 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.

58 See pp.217-8.

59 Fothergill etc., item 4, J.F. to M.B., 8 May 1762.

60 Fothergill etc., item 7, J.F. to M.B., 21 May 1762.

61 Boulton and Fothergill, 'Partnership with [J.]F.' [c.1782].

62 Walker, Z. Snr, 1 of 2 boxes (hereafter cited as Walker, Z. Snr 1), item 35, Statement of Affairs, 1763-80.
63 Delieb and Roberts, *Silver Manufactory*, p. 32.
64 Letter Book B, Boulton and Fothergill, 1764-1766 (hereafter cited as Letter Book B), p. 251, B. & F. to Messrs. Baumgartner, 27 March 1766.
65 Robinson, 'Boulton and Fothergill', p. 67.
66 Letter Book E, Boulton and Fothergill, 1771-1773 (hereafter cited as Letter Book E), p. 394, B. & F. to Messrs. Baumgartner, 8 March 1772.
67 See note 74 below.
68 Robinson, 'Boulton and Fothergill', p. 68.
69 Letter Book C, M. Boulton, 1766-1768 (hereafter cited as Letter Book C), p. 71, M. B. to H. F. Bargum, 2 March 1768.
70 Letter Book C, p. 22, M. B. to Monsieur Godfrey [August - September] 1767. M. B. stated that he could read, but not write, French. He did not understand German (Letter Book C, p. 33, M. B. to J. H. Ebbinghaus, 20 October 1767) or Italian (Letter Book C, p. 8, M. B. to Mr Wendler, 8 July 1769) or Latin (Letter Book D, M. Boulton 1768-1773 (hereafter cited as Letter Book D), p. 64, M. B. to Rodney Valltravers, November 1772). In view of M. B.'s and the firm's difficulties with other languages it is unlikely that he could manage any others (see notes 73 and 74).
71 Fothergill etc., item 54, note in M. B.'s hand [1766].
72 Letter Book C, p. 6, M. B. to William Daniel, 10 July 1767.
73 A. J. C. understood and wrote both French and German (Letter Book M, p. 206, M. B. to James Watt, 3 November 1781). A. J. C. could also translate Dutch (Box C1 Ca to Caz (hereafter cited as Box C1), item 18, A. J. C. to M. B., 27 October 1786).
74 The partners used translators for letters received in languages the firm could not itself translate and each reply was sent in English or French or German according to the customer's preference. For example, a letter in Italian was given by B. &F. to a translator and a reply sent in English (Letter Book K, Boulton and Fothergill, 1780-1781 (hereafter cited as Letter Book K), p. 268 [B. & F.] to Franco Loccatelli, 21 October 1780). A letter in Spanish was given to a translator and a reply sent in English (Letter Book H, Boulton and Fothergill, 1776-1779 (hereafter cited as Letter Book H), pp. 463-4 [B. & F.] to Hananel Mendes Da Costa, 7 February 1778). Letters received in Swedish from a Mr. Wynquist (a correspondent in Finland) were translated in London and the partners sent replies in German (Letter Book F, Boulton and Fothergill, 1772-1774 (hereafter cited as Letter Book F), p. 496, B. & F. to Wiggett and Worth, Norwich, 25 May 1774). Merchants sometimes sent B&F. translations of orders e. g. one in Italian (Box D2 Dem to Dz (hereafter cited as Box D2), item 342, J. P. Du Roveray to B. & F., 8 April 1773).
75 Fothergill etc., item 3, J. F. to M. B., 7 May 1762.
76 Fothergill etc., item 13, J. F. to M. B., 1 June 1762.
77 Fothergill etc., item 19, J. F. to M. B., 8 February 1764.
78 Boulton M. (Miss Anne Robinson. Mrs Boulton), item 18, M. B. to Mrs Boulton, 15 February 1764 and Boulton M. (Miss Anne Robinson Mrs Boulton), item 33, 14 October 1766.
79 Fothergill etc., item 19, J. F. to M. B., 8 February 1764.
80 Fothergill etc., item 7, J. F. to M. B., 21 May 1762.

81 e.g. Letter Book A, p.185 [B.& F.] to von Hoeven & Co., Leipzig, 5 November 1764.
82 Letter Book A, pp.36-7, M.B. to Godhard Hagen, 11 November 1762.
83 Letter Book A, p.85a, B.& F. to Henry Lock, 26 October 1763.
84 Letter Book A, pp.82-3, B.& F. to Carl von Becker, 8 October 1763.
85 *The Compact Edition of the Oxford English Dictionary*, 2 vols., (Oxford, 1971), hereafter cited as *OED*.
86 Letter Book A, pp.66-7, [B.& F.] to 'Montreal', 6 July 1763. (See note 103 for further information about 'Montreal'.)
87 J. Paul de Castro, *The Law and Practice of Hall-marking Gold and Silver Wares*, second edition (1935), pp.71-2 (hereafter cited as de Castro, *Law and Practice of Hall-marking*).
88 Delieb and Roberts, *Silver Manufactory*, p.37, refers to a letter of 30 July 1763 as '... the very first mention of the use of silver in buckles, at any rate by Boulton and Fothergill'. The letter (Letter Book A, p.70, B.& F. to Conrad von der Becker, 30 July 1763) refers to the partners' production of '... heavy steel chapes for silver buckles of w^ch we have a very considerable manufactory'. In my view the partners' 'considerable manufactory' refers to the steel chapes and not the silver buckles. My view is supported by another letter written in 1764 referring to B. & F.'s supply of chapes to silversmiths for silver buckles. (Letter Book A, p.187, B.& F. to 'Quebec', 7 November 1764).
89 Most of the evidence for the production of silver 'toys' at Soho during the partnership comes from Boulton and Fothergill Day Book, 1779-81 (hereafter cited as Day Book, 1779-81) e.g. 'One pair of silver wire knee buckles, 9s. 6d., supplied to Thomas Fletcher & Co.', 23 October 1779, Day Book, 1779-81 p.17. There is not an equivalent Day Book to cover the earlier (or later) years of the partnership.
90 Although B.& F. were not producing assay silver at this time, figures for the supply of silver throughout the partnership (see Appendix IV) have been arranged in assay years to provide comparisons with the production of assay silver. Assay years ran from early July to early July (B.A.O., The Register of Plate and Silver Wares Assayed and Marked or Broke at the Birmingham Assay Office, August 31st 1773 - March 20th 1792, hereafter cited as B.A.O. Plate Register, Birmingham, 1773-92).
91 See Appendix IV.
92 Fothergill etc., item 20, J.F. to M.B., 11 February 1764. In 1784 Samuel Garbett informed M.B. that the term 'Sheffield plate' was widely used elsewhere (Garbett, Samuel 1, item 95, Samuel Garbett to M.B., 14 July 1784).
93 The earliest references in the M.B.P. to Sheffield plate occurred in 1764: e.g. in February there was mention of 'plated candlesticks' (Fothergill etc., item 20, J.F. to M.B., 11 February 1764) and later the partners had sheets of Sheffield plate rolled in Derby (Letter Book B, p.6, Z.W. to William Richardson, 7 August 1764). Scholars have given other dates for the introduction of Sheffield plate: Dickinson, *Boulton*, p.52, gave 1762 (without evidence) and Delieb and Roberts *Silver Manufactory*, p.40 gave 1765.
94 Frederick Bradbury, *History of Old Sheffield Plate* ... (1912, reprint 1968), p.11 (hereafter cited as Bradbury, *Sheffield Plate*).
95 ibid., p.25.

96 ibid., pp. 27-8
97 ibid., p. 40.
98 Box J Ja to Jz (hereafter cited as Box J), item 93, B. & F. to Nathaniel Jeffreys, November 1764. (See also note 93 above.)
99 Letter Book E, p. 407 [B. & F.] to Thomas Craig, 26 March 1772.
100 Letter Book E, p. 685, B. & F. to J. B. Bogler, 28 December 1772.
101 See Appendix IV.
102 Cash Book, Soho Boulton and Fothergill Workmen, 1762-1764 (hereafter cited as Cash Book 1762-4), p. 170, 24 October 1773.
103 Letter Book A, p. 95, B&F to 'Montreal', 15 December 1763. 'Montreal' was a code-name for a foreign customer who cannot be identified. This letter is in French, but 'Montreal' may not have been a French customer, since parts of this letter quote an order from him in Italian. 'Montreal's' orders were sent to B. & F. by a London merchant John Motteux (Letter Book A, p. 11, M. B. to John Motteux, 22 July 1762). Many of the partners' customers abroad were given code-names and the reasons for this are discussed elsewhere (see Chapter II note 472).
104 Nicholas Goodison, *Ormolu: The Work of Matthew Boulton* (1974), p. 30 (hereafter cited as Goodison, Ormolu). M. B. once boasted to a shopkeeper that he had exclusive rights to the blue-john mined at Castleton, Derbyshire; this was untrue.
105 Cule, *Financial History*, p. 21.
106 Letter Book B, p. 11, B. & F. to John Perchard, 18 August 1764.
107 Walker Z. Snr 1, item 35, Statement of Affairs, 1763-80.
108 Boulton and Fothergill, 'Partnership with [J.]F.' [c. 1782].
109 Letter Book B, p. 332, M. B. to Nathaniel Jeffreys, 8 March 1766.
110 Letter Book A, pp. 173-4, J. F. to J. H. Ebbinghaus, 24 October 1764. The inheritance may well have been larger since M. B. once claimed that his wife's estate increased from £6,000 at their marriage to £28,000 in 1764 following the death of his brother-in-law (Letter Book M, pp. 134-5, M. B. to William Matthews, 31 August 1781).
111 Fothergill etc., item 34, J. F. to M. B., 12 November 1765.
112 Boulton and Fothergill, 'Partnership with [J.]F.' [c. 1782].
113 Letter Book B, p. 332, M. B. to Nathaniel Jeffreys, 8 March 1766. Dickinson, *Boulton* p. 46 incorrectly implies that production stopped at Snow Hill in 1762.
114 John Martin Robinson, *The Wyatts: an Architectural Dynasty* (1979), pp. 18-30 (hereafter cited as Robinson, *The Wyatts*).
115 Wyatt Family, item 1A, M. B. to Benjamin Wyatt Snr, 26 April 1765.
116 1 Box The Diaries of Matthew Boulton, 1766-1808 (hereafter cited as M. B. Diary) e. g. M. B. Diary, 1766 note of payment to Benjamin Wyatt for £200, 26 April 1766, and Wyatt Family, item 1, Account of Benjamin Wyatt with B. & F., payment of £89 16s. 10½d., 1769.
117 e. g. M. B. Diary, 1767, payment to Wyatts of £200, 7 November 1767, and M. B. Diary, 1767, payment of £200, 7 December 1767.
118 M. B. Diary, 1766, payment of £15 to John Wyatt, 9 July 1766.
119 Without evidence, Jennifer Tann asserted that either James or Samuel or both designed the Manufactory (Jennifer Tann, *The Development of the Factory* (1970), pp. 159-60, hereafter cited as Tann, *Development of the Factory*). Robinson attributed the front block to William but with the help of his brother Benjamin for the drawings. (Robinson, *The Wyatts*, p. 19). Delieb and Roberts stated that Soho's construction was directed by Samuel (Delieb and Roberts, *Silver Manufactory*, p. 29).

120 Wyatt Family, item 224, William Wyatt to M.B., 16 September 1763.
121 Fothergill etc., item 34, J.F. to M.B., 12 November 1765.
122 Boulton and Fothergill, 'Partnership with [J.] F' [c.1782].
123 Wyatt Family, item 227, William Wyatt to M.B., 8 September 1765.
124 Wyatt Family, item 231, William Wyatt to M.B., 29 December 1766.
125 In 1764 M.B. mortgaged property to Jacob Tonson for a loan of £3,500 (Box T1 Ta to Tor (hereafter cited as Box T1), item 231, Jacob Tonson to M.B., 7 November 1764) and borrowed £1,500 more from him in 1767 (Cule, *Financial History*, p.22). M.B. borrowed £600 from Mary Croff by 1762 (Box C3 Col to Cz (hereafter cited as Box C3), item 291, receipt 24 November 1763 for one year's interest on £600) and between 1759 and 1768 took loans of £500, £250 and £100 from Joseph Scott (Box S1, item 26, series of receipts between 13 November 1759 and 16 December 1768). M.B. also started a series of mortgages with John Kettle in 1761 (Box K Ka to Kz (hereafter cited as Box K), item 110, receipt, 6 November 1762 for one year's interest) which by 1766 amounted to £2,000 (Box K, item 113, records interest payments on £1,300 and £700 for 1766). By 1765 M.B. borrowed £600 from Samuel Clements ([M.B.] Notebook 5, 1765-6, p.15, 15 October 1765). In 1766 there is further evidence that loans had been taken out: £1,300 from James Allen (Box M1 Ma to Mit (hereafter cited as Box M1), item 72, 1 August 1766); £600 from John Sherratt (Box S1, item 226, 25 February 1767); £1,700 from Thomas Allen [M.B.] Notebook 5, 1765-6, p.19, 13 December 1766); £200 from Thomas Reeves ([M.B.] Notebook 5, 1765-6, p.23, 29 November 1766); an unspecified amount from Martha Dolphin ([M.B.] Notebook 5, 1765-6, p.19, 2 February 1766); £1,000 ([M.B.] Notebook 5, 1765-6, p.27 [1766]) and £2,000 from Thomas Tippin (Box T1, item 222, Bond to perform covenant from Thomas Tippin to M.B., 8 February 1766); £300 from Mrs Heath ([M.B.] Notebook 5, 1765-6, pp.16-17, 6 October 1766); £2,000 from the London merchant John Motteux (Motteux, John Sir Motteux, John Snr (hereafter cited as Motteux etc.), item 9, John Motteux to M.B., 2 October 1766).
126 Of the loans and mortgages listed in note 125, only those from Jacob Tonson are mentioned by Cule (Cule, *Financial History*, p.22).
127 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.
128 Walker Z Snr 1, item 35, Statement of Affairs, 1763-80.
129 Boulton and Fothergill, 'Partnership with [J.]F' [c.1782].
130 Cule, *Financial History*, pp.8-17.
131 ibid., p.22.
132 ibid., p.8.
133 Fothergill etc., item 155, J.F. to M.B., 19 May 1773. J.F. was abroad in 1766 (see p.22).
134 Tann, *Development of the Factory*, pp.153-5.
135 Letter Book B, p.158, J.F. to John Lewis Baumgartner, 13 July 1765.
136 Letter Book D, M.Boulton, 1768-1773 (hereafter cited as Letter Book D), pp.29-30, M.B. to James Adam, 1 October 1770.
137 Tann, *Development of the Factory*, p.11.
138 Berg, *Age of Manufactures*, p.290.
139 Eric Pawson, *The Early Industrial Revolution: Britain in the Eighteenth Century* (1979), p.92 (hereafter cited as Pawson, *Early Industrial Revolution*).

140 John Rule, *The Labouring Classes in Early Industrial England 1750-1850*, Themes in British Social History (1986), p. 8. (hereafter cited as Rule, *The Labouring Classes*).
141 Fothergill etc., item 54, note in M. B.'s hand [1766].
142 See p. 15.
143 Customers were informed that the commission business was being given up (Letter Book A, p. 90, M. B. to P. L. Van Damme, Ghent, 7 November 1763 and Letter Book A, pp. 72-5 [B&F] to M. H. Kindler, Königsberg, 10 August 1763).
144 See p. 16.
145 Fothergill etc., item 10, 'Some remarks abt. my partnership' [c. 1782].
146 Box E1 Ea to Edw (hereafter cited as Box E1), item 22, M. B. to J. H. Ebbinghaus n. d. (but this is reply to letter of 5 May 1766).
147 Boulton and Fothergill, 'Partnership with [J.]F', [c. 1782].
148 Boulton M. (Mrs Anne Robinson, Mrs Boulton), item 15, M. B. to Mrs Boulton, 7 February 1764. Letter addressed to, 'Mrs Boulton on Snow Hill, Birmingham'.
149 Boulton and Fothergill, 'Partnership with [J.]F.' [c. 1782].
150 Wyatt Family, item 229, William Wyatt to M. B., 10 February 1766.
151 These documents include Fothergill etc., item 54, document in M. B.'s hand [1766], Fothergill etc., item 254 History of Facts, B. & F. n. d. and Boulton and Fothergill, 'Partnership with [J.]F.' [c. 1782].
152 Fothergill etc., item 54, document in M. B.'s hand [1766].
153 Cash Book, Birmingham Boulton and Fothergill Petty Cash Book, 1767-1777 (hereafter cited as Cash Book, 1767-7), p. 272. Records payment of half a year's window tax on Snow Hill at 19s. 0d., 31 March 1777.
154 Letter Book H, p. 182 [B. & F.] to Hewson, Davidson & Co., 5 April 1777.
155 Fothergill etc., item 54, document in M. B.'s hand, [1766].
156 Letter Book E, p. 186, J. S. to Mr Hawksford, 7 September 1771.
157 Walker Z. Snr 1, item 62, document in M. B.'s hand enclosed in letter to Z. W., 24 February 1782.
158 Letter Book A, p. 35, M. B. to J. H. Ebbinghaus, 18 December 1767.
159 Letter Book H, p. 123 [B&F] to Charles and Edward Hague, London, 5 February 1777. Iron and brass goods to be forwarded to P. L. van Damme of Ghent. There is very little evidence that B. & F. produced brass (Goodison, *Ormolu* p. 10) and iron goods were obtained locally for factoring (Letter Book H, pp. 310-11, [B. & F.] to the Earl of Exeter, 1 September 1777).
160 Letter Book F, p. 8 [B. & F.] to Isaac Broadley, 31 July 1772. Sixteen casks of Josiah Wedgwood's earthenware being sent to Broadley who arranged for their shipment from Hull to St. Petersburg.
161 Letter Book H, p. 238 [B. & F.] to Isaac Broadley, 10 June 1777, B. & F. asked Broadley to forward to Wyburg in Russian Finland a cask of cutlery made by Benjamin Withers & Co., Sheffield.
162 See p. 18.
163 Letter Book E, p. 574., A. J. C. to Andrew Vezian, 12 September 1772. Sent to Vezian, a London merchant, watch-keys supplied to B. & F. by Messrs Isaac Anderton, Son and Calley in Birmingham.

164 Letter Book E, p.366, A.J.C. to William Matthews, 12 February 1772. Sent to William Matthews, a London merchant, some lacquered buttons which were described as commissioned goods. At this time at least, B. & F. obtained them in Birmingham (Letter Book E, pp.3-4, J.W. to Bustamante & Co., 3 January 1770).

165 Letter Book F, p.444 [B.& F.] to Battier Zornlin & Co., 6 April 1774.

166 See note 159.

167 See note 93 above for Sheffield plate. Stone vases with gilt ornaments were produced by B. & F. (Goodison, *Ormolu*, pp.143-168).

168 See note 160 above for an example.

169 Letter Book F, p.198 [B.& F.] to Mr John Cruikshank, 24 April 1773 and Letter Book E, p.111, B.& F. to John Porzelius, 29 May 1771.

170 Box B1, item 206, John Baskerville to [B.& F.], 20 July 1773. Baskerville listed the prices of japanned goods supplied to B.& F. without discounts. Baskerville also stated that he considered the prices to be less than the value of the goods which was something of an invitation to B.& F. to charge more if they wished to do so.

171 Letter Book F, p.64 [B.& F.] to James Descotes & Co., London, 3 October 1772.

172 Letter Book F, pp.414-6 [B.& F.] to Sutton and Schombart, 26 February 1774.

173 M.B. left Dover on 17 November 1765 (Boulton M. (Miss Anne Robinson. Mrs Boulton), item 25, M.B. to Mrs Boulton, 18 November 1765). M.B. arrived back at Dover on 18 December 1765 ([M.B.] Notebook 4, 1765, p.38).

174 Boulton M. (Miss Anne Robinson. Mrs Boulton), item 25, M.B. to Mrs Boulton, 18 November 1765.

175 [M.B.] Notebook 4, 1765, pp.19-37.

176 Boulton M. (Miss Anne Robinson. Mrs Boulton), item 25, M.B. to Mrs Boulton, 8 December 1765.

177 In February 1766 (Letter Book B, p.310, J.F. to Duncombe and Ingram, 8 February 1766) J.F. wrote that his departure was imminent. In February 1768 (Letter Book C, p.59, M.B. to Mr H. Bargum, 6 February 1768) M.B. hoped that J.F. would be home in May or at the beginning of June, 1768.

178 Robinson, 'Boulton and Fothergill', p.67.

179 Letter Book C, p.67 [B.& F.] to J.H.Ebbinghaus, 2 March 1768.

180 Letter Book A, pp.209-11, [B.& F.] to Orcel Snr and Jnr, Aix-en-Provence, 13 March 1765.

181 Fothergill etc., item 19, J.F. to M.B., 8 February 1764.

182 Letter Book D, p.25, M.B. to Richard Tonson, 21 June 1769.

183 Jane E. Norton., *Guide to the National and Provincial Directories of England and Wales, Excluding London, Published Before 1856* (1950), p.183.

184 *Sketchley's Birmingham etc. Directory*, third edition (1767), frontispiece.

185 ibid., p.43.

186 eg M.Swinney, *The New Birmingham Directory and Gentleman and Tradesman's Compleat Memorandum Book...*, (1774), Preface, hereafter cited as Swinney, *New Birmingham Directory* (1774). Also Pearson and Rollason, *The Birmingham Directory or Merchant and Tradesman's Useful Companion...* (1777), p.7.

187 Letter Book C, p.8, M.B. to P.J. Wendler, 8 July 1767.

188 Dickinson, *Boulton*, p.53, gave 1765. It has also been suggested that silver plate manufacture was not introduced until the early 1770's (Frances Fergusson, 'Wyatt Silver', *Burlington Magazine*, Vol.CXVI, No.861 (December 1974), pp.750-55 (p.751), hereafter cited as Fergusson, 'Wyatt Silver').

189 Dickinson, *Boulton*, p.67. Garbett was giving evidence before the Commons Committee dealing with petitions for the Bill to establish Assay Offices in Sheffield and Birmingham, 18 February 1773.

190 Letter Book B, p.325, B.& F. to Benjamin Molineux, 28 February 1766.

191 There are no surviving Ledgers or Journals in the M.B.P. for this period.

192 For example, candlesticks in unspecified materials were sent to customers in 1764 (Fothergill etc., item 19, J.F. to M.B., 8 February 1764); 1765 (Fothergill etc., item 45, B. & F. to M.B., 19 December 1765); and 1766 (Letter Book B, p.332, B. & F. to Nathaniel Jefferys, 8 March 1766).

193 e.g. M.B. bought a coffee-pot and stand from Soho in 1776 (Ledger, Soho Boulton and Fothergill, Ledger 1776-1778 (hereafter cited as Ledger 1776-8), p.2, 7 February 1776).

194 Box J, item 91, Nathaniel Jefferys to M.B., 11 June 1760. (M.B.'s service came to £50 and included two waiters, two pairs of salts, a milk-ewer, a tureen-ladle, a ragout spoon, twelve tablespoons, twelve teaspoons, tongs and a coffee-pot. M.B. was also asked whether he wanted a pair of sauce-boats with ladles and a pint mug.) Box J, item 96, Nathaniel Jefferys to M.B., 4 June 1767. (This order of £5 18s. 0d. was for a snuffer-stand, a funnel, a pair of snuffers with silver bows.) Box J, item 98, Nathaniel Jefferys to M.B., 31 May 1769. (An order for twelve dessert spoons worth £6 11s. 0d.)

195 [M.B.] Notebook 4, 1765, 20 October 1765. The candlestick maker was Coaker who worked in Wood Street.

196 Box E1, item 26, M.B. to J.H. Ebbinghaus, 1 December 1766.

197 Goodison, *Ormolu*, p.129. The order for Kedleston Hall, Derbyshire was not delivered until at least 1766.

198 By 1773 at least five Birmingham firms had registered at Goldsmiths' Hall, London (Arthur G. Grimwade, *London Goldsmiths 1697-1837. Their Marks and Lines from the Original Registers at Goldsmiths' Hall and Other Sources* (1976), p.717, hereafter cited as Grimwade, *London Goldsmiths*). John Gimblett and William Vale were registered at the Chester Assay Office by 1773 (Benjamin Walker 'Some Eighteenth Century Birmingham Houses and the Men who lived in them' *Transactions of the Birmingham Archaeological Society*, Vol.LVI (1932), pp.1-36 (p.4).

199 *Sketchley's Birmingham etc. Directory* (1767), p.16.

200 Boulton M. Biograph etc., item 112, James Keir, 'Memorandums for the Memoir of M. Boulton', 3 December 1809.

201 Goodison, *Ormolu*, p.20.

202 ibid., p.63.

203 Letter Book C, pp.76-8 [M.B.] to John Motteux, 23 February 1768.

204 W.K.V. Gale, *Boulton, Watt and the Soho Undertakings* (1952), p.3.

205 Letter Book C, p.64, B. & F. to Mr Cookson, 23 February 1768.

206 Goodison, *Ormolu*, p.27.

207 Letter Book D, p.14, M.B. to Solomon Hyman, 23 January 1769.

208 Goodison, *Ormolu*, p.34.

209 Boulton M. Biograph etc., item 112 sheet 1, James Keir 'Memorandums for the Memoir of M. Boulton', 3 December 1809.
210 Goodison, *Ormolu*, p. 25.
211 ibid., p. 19.
212 ibid., p. 89.
213 ibid., p. 242.
214 ibid., p. 34.
215 ibid., p. 36.
216 ibid., p. 38.
217 ibid., p. 63.
218 ibid., p. 25.
219 ibid., p. 137.
220 ibid., pp. 101-3.
221 ibid., pp. 131-5.
222 ibid., pp. 138-9.
223 ibid., pp. 140-3.
224 ibid., pp. 112-8.
225 ibid., p. 38.
226 Boulton M. Biograph etc., item 112, sheet 2, James Keir 'Memorandums for the Memoir of M. Boulton', 3 December 1809.
227 Goodison, *Ormolu*, pp. 111-2.
228 Fothergill etc., item 69, J.F. to M.B., 30 March 1771.
229 Goodison, *Ormolu*, p. 38.
230 ibid., p. 38.
231 ibid., p. 39.
232 Letter Book E, p. 134 [M.B.] to William Matthews, 23 June 1771.
233 M.B. Diary, 1768.
234 [M.B.] Notebook 6, 1768-75, pp. 133-4, 1 January 1769.
235 Birmingham City Museum and Art Gallery, *Birmingham Gold and Silver 1773-1973* exhibition catalogue (1973), A2.
236 See Appendix 111A.
237 See Appendix 111.
238 Dickinson, *Boulton*, p. 64.
239 Box Garbett, Samuel 1, item 1, Samuel Garbett to M.B., 16 December 1766.
240 Box P2 Pio to Pz (hereafter cited as Box P2), item 136, J. Downall to M.B., 8 September 1769.
241 Arthur Westwood, *The Assay Office at Birmingham Part 1: its Foundation* (1936), p. 4 (hereafter cited as Westwood, *Assay Office, Birmingham, Part 1*).
242 Letter Book E, p. 2, M.B. to the Earl of Shelburne, 7 January 1771.
243 e.g. some of Sheffield's silversmiths (Robert Rowe, *Adam Silver 1765-1795*, Faber Monographs on Silver (1965), p. 55 and p. 68, hereafter cited as Rowe, *Adam Silver*).
244 Fothergill etc., item 107, J.F. to M.B., 6 February 1773.
245 *Memorial Relative to Assaying and Marking Wrought Plate at Birmingham 1773.* Quoted in Westwood, *Assay Office, Birmingham Part 1* p. 12.
246 Dickinson, *Boulton*, p. 63.
247 Letter Book E, p. 355, B. & F. to James Folliott, 23 January 1772.
248 Scale, John. Boulton and Scale. (M.B. and Boulton Co.) Scale Family (hereafter cited as Scale etc.), item 6, J.S. to M.B., 6 February 1772.
249 Letter Book E, p. 427, A.J.C. to James Folliott, 14 April 1772.
250 Letter Book E, p. 435, A.J.C. to James Folliott, 18 April 1772.
251 Letter Book E, p. 448, A.J.C. to James Folliott, 13 May 1772.
252 Letter Book E, p. 458, A.J.C. to James Folliott, 25 May 1772.

253 Letter Book E, pp. 47-8, J. W. to William Matthews, 18 February 1771.
254 Letter Book E, p. 172, C. W. to Henry Morris, 13 August 1771.
255 Letter Book E, p. 157, C. W. to James Folliott, 30 July 1771.
256 Letter Book E, p. 172, C. W. to Henry Morris, 13 August 1771.
257 e. g. Letter Book E, p. 278, B. & F. to Nicholas Smyth, 19 November 1771; Letter Book E, p. 172, B. & F. to William Matthews, 14 August 1771 and Letter Book E, pp. 162-3, M. B. to the Duke of Grafton, 1 August 1771.
258 B. R. L., B. W. C., Boulton and Fothergill. Portions of a Letter Book, 1773 (hereafter cited as B. R. L., B. W. C., Portions of a Letter Book, 1773), p. 137, B. & F. to James Folliott, 27 May 1773.
259 Wedgwood Josiah, Wedgwood Family, Wedgwood J. Jnr, and Bryerley (hereafter cited as Wedgwood etc.), item 8, Josiah Wedgwood to M. B., 19 February 1771.
260 e. g. Letter Book E, p. 89, [B. & F.] to William Matthews, 22 April 1771 and Letter Book E, p. 161, M. B. to James Stuart, [1 August 1771].
261 Letter Book E, pp. 212-3 [B. & F.] to James Stuart, 5 October 1771.
262 Letter Book E, p. 161, M. B. to James Stuart [1 August 1771].
263 See, for example, notes 247-252 above; however, there was one occasion when the partners gave Folliott advice about opening a box to ensure that candlesticks were not spoiled (Letter Book E, p. 355, B. & F. to James Folliott, 23 January 1772).
264 Letter Book E, p. 2, M. B. to the Earl of Shelburne, 7 January 1771.
265 e. g. Letter Book E, pp. 162-3, M. B. to the Duke of Grafton, 1 August 1771 and Letter Book E, p. 161, M. B. to James Stuart [1 August 1771].
266 e. g. letters in note 265 above.
267 Letter Book E, pp. 626-7, B. & F. to Lord Boston, 1 November 1772.
268 Letter Book E, p. 640, A. J. C. to Henry Meredyth, 18 November 1772.
269 Letter Book F, Boulton and Fothergill, 1772-1774 (hereafter cited as Letter Book F), p. 185 [B. & F.] to Patrick Robertson, 10 April 1773.
270 Letter Book G, p. 658, B. & F. to Patrick Robertson, 13 July 1776.
271 See Appendix 1A.
272 See Appendix 1A.
273 See Appendix 111A.
274 Letter Book E, p. 353, A. J. C. to William Matthews, 19 January 1772. An order for two tea-canisters.
275 Letter Book E, pp. 340-1, B. & F. to Lord Kerry, 8 January 1772. An order for a pair of candlesticks and three pairs of candle-stick branches.
276 Letter Book D, p. 72, M. B. to the Duke of Richmond, 4 December 1772.
277 Letter Book E, p. 553, B. & F. to Sir Robert Murray Keith, 23 August 1772. M. B. failed to obtain the order for tureens (Letter Book E, p. 579, B. & F. to Sir Robert Murray Keith, 17 September 1772).
278 Letter Book E, pp. 212-3, B. & F. to James Stuart, 5 October 1771.
279 Letter Book F, p. 153, B. & F. to David Melville, 24 February 1773.
280 Fothergill etc., item 157, M. B. to J. F., May 1773.
281 Westwood, *Assay Office, Birmingham, Part 1*, pp. 3-8.
282 ibid., p. 16.
283 Box D2, item 93, Gilbert Dixon to M. B. and J. F., 8 December 1772.
284 Letter Book E, pp. 680-1, B. & F. to Gilbert Dixon, 24 December 1772.

285 Westwood, *Assay Office, Birmingham, Part 1*, p. 11.
286 Crisp-Jones, *Silversmiths of Birmingham*, p. 28.
287 Westwood, *Assay Office, Birmingham, Part 1*, pp. 11-14.
288 ibid., pp. 14-15. The petition was presented by 'the Wardens and Assistants of the Company or Mystery of Goldsmiths of the City of London'.
289 ibid., p. 15.
290 ibid., p. 15.
291 de Castro, *Law and Practice of Hall-marking* p. 8.
292 Dickinson, *Boulton*, p. 68.
293 Quoted in Westwood, *Assay Office, Birmingham, Part 1*, pp. 23-4.
294 ibid., p. 16.
295 Letter Book G, pp. 434-5, B. & F. to R. Conway, 8 October 1775.
296 *Report from the Committee Appointed to Enquire into the Manner of Conducting the Several Assay Offices in London, York, Exeter, Bristol, Chester, Norwich and Newcastle-upon-Tyne* (London, 1773).
297 A. H. Westwood, 'The Birmingham Assay Office', in *Birmingham Gold and Silver 1773-1973*, exhibition catalogue (1973).
298 Dickinson, *Boulton*, p. 68.
299 Westwood, *Assay Office, Birmingham, Part 1, pp. 25-29.*
300 Crisp-Jones, Silversmiths of Birmingham, pp. 28-9.
301 Fothergill etc., item 107, J.F. to M.B., 6 February 1773.
302 Fothergill etc., item 159, J.F. to M.B., 24 May 1773.
303 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.
304 Cule, *Financial History*, pp. 56-7.
305 ibid., p. 46 and p. 58.
306 Cule estimated that this time the cost of interest and commission amounted to five per cent, but supplied no evidence (ibid., p. 57).
307 ibid., p. 136.
308 ibid., p. 58.
309 ibid., pp. 60-1.
310 Walker Z. Snr 1, item 35, Statement of Affairs, 1763-80.
311 Cule, *Financial History*, p. 15.
312 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
313 Cule, *Financial History*, p. 56.
314 Exactly when Müller went abroad is unclear, but many payments were made to him between 1768 (Cash Book, 1767-77, p. 39, 9 August 1768) and 1775 (Cash Book, 1767-77, p. 191). Neither reference specifically proves that he was abroad but a payment in 1769 of £7 10s. 7d. was for Müller to take a cask to and from Calais. (Cash Book, 1767-77, p. 50, 15 February 1769).
315 Cule, *Financial History*, p. 62.
316 Fothergill etc., item 261. 'Rough Sketches of Facts for my Naritive of B. & F.' [c. 1782].
317 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
318 Fothergill etc., item 55, J.F. to M.B., 19 May 1773.
319 M.B. Diary, 1772, pp. 14-21. M.B. left on 18 January and arrived back at Soho on 19 February; arrived in London on 2 April and arrived back on 25 April; left Soho on 7 May and arrived back on 30 May, and left Soho on 11 June and was back there on 30 June.
320 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
321 Boulton and Fothergill, 'Partnership with [J.]F' [c. 1782].

322 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.
323 Fothergill etc., item 10, 'Some remarks ab[t] my partnership' with [J.]F. [1782].
324 Wyatt Family, item 231, William Wyatt to M.B., 29 December 1766.
325 Letter Book C, p.35, M.B. to J.H. Ebbinghaus, 18 November 1767.
326 M.B. Diary, 1768, Payment for William Wyatt, 21 June 1768.
327 Wyatt Family, item 1, Account of Benjamin Wyatt with B. & F., 1769.
328 [M.B.] Notebook 8, 1772, p.31, Payment to Benjamin Wyatt and Sons, 7 May 1772.
329 Letter Book C, p.35, M.B. to J.H. Ebbinghaus, 18 November 1767.
330 Scale etc., item 8, 'Mr Scale's Oath of the Valuation of the Buildings and Effects of Soho Manufactory', 20 May 1772.
331 Scale etc., item 6, J.S. to M.B., 6 February 1772.
332 Boulton and Fothergill, 'Conclusion of the Narrative relative to the Dispute between them.', p.13 [1782].
333 M.B. made the request in March (Letter Book C, p.66, M.B. to J.H. Ebbinghaus, 2 March 1768) and Ebbinghaus refused in September (Letter Book C, pp.80-2, M.B. to J.H. Ebbinghaus, September 1768).
334 Box E1, item 37, J.H. Ebbinghaus to M.B., 24 May 1772.
335 Letter Book D, pp.60-1, M.B. to J.H. Ebbinghaus, 24 October 1772.
336 Cule, *Financial History*, p.37.
337 ibid., pp.47-8.
338 ibid., pp.61-2.
339 Letter Book C, p.71, M.B. to H.F. Bargum, 2 March 1768.
340 Box F1 Fa to Foz (hereafter cited as Box F1), item 121, Bond to Thomas Fisher of Hampton in Arden, 24 September 1768. (Cule, *Financial History*, p.27, wrote, incorrectly, that £4,000 was mortgaged.)
341 Cule, *Financial History*, pp.28-32. The loan was arranged by Christian Van Orsoy and Sons, of Amsterdam.
342 Box O Oa to Oz (hereafter cited as Box O), item 20, Van Orsoy to M.B., 5 April 1785.
343 Letter Book F, p.165, B.& F. to Thomas Allen, 10 March 1773.
344 Cule, *Financial History*, p.22.
345 ibid., pp.31-6.
346 Cule, *Financial History*, p.291.
347 Fothergill etc., item 254, 'History of Facts B. & F.' [c.1782].
348 Cule, *Financial History*, pp.33-4. The London bank was Neale, James, Fordyce and Down.
349 Letter Book D, p.59, M.B. to J.H. Ebbinghaus, 24 October 1772. M.B. here stated that he lost £2,470 but retrieved £1,700. However, these figures do not tally with the £5,000 he elsewhere stated that he deposited there (see text).
350 Fothergill etc., item 254, 'History of B. & F.' [c.1782].
351 See p.106.
352 Boulton M. Biograph etc., item 111, 'Memorandum concerning Mr Boulton' by James Watt, 17 September 1809.
353 [M.B.] Notebook 11, 1775-6, p.41.
354 Walker Z. Snr 1, item 35, Statement of Affairs, 1763-80.
355 Fothergill etc., item 264, notes in M.B.'s hand re.B. & F., n.d.
356 Cule, *Financial History*, p.14.
357 Boulton and Fothergill, 'Partnership with [J.]F' [c.1782].
358 Box G1 Ga to Gle (hereafter cited as Box G1), item 12, Bond for £600, 15 March 1770.
359 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.
360 Walker Z. Snr 1, item 35, Statement of Affairs, 1763-80.

361 Fothergill etc., item 159, J.F. to M.B., 24 May 1773.
362 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.
363 Fothergill etc., item 155, J.F. to M.B., 19 May 1773.
364 See Dickinson, *Boulton*, p.65; Eric Robinson, 'Eighteenth Century Commerce and Fashion: Matthew Boulton's Marketing Techniques', *Economic History Review*, second series, Vol.XVI, No.1 (1963), pp.39-60 (pp.40-6) (hereafter cited as Robinson, 'Matthew Boulton's Marketing Techniques'). Also Fergusson, 'Wyatt Silver' p.751.

CHAPTER II

THE MARKETING OF SILVER

Following the foundation of The Assay Office, Birmingham, in 1773, Boulton was intent upon rapidly expanding the silver business;[1] that expansion is the subject of this chapter. Discussion is largely organised around the geographical distribution of sales since circumstances varied from region to region not only at home but also abroad. However, there were some considerations which applied generally and these are dealt with first.

The strengthening of the nation's economy during the eighteenth century created favourable conditions for the development of Boulton's silver business. The increase in the nation's wealth is indicated by its trading figures. Exports (together with re-exports) from England and Wales rose as follows: 1733 £8·8 million; 1743 £11·3 million; 1753 £12·2 million; 1763 £14·7 million and the figure for 1773 was £14·8 million. The value of imports into England and Wales also increased: 1733 £8·0 million; 1743 £7·8 million; 1753 £8·6 million; 1763 £11·2 million and in 1773 £11·4 million.[2]

This wealth supported a consumer boom during the third quarter of the century;[3] one part of this phenomenon was the high demand for silver. In the absence of production figures, the best available indication of the rising level of production in London is provided by the annual totals of diet silver taken for assay purposes at Goldsmiths' Hall, London. Diet silver was scraped from articles by assayers and used as samples to test whether pieces had the required proportion of pure silver. The scrapings were placed in a diet box and weighed at the end of each year; these totals were roughly proportional to the amount of silver assayed.[4] The figures, selected at ten-yearly intervals, were as follows: 1743 91oz. 18dwt.;[5] 1753 80oz.;[6] 1763 189oz.[7] and for 1773 194oz. 10 dwt.[8]

These figures suggest that the production of silver roughly doubled between 1753 and 1763 but they exaggerate the increase. In 1719, by the Acts of 6 Geo. 1. c. 11 and 7 Geo. 1. c. 20. S. 34, a duty of six pence per ounce was imposed on silver plate imported into or made in Great Britain.[9] To avoid payment silversmiths sometimes neglected to send silver to Goldsmiths' Hall, which was responsible for

collecting the duty; the diet figures therefore understate the level of production in London. Silversmiths who avoided the duty counterfeited assay office marks and this practice alarmed the Goldsmiths' Company in 1730 and again in 1742, when a few offenders were convicted. This had a salutary effect for some years but the Company was again concerned in the early 1750s.[10] This situation led to the 1757 Act of 31 Geo. 11.c.32; the duty was replaced by a licence (to be taken out annually by makers or dealers in silver plate) and the death penalty was introduced for those counterfeiting assay office marks.[11] After 1757 'duty-dodging' reduced and the diet figures[12] therefore became a more accurate index of production.

Although this legislation was a factor in increasing the diet figures after 1757, those figures also reflect an increase in production. The reduction of six pence per ounce in the price of silver following the 1757 Act was a major stimulus to demand; this may be judged from the reactions of those in the industry to the 1784 Act of 24 Geo.III.c.53 which re-imposed the duty of six pence an ounce.[13] Samuel Garbett, the Birmingham bullion dealer, wrote soon afterwards: '... the law of last sessions laying a duty upon wrought plate will completely Root up that Manufacture at Birmingham'.[14] Garbett also knew of the London Goldsmiths' opposition to the Act[15] and he predicted that it would place insurmountable difficulties in the way of exporting silver.[16]

Boulton knew of the high demand for silver. He was a friend of Samuel Garbett[17] who supplied the partners with bullion from at least the early 1760s.[18] Garbett's comments about the 1784 Act were made to the Marquess of Lansdown,[19] formerly the Earl of Shelburne, who encouraged Boulton to produce ornamental metalwork at least from 1765[20] and the two men corresponded subsequently over the campaign to secure an assay office for Birmingham.[21] Boulton could also have picked up knowledge about the silver industry from London: he knew Nathaniel Jeffery, a goldsmith in the Strand[22] at least as early as 1762[23] and often visited him in later years.[24] The buoyant state of the silver industry was alluded to in a report by the silversmiths of Birmingham and Sheffield in 1773 when they made reference to '... the Very Prevailing Taste for plate ...'.[25] At that time they were also aware[26] that the amount of silver passed by Goldsmiths' Hall in the period 1766-1772 was consistently around 100,000 lb. per annum: for

1766 94,232 lb. 11oz. 3dwt. and for 1772 104,641 lb. 4oz. 15dwt.[27]

It is beyond reasonable doubt that the level of demand was one factor behind Boulton's decision to produce silver plate. This was consistent with his entrepreneurial attitude which led him, throughout his career, to launch enterprises which met the changing demands of the marketplace. Although Boulton operated on a more ambitious scale than other local firms, his approach was characteristic of Birmingham's manufacturers who tended to adjust their production to keep up with changing consumer requirements.[28]

It was also typical of Boulton to attract orders by undercutting his rivals[29] and he maintained this policy for silver plate by keeping his prices lower than those of his main competitors: the silversmiths of London. Boulton once advised a customer that he was charging 1s. 2d. per ounce for the fashioning of plates as against the 1s. 6d. he reckoned London silversmiths charged; moreover, for the same customer Boulton used just 16oz. of silver rather than the 20 or 22oz. he thought was used in the capital. Although here Boulton was probably exaggerating the differences to increase trade, his prices were competitive[30] and sometimes the differences were substantial: for example, the 'Lyon' candlestick (Plate 11) made at Soho with thin silver and the aid of machinery sold for £17 2s. 0d. per pair as opposed to the £44 11s. 0d. charged for the same pattern by London silversmiths who used more silver and traditional techniques.[31]

These lower prices encouraged Boulton to believe that silver plate could be sold to a wider spectrum of society. In 1773, the silversmiths of Sheffield and Birmingham wrote that the prices of London's silversmiths were so exorbitant that their work was '... unsaleable to all but a few rich People...', and these provincial silversmiths insisted that the cross-section of society buying silver could be expanded.[32] These hopes were contemporary with the observations of those who noted both the restless determination of the lower ranks to acquire the possessions of those above them, and to the widespread taste for luxury.[33] These ambitions were supported by rising incomes: between 1750 and 1780 the proportion of the English population with family incomes in the range of £50 to £400 increased from about fifteen per cent to nearly twenty-five per cent.[34]

The aspirations of consumers and the new producers of silver plate were therefore not without some foundation; however, their positions

must be closely examined. The statements of the silversmiths of Birmingham and Sheffield in 1773 must be weighed against their understandable desire to make out strong cases for assay offices in their towns.[35] Moreover, quite apart from the tendency of mid-eighteenth-century commentators to exaggerate the aspirations of their contemporaries,[36] most people's incomes were still insufficient for them seriously to contemplate purchasing silver plate even at Boulton's prices. The following examples give an idea of his price range: one service of plate came to £1,545 19s. 4d.;[37] one coffee-pot cost £39 13s. 6d.[38] and a pair of salt-cellars came to £1 10s. 10d.[39] Substantial purchases were within reach of the wealthiest 150 families in England and Wales whose annual incomes (in 1760) were reckoned to be in the range £6,000 to £20,000. The purchase of some silver plate was also possible for the wealthiest merchants or tradesmen whose annual incomes were put at £600 and £400 respectively. For the vast majority however, silver plate remained almost completely beyond their means. In 1760 the average merchant earned about £200 and the average inn-keeper £100.[40] In Birmingham wage rates were higher than anywhere else but even there in 1791 the adult worker earned only between 7s. 0d. and £3 per week (though the family income was often supplemented through the earnings of women and children which were put at 7s. 0d., and 1s. 6d. to 4s. 6d., per week respectively). More typical of the national average for a male worker at this time was the £15 per year paid to agricultural workers outside Birmingham.[41]

That Boulton did not seriously believe that the market for silver plate could be very considerably extended is suggested by his promotion of Sheffield plate for a wide market. Although in the mid-1770s the partners doubted whether Sheffield plate was suitable for important orders - in 1775 they advised against making ecclesiastical flagons in the material since it lacked the neatness and durability of silver[42] - they thought it good enough to write in a trade directory of 1774 that their Sheffield plate had the '... appearance of solid silver, more especially when compared with that of any other Manufactory'.[43] Moreover, the widespread appeal of Sheffield plate was enhanced by its price which was considerably lower than silver: a pair of 'Lyon' candlesticks in Sheffield plate cost £7 18s. 6d.[44] as against £17 14s. 6d.[45] The partners quoted prices

for silver tea-urns which ranged from £27 to over £100 according to size, weight, and the richness of ornament.[46] Sheffield plate tea-urns varied from £7 7s. 0d. to £11 11s. 0d. if they were plated on both sides with silver; if they were tinned on the inside they were one and a half guineas less.[47]

Though the market for Boulton's silver plate was still restricted, the number of potential customers for small silver articles was large. The price range for these is indicated by the following: filigree tea-measures 5s. 9d. each,[48] filigree hat-pins 6s. 0d. per dozen,[49] and one customer was charged 1s. 5d. each for coat buttons and 8½d. for waistcoat buttons.[50]

The difference in price between silver plate and smaller silver items was largely responsible for the fundamental distinction between the marketing methods adopted for them. The methods of selling small silver items were basically the same as those used by the partners for other inexpensive products. The marketing techniques for silver plate were to be closer to those developed for ormolu, which was similarly expensive; however, ormolu production had led to heavy losses[51] and it was vital to avoid the repetition of errors which led to that failure, particularly in view of the partners' continuing financial problems.[52]

One of the partners' most serious difficulties was the lack of circulating capital[53] and it was therefore vital to avoid tying up large amounts of money in silver. The price varied from time to time: in 1773 the partners paid between 5s. 6d. per oz.[54] and 5s. 7d. per oz. for sterling silver.[55] The price rose later: in 1777 they paid 5s. 9½d. per oz.,[56] and in 1778 5s. 11½d. per oz.[57] Fine silver (which was used for filigree)[58] was more expensive: in 1773 the partners paid 6s. 3d. per oz.,[59] and in 1778 6s. 6d. per oz.[60]

The high cost of silver made it essential to produce large items to order. While the partners built up stocks of cheaper items such as buttons[61] and even silver filigree,[62] they avoided doing so initially for both silver plate[63] and ormolu.[64] In the early 1770s, however, they made the error of producing large quantities of ormolu for the sales at Christie and Ansell's, much of which remained unsold and stayed on their hands for many years. After 1772 the error was not repeated for ormolu[65] (which was subsequently made to order)[66] and the partners never risked a similar approach for selling silver. The

partners reckoned to make single items of silver plate[67] or small orders of silver plate[68] within a month or so of receiving the commission, though it naturally took longer for services of plate: one was made over a period of two years.[69] Although some customers were offended by delays in manufacture,[70] the policy, at least in principle, was acceptable (it was common amongst silversmiths in London)[71] and since many customers wished to have items made to their own requirements, it was often inevitable.[72]

The partners' policy of not tying up capital in silver, led them to avoid making samples of silver plate. It was their normal practice to provide trade customers with pattern cards for mass-produced items like buttons[73] and silver filigree,[74] though drawings[75] and catalogues[76] were used for many articles. While the over-production of ormolu in the early 1770s meant that customers were often able to see such pieces before they ordered,[77] Fothergill was determined that money would not be spent on samples of silver plate. In 1773 Boulton, then in London, wrote to Fothergill:

> I must get a few specimens of Elegant Plate as we have many... friends that... will be disappointed if they see none.[78]

Fothergill replied:

> I am sorry [about] your mention of getting up specimens of elegant plate... when our capital is insufficient to carry on our current Button Business w^ch^ if properly attended to would answer every purpose.[79]

Fothergill's view prevailed and customers normally ordered silver plate from drawings.[80]

The partners' reluctance to tie up capital meant they were generally unwilling to allow trade customers to take expensive items on sale or return. Requests for ormolu on this basis in the early 1770s were refused either on the grounds that the exclusiveness of the product would be impaired[81] or that the partners could not afford to allow it.[82] When they allowed this concession, as they did when they had surplus stock after the Christie and Ansell sales, the results were not encouraging since pieces were often returned.[83] The partners normally refused to send silver plate on a sale or return basis.[84]

A different approach was adopted for cheaper items. Although there were exceptions,[85] the partners were often prepared to allow trade customers to take such items as bracelets,[86] chains or buttons

on sale or return.[87] Some instances of allowing trade customers silver filigreeoccurred,[88] though at least on some occasions this happened because it was convenient for the partners: on one occasion they were trying to move large stocks[89] and on another they sent an advertisement even though it was not asked for.[90]

The partners encouraged the sales of most articles to trade customers by offering discounts. Silver filigree consistently carried a discount of fifteen per cent;[91] if goods were paid for within six months, a further reduction of five per cent was given for immediate payment. This additional reduction normally applied for other goods[92] though the basic discount varied from article to article: in 1771 this was forty-five per cent for silver plated (i.e. silver on copper) buttons; more typical was the fifteen per cent for gilt chains and buckles, but no discount was permitted for gilt trinkets.[93] Discounts varied from time to time: on Sheffield plate, for example, fifteen per cent was allowed[94] until 1772 but thereafter twenty per cent was usual.[95] These variations were mainly due to the partners' wish to keep their discounts in line with their competitors.[96] Customers were left to add whatever profit margin they felt to be appropriate.[97]

The partners did not normally allow trade discounts for ormolu or silver plate. In the early 1770s Boulton generally avoided doing so for ormolu since he was keen to sell direct to the public;[98] only later, when he was anxious to move large stocks did he modify this approach.[99] Except on rare occasions when he was pressed into doing so,[100] Boulton did not normally allow a discount for silver plate[101] (or even an allowance of five per cent for prompt payment).[102] He defended this policy on the grounds that his low fashioning charges gave no room for discounts,[103] but this claim is not convincing. Although comparisons cannot often be made between the fashioning charges for silver and Sheffield plate, this charge for a pair of silver 'Lyon' candlesticks was £6 3s. 6d.;[104] even though the method of making the pattern in Sheffield plate was basically the same[105], Boulton fixed his fashioning charge at about the same level[106] but nevertheless, as we have seen, gave a substantial discount.[107] Although that discount was on the total cost of Sheffield plate and a similar discount on silver plate would have been prohibitive (because of the much higher cost of the material), a discount on just the

fashioning charge of silver plate would have been generally possible. (On the rare occasions when the partners did give a discount on silver plate, it was just on the fashioning charge.)[108] The extent to which Boulton allowed discounts on silver plate has been exaggerated[109] and his approach contrasted strongly with Sheffield's silversmiths who normally gave discounts to the trade.[110]

Compared with most of the firm's products, Boulton was intent upon selling silver plate to the public. In part this reflected his hostility towards trade customers: in 1773 he was party to a document in which London's retailers of silverware were condemned for reaping the benefit of high prices even though they were '... not the working Part of the Trade'.[111] He also once referred to shopkeepers as '... the Bane of all improvements...' and '... a race of disingenuous persons' and felt that their premises generally lacked sufficient distinction for marketing expensive items.[112] There was another factor behind Boulton's determination to sell silver plate direct to the public: he wanted to ensure that the prestige of doing so reflected directly upon himself and his firm.

Boulton's marketing of expensive products relied heavily upon direct contact with the most wealthy and influential members of society; this was true of ormolu[113] and it was also to be essential for the marketing of silver. Boulton's intention, like that of other manufacturers of expensive products, was not merely to obtain orders from those he contacted; he hoped that they would establish through their choice of manufacturer his firm's reputation and thereby influence others.[114]

The main focus of the marketing of silver was the Soho Manufactory (Plate 1) and Boulton ensured that his many important visitors enjoyed memorable visits. The elegant building was widely admired.[115] Although goods could also be ordered at the firm's warehouse in Birmingham,[116] the partners added a showroom at Soho, which they called the Toy Room,[117] that was fitted in 1771 with cases from the London cabinet-makers Ince and Mayhew;[118] when the Staffordshire potter Josiah Wedgwood (who built a similar room at his Etruria factory)[119] visited Soho in 1772 he described the Toy Room as a '... superb gallery...' and noted there ormolu vases, Sheffield plate, and a silver coffee-pot.[120] Visitors admired too the technology developed at Soho[121] and according to a life-long friend of Boulton's

he received his visitors '... with so much courtesy and desire of pleasing (which were very distinguishing traits in his manner) that however their curiosity was satisfied, they were still more pleased with the proprietor'; visiting Soho became '... a fashion among the higher and opulent ranks, foreigners of distinction and all who could gain access to it'.[122] In 1771 Boulton claimed that in just one week he received the following visitors: Prince Poniatowski (a nephew of the King of Poland), the ambassadors of France, Denmark, Sardinia and Holland, Count Orloff (a favourite of the Empress of Russia) and the Viceroy of Ireland.[123] The procession continued in later years and included merchants from abroad,[124] trade customers from England[125] as well as the English aristocracy.[126] The reputations of Soho and Boulton proved to be of considerable benefit to the silver business: visitors from several parts of Europe placed orders at the Manufactory and the firm received enquiries[127] and subsequent orders from many quarters.[128]

The importance of Soho for selling silver was due in some measure to the fact that it did not suffer as much as other parts of the firm's marketing effort from the partners' financial difficulties which, as we shall see, inhibited marketing elsewhere.[129] The silver business in the 1770s benefited from Soho's earlier expansion, and the cost of entertaining important visitors was met by Boulton alone: for this purpose he spent each year six or seven hundred pounds at Soho House.[130]

Yet even the marketing of silver plate at Soho did not entirely escape the partners' financial difficulties. In 1773 Boulton's ambition to have a glittering display of silver plate at the Toy Room met with Fothergill's firm opposition on purely financial grounds.[131] Fothergill's view largely prevailed: the majority of the exhibits and purchases of ready-made items were for cheaper articles such as buttons,[132] sword-hilts[133] and Sheffield plate.[134] Most of the silver items sold at the 'Toy Room' were small: these included buckles,[135] buttons,[136] spoons,[137] and pencil-cases.[138] Larger silver articles were sold infrequently; the main exceptions were candlesticks,[139] though other items such as tankards,[140] cream-jugs, and salt-cellars[141] were sold from time to time. Although in one sense the absence of very large pieces of silver plate did not matter - according to a clerk the majority of visitors only wished to buy

inexpensive items[142] - the Toy Room necessarily lost impact. Most of the orders for silver plate from Soho's visitors had to be made and then sent on to customers at a later date.[143] On 31 October 1775 Lord Gormonston spent several hours talking to Boulton at Soho and ordered two pairs of silver candlesticks which were later sent to him.[144]

In 1775 the partners relinquished control of the Toy Room[145] first to John Ellis Myles[146] and then in rapid succession to Benjamin Slade (1777),[147] John Stuart and John Hodges (1777[148]-79[149]), Mrs Powell (1779[150]-81[151]) and T. and T. Richards from 1781[152] until the end of the Boulton and Fothergill partnership.[153] Little is known about the precise arrangements between the custodians of the Toy Room and the partners; however, Myles received a commission of between two-and-a-half per cent and five per cent (depending on the article) for selling goods manufactured at Soho.[154] T. and T. Richards rented the Toy Room[155] and received the normal trade discounts from Boulton and Fothergill.[156] From 1775 large quantities of goods were transferred to the Toy Room;[157] these included silver filigree[158] but not silver plate.

The partners' reasons for releasing control of the Toy Room are not certain, but a number of reasons may be suggested. Their persistent financial difficulties[159] were in some degree reduced by extra income from rent and less of their capital was tied up in stock. Moreover, the tenants had a financial stake in the success of the Toy Room which in turn would benefit the partners through increased sales of goods manufactured at Soho. The partners' handling of the Toy Room was consistent with the general tendency at Soho in the mid-1770s to both rely upon the capital of others and to delegate responsibility.[160]

Another factor which probably had some bearing on their decision to give up responsibility for the Toy Room,was the wish to appear to have given up retailing. Some trade customers resented the partners' refusal to give discounts on expensive items. The partners met the criticism by insisting that they did not wish to retail goods and found the public troublesome.[161] On one occasion in 1775, the partners claimed to a London shopkeeper '... we have done with retail Business ourselves having lately let out our Toy Room to a Person who... [buys] ... the Goods of us and sells them again to such Persons

as will visit our Manufactories'.[162] In fact, the partners had not given up retailing since articles which were ordered by visitors and which were not ready-made, were sold without the involvement of the Toy Room; this applied to a variety of articles,[163] including silver plate.[164] The Toy Room was also not involved with orders received through the post which had to be specially made.[165]

The strong local reputations of Boulton and the Soho Manufactory were a valuable marketing asset. The prominence of the Manufactory within the area was illustrated by M. Swinney's *'The New Birmingham Directory...'* of 1774 which included a detailed description and an engraving of Soho.[166] Quite apart from his rôle as a manufacturer, Boulton was involved in many other activities. He was a leading member of the Lunar Society which met regularly at members' houses from about 1765; the Society brought together leading Midlands' industrialists and scientists such as Josiah Wedgwood, Erasmus Darwin, and Joseph Priestley who discussed the application of scientific ideas to industry.[167] Boulton was strongly involved in local affairs: he served as a warden of The Assay Office in 1773-4 and again between 1780 and 1782;[168] he represented the supporters of the Theatre Royal at its opening in Birmingham in 1774[169] and belonged to the Birmingham Chamber of Manufacturers.[170]

Boulton's domination of silver plate manufacture in Birmingham ensured that a high proportion of orders placed there would come to him.[171] Out of the 16,983oz. marked at The Assay Office, Birmingham, in the assay year 1773-4,[172] 9,833oz. 5dwt. 12gr. were made at Soho.[173]

Boulton's most important commissions for silver from Birmingham were two sets of communion plate. One, for St. Mary's Chapel following its opening in 1774 (Plate 17), was paid for through donations by the congregation. The other (Plate 18) was made between 1774 and 1775 for St. Bartholomew's Church, which opened in 1750; this set was paid for through a bequest of £50 by Miss Mary Carles who died in 1763.[174]

There were two other main sources for silver orders in Birmingham. Trade customers usually bought filigree[175] or other small items such as spoons[176] though occasionally they purchased larger items such as candlesticks.[177] Staff at the Soho Manufactory purchased small items[178] and Boulton, Fothergill, and their families, were also

customers.[179]

The demand for silver in Birmingham was not large. Although the town's population increased rapidly in the second half of the century (24,660 in 1741 and 50,295 in 1781)[180] the number of people affluent enough to buy silver plate was very limited: in 1783 it was reckoned that only 209 citizens owned property worth £5,000 or more.[181]

A large number of orders for silver were, however, obtained from families in the West Midlands. The most valuable patron was Lord Craven of Combe Abbey, near Coventry, who ordered by 1773[182] the first service of plate made at Soho.[183] The order came to between £1,300 and £1,400 by 1774[184] and further pieces were added up to 1776.[185] Most of the order was probably supplied to Combe Abbey since the bulk of the correspondence was directed there,[186] though on one occasion Lord Craven was asked whether a lamp should be sent to his London address in Berkeley Square.[187] Several other notable clients made smaller orders: these included Sir Harry Bridgman of Weston Park, Shropshire,[188] Sir Edward Littleton of Teddesley Park, Staffordshire,[189] and the Earl of Warwick.[190]

Some substantial orders for silver were made by less illustrious patrons within the West Midlands. Richard Moland of Hales Hall, near Cheadle, bought plate for which he made payments of £93 15s. 6d.[191] and £14 9s. 6d.[192] in 1774 and subsequent smaller payments.[193] Dr Gresley, of Seal near Burton-upon-Trent, paid £114 13s. 5d. for a service in 1776.[194] Other substantial orders were made for John Turton of Sugnall Hall, near Stafford[195] and J. C. Talbot of Ingestre also near Stafford.[196]

The partners obtained a flow of smaller orders for silver from the West Midlands. Many came from the public living in towns such as Lichfield,[197] Stourbridge,[198] Wolverhampton,[199] Walsall,[200] and Worcester.[201] Trade customers in this area bought mainly utilitarian pieces such as ladles,[202] tankards,[203] and spoons.[204] A few local customers occasionally asked the partners to repair or polish old plate.[205]

For a silver business to develop on a large scale it was essential to establish a reputation in London for there British reputations and fashions were dictated;[206] moreover, as the silversmiths of Birmingham and Sheffield commented in 1773, London was '... the only great Market for [silver] Plate in the Nation'.[207] London was Europe's largest

city, with a population of over 675,000 (in 1750).[208] London then housed ten per cent of the population of England and Wales (which was a larger proportion than in any European country)[209] and virtually all of the leading members of English society had a home there. London offered too the possibility of gaining orders for homes elsewhere in Great Britain: the aristocracy used their London addresses for only a part of the year and placed orders there for their country homes on which they spent far more; the gentry lived in a similar manner and even merchants increasingly had second homes in the country.[210] Contacts in London could gain the partners exports since London's international significance was enormous: forty-nine per cent of the tonnage entering English ports went to the capital in 1772[211] and by then London was both western Europe's most important insurance centre and was rapidly becoming the main banking centre of the world.[212]

Boulton's difficulties in gaining a share of the market for silver plate in London were considerable; that market was overwhelmingly supported by the capital's own silversmiths,[213] and Boulton had to compete from a manufactory more than 110 miles away. He was, however, helped by improved communications: the first public stage-coach to run regularly between London and Birmingham was established in 1731 and in 1742 the journey was cut by half a day to two.[214] Later, the time reduced even further since Boulton could leave London early in the morning and arrive home about twenty-four hours later.[215] This facilitated his trips: in 1775, for example, he went to London on three occasions.[216] The post normally arrived the day after it was sent.[217] Silver could be despatched by coach if it was needed in London on the following day but, since the speed involved sometimes caused damage, the partners normally sent it by wagon,[218] even though it took five[219] or six days.[220] The partners paid the whole bill for sending goods by wagon;[221] when they used the more expensive coach they normally paid half the cost.[222] Customers were charged for the substantial boxes in which silver plate was packed.[223]

A larger problem than the time and cost of sending pieces to London was competing with the strong and established reputations of the capital's silversmiths;[224] however, Boulton was able to build upon the reputation he had established for fine metalwork through the production of ormolu.[225] A number of customers who bought ormolu, subsequently purchased silver plate: these included the Duke of

Northumberland[226] and Lord Shelburne.[227] The ormolu auctions at Christie and Ansell's in the early 1770s led to some sales of silver. The 1771 sale included two large pairs of silver candlesticks which were bought by Lord Kerry for £87 8s. 0d.;[228] in the following year he bought a further pair and three pairs of matching branches.[229] There were other customers who attended these sales who either at the time,[230] or subsequently, ordered silver; moreover, in correspondence with them Boulton took the opportunity to tell them of his determination to expand his silver business following the foundation of The Assay Office in Birmingham in 1773.[231]

After the failure and difficulties of organising the 1772 auction of ormolu, Boulton vowed never to repeat his error[232] but one further sale was organised at Christie and Ansell's in 1778.[233] However, this was mounted primarily to move old stock and contained 127 lots; all were of ormolu apart from 22, 19 of which contained silver filigree.[234] This sale repeated the failures of earlier years: only one of the filigree lots sold[235] and the proceeds of the whole sale came to just £182 while the value of unsold items amounted to £933 1]s. 0d.[236] Although these failures taught the partners an important lesson in marketing, they did not seriously damage the firm's reputation since Boulton made every effort to conceal the losses from the public.[237]

In the early years of the silver business Boulton maintained a method of selling which he started for the ormolu business: personal visits to important customers. These visits, which he greatly enjoyed,[238] yielded orders for ormolu as early as 1768[239] and in 1770 an audience with George III and Queen Charlotte resulted in commissions for seven ormolu-mounted vases,[240] a pair of candle-vases (Plate 3), and the 'King's' clock-case (Plate 4). Some visits led to orders for both ormolu and silver,[241] but it was the latter which Boulton primarily pursued from about 1772. Several visits at this time led to commissions for silver:[242] for example, in 1772 Boulton visited Sir Robert Rich[243] who later bought eight dishes,[244] a tea-urn,[245] and a silver-gilt épergne[246] (Plate 60).

Boulton also sought to increase his and Soho's reputation through contacts with leading London-based architects. Architecture had social prestige: it was regarded as a necessary part of a gentleman's education and many subscribed to illustrated folios of architecture.

The leading architects of the third quarter of the eighteenth century, Sir William Chambers and Robert Adam, raised the status of their profession.[247] Leading architects also had contacts with an enormous number of patrons: Robert and James Adam built, or altered, or were connected with, 163 buildings in England, Scotland, Ireland, and Wales[248]. Since architects in England from the mid-eighteenth century, took far more interest than their predecessors in the overall harmony of their interiors, many designed a wide range of household furniture and fittings. As a result they came into contact with many craftsmen and manufacturers.[249]

Architects' prestige, influence, and reputation as arbiters of taste, made it highly desirable for manufacturers to make contacts with them: Wedgwood thought this was of paramount importance.[250] Boulton had already established close relationships with some architects before building up the silver business. In March 1770 Boulton met Chambers, the King's architect; the visit was connected with ormolu commissions for the King.[251] It is possible that Boulton first met James Adam as early as 1758 (when James visited manufacturers in Birmingham);[252] however, it was necessary for Lord Shelburne to give Boulton a letter of introduction to the Adam brothers in 1765.[253]

The Adams were involved with Boulton's ambition to open a showroom in London. This ambition was shared by other provincial manufacturers such as Wedgwood (who successfully opened his first showroom in London in either 1765 or 1766).[254] Boulton probably thought about taking a room in Pall Mall in 1769-70 to display vases but nothing came of that.[255] In 1770 James Adam suggested that Boulton should take a lease on a corner shop with a front on the Strand.[256] This site was then being developed by the Adams.[257] Boulton was keen on the idea but wanted more than a corner shop; he envisaged a two-storey showroom with space on the ground floor for cheaper articles and an elegant room on the first floor for ormolu and silver plate. The upper room would be exclusive, relatively private, and primarily for the benefit of the nobility; this idea was based upon the finest shops in Paris.[258] James subsequently urged Boulton to have both a shop, to catch the attention of passing customers, as well as the showroom.[259] In 1771 the Adams began to prepare plans,[260] but that was as far as the scheme went.

These highly ambitious schemes came to nothing for several reasons. Boulton was anxious about the cost and management of a showroom and wanted an active partner in London who could provide substantial capital.[261] James Adam, interpreting a letter from Boulton as an attempt to involve the Adams in a partnership, not only rejected that idea but also suggested that Boulton should find another partner. Moreover, James refused to be involved in a retail business; the only financial contribution he was prepared to make was towards building costs.[262] Boulton pursued the matter no further with the Adams after 1771[263] and Boulton was unable to find another partner. This was just one of a number of abortive attempts by Boulton to establish an impressive London showroom.[264]

In view of the breakdown in negotiations, it is scarcely surprising that Boulton gained few orders from his connection with the Adams. Although they did supply one order for ormolu in 1770,[265] there is no firm evidence that the Adams supplied an order for silver or recommended a customer to purchase silver from Boulton.[266] However, on one occasion at least, it is likely that their recommendation was responsible for an order: in 1775 the banker Thomas Coutts sent Boulton three Adam designs for tureens which were to be made for the Earl of Findlater.[267]

Boulton also had a connection with the architect James Stuart. In 1770 he offered Boulton space for a showroom in a development between the Adelphi and the Strand; this distracted Boulton from his similar negotiations with the Adams but also eventually came to nothing.[268] In 1769 Stuart commissioned a bronze tripod from Boulton to surmount the Lanthorn of Demosthenes at Shugborough.[269] Acting on behalf of the Admiralty, Stuart provided Boulton in 1771 with an order for a silver tureen and dish;[270] the order was repeated in 1781[271] (Plate 14).

Boulton was on friendly terms with Robert Mylne[272] and this architect supplied some orders. In 1775 Boulton sent Mylne an estimate for silver chimney-piece ornaments for an unidentified Duke, though there is no evidence that these were supplied.[273] Mylne was, however, sent a few small orders for silver: candlesticks[274] and six dessert-spoons in 1777[275] (the latter were for Mylne's wife)[276] and six more spoons in 1778.[277]

As far as the silver business was concerned Boulton's most

important contact among architects was James Wyatt. Boulton was well-placed to build up a strong relationship with James: members of his family lived relatively close to Soho,[278] they were responsible for the Soho Manufactory;[279] and some worked for the partners.[280] The connection with James was particularly advantageous: following his successful rebuilding of the Pantheon in Oxford Street, London, in 1770, his reputation rapidly grew to the point in the mid-1770s[281] when it began to over-shadow Robert Adam's.[282]

The Wyatts commissioned some metalwork from Soho. In 1765-6 Samuel Wyatt was probably responsible for commissioning ormolu for Kedleston Hall, Derbyshire, where he was clerk of works.[283] James ordered some silver: in 1773 this amounted to £11 8s. 0d.;[284] in 1774 four pairs of candlesticks were sent for a friend of Wyatt's[285] and two pairs of candlesticks (to a design by Wyatt)[286] and three plates were sent to Wyatt in 1776.[287]

The total of documented instances of Boulton obtaining orders from the public as a result of his connections with architects was small; however, the importance of architects to Boulton's sales of silver was almost certainly far greater than can be directly proved. As we have seen, the final destination of some of the silver supplied to architects is not clear; some, at least, of that could have been for the use of others. There were probably more than just the recorded instances of architects recommending their clients to obtain silver from Boulton: such recommendations were not likely to be recorded in the firm's papers but in a number of cases the partners supplied silver to customers who had connections with architects of Boulton's acquaintance.[288] The appeal of the firm's work was enhanced through connections with architects and the use of their designs: Boulton boasted of his association with Wyatt[289] and ensured that the origin of one of the firm's patterns was clear to the public by referring to it as the 'Wyatt candlestick'.[290]

The day-to-day work of the partners' marketing in London was carried out by their agents. William Matthews was not only an agent and banker[291] for the partners but his house in Cannon Street[292] was used by Boulton as a base on business trips.[293] After 1775 Matthew's rôle in selling the partners' hardware goods in London was taken over by a succession of other agents. Early in 1776 John Wyatt was sent to London; he was formerly a clerk at Soho and was a cousin of the

architect James Wyatt.[294] John was paid on commission; for silver plate this was two-and-a-half per cent[295] but for Sheffield plate he received five per cent of the sale price.[296] In February 1777 Wyatt was dismissed because the partners were dissatisfied with his conduct.[297] He was immediately followed by Joshua Dyott, who had been an apprentice at Soho;[298] he sold the partners' goods as well as those of other manufacturers.[299] In February 1781 the partners in effect sacked Dyott by refusing to maintain their initial agreement that he should receive a commission of five per cent in addition to trade discounts (on non-silver items); after he was allowed only the normal trade discounts[300] there is little evidence that Dyott continued to work for the partners.[301] The reasons for the partners' treatment of Dyott are not clear but he had complained both about the strain of the job[302] and the quality of the partners' goods.[303] Dyott's rôle, particularly in selling expensive metalwork, had been undermined by John Stuart (formerly a clerk at Soho), who was sent to London in January 1778.[304] Shortly before, Dyott had been required to return to Soho all his pattern drawings for ormolu, silver, and Sheffield plate;[305] this was probably a preparation for Stuart's new job. Stuart received a commission of five per cent[306] and remained as an agent in London beyond the time of the Boulton and Fothergill partnership.[307]

These agents were required to do a variety of jobs. They handled the whole range of the partners' goods.[308] Boulton preferred to send large consignments to his agents for distribution (rather than small orders direct to customers) since this achieved some economy in transport costs.[309] In 1773, for example, Matthews received from Soho a pair of silver candlesticks with branches to deliver to Keith Stewart[310] and there were many other instances with other agents.[311] The agents were also required to secure orders: in 1776, for example, Wyatt obtained an order for a pair of silver candlesticks from General Frazer[312] and Wyatt regularly visited shops with drawings and prices for a variety of items.[313]

Some of the partners' most important orders for silver were for customers in London. Mrs Elizabeth Montagu bought a service large enough for the use of nine people;[314] the order included tureens, dishes,[315] plates,[316] ladles,[317] and salt-cellars[318] (Plates 67 and 86). For a service of plate Lady Morton made payments of

£26 16s. 8d.[319] and £52 12s. 11d.;[320] however, the value of the items was substantially more since her account was credited with 300oz. of old silver which was valued at 5s. 5½d. per oz.[321] Other substantial orders were produced for the Earl of Macclesfield,[322] Sir Charles Bingham,[323] and Sir George Shuckburgh.[324]

The success of marketing silver in London would have been greater if the partners' agents had not operated under a number of difficulties. One of these, according to John Wyatt, was the partners' normal practice of requiring customers to order silver plate from drawings (or from catalogues, as occasionally happened with trade customers from the mid-1770s when the partners produced catalogues basically intended for Sheffield plate).[325] Many customers wished to see finished pieces of plate to provide them with a clear idea of the firm's workmanship. Given that the partners were unwilling to make samples,[326] Wyatt suggested that customers could be shown silver plate completed for other clients.[327] This was managed only occasionally: for example, in 1777 Charles Vere was shown parts of Mrs Montagu's service of plate before he made his order.[328]

Wyatt was also unhappy about visiting customers to obtain orders: he found that journeys to potential clients were often wasted since they were often out or refused to see him; moreover, the gentry, merchants, and shopkeepers often treated him in a haughty manner. He thought his difficulties would be reduced if clients visited him,[329] but his accommodation was unsuitable for this purpose. When Wyatt first went to London he took lodgings on the second floor of a house in Henrietta Street, Covent Garden, which was not fit for exhibiting plate.[330]

Wyatt's position partially improved in March 1776 when he rented a house in Southampton Street[331] which was fitted with two show cases supplied by Ince and Mayhew.[332] Wyatt regarded this as barely satisfactory: he looked forward to having a large showroom.[333] Furthermore he can hardly have failed to be aware that Covent Garden - where Southampton Street and Henrietta Street are situated - was no longer the highly fashionable area that it had been at the turn of the century. The aristocracy had largely moved to the West End of London.[334]

Plans for the construction of an impressive exhibition room in a fashionable part of London were considered for much of 1776. The

architect Samuel Wyatt identified Oxford Street, Bond Street, and Gerrard Street as suitable places;[335] he prepared plans for a building but Boulton dismissed them as no more than ordinary shops.[336] He proposed instead '... an elegant lofty long room...' about 700 feet square which would be large enough for the firm's whole range but particularly appropriate for expensive items; Boulton also preferred a site in or near the City.[337] Wyatt hoped to involve an unidentified young man whose father was prepared to advance £3000; the young man was either to form a partnership with Wyatt alone or with Wyatt, Boulton, and Fothergill.[338] Late in 1776 there was no further mention of the partnership or the plan to build an impressive warehouse and discussion later turned upon a cheaper alternative: converting a house in Henrietta Street which was available either for purchase or letting.[339] Boulton and Fothergill were restrained by their lack of capital but they did agree to proceed if mortgage payments could be deferred until 1778[340] and went as far as to make arrangements for the payment of £200 towards the purchase.[341]

These plans went no further; in December 1776 the partners abruptly changed their minds and instructed Wyatt to abandon plans for the purchase of the house in Henrietta Street.[342] Later Stuart also thought that an impressive showroom was important for his success[343] but he too was unsuccessful in persuading the partners to invest their capital in this way.

Another drawback in marketing in London was noted by Wyatt: many customers objected to the lack of a workman there who could make repairs and modifications to silver. Not only did this deprive the partners of such work on London customers' old plate[344] but it occasionally caused difficulties with silver made by the partners: Sir Robert Rich's épergne (Plate 60) had to be returned to Soho on two occasions for further work before the client was satisfied.[345]

There was a further difficulty in competing with London's silversmiths: the standard of silver passed at Goldsmiths' Hall was lower than that passed by The Assay Office at Birmingham (which from 1773 the partners were required, by law, to use).[346] Legally each troy pound of sterling silver had to contain 11oz. 2dwt. of pure silver and 18dwt. of alloy. Throughout the period that the partners made silver, London's silversmiths frequently produced silver plate which contained 2½dwt. less silver per troy pound than was legally

required.[347] At the Birmingham office the proper limit was adhered to and the partners reckoned that this added ½d. per ounce to the price they charged customers in comparison with their London rivals.[348] During the mid-1770s Boulton was determined to overcome the problem and in 1774 he contacted J. A. Wedderburn, the Solicitor General, to press for a debate in Parliament.[349] Boulton also enlisted the support of Lord Dartmouth: in 1775 the latter got a spoon marked at Goldsmiths' Hall[350] even though it was below the legal standard.[351] However, after 1776 Boulton dropped the matter; perhaps his resolve was weakened by the refusal of Sheffield's silversmiths to share the cost of pursuing the issue, even though they shared Boulton's sense of grievance.[352]

The partners were embarrassed by the difference between their own and London's prices but normally passed on that difference to their customers. In 1777, fearing that Mrs Montagu would find the price too high, the partners sent her copies of letters from their bullion dealer to prove how much they paid.[353] Boulton had to explain his difficulty to a number of customers who spotted the anomaly; although they generally accepted the position[354] at least on one occasion it caused a heated dispute with a trade customer in Bristol and the partners only resolved the matter when they gave him an abatement of 8s. 6d. on twelve sugar-basins.[355]

Boulton did little to encourage trade customers in London to buy his silver plate. London's goldsmiths thought they virtually had a right to discounts: they obtained them from Sheffield's silversmiths[356] and in 1771 two London firms, Henry Morris, and John Parker and Edward Wakelin, pressed Boulton for a similar concession when they ordered candlesticks. Although Boulton yielded to pressure on those occasions,[357] he subsequently stuck to his policy of refusing trade discounts.[358] It is also likely that London's silversmiths were widely offended by Boulton's refusal to supply silver without his and Fothergill's makers' marks: trade customers wanted to put their own marks on pieces. In 1776 Thomas and Robert Gray made such a request which was rejected on the grounds that it was illegal since the passing of the 1773 Assay Office Act.[359] However, this did not prevent the partners from doing so with at least one order for a customer in Scotland[360] and the partners' attitude suggests that they were intent upon selling direct to the public through their own London

agents. The partners were selective in advertising their silver to trade customers; for example, in 1772 James Goddard was advised of the partners' whole range, but with the exception of boxes, no mention was made of silver plate.[361]

The partners did, however, strongly promote their silver amongst trade customers in London on one occasion. In 1772 they sent a consignment of silver plate, silver filigree, and Sheffield plate to their London agent William Matthews. The partners invited the following trade customers to see the display: Morris; Parker and Wakelin; William Townsend; Stephen Unwin; Nathaniel Jefferys and Drury Drury; Edward Scales; Woolley and Heming; and William Webb.[362]

Although these firms bought substantial quantities of Sheffield plate,[363] they purchased very little silver. There is no evidence that Webb, Scales or Unwin bought any silver. Woolley and Heming,[364] and Jefferys and Drury[365] were each supplied with silver filigree on one occasion. Apart from the two pairs of candlesticks bought by Morris in 1771[366] he only otherwise bought a small amount of unspecified plate in 1778.[367] Townsend is only known to have bought nine dozen silver-gilt buttons.[368] Boulton and Fothergill's main trade customer in London was Parker and Wakelin: apart from the two pairs of candlesticks they bought in 1771,[369] they purchased three more pairs in 1776.[370] After 1776, when the firm became John Wakelin and William Taylor,[371] they bought four pairs of candlestick-branches[372] and two pairs of rings.[373] Although there were occasional instances of other trade customers in the capital buying silver,[374] the total was not large.

Contacts made in London provided Boulton with some important orders for country houses. In 1772 Boulton met Sir Harbord Harbord at his home in Albemarle Street[375] and sketches of silver plate were later taken there.[376] Harbord ordered a substantial amount of plate; some of this may have been for Albemarle Street[377] but a coffee-pot, a tea-urn, and a bread-basket were directed in 1774 to his country house, Gunton Hall, in Norfolk.[378] Other orders were obtained in London for country houses not only in England,[379] but on one occasion for Sir John Middleton's house near Denbigh[380] (which was one of the very few orders sent to Wales).[381]

By far the largest number of orders from provincial areas derived from customers contacting Soho: however, the demand was usually for

straightforward items. Some customers made orders while visiting Soho;[382] for example, Dr Willis of Greatford, near Stamford, ordered a dozen spoons in 1776.[383] A far larger number of orders were made by post, sometimes by the public[384] but mainly by the trade. The latter normally purchased basic items of silver such as spoons, salt-cellars, tea-tongs,[385] and tankards;[386] otherwise their silver orders were usually for filigree.[387]

The provincial distribution of the partners' sales of silver was strongly determined by the existence, or absence, of competitors in an area. To a large degree the provincial centres of silversmithing were indicated by the presence of assay offices. During the Boulton and Fothergill partnership, apart from the assay offices in Birmingham and Sheffield from 1773,[388] others existed at Exeter, Chester, and Newcastle-upon-Tyne; although Norwich, York and Bristol had statutory rights to assay offices, these no longer functioned.[389] In those towns where the local silversmiths were numerous enough to support an assay office the partners received hardly any enquiries, let alone orders, for silver[390] (except as we have seen, from Birmingham and adjacent towns).[391] Very occasionally the partners obtained orders or enquiries from customers living in or near Norwich,[392] York,[393] and Bristol;[394] they also sometimes received trade orders from such towns as Hull,[395] Kendal,[396] Manchester,[397] Liverpool,[398] and Chesterfield.[399]

The partners did little to stimulate demand from provincial customers. They rarely visited provincial trade customers nor did they have their own agents there;[400] normally the partners informed these customers of the range of silver wares by post but then only after the customer had made enquiries or placed an order.[401]

The main exception to this general policy was in Bath, the principal centre of provincial eighteenth-century elegance;[402] however, as far as silver was concerned, Boulton's efforts were basically directed at promoting filigree and the results were not encouraging. The main contact was a shopkeeper, William Evill, who met Boulton in 1769;[403] in 1771 Evill requested goods on a sale or return basis.' The partners agreed, since they wished to stimulate sales in the area[404] and the selection included silver filigree;[405] however, a large quantity was returned[406] and on only one subsequent occasion is he known to have bought silver.[407] Another shopkeeper in

Bath was allowed silver filigree on a sale or return basis,[408] but there is no further evidence of dealings with her over orders for silver. Although a few members of the public who lived in or near Bath bought silver plate, the sales were generally limited.[409]

As far as the silver business was concerned, several factors led the partners to give a low priority to marketing in provincial areas. In part this was due to the low level of demand. In 1772-3 104,641 lb. 4oz. 15dwt. were marked at Goldsmiths' Hall, London;[410] the comparable figure for Exeter was 1841b. 14oz. 17dwt.[411] and for Newcastle-upon-Tyne 10131b. 2oz. 0dwt.[412] These figures show that any concerted attempt to promote sales in provincial areas would have met with limited results. Quite apart from the the partners' general refusal to offer trade customers any incentive to buy silver plate,[413] the partners developed an almost contemptuous attitude towards such customers in provincial areas when the general demand for their silver plate was at its height in the mid-1770s.[414] On occasions they deflected orders for tankards, spoons and other straightforward items by claiming, quite falsely,[415] that they did not make them.[416] On one occasion when they rejected an order for a toothpick-case, they stated that they were too busy with more important orders.[417]

Boulton's indifference towards trade customers in England (where the partners' proximity and reputation made it likely that members of the public would come to him for their orders) is highlighted by his attitude towards the Edinburgh goldsmith, Patrick Robertson. Even though English silver enjoyed increasing popularity in Scotland following the Act of Union in 1707,[418] Boulton felt that he was unlikely to gain much of that market unless he made a strong contact there.[419] Robertson's connection with Boulton pre-dated the expansion of the silver business (Robertson bought ormolu in 1771)[420] and subsequently he was the partners' only customer who was allowed silver plate on sale or return. In 1772 Robertson returned two pairs of cups[421] but in 1774 and 1775 he was sent a few pairs of candlesticks, spoons, salt-cellars, bottle-tickets, bottle-stands, and a cruet-frame[422], all of which he kept.[423] In 1775 Robertson sent Soho candlesticks for repair.[424] In the following year he bought two pairs of candlesticks; illegally, Boulton did not have these assayed[425] and this is the only known instance of the partners failing to do so after the foundation of The Assay Office in Birmingham.

Presumably Robertson put his own maker's marks on these candlesticks. Although it is possible that Robertson bought more silver plate from Soho[426] it is likely that Boulton was disappointed by the number of Robertson's orders: the partners were dismayed by the general level of their sales in Edinburgh.[427]

Despite Boulton's special encouragement of Robertson, the partners' most valuable contact for the sale of silver plate in Scotland was Lord Hope. In London, Hope bought from the partners plate worth £250 by 1777. He had a house, Preston Hall, near Edinburgh[428] and friends including Thomas Graham of Balgowan near Perth and the Earl of Hopetoun in Edinburgh.[429] Their purchases of silver from Boulton were substantial: Hopetoun's came to £70 15s. 4d.[430] and Graham paid instalments of £166 7s. 11d., £62 14s. 5d.,[431] and £33 13s. 4d. in 1778 for a service of plate.[432]

Boulton's export of silver to Ireland grew out of strong trading links: in 1763 Ireland imported goods from Sheffield and Birmingham worth £120,000.[433] The partners' earliest silver order for Ireland was in 1772 when a set of escutcheons, and door-knobs (Plate 16), were provided for the Earl of Ely's new home in Dublin;[434] that the order was placed with Boulton is not surprising since Birmingham had a reputation for producing door-furniture[435] and he had links with trade customers in Ireland.[436] Some silver plate orders did come from the public in Dublin,[437] which suggests that Boulton had something of a reputation there. In other cases orders were placed by visitors to Soho;[438] the most important instance was Cornelius O'Callaghan's visit in 1777 when he ordered various silver articles, including a cup and cover (Plate 81), together worth £123 8s. 0d.,[439] which were subsequently sent to his home at Shanbally, near Clonmel.[440]

There was a long tradition for English plate finding its way to the continent via British ambassadors, who took plate as ambassadorial gifts or for their own needs; Russia[441] and Vienna were two places where English silversmiths benefited from ambassadorial contacts.[442] Boulton was in touch with many ambassadors[443] but two were of particular importance. In 1777 the Earl of Malmesbury, then the British Ambassador to Russia, dined with Mrs Montagu who had recently received her service of silver plate from the partners; she recommended Boulton to Malmesbury.[444] A silver service was later sent to the Earl in St Petersberg[445] for which he was charged £1,386

3s. 4d.[446] and £159 16s. 0d.[447] The other British ambassador of importance for Boulton's silver business was Sir Robert Murray Keith; in 1772 Boulton received a letter of introduction for Sir Robert who had recently been appointed British Ambassador to Vienna.[448] In 1773 he ordered at Soho[449] silver plate worth £268 19s. 0d.;[450] more silver was sent to him in 1774[451] and in the following year candlesticks and branches were sent to him via Hamburg.[452]

Boulton's contacts with Russians were particularly important. In 1771 a consignment of ormolu vases was sent to Lord Cathcart, the British Ambassador to the Court at St Petersberg; he mentioned them to the Empress, Catherine II, who bought them all.[453] As far as the silver business was concerned, it was a foreign ambassador, Mussin Pushkin, the Russian Ambassador to London, who did most to promote sales abroad for the partners. Boulton dined with him on one occasion in London during 1772.[454] Quite apart from Pushkin's later purchases of silver plate and other articles for himself,[455] he provided M. F. A. Müller, an agent employed by the partners, with a letter of introduction to members of the nobility in Russia[456] and this led to substantial orders of silver plate.[457] In 1775 Pushkin sent a letter of introduction to Boulton for the Duke of Holstein-Gottorp[458] and his travelling companion, who both intended to visit Soho.[459] This companion, Colonel de Staal[460] discussed an order for silver cutlery at Soho;[461] this was completed in 1777[462] and came to £273 6s. 0d.[463] The Duke's purchases of silver plate were very substantial: for the bulk of the order, sent in 1777, he was charged £1,202 19s. 4d.[464] and later purchases came to £293 2s. 3d.[465]

Russia received a higher proportion of the partners' silver than any other foreign country; quite apart from the exports which derived from ambassadorial contacts, the silver business benefited from the partners' trade contacts. They prided themselves on their knowledge of trade with Russia.[466] The partners had many agents in St Petersberg[467] and some purchased silver: for example, James Hill and Co. bought buckles worth £66 15s. 8d. in 1778;[468] and Johann Erich ordered a presentation plate in 1780.[469]

Trade contacts which the partners had built up earlier, essentially for the export of other products,[470] yielded some benefits to the silver business; however, these customers normally bought only inexpensive silver pieces. London merchants usually bought such

items as buttons and spoons.[471] It is not normally clear where merchants sent the partners' products; this is also true of silver exported to the partners' own agents abroad who in many cases were only identified in the firm's ledgers and letters by code-names.[472] Usually these agents' orders for silver formed a small part of a large consignment of miscellaneous items;[473] for example, the only silver pieces in an order for 'ARZ Vine' in 1780 were eight punch-ladles, six filigree neckcloth-runners and a dozen filigree purse-runners together worth £4 18s. 6d.; however, the whole order, which otherwise consisted of tortoise-shell 'toys' and Sheffield plate came to £74 14s. 9d.[474] Orders consisting of silver alone were rare.[475]

The amount of silver plate exported by the partners was limited in comparison with their other products. In 1775 a London merchant received a full list of the firm's range with the comment that all of the items, apart from silver plate, were regularly sent to Holland.[476] Two years later the partners listed the articles most frequently exported to Paris; these included Sheffield plate, ormolu and a range of cheaper items but the list made no mention of silver plate.[477]

There was less determination to build up the export of silver through merchants and agents than the partners showed in building up markets for cheaper items. In 1772 Thomas Craig of Dublin received a full list of Soho's range but, with the exception of filigree, no mention was made of silver.[478] In 1773 a Samuel Tonge offered to obtain orders for the partners when he travelled through France, Flanders, and Italy but the partners only wanted him to obtain large orders for buttons.[479] Similarly in 1777 two correspondents offered to extend the partners' number of contacts in Spain and Italy; this was accepted but the partners only wished to extend their orders for basic goods: no mention was made of silver plate.[480] One of the partners' agents in Switzerland, with whom they had been in contact since about 1775, expressed surprise that he only discovered in 1780 that the partners had been making silver plate for many years.[481]

There is no stated reason for this apparent reluctance to export silver. A number of factors may have been responsible: tariffs were high in a number of countries,[482] and although the partners checked on the reliability of customers abroad,[483] some proved to be less than trustworthy.[484] The partners also constantly complained of late payments from abroad[485] which was often due to unfavourable exchange

rates.[486] However, these difficulties applied to the export of all items but they did not deter the partners from exporting buttons, 'toys' and Sheffield plate in large quantities.[487] Moreover, the larger part of ormolu produced at Soho was exported.[488]

There were, however, a number of significant differences in exporting silver. The high level of ormolu exports was in a large measure due to over-production in the early 1770s[489] and the reluctance of English patrons to purchase this article:[490] here the partners were forced to find another market. These circumstances did not apply to silver: the partners produced silver to order[491] and they were finding it hard to cope with domestic demand in the mid-1770s.[492] Moreover, when the partners were planning the silver business they were particularly alarmed by the extent of debts abroad: in April 1773 they were owed £7,744 15s. 3d. of which £5,054 3s. 4d. were for foreign debts.[493] The latter included £268 19s. 0d. for silver plate made for Sir Robert Murray Keith.[494] Later, in 1774, Müller's trip to Russia and Poland resulted in several thousand pounds worth of goods (including silver plate) which were never paid for.[495] In these circumstances a certain caution in sending expensive items abroad is understandable.

A factor which limited demand abroad for English silver was the difference in the intrinsic value of silver plate. Boulton was probably not aware of this difference when silversmithing at Soho was in its infancy[496] since in 1775 he intended to find out the intrinsic standard of plate in Paris, Hamburg and Amsterdam.[497] Boulton probably did not gather this information (at least in detail) at the time since the same question was asked in 1783 by the Birmingham Commercial Committee, of which Boulton was a member.[498] Although the Committee then thought that the standards were lower abroad[499] it was necessary to conduct detailed research and at a subsequent meeting, in 1785, it was reported that the export of silver would have been greater if English silversmiths were not required to make plate containing 11/12ths of fine silver when the required proportions abroad were only 9/12ths or 10/12ths.[500] Later, Boulton learned that French plate was about three per cent less pure than English sterling silver[501] and was correspondingly cheaper.[502] If Boulton had been fully aware of these facts when planning the silver business he would have been less optimistic then[503] about exporting silver.

Boulton's sales of silver conformed to a general pattern. The largest quantities were sold to the public; despite the problems of selling silver in London the highest concentration was there since the demand was large and the efforts of Boulton and his salesmen were strongest;[504] important orders were obtained from the West Midlands where Boulton and the Soho Manufactory were well-known and where there was little competition.[505] Although some important orders derived from the public elsewhere in the British Isles[506] and abroad the total number of orders was not large; this reflects both the lack of demand and a limited marketing effort.[507] The most important commissions came from the wealthiest sections of society[508] though numerous small orders derived from society's lower strata.[509] The bulk of the orders from trade customers were for 'toys' and filigree where the partners offered discounts;[510] however, the trade's purchase of silver plate was severely limited both by the partners' less than vigorous marketing campaign and the decision to refuse the concessions which Soho's trade customers normally enjoyed.[511]

The sales of silver plate fell short of the level Boulton aimed at. He was initially unaware of the lower intrinsic value of silver plate abroad and the firm's ambition to export was also inhibited by fears over payment.[512] The partners were unable to afford Boulton's ambitions to open an impressive showroom in London[513] or the provision of samples.[514] He felt that in certain quarters his work did not enjoy as high a reputation as that of London's silversmiths[515] and he suffered from the unfair competition which derived from the lower standard of silver accepted at Goldsmiths' Hall.[516]

Yet the level of silver plate sales was not just restricted by Boulton's inability to control a series of difficulties; sales were also severely and inevitably limited by his negative attitude towards trade customers.[517] This was largely motivated by his determination to enhance his own and Soho's reputations by selling silver plate direct to the public and in particular to the most important and influential members of society.[518] Although Boulton wanted a higher level of sales than he achieved, prestige, rather than the highest possible level of sales, was his main priority when planning the silver business.

Nevertheless, the amount of silver plate made by the partners in the mid-1770s did rapidly increase. Prior to the foundation of The

Assay Office in Birmingham in 1773 the highest quantity of silver sent to Chester in any assay year was in 1771-2 when 1,340oz. 14dwt. 0gr. (plus a few other articles) were assayed;[519] in 1773-4 9,833oz. 5dwt. 12gr. were hallmarked at Birmingham and in 1776-7 the figure increased to 11,831oz. 3dwt. 12gr., which was the highest achieved during the Boulton and Fothergill partnership.[520] This total made the partners one of the larger producers of silver in England though the total was exceeded by some firms in London.[521]

NOTES

CHAPTER II

THE MARKETING OF SILVER

1 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp. 154-5, B. & F. to Mr Udney, 12 June 1773.

2 T.S. Ashton, *Economic Fluctuations in England 1700-1800 (1959), pp. 183-4 (hereafter cited as* Ashton, *Economic Fluctuations*).

3 Neil McKendrick, 'Introduction. The Birth of a Consumer Society: the Commercialization of Eighteenth-century England' in Neil McKendrick, John Brewer and J.H. Plumb, *The Birth of a Consumer Society: the Commercialization of Eighteenth-century England* (1982), pp. 1-6 (hereafter cited as McKendrick, 'Introduction: The Birth of a Consumer Society').

4 The annual totals quoted in the text have been calculated by adding together the annual totals collected by the senior and junior assayers and reported in the various Court Minute Books of the Goldsmiths' Company (see following notes). I am grateful to Mr J.S. Forbes, Deputy Warden, Assay Office, Goldsmiths' Hall for advice in the interpretation of these figures and to Miss Susan Hare, Librarian of the Goldsmiths' Company for the information that the figures are the best available guide to production in London prior to 1776 (see pp. 52-3).

5 G.H.L., Goldsmiths' Company, Court Minute Book 1742 to 1754. New Series 15; No 1558: B39, pp. 34-5, Report of the Diet, 28 May 1743.

6 G.H.L., Goldsmiths' Company, Court Minute Book 1742 to 1754. New Series 15; No 1558: B39, p. 390, Report of the Diet, 28 May 1753.

7 G.H.L., Goldsmiths' Company, Court Minute Book, 1754 to 1767. New Series 16; No 1559: B39, pp. 281-2, Report of the Diet, 28 May 1763.

8 G.H.L., Goldsmiths' Company, Court Minute Book, 1767-1777. New Series 17; No 1560: B39, pp. 241-2, Report of the Diet, 28 May 1773.

9 de Castro, *Law and Practice of Hall-marking*, pp. 54-5.

10 Arthur Grimwade, *Rococo Silver 1727-1765*, Faber Monographs on Silver (1974), pp. 18-20 (hereafter cited as Grimwade, *Rococo Silver*).

11 William Chaffers, *Hall Marks on Gold and Silver Plate...* (1912), p. 97 (hereafter cited as Chaffers, *Hall Marks*).

12 Grimwade, *Rococo Silver*, pp. 18-20.

13 de Castro, *Law and Practice of Hall-marking*, pp. 54-5.

14 Photostats Shelburne-Garbett. Papers in the William Clements Library U.S.A., Samuel Garbett to the Marquess of Lansdown, 2 December 1784.

15 Photostats Shelburne-Garbett. Papers in the William Clements Library U.S.A., 'Note of Samuel Garbett relative to London Goldsmiths', December 1784.

16 Photostats Shelburne-Garbett. Papers in the William Clements Library U.S.A., Samuel Garbett to Earl of Shelburne, 14 October 1784.

17 Box E2 Ef to Ez (hereafter cited as Box E2), item 100, M.B. to Joseph Ewart, 28 April 1791.

18 Cash Book, Birmingham Boulton and Fothergill Cash Book, 1763-1765 (hereafter cited as Cash Book 1763-5), 7 March 1763, Payment for £60 0s. 0d. for bullion.
19 See notes 14, 15, 16, above.
20 Box S1 item 200, Lord Shelburne to James and Robert Adam, 16 April 1765. Shelburne gave M.B. a letter of introduction to the Adam Brothers and asked them to order metalwork on his behalf from the Soho Manufactory.
21 See p. 26.
22 Sir Ambrose Heal, *The London Goldsmiths 1200-1800...* (1935, reprint 1972), p. 183 (hereafter cited as Heal, *London Goldsmiths*).
23 Boulton M. (Miss Anne Robinson, Mrs Boulton), item 21, M.B. to Mrs Boulton [1762].
24 Boulton M. (Miss Anne Robinson, Mrs Boulton) item 18, M.B. to Mrs Boulton, 15 February 1764 and item 33, M.B. to Mrs Boulton, 14 October 1766.
25 *Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent*, quoted in Westwood, *Assay Office, Birmingham Part 1*, p. 12.
26 The Sheffield and Birmingham silversmiths were aware of the figures since they were published in a report which formed part of the investigations made at the time when these silversmiths were attempting to secure assay offices for their towns (see note 27).
27 *Report from the Committee Appointed to Enquire into the Manner of Conducting the Several Assay Offices in London, York, Exeter, Bristol, Chester, Norwich and Newcastle-upon-Tyne* (1773), p. 63.
28 Berg, *Age of Manufactures*, pp. 301-2.
29 Letter Book E, p. 8, M.B. to the Earl of Warwick, 30 December 1770.
30 See pp. 132-5.
31 See p. 113.
32 *Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent* (1773) quoted in Westwood, *Assay Office, Birmingham, Part 1*, p. 21.
33 Neil McKendrick, 'The Consumer Revolution of Eighteenth-century England' in Neil Mc Kendrick, John Brewer and J.H. Plumb, *The Birth of a Consumer Society: the Commercialization of Eighteenth-century England* (1982) pp. 9-33 (pp. 9-11) citing e.g. N. Forster *An Enquiry into the Present High Prices of Provisions* (1767), p. 41. (hereafter cited as McKendrick, 'The Consumer Revolution of Eighteenth-century England').
34 ibid., p. 24.
35 See p. 29.
36 Rule, *Labouring Classes*, pp. 66-7.
37 See pp. 75-6.
38 Walker Z. Snr 1, item 12, 26 April 1773. The coffee-pot was made for Lord Clermont.
39 Ledger 1776-8, p. 153, 15 July 1776. Order for Robert Hynam, St Petersburg.
40 The estimates were made by James Massie. (Peter Mathias, 'The Social Structure in the Eighteenth Century: a Calculation by Joseph Massie', *Economic History Review*, second series, Vol. X, No. 1 (August 1957), pp. 30-45 (pp. 42-3).
41 Berg, *Age of Manufactures*, p. 308.

42 Letter Book G, pp. 485-6, B. & F. to The Very Reverend Dean Addenbroke, 9 November 1775.
43 Swinney, *The New Birmingham Directory*, (1774), Preface. The extensive description of Soho and the Frontispiece which is a sketch of the Manufactory, suggest that this was compiled with the help of B. & F. Swinney worked at 76, High St., Birmingham (ibid., title-page).
44 Letter Book F, p. 102, B. & F. to the Earl of Hertford, 28 November 1772.
45 Letter Book E, p. 218, B. & F. to Sir Alexander Gilmour, 12 October 1771.
46 Letter Book G, p. 233 [B. & F.] to Joseph Green, 21 January 1775.
47 Letter Book G, J. H. to Lady Belcarres, 7 February 1777.
48 Day Book 1779-81, p. 481, 9 November 1780. Order for Hudson and Drury, Birmingham.
49 Day Book 1779-81, p. 146, 29 February 1780. Order for Hugh Johnston & Co.
50 Cash Book, Soho Boulton and Fothergill Cash DR Book, 1772-1782 (hereafter cited as Cash Book 1772-82), 23 March 1774. An order for Mr Newbold.
51 See p. 25.
52 See pp. 31-5.
53 See pp. 32-4.
54 Letter Book F, p. 331 [B. & F.] to Robert Albion Cox, 30 September 1773.
55 Letter Book F, p. 259 [B. & F.] to Robert Albion Cox, 7 July 1773.
56 Journal, Soho Boulton and Fothergill Journal, 1776-1778 (hereafter cited as Journal 1776-8), p. 362, 10 July 1777.
57 Journal 1776-8, p. 492, 11 March 1778.
58 See Appendix V, entry on Thomas Caldecott.
59 Letter Book F, p. 236 [B. & F.] to Robert Albion Cox, 7 June 1773.
60 Journal 1776-8, p. 501, 19 March 1778.
61 Letter Book H, pp. 921-2 [B. & F.] to George Scott, 19 April 1779.
62 Fothergill etc., item 78, M. B. to J. F., 23 January 1772.
63 Letter Book B, p. 325 [B. & F.] to Benjamin Molineux, 28 February 1766.
64 See p. 23.
65 Goodison, *Ormolu*, pp. 38-40.
66 ibid., p. 92.
67 Letter Book G, p. 616, B. & F. to John Turner, 20 May 1776. (Order for a coffee-pot to be made in three or four weeks.)
68 B. R. L., B. W. C., Portions of a Letter Book, 1773, p. 115, B. & F. to Dr Wall, 4 May 1773. (Order for cream-buckets ordered on 2 April and delivered early in May.)
69 A service for Elizabeth Montagu was started in 1776 (Montagu Mrs, item 9, Elizabeth Montagu to M. B., 8 April 1776) and finished in 1778 (Letter Book I, p. 190, J. H. to John Stuart, 25 March 1778).
70 See p. 128.
71 Customers often asked George Wickes to re-fashion their old plate (Elaine Barr, *George Wickes 1698-1761: Royal Goldsmith* (1980), p. 113, hereafter cited as Barr, *George Wickes*). Wickes did however have some silver on display (ibid., p. 30).
72 See pp. 180-3.

73 Letter Book E, pp. 3-4, J. W. to Bustamante & Co., 3 January 1770.
74 e. g. Day Book 1779-81, p. 285, 8 June 1780.
75 Letter Book G, p. 597, J. H. to Richard Conquest, 25 April 1776.
76 Letter Book K, p. 296, B. & F. to H. F. Bargum, 13 November 1780. Bargum was to be sent a catalogue of Sheffield plate.
77 Goodison, *Ormolu*, p. 95.
78 Fothergill etc., item 139, M. B. to J. F., 20 April 1773.
79 Fothergill etc., item 141, J. F. to M. B., 28 April 1773.
80 Letter Book E, p. 535, B. & F. to Sir Harbord Harbord, 1 August 1772. There were a few exceptions (see Chapter IV note 298).
81 Letter Book E, p. 291, B. & F. to Henry Morris, 2 December 1771.
82 Letter Book E, pp. 173-4, B. & F. to William Evill, 14 August 1771.
83 Goodison, *Ormolu*, p. 80. Ormolu was returned by the London firms Le Coq and Wilkinson in 1771 and 1772 respectively.
84 Letter Book E, p. 291, B. & F. to Henry Morris, London, 2 December 1771, (For an exception see p. 74)
85 Letter Book G, p. 541, B. & F. to Miss Florry, 22 February 1776 and Letter Book I, Boulton and Fothergill, 1777-1782 (hereafter cited as Letter Book I) p. 100, B. & F. to Samuel Ballin, 13 October 1777.
86 Letter Book G, p. 760, B. & F. to J. P. Du Roveray, 3 December 1776.
87 Letter Book G, pp. 172-3, B. & F. to Patrick Robertson, [November 1774].
88 e. g. Letter Book E, p. 243, A. J. C. to William Evill, 29 October 1771.
89 Fothergill etc., item 78, M. B. to B. & F., 23 January 1772. M. B. suggested sending stocks to Jefferys and Drury, London.
90 B. R. L., B. W. C., Portions of a Letter Book, 1773, p. 129, B. & F. to Wooley and Heming, 22 May 1773.
91 Day Book 1779-81, p. 22, 30 October 1779 (order for Mr Tutin, Birmingham). Also Day Book 1779-81, p. 83, 20 December 1779 (order for Charles Foster, Walsall).
92 Letter Book E, p. 277, B. & F. to Parker and Wakelin, 16 November 1771.
93 [M. B.] Notebook 7, 1771, p. 60.
94 Letter Book E, p. 277, B. & F. to Parker and Wakelin, 16 November 1771.
95 Letter Book E, p. 375, A. J. C. to William Matthews, 22 February 1772 and Letter Book G, p. 263, J. H. to John Perchard, 18 February 1775.
96 Letter Book G, pp. 169-70, B. & F. to John Turner, 31 October 1774.
97 Letter Book G, p. 547, B. & F. to James Bellis, 26 February 1776.
98 Goodison, *Ormolu*, p. 80.
99 e. g. Letter Book G, p. 547, B. & F. to James Bellis, 26 February 1776. This customer was given a discount of 10% with a further allowance of 5% for prompt payment. See also Goodison, *Ormolu*, p. 80.
100 See Chapter II note 358.
101 The following letters confirm that discounts were not given: Letter Book E, p. 546, A. J. C. to William Matthews, 16 - 21 August 1772; Letter Book E., p. 49 [B. & F.] to Nathaniel Jefferys, 18 or 19 February 1771. The following accounts confirm that discounts were not given: an account for two pairs of candlesticks supplied to Finch, Russell & Co.,

London, (Day Book 1779-81, p.90, 28 December 1779); and account for spoons, also supplied to Finch, Russell & Co., (Day Book 1779-81, p.108, 15 January 1780).

102 Letter Book G, p.382, B. & F. to James Folliott, 25 July 1775.

103 Letter Book G, pp.378-9, B. & F. to Josiah Birch, 19 July 1775.

104 See p.113.

105 See pp.113-4.

106 On the assumption that a pair of Sheffield plate "Lyon" candlesticks required the same weight of metal as a pair in silver (38oz., see p.113) the cost of the plated metal would have come to between 19s. 0d. and £1 18s. 0d. since different qualities were priced between 6d. and 1s. per oz. (see p.214). As a pair in Sheffield plate cost £7 18s. 6d. (see p.54) the fashioning charge came to between £6 19s. 6d. and £6 0s. 6d.

107 See p.57.

108 See Chapter II note 357.

109 Rowe, *Adam Silver* p.84. Here Rowe states that Boulton normally allowed Wakelin and Taylor, who succeeded Parker and Wakelin in 1776 (ibid., p.44) a discount of 20% with a further discount of 5% for prompt payment, on silver, ormolu and Sheffield plate. In fact, these discounts normally applied to Sheffield plate only (Letter Book E, p.642, B. & F. to Parker and Wakelin, 21 November 1772). Wakelin and Taylor were not normally allowed discounts for silver plate (Day Book 1779-81, p.111, 20 January 1780).

110 Rowe, *Adam Silver*, p.84.

111 *Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths and Plateworkers of the City of London and Places Adjacent* (1773). Quoted in Westwood, *Assay Office, Birmingham, Part I*, p.21.

112 Letter Book D, p.30, M.B. to James Adam, 1 October 1770.

113 Goodison, *Ormolu*, pp.84-6.

114 Neil McKendrick, 'The Commercialization of Fashion', in Neil McKendrick, John Brewer and J. H. Plumb, *The Birth of a Consumer Society: the Commercialization of Eighteenth-century England* (1982), pp.34-99 (p.71), hereafter cited as McKendrick, 'The Commercialization of Fashion'.

115 Letter Book C, p.30, M.B. to J.H. Ebbinghaus, 20 October 1767.

116 Letter Book E, p.92, J.W. to William Gurnall, 30 April 1771.

117 Letter Book G, p.720, B. & F. to Peter Du Roveray, 17 October 1776.

118 Letter Book E, p.123, C. W. to Mayhew and Ince, 8 June 1771.

119 McKendrick, 'The Commercialization of Fashion', p.77.

120 *Letters of Josiah Wedgwood, 1762-1795*, edited by Baroness Katherine Eufemia Farrer, 3 vols (1903-6), hereafter cited as Farrer, *Wedgwood*, Vol.11, 1771-1780 (1903), p.83, Josiah Wedgwood to Thomas Bentley, 13 July 1772.

121 Montagu, Mrs, item 1, Elizabeth Montagu to M.B., 31 October 1771.

122 Boulton M. Biograph etc., item 112, sheet 2, James Keir 'Memorandums for the Memoir of M. Boulton', 3 December 1809.

123 Letter Book D, p.61, M.B. to J.H.Ebbinghaus, 24 October 1772.

124 e.g. Charles Hampeler of Warsaw (Letter Book F, p.483, B. & F. to Battier Zornlint & Co., 14 May 1774).

125 e.g. William Evill, Bath (Letter Book I, p.750, B. & F. to William Evill, 19 April 1781).

126 e.g. Lord and Lady Villiers (Hodges, John, item 10, J.H. to M.B., 25 May 1778).
127 See p. 75.
128 See pp. 75-6.
129 See p. 70.
130 Boulton and Fothergill, 'Partnership with [JJF.' [c. 1782].
131 Fothergill etc., item 141, J. F. to M. B., 28 April 1773.
132 Fothergill etc., item 147, J. F. to M. B. [11] May 1773.
133 Letter Book G, p. 720, B. & F. to Peter Du Roveray, 17 October 1776.
134 Journal 1776-8, p. 44, 26 February 1776.
135 Cash Book 1772-82, 20 October 1773.
136 Cash Book 1772-82, 23 March 1774.
137 e.g. Tablespoons and gravy-spoons (Cash Book 1772-82, 12 July 1774) and teaspoons (Cash Book 1772-82, 30 July 1774).
138 Cash Book 1772-82, 19 September 1772.
139 Cash Book 1772-82, 18 November 1774 and 23 December 1772.
140 Cash Book 1772-82, 6 April 1775.
141 Cash Book 1772-82, 10 May 1774.
142 Hodges, John, item 19, J.H. to M.B., 12 September 1780.
143 e.g. A coffee-pot for Lister Fletcher of Lichfield (Letter Book G, p. 39, B. & F. to Lister Fletcher, 24 June 1774) and two tureens for John Taylor of London (Letter Book I, pp. 30-1, B. & F. to John Taylor, 25 June 1777) ordered in September 1776 (Letter Book G, p. 841, B. & F. to John Taylor, 28 February 1777).
144 Letter Book H, pp. 129-30 [B. & F.] to Lord Gormonston, 14 February 1777.
145 Letter Book G, p. 383, B. & F. to George and Richard Otley, 27 [July] 1775.
146 Ledger 1776-8, p. 32, January 1776.
147 Cash Book 1772-82, 27 August 1777.
148 Cash Book 1772-82, 13 December 1777.
149 Cash Book 1772-82, 5 January 1779.
150 Cash Book 1772-82, 5 January 1779.
151 Cash Book 1772-82, 22 June 1781.
152 Cash Book 1772-82, 4 July 1781.
153 Cash Book 1772-82, 31 May 1782.
154 Journal 1776-8, p. 249, 31 December 1776.
155 Letter Book M, p. 17, Agreement; B. & F. and T. & T. Richards, 7 May 1781.
156 Day Book 1779-81, pp. 126, 11 February 1780.
157 Ledger 1776-8, p. 180, 24 September 1776, articles worth £43 18s. 6d. were sent to Myles between 23 July and 24 September 1776. Journal, Soho Boulton and Fothergill, in part Matthew Boulton Journal, 1781-1783 (hereafter cited as Journal 1781-3), p. 12, goods worth £6 6s. 10d. sent to T. & T. Richards, 10 August 1781.
158 e.g. Smelling-bottles (Day Book 1779-81, p. 60, 2 December 1779) and neckcloth runners (Day Book 1779-81, pp. 127-8, 12 February 1780).
159 In December 1777 the partners' Bill Account was nearly £25,000 (Cule, *Financial History*, p. 74).
160 e.g. Francis Eginton was taken into partnership with B. & F. for the production of ormolu, Sheffield plate and silver by 1776 (Ledger 1776-8, p. 2, 1 January 1776).
161 Letter Book E, pp. 17-18, B. & F. to Woolley and Heming, 19 January 1771.

162 Letter Book G, p.383, B. & F. to G. & T. Otley, 27 [July] 1775.
163 e.g. Orders for Sheffield plate made at Soho which were dealt with by B. & F. but not the Toy Room (Letter Book I, p.3, B. & F. to Colonel Burton, Dublin, 17 May 1777).
164 In 1776 Dr Willis of Gretford, near Stamford, was sent silver spoons ordered when he was at Soho (Letter Book G, p.779, B. & F. to Dr Willis, 18 December 1776). This order did not involve the Toy Room but passed through B. & F.'s ledger (Ledger 1776-8, p.206, 17 December 1776).
165 e.g. An order for a pair of silver candlesticks by Lady Sackville in 1780 was dealt with through correspondence with B. & F. (Letter Book I, pp.656-7, B. & F. to Lady Sackville, 18 November 1780). This order passed through the partners' own accounts (Journal, Soho Boulton and Fothergill Journal, 1778-1781 (hereafter cited as Journal 1778-81), p.442, 16 November 1780).
166 Swinney, *The New Birmingham Directory* (1774), Preface.
167 Schofield, *Lunar Society*, pp.17-25.
168 B.A.O., Plate Register, Birmingham, 1773-92.
169 Birmingham 2 2 of 2 boxes (hereafter cited as Birmingham 2), item 132, booklet entitled *Theatre Royal, Birmingham*, p.8.
170 Chamber of Manufactures, item 1, Regulations on Trade by Committee Meeting, 27 November 1770.
171 See p.23.
172 B.A.O., Plate Register, Birmingham, 1773-92.
173 See Appendix 1B.
174 Benjamin Walker, 'The Eighteenth-Century Communion Service of St Bartholomew's Church, Birmingham', *Transactions of the Birmingham Archaeological Society*, Vol.LX (1936), pp.149-50.
175 Letter BookI, pp.500-1, B. & F. to Finch & Co., 23 November 1779.
176 Day Book 1779-81, p.108, 15 January 1780 (order from Finch & Co.).
177 Ledger 1776-8, p.120, 2 May 1776 (order from Benjamin May).
178 Ledger 1776-8, p.319, 20 July 1778; Francis Eginton bought a punch-ladle. Ledger 1778-82, p.119, 8 June 1779; William Bingley bought twelve teaspoons and six tablespoons. (See Appendix V, entries on Bingley, William and Eginton, Francis).
179 Day Book 1779-81, p.100, 31 December 1779, lists several items bought by M.B. in 1779 including an inkpot, knives and forks, and buckles for his son; Day Book 1779-81, pp.534-5, 30 December 1780 lists filigree items bought by J.F. for his family.
180 William Hutton, *A History of Birmingham to the End of the Year 1780*, sixth edition (1835), p.77.
181 ibid., pp.206-7.
182 M.B. Diary 1773, p.5 [n.d.].
183 Letter Book G, pp.548-9, B. & F. to J.W., 27 February 1776.
184 Letter Book G, pp.23-4, B. & F. to Lord Craven, 10 June 1774.
185 Letter Book G, p.675, B. & F. to Lord Craven, 7 August 1776.
186 Letter Book G, p.114, B. & F. to Lord Craven, Combe Abbey, 30 August 1774.
187 Letter Book G, p.23, B. & F. to Lord Craven, 10 June 1774.
188 Letter Book G, pp.166-7, B. & F. to Sir Harry Bridgman, 27 October 1774.
189 Letter Book H, pp.29-30, B. & F. to Sir Edward Littleton 16 October 1776.
190 Letter Book G, p.120, B. & F. to the Earl of Warwick, 6 September 1774.

191 Letter Book G, p.20, B. & F. to Richard Moland, 7 June 1774.
192 Letter Book G, p.76, B. & F. to Richard Moland, 21 July 1774.
193 Letter Book G, p.24, B. & F. to Richard Moland, 24 January 1775 (payment for £17 19s. 3d.) and Letter Book I, pp.65-6, B. & F. to Richard Moland, 14 August 1777.
194 Box G2 Gle to Gz (hereafter cited as Box G2), item 216, note of Dr Gresley's order, 30 August 1776.
195 Letter Book G, pp.35-6, B. & F. to John Turton, 20 June 1774.
196 Letter Book G, p.141, B. & F. to J. C. Talbot, 24 September 1774.
197 Letter Book G, p.782, B. & F. to Dr Short, 21 December 1776.
198 Letter Book I, p.202, B. & F. to J. Brettell, 6 April 1778.
199 Letter Book G, p.624, B. & F. to Captain Evans, 29 May 1776.
200 Box W2 We to Wil (hereafter cited as Box W2), item 88, H. M. Whateley to B. & F., 24 February 1775.
201 Letter Book G, pp.46-7, M.B. to Samuel Bradley, 27 June 1774.
202 Letter Book G, p.480, B. & F. to Adams and Sons, Walsall, 30 November 1775.
203 Letter Book G, p.118 [B. & F.] to J. Wright, Chesterfield, 3 September 1774.
204 Letter Book G, p.172, B. & F. to J. Wright, Chesterfield, 5 November 1774.
205 e.g. Repair of a tankard for Adams and Sons, Walsall (Letter Book G, p.59, A. J. C. to Adams and Sons, 7 July 1774) and polishing three small waiters for Lord Dartmouth (Day Book 1779-81, p.446, 3 October 1780). Dartmouth lived at Sandwell Hall, Staffordshire (R. W. Sturgess, 'Landowners, Mining and Urban Development in Nineteenth-Century Staffordshire' in *Land and Industry The Landed Estate and the Industrial Revolution*, edited by J. T. Ward and R. G. Wilson (1971), pp.173-204 (p.184).
206 McKendrick, 'The Consumer Revolution of Eighteenth-century England', p.21.
207 *Reply of the Petitioners from Birmingham and Sheffield to the case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent* (1773), quoted by Westwood, *Assay Office, Birmingham, Part 1*, p.21.
208 George Rudé, *Hanoverian London 1714-1808* (1971), pp.4-5 (hereafter cited as Rudé, *Hanoverian London*).
209 ibid., p.IX.
210 ibid., pp.46-62.
211 ibid., p.30 (citing Sir Joseph G. Broadbank. *A History of the Port of London* (London, 1921), Vol.1, pp.74-81).
212 Rudé, *Hanoverian London*, pp.32-3.
213 *Reply of the Petitioners from Birmingham and Sheffield to the case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent* (1773), quoted by Westwood, *Assay Office, Birmingham, Part 1*, p.21.
214 Dickinson, *Boulton*, pp.18-19.
215 M. B. Diary, 1773, p.69. M.B. left London on 30 May 1773.
216 M. B. Diary, 1775, p.11. He went to London on 27 February, 17 March and 25 April 1775.
217 Letter Book L, M. Boulton 1780-1789 (hereafter cited as Letter Book L), p.64, M. B. to James Watt, 4 November 1785.
218 Letter Book G, p.1, B. & F. to the Earl of Radnor, 19 May 1774.
219 Letter Book I, p.178, B. & F. to Philip Mysson, 16 February 1778.
220 Letter Book G, pp.818-9, B. & F. to Elizabeth Montagu, 5 February 1777.

221 Letter Book G, p. 1, B. & F. to the Earl of Radnor, 19 May 1774. In 1786 carriage by wagon to London cost £5 10s. Od. per ton in summer and £6 Os. Od. in winter (Box B4 Boa to Boz (hereafter cited as Box B4), item 32, Charles Bonel to M. B., 19 August 1786).

222 Letter Book G, p. 695, B. & F. to William Webb, 7 September 1776.

223 Wakelin and Taylor were charged 9s. Od. for a box holding a pair of candlestick-branches (Day Book 1779-81, p. 73, 14 December 1779).

224 *Reply of the Petitioners from Birmingham and Sheffield to the case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent* (1773), quoted by Westwood, *Assay Office, Birmingham, Part 1*, p. 21.

225 See p. 158.

226 Northumberland bought several pieces of ormolu in 1772 (Goodison, *Ormolu*, p. 38) and in 1774 he bought two pairs of silver candlesticks (Letter Book G, p. 124, B. & F. to the Duke of Northumberland, 14 September 1774).

227 Shelburne bought several pieces of ormolu between 1765 and 1771 (Goodison, *Ormolu*, p. 236) and two pairs of silver candlesticks in 1771 (Letter Book E, p. 81, J. W. to William Matthews, 30 March 1771).

228 Goodison, *Ormolu*, p. 256.

229 Letter Book E., p. 372, A. J. C. to Lord Kerry, 21 February 1772.

230 e.g. Mr Knight ordered an unspecified number of silver candlesticks at the 1772 sale (Letter Book E, p. 520, A. J. C. to William Matthews, 21 July 1772).

231 In 1771 Robert Udney bought a pair of ormolu-mounted vases at the Christie and Ansell's sale (Goodison, *Ormolu*, p. 238) and when in 1773 he ordered a silver coffee-pot he was informed about M. B.'s intentions following the 1773 Act (B. R. L., B. W. C., Portions of a Letter Book, 1773, pp. 154-5, B. & F. to Mr Udney, 12 June 1773).

232 Goodison, *Ormolu*, pp. 111-2.

233 Goodison, *Ormolu*, p. 262.

234 ibid., p. 42.

235 ibid., p. 267.

236 ibid., p. 42.

237 ibid., p. 39.

238 In 1770 M. B. described his enjoyment in visiting Lord Shelburne and the Duke of Northumberland (Boulton M. (Miss Anne Robinson. Mrs Boulton), item 56, M. B. to Mrs Boulton, 6 March 1770).

239 M. B. visited Lord Morton in 1768 (M. B. Diary, 1768) and Morton later ordered an ormolu-mounted vase (Goodison, *Ormolu*, p. 232)

240 Fothergill etc., item 18, M. B. to Soho [1770].

241 e.g. In 1770 M. B. visited the Duke of Northumberland and Lord Shelburne (see Chapter II, note 238); both bought ormolu and silver (see Chapter II, notes 226 and 227).

242 e.g. In 1772 M. B. visited the Duke of Richmond ([M. B.] Notebook 8, p. 5, 1772). Richmond later bought a silver coffee-pot (Box R1 Ra to Riz (hereafter cited as Box R1), item 294, Duke of Richmond to B. & F., 19 July 1773). See also p76.

243 [M. B.] Notebook 8, p. 5, 1772.

244 Letter Book G, p. 116, B. & F. to Sir Robert Rich, 1 September 1774.

245 Letter Book G, p. 441, B. & F. to Sir Robert Rich, 13 October 1775.
246 Letter Book G, p. 610, B. & F. to J. W., 13 May 1776.
247 Barrington Kaye, *The Development of the Architectural Profession in Britain* (1960), pp. 45-6.
248 Howard Colvin, *A Biographical Dictionary of English Architects 1660 - 1840*, second edition (1978), pp. 50-5 (hereafter cited as Colvin, *Biographical Dictionary*).
249 Ralph Fastnedge, *English Furniture Styles: from 1500-1830* (1955, reprint 1967), p. 183 (hereafter cited as Fastnedge, *Furniture Styles*).
250 *Selected Letters of Josiah Wedgwood*, edited by Ann Finer and George Savage (1965), pp. 235-6, Josiah Wedgwood to Thomas Bentley, 19 June 1779 (hereafter cited as *Letters of Josiah Wedgwood*, ed. Finer and Savage).
251 Goodison, *Ormolu*, pp. 51-2.
252 William Bennett, *John Baskerville: The Birmingham Printer*, 2 vols (1939), Vol. 1, p. 93. Since the tour was conducted by Samuel Garbett, a close friend of M. B. (see p. 52), it is possible that Adam saw the workshops at Snow Hill.
253 Box S1, item 200, Lord Shelburne to 'Mr Adams', 16 April 1765.
254 *Letters of Josiah Wedgwood*, ed. Finer and Savage, p. 13.
255 ibid., p. 81, Josiah Wedgwood to Thomas Bentley, 26 September 1769. Wedgwood remarked that M. B. had actually taken the room; since, however, Wedgwood's remark was based upon a report from a visitor to Soho, it is likely either that M. B.'s comments were misunderstood or that M. B. was indulging in some impressive sales talk. There is nothing to confirm that the room was actually taken in Pall Mall (Goodison, *Ormolu*, p. 87).
256 Box A Aa to Az (hereafter cited as Box A), item 4, James Adam to M. B., 14 August 1770.
257 John Summerson, *Georgian London*, second edition (1962), pp. 138-9. The development was on a site for which the Adam Brothers took out a ninety-nine year lease in 1768.
258 Letter Book D, p. 29, M. B. to James Adam, 1 October 1770.
259 Box A, item 5, James Adam to M. B., 5 November 1770.
260 Box A, item 6, James Adam to M. B., 28 January 1771.
261 Letter Book D, p. 29, M. B. to James Adam, 1 October 1770.
262 Box A, item 5, James Adam to M. B., 5 November 1770.
263 See Chapter II, note 260.
264 See pp. 69-70.
265 Goodison, *Ormolu*, p. 82. An order for lamp chains for Lord Shelburne.
266 See, however, Chapter II, note 288.
267 Box C3, item 234, Thomas Coutts to M. B., 21 September 1775.
268 Goodison, *Ormolu*, p. 89.
269 ibid., p. 83.
270 Letter Book E, p. 161, B. & F. to James Stuart, [1 August 1771].
271 Fothergill etc., item 247, J. F. to J. H. (quoting a letter from M. B. to J. F.), 1 April 1781.
272 Boulton M. (Miss Anne Robinson. Mrs Boulton), item 60, M. B. to Mrs Boulton, 29 April [1777].
273 Letter Book G, p. 461, M. B. to Robert Mylne, 4 November 1775.
274 Ledger 1776-8, p. 230, 18 March 1777.
275 Ledger 1776-8, p. 276, 21 November 1777.
276 Letter Book I, pp. 116-7, B. & F. to Robert Mylne, 13 November 1777.

277 Letter Book I, p. 151, B. & F. to Robert Mylne, 10 January 1778.
278 At least since the early sixteenth century, generations of the Wyatt family lived at Weeford, near Lichfield in South Staffordshire. James and his brothers (see p. 19) were brought up at Weeford and the father, Benjamin, lived there until his death in 1772. One of the brothers, Samuel, returned to Weeford and lived there from 1768-1774. (Robinson, *The Wyatts*, pp. 2-24).
279 See p. 19.
280 Charles Wyatt, a Soho clerk and button-maker, and John Wyatt, a London agent from 1776, were cousins of James Wyatt (Goodison, *Ormolu*, p. 189).
281 John Summerson, *Architecture in Britain 1530-1830*, The Pelican History of Art, fifth edition (1969, paperback edition 1970), pp. 458-60 (hereafter cited as Summerson, *Architecture in Britain*).
282 ibid., p. 443.
283 These orders included ormolu door furniture in 1765-6 (Goodison, *Ormolu*, p. 49) and sconces (wall-mounted candle-branches) in 1766 (ibid., p. 82).
284 Letter Book F, pp. 498-9, B. & F. to J. W., 4 June 1774.
285 Letter Book G, p. 1, B. & F. to James Wyatt, 19 May 1774.
286 Letter Book G, p. 588 [B. & F.] to J. W., 30 March 1776 and Letter Book G, p. 538, J. H. to J. W., 17 February 1776.
287 Letter Book G, p. 524, B. & F. to J. W., 6 February 1776.
288 In 1772 James Wyatt produced an unexecuted design for decoration in Syon House, Middlesex, for the Duke of Northumberland (Robinson, *The Wyatts*, p. 246). At about that time, Northumberland bought ormolu from B. & F. and later also bought silver (see note 226). It is possible however that M. B.'s connection was via Robert Adam who provided executed designs for the interior of Syon (1762-9) and (in 1773) an entrance screen (Colvin, *Biographical Dictionary*, p. 52). In 1769 Adam completed Gunton Church, Norfolk for Sir William Harbord (ibid., p. 50); later M. B. provided Sir Harbord Harbord with silver for Gunton Hall (see p. 72). James Wyatt also produced designs for additions at Gunton Hall (Robinson, *The Wyatts*, p. 241).
289 Letter Book G, p. 558, B. & F. to His Highness the Prince Holstein [The Duke of Holstein-Gottorp, see Chapter II note 458], 28 February 1776.
290 See p. 176.
291 See Chapter I, note 53.
292 Letter Book E, pp. 626-7, B. & F. to Lord Boston, 1 November 1772.
293 B.R.L., B.W.C., Portions of a Letter Book, 1773, A. J. C. to William Matthews, 22 May 1773.
294 Goodison, *Ormolu*, p. 87 .
295 Letter Book H, pp. 201-3 [B. & F.] to J. W., 26 April 1777.
296 Wyatt Family, item 74, J. W. to B. & F., 2 March 1776.
297 Letter Book G, p. 868, B. & F. to Messrs Hall and Shiers, 15 March 1777.
298 Letter Book G, p. 817, John Stuart to J. W., 1 February 1777.
299 Box D2, item 367, John Dyott to B. & F., 16 December 1777.
300 Box D2, item 370, John Dyott to B. & F., 16 February 1781.
301 There were very few exceptions; one was an order for stew-pans (Letter Book I, p. 751, B. & F. to John Dyott, 19 April 1781),

but this order was only forwarded after the partners reminded him to do so (Letter Book I, p.746, J. H. to John Dyott, 11 April 1781).

302 Box D2, item 367, John Dyott to B. & F., 16 December 1777.

303 Box D2, item 368, John Dyott to B. & F., 21 January 1778.

304 Letter Book I, p.161, J. H. to John Stuart, 24 January 1778.

305 Box D2, item 367, John Dyott to B. & F., 16 December 1777.

306 Letter Book I, p.988, J. H. to John Stuart, 22 June 1782.

307 Box S3 Spil to Sz (hereafter cited as Box S3), item 284, John Stuart to M. B., 15 April 1784.

308 e.g. William Matthews dealt with buttons (Letter Book G, p.423, J. H. to William Matthews, 20 September 1775) and ormolu (Goodison, *Ormolu*, pp.86-7). John Stuart dealt with buttons (Letter Book I, p.157, J.H. to John Stuart, 17 January 1778) and Sheffield plate (Letter Book I, p.161, J. H. to John Stuart, 24 January 1778).

309 Letter Book E, p.32, B. & F. to Mary Stovin, 4 February 1771.

310 Letter Book G, p.25, B. & F. to William Matthews, 11 June 1774.

311 e.g. John Stuart (Ledger 1776-8, p.181, 26 September 1776).

312 Wyatt Family, item 113, J. W. to B. & F., 30 November 1776.

313 Letter Book G, pp.656-7 [B. & F.] to J. W., 10 June 1776.

314 Montagu,Mrs, item 9, Elizabeth Montagu to M. B., 8 April 1776.

315 Letter Book G, pp.837-8, B. & F. to Elizabeth Montagu, 19 February 1777.

316 Letter Book G, p.838, J. S. to J. W., 20 February 1777.

317 Letter Book G, p.812, J. H. to J. W., 28 February 1777.

318 Letter Book G, pp.818-9, B. & F. to Elizabeth Montagu, 5 February 1777.

319 Journal 1776-8, p.495, 26 March 1778.

320 Letter Book I, pp.220-1, B. & F. to Lady Morton, 6 May 1778.

321 Letter Book G, p.917, B. & F. to Lady Morton, 15 May 1777.

322 Plate worth £49 0s. 0d. (Letter Book G, pp.314-5, B. & F. to the Earl of Macclesfield, 21 April 1775).

323 A dozen soup-plates worth £76 18s. 7½d. (Ledger 1776-8, p.2, 30 January 1776).

324 Plate costing £92 18s. 8d. (Ledger 1776-8, p.206, 3 December 1776).

325 Catalogues were issued to trade customers but these were normally stated to be for Sheffield plate (e.g. Letter Book G, p.856, J. H. to Mr E. Jee, 8 March 1777 and Letter Book I, p.540, B. & F. to Samuel Roulet, 17 February 1780). Since designs could normally be executed in Sheffield plate or silver, trade customers occasionally used the catalogue to order silver: in 1780 Henry Morris of London ordered silver candlesticks from a catalogue (Letter Book I, p.547, J. H. to Henry Morris, 2 March 1780).

326 See p.56.

327 Wyatt Family, item 78, J. W. to B. & F., 12 March 1776.

328 Box V Va to Vz (hereafter cited as Box V), item 63, Charles Vere to M. B., 20 January 1777.

329 Wyatt Family, item 72, J. W. to B. & F., 27 February 1776.

330 Wyatt Family, item 61, J. W. to B. & F., 18 February 1776.

331 Wyatt Family, item 82, J. W. to B. & F., 21 March 1776.

332 Box M1, item 198, Account between B. & F. and Mayhew and Ince, 25 July 1776.

333 Wyatt Family, item 77, James Wyatt to B. & F., 10 March 1776.

334 Rudé, *Hanoverian London*, p.41.

335 Wyatt Family, item 72, J. W. to B. & F., 27 February 1776.
336 Wyatt Family, item 76, J. W. to B. & F., 27 February 1776.
337 Account by M. B. enclosed in Letter Book G, p.562, J. H. to J. W., 7 March 1776. Copy of account in Fothergill etc., item 88, 'My ideas of a Theka in London are...' [1776?].
338 Wyatt Family, item 97, J. W. to M. B., 21 August 1776.
339 Wyatt Family, item 98, J. W. to B. & F., 2 November 1776.
340 Letter Book G, pp.742-3, B. & F. to J. W., 15 November 1776.
341 Letter Book G, p.758, J. H. to J. W., 30 November 1776.
342 Letter Book G, pp.785-6, B. & F. to J. W., 21 December 1776.
343 Box S3, item 278, John Stuart to M. B., 7 January 1778.
344 Wyatt Family, item 72, J. W. to B. & F., 29 January 1776. An exception was a lamp and stand for a coffee-pot which was cleaned and repaired for B. & F.'s London agent William Matthews (Letter Book I, p.42, J. H. to William Matthews, 14 July 1777).
345 Kenneth Quickenden, 'Boulton and Fothergill Silver: an Épergne Designed by James Wyatt', *Burlington Magazine*, Vol.CXXVIII, No. 999 (June 1986), pp.417-21 (pp.417-8). Hereafter cited as Quickenden 'B. & F. Silver: an Épergne Designed by James Wyatt'. Jefferies and Jones returned for repairs a pair of candlestick-branches damaged in transit (Letter Book I, p.955, J. H. to Jefferies and Jones, 16 April 1782).
346 The 1773 Act compelled manufacturers within twenty miles of Birmingham to send their silver to The Birmingham Assay Office (*An Act for Appointing Wardens and Assaymasters for Assaying Wrought Plate in the Towns of Sheffield and Birmingham* (13 Geo.III. c.52), (1773), quoted in de Castro, *Law and Practice of Hall-marking* pp.251-63). However, B. & F. failed to have silver plate hallmarked at Birmingham on at least one occasion (Letter Book G., p.658, B. & F. to Patrick Robertson, 13 July 1776).
347 See pp.30-1. The malpractice continued after 1773: this was confirmed by the London bullion dealer Robert Albion Cox in 1775 (Box C3, item 240, Robert Albion Cox to Willmore and Alston, 21 July 1775) and by B. & F.'s correspondence up to the end of their partnership (Letter Book N, Matthew Boulton, 1782-1786 (hereafter cited as Letter Book N), p.3, B. & F. to Jefferies and Jones, London, 27 June 1782).
348 Letter Book G, pp.434-5, B. & F. to R. Conway, London, 8 October 1775.
349 Letter Book G, p.201, B. & F. to B. A. Wedderburn, 19 December [1774].
350 Box D1 Da to Del (hereafter cited as Box D1), item 131, Lord Dartmouth to M. B.; 28 July 1775.
351 Box D1, item 166, M. B. to Lord Dartmouth, 30 July 1775.
352 Box G1, item 274, Thomas Gilbert to M.B., 29 March 1776.
353 Letter Book G, pp.830-1, B. & F. to Elizabeth Montagu, 15 February 1777.
354 Letter Book G, pp.6-7, B. & F. to T. Birch, 23 May 1774 and Letter Book G, pp.434-5, B. & F. to R. Conway, 8 October 1775.
355 Letter Book I, p.652, B. & F. to John Wise, 26 October 1780.
356 Rowe, *Adam Silver*, p.84.
357 The size of the discount given to Morris is not clear (Letter Book E, p.291, B. & F. to Henry Morris, 2 December 1771). Parker and Wakelin were permitted a discount of ten per cent

off the fashioning charge since they paid promptly (Letter Book E, p.302, B. & F. to Parker and Wakelin, 9 December 1771). The bill was, however, further reduced: the discount on the fashioning charge was increased to fifteen per cent and this was increased by a further five per cent for prompt payment (VAM, John Parker and Edward Wakelin, Workmen's Ledger, No.2, 1766-72, Vol.3 (VAM 8), Account 162, 14 December 1771). These reductions were the result of pressure: Parker and Wakelin knew that identical candlesticks had been supplied to a non-trade customer (Letter Book E, p.277, B. & F. to Parker and Wakelin, 16 November 1771) for the same basic fashioning charge of £7 17s. 6d. per pair (Letter Book E, pp.314-5, B. & F. to Parker and Wakelin, 14 December 1771).

358 See Chapter II, notes 101 and 109.

359 Letter Book I, p.256, J. H. to John Stuart, 13 June 1778.

360 See p.74.

361 Letter Book E, pp.472-3, J. S. to James Goddard, 8 June 1772.

362 Letter Book E, p.379, 29 February 1772. The same letter was sent to the firms listed in the text.

363 e.g. Parker and Wakelin bought three pairs of candlesticks (Letter Book E, p.601, B. & F. to Parker and Wakelin, 14 October 1772); William Webb bought four pairs of candlesticks (Ledger 1776-8, p.181, 21 September 1776) Parker and Wakelin later became Wakelin and Taylor (see text) and continued to buy Sheffield plate (e.g. Day Book 1779-81, p.449, 6 October 1780 and p.545, 20 January 1781).

364 B.R.L., B.W.C., Portions of a Letter Book, 1773, p.129, B. & F. to Woolley and Heming, 22 May 1773.

365 Fothergill etc., item 78, M. B. to J. F., 23 January 1772.

366 Letter Book E, p.144, C. W. to William Matthews, 13 July 1771 and p.175, B. & F. to William Matthews, 17 August 1771.

367 Letter Book I, p.251, B. & F. to Henry Morris, 9 June 1778.

368 Day Book 1779-81, p.45, 20 November 1779.

369 Letter Book E, p.314, B. & F. to Parker and Wakelin, 14 December 1771.

370 Letter Book G, p.516, B. & F. to Parker and Wakelin, 24 January 1776 and Ledger 1776-8, p.2, 16 February 1776.

371 Heal, *London Goldsmiths*, p.261.

372 A pair in 1779 (Day Book 1779-81, p.73, 14 December 1779); two pairs in 1780 (Day Book 1779-81, p.111, 20 January 1780 and p.330, 11 July 1780) and a pair in 1781 (Day Book 1779-81, p.645, 3 May 1781).

373 Day Book 1779-81, p.208, 15 April 1780.

374 e.g. A. Wilson, Strand, London (Letter Book G, p.637, J. H. to A. Wilson, 12 June 1776) and J. Norman, Merchant, Black Friars, London (Letter Book G, pp.108-9, B. & F. to James Norman, 27 August 1774). See also Chapter II, note 345.

375 Letter Book E, p.353, B. & F. to Sir Harbord Harbord, 19 January 1772.

376 Letter Book G, p.204, B. & F. to Sir Harbord Harbord, 19 December 1774.

377 e.g. A cheese-toaster (Letter Book G, pp.203-4, B. & F. to Sir Harbord Harbord, 19 December 1774).

378 Box H1 Ha to Hau (hereafter cited as Box H1), item 116, Sir Harbord Harbord to B. & F., 19 July 1774.

379 e.g. A coffee-pot for Lord Gower's Trentham Hall, Stafford (Letter Book G, p.370, J. H. to William Matthews, 9 July 1775).

380 Correspondence concerning payment for an épergne was sent to Berkeley Square (Letter Book H, pp.177-8, B. & F. to Sir John Myddleton, 2 April 1777) but the épergne was sent to Gwaenynog, near Denbigh (Letter Book G, p.672, B. & F. to Sir John Myddleton, 3 August 1776).

381 A cup was, however, sent to the Dean of St Asaph (Letter Book G., pp.390-1, B. & F. to the Very Reverend Dean of St Asaph, 1 August 1775).

382 e.g. Dr Willis of Greatford near Stamford who ordered a dozen tea-spoons while visiting Soho (Letter Book G, p.779, B. & F. to Dr Willis, 18 December 1776).

383 Letter Book G, p.779, B. & F. to Dr Willis, 18 December 1776.

384 e.g. Reverend Mr Levett of West Wycombe bought unspecified silver items (Letter Book G, p.647, B. & F. to Reverend Mr Levett, 27 June 1776).

385 Letter Book G, p.407 [B. & F.] to Stephen Branston, Hull, 25 August 1775.

386 Letter Book G, pp.118-9 [B. & F.] to John Wright, Chesterfield, 3 September 1774.

387 Silver filgree order for Walley and Jones, Liverpool (Day Book 1779-81, p.186, 29 March 1780).

388 See p.31.

389 *Report from the Committee Appointed to Enquire into The Manner of Conducting the Several Assay Offices in London, York, Exeter, Bristol, Chester, Norwich, and Newcastle-upon-Tyne* (1773), p.3.

390 There were a few exceptions e.g. Benjamin Hall, Wentworth House, near Sheffield, bought a dozen teaspoons and tea-tongs (Letter Book I, pp.241-2, B. & F. to Benjamin Hall, 30 May 1778); James Folliott who arranged for the assay of the partners' silver in Chester before 1773 (see p.27) bought two skewers (Letter Book G, p.17, B. & F. to James Folliott, 6 June 1774).

391 See pp.61-2.

392 See p.72.

393 Coupland and Willans of York were once given some fashioning charges (Letter Book G, pp.93-4, B. & F. to Coupland and Willans, 10 August 1774). There is, however, nothing to show that they bought silver from B. & F.

394 See p.222.

395 e.g. Spoons, salt-cellars and tea-tongs for Stephen Branston, Hull (Letter Book G, p.407 [B. & F.] to Stephen Branston, 25 August 1775).

396 e.g. Salt-cellars and a lemon-strainer for Thomas Miller, Kendal (Letter Book I, p.108, B. & F. to Thomas Miller, 25 October 1777).

397 Candlesticks for Thomas Birch, Manchester (Letter Book G, p.360, B. & F. to Thomas Birch, 3 July 1775).

398 Coffee-pot and stand for North, Wagner & Co., Liverpool (Letter Book I, pp.2-3 [B. & F.] to North, Wagner & Co., 17 May 1777).

399 John Wright, an order for a two-handled cup (Letter Book G, pp.145-6, B. & F. to John Wright, 1 October 1774).

400 An exception was M. B.'s trip to trade customers in Southampton and Portsmouth in 1772 ([M.B.] Notebook 8, 1772, p.50).

401 e.g. The partners only provided John Wright of Chesterfield with details of their range after he had ordered tankards (Letter

Book G, pp. 118-9 [B. & F.] to John Wright, 3 September 1774). Similarly Coupland and Willans of York requested fashioning charges and only then did the partners provide details of their range (Letter Book G, pp. 93-4, B. & F. to Coupland and Willans, 10 August 1774).

402 Summerson, *Architecture in Britain*, p. 386.

403 *Letters of Josiah Wedgwood*, ed. Finer and Savage, p. 124, Josiah Wedgwood to Thomas Bentley, 6 June 1772.

404 Letter Book E, pp. 173-4 [B. & F.] to William Evill, 14 August 1771.

405 Letter Book E, p. 243, A. J. C. to William Evill, 29 October 1771.

406 Letter Book F, p. 134 [B. & F.] to William Evill, 26 January 1773. The goods returned came to £145 11s. 0d.

407 An order for two cream-pails (Letter Book I, p. 750, B. & F. to William Evill, 19 April 1781).

408 Letter Book G, p. 31, B. & F. to Mrs Ambrose Mainwaring, 18 June 1774.

409 e.g. Y. D. Astley of Everley, near Pewsey, in Wiltshire, bought buttons worth £1 8s. 0d. (Letter Book H, p. 81, B. & F. to Y. D. Astley, 19 December 1776) and Mr Callaghan of Bath bought two pairs of candlesticks, one dozen tablespoons and twelve teaspoons (Letter Book G, p. 113, B. & F. to Mr Callaghan, [29 or 30 August 1774]).

410 *Report from the Committee Appointed to Enquire into The Manner of Conducting the Several Assay Offices in London, York, Exeter, Bristol, Chester, Norwich, and Newcastle-upon-Tyne* (1773), p. 63.

411 ibid., p. 73.

412 ibid., p. 77.

413 See pp. 56-8.

414 See Appendix IB.

415 See Appendix IIIC.

416 Letter Book G, p. 407, B. & F. to Stephen Branston, 25 August 1775 and Letter Book I., p. 108, B. & F. to Thomas Miller, 25 October 1777.

417 Letter Book G, p. 567, J. H. to John Wise, 11 March 1776.

418 Malcolm Baker, 'Patrick Robertson's Tea-urn and the Late Eighteenth-century Edinburgh Silver Trade', *Connoisseur*, Vol. 183 (August 1973), pp. 289-94, (pp. 291-2), hereafter cited as Baker, 'Patrick Robertson's Tea-urn'.

419 That this attitude was behind M. B.'s treatment of Robertson is confirmed by the former's willingness, exceptionally, to allow the latter a discount of ten per cent on ormolu in 1771 because M. B. wished to encourage sales in the north (Goodison, *Ormolu*, p. 80).

420 ibid., p. 80.

421 Letter Book F, p. 99 [B. & F.] to Patrick Robertson, 18 November 1772.

422 Letter Book G, pp. 172-3, B. & F. to Patrick Robertson [early November 1774] and p. 223, B. & F. to Patrick Robertson, 8 January [1775].

423 Letter Book G, p. 530, B. & F. to Patrick Robertson, 13 February 1776.

424 Letter Book G, p. 490, B. & F. to Patrick Robertson, 16 December 1775.

425 Letter Book G, p. 658, B. & F. to Patrick Robertson, 13 July 1776.

426 Baker, 'Patrick Robertson's Tea-urn', pp.289-91. Baker draws attention to a silver tea-urn of 1778 with Robertson's maker's marks, which is now in the Royal Scottish Museum, Edinburgh. Baker wonders whether the piece was made by B. & F. because of the general stylistic similarities with their work; he concludes, however, that the urn was made by Robertson because of small stylistic differences with the partners' designs and because he (Baker) believed that by 1778 there was no correspondence between Robertson and B. & F. However, in 1779, B. & F. offered to make Robertson a silver tea-urn (Letter Book I, p.461, B. & F. to Patrick Robertson, 15 July 1779). This letter cannot refer to the tea-urn in question since it dates from the following year; however, the continued correspondence with Robertson makes it more likely (though by no means certain) that the 1778 tea-urn was made at Soho. (There is no evidence that Robertson took up B. & F.'s offer of 1779.)

427 In 1771 B. & F. expressed disappointment over the low sales of ormolu vases to Robertson and in 1774 expressed dismay over Sheffield plate sales to another agent in Edinburgh, John Alston (Baker, 'Patrick Robertson's Tea-urn', pp.289-91).

428 Letter Book H, pp.151-2 [B. & F.] to J. W., 3 March 1777.

429 Letter Book G, p.683, B. & F. to the Earl of Hopetoun, 19 August 1776.

430 Ledger 1776-8, p.206, 20 November 1776.

431 Journal, Soho Boulton and Fothergill Journal, 1778-1781 (hereafter cited as Journal 1778-81), p.319, 27 July 1778.

432 Journal 1778-81, p.35, 16 October 1778.

433 Box T1, item 70, Nicholas Tent to M. B., 28 June 1763.

434 Nicholas Goodison, 'The Door Furniture at Ely House', *Bulletin of the Irish Georgian Society*, Vol.XIII, Nos.2-3 (April-September 1970), pp.45-8 (hereafter cited as Goodison 'Door Furniture at Ely House'). How many sets were supplied is not clear, but eleven survive.

435 Goodison, *Ormolu*, pp.3-5.

436 Letter Book E, p.407, B. & F. to Thomas Craig, 26 March 1772.

437 e.g. N. Clements bought plate worth £15 15s. 5d. (Letter Book G, p.521, B. & F. to N. Clements, 1 February 1776) and Graves Chamney ordered two sauce-boats in 1780 (Day Book 1779-81, p.149, 1 March 1780).

438 Henry Meredyth, of Dublin ordered an unspecified number of candlesticks (Letter Book E, p.640, A. J. C. to Henry Meredyth, 18 November 1772).

439 Letter Book H, pp.421-2, B. & F. to Cornelius O'Callaghan 30 December 1777.

440 Letter Book I, p.140, B. & F. to Cornelius O'Callaghan, 16 December 1777.

441 Charles Oman, *The English Silver in the Kremlin 1557-1663* (1961), p.20.

442 Barr, *George Wickes*, p.110. Wickes executed silver plate in 1737 and 1740 for Mr Finch, the British Ambassador to Vienna.

443 e.g. Sir John Goodricke in Sweden, Lord Stormont in Paris and Lord Gratham in Madrid (Goodison, *Ormolu*, pp.97-8).

444 Matthews & Barton. Matthews, William, item 25, William Matthews to B. & F., 21 February 1777.

445 Box H1, item 142, James Harris (the Earl of Malmesbury) to M. B., 15 October 1777.

446 Journal 1778-81, p.549, 7 July 1778.
447 Journal 1778-81, p.1, 12 August 1778.
448 Box R2 Roa to Rz (hereafter cited as Box R2), item 37, George Robertson to M.B., 13 July 1772.
449 Fothergill etc., item 132, J. F. to M. B., 3 April 1773.
450 Fothergill etc., item 132, Account of Debts due in the months of April and May, 1 April 1773.
451 Letter Book F, p.397, B. & F. to Sir Robert Murray Keith, 26 January 1774.
452 Letter Book G, pp.462-3, B. & F. to Sir Robert Murray Keith, 10 November 1775.
453 Goodison, *Ormolu*, p.97.
454 Boulton M. (Miss Anne Robinson, Mrs Boulton), item 39, M. B. to Mrs Boulton, 18 April 1772.
455 Pushkin and M. B. corresponded over silver plate (Box P2, item 119, Mussin Pushkin to M. B., 7 April 1778) and his purchases amounted to £100 1s. 6d. (Journal 1778-81, p.58, 29 December 1778) but some of this was for Sheffield plate (Letter Book I., p.343, J. H. to John Stuart, 18 [December] 1778).
456 Letter Book F, pp.595-7 [B. & F.] to Mussin Pushkin, 15 October 1774.
457 Letter Book G, p.253, B. & F. to William Matthews, 6 February 1775. Unfortunately no details about these orders are recorded.
458 The Duke was normally referred to in the M. B. P. as the Prince of Holstein (see Chapter IV, note 263). He can be identified with the Duke of Holstein-Gottorp, who was a first cousin to Catherine II, Empress of Russia, and Emperor Peter III (Box P2, item 118, Mussin Pushkin to M. B., 14 June 1775). The Duke (1755-1829) was also Duke Peter Friedrich Ludwig of Oldenburg (Göttingen University, *Herzog Peter Friedrich Ludwig Von Oldenburg (1755-1829)* ...(1979), pp.8-9, Hereafter cited as Göttingen University, *Herzog Peter Friedrich Ludwig Von Oldenburg*).
459 Box P2, item 118, Mussin Pushkin to M. B., 14 June 1775.
460 Letter Book G, pp.601-2, [B. & F.] to J. W., 3 May 1776. Colonel de Staal can be identified as Carl Friedrich von Staal, 1721-1789 (Göttingen University, *Herzog Peter Friedrich Ludwig Von Oldenburg*, pp.28-9).
461 Letter Book G, p.572, J. H. to J. W., 16 March 1776.
462 Letter Book I, pp.70-1, B. & F. to G. Thornton, 27 August 1777.
463 Letter Book I, pp.71-3, B. & F. to G. Thornton, 29 August 1777.
464 Letter Book I, pp.73-4, B. & F. to the Prince of Holstein, 27 August 1777 (see note 458 above).
465 Day Book 1779-81, p.434, 23 September 1780.
466 Letter Book H, pp.725-7 [B. & F.] to Stairps Hande & Co., 27 October 1778.
467 Goodison, *Ormolu*, p.98.
468 Letter Book H, p.520 [B. & F.] to Thomas Blanckenhagen, 11 April 1778.
469 Letter Book K, p.40, B. & F. to Johann Erich, 14 June 1780.
470 See p.17.
471 e.g. An order for buttons (Letter Book G, p.340, B. & F. to J. P. Du Roveray, 10 May 1775) and an order for eighteen tablespoons for Finch, Russell & Co. (Day Book 1779-81, p.108, 15 January 1780).

472 Robinson 'Boulton and Fothergill', p.72. Robinson argued that the codes were used through the partners' desire to hide from customers the discounts allowed to other customers and from the customers' wish to have exclusive patterns. Some code-names can be identified with merchants operating in particular towns: e.g. 'Senegall' was in Naples.

473 e.g. 'ARM Faner' bought silver filigree worth 7s. 6d. but the whole order which came to £74 7s. 11d. consisted mainly of buttons, tortoise-shell and Sheffield plate (Day Book 1779-81, pp.403-5, 29 August 1780).

474 Day Book 1779-81, pp.248-250, 12 May 1780.

475 An exception was two punch-ladles for 'APB Octupton' (Day Book 1779-81, p.280,, 6 June 1780).

476 Letter Book F, p.511 [B. & F.] to William Aitkin, 22 June 1774.

477 Letter Book I, p.16, B. & F. to J. C. Preidel, 7 June 1777.

478 Letter Book E, p.407, B. & F. to Thomas Craig, 26 March 1772.

479 Letter Book F, pp.284-5 [B. & F.] to Samuel Tonge, 31 July 1773.

480 Letter Book H, pp.387-8, B. & F. to E. Lees [6 December 1777] and p.389, B. & F. to Mr Gibbs, 6 December 1777.

481 Box C2 Ce to Cog (hereafter cited as Box C2), item 134, S. Clais to M. B., 10 December 1781.

482 In Russia tariffs were thirty per cent (Box C1, item 194, Lord Cathcart to B. & F., 21 February 1772). In 1766 J. F. reported to M. B. that duties were so high in Sweden that the market could only be penetrated by smuggling. Also in 1766 M. B. became involved in a campaign to remove Portugal's prohibitions on the import of English hardware (Robinson, 'Boulton and Fothergill', pp.65-7).

483 Letter Book F, p.268 [B. & F.] to Edmund Radcliffe, 13 July 1773. The partners asked for a reference for G. G. Sinigaglia of Italy before they were prepared to trade with him.

484 In 1774 the partners recommended Levy Hyman of Amsterdam as an entirely trustworthy agent (Letter Book F, p.525, B. & F. to Edmund Radcliffe, 11 July 1774). Four years later M. B. complained that at Hyman's death he owed the partners substantial sums and that Hyman's executors only paid twenty per cent of the debt (Letter Book H, p.632, B. & F. to George Ensell, 22 July 1778).

485 Letter Book G, p.23, B. & F. to Lord Craven, 10 June 1774 and Letter Book H, p.438, B. & F. to Robert Albion Cox, 10 January 1774.

486 Fothergill etc., item 112, J. F. to M. B., 24 February 1773.

487 See Chapter II, note 482 and p. 22.

488 Goodison, *Ormolu*, p.95.

489 See p.25.

490 Goodison, *Ormolu*, pp.96-7.

491 See p.55.

492 In the mid-1770s the partners often commented that the delays in sending silver were due to the number of orders in hand e.g. Letter Book G, p.67, B. & F. to Lister Dighton, 14 July 1774 and pp.203-4, B. & F. to Sir Harbord Harbord, 19 December 1774.

493 Cule, *Financial History*, p.56.

494 Fothergill etc., item 132, Account of Debts due in the months of April and May, 1 April 1773.

495 Cule, *Financial History*, p. 62.
496 In 1773 M. B. and the silversmiths of Birmingham and Sheffield remarked that the price of silver plate produced in London was too high for it to rival foreign silver plate. The context makes it clear, however, that this view was based upon the fashioning charges rather than the intrinsic value of the silver plate. (*Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths, Plateworkers of the City of London and Places Adjacent* (1773), quoted in Westwood, *Assay Office, Birmingham, Part 1*, p. 21)
497 M. B. Diary, 1775, p. 20.
498 Birmingham Commercial Committee, item 3, September 1783.
499 Birmingham Commercial Committee, item 4, paper publishing the resolutions of a meeting of the Birmingham Commercial Committee, 19 September 1783.
500 Birmingham Commercial Committee, item 6, Meeting of Committee, 25 January 1785.
501 Garbett, Samuel, 1786-1797, 2 of 3 boxes (hereafter cited as Garbett, Samuel 2), item 38, Samuel Garbett to M. B., 25 November 1786.
502 Garbett, Samuel 2, item 40, Samuel Garbett to M. B., 7 December 1786.
503 Letter Book D, p. 79, M. B. to William Baker, 14 June 1773.
504 See pp. 62-73.
505 See pp. 61-2.
506 See pp. 72-5.
507 See pp. 73-8.
508 See pp. 68-9 and pp. 75-6.
509 See pp. 61-2.
510 See p. 57 and p. 73.
511 See pp. 56-8 and pp. 71-2.
512 See pp. 77-8.
513 See p. 70.
514 See p. 56.
515 Letter Book G, p. 830, B. & F. to Elizabeth Montagu, 15 February 1777.
516 See pp. 70-1.
517 See pp. 57-8.
518 See pp. 58-9.
519 See Appendix 1A.
520 See Appendix 1B.
521 In 1778-9 Sebastian and James Crespell of London made up more than 20,000oz. of silver (Philippa Glanville, *Silver in England*, English Decorative Arts (1987), p. 106 hereafter cited as Glanville, *Silver*).

CHAPTER III

THE PRODUCTION OF SILVER

Boulton's general philosophy of manufacturing[1] was to make large quantities at reasonable prices through higher levels of organisation, efficiency, and technological innovation than his competitors.[2] He tended to price items at a moderate level but hoped to ensure healthy profits by making large quantities.[3]

The extent to which Boulton applied this essentially industrial approach to the production of silver varied according to different types of items. It was used to a considerable degree for some articles where the demand was substantial and where through a high degree of mechanisation the partners were able to produce pieces at very competitive prices.[4] Other, particularly prestigious items which were in less demand, relied mainly on hand skills and prices were closer to those of other manufacturers who used similar techniques.[5]

We saw in the last chapter both that Boulton was disappointed by the level of silver sales but that he did not regard the volume of sales as the highest priority;[6] these almost contradictory attitudes can be understood in the light of silver production methods at Soho. Low prices were possible where the degree of technology involved in production was considerable; however, the high cost of that technology was only justified if the volume of sales was large. The technology used to manufacture silver was also used to make other articles (particularly Sheffield plate)[7] which sold in larger quantities;[8] although therefore the actual level of silver sales meant that Boulton was not using that technology to its full potential, he was nevertheless both able to make items at a competitive price and, when planning the business, to give less than the highest priority to the level of sales. Where hand skills were involved the level of sales was also not crucial: although higher sales would have permitted more economy in the use of models and patterns, the individual and varied demands of customers purchasing the prestigious items[9] which particularly involved hand techniques inevitably limited the extent to which such economies could be achieved;[10] moreover, since the essential resource required here was skill, Boulton could readily adjust this according to the number of orders he was able to obtain.[11]

The purpose of this chapter is to analyse Boulton's approach to the production of silver through sections on the following: departments and their managers, technology, the use of hand techniques, and an assessment of the quality of production. Through much of the chapter reference is made to the rôles of individual staff and the pricing of silver.

To ensure the efficient use of resources the production of silver items was located in departments which made similar items in other metals. Although several of the managers of these departments worked at Soho in the 1760s[12] it is only from 1776 that information survives about departmental organisation at Soho.[13] By 1773 the partners were alarmed about the quality of management at Soho which was partly responsible for the inefficiency and financial difficulties of the partnership;[14] they therefore changed some managers and some were taken into partnership to encourage efficiency and increase capital.[15]

Although in a few cases it is not possible to be sure which department made a particular item - this is true of rings[16] and bodkins[17] - in most cases silver articles can be ascribed to particular departments. Thomas and George Caldecott specialised in filigree and used gilt base metals as well as silver. Prior to his departure in 1776, John Bentley made a variety of 'toys' in different metals including (in silver) inkpots, pen-cases, and chains. John Eginton produced a wide range of 'toys' in an equally wide range of materials; in silver he made instrument-cases and boxes and also produced silver-gilt lockets. Robert Dodd (who was in partnership with Boulton and Fothergill from at least 1776) mainly produced tortoise-shell items and gilt boxes but his range included silver boxes.[18]

Silver buttons were probably produced just in some of the departments specialising in buttons.[19] Sets of silver buttons were made by the Solid, Shanked, Gilt and Plated Buttons department.[20] By 1773 Charles Wyatt also manufactured buttons in a number of metals, including silver, and by 1776 he was in partnership with Boulton and Fothergill, just for the production of these items. Following Wyatt's dismissal in 1777 (for theft),[21] John Scale took over Wyatt's rôle and produced large quantities of buttons including many in silver-gilt metal.[22]

Silver plate was produced in the department which also produced

ormolu and Sheffield plate.[23] As early as 1770 Boulton was dissatisfied with the management of John Bentley;[24] in 1772 Boulton insisted that responsibility for checking all chasing be transferred during his absence from Bentley to Francis Eginton.[25] At about this time Eginton was put in charge of the department[26] and Bentley was transferred, as we have seen, to 'toy' production. Fothergill had also been concerned about the quality of management[27] but he was keen to take on a partner as a means of relieving the firm's financial difficulties which he thought would increase with the introduction of silversmithing.[28] Again and again in 1772 and 1773 Fothergill pressed Boulton to form a partnership specifically for silversmithing.[29] Fothergill thought the silver business a sufficiently weighty innovation to justify such a move (and would therefore not lead the outside world to conclude they were in financial difficulties[30]) and felt that the success in obtaining the 1773 Act would attract a suitable partner.[31] It is possible that Eginton became a partner in 1773[32] (since there is no subsequent surviving correspondence in which Fothergill continued to demand a new partner) but certainly by 1776 Eginton was in partnership for the production of silver plate, ormolu, and Sheffield plate.[33] The terms of the partnership have not survived but Eginton was paid a salary in addition to profits.[34] As well as the responsibilities of managing the many workmen in his department, he also personally supervised some workshops and was the chief designer.[35]

Most of this chapter is about silver plate production and deals with the efforts to overcome the three main production problems which confronted the new venture in the early 1770s. Firstly, the inefficiency of many staff in Eginton's department was a source of anxiety to the partners.[36] Secondly, Boulton noted about 1770 that further technical innovations would be required at Soho.[37] Thirdly, it was necessary to increase silversmithing expertise to meet the planned expansion in the production of silver plate.[38]

Boulton deliberately restricted the number of silversmiths at Soho until he was sure that Parliament was prepared to grant Birmingham an assay office[39] and before 1773 only two specialist silversmiths are known to have worked at Soho.[40] Following the Act, Boulton was determined to increase production rapidly[41] and it was therefore necessary to recruit experienced silversmiths. This involved

enticing men from their employers; even though the practice was by no means uncommon it caused disputes,[42] as Boulton's experience had taught him.[43] Suitable men could not be found in Birmingham - it was almost entirely without silver plate workers[44] - and Boulton was forced to recruit from London which, because it dominated the silver industry in England, provided the main source of labour.[45]

Although silver plate manufacture required some new resources, its development was facilitated by re-deploying equipment and staff originally acquired for other products. This flexible use of resources was characteristic of Birmingham's 'toy' industry where tools and skills were often turned to whatever happened to be in demand.[46] This approach determined the partners' agreements with adult workers: although they were normally employed for a particular job, the partners reserved the right to direct them to any task at Soho.[47] Boulton also required his apprentices to be flexible and after a period of assessment they were required to settle into whichever branch of Soho's production best fitted the apprentice's skills and the partners' needs. The large number of apprentices enabled Boulton to select the best for prestigious products like silver.[48] The flexible use of apprentices was paralleled at Birmingham and contrasts with the premium apprenticeship system which was rarely used there[49] or at Soho.[50] That system was used in towns or cities such as Coventry or London with borough status and strong guilds,[51] where the trade pursued during the apprenticeship was normally carried on in later years.[52]

Even though the partners did not wish to neglect their established products, such as buttons and 'toys', to develop silver plate[53] there were several ways in which Eginton was able to utilise existing resources. Some staff specialised in processes[54] or articles[55] whose skills were deployed for silver plate. Several staff whose highly-developed skills were used for ormolu[56] were available for silversmithing particularly after ormolu production declined from about 1772.[57] Eginton's department co-operated with others in several ways. He supplied silver to other departments[58] and old silver was sometimes returned for melting-down and re-use.[59] Other materials also circulated: for example, he received on one occasion steel wire, emery, and resin, from Buttons, Steel Chains, and Hilts .[60] There was also an exchange of expertise; for example, the Caldecott's

received silver which had originally been rolled for Eginton's department[61] and they frequently did work for him.[62] Refining was carried out by James Keir[63] between 1778 and 1780;[64] he provided this service for Eginton's department[65] and others.[66]

Boulton regarded the development of machinery as a crucial means of producing silver at a lower price than his London rivals;[67] apart from machinery which was developed for silversmithing[68] (and to a large extent for Sheffield plate as well)[69] he was able to take advantage of the water-power developed for general use at Soho. Here the original water-mill was re-built in 1761[70] and minor alterations were carried out in 1765[71] and 1766.[72] By 1767 the mill was used for rolling metals and turning 'laps' (rotating discs for grinding and polishing metals). Boulton was thought to have been the first to use water-power to turn 'laps'.[73]

The line of the watercourse that supplied the required power to the water-mill is indicated in an undated sketch-plan (Plate 19). The water ran underneath the front block of the Manufactory, through the rolling-mill and from there turned sharply left before entering Hockley Pool (Plate 20). The position of Hockley Pool to the south-east of the Manufactory, is shown on a plan of 1805 (Plate 21); this plan also shows the Mill Pool, to the north-west of Soho, which provided the water supply. The Mill Pool was twenty-four feet higher than Hockley Pool[74] so that the speed of water as it reached the rolling-mill was considerable. The Mill Pool was supplied by Hockley Brook (a tributary stream of the River Tame). Hockley Brook descended from 520 feet to about 325 feet above sea-level over its six-mile length, which made it a fast-flowing stream that was particularly suitable for turning a water-wheel.[75]

Nevertheless, attempts had to be made here, as elsewhere in industry at this time,[76] to overcome the inadequate supply of water during the summer months. The Mill Pool had been constructed shortly before Boulton took over the Manufactory in order to create a large reservoir which would increase supply during the summer.[77] Even so, the partners were obliged to connect a horse-mill to the water-wheel during the driest period of the year;[78] this practice began from at least 1763[79] and continued into the early 1770s.[80]

The partners found that these measures were not entirely satisfactory, as did other manufacturers who tried them in similar

situations.[81] Despite the Mill Pool, the shortage of water in the summer months continued to affect production and the problem was acute in 1765.[82] The situation deteriorated even further after 1768[83] following the construction of canals by the Birmingham Canal Navigation Company which used some water that would otherwise have flowed in Hockley Brook.[84] Moreover, the expedient of using the horse-mill was very expensive: the cost was put at five or six guineas per week.[85] As a result, Soho sometimes resorted to turning rollers by hand.[86]

These difficulties led Boulton to think of using a steam-engine to return water from Hockley Pool (which existed long before Boulton occupied the site)[87] to the Mill Pool to augment the supply in summer.[88] Boulton conducted experiments with a steam-engine as early as 1765[89] but nothing of consequence seems to have come from this.[90] However, this marked the beginning of an important interest which had enormous significance for Boulton's later career.[91] In 1769 he first became acquainted with the engineer James Watt[92] who in 1765 had developed a steam-engine at Kinneil in Scotland which incorporated his innovation of a separate condenser. Compared with the traditional Newcomen engine, Watt's required between two-thirds and three-quarters less coal (for fuel) to do the same amount of work. Watt patented his invention in 1769.[93] The possibility of a partnership between the two men arose since Watt required financial backing and Boulton was both keen to use steam-power at Soho and gain financially from the production of steam-engines. In 1774 Watt moved to Birmingham and in the following year their partnership began.[94] The steam-engine which Watt had built at Kinneil was transferred to Soho in 1774 and Boulton (like other manufacturers who used steam-engines for a similar purpose)[95] found that this solved his problem.[96]

In 1770 Boulton remarked that he had the use of two water-mills for rolling metal.[97] Apart from the one at Soho, he was thinking of Hofford Mill[98] where the partners carried out construction work in 1765.[99] This mill[100] was about two and a half miles from Soho.[101] The partners rented the mill and when in 1780 they were offered the lease it was refused[102] since Fothergill thought the money could be better invested at Soho.[103]

Although the partners had large quantities of metal rolled at Hofford,[104] silver is only known to have been rolled there by them on

one occasion,[105] though this could have happened at other times.[106] However, because of general lack of firm evidence that silver was transferred to Hofford it seems likely that most silver was rolled at Soho.[107]

The partners bought a large number of rollers. In 1764 Benjamin Huntsman of Sheffield, who made high-quality steel[108] (and who had supplied the partners with rollers before) was asked to make a pair about 7¼ inches long and 3⅝ inches in diameter specifically for rolling copper and silver at Soho.[109] About 1770 Boulton noted (in the context of silversmithing) the need for two-feet long rollers that were carefully prepared;[110] in 1771 two were purchased from Abraham Darby of Coalbrookdale which were probably designed to meet this need.[111]

The progress of the silver business required further developments. In 1774 the partners received an order for a large silver tray 2 feet 7½ inches long and about 1 foot 11¾ inches wide.[112] This was a larger sheet than the partners had produced before. Boulton claimed that he constructed another water-powered rolling-mill[113] but given the lack of evidence of any major building activity at this time it is more likely that he modified one of his existing mills. This additional facility not only enabled the partners to roll large sheets but they no longer had to resort sometimes to rolling metal by hand.[114] At about the same time further steel rollers were bought from Huntsman for preparing fine wire for filigree pieces[115] and for producing silver foil.[116]

Despite these improvements the problems of rolling metals were not fully resolved. Large quantities of silver were rolled for the partners by the Birmingham firm Birch and Hunt in 1778[117] and 1780;[118] other metals were rolled by this[119] and other firms from time to time.[120] Fothergill complained of the inadequacy of the mill at Soho and the reliance on Hofford. He wanted another mill at Soho;[121] the mill was re-built but only after the end of the Boulton and Fothergill partnership.[122]

By Boulton's day the use of rolling-mills was widespread; they replaced the need to hammer metal to make sheets. Rolling-mills first occurred in England for general metalwork in the late seventeenth century.[123] In Sheffield in 1743 Thomas Boulsover introduced Sheffield plate; he rolled the ingot[124] of copper and

silver to form a sheet. Other Sheffield plate manufacturers in the town began by beating the ingot to form the sheet;[125] later, rollers were turned by hand and then by horses but by 1762-5 Joseph Hancock employed a water-powered rolling-mill to produce sheets of silver-plated metal for the trade.[126] By about 1765 silver was also regularly rolled in Sheffield.[127] In Birmingham silver was rolled with the aid of water-power by 1756[128] and in London silversmiths were beginning to rely on rolled rather than hammered sheets.[129]

The use of rollers extended beyond just rolling smooth sheets of silver; about 1770 Boulton noted that it would be possible to produce straight mouldings and ornaments from pairs of patterned steel rollers rotating against each other.[130] The purchase of unhardened rollers[131] suggests that these were sunk with a pattern at Soho.[132] Soho may have been one of the first factories to use the technique: only later in the 1770s is it known to have been used elsewhere.[133] Early in the 1770s some mouldings on the partners' ormolu were made in this way.[134] This technique may have been used[135] for a number of mouldings on silver; beadings could easily be made by this method and they frequently occur on the partners' silver (Plates 28 and 65). The 'ribbon and wreath' pattern (Plates 67 and 79) was frequently promoted by the partners in the mid-1770s; it was a popular design and, once the rollers had been sunk with the pattern, it was in their interest to use them as often as possible.[136]

The capacity of rolling to reduce metal to very thin sheets was conducive to the use of the fly-press and stamping.[137] Plate 22, taken from James Bisset's *A Poetic Survey Round Birmingham...* (1800), shows a collection of machines including fly-presses and a stamp, that were widely used by button-makers in Birmingham,and which Boulton intended to adapt for the economical production of parts and ornaments for silver.[138] The fly-press was introduced into England in 1662 for the production of coins;[139] by the latter half of the seventeenth century it was widely used for buttons[140] and this continued at Soho[141] and at Sheffield.[142] The use of the fly-press was extended in the mid-eighteenth century; by , c1765 it was used in Sheffield for Sheffield plate and silver.[143] Even though presses were not used at this time in London for silver plate[144] the technique was used for other metal products in the capital.[145]

The fly-press (shown both on the extreme left and extreme right of

Plate 22) could be used to punch out blanks, to pierce, or to impose a pattern on metal and was operated in the following way. After the tip of the punch had been shaped and hardened, the punch was firmly fixed into the head of the machine with the aid of screws. For cutting out blanks or piercing, a bed (with holes which were identical in shape, but larger than those of the punch) was placed beneath the punch. For imposing a pattern on a piece of metal a die with the same pattern as the punch, but in reverse, was placed underneath. By rotating the lever at the top of the press the punch was brought down to the bed with considerable force because of the impetus given by the weights on the cross-arm. Pieces of metal punched from the sheet were collected underneath.[146]

Boulton was keen to use fly-presses on silver.[147] The sides of a pair of salt-cellars 1774-5 (Plate 23) were pierced by repetitively passing strips of thin silver under two differently shaped punches. This method was also used in Sheffield to fashion similar articles and was an alternative to traditional saw-piercing which was still used in London.[148]

Salt-cellars produced with the aid of fly-presses were cheaper than those made with saw-piercing: the former method generally involved using less silver (the presses worked more successfully with thin sheets) and, since a degree of mechanisation was involved, the fashioning charge was lower. In 1770 the London retailer John Parker and Edward Wakelin charged a customer £3 10s. 10d. for a pair of salt-cellars decorated with saw-piercing; the fashioning charge was £1 8s. 0d., and the weight 4oz. 11dwt.[149] These figures contrast strongly with machine-pierced pairs by Boulton and Fothergill: their pair of 1774-5 (Plate 23) weigh (without the two spoons) 3oz. 6dwt.[150] On one occasion the partners charged 17s. 6d. for a pair weighing only 1oz. 17dwt. with a fashioning charge of about 7s. 1d.[151]

Two specialist piercers John Haywood and Joseph Saunders worked at Soho from 1762; later their skills were used to manufacture certain silver plate items and possibly silver buttons.[152] Whether they were responsible for saw-piercing such items as the dish-ring of 1773-4 (Plate 24) is not clear, but both were accustomed to working with presses. Saunders was supplied with one[153] and in 1776 he was in charge of the Press-shop with Haywood.[154] In 1782 Haywood's

workshop contained not only piercing presses but also 366 pairs of assorted piercing and clipping tools for making salt-cellars, cruet-frames and sugar-tongs.[155] He also made similar articles in Sheffield plate[156] but the demand for such pieces in silver was consistent enough for fairly regular production. For example, in the assay year 1776-7 silver salt-cellars were made in batches as follows: 1 pair, 2 pairs, 3 pairs, 6, 4 pairs, 2 pairs, 8, 2 pairs, and 6.[157].

In addition to the fly-presses, James Bisset's *A Poetic Guide Round Birmingham..* (Plate 22) shows a 'stamp' to the right of the scroll. At Soho Thomas Moore worked as a stamper before the introduction of silversmithing, and later, in Francis Eginton's department, he was in charge of workshops for making dies and stampings; these workshops contained three 'stamps' as well as a number of hammers.[158] Separate workshops were used for stamping buttons.[159]

These 'stamps' were used in the following way. A die, sunk with the pattern required, was placed at the bottom of the 'stamp' and held firmly in the centre of the upright rods with the aid of four large screws and wedges of various sizes called 'dogs'. Lead or copper was poured into the die to form a 'force' (a male die).[160] A 'lickup' (a block of wrought iron toothed like a rasp) was fixed in a square hole on the underside of the hammer and lowered to pick up the 'force' after it had cooled and taken the impression of the die. The hammer (together with the 'lickup' and 'force') guided by the grooved sides fitting the inside of the uprights (the width of which could be adjusted with screws to accommodate hammers of different sizes) was first raised to the top of the 'stamp' by means of a rope which ran over a wheel at the top. When released, the 'force' stamped the sheet of silver, and a set of protective copper linings placed on the die, into the pattern required. The copper sheets (which prevented the silver from cracking by too quickly assuming the pattern of the die, and which also prevented deposits of copper from attaching themselves to the silver) were taken away one by one as the hammer was successively raised and lowered. Between blows the silver was annealed (i.e. softened by alternately heating and cooling it to overcome the increasing resistance of the metal to further work).[161] The stamping therefore gradually received a clearer impression of the details on the die.[162] The number of blows required depended both on the thickness of the metal and the depth of pattern: Boulton once noted

that some silver medals required five blows each.[163]

The job was tiring but different forms of assistance were developed. A stirrup could be added to the bottom of the rope or another workman could help to raise the die and hammer.[164] Boulton noted that a workman stamping medals at the rate of four gross per day could make ten gross per day with the help of a boy placing the blank medals in the stamp.[165] There is no evidence that stamping machines (or fly-presses) at Soho were operated with mechanical power during the Boulton and Fothergill partnership[166] though power was used there for this purpose at a later date.[167] Such a development may have been regarded as unnecessary during the partnership since dies were small; when they became larger the assistance of mechanical power became essential.[168]

Hammering sheets of silver between iron dies is an ancient part of the silversmith's craft;[169] this continued into the eighteenth century for shaping buttons[170] and parts of silver tablewares.[171] However, the use of dies with 'stamps' only began in the mid-eighteenth century. It was in the Midlands that dies with 'stamps' were developed for the silver and allied industries. In Sheffield they were used to stamp knife-hafts[172] and from the late 1750s when large items were produced for the first time in Sheffield plate, they were used not only for that metal but also for silver tablewares.[173] The 'stamp' was also widely used in Birmingham for buttons[174] and other products.[175] A 'stamp' workshop was built at Soho in 1764.[176]

The development of dies and 'stamps' was partly due to improvements in metallurgy. Dies used for the earliest Sheffield plate were made of soft cast metals which easily cracked and blurred even after limited usage so that it was then essential to chase details on stampings.[177] These defects were avoided,[178] after the mid-1760s[179] when dies were made with the high-quality, but expensive, crucible steel introduced by Huntsman of Sheffield in 1740.[180] Boulton and Fothergill bought ready-made dies from Huntsman[181] as well as bars of steel from which they forged their own dies.[182] The partners did, however, buy dies from other suppliers.[183] Dies were also widely used from the mid-eighteenth century because only then did large factories emerge which could afford and make maximum use of them. The first factory (rather than workshop) in Sheffield for the silver and Sheffield plate industry [184] was established by Tudor and

Leader in the early 1760s.[188] By 1774 the town had six firms which made both silver and Sheffield plate.[189] These firms were large[197] and a high proportion of their capital was spent on dies. An inventory made by one Sheffield firm in 1775 shows that of a total stock of tools and utensils amounting to £568 3s. 8d., the value of the dies alone came to £247 11s. 8d.[198] Boulton and Fothergill fitted into this pattern: they too used dies for more than one metal[199] and their stock of dies at the end of the partnership amounted to £300 7s. 5d. just in that part of the Soho Manufactory which produced silver plate, ormolu and Sheffield plate.[190]

The names of many die-sinkers were recorded at Soho[191] and the heavy demand for button dies in the mid-1760s led the partners to use outworkers,[192] as did other Birmingham manufacturers in this period (though this was usually because they were not large enough to employ die-sinkers on a full-time basis).[193] In Francis Eginton's department three men at least were involved in die-sinking: John Eginton was in charge of a die-sinking workshop and following his departure in 1777 die-sinking was carried on by Edward Hodges and William Wilson. All three were also involved with other tasks. A separate workshop was used for sinking dies for buttons.[194] A substantial proportion of the silver made at Soho involved the use of dies (together with 'stamps'). Medals were only made in this way.[195] Buttons,[196] buckles,[197] spoons[198] and candlesticks[199] were often made with dies though they were sometimes produced with other techniques.[200] Ornaments were sometimes[201] produced with dies: references were made to dies for waiter borders[202] and to details '... stamp'd from the vine-pattern die'.[203] This die may well have been used for the clusters of vine leaves and bunches of grapes on the sweetmeat basket of 1774 (Plate 25): each cluster is identical and made from thinly stamped silver and these are characteristics of die-stamping.[204] Only small stampings were made at Soho during this period[205] though in the case of candlesticks a number of small stampings were assembled to make a comparatively large article.

The technique of making candlesticks with dies was developed in Sheffield from the local practice of stamping thin knife-handles in halves, soldering them together, and filling them with tin or lead to provide strength and weight. Candlesticks were made in a similar way but an iron rod was inserted in the centre and the remaining cavities

were filled with substances such as resin or Plaster of Paris. These additions were essential since only thin silver or Sheffield plate was used.[206]

Candlesticks were made at Sheffield in this way by 1755;[207] the technique was recommended to Boulton in 1762[208] and in the following year the partners spoke of making silver candlesticks by this method.[209] This technique was not used in London until the mid-nineteenth century, though London firms did sell candlesticks of this type made in Sheffield[210] and at the Soho Manufactory.[211]

Candlesticks made with dies were substantially cheaper than those made by casting, which was the method used in London. The partners charged £17 2s. 0d. for a pair of stamped 'Lyon' candlesticks (Plate 10) but thought that a cast pair to this pattern would cost £44 11s. 0d. The difference largely derived from the cost of the silver: 38 oz. per pair as opposed to the 108 oz. per pair required for cast candlesticks.[212] Since die-stamped articles could be made more easily, the partners were content with a lower fashioning charge;[213] even though they charged 3s. 3d. per oz. as opposed to the 2s. 6d. per oz. they reckoned London silversmiths charged,[214] the substantial difference in the weights of silver resulted in a considerable difference in the fashioning price overall. Only rarely did the partners make cast candlesticks[215] and most of their other patterns were lighter than the 'Lyon' candlesticks;[216] nevertheless, they were convinced of the quality of candlesticks made with 'stamps' and dies.[217]

Dies lasted indefinitely and the partners maximised their use.[218] The 'Lyon' candlestick pattern was strongly promoted[219] and many were sold in silver;[220] the same pattern was also made in Sheffield plate[221] and ormolu.[222] Producing dies for candlesticks was worthwhile since the demand was regular: in the assay year 1773-4 thirty-eight pairs plus one single candlestick (in a variety of patterns) were made in silver alone.[223]

Dies were however, expensive and time-consuming to make,[224] and the partners avoided making more than were necessary. Customers were offered a choice of candlestick patterns: in 1775 Sir Robert Murray Keith was offered six[225] and the partners up-dated their range from time to time.[226] Occasionally customers wanted other patterns and the partners dealt with this problem in different ways. In 1771

Henry Morris, a goldsmith in London, was sent a pair of silver candlesticks which were different from, but (according to the partners) close to, those required. This ploy was almost certainly devised to avoid making more dies[227] and it was successful: there is nothing to suggest that the candlesticks were returned. On another occasion Boulton asked the architect Robert Mylne to accept a silver candlestick pattern within the firm's range to avoid sinking dies for one of Mylne's own designs[228] and apparently he obliged.[229] Only on one occasion is Boulton known to have made dies to meet a customer's order for a new silver candlestick pattern.[230]

A number of workmen were involved with producing silver candlesticks. Three men - William Bingley, William Hancock and John Duval - who were mainly employed on ormolu in the early 1770s, occasionally turned their hands to making silver candlesticks at that time. It is quite possible that they continued to make silver candlesticks,though Duval left in 1777. Traba worked on silver candlesticks in 1773 but left in that year.[231] Given the limited number of staff who are known to have worked on silver candlesticks and the level of production (it was greater than any other silver plate article)[232] it is probable that a group of specialist candlestick makers [233] made candlesticks in silver as well as other metals[234] and materials;[235] this group included Baker (up to 1773), William Parker, and John Fellowes.[236]

Unlike candlesticks, silver buttons were frequently made to customer's individual designs even when made with dies. Customers were, however, required to pay for button-dies sunk with their own pattern. For example, in 1771 Sir Harbord Harbord was told that he would be charged one guinea for the dies but that these would always be at his disposal. The partners estimated that silver buttons made in this way would cost him no more than 6s. 0d. for a dozen coat and a dozen vest buttons together. These were made of thin rolled silver (probably cut out with a 'press' and stamped with detail by a die)[237] and backed with bone. Alternatively the buttons could be cast, in which case they would require more silver; each coat and vest button for Sir Harbord would then cost 1s. 0d. and 9d. respectively.[238] The partners were arguing in favour of Sir Harbord paying for dies since they probably assumed that he would buy many more; however, another customer was told that since he only wanted a few buttons these should

be cast and any individual pattern required should be added '... by hand...' (i.e. by chasing or engraving). This number of buttons did not justify the trouble and expense of making dies.[239] Silver buttons were therefore made by both methods, but the absence of cast buttons from the assay year 1777-8 to the end of the partnership is striking.[240]

The use of silver wires, mainly for the edges of articles, was a traditional part of the silversmith's craft. Wire-drawing involved the use of a 'drawbench'; this had a winch at one end attached by a strong iron loop to a pair of pincers (called 'draw-tongs'); these were used to draw wire through a draw-plate fixed at the other end of the bench.[241] About 1770 Boulton noted the need for a drawbench[242] and one was later recorded in the Wire-Drawing Shops .[243] Although specialist wire-drawers are not recorded they probably existed at Soho: such specialists were employed elsewhere in large silversmithing firms.[244]

Boulton intended to go beyond the traditional techniques for wire-drawing by utilising the power of the water-mill both to draw thick wires and to draw wires around a cylinder to form parallel rings which could be soldered together to form broad decorative bands. These rings of wires could also be die-stamped to form a decorative border.[245]

Boulton went to great lengths to obtain the best draw-plates . He bought six in London in 1768[246] and in 1772 asked his London agent to obtain one with holes narrower than the width of a pin.[247] In Lyon a type of steel was available which provided draw-plates of the highest quality; in 1772 Boulton asked an agent in Paris to obtain some for him[248] and later Boulton was offered similar 'draw-plates' by a manufacturer in London who claimed that they were as good as those made in France.[249]

The ductility of silver was appreciated long before[250] but the fashion for light design in the 1770s[251] made wire-work particularly popular. Wires were widely used for such items as sugar-bowls (with glass liners) and cake-baskets[252] and at Soho they were employed for the sweetmeat-basket of 1774-5 (Plate 25) and the bread-basket of 1780-1 (Plate 26) though for the latter the wires were probably die-stamped to create the beading. These articles were made in Sheffield in a similar way but in London open effects on baskets were usually

created with saw-piercing and the pieces were therefore more substantial.[253]

Most of the thin silver wire at Soho was used for small filigree pieces. The range was wide and included buckles, hair-runners, instrument-cases, and neckcloth-slides. While the known production of filigree between 1779 and 1781 is far higher than for earlier years[254] it is likely that the level of production was relatively consistent throughout the 1770s.[255]

When considering the technical developments required for the silver business, Boulton wanted a few large hammers, which were to be powered by the water-mill and used to shape such pieces as tankards, cups, and plates. As Boulton noted, such hammers were widely used in the brass industry,[256] which was an important one in Birmingham.[257] Such powerful hammers may have been constructed at Soho: the partners produced tankards, cups, and plates.[258] There is, however, no positive evidence that such hammers were employed: these articles could have been shaped by alternative means[259] and on one occasion the partners remarked that other manufacturers had means of making such articles at a lower rate.[260] It is therefore not clear whether large hammers were used at Soho for silversmithing, but as we have seen, many other technological innovations were employed there for the silversmithing business.

Yet many traditional silversmithing techniques survived at Soho; one example of this was casting which was carried out there as in other large silversmithing firms by specialist workmen.[261] John Allen was employed as a caster by 1763; within Francis Eginton's department he was later in charge of one workshop specifically devoted to casting silver and jointly of another for a variety of metals. Isaac Ryley cast a variety of metals including silver, for different departments.[262] The Soho Inventory of 1782 lists the equipment in the Casting Shop which was required for the common casting process: loam, sand, ladles, cast figures, sieves, moulds, and bellows.[263] This equipment was typical of a casting workshop of this period.[264]

The process was carried out in the following way. A mixture of wetted loam and sand was firmly beaten into a mould. The pattern was dusted with black lead[265] (to prevent it sticking to the loam and sand) and pressed half-way into the surface of the mixture. The whole surface was dusted with black lead to prevent it sticking to the

sand and loam in a second mould which was prepared in the same way as the first. This second mould was firmly pressed onto the first and removed when an impression of the other half of the pattern had been received. Subsequently, the pattern was removed from the first mould and a few channels were impressed into the surface from the depression (created by the pattern) to the edge of the mould; one was to pour in the silver and the others were to allow the escape of air during the casting process. Both moulds were then dried, placed together, and the molten silver poured in. This technique produced rough simple castings which required further filing or chasing.[266] The casting for the finial on the cover of the tureen of 1776-7 (Plate 67) was made by this method.

Another traditional casting technique,[267] *cire perdue*, was used at Soho particularly for the large hollow castings required for ormolu figures used on the firm's clocks. The technique involved fashioning a wax model on a core of clay, or clay mixed with ashes. The model was encased in a mould with casting sand and then heated so that the wax melted and ran away through a channel created in the sand for this purpose. The silver was then poured into the cavities left by the wax; later, when the metal had solidified, the mould was taken away and the core extracted from the casting.[268] This technique was little used for silver at Soho since few large figures were made; however, the harpies on the cassolette of 1779-80 (Plate 70) were created by this method.[269]

Hand-raising was another traditional technique[270] used at Soho. The wine-jug of 1776-7 (Plate 27) was shaped in this way. Underneath the main part of the jug is a compass point; the compass described a series of concentric rings on the disc of silver from which the piece was fashioned. These rings served as guides when the sheet was raised with a series of concentric hammer blows moving from the centre to the outer edge. This raising was done on a stake and the heavy hammer marks removed with a smooth-faced planishing hammer. The lip of the jug was hammered out beyond the main profile and slightly squeezed to create a suitable shape for pouring. At each stage the silver was annealed. The base was also hand-raised but strengthening wires were added (where the base meets the main body) and a flatter, deeper wire added at the bottom to provide stability and perhaps to give the illusion that the base is thicker than it is. The pair of

sauce-tureens of 1776-7 (Plate 67) were basically shaped by hand-raising; the technique was used to shape the main parts (the hammer marks are still visible underneath the base) and the fluting was fashioned by hammering the metal from the outside with specially shaped punches; the sharp definition to the lines between the flutes was due to further punching of those lines from the inside.[271]

Hand-raising was an expensive technique[272] and simpler methods were adopted for shaping some hollow-ware pieces. For example, the teapot of 1776-7 (Plate 28) involved turning a sheet of silver into a cylindrical shape and joining the ends with a cramped seam (i.e. cutting dovetails in both ends of the silver strip and overlapping them).[273] The join was soldered; this entailed heating the article on a charcoal fire with the aid of bellows and a blow-pipe (directed at the part to be soldered) in order to create sufficient heat. After the join was cleaned in 'pickle' (a mixture of hydrochloric acid and water in the ratio of 1:10) it was heated, and the solder (an alloy of silver and brass roughly in the ratio 3:1) was applied and allowed to run into the crevice.[274] The seam was made imperceptible by hammering. Discs of silver were added to form the base and top; these were fixed with solder. Teapots were made elsewhere in this way.[275]

The equipment necessary for the basic fashioning of such pieces as the tureen and teapot was contained within the workshop of the silversmith James Watt.[276] The tools included compasses, hammers, hand-shears (for cutting sheets of silver), an oil stone (for sharpening tools) as well as pliers, scissors and a rule. The workshop contained a hearth and bellows used for soldering and annealing silver.

Watt's workshop also contained swages. By Boulton's day these were widely used in the workshops of Birmingham[277] and Sheffield. A swage consists of a pair of hinged jaws with patterns imposed on the insides (in relief on the upper and in intaglio on the lower jaw). The swage was held in a vice, and the silver (protected by a leather) was placed between the jaws. The pattern was impressed upon the border of the salver by tapping the upper jaw with a hammer; by stages, the entire edge was swaged by repeating the operation.[278]

Apart from Watt, several other silversmiths worked at Soho. E. Bates and Thomas Bunbury were employed as specialists in the earliest

stages of the silver business. S. Holme and Strickland, though working at Soho before, are only known to have worked on silver plate in the mid-1770s (and the latter also made Sheffield plate). John de la Fontaine was originally employed as a 'toy-maker' but later produced silver plate and Sheffield plate.[279] Since ormolu production consisted largely of vases and clocks,[280] staff engaged for that business were of limited use for those silver products where the skill of hand-raising was vital; however, John Duval who worked for the ormolu business in the early 1770s, did on one occasion at least help with a silver coffee-pot. A number of specialist silversmiths were recruited from London in the mid-1770s; in addition to Watt, these included Hanckel, George Wyon, Stephen Edstrom and Anthony Burn.[281]

These men were probably responsible for the basic fashioning of a number of different types of silver plate. There is very little evidence of the types of silver made by each of these men,[282] but in 1776 when the partners were looking for silversmiths they wanted them to be capable of making a range including épergnes and tea-urns.[283] For such pieces it would have been unwise to employ a man to make only one type since the demand was not large enough: only one or two épergnes were produced in each assay year between 1773 and 1777 and none was made in the latter years of the partnership. Tea-urns were only marginally more popular: from 1773 the highest number produced in one assay year was four.[284]

These silversmiths at Soho essentially specialised not in producing a particular article but in a small range of silversmithing skills - raising, soldering, and annealing - which were fundamental to making larger pieces of silver plate. This was also true of large firms elsewhere. The basic fashioning of articles, at Soho and in other large firms, was added to by the specialist skills of other workers such as the chasers.[285]

The larger and more expensive pieces in particular displayed the traditional skills of chasing (the modelling of the surface of the silver with hammers and punches)[286] and repoussé work (modelling in relief by beating the metal from the back with punches and hammers).[287] On the cup and cover of 1777-8 (Plate 81) the guilloche pattern (interlacing bands forming a plait)[288] on the base is repoussé work; the snake handles are basically wires forged to create

variations in their thickness but they were also chased to provide a suitably scaly surface; the festoons of husks, the band with an elaborate scroll, and the acanthus, have been cut from silver sheets, chased, and soldered on. The sauce-tureen of 1776-7 (Plate 67) is unusually elaborate: the edge of the cover is matt-chased and specially shaped punches were used from the underside to create the general shape of the husks, both on the cover and on the main body of the tureen; these ornaments have been given precise definition with punches from the outside. The arabesque frieze (consisting of flowing lines and tendrils)[289] was made from a strip added to the body of the tureen and deeply chased and pierced. The acanthus at the end of the handles was cut from a sheet and then chased. The base has a rim of repoussé flower and ribbon detailing.

An inventory of 1782 lists the contents of the chasing workshop.[290] This contained a wide range of hammers and punches as well as sand-bags and pitch on which the silver was supported during the chasing process.[291]

Francis Eginton was in direct charge of chasing; by the mid-1770s he had long experience of the technique and possessed the requisite artistic ability. John Eginton taught apprentices to draw and when proficient some became chasers; one of these was Edward Hodges[292] whose workshop contained not only dies but also chasing tools.[293] Wilson and Hooker were thought to be suitable for chasing silver. Henry Gillings almost certainly chased some silver since he came to Soho from London in 1775[294] when the partners were recruiting chasers from the capital for silversmithing.[295] Dumée and Kassterrel also chased silver.[296]

There were many other chasers working at Soho. In 1770 Boulton claimed that he had thirty-five[297] and at about this time wanted twenty more.[298] The names of many other chasers at Soho are known[299] and several worked on ormolu[300] but none of them was specifically recorded as chasing silver. However, it is certain that some of them did so: the partners habitually referred to chasers in general rather than chasers for any particular metal[301] and on one occasion in 1777, they remarked that they were moving chasers from their normal work to assist with the silver business because of the pressure of work.[302]

Crests and coats of arms were engraved.[303] Little is known about the engravers at Soho. In 1771 Boulton thought about inviting a

French engraver to Soho[304] though whether or not he came is unclear. In 1774 it was said that Soho only had one engraver, at least for silver.[305] This could have been a reference to John Eginton: he not only carried out engraving but also instructed boys in this art.[306]

The final stages in production were burnishing and polishing. H. Allen was recorded on one occasion, as burnishing a silver box and John Hughes polished, specifically, silver.[307] These are the only two staff known to have worked on silver plate but several other burnishers and polishers are recorded who may have done so.[308]

A burnishing workshop for buttons was in the charge of John Otley; another[309] was used for silver plate as well as ormolu[310] and Sheffield plate.[311] Burnishing moves the surface of silver by compression and the process requires tools with points, knobs, or flattened surfaces of hardened steel, teeth, or stones such as agate or blood-stone.[312] The burnishing workshops contained a number of burnisher's tools including a stone burnisher.[313] Boulton once noted the need for 'laps' for polishing burnishing stones[314] and on one occasion ordered burnishing stones from Paris.[315]

When planning the silver business Boulton intended to polish silver with the aid of the water-mill.[316] 'Laps' connected to the mill had been set up for polishing metal at Soho by 1764[317] and many were recorded in an inventory of the mill in 1782.[318] There is, however, no firm evidence that silver plate was polished with 'laps' powered by the water-mill.

The polishing workshop[319] in the part of the Manufactory that made silver (as well as ormolu[320] and Sheffield plate[321] which also required polishing) contained lathes which were traditionally used for this purpose. A lathe could be turned by connecting it to a rotating wheel by means of a rope; this method of turning lathes was used in France as early as the fifteenth century and a 'wheel and stand' was included in Soho's polishing workshop. This also contained a foot-lathe which relied upon a treadle connected by a rope to the 'headstock' (i.e. the end of the spindle). The treadle was also used with the 'pole-lathe' which was also included in Soho's polishing shop. The 'pole-lathe' also relied upon the flexibility in a pole fastened to the ceiling; a rope connected to the treadle was wound around the work-in-hand on the spindle and then fastened to the pole; after the rope had been pulled down by depressing the treadle it was

pulled back up by the spring in the pole. These two actions rotated the work in opposite directions.[322] The pole-lathe had been used by many generations of craftsmen but its design remained virtually unchanged.[323]

Lathes hastened the polishing process and the polishing workshop contained other materials for this purpose. The brushes there were used on the polishing lathes and rotten-stone[324] (a decomposed siliceous limestone used in powder form) was traditionally used with oil to polish silver.[325] The partners ordered pumice[326] which, with oil, was also used for polishing.[327] The process involved some loss of silver whereas burnishing did not; in order to compensate themselves for this loss the partners charged more for polished silver items.[328]

Only a limited amount of silver plate was gilded at Soho even though the technique was used there for 'toys'[329] and had been much used in the early 1770s when ormolu production was at its height.[330] The popularity of gilding was adversely affected by the widespread taste for restraint and the antique: the connoisseur Sir William Hamilton warned Josiah Wedgwood that this would make gilding increasingly unacceptable on his pottery.[331] However, a silver-gilt épergne was supplied by the partners to Sir Robert Rich in 1776[332] (Plate 60) and four silver-gilt monteiths were sold to the Duke of Ancaster in 1777.[333] (Monteiths are wine-glass coolers in the shape of a punchbowl; the crenellated edges hold the inverted bases of wine-glasses which are surrounded by ice in the centre of the bowl.)[334] Although silver-gilt plate was rarely made at Soho, silver-gilt buttons were frequently produced[335] and silver-gilt spoons were made from time to time.[336]

The process used at Soho was the traditional mercurial gilding or fire-gilding technique.[337] Gold was reduced to a fine leaf or powder and amalgamated with mercury (under heat) in a ratio of six to one. After cooling, the amalgam was squeezed through chamois leather to remove the excess mercury. This left a substance with the texture of butter consisting of roughly two parts mercury to one of gold. The object to be gilded was cleaned, usually with a wire brush and nitric acid, to remove traces of oxidization. The object was then smeared with nitrate of mercury to facilitate the application of the gilding amalgam which was applied with a special brush or gilding knife. The

object was then heated to make the mercury evaporate leaving gold alloyed to the surface.[338] This gave dull yellow surfaces; however, Boulton altered the colour and finish of the gilding on ormolu with further processes but whether they were used on silver as well is not clear. The gilding process was finished with burnishing.[339]

The only workman who can be identified as a gilder was Thomas Bradbury.[340] The equipment required for gilding was listed in an inventory of Gilding Shops and included a 'scratching lathe used for cleaning the object prior to gilding.[341] A separate gilding workshop was used for buttons.[342]

Where traditional techniques were involved the partners were far more willing to produce new designs particularly for important customers. Whereas the use of dies generally led the partners to require customers to have a stock design,[343] the traditional techniques permitted greater flexibility. The tureens supplied to Mrs Montagu in 1777 (Plate 67) were richer than any produced at Soho before.[344] When sent designs for cassolettes (perfume burners[345]) the accompanying letter invited her to submit any design ideas of her own which she might prefer.[346] In 1776 the Duke of Holstein-Gottorp was sent drawings for tureens[347] which were based on ideas put to Boulton by the Duke; nevertheless, Boulton offered to obtain the assistance of the architect James Wyatt for further changes and was willing to incorporate any further ideas that his client might have.[348] Except when it was necessary to make new models[349] there is nothing to suggest that customers were charged more for new designs.

Simple designs were considerably cheaper to make than elaborate ones. For example, Lady Morton was instructed that a plain tea-urn would be 2s. 0d. per oz. while one with fluting and husks would be 4s. 0d. per oz.; the same price difference was quoted for coffee-pots but the disparity for a teapot was even greater: 4s. 9d. per oz. as opposed to 2s. 6d. per oz.[350]

The partners' fashioning prices per oz. generally compared favourably with those of the leading London retailer Parker and Wakelin, which from 1776 became Wakelin and Tayler.[351] The price quoted Lady Morton was substantially less than the charge of nearly 4s. 0d. per oz. once made by the London firm for what was also described as a plain teapot.[352] Boulton and Fothergill charged between 10d. and 1s. 2d. per oz. for plates according to the pattern on the border;[353]

this contrasts with 1s. 5d. per oz. once charged by Parker and Wakelin.[354] Boulton charged 1s. 6d. per oz. for making a waiter with a gadrooned border[355] (a pattern with repeated convex curves[356]); Wakelin and Tayler charged 2s. 1d. for the same article with the same pattern.[357] With other pieces, however, these price differences were not sustained: Boulton and Fothergill quoted 3s. 0d. per oz.[358] and 4s. 6d.[359] for sauce-boats but Parker and Wakelin sold them for 2s. 9d.[360] and 3s. 0d.[361]

The overall fashioning charge depended upon the charge per oz. and the weight of the article. Some of Boulton's pieces weighed about the same as those supplied by the two London firms: teapots usually weighed about 14 oz. or 15 oz. from Wakelin and Tayler[362] or Boulton;[363] sauce-boats usually weighed a little less than 20 oz. from Boulton[364] or from Parker and Wakelin.[365] Boulton's plates generally weighed about 18 oz. 10 dwt.[366] whereas on one occasion Parker and Wakelin supplied plates weighing about 16 oz. 10 dwt.[367]. Other articles by Boulton and Fothergill tended to weigh less: their salt-cellars of 1779-80 (Plate 82) made by hand-raising, weigh about 2 oz. 5 dwt. each[368] which was about half or a quarter of an oz. less than Wakelin and Tayler's.[369] The differences with London were more obvious with larger pieces: the épergne of 1776 (Plate 60) by Boulton and Fothergill weighed 105 oz. 13 dwt. 12 gr. when assayed;[370] comparable épergnes by the specialist London firm of Thomas Pitts weighed considerably more: 211 oz. 4 dwt. and 166 oz. 1 dwt.[371]

These figures for pieces made by traditional methods show that Boulton's prices and weights were generally about the same or lower than those of the London firms; Boulton did, however, make exaggerated claims for the differences. In 1776 he claimed to make plates weighing 16 oz. at a fashioning charge of 1s. 2d. per oz. whereas in London he thought silversmiths' plates weighed 20 oz. to 22 oz. and that they charged 1s. 6d. per oz. for making them.[372] When Boulton launched the silver business he boasted (on different occasions) that his fashioning charges would be fifty per cent[373] or twenty per cent[374] below those of his London rivals. While, as we saw earlier, substantial differences existed when Boulton used machinery (both in weights and overall fashioning charges) there were sometimes discrepancies between Boulton's early claims and later prices for items substantially made by hand and this was pointed out

by one customer in 1776.[375] Moreover, Boulton's claims to make lighter pieces of hand-made plate were undermined by the increasing tendency of London's silversmiths in the 1770s to reduce competitively the weights of their products.[376]

Nevertheless, it was rare for customers to complain about the partners' charges[377] since they were generally competitive with those of London firms. Where the partners used machinery they had (as we saw earlier) a distinct prospect of making a profit even though they charged less than their London rivals.[378] However, where items made at Soho relied mainly on the same traditional methods of manufacture which were used in the capital, the partners lacked the means to compensate for their lower profit-margins; although Boulton was normally content to make limited profits on each article (because he made so many),[379] the prospects of making any profits on hand-made silver were limited if Soho operated inefficiently.

Boulton and Fothergill, like other large factory owners of the early industrial period, attempted to impose a rigid discipline on their workforce.[380] Employees at Soho were required to work from 6 a.m. to 7 p.m. in summer and from 7 a.m. to 8 p.m. in winter with half an hour's break for breakfast and one hour for dinner.[381] Contracts with employees varied in length but wages and increments were fixed when indentures were signed. Contracts specifically warned about disclosing any of the firm's secrets, or damaging, or lending, or stealing, any of the partners' property. Pay was deducted for absenteeism[382] though workers could obtain relief from the Soho Club which was financed by contributions from workers and visitors (but not Boulton or Fothergill);[383] schemes of this kind developed widely in the eighteenth century.[384] Premium apprentices, who were generally avoided at Soho[385] and who came from at least moderately prosperous homes[386] were less likely to be as dependent on their employers as '...the plain country lads...' (to use Boulton's phrase) who were preferred at Soho.[387] Traditionally premium apprentices boarded at their master's house;[388] although Boulton (and probably Fothergill) refused to do that,[389] they provided specially-built accommodation at the Soho Manufactory for poor apprentices[390] while those from respectable backgrounds were placed in the homes of the partners' more reliable employees. In contrast to the premium apprenticeship system it was usual for the partners to pay for their

apprentices' board, and clothes, and to pay wages.[391]

The partners found, as did other contemporary pioneers of industrialization, that firm rules did not ensure discipline at a time when the tradition of self-regulated work patterns, which were integral to the domestic system of production, were still strong.[392] In 1773 Scale regarded the incompetence and poor behaviour of staff as a major cause of Soho's difficulties.[393] At this time the inefficiency of several staff in Francis Eginton's department gave cause for concern; these included John Duval, William Hancock, Thomas Bradbury, and John de la Fontaine but none of these was dismissed, although de la Fontaine left temporarily and Duval left in 1777.[394]

However, the partners' concern led them to take some firm action. In 1773 some staff left: Traba was dismissed for stealing silver; Baker was also dismissed after refusing to work on a tea-urn (in an unspecified material) and Dumée, a chaser whose work was of a low standard, resigned after an argument with Eginton.[395] The partners took considerable trouble when recruiting silversmiths from London. In 1771 Duval who had earlier worked there,[396] wrote on Boulton's behalf to four silversmiths in the capital[397] and at about the same time Kelly, a London silversmith, supplied Boulton with a list of ten silversmiths and the names of their employers.[398] Kelly's activities made him unpopular with some employers[399] but the partners' London agent, William Matthews interviewed the recommended workmen;[400] some were rejected for reasons of age, lack of ability[401] or character[402] and those who were selected were required to undergo a trial period at Soho.[403]

The quality of the silversmiths recruited by the partners varied. Some taken from London in the mid-1770s were not reliable: Anthony Burn was described as '...fickle-minded...' and '...indifferent...' and left abruptly after only a year at Soho, by which time he was in debt to the partners; Stephen Edstrom stayed for only two years and also accumulated debts, and George Wyon failed to keep up with the rent for the house the partners reserved for him. On the other hand, there is nothing to suggest that other men from London - Hanckel and James Watt - were in any way deficient, nor were others such as Thomas Moore, William Wilson, and William Bingley who were probably recruited locally.[404]

Another issue over which Scale expressed concern when the silver

business was being planned was the level of wages. He felt in 1771 that no silversmith should be paid more than £1 5s. 0d. per week.[405] Although some received £1 1s. 0d.[406] Scale pointedly remarked in 1773 that one earned £1 6s. 0d. and another £2 10s. 0d. (though this included the wages of that master's apprentices).[407] Scale was anxious about the wages the firm might have to offer to attract men from London.[408] One was offered one guinea per week together with other benefits; although this was within Scale's limit it was on a par with that silversmith's London wage[409] and even this level of remuneration was dangerous in view of Boulton's policy of making silver at a lower price than his competitors in the capital. Several others were paid at about the same level.[410] Pushing wage rates lower was virtually impossible if men were to be attracted from London and if the partners were to compete with other employers in Birmingham where wage-rates were high.[411]

In 1773 Scale felt [412] - as did other manufacturers[413] - that greater efficiency would result from paying men by the piece. Although Boulton and Fothergill subsequently favoured the idea of paying silversmiths in this way,[414] contracts between the partners and both journeymen and apprentices normally referred to weekly wages;[415] the exceptions were for chasing and die-sinking where there was an agreed price for the job.[416] Workmen often resisted the pressure that the piece-rate system implied[417] and this made the partners somewhat defensive: although one silversmith was offered weekly terms, the partners tentatively suggested that he might eventually work on piece-rates.[418] The partners were obliged to adhere to the normal practice in Birmingham where workers were generally paid by the week;[419] die-sinkers were an exception as they usually worked independently.[420] Although a few trades did use the piece-rate system in the eighteenth century this was generally where the work involved was repetitive and capable of measurement;[421] only when these conditions increased in later generations with the spread of mechanization, did the piece-rate system become more general.[422]

Scale had also suggested that workmen should pay rent on their workshops and purchase (with the exception of heavy equipment such as presses) their own materials and tools; the proposals were designed to release the partners' own capital, which was heavily tied up in the building and equipment of Soho, for circulating capital.[423] These

ideas were virtually ignored by the partners. They purchased the materials for producing silver[424] and owned not only the heavy machinery but also large quantities of tools.[425] Agreements signed with employees stipulated that they would be supplied with materials and tools[426] and on one occasion, at least, when a silversmith brought tools to Soho, he was paid for them.[427] There is hardly any evidence that workmen had their own equipment at Soho[428] and there is nothing to suggest that they paid rent for their workshops.

In 1770 Boulton acknowledged privately that a general weakness was the failure to deliver goods promptly. Although he resolved then to overcome the problem,[429] the fault was also true of some silver plate orders in the following few years,[430] in part because of the shortage of silversmiths.[431] However, even when the partners increased silversmithing expertise during the mid-1770s[432] the problem persisted. In 1774 they apologised for the delay in completing Sir Harbord Harbord's silver plate[433] and later Boulton confessed shame over the long delay in making Mrs Montagu's order.[434] The partners frequently failed to meet their own deadlines. A customer was promised on 3 July 1776 that silver buttons would be sent in about a week[435] but they were sent on 23 August;[436] another was promised silver plate by 12 November 1776[437] but the order was sent on 3 December and 7 December 1776.[438] John Taylor (of London) ordered two silver tureens in September 1776; he received an apology for the delay in February 1777 when they were promised for March.[439] The tureens were sent in July.[440] Another customer was sent a waiter in February 1778 which was some time after the date stipulated by the customer.[441] There were many other instances of similar delays in the mid-1770s.[442]

A number of factors contributed to these delays. As production built up in the mid-1770s[443] the partners did not recruit enough silversmiths: in 1776 they confided to one of their London agents that they now had enough orders to employ another dozen silversmiths.[444] The partners frequently explained delays to customers on the enormous demand for their silver in a way which contrived to highlight their popularity and divert attention from their mis-management.[445]

The measures taken by the partners to avoid delays were inadequate. They rarely turned down orders through the pressure of work, and, when they did, it was usually for comparatively small orders from trade customers: John Wise, of Bristol, was refused an order for

silver toothpick-cases because Soho was overwhelmed with more important orders;[446] John Turner of Derby[447] and Wilson and Blanckenhagen[448] of London were refused orders because of their deadlines. Only very occasionally were orders rejected from the public.[449] The partners also occasionally tried to deal with their silver production problems by re-deploying staff primarily employed for Sheffield plate;[450] however, not only did this scarcely prevent delays in completing silver but contributed to similar inefficiency with Sheffield plate.[451]

The partners frequently diverted blame from themselves by attributing the delays to a range of factors largely outside their control. These included the breakage of dies[452] as well as the necessity for making new tools for a new design.[453] The partners also attached blame to the silversmiths' excessive and irregular holidays,[454] their mediocrity,[455] their drunkenness,[456] or the forming of combinations.[457] It is difficult to verify these charges but in view of both the general problems of manufacturers of this period in controlling their workforce and the erratic behaviour of some of the silversmiths at Soho,[458] it is likely that these were contributory causes of delays. However, even though Boulton had expressed in 1770 a determination to achieve greater efficiency[459] he was partly to blame: in Scale's view the delays were the inevitable consequence of Boulton's tendency to overload Soho with work[460] and the frequency of those delays suggests that this was a price Boulton was prepared to pay in order to extract from his staff the highest possible level of activity.

Although delays remained frequent, the quality of workmanship improved during the 1770s. Boulton was anxious about the matter at the beginning of the decade[461] and was particularly dismissive about the quality of chasing[462] but later he is not known to have felt such concern. The lions' faces on the candlesticks of 1774-5 (Plate 11) show a conspicuous improvement on those of 1768-9 (Plate 10) in the depth and conviction of the modelling. There were very few complaints about workmanship but an exception occurred in 1776 when Sir Robert Rich made several about his épergne (Plate 60). These included inadequate joining of the parts with screws, poor burnishing, and a part which broke in transit. These faults were, however, largely remedied.[463]

The partners' policy of making light silver occasionally caused difficulties. In 1777 Richard Moland required stronger replacements[464] for six flimsy salt-spoons;[465] spoons were often struck from dies at Soho[466] and even Boulton had a low opinion of them when made in this way.[467] Another customer complained about the lightness of his candlesticks which were replaced with another pair weighing about 75 oz.[468] Lord Hope disapproved of an estimate of £37 7s. 5d. for an épergne,[469] preferring one which would come to about £55;[470] an épergne was subsequently made for the higher figure.[471] The firm's policy of making light silver at a reasonable price to encourage trade could be counter-productive.

Occasionally pieces exceeded the firm's estimates; low estimates may have resulted from a determination to gain orders but other reasons for the discrepancies were given. In 1771 the Admiralty stipulated that their tureen (Plate 14) should come to no more than £100; the partners charged £140 16s. 0d. since it was larger than intended and they attributed the error to inexperience.[472] In 1776 Sir George Shuckburgh complained that some of his silver plate exceeded the estimate; the partners did not dispute this, but stressed the difficulties of making pieces to particular weights.[473] In 1779 tea-urns for Mrs Dundas[474] and Robert Hinde[475] both required more silver than was originally thought. These errors, which occurred with items which were largely hand-made and not often produced at Soho[476] were understandable, and in view of the high level of production in the mid-1770s complaints on this score were relatively few.

The amount of silver produced at Soho rapidly increased during the mid-1770s. Prior to the opening of The Assay Office, Birmingham, in 1773, the largest amount of silver sent for assaying was in 1771-2 when 1,340 oz. 14 dwt. 0 gr. (plus a few other articles) were sent to Chester;[477] in 1776-7 the figure increased to 11,831 oz. 3 dwt. 12 gr. which was the largest in any year of the Boulton and Fothergill partnership.[478] Before 1773 the production of assay silver consisted mainly of candlesticks; relatively little hollow-ware had been produced[479] and the partners had no experience of making services of plate[480] or cutlery.[481] Later, the partners not only added cutlery and services of plate to their range but they also produced a wide variety of tablewares as well as ambitious items such as monteiths[482] and ecclesiastical plate.[483]

As production increased at Soho, Boulton and Fothergill were almost entirely able to meet customers' orders from their own workshops. Before 1773 the partners sometimes obtained knives from Sheffield and spoons from London for factoring. The amount of silver sold on commission declined in the mid-1770s though the partners occasionally obtained small items - spoons, buttons, buckles, and snuffers - from manufacturers in Birmingham, Manchester or London.[484]

The use of outworkers by the partners was largely unnecessary and, given the traditional risks of inefficiency and theft which widely accompanied their use by other manufacturers,[485] was best avoided. However, the partners did use to a limited extent two outworkers for silver: Thomas Mynd and John Bentley who worked separately in Birmingham. Boulton felt that Mynd's buckles were better than Soho's but the main reasons for employing them were their close relationships with Boulton: both were related to him by marriage, and both had once worked at Soho. On one occasion Bentley supplied four boxes which were assayed under the partners' names.[486] Despite the occasional use of outworkers and the sale of limited quantities of silver on commission, Soho's self-sufficiency is striking: a number of large London firms relied extensively on other manufacturers to supply ready-made pieces of silver.[487]

During the 1770s the partners made some impressive achievements in the manufacture of silver. They rapidly increased the volume[488] and range of production,[489] and improved the quality of workmanship.[490] Generally the partners had little difficulty with the security of silver,[491] even though this is a problem which has traditionally bedevilled the silver industry.[492] Although between 1773 and 1775 a limited amount of their silver was found to be below the required standard at The Assay Office, Birmingham, these errors did not occur earlier or later.[493]

There were, however, some serious problems which though identified in the early 1770s were by no means entirely overcome. The choice of staff was frequently ill-advised[494] and orders were persistently delivered late.[495] The partners generally failed to introduce piece-work rates which may have improved production[496] and wage levels were sometimes at a level which prejudiced profitability.[497]

Yet at Soho (as in Birmingham generally in the early industrial period)[498] the workforce did not resist technical innovation and here

the partners were able to gain over their rivals in London. However, the extent to which silver relied on mechanized production varied with different types of articles. Some, such as candlesticks, were mainly dependent on machinery and the expense of that equipment was justified partly by the production of these items in silver[499] but even more by the higher demand for them in Sheffield plate;[500] other, particularly prestigious items, relied mainly upon traditional silversmithing skills.[501] Overall, the extent to which mechanization replaced hand-skills in silver production at Soho has been exaggerated[502] and the technical developments there were basically the same as those which were being used in Sheffield.[503]

By Boulton's generation, the efficiency obtained from employing a workman for one specialised operation was widely understood by manufacturers in Birmingham.[504] There, as at Soho, the production of a button was divided into many specialised operations each of which was carried out by a different and relatively unskilled worker.[505]

This method of production was not, and could not be, fully applied to silver plate production at Soho. Although some operations, such as polishing,[506] did not require a high level of skill, others, such as chasing,[507] did. Since some processes, such as stamping[508] and chasing[509] were in demand in Eginton's department for more than one metal, the volume of work was sufficient to justify the employment of a specialist; however, while the preparatory and finishing stages were given to specialists, the basic construction, particularly of elaborate pieces of silver plate, required a cluster of inter-dependent skills which could not easily be divided amongst different workmen;[510] particularly when the number of men to whom important commissions could be entrusted was limited.[511] Although a small number of men (such as candlestick makers) specialised in a particular article since the demand in silver and particularly Sheffield plate was considerable,[512] the inconsistent demand for most items generally made this form of specialisation impracticable.[513] As far as silver plate manufacture was concerned the principle of specialisation was modified by the need for pragmatism.

A few types of articles made by specialists in London were so competitively priced that even when the retailers' mark-up was added, the product was cheaper than Boulton and Fothergill's prices. Thomas Pitts sometimes supplied Parker and Wakelin with a couple of épergnes

a month[514] whereas Boulton and Fothergill made only five throughout their partnership.[515] Pitts usually charged Parker and Wakelin 2s. 6d.[516] or 2s. 9d.[517] per oz. for fashioning and they usually added a mark-up (for épergnes) of a shilling per oz.[518] Even so, this amounted to less than Boulton and Fothergill's charges of 5s. 0d.[519] or 5s. 6d. Although Boulton and Fothergill tended to make pieces lighter, which reduced the disparity in the overall charge, one customer who focused discussion on the fashioning charge per oz., insisted that his épergne could be obtained more cheaply in London.[520] The partners also found it particularly difficult to compete with the low prices charged by others for some utilitarian items. This particularly applied to cutlery, where competition was intense: in 1773 in London alone there were at least thirty-six specialist spoonmakers.[521] Isaac Callard supplied Parker and Wakelin with four-pronged table forks for a fashioning charge of only £1 10s. 0d. per dozen;[522] the London retailer's mark-up of 12s. 0d.[523] still left their customers paying considerably less than the £3 0s. 0d. once charged by Boulton and Fothergill for doing the same work.[524] This competition led the partners to admit in 1775 that prices charged in London and elsewhere for plain cutlery and pints were below their own[525] (even though the partners once charged only 0s. 7d. per oz. for making the latter[526]) and this is reflected in the relatively low production figures for the partners' pints[527] and a tendency for them to factor cutlery more than other items.[528] The partners were reluctant to compete with very low fashioning charges for these items in silver; moreover, since they were also unwilling to make them in Sheffield plate[529] they lost small economies in manufacturing them that they would otherwise have gained by making substantial numbers.

Nevertheless, the partners priced most items at a point which was competitive with retailers but which also provided Boulton with a basis for making a profit. Whereas Boulton charged £17 8s. 0d. for a pair of 'Lyon' candlesticks,[530] Parker and Wakelin charged £24 14s. 3d. for a pair of festoon candlesticks;[531] the difference was partly due to the retailer's mark-up of £2 18s. 11d.[532] but it was also the result of the greater weight of silver: 36 oz.[533] as against 56 oz 9 dwt. 12 gr.[534] Despite the ease of using dies, Boulton charged £6 14s. 6d. for fashioning[535] while James Ansill and Stephen Gilbert charged Parker and Wakelin £6 0s. 0d. for making the cast

candlesticks.[536] Although with essentially hand-made items Boulton did not have a technical advantage, he did enjoy the benefit of directly supplying the public. Boulton once priced a tea-urn which was similar in weight and decoration to the one the non-specialist makers Ansill and Gilbert supplied to Parker and Wakelin; Boulton's fashioning charge was put at £18 0s. 0d. at most,[537] but Parker and Wakelin's supplier charged them £14 2s. 0d. for the fashioning[538] and the retailer added a mark-up of £8 3s. 10d.[539] By charging a price between the supplier's and the retailer's Boulton was intending both to provide himself with a comfortable profit and yet make such items attractive to his customers.

Generally, Boulton was well-placed to compete with retailers, who had become by the mid-eighteenth century a very significant part of the trade; he was, however, more vulnerable to competition from makers when they supplied the public direct. One maker, Thomas Daniell of the London Silver Plate Manufactory, claimed to pass on to the public wholesale fashioning charges one-third less than those normally made. While this, if carried out, would have provided very stiff competition for Boulton, it is doubtful whether such prices were widely available since makers normally charged the public more than trade customers.[540] Although, as we have seen, Pitts supplied the trade with elaborate épergnes for 2s. 9d. per oz., an épergne like Sir Robert Rich's (Plate 60) was thought to have only been available to the public in London for about 4s. 0d. per oz. which suggests that makers put their prices to the public at a level which was comparable to those of retailers.[541] Although in this case the price was less than Boulton's, some plain items apart, it is unlikely that makers were generally able to undercut Boulton. Judging from the prices Parker and Wakelin's suppliers charged them for hand-made items where the makers were unable to specialise to a greater degree than Boulton, their prices were not likely to have been significantly more competitive, given Soho's tendency to make lighter pieces of plate.[542] Moreover, Boulton was more competitive where he enjoyed the advantage of using machinery and making particularly light pieces; here his overall prices to the public were even lower than London maker's prices to the trade.[543] The limited information available on prices charged to the public by makers during this period requires a cautious

conclusion, but it is likely that Boulton was competitive for most items.

Overall, in his rivalry with different firms, Boulton once conceded that he was least competitive for a few plain, utilitarian items, which he tended to avoid making; rather, he concentrated on ornamental tablewares where his prices were competitive and where he had a basis for making a profit[544] particularly where machinery was involved to a significant degree.[545] Although the prospects of operating at a profit were diminished by some inefficiency at Soho,[546] Boulton concentrated on items where the fashioning charges were relatively high.[547] This policy was therefore partly determined by financial considerations but it was also due to the greater prestige that such products would bring and required considerable attention to design.

NOTES

CHAPTER III

THE PRODUCTION OF SILVER

1 Boulton M. Biograph etc., item 112, sheet 2, James Keir 'Memorandums for the Memoir of M.Boulton', 3 December 1809.
2 Letter Book E, p.8, M.B. to the Earl of Warwick, 30 December 1770.
3 Letter Book G, p.87, M.B. to V.Green, 6 August 1774.
4 See p.113.
5 See pp.117-20.
6 See p.79.
7 See p.113.
8 See pp.54-5 and Chapter III, note 500.
9 See pp.181-3.
10 See pp.117-20.
11 See pp.118-9.
12 See Appendix V, entries on e.g.Eginton, Francis and Bentley, John.
13 Ledger 1776-8.
14 Scale etc., item 14, 'Proposals to B. & F. by John Scale' [1773].
15 See p.103.
16 Perhaps they were made in the department 'Unstable Articles' since gold rings were made there (Ledger 1776-8, p.180, 7 November 1776).
17 No department was recorded in the ledgers as making bodkins, but they were made at Soho (see Appendix 111c).
18 See Appendix V, entries on Caldecott, Thomas and George; Bentley John; Eginton, John; and Dodd, Robert.
19 Francis Eginton's department occasionally sold silver buttons (e.g. Ledger 1776-8, p.2, 16 February 1776, a dozen and a half coat buttons sold to J.H. worth £1 1s. 0½d.). However, silver buttons were transferred to Eginton from the 'Solid Shanked, Gilt and Plated Buttons' department (Ledger, M.B. Ledger 1775-1778 and 1787-1789 (hereafter cited as Ledger 1775-8 and 1787-9), p.5, 22 July 1775). The buttons sold to J. H. may well have been transferred to Eginton with a view to melting them down: what were described as 'old' silver buttons occur in the ledgers under Eginton's department (Ledger 1775-8 and 1787-9, p.4., 14 June 1775).
20 e.g. Ledger 1776-8, p.106, 26 May 1776 and 27 May 1776.
21 See Appendix V - entry on Wyatt, Charles.
22 Day Book 1779-81, p.45, 20 November 1779 and Journal 1778-81, p.238, 20 November 1779.
23 From 1776 the ledgers in the M.B.P. list the ormolu, silver and Sheffield plate made in the department 'Silver, Plated and Ormolu Goods in partnership with Francis Eginton' (e.g. Ledger 1776-8, p.2, and p.103).
24 Fothergill etc., item 18, M.B. to Soho [1770]. M.B. also complained that Bentley's gilt work on ormolu tarnished easily (see Appendix V, entry on Bentley, John).
25 Fothergill etc., item 91, M.B. to J.F., 9 May 1772.
26 See Appendix V - entry on Eginton, Francis
27 See p.32.
28 Fothergill etc., item 159, J.F. to M.B., 24 May 1773.

29 Fothergill etc., item 84, J.F. to M.B., 6 February 1772; Fothergill etc., item 141, J.F. to M.B., 28 April 1773 and Fothergill etc., item 150, J.F. to M.B., 15 May 1773.
30 Fothergill etc., item 138, J.F. to M.B., 25 April 1773.
31 Fothergill etc., item 131, J.F. to M.B., 1 April 1773.
32 There are no surviving ledgers or journals in the M.B.P. for this period; these would have provided an answer to this question.
33 Ledger 1776-8, p.2, 1 January 1776.
34 Box D1, item 137, M.B. to the Earl of Dartmouth [1777]. This is a copy of a letter in Llewellyann Jewitt, *The Wedgwoods...* (1865), p.353. The original letter has not survived in the M.B.P.
35 See Appendix V - entry on Eginton, Francis.
36 See p.126.
37 [M.B.] Notebook 6, 1768-75, pp.95-6.
38 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp.154-5, B. & F. to Mr Udney, 12 June 1773.
39 Letter Book E, p.161, M.B. to James Stuart [1 August 1771].
40 See Appendix V - entries on Bunbury, Thomas and Bates, E.
41 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp.154-5, B. & F. to Mr Udney, 12 June 1773.
42 See p.126.
43 In 1769 M.B. complained to the Birmingham manufacturer John Taylor (see p.15) that the latter had enticed two workmen from Soho before their agreements with B. & F. had expired; M.B. had to admit, however, that he had successfully encouraged one man to leave Taylor for Soho (Letter Book D, p.11, M.B. to John Taylor, 23 January 1769).
44 The number of firms producing silver in Birmingham prior to 1773 is not known, but an indication is given by the number of firms who registered at the London assay office. Up to and including 1773 only five registered their marks at Goldsmiths' Hall but four entered as 'small workers' (i.e. they did not make silver plate) and the fifth entered without category (Grimwade, *London Goldsmiths*, pp.716-7). Although a few other firms registered at Chester (see Chapter I,note 198) as did B. & F. (see p.28), the amount of expertise in Birmingham for making silver plate was limited.
45 See pp.126-7.
46 Berg, *Age of Manufactures*, p.295.
47 See Appendix V - entry on Fellowes, John.
48 Letter Book D, p.29, M. B. to James Adam, 1 October 1770.
49 Berg, *Age of Manufactures*, p.307.
50 Dickinson, *Boulton*, p.62, William Wilson and Edward Hodges were both involved with the silver business at Soho (see Appendix V, entries on Wilson, William and Hodges, Edward) but neither was a premium apprentice since neither registered with the state. Their names do not occur in the County Registers of the Apprenticeship Registers 1710-1808 at the Public Record Office, Kew. This has been ascertained though reference to an abstract of these registers at the Heslop Room, University of Birmingham. These registers were made out by the Commissioners of Stamp Duties, who collected the duties payable by masters on apprentices' premiums. The legislation under which they worked was enforced between 1710 and 1804 when the Satute 8 Anne C. 5 was repealed (Smith, *Warwickshire*

Apprentices, p. IX). Only very rarely did M. B. take a premium apprentice; however, one unidentified premium apprentice was referred to in 1772 (Letter Book E, p. 510, B. & F. to William Matthews, 14 July 1772). See also Chapter 1, note 12.

51 Berg, *Age of Manufactures*, pp. 304-7. It should not, however, be assumed that all apprentices in the boroughs followed the full rigour of the premium apprenticeship scheme. For example, the London goldsmith George Wickes, 1698-1761 (Barr, *George Wickes*, p. 1 and p. 184) did take premium apprentices but he waived the premiums for two and neither was registered with the state (ibid., pp. 37-39).

52 George Wickes (see note 51 above) took seven apprentices; most later worked as goldsmiths though nothing is known of the later careers of a few (ibid., pp. 37-48).

53 Letter Book G, p. 172, B. & F. to Patrick Robertson [early November 1774].

54 e. g. casting (see Appendix V, entry on Allen, John) and stamping (see Appendix V, entry on Moore, Thomas).

55 e. g. candlestick-makers (see p. 114) or salt-cellars (see p. 110).

56 See Appendix V - e. g. entries on Eginton, Francis and Duval, John.

57 See p. 25.

58 e. g. Thomas and George Caldecott had 12 oz. 2 dwt. 12 gr. of fine silver transferred on 22 January 1776. (Journal 1776-8, p. 88, 30 April 1776).

59 e. g. The Solid, Shanked, Gilt and Plated Buttons department sent 9 oz. 8 dwt. of old silver buttons. (Ledger 1776-8, p. 145, 10 July 1776).

60 Ledger 1776-8, p. 277, 31 December 1777 and p. 238, 6 May 1777.

61 Ledger 1776-8, p. 190, 25 March 1777.

62 Journal 1778-81, p. 9, 24 August 1778. Unspecified work valued at £13 2s. 6d.

63 Keir, James, item 70, 'Statement of the Case between M. B. and James Keir', n. d.

64 See pp. 217-9.

65 Journal 1778-81, p. 19, 12 September 1778. A charge of £1 4s. 0d. for refining 63 lb. of 'silver dirt'. (i. e. silver from the filings, clippings etc., swept up in workshop dust).

66 Much of Keir's work involved extracting silver from the silver and copper clippings produced from the manufacture of silver plated buttons; work of this kind was done for Charles Wyatt's button department (Journal 1776-8, p. 196, 19 October 1776).

67 Letter Book G, p. 172, B. & F. to Patrick Robertson [early November 1774].

68 [M. B.] Notebook 6, 1768-75, pp. 95-6.

69 See p. 110 and p. 113.

70 See p. 15.

71 Letter Book B, p. 220, J. S. to John Cantrell and Co., 5 October 1765.

72 Letter Book B, p. 296, Z. W. to J. Martin Willett, 11 January 1766.

73 Boulton M. Biograph etc., item 111, 'Memorandum concerning Mr. Boulton commencing with my first acquaintance with him' by James Watt, 17 September 1809. The account of the water-mill was based on Watt's first visit to Soho in 1767.

74 Letter Book G, p. 462, M. B. to Robert Mylne, 4 November 1775.

75 Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century', pp. 65-70. The particular value of Hockley Brook for a water-mill is illustrated by the fact that the first

recorded rolling-mill (Thimble Mill) in the Birmingham area was constructed here shortly before 1748.

76 Although the Coalbrookdale Company, Shropshire, had the use of the Upper Furnace Pool to conserve water for the summer and autumn months, the firm constructed in 1735 pumps operated by horses to return water from the Lower Furnace Pool to the Upper Furnace Pool so that the water could be used repeatedly. The water wheel was used to power the bellows of the blast-furnaces. The introduction of the horse-pumps decreased the seasonal fluctuation of iron production. (Arthur Raistrick, *Dynasty of Iron Founders: the Darbys and Coalbrookdale* (1953, reprinted 1970), pp. 108-113, hereafter cited as Raistrick, *Dynasty of Iron Founders.*)

77 Fothergill etc., item 9, 'Case between B. & F.' [c. 1782].

78 Fothergill etc., item 254, 'History of Facts B. & F.' [c. 1782].

79 Cash Book 1763-6, p. 23, 30 July 1763.

80 Letter Book D, p. 34, M. B. to Thomas Gilbert, 2 February 1771.

81 Despite earlier improvements (see chapter III, note 76) which did reduce the shortage of water in the driest period of the year the Coalbrookdale Company still found that its needs were not entirely met. (Raistrick, *Dynasty of Iron Founders*, pp. 112-3).

82 Letter Book B, p. 177, Z. W. to Stephen Smith, 13 August 1765.

83 Letter Book C, p. 48, M. B. to Richard Tonson, 2 January 1768.

84 Letter Book D, p. 34, M. B. to Thomas Gilbert, 2 February 1771.

85 Fothergill etc., item 254, 'History of Facts B. & F.' [c. 1782].

86 Letter Book G, p. 517, M. B. to Benjamin Huntsman, 25 January 1776.

87 Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century', p. 73. Hockley Pool was built before 1725.

88 Fothergill etc., item 254, 'History of Facts B. & F.' [c. 1782].

89 Box C1, item 131, Count Carbieri to M. B., 30 May 1765. According to Erasmus Darwin, M. B. constructed a model of a steam-engine. (Darwin, Erasmus and Darwin Family, item 11, Erasmus Darwin to M. B., 11 March 1766).

90 The local historian, Stebbing Shaw, asserted that M. B. made a pumping-engine to Savery's design in 1767. (Stebbing Shaw, *The History and Antiquities of Staffordshire...*, 2 vols (1798-1801), Vol. 11, p. 118). In the absence of any firm evidence that M. B. successfully installed a pumping-engine prior to Watt's in 1774, modern historians have assumed that an engine was not built or, if it was, that it was unsuccessful (John Lord, *Capital and Steam Power, 1750-1800* (1923), pp. 96-7).

91 See pp. 212-3 and pp. 226-7.

92 Cule, *Financial History*, p. 51.

93 Dickinson, *Boulton*, pp. 74-86.

94 Cule, *Financial History*, pp. 51-5.

95 In 1742 the Coalbrookdale Company replaced its horse-driven pumps with a steam-engine to return water to the Upper Furnace Pool. This considerably improved the supply of water during the driest period of the year and markedly reduced seasonal fluctuations in the production of iron. (Raistrick, *Dynasty of Iron Founders*, p. 113).

96 Dickinson, *Boulton*, pp. 74-86

97 Letter Book D, p. 29, M. B. to James Adam, 1 October 1770.

98 It is unlikely that M. B. was referring to Sarehole Mill (see p. 13) since there is no evidence that he rented the water-mill at Sarehole after 1756, though M. B.'s mother rented

a house there until 1760 (Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century', pp.80-1).

99 Cash Book 1763-6, p.117, 22 June 1765. A reference to the supply of nails.

100 Although Hofford Mill has been mentioned in earlier literature on M.B. (e.g. Goodison, *Ormolu*, p.185, note 6) no attempt has previously been made to locate B. & F.'s mill. This may have been due to the varied spellings for the mill through the centuries: in 1615 Hollford; in 1654 Holdford; in 1798 Hallford; in 1815 Oldford (D. Dilworth, *The Tame Mills of Staffordshire* (1976), pp.19-21, hereafter cited as Dilworth, *Tame Mills*). However, the spelling 'Holford's' was used in S. Botham's map 'A Plan of the Township of Handsworth in the County of Stafford' (1794), B.R.L., Manuscript Number 601704. Although the partners normally referred to Hofford Mill (Ledger 1776-8, p.31, 1 January 1776) they did at least on one occasion refer to 'Holford' (Ledger 1775-8 and 1787-9, p.7, 15 June 1776). Which spelling was normally used outside Soho in the eighteenth century is not clear since records do not survive for the mill (apart from the M.B.P.) for the period between 1654 and 1794 (Dilworth, *Tame Mills*, pp.20-1). It is possible therefore that the partners' usual spelling, 'Hofford', was used elsewhere at that time.

101 B.R.L., Manuscript Number 601704. S. Botham's 'A Plan of the Township of Handsworth in the County of Stafford' (1794).

102 Box M2, Mol to Mz (hereafter cited as Box M2), item 68, Thomas Moore to [B. & F.], 8 April 1780.

103 Fothergill etc., item 237, J.F. to M.B., 12 April 1780.

104 e.g. Ledger 1776-8, p.129, 9 July 1776 and p.51, 1 March 1776. These are references to 'plated' metal, i.e. laminated silver and copper for Sheffield plate.

105 Ledger 1775-8 and 1787-9, p.8, 29 November 1776.

106 Some references are merely to 'metal' e.g. Ledger 1776-8, p.181, 9 October 1776 and p.189, 11 November 1776.

107 Accounts for rolling metals at Soho do not survive.

108 See p.111.

109 Letter Book B, p.8, B. & F. to Benjamin Huntsman, 9 August 1764.

110 [M.B.] Notebook 6, 1768-75, pp.95-6.

111 Letter Book G, p.198, B. & F. to Abraham Darby and Co., 14 December 1771. The rollers were two-feet long and the partners stated that they were for a new purpose.

112 Delieb and Roberts, *Silver Manufactory*, p.54. The tray was bought by a group of ladies in Worcester for Lady Lewes.

113 Letter Book G, pp.46-7, M.B. to Samuel Bradley, 27 June 1774.

114 Letter Book G, p.517, M.B. to Benjamin Huntsman, 25 January 1776.

115 Letter Book F, p.644 [B. & F.] to Benjamin Huntsman, 24 December 1774.

116 Letter Book G, pp.496-7, B. & F. to Benjamin Huntsman, 28 December 1775.

117 Journal 1776-8, p.465, 16 January 1778. Birch and Hunt were paid £12 5s, 1d. for rolling 5,882 oz. of silver. This does not specify whether this was sterling or fine silver.

118 Journal 1778-81, p.554, 31 December 1780. Birch and Hunt were paid £4 18s. 6d. for rolling 2,364 oz. of silver.

119 Journal 1776-8, p.465, 16 January 1778. (Rolling 'plated' metal i.e. for making Sheffield plate.)

120 Ledger 1778-82, p.88, 17 December 1781. Metal rolled by E.W. Noble.
121 Fothergill etc., item 237, J.F. to M.B., 12 April 1780.
122 The mill was re-built in 1785 (Rennie, John, item 6, John Rennie to M. B., 18 August 1785).
123 John Culme, *Nineteenth Century Silver* (1977), p.14, (hereafter cited as Culme, *Nineteenth Century Silver*).
124 The ingot was about 1½ inches to 1¾ inches thick, 2½ inches wide and 8 inches long and consisted of copper and a layer of silver on one or both sides. This was rolled out to form a sheet (Bradbury, *Sheffield Plate*, p.11).
125 ibid., pp.13-15.
126 ibid., p.40.
127 ibid., p.454.
128 Pelham, 'The Water Power Crisis in Birmingham in the Eighteenth Century', p.75.
129 Robert Campbell, *The London Tradesman Being a Compendious View of All the Trades, Professions, Arts both Liberal and Mechanic, now Practised in the Cities of London and Westminster* (1747, reprint 1969), p.141.
130 [M.B.] Notebook 6, 1768-75, pp.95-6.
131 Letter Book G, p.266, B. & F. to Benjamin Huntsman, 23 February 1775.
132 Once steel dies hardened it was impossible to sink or engrave patterns upon them. (Letter Book H, p.844 [B. & F.] to George Chapman, 23 January 1779).
133 The earliest use of die-cut rotating cylinders elsewhere was by the Birmingham manufacturer of brass William Bell. He began to use the method in 1779 for small frames and edges of small boxes (Rupert Gentle and Rachael Feild, *English Domestic Brass 1680-1810 and the History of its Origins* (1975), p.45, hereafter cited as Gentle and Feild, *English Domestic Brass*).
134 Goodison, *Ormolu*, pp.64-5.
135 It is difficult, from observation alone, to tell whether such ornaments were made with rollers or with small dies.
See p.112 .
136 N. Clements, of Dublin was urged to have the 'ribbon and wreath' pattern rather than the 'old-fashioned' gadroon border for his silver plate (Letter Book G, p.438 [B. & F.] to N. Clements, 11 October 1775). J.W., the partners' agent, was told to promote the pattern in London (Letter Book G, p.548, B. & F. to J. W., 27 February 1776).
137 Letter Book E, p.200, B. & F. to Sir Harbord Harbord, 26 September 1771.
138 [M.B.] Notebook 6, 1768-75, pp.95-6.
139 Dickinson, *Boulton*, p.133.
140 ibid., p.13.
141 Ledger 1776-8, p.209, 31 December 1776.
142 Bradbury, *Sheffield Plate*, p.14.
143 ibid., p.186.
144 ibid., p.309.
145 In 1769 John Pickering, a London coffin-maker was granted a patent for making coffin furniture in a variety of metals (including silver) with the aid of dies and presses. (Gentle and Feild, *English Domestic Brass*, p.44).
146 Bradbury, *Sheffield Plate*, p.119.
147 [M.B.] Notebook 6, 1768-75, pp.95-6.

148 Bradbury, *Sheffield Plate*, p.309.
149 VAM, John Parker and Edward Wakelin, Gentlemen's Ledger 1765-1775, Vol.7 (VAM 7), p.210, 8 May 1770.
150 Delieb and Roberts, *Silver Manufactory*, p.55.
151 Day Book, 1779-81, p.538, 3 January 1781. Order for Grew and Sheriff. Figures given in the text have been calculated from the order for two pairs weighing 3 oz. 14 dwt. costing £1 15s. 0d. A separate fashioning charge was not given but this has been calculated here by deducting from the total cost the charge for the sterling silver which at that time was 5s. 7½d. per oz. (Day Book 1778-81, p.588, 7 March 1781).
152 See Appendix V - entries on Haywood, John and Sanders, Joseph. In addition to their work on silver plate, they worked on buttons but since William Tyrer also had a piercing workshop for button making (Soho Inventory, 1782, pp.9-10) it is not clear who was responsible for piercing silver buttons.
153 Ledger 1776-8, p.227, 16 October 1777.
154 See Appendix V, entry on Sanders, Joseph.
155 See Appendix VI - John Haywood's Shop.
156 Day Book, 1779-81, p.217, 22 April 1780. An order which included, salt-cellars and a cruet-frame in Sheffield plate for 'A.L.D. Zetapor'.
157 B.A.O., Plate Register, Birmingham, 1773-92.
158 See Appendix V - entry on Moore, Thomas and Appendix VI - entry on Thomas Moore's Shop.
159 The Soho Inventory, 1782, p.4., lists two workshops for stamping buttons. John Jerom and John Vale were in charge of them but which of these was responsible for silver buttons is not clear.
160 See Appendix VI, entry on Thomas Moore, for reference to 'copper forces' in Moore's workshop. The supply of 15 lb. of lead to Moore's workshop was recorded in 1776. (Ledger 1776-8, p.64, 19 February 1776).
161 Barr, *George Wickes*, p.54.
162 Bradbury, *Sheffield Plate*, pp.103-6.
163 [M.B.] Notebook 8, 1772, p.48.
164 Bradbury, *Sheffield Plate*, p.104.
165 [M.B.] Notebook 8, 1772, p.48.
166 Goodison, *Ormolu*, p.12, implies that stamping machines were powered by the water-mill in the 1760s. I can find no evidence to support this view.
167 In 1790, M.B. patented the application of water-mills, cattle-mills and steam-engines to the working of stamps and fly-presses (*Boulton's Specification: Application of Motive Power to Stamping and Coining etc.*, British Patent Number 1757 (1790)).
168 On one occasion B. & F. wrote as if a die five inches by eight inches was unusually large (Letter Book 1, p.980, J.H. to J. Ramsden, 12 June 1782). In 1847 Elkington's of Birmingham were recorded as converting 30 inch discs of metal into salvers and meat covers with the assistance of steam-powered 'stamps' (Culme, *Nineteenth Century Silver*, pp.12-13).
169 In the eleventh century Theophilus in *Divers Arts*, discussed the use of dies in silversmithing (H. Wilson, *Silverwork and Jewellery* (1902), pp.267-70, hereafter cited as Wilson, *Silverwork and Jewellery*).
170 Bradbury, *Sheffield Plate*, p.18.

171 Two silver chocolate-pots made in London, one by William Lukin in 1701 and the other by Thomas Corbett in 1703 have identical spouts made with the same dies. (Culme, *Nineteenth Century Silver*, p. 80).

172 Bradbury, *Sheffield Plate*, p. 99.

173 ibid., p. 63. See p. 18.

174 Pearson and Rollason, *The Birmingham, Wolverhampton, Walsall, Dudley, Bilston and Willenhall Directory or Merchant and Tradesman's Useful Companion...* (1781), p. XXII, hereafter cited as Pearson and Rollason, *Birmingham etc., Directory*, (1781).

175 From 1769 Richard Ford used stampings for furniture, coffin-mounts, and kitchen hollow-ware, in a variety of metals. In 1777 Marston and Bellamy stamped patterned furniture fittings, lock-plates and other small objects. From 1770 John Smith stamped buttons (Gentle and Feild, *English Domestic Brass*, pp. 44-5).

176 Cash Book 1762-4, p. 235, 16 April 1764.

177 Bradbury, *Sheffield Plate*, pp. 99-101.

178 Culme, *Nineteenth Century Silver*, p. 12.

179 Bradbury, *Sheffield Plate*, p. 214.

180 Steel was traditionally made by heating iron with charcoal so that the carbon in charcoal was diffused into the surface of the iron, forming a layer of steel which was hammered off. Many of these layers were then hammered together to form bars of 'blister' steel. Huntsman's innovation involved melting these bars in clay crucibles placed in a chamber lined with fire-brick and fired with coke. The intense heat melted impurities which could be skimmed from the surface; the absence of these impurities created a strong and highly tensile steel. (W. K. V. Gale, The *British Iron and Steel Industry: a Technical History* (1967), p. 36.

181 Letter Book G, pp. 150-1, B. & F. to Benjamin Huntsman, 6 October 1774.

182 Letter Book B, p. 8, B. & F. to Benjamin Huntsman, 9 August 1764.

183 Journal 1776-8, p. 341, 4 June 1777. Dies supplied by Dearman, Winwood, and Freeth.

184 Bradbury, *Sheffield Plate*, p. 442.

185 Culme, *Nineteenth Century Silver*, p. 10.

186 Bradbury, *Sheffield Plate*, p. 442.

187 ibid., p. 145.

188 ibid., p. 63. It is not clear which firm made this inventory.

189 Letter Book G, pp. 234-5, B. & F. to J. P. Du Roveray, 21 January 1775.

190 Soho Inventory, 1782, p. 142.

191 e.g. Whitworth (Cash Book 1767-77, p. 14, 4 September 1767) and Thomas Baddley (Cash Book 1767-77, p. 16, 29 September 1767).

192 Letter Book B, p. 181, M. B. to John Cantrell, 22 August 1765.

193 Berg, *Age of Manufactures*, p. 300.

194 See Appendix V, - entries on Eginton, John, Hodges, Edward and Wilson, William. See also Appendix VI, entries on Edward Hodges' Shop and Tools etc. in Die-Sinking Shops.

195 Hodges, John, item 28, J. H. to M. B., 9 April 1781. See also pp. 110-1.

196 Letter Book G, pp. 234-5, B. & F. to J. P. Du Roveray, 21 January 1775.

197 Letter Book G, pp. 112-3, B. & F. to W. Webb, 29 August 1772.

198 [M. B.] Notebook 6, 1768-75, pp. 95-6.

199 Scale etc., item 13, J.S. to M.B., 7 February 1773.
200 See p.113.
201 See pp.108-9 for examples of ornaments made by methods other than die-stamping.
202 Letter Book E, p.89 [B. & F.] to William Matthews, 22 April 1771.
203 Scale etc., item 13, J.S. to M.B., 7 February 1773.
204 Only after the introduction of steel dies were stampings identical (see p.111); before then the use of soft metal dies necessitated chasing of stampings, which to some extent, led to variations in details (Bradbury, *Sheffield Plate*, p.101).
205 See Chapter III, note 168.
206 Bradbury, *Sheffield Plate*, pp.214-5.
207 The low quality of early dies necessitated the chasing of details after the die-work was complete (ibid., pp.30-3). By 1765 the improvement in the quality of dies allowed candlesticks to be made without chasing (ibid., p.214).
208 Box S3, item 98, Joshua Steel to M.B., 23 October 1762.
209 Letter Book A, p.95, B. & F. to 'Montreal', 15 December 1763. Although B. & F. claimed here that they were making silver candlesticks in this way, there is no evidence that they did so until later (see p.23).
210 Bradbury, *Sheffield Plate*, pp.189-90.
211 VAM, John Parker and Edward Wakelin, Workmen's Ledger, No.2, 1766-72, Vol.3 (VAM 8), Account 162, 14 December 1771. Two pairs of 'Lyon' candlesticks weighing 66 oz. 13½ dwt. These weights are the same as those used by B. & F. for stamped 'Lyon' candlesticks (see text).
212 Scale etc., item 13, J.S. to M.B., 7 February 1773.
213 Letter Book C, p.62 [B. & F.] to John Motteux, 23 February 1768.
214 Scale etc., item 13, J.S. to M.B., 7 February 1773. J.S. thought London silversmiths might use as much as 216 oz.
215 Exceptions were 'Lyon' candlesticks made for Lord Kerry which weighed 108 oz. 12 dwt. per pair (Scale etc., item 13, J.S. to M.B., 7 February 1773). Lord Kerry bought two pairs at the Christie and Ansells sale in 1771 (Goodison, *Ormolu*, p.256).
216 The following are weights of the batches of candlesticks assayed by the partners from August - December 1773: 6 pairs 116 oz. 13 dwt. (31 August 1773); 1 pair 16 oz. 8 dwt. 12 gr. (2 November 1773); 2 pairs 38 oz. 4 dwt. 12 gr. (9 November); 5 pairs 99 oz. 11 dwt. (23 November); 2 pairs 34 oz. 7 dwt. (30 November); the weights for three pairs assayed on 28 September are not recorded separately from a large quantity of other silver assayed on that date (B.A.O., Plate Register, Birmingham, 1773-1792).
217 Scale etc., item 13, J.S. to M.B., 7 February 1773.
218 Letter Book C, p.62 [B. & F.] to John Motteux, 23 February 1768.
219 In 1773 M.B., then in London, was sent a silver 'Lyon' candlestick to show prospective customers. (Scale etc., item 13, J.S. to M.B., 7 February 1773).
220 See note 211 above and Plates 10 and 11. In 1771 two pairs were supplied to Sir Alexander Gilmour (Letter Book E, p.218, B. & F. to Sir Alexander Gilmour, 12 October 1771) and to a Mr Udney (Letter Book E, p.277, B. & F. to John Parker and Edward Wakelin, 16 November 1771).
221 Letter Book G, p.94, B. & F. to Lord Ravensworth [August 1774].
222 Goodison, *Ormolu*, pp.101-2.

223 See Appendix IIIC.
224 Letter Book G, p.565, B. & F. to J.W., 9 March 1776.
225 Letter Book G, p.421 [B. & F.] to Sir Robert Murray Keith, 16 September 1775.
226 Letter Book G, p.402, B. & F. to Sir Robert Murray Keith, 17 August 1775. See p.176.
227 Letter Book E, pp.112-3, J.S. to Henry Morris, 29 May 1771. J.S. referred here to the difficulty of making new tools.
228 Letter Book G, pp.461-2, M.B. to Robert Mylne, 4 November 1775.
229 There is no further correspondence about the design but Mylne was sent silver candlesticks in March 1777 (Ledger 1776-8, p.230, 18 March 1777).
230 In 1776 B. & F. refused to make a candlestick with a triangular section for Lady Morton because of the expense and time involved in making new dies (Letter Book G, p.565, B. & F. to J.W., 9 March 1776). Subsequently that decision was reversed (Letter Book G, p.573, B. & F. to J. W., 19 March 1776).
231 See Appendix V - entries on Bingley, William; Hancock, William; Duval, John and Traba.
232 See Appendix IIIC.
233 Letter Book E, p.62, J.W. to William Matthews, 6 March 1771 and Hodges, John, item 24, J.H. to M.B., 27 November 1780.
234 e.g. tutenage (Journal 1776-8, p.290, 14 March 1777). Tutenage was used to refer to tin or spelter (Letter Book D, p.18, M.B. to John Motteux, 22 April 1769). Copper (Letter Book H, pp.8-9 [B. & F.] to G.W. Soltau, 19 September 1776).
235 e.g. marble (Box W3 Wim to Wz (hereafter cited as Box W3), item 154, Miss S. Watts to B. & F., 22 November 1768).
236 See Appendix V - entries on Baker, Parker, William and Fellowes, John.
237 This was the usual technique in Birmingham for making buttons (Pearson and Rollason, *Birmingham etc., Directory* (1781), p.XXII). See Appendix IV, entry on Callow, Mrs and Joshua.
238 Letter Book E, p.200, B. & F. to Sir Harbord Harbord, 26 September 1771.
239 Letter Book E, pp.284-5, B. & F. to E. Roche, 26 November 1771.
240 Stamped buttons were exempt from assay (De Castro, *Law and Practice of Hall-marking*, p.71). It may therefore be assumed that the buttons assayed between 1774 and 1777 were cast. (See Appendix IIIC for assay buttons and Appendix IIIB for non-assay buttons) I have no explanation for the lack of cast buttons late in the partnership.
241 Wilson, *Silverwork and Jewellery*, p.40.
242 [M.B.] Notebook 6, 1768-75, pp.95-6.
243 See Appendix VI - entry on Wire Drawing Shops.
244 e.g. John Jehner, who worked for the London silversmith George Wickes between 1747/8 and 1752, specialised in making silver wire though he also 'flatted silver' i.e. hammered silver into sheets. (Barr, *George Wickes*, p.59).
245 [M.B.] Notebook 6, 1768-75, pp.95-6.
246 M.B. bought them from a Mr Waller, Christ's Hospital, London (M.B. Diary, 1768).
247 Letter Book E, pp.568-9, A.J.C. to William Matthews, 5 September 1772.
248 Letter Book E, p.390, B. & F. to Solomon Hyman, 7 March 1772.
249 Jarvis Simcock claimed to have discovered this secret. (Box S1, item 261, Jarvis Simcock to M.B., 28 May 1777).

250 A grain of silver can be drawn into a thread of nine yards (Herman Boerhaave, *Elementa Chemiae...*, 2 vols. (1724) translated as *A New Method of Chemistry...*, by P. Shaw and E. Chambers (1727), p.84). M.B. bought a copy in 1758 (Goodison, *Ormolu*, p.186).
251 See pp.216-7.
252 Rowe, *Adam Silver*, p.55.
253 ibid., p.55.
254 See Appendix IIIB.
255 See Appendix V - entry on the Caldecotts, Thomas and George. The apparently high level of production between 1779 and 1781 is due to the survival of a unique Day Book (Day Book 1779-81).
256 [M.B.] Notebook 6, 1768-75, pp.95-6.
257 Sketchley and Adams, *Tradesman's True Guide* etc. (1770), p.10.
258 See Appendix IIIC.
259 e.g. hand-raising (see pp.117-8).
260 Letter Book I, p.108, B. & F. to Thomas Miller, 25 October 1777.
261 Barr, *George Wickes*, p.58. Cornelius Woldring worked as a caster and polisher for George Wickes of London between 1748 and 1761.
262 See Appendix V - entries on Allen, John and Ryley, Isaac.
263 See Appendix VI - entry on the Casting Shop.
264 *Encyclopédie, ou Dictionnaire Raisonné des Sciences, des Arts et des Métiers...*, edited by M. Diderot, 35 vols (1751-7), Vol. III (1751), Plates 1 - 6, 'Fondeur en Sable'.
265 Letter Book E, p.33, M.B. to William Matthews [February 1771], an order for black casting dust.
266 Wilson, *Silverwork and Jewellery*, pp.196-9.
267 ibid., pp.266-7. The *cire perdue* technique was used in the eleventh century by Theophilus.
268 Goodison *Ormolu*, p.66.
269 Similar ormolu figures were used for a pair of 'wing-figured' candle vases of 1772. These figures are hollow castings. (Goodison *Ormolu*, Plates 127-30).
270 Barr, *George Wickes*, p.54.
271 The remaining hammer marks as well as the compass point are ways of recognising hand-raising (Barr, *George Wickes*, pp.54-5).
272 Letter Book G, pp.173-4, B. & F. to John Turton, 9 November 1774.
273 Bradbury, *Sheffield Plate*, p.111.
274 Wilson, *Silverwork and Jewellery*, pp.94-7.
275 Bradbury, *Sheffield Plate*, p.111.
276 See Appendix VI - entry on James Watt's Shop and Appendix V - entry on Watt, James.
277 Berg, *Age of Manufactures*, p.301.
278 Bradbury, *Sheffield Plate*, pp.113-5.
279 See Appendix V - entries on Bates E.; Bunbury, Thomas; Holme S.; Strickland and de la Fontaine, John.
280 See pp.24-5.
281 See Appendix V - entries on Duval, John; Watt, James; Hanckel; Wyon, George; Edstrom, Stephen and Burn, Anthony.
282 In 1771 the silversmith Bunbury worked on a silver tureen and two waiters but the metal used for the waiters was not specified (Letter Book E, p.89 [B. & F.] to William Matthews, 22 April 1771).
283 Letter Book G, p.606, B. & F. to William Matthews, 8 May 1776.
284 See Appendix IIIC.

285 Bradbury reproduces a description of making a salver by F. I. Burdekin c. 1850 in Sheffield. The processes used by Burdekin were strikingly close to those for which Watt's workshop was equipped. (Bradbury, *Sheffield Plate*, pp. 133-6). Barr shows that George Wickes himself raised some articles but a number of specialists were also employed to carry out such processes as wire-drawing, casting, and chasing. John Fisher worked (principally) as a chaser for Wickes from 1748 to 1757 (Barr, *George Wickes*, pp. 53-9).

286 Wilson, *Silverwork and Jewellery*, p. 477.

287 ibid., pp. 44-51.

288 John Fleming, Hugh Honour, Nikolaus Pevsner, *The Penguin Dictionary of Architecture* (1980), p. 147 (hereafter cited as Fleming etc., *Dictionary*).

289 ibid., p. 16.

290 See Appendix VI - entry on the Chasing Shop.

291 Wilson, *Silverwork and Jewellery*. On p. 483 Wilson discusses the use of sand-bags and on p. 33 the use of pitch in conjunction with chasing.

292 See Appendix V - entry on Eginton, Francis; Eginton, John and Hodges, Edward.

293 See Appendix VI - entry on Edward Hodges' Shop.

294 See Appendix V - entries on Wilson, William; Hooker and Gillings, Henry.

295 Letter Book G, p. 606, B. & F. to William Matthews, 8 May 1776.

296 See Appendix V - entries on Dumée and Kassterrel.

297 *Letters of Josiah Wedgwood*, ed. Finer and Savage, pp. 100-1. (Josiah Wedgwood to Thomas Bentley, 24-26 December 1770).

298 Fothergill etc., item 18, M.B. to Soho [c. 1770].

299 Allen (Fothergill etc., item 60, Account 3 December 1769 to 5 February 1770); John Benton (1 Bundle Cash Accounts, June 1769-July 1774, 6 June 1770); Joseph Burton (Box B6, Bua to Boz (hereafter cited as Box B6), item 78, 27 September 1768 'Articles of Agreement between Joseph Burton, Chaser and B. & F. Toy Makers for 3 years'); Edward Pardoe (Box P1, item 18, 31 August 1768. 'Articles of Agreement between Edward Pardoe of Birmingham, Chaser and B. & F. for 3 years'); Bob Harrison (Scale etc., item 16, J.S. to M.B. [February 1773]); John Bentley (see Appendix V).

300 William Chamberlain, Richard Bentley and William Hancocks (Goodison *Ormolu*, p. 68) J. Hancock and Thomas Maddocks also chased ormolu (Box M1, item 49, Thomas Maddocks to M.B., 31 August 1785).

301 See note 299 above on John Benton and Edward Pardoe.

302 Letter Book G, p. 840, B. & F. to Sir Robert Murray Keith, 22 February 1777.

303 Letter Book E, p. 55, J.W. to William Matthews, 26 February 1771.

304 Letter Book E, p. 70, B. & F. to William Matthews, 16 March 1771.

305 Letter Book G, pp. 67-8, B. & F. to L. G. Clifford, 14 July 1774.

306 See Appendix V - entry on Eginton, John.

307 See Appendix V - entry on Allen, H. and Hughes, John.

308 Elizabeth Allen worked as a burnisher or polisher (Box A, item 45, Agreement to work for B. & F., 6 December 1769). Hannah Owen worked as a polisher and burnisher (Box O, item 26, Agreement to work for B. & F., 6 December 1769). William Prennals

worked as a burnisher and instructed others in the art (Box P2, item 170, Articles of Agreement between William Prennals and M.B. and J.F., 1 June 1776).

309 See Appendix VI - entries on Tools etc., in John Otley's Burnishing Shop, and Burnishing Shop, and Appendix V - Otley, John.

310 Goodison *Ormolu*, pp.73-4.

311 Bradbury, *Sheffield Plate*, pp.130-2.

312 Wilson, *Silverwork and Jewellery*, p.476.

313 See Appendix VI - entry on Burnishing Shop.

314 [M.B.] Notebook 6, 1768-75, p.38.

315 Letter Book E, p.390, B. & F. to Solomon Hyman, 7 March 1772.

316 [M.B.] Notebook 6, 1768-75, pp.95-6.

317 Letter Book B, p.10, B. & F. to Moses Oppenheim, 18 August 1764.

318 Soho Inventory, 1782, p.6.

319 See Appendix VI - entry on Polishing Shop.

320 Goodison *Ormolu*, p.67.

321 Bradbury, *Sheffield Plate*, p.132.

322 R.E. Haines, *The Wood-Turning Lathe*, Home Workshop Series (1952), pp.2-3.

323 The pole-lathe was in use in the thirteenth century (L.T.C. Rolt, *Tools for the Job : a Short History of Machine Tools* (1965), pp.20-33.

324 See Appendix VI - entry on Polishing Shop.

325 Wilson, *Silverwork and Jewellery*, p.232.

326 Ledger 1776-8, p.247, 20 July 1778.

327 Wilson, *Silverwork and Jewellery*, p.231.

328 Letter Book G, p.830, B. & F. to Elizabeth Montagu, 15 February 1777. How much difference this made to the price of silver plate was not specified.

329 See p.23.

330 Goodison *Ormolu*, pp.69-74.

331 McKendrick, 'The Commercialization of Fashion', pp.75-6.

332 Letter Book G, pp.582-4, B. & F. to Sir Robert Rich, 25 March 1776.

333 Letter Book G, p.802, B. & F. to the Duke of Ancaster, 18 January 1777.

334 Bradbury, *Sheffield Plate*, p.189.

335 See Appendix IIIB. Silver-gilt buttons at Soho were either called 'argent moulu' (Fothergill etc., item 71, J.F. to M.B., 4 April 1770) or 'argente d'ore' (Day Book 1779-81, pp.589-90, 10 March 1781).

336 Day Book 1779-81, p.306, 28 June 1780.

337 Barr, *George Wickes*, p.147.

338 Goodison *Ormolu*, p.69.

339 Gilding waxes, applied with heat, and containing different substances, created various effects. For example, M.B. noted a mixture of sal petre (potassium nitrate) 2oz.; allum (potassium aluminium sulphate) 1oz.; and salt (sodium chloride) 5dwt. provided 'dead colour' (i.e. a plain matt finish). For a 'red middle yellow' M.B. noted salt (sodium chloride) 1oz.; sal petre (potassium nitrate) 15dwt.; verdegrees (cupric acetate) 15dwt.; green copperas (ferrous sulphate) 15dwt.; red chalk 15dwt. and sal ammoniak (ammonium chloride) 1oz. (ibid., pp.70-4).

340 See Appendix V - entry on Bradbury, Thomas.

341 Goodison *Ormolu*, p.74.
342 See Appendix VI - entries on Tools etc. in Gilding Shops above stairs and In Gilding Shop below stairs.
343 See pp.113-4.
344 Letter Book G, p.830, B. & F. to Elizabeth Montagu, 15 February 1777.
345 Goodison *Ormolu*, p.24.
346 Letter Book G, pp.186-7, B. & F. to Elizabeth Montagu, 23 December 1776.
347 Letter Book G, p.528, B. & F. to J. W., 10 February 1776.
348 Letter Book G, pp.558-9, B. & F. to the Prince of Holstein [the Duke of Holstein Gottorp - see Chapter II note 458], 28 February 1776.
349 The high fashioning charge of 5s. 6d. per oz. for Sir Robert Rich's épergne (Plate 60) was partly justified by B. & F. on the grounds that new models were required for casting. (Letter Book G, pp.582-4, B. & F. to Sir Robert Rich, 25 March 1776).
350 Letter Book G, p.544, B. & F. to J. W., 24 February 1776.
351 Rowe, *Adam Silver*, p.44.
352 VAM John Wakelin and William Tayler, Gentlemen's Ledger 1776-82 vol.8 (VAM 11), p.260, 11 July 1777. William Barker Daniel was charged £2 16s. 0d. for making a teapot weighing 14oz. 6dwt.
353 Letter Book G, p.551, J. H. to J. W., 28 February 1776. These prices were reduced by 2d. per oz. if the customer supplied the silver.
354 VAM, John Parker and Edward Wakelin Gentlemen's Ledger, 1765-75, vol.7 (VAM 7), p.181, 27 October 1767. The Very Reverend Mr Harman was charged 7s. 1d. per oz. for plates but this included the price of the silver, which at the time was 5s. 8d. per oz. (VAM, John Parker and Edward Wakelin, Gentlemen's Ledger, 1765-75, vol.7 (VAM 7), p.184, 4 December 1767).
355 Letter Book I, pp.192-3 [B. & F.] to John Lind, 25 March 1778.
356 Bradbury, *Sheffield Plate*, p.124.
357 VAM, John Wakelin and William Tayler, Gentlemen's Ledger, 1776-82, vol.8, (VAM 11) p.260, 4 November 1777. William Barker Daniel was charged 7s. 10d. per oz.; this included silver which cost 5s. 9d. per oz. (VAM, John Wakelin and William Tayler, Gentlemen's Ledger, 1776-82, vol.8 (VAM 11), p.260 11 July 1777).
358 Letter Book G, p.551, J. H. to J. W., 28 February 1776.
359 Letter Book G, p.710, J. H. to J. W., 4 October 1776.
360 VAM, John Parker and Edward Wakelin Gentlemen's Ledger, 1773-6, vol.3 (VAM 10), p.66, 23 March 1774. William Jones was charged 8s. 3d. per oz.; this included the price of silver which was then 5s. 6d. (VAM, John Parker and Edward Wakelin, Gentlemen's Ledger, 1773-6, vol.3 (VAM 10), p.83, 2 December 1774).
361 VAM, John Parker and Edward Wakelin, Gentlemen's Ledger, 1773-6 vol.3 (VAM 10), p.83, 17 December 1774. Charles Mawson was charged 8s. 6d. per oz.; this included the price of silver which was then 5s. 6d. per oz. (see note 360 above). The sauce-boats were fairly elaborate since they had 'antique' handles and 'gadrooned' borders i.e. decorated with convex curves (Fleming etc., *Dictionary*, p.128).

362 VAM, John Wakelin and William Tayler, Gentlemen's Ledger, 1776-82, vol.8 (VAM 11) p.260, 11 July 1777, oval teapot for William Barker Daniel weighed 14oz. 6dwt.

363 In 1776 B. & F. suggested weights of 14oz. or 15oz. for a teapot (Letter Book G, p.544, B. & F. to J. W., 24 February 1776).

364 For the assay year 1773-4 sauce-boats were made by B. & F. to the following weights: 1 pair 39oz. 14dwt.; 1 pair 31oz. 15dwt. 12gr.; 2 sauce-boats 39oz. 6dwt.; 4 sauce-boats 73oz. 19dwt. 12gr.; 4 sauce-boats 124oz. 1dwt. 12gr. (B.A.O., Plate Register, Birmingham, 1773-92).

365 VAM, John Parker and Edward Wakelin, Gentlemen's Ledger, 1773-6, vol.3 (VAM 10), p.63, 23 March 1774. A pair weighed 36oz. 18dwt. VAM, John Parker and Edward Wakelin, Gentlemen's Ledger, 1773-6, vol.3 (VAM 10), p.83, 17 December 1774. 2 pairs weighed 69oz. 3dwt.

366 B. & F. assayed the following plates in the assay year 1776-7: 1 plate 6oz. 18dwt. 12gr.; 60 plates 1120oz. 8dwt.; 12 plates 224oz. 1dwt.; 24 plates 467oz. 13dwt.; 5 plates 92oz. 19dwt.; 12 plates 239oz. 11dwt.; 38 plates 708oz. 7dwt. 12gr.; 6 plates 106oz. 11dwt. (B.A.O., Plate Register, Birmingham, 1773-92).

367 VAM, John Parker and Edward Wakelin, Gentlemen's Ledger, 1765-76, vol.7 (VAM 7), p.181, 27 October 1767. The Very Reverend Mr Harman bought 6 dozen plates weighing 1299oz. 18dwt.

368 These salt-cellars weigh about 2oz. 5dwt. each (Delieb and Roberts, *Silver Manufactory*, p.46).

369 VAM, John Wakelin and William Tayler, Gentlemen's Ledger, 1777-87, vol.9 (VAM 12), p.269, 30 August 1782. 4 oval beaded 'Antique' salt-cellars 11oz. 6dwt.; p.289, 6 October 1781, 4 plain oval salt-cellars 10oz. 7dwt.

370 B.A.O., Plate Register, Birmingham, 1773-92, 4 June 1776.

371 VAM, John Parker and Edward Wakelin, Workmen's Ledger No.2, 1766-72, vol.7 (VAM 8), p.200. Thomas Pitts supplied the following to Parker and Wakelin: 8 May 1772, épergne supporting one large basin, 4 small basins and 4 saucers weighed 21oz. 4dwt.; 18 March 1773, épergne with one large basin, 4 small basins and 4 saucers weighed 166oz. 1dwt.

372 Letter Book G, pp.830-1, B. & F. to Mrs Montagu, 15 February 1777.

373 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp.154-5, B. & F. to Mr Udney, 12 June 1773.

374 Wyatt Family, item 73, J. W. to B. & F., 29 February 1776.

375 Sir Robert Rich over the charge for his silver-gilt épergne, Plate 60 (Wyatt Family, item 73, J. W. to B. & F., 29 February 1776).

376 Sauce-boats by Parker and Wakelin in the 1770s generally weighed a little less than 20oz. (see text); however, a pair made by Wakelin in 1757 weighed 48oz. 1dwt. (Barr, *George Wickes* p.109). See also pp.216-7.

377 An exception was Sir Robert Rich who was charged 5s. 6d. peroz. by B. & F. for his silver-gilt épergne but he reckoned that a London silversmith would only have charged 4s. 0d. peroz. (Wyatt Family, item 73, J. W. to B. & F., 29 February 1776). Another exception was the Earl of Radnor for a tea-urn (Letter Book G, p.40, B. & F. to the Earl of Radnor, 24 June 1771).

378 See p.113

379 Letter Book E, p.8, M. B. to V. Green, 6 August 1774.

380 Rule, *The Labouring Classes*, pp. 134-8.
381 See Appendix V - entry on De la Fontaine, John.
382 See Appendix V - entry on Fellowes, John.
383 Letter Book N, pp. 48-9, J. H. to Thomas Percival, 16 November 1782.
384 Rule, *The Labouring Classes*, p. 165.
385 See Chapter III note 50.
386 The apprentices of the London goldsmith George Wickes included the son of a schoolmaster and another came from the landed gentry in Worcestershire (Barr, *George Wickes*, pp. 38-45).
387 Letter Book D, p. 29, M. B. to James Adam, 1 October 1770.
388 Barr, *George Wickes*, pp. 37-9.
389 Box C3, item 283, M. B. to Thomas Creighton, 1 October 1791. There is no evidence that J. F. took in apprentices.
390 Letter Book C, p. 74, M. B. to Peter Bottom, 30 March 1768.
391 Box C3, item 283, M. B. to Thomas Creighton, 1 October 1791.
392 Rule, *The Labouring Classes*, pp. 134-8.
393 Scale etc., item 14, 'Proposals to B. & F. by John Scale' [1773].
394 See Appendix V - entries on Duval, John; Hancock, William; Bradbury, Thomas; De la Fontaine, John.
395 See Appendix V - entries on Baker, Dumée and Traba.
396 See Appendix V - entry on Duval, John.
397 Duval wrote to the following: Hanckel, working for Emick Romer in Holborn; Harrison working for Hemming; Salven working for Salter and Richards working for Molière (Letter Book E, p. 117 [B. & F.] to William Matthews, 4 or 5 June 1771).
398 Matthews and Barton, Matthews, William, item 5, William Matthews to M. B., 27 June 1771. The silversmiths were as follows: Benson who had worked for Gardener, St James' St, at hand-raising and mounting; John Wright, a German, who worked at hand-raising and mounting; Duff, who worked at mounting and hand-raising; Cormack, a silversmith working with Horsley; Wakesmith, a German, who worked as a hand-raiser with Horsley; Stross, a German, who worked as a hand-raiser and mounter with Moniak; Sultzer, a German, working with Moniak; Hanckel, working with Hemming; Sibel, working for Dumée; Heckford.
399 Letter Book E, pp. 119-20, J. S. to William Matthews, 6 July 1771.
400 Matthews and Barton, Matthews, William, item 5, William Matthews to M. B., 27 June 1771.
401 Sibel was too old and Benson lacked ability (Letter Book E, pp. 119-20, J. S. to William Matthews, 6 July 1771).
402 Clarke (Letter Book G, p. 620, B. & F. to William Matthews, 23 May 1776).
403 Letter Book G, p. 620, B. & F. to William Matthews, 23 May 1776.
404 See Appendix V - entries on Burn, Anthony; Edstrom, Stephen; Wyon, George; Hanckel; Watt, James; Moore, Thomas; Wilson, William and Bingley, William. There is nothing to suggest that the last three were recruited from outside Birmingham.
405 Letter Book E, pp. 119-20, J. S. to William Matthews, 6 July 1771.
406 Letter Book E, pp. 129-30, J. S. to William Matthews, 17 June 1771.
407 Scale etc., item 14, 'Proposals to Boulton and Fothergill by John Scale' [1773].
408 Letter Book E, pp. 119-20, J. S. to William Matthews, 6 July 1771.
409 See Appendix V - entry on Watt, James.
410 See Appendix V - entries on Caldecott, George and Thomas; Fellowes, John, and Moore, Thomas.

411 In 1791 Arthur Young gave 10s.-25s. per week as the range of adult male workers' wages in Birmingham but thought the higher end predominated to make Birmingham's wages the highest in Europe (John Rule, *The Experience of Labour in Eighteenth-Century Industry* (1981), p.67).
412 Scale etc., item 14, 'Proposals to Boulton and Fothergill by John Scale' [1773].
413 Rule, *The Labouring Classes*, pp.120-6.
414 Letter Book G, pp.607-8, J. H. to William Matthews, 11 May 1776.
415 See Appendix V - e.g. entries on Watt, James and Hodges, Edward.
416 See Appendix V - entry on'Wilson, William. A chaser, Joseph Burton, who may have worked on silver, was engaged in 1768; he was to be paid piece-rates where there was an agreed price, but otherwise he was to be paid weekly (Box B6, item 78, 'Articles of Agreement between Joseph Burton, Chaser, and B. & F., Toy Makers', 27 September 1768).
417 Rule, *The Labouring Classes*, pp.120-1.
418 Letter Book G, p.267 [B. & F.] to James Watt, 7 February 1775.
419 Berg, *Age of Manufactures*, p.308.
420 ibid., p.300.
421 e.g. hatters and printers (Rule, *The Labouring Classes*, p.120).
422 ibid., p.121.
423 Scale etc., item 14, 'Proposals to Boulton and Fothergill by John Scale' [1773].
424 See Appendix IV.
425 See Appendix VI.
426 See Appendix V - entries on Bunbury, Thomas and Fellowes, John.
427 See Appendix V - entry on Burn, Anthony.
428 See, however, Appendix V - entries on Caldecott, Thomas and George and Bradbury, Thomas.
429 Fothergill etc., item 61, M. B. to J. F., 25 February 1770.
430 e.g. a cup for Dr Sutton of Aversham near Newark-upon-Trent (Letter Book E, p.93, C. W. to Dr Sutton, 3 May 1771).
431 M. B. lacked sufficient silversmiths to work on the tureen for the Admiralty in 1771 (Letter Book E, p.161, M. B. to James Stuart [1 August 1771]) and it was delayed (see Appendix V - entry on Bunbury, Thomas).
432 See p.119.
433 Letter Book G, p.202, B. & F. to Sir Harbord Harbord, 19 December 1774.
434 Letter Book G, pp.786-7, B. & F. to Elizabeth Montagu, 23 December 1776.
435 Letter Book G, p.652, B. & F. to G. W. Soltau, 3 July 1776.
436 Letter Book G, p.686, B. & F. to G. W. Soltau, 24 August 1776.
437 Wyatt Family, item 113, J. W. to B. & F., 30 November 1776.
438 Journal 1776-8, p.224, 3 December 1776.
439 Letter Book G, p.841, B. & F. to John Taylor, 22 February 1777.
440 Letter Book I, pp.36-7 [B. & F.] to John Taylor, 3 July 1777.
441 Letter Book I, p.176, B. & F. to Miss Pidcock, 16 February 1778.
442 e.g. Letter Book G, pp.733-4, M. B. to Dr Gresley, 2 November 1776; Letter Book G, p.602, B. & F. to John Turton, 4 May 1776 and Letter Book I, p.151, B. & F. to Mrs Banister, 10 January 1778.
443 See Appendix IB.
444 Letter Book G, p.608, John Hodges to William Matthews, 11 May 1776.

445 e.g. Letter Book G, p.898, B. & F. to Nigel Gresley, 19 April 1777; Letter Book G, p.12, B. & F. to S. O. Tayler, 28 May 1774 and Letter Book G, pp.67-8, B. & F. to L. D. Clifford, 14 July 1774.

446 Letter Book G, p.567, J. H. to John Wise, 11 March 1776.

447 Letter Book G, p.764, J. H. to John Turner, 5 December 1776. An order for a silver cup.

448 Letter Book H, p.198, B. & F. to Wilson and Blanckenhagen, 23 April 1777. An order for silver snuff-boxes.

449 An exception was Richard Lovell Edgecombe (Letter Book G, pp.719-20, B. & F. to Richard Lovell Edgecombe, 16 October 1776); this may have been because he had delayed payment for earlier articles (Box E1, item 97, Richard Lovell Edgecombe to M.B., 24 November 1774). Orders were more frequently turned down from 1777 but this was a consequence of B. & F's decision to run down silversmithing (see pp.216-7).

450 Letter Book G, p.42, A. J. C. to the Duke of Montagu, 25 June 1774.

451 Letter Book G, p.84, B. & F. to J. Sneyd, [August] 1774.

452 Letter Book G, p.602, B. & F. to John Turton, 4 May 1776.

453 Letter Book G, pp.108-9, B. & F. to James Norman, 27 August 1774.

454 Letter Book I, p.151, B. & F. to Mrs E. Bannister, 10 January 1778.

455 Letter Book G, pp.255-6, B. & F. to Lord Gower, 10 February 1775.

456 Letter Book G, pp.786-7, B. & F. to Mrs Montagu, 23 December 1776.

457 Letter Book I, p.282, B. & F. to Thomas Graham, 27 July 1778.

458 See Appendix V - e.g. entries on Burn, Anthony and Edstrom, Stephen.

459 See p. 128.

460 Scale etc., item 14, 'Proposals to Boulton and Fothergill by John Scale' [1773].

461 Fothergill etc., item 61, M. B. to J. F., 25 February 1770.

462 Fothergill etc., item 91, M. B. to J. F., 9 May 1772.

463 Inspection of the épergne in 1984 revealed that the repairs on the festoons and the rims around the bowls were not inconspicuously carried out and that several screws were missing; the last suggests that the fault Rich noted was not put entirely right (Quickenden, 'B. & F. Silver: an Épergne Designed by James Wyatt', p.418).

464 Letter Book G, p.895, B. & F. to Richard Moland, 16 April 1777.

465 Journal 1776-8, p.326, 6 May 1777.

466 Dickinson, *Boulton*, pp.72-3. Dr Samuel Johnson saw spoons struck with dies at Soho in 1774. Johnson did not state that these were of silver, but Soho refused to make spoons in Sheffield plate (Letter Book E, p.595, A. J. C. to William Hackett, 8 October 1772).

467 Letter Book M, p.197, M. B. to James Watt, 30 October 1781.

468 The customer was a London merchant, James Norman. The partners offered to send the replacements in 1774 (Letter Book G, p.123, B. & F. to James Norman, 12 September 1774). The pair of candlesticks was sent in 1775 (Letter Book G, p.245, B. & F. to James Norman, 30 January 1775).

469 Letter Book G, p.538, J. H. to J. W., 17 February 1776.

470 Wyatt Family, item 68, J. W. to B. & F., 21 February 1776.

471 Ledger 1776-8, p.157, 15 August 1776.

472 Letter Book E, p.161, M. B. to James Stuart [1 August 1771].

473 Letter Book G, pp.789-90, B. & F. to Sir George Shuckburgh, 24 December 1776.

474 Letter Book I, p.372, B. & F. to Mrs Dundas, 27 January 1779. The tea-kitchen cost £54 0s. 8d. (Ledger 1778-82, p.113, 21 January 1779). It weighed 104oz. 17dwt. (Letter Book I, p.461, B. & F. to Patrick Robertson, 15 July 1779).

475 Letter Book I, p.481, J. H. to John Stuart, 6 October 1779.

476 See Appendix IIIC.

477 See Appendix IA.

478 See Appendix IB.

479 See Appendix IIIA.

480 The first service of silver plate made at Soho was for Lord Craven (Letter Book G, pp.548-9, B. & F. to J. W., 27 February 1776). There is no evidence that silver plate was supplied to Craven until 1774 (1 Bundle Stock Taking, Soho Cash Account with Birmingham Warehouse, 30 September 1773 to 4 January 1775. On 22 January 1774 £1 1s. 0d. was paid for the carriage of Craven's plate).

481 Letter Book E, p.281, B. & F. to Kelly Lot & Co., 23 November 1771. See also Appendix IIIA.

482 See Appendix IIIC.

483 See p.61.

484 See Appendix II.

485 Berg, *Age of Manufactures*, pp.84-5.

486 See Appendix V - entries on Bentley, John and Mynd, Thomas.

487 The London partnership of Parker and Wakelin lasted from shortly after 1758 to 1776 (Grimwade, *London Goldsmiths*, p.614). The firm was regularly supplied with certain items: e.g. Isaac Callard and James Tookey provided spoons; David Hennell supplied salt-cellars and Thomas Pitts supplied épergnes (Barr, *George Wickes*, p.61). A large number of candlesticks made in Sheffield during the 1770s, were overmarked with London makers' initials (Rowe, *Adam Silver*, p.55 and p.68). Hester Bateman registered her mark at Goldsmiths' Hall in 1761 (David S. Shure *Hester Bateman : Queen of English Silversmiths* (1959), p.14, hereafter cited as Shure, *Bateman*). Nevertheless almost her entire output between 1760 and 1774 was commissioned and overmarked by other London firms (Shure, *Bateman*, pp.14-5). Later, when pieces can be identified with her marks, her range, though wide, did not include candlesticks or candelabra (Shure, *Bateman*, caption to Plate XXXIX).

488 See Appendix I.

489 See Appendix III.

490 See p.129.

491 Traba was dismissed in 1773 for stealing silver (see Appendix V - entry on Traba). Thereafter there are no further recorded instances of staff stealing silver during the B. & F. partnership, though Charles Wyatt was accused of misappropriating gilt waste (see Appendix V - entry on Wyatt, Charles).

492 Reports of the theft by workmen of silver were frequently made in the Birmingham newspaper *Aris's Gazette* between the 1740s and 1790s (Berg, *Age of Manufactures*, p.308). In 1811 William Nicholson was convicted for stealing 9oz. of silver from his employer, Stephen Adams, a buckle and spoon-maker of

St Anne's Lane, City of London; also in 1811 a porter, Potter, stole 127oz. of silver from the workshops of Rundell, Bridge and Rundell, Dean St, London. In 1862 James Griffin, a jeweller of Great Hampton St, Birmingham, reported to The Parliamentary Children's Employment Commission that liquor shops attracted 'fence masters' i.e. men who bought stolen metals from employees in the area (Culme, *Nineteenth Century Silver*, pp. 37-44).

493 See Appendix IB.

494 See p. 126.

495 See p. 128.

496 See p. 127.

497 See pp. 126-7.

498 Berg attributes this to Birmingham's prosperity and egalitarian social structures; in contrast there was resistance to machinery, particularly in the South West and North, where these factors did not apply (Berg, *Age of Manufactures*, pp. 318-9).

499 See p. 113.

500 e.g. Lady Hertford ordered nine pairs of Sheffield plate candlesticks (B.R.L., B.W.C., Portions of a Letter Book, 1773, p. 73, B. & F. to the Earl of Hertford, 1 April 1773). These were in the 'Lyon' pattern (Fothergill etc., item 131, J. F. to M. B., 1 April 1773) which was also made in silver (see p. 113). Silver candlesticks were not made in such large batches (see p. 203).

501 See pp. 119-20.

502 Rowe's account of silversmithing at Soho places excessive emphasis on the use of machinery there and implies , without evidence, that M. B. invented processes for silversmithing (Rowe, *Adam Silver*, pp. 46-55).

503 See pp. 107-13.

504 e.g. the Birmingham gun trade was based on hundreds of specialist firms each of which made only one part of a gun or completed one process. The gun was passed from one firm to another and production was organised by merchants like Samuel Galton, 1720-1799 (Barbara M. D. Smith, 'The Galtons of Birmingham: Quaker Gun Merchants and Bankers, 1702-1831', *Business History*, vol. IX, no. 2 (July 1967), pp. 132-50).

505 In 1766 Lord Shelbourne reported that in Birmingham a button passed through fifty hands and that children of six or eight did the work with as much competence as men (Berg, *Age of Manufactures*, p. 293, using Lord Edward Fitzmaurice *Life of William, Earl of Shelbourne*, vol. 1, 1737-1766 (London, 1875), p. 404). At Soho a button passed through the hands of at least ten workers (Goodison *Ormolu*, p. 13, quoting G. C. Lichtenberg to J. A. Schernhagen, 16 October 1775 in M. L. Mare and W. H. Quarrell's *Lichtenberg's Visits to England as described in his Letters and Diaries*, (Oxford, 1938), p. 97).

506 See p. 121.

507 See p. 120.

508 See pp. 110-4.

509 See p. 120.

510 See p. 119.

511 See p. 128.

512 See p. 114.

513 See p. 119.

514 VAM, John Parker and Edward Wakelin Workmen's Ledger No. 2, 1766-72, 2 of 8 (VAM 8), p. 43, 11 May 1769 and 27 May 1769.
515 See Appendix IIIC.
516 VAM, John Parker and Edward Wakelin Workmen's Ledger No. 2, 1766-72, 2 of 8 (VAM 8), p. 43, 19 June 1769.
517 VAM, John Parker and Edward Wakelin Workmen's Ledger No. 2, 1766-72, 2 of 8 (VAM 8), p. 200, 18 March 1773.
518 e.g. VAM, John Parker and Edward Wakelin Gentlemen's Ledger 1773-6 (VAM 10), p. 63, 2 April 1774. An épergne charged at 3s. 9d. per oz.
519 Letter Book G, p. 490, J. H. to William Matthews, 16 December 1775.
520 Quickenden, 'B. & F. Silver: an Épergne Designed by James Wyatt', p. 418.
521 Glanville, *Silver*, p. 179.
522 Information supplied by Helen Clifford from the Garrard ledgers.
523 Wakelin and Tayler once charged £1 2s. 0d. for the fashioning of a dozen four-pronged forks (VAM, John Wakelin and William Tayler Gentlemen's Ledger 1776-82, 8 of 9. (VAM 11), p. 249, 12 May 1777).
524 Letter Book G, p. 544, B. & F. to J. W., 24 February 1776.
525 Letter Book G, p. 407, B. & F. to Stephen Branston, 25 August 1775.
526 Letter Book G, p. 169, B. & F. to John Turner, 31 October 1774.
527 See Appendix IIIC
528 See Appendix II.
529 In the mid-1770s B. & F. refused to make épergnes (Letter Book G, p. 93, B. & F. to Messrs Coupland and Willans, 10 August 1774); tankards (Letter Book I, p. 104, B. & F. to Edward Lapworth, 18 October 1777); knives and forks (Letter Book G, p. 357, B. & F. to Mrs C. Ascough, 8 June 1775). They seldom made Sheffield plate spoons (Letter Book N, p. 80, J. H. to Playfair, Wilson and Co., 21 February 1783).
530 See p. 113.
531 VAM, John Parker and Edward Wakelin, Gentlemen's Ledger 1765-75, vol. 7 (VAM 7), p. 111, 17 January 1770.
532 Ansill and Gilbert charged £6 0s. 0d., which, together with the cost of the silver, £15 15s. 4d. (VAM, John Parker and Edward Wakelin, Workmen's Ledger, No. 2, 1766-72, vol. 3 (VAM 8), p. 76, 17 January 1770) left a mark-up of £2 18s. 11d. since the final charge was £24 11s. 3d. (see text).
533 See p. 113.
534 VAM, John Parker and Edward Wakelin, Workmen's Ledger, 1765-75, vol. 7 (VAM 7), p. 111, 17 January 1770.
535 See p. 113.
536 See note 532 above.
537 Weighing between 80oz. and 90oz., fashioning 4s. 0d. peroz. (Letter Book G, p. 544, B. & F. to John Wyatt, 24 February 1776).
538 The tea-urn, supplied by Ansill and Gilbert, weighed 94oz. 9dwt., costing £26 0s. 0d. in silver and they charged £14 2s. 0d. for labour (VAM, John Parker and Edward Wakelin Workmen's Ledger No. 2, 1766-72, vol. 3 (VAM 8), p. 70, 8 December 1768).
539 Parker and Wakelin charged their customer £48 5s. 10d. (VAM, John Parker and Edward Wakelin, Gentlemen's Ledger 1765-75, vol. 7 (VAM 7), p. 82, 3 January 1769). The difference between this final charge, and the combined cost of the silver and the

supplier's labour (see note 538 above) provides the mark-up figure.

540 Glanville, *Silver*, pp. 181-90.

541 Quickenden, 'B. & F. Silver: an Épergne Designed by James Wyatt', p. 418.

542 See p. 124.

543 See p. 133.

544 Letter Book G, p. 407, B. & F. to Stephen Branston, 25 August 1775.

545 See pp. 109-13.

546 See pp. 125-9.

547 See pp. 123-4.

CHAPTER IV

THE DESIGN OF SILVER

The appeal of Boulton and Fothergill's silver depended to a considerable extent on design. The consumer boom from the mid-eighteenth century was stimulated by rapid changes in fashion.[1] Many of Boulton's customers had old silver plate re-fashioned to conform with the latest taste.[2] He was well aware of the close interest that the leading members of society paid to changes in style and also understood that their preferences were quickly and closely imitated by others.[3]

In his efforts to ensure that the Soho Manufactory gained a favourable reputation for design, Boulton had to contend with a number of difficulties. From his provincial base he had to keep up to date with stylistic changes in London since it was there that national trends were introduced.[4] Boulton felt too that he had to struggle against Birmingham's widespread reputation for shoddy goods.[5] He also had to overcome his own early inattention to design. In 1767 J. H. Ebbinghaus[6] criticised a consignment sent to him in Westphalia: he felt both that the colours and patterns of the buckles made them virtually unsaleable and that the chains were clumsy.[7] The Earl of Shelburne was convinced that Soho would not be regarded as a manufactory of the first importance until Boulton acquired a variety of elegant designs.[8]

The reputation of Soho was transformed by the production of ormolu.[9] Mrs Montagu referred to the Manufactory in 1772 as a '. . . temple of the beaux arts...'[10] and the effort put into the design of ormolu provided some benefits for the silver business. The contacts and sources which provided designs for ormolu provided a fund of knowledge which was used for silver[11] and in a few cases the same designs were used for both.[12]

Yet Boulton's approach to the design of silver was to be more low-key. The ormolu business taught Boulton that it was possible to become over-ambitious in design: in 1772 after the failure of the ormolu sale at Christie and Ansells he was bitterly disappointed by the English aristocracy's failure to buy and, in his view, fully appreciate, some of Soho's highly ambitious productions.[13] Only occasionally did Boulton make very elaborate items in silver

(e.g. Plate 70); normally he produced candlesticks, tablewares, and a wide range of smaller items,[14] some of which were very plain (Plate 85). In contrast, vases, which characterised the ormolu business,[15] were rich (Plate 3). Whereas silver was produced to order, ormolu generally was not; whereas ormolu was primarily designed in anticipation of the customer's taste'[16] Boulton later normally ensured that customers approved of designs for silver before the items were made,[17]

This chapter contains two themes. The first covers the external influences upon the firm's silver: these include publications, architects, the metalwork of other firms and the individual requirements of customers. The second theme deals with the ways in which these influences were dealt with at Soho; the importance of this theme derives in particular from the fact that the forms of the firm's silver were seldom a complete copy of external designs but depended rather upon a process of adaptation. To ensure that these influences were intelligently assimilated and sensitively used it was necessary to build up a fund of artistic knowledge and skills at the Soho Manufactory.

Boulton took a strong personal interest in the visual arts. One of the principal ways in which he developed this appreciation was through discussion with leading members of society. On 4 March 1770 Boulton visited the Earl of Shelburne in London and they discussed a number of items produced at the Soho Manufactory. On the following day, Boulton spent three hours with the Duke of Northumberland, saw his collection of paintings and other ornamental pieces, and held a conversation about various arts.[18] As Boulton acknowledged in the Preface to the catalogue for the ormolu sale at Christie and Ansells in 1771, such visits and discussions had helped to '...improve or correct [his] taste'.[19] Boulton also bought works of art; for example, in 1767 he purchased from Italy a statue of Venus for his garden and cameos for his own collection.[20] These acquisitions helped to give Soho an aura of artistic sophistication to Boulton's innumerable visitors.[21] Boulton would have liked to have gone further: in 1772 he planned to build a museum of about 800 square feet[22] and in the same year Sir Rodney Valltravers invited Boulton to his own museum to gain ideas for the Soho project.[23] There is, however, nothing to suggest that the museum was built: it is likely

that Boulton felt he had insufficient funds.[24]

He also built up artistic expertise at the Soho Manufactory for the benefit of the firm's products. For this, Boulton was heavily dependent on the contributions of the brothers Francis and John Eginton. Francis possessed a range of skills: chasing, engraving, painting, and modelling.[25] Although Birmingham had a few drawing schools and a large number of French and German artists who instructed local youths in drawing and design, Boulton was not dependent upon them.[26] Young employees with ability were taught to draw[27] by John Eginton: for that alone in 1776 he was paid £7 9s. 3d., which indicates a substantial demand for his services.[28]

Drawings were required for a variety of purposes. They were sent to customers to provide them with an idea of the design that the firm had in mind.[29] Customers were not normally charged for these drawings.[30] The partners also kept a record of their designs which in the nineteenth century were bound to form a pattern book (Plate 72).[31] The silversmiths also required drawings from which to work. Whether different types of drawing were developed for these different purposes is not clear.[32] Draughtsmen were also required to copy patterns for use by the firm: in 1768 Boulton, then in London, sent for an artist (from Soho) to sketch patterns thought likely to be of value to the Manufactory,[33] and on one occasion Boulton asked the London cabinetmakers Ince and Mayhew to find a draughtsman capable of copying three pattern books for him.[34]

Many designs were created by members of staff at the Soho Manufactory.[35] The main responsibility rested with Francis Eginton. In the late 1760s and early 1770s he was mentioned as the designer of a few large pieces in unspecified metals. His involvement with design continued: in 1773 Boulton suggested that Eginton should look around for design ideas in London and visit architects and members of the aristocracy. Eginton went to London on a number of occasions. In 1771 he was referred to as the firm's 'chief designer'.[36] He was assisted by at least one other person, William Bingley, who produced about 1771 a design for an ormolu-mounted vase.[37]

The responsibility for design and much of the actual designing at Soho was a part of the rôle of senior staff, as it was elsewhere in silver businesses.[38] Yet the design work at Soho was shared with

others. An ability to design was expected of a fully trained silversmith in the eighteenth century.[39] On one occasion Boulton insisted that he would not employ a man unless he was capable of producing original designs: copying the designs of others was insufficient.[40]

One of the styles used at the Soho Manufactory was what was subsequently called the Rococo.[41] This style originated in France in the opening years of the eighteenth century[42] and reached its mature form in the work of leading designers by c.1730.[43] Juste Aurèle Meissonier's design of 1728 for a candlestick (Plate 29)[44] exhibits many of the style's characteristic motifs: shells, scrolls, cherubs, fronds of palm and cartouches (panels with curved and elaborate edges).[45] Typically for the Rococo, these forms are varied, twisted, and distorted, and the whole design is full of spiralling, though broken, movement and asymmetry. This style gradually dominated the visual arts not only in France but in most parts of Europe.[46]

Even though Rococo tendencies can be found in English silver from the mid-1720s[47] (which were amongst the earliest instances of the style in the visual arts)[48] the Rococo made less impact here than on the Continent and was slow to develop. The Rococo, which was frequently referred to as the 'French taste',[49] had to struggle against anti-Gallican sentiment[50] and a native hostility towards lavishness in the visual arts.[51] Even when in the 1740s the Rococo generally became more popular[52] it still failed to make a significant impact on architecture (which from c.1715 had been dominated by the classicism of the Palladian Movement)[53] and the mid-century taste for decorativeness frequently found expression in the vogues for Chinoiserie[54] and Gothic.[55] However, the Rococo did make a strong impact on the decorative arts, where the foreign influence was strong;[56] this was particularly true with silver, much of which was produced by Huguenots.[57] One of these, Paul de Lamerie, produced pieces which sometimes approached the qualities of French work:[58] his ewer of 1742 (Plate 30) similarly uses abundant detail, asymmetrical panels, scrolls and a cast figure for the handle. Silversmiths of English stock gradually adopted the Rococo[59] but generally the style (in silver as in other decorative arts)[60] remained more restrained and balanced than in France; this became increasingly true in the 1750s as rich castings gave way to repoussé work and piercing.[61] This tendency

was maintained with the Soho Manufactory's silver.

The continuation of this English Rococo at Soho is in some degree surprising since during the late 1760s and early 1770s Boulton admired the richness of French workmanship.[62] On his trip to the Continent in 1765 he was deeply impressed by the visual arts in France.[63] This attitude continued: in 1768 he bought a selection of articles[64] from the London goldsmith Thomas Harrache which had recently been imported from Paris.[65] In 1771 Boulton contemplated employing a French engraver[66] and his interest in acquiring the gilding techniques of French metal workers, which began in the late 1760s, continued into the next decade.[67]

Boulton's early admiration for the richness of French design and workmanship was not transferred into his firm's Rococo silver. Although the Huguenot influence at Soho was strong, their approach had over several generations been tempered by English demands for restraint; moreover, Soho's production methods were sometimes incapable of fully capturing the richness of French workmanship. Amongst the earliest surviving silver by Boulton and Fothergill is a pair of Rococo candlesticks of 1768-9 (Plate 5) showing marked similarities with a pair made in the previous year by the London partnership of Nicholas Dumée (a Huguenot) and Francis Butty (Plate 6).[68] Both pairs of candlesticks have scrolls, festoons of husks, flowers, and a pronounced curvilinear rhythm on the base and stem; however, the cast London pair has a deeper definition of detail than was possible with the die-stampings used at Soho[69] and both pairs strongly contrast with the highly elaborate designs by Meissonnier which required heavy castings (Plate 29). Several Huguenots were at Soho in the early 1770s and at least two worked on silver: John Duval and Dumée (a cousin of the London goldsmith Nicholas Dumée).[70] A few other examples of Rococo silver by the partners from the first half of the 1770s have survived. A pair of shoe buckles of 1773-4 (Plate 32) has an undulating frame with rosettes and looped bows. A sugar-vase of 1774-5 (Plate 33) maintains characteristics of mid-century English Rococo: a curved profile, scrolls, flowers, light chasing, and piercing.

The number of Rococo pieces of silver produced by the partners was limited and other mid-century decorative styles had even less impact on their work. Although Gothic tracery appears on a pair of salt-

cellars (Plate 23) the partners' use of that style was negligible[71] and there is no sign of that other vogue - Chinoiserie - making any impact on their work. The fundamental reason for the limited use of these styles at Soho was that they were generally out of fashion by the time the partners began to produce silver.[72]

Boulton gradually adjusted to the anti-Rococo mood. Although the use of the Rococo in England was long-standing and although it was usually modified to suit English taste, the Rococo was nevertheless still associated with France: Boulton called it the 'French style'.[73] He was not without some anti-Gallican prejudice[74] and in the mid-1770s that influenced his attitude towards design: in 1776 he referred contemptuously to '... French finery ...'.[75] The latter remark was made to a leader of fashionable taste, Elizabeth Montagu[76] and reflected prejudices that she had earlier expressed to Boulton.[77] Although as a business man he was still prepared to use the style, he now did so without conviction.[78]

Changing attitudes ensured that the Rococo virtually died out in the partners' work from he mid-1770s and where it did occur, was combined with other influences. A teapot of 1777-8 (Plate 34) has pronounced repoussé chasing of C-scrolls and flower heads with a floral rose knob on the lid. These Rococo motifs are placed on a drum-shaped form which was introduced by English silversmiths c.1770;[79] the plain shape contrasts strongly with elaborate pear-shaped Rococo forms (Plate 31).

Other silver by the partners retained Rococo shapes but avoided Rococo detail. The outline of the 'fiddle-pattern' cutlery of 1774-5 (Plate 35) derives from a shape introduced in France early in the 1730s which remained popular beyond the eighteenth century.[80] Some of the partners' jugs (Plates 36 and 37) were based on the 'helmet'-shape which originated in the late seventeenth century, and remained popular during the first half of the following century (Plate 30). The retention of the 'helmet'-shape even in the attenuated form that was used at Soho, was unusual elsewhere after the mid-century;[81] however, the combination of Rococo shapes with Neo-classical detail which the partners were using on these pieces can be paralleled in the work of other contemporary silversmiths during the gradual transition from the Rococo to Neo-classicism.

The partners' silver was increasingly being influenced by what was

later labelled Neo-classicism;[83] this style dominated the visual arts in Europe during the second half of the eighteenth century.[84] Although a thread of classicism survived during the first half of the century,[85] Neo-classicism was born in the mid-eighteenth century out of a mounting hostility to the excesses of the Rococo (a reaction which began in France in the 1730s)[86] and was based upon a revival of the classical tradition. The focus of the movement was in Italy. Here much attention was given to earlier classical revivals, in particular the Renaissance, which was indebted to Roman art. However, the Neo-classical movement placed particular emphasis on the fresh study of antiquity, and through archaeological research some acquired a greater understanding and knowledge of ancient Roman art than had been obtained hitherto.[87] Greek art had been little known or appreciated before but some Neo-classicists gave it prominence by visiting Greece and publishing full and accurate information;[88] moreover, they challenged the importance of ancient Roman art both by insisting that in essentials it derived from the Greeks and by extolling the Greek emphasis on rationalism and noble simplicity.[89] The Romanists largely conceded the historical argument but maintained their defence by highlighting their admiration for Roman grandeur, richness, variety, and creativity.[90]

One of the main ways in which knowledge about antiquity was disseminated was through archaeological publications and Boulton purchased a large number. As early as 1764 he bought Bernard de Montfaucon's *L'Antiquité Expliquée et Representée en Figures*[91] published in fifteen volumes in Paris in 1719.[92] This contained an account of ancient classical, Egyptian, and barbaric designs. In 1767 Boulton subscribed to Pierre François Hugues D'Hancarville's *Collection of Etruscan Greek and Roman Antiquities from the Cabinet of the Hon. W. Hamilton* .... This was published in Naples in four volumes in 1766 and 1767 but Boulton was able to obtain only the first[93] by 1768;[94] he had not acquired the remaining three volumes even in 1776[95] and it is not clear when, or indeed if, he received them. The publication was produced with the needs of manufacturers in mind[96] and Boulton had been excited by the prospect of obtaining the whole publication for the benefit of his Manufactory.[97] Hamilton's collection consisted of bronzes found at Herculaneum (where archaeological research began in 1738)[98] and vases which were widely

thought to be Etruscan but which were made by the Greeks in their colonies of southern Italy.[99] In 1767 Boulton was probably aware[100] of Antonio Francesco Gori's *Museum Florentinum*.. published in twelve volumes in Florence between 1731 and 1766. Boulton purchased the first three volumes[101] in 1771;[102] these provided him with engravings of classical gems and statues. By 1771 Boulton bought the first five[103] volumes of *Le Antichità di Ercolano Esposte*, published in nine volumes by the Accademia Ercolense in Naples between 1757 and 1792. He also subscribed[104] to a one-volume summary of the Accademia Ercolense's publication, by Thomas Martyn and John Lettice, called *The Antiquities of Herculaneum*, which Boulton received on publication in 1773.[105] Boulton probably bought further archaeological publications produced outside England;[106] in addition, as we shall see, he purchased archaeological publications by British architects.[107]

We shall also see differences in the character of the partners' silver and the work of antiquity; this was due to a variety of other influences on their work but the most important were the different interpretations of antiquity by contemporary British architects. Earlier in the eighteenth century the impact of architects on silver design had been limited[108] but with the introduction of Neo-classicism that situation altered for a number of reasons. The Palladian tradition gave architects a classical background which enabled them to readily assimilate Neo-classicism; in contrast craftsmen in the applied arts during the mid-eighteenth century generally employed the Rococo style.[109] Moreover, the Neo-classical architects were more intent than their predecessors in England on achieving stylistic unity throughout their buildings; this led some Neo-classicists to design a wide range of domestic items. These circumstances and the status of architects[110] led craftsmen to look to the former for inspiration.[111] The architects were also in a strong position to take a lead since the most important members of their profession travelled to the sources of Neo-classicism, Italy and Greece.[112] The new study of antiquity influenced English architecture by 1758[113] and - through designs by architects - influenced metalwork from c.1760.[114] However, although the English architects' influence and the study of antiquity were to become dominant influences on the partners' work, neither influenced the earliest silver produced at Soho. Initially, their Neo-classical silver followed other contemporary trends in

metalwork which were based upon earlier classical revivals.

The classical column was frequently used at Soho as the basis for candlestick designs. There was a tradition for this from the mid-seventeenth century[115] which was not entirely eliminated in England during the first half of the following century.[116] However, the stronger interest in the classical past brought about by Neo-classicism led English silversmiths to use the column more extensively for candlestick designs from the late 1760s[117] and the partners followed this development. In 1768 Boulton and Fothergill made a set of three candlesticks; the column was used for the design but which order was employed here is not known.[118] The Corinthian order was most widely used by silversmiths;[119] the partners used it for Sheffield plate candlesticks by 1765[120] and for silver candlesticks at a later date[121] (Plate 38). By 1775, however, Boulton felt that column candlesticks were out-of-date[122] and that view reflected a number of influences upon him.

Some of the partners' early silver was influenced by French Neo-classicism, which began c1739 with architectural designs by Jean-Laurent Le Geay when he was in Rome.[123] Although this phase of Neo-classicism was labelled 'the antique style' or 'the Greek taste' by contemporaries, it did not depend on the direct study of antiquity[124] but upon later classical revivals and in particular the Louis XIV style. The emphasis was on bulky forms, pure geometry and rich classical details such as garlands, Greek key-frets, Vitruvian scrolls, and lion faces and paws.[125] This style made its way into the decorative arts by the mid-1750s.[126]

By the time Boulton went to France in 1765[127] a substantial amount of metalwork had already been executed there in this style[128] and his purchases in the late 1760s of French metalwork in London[129] and direct from France[130] are likely to have included some Neo-classical pieces. In 1769 Boulton was informed about the popularity of the style in France and about the use of the phrase 'in the Greek manner'.[131] In the same year he noted that he should visit the Earl of Coventry at his houses in Piccadilly, London, and Croome Court, Worcestershire.[132] The two men became well-acquainted.[133] In 1765 a bureau 'in the Greek manner', was forwarded to Croome Court from Paris;[134] Coventry also obtained from Paris some sconces (wall-mounted candlestick-branches)[135] described as being in the 'antique style' and

a commode 'in the Greek manner' in 1763.[136]

The popularity of Boulton's early metalwork depended in some degree on the extent to which he absorbed French influences. In 1771 he wrote that French metalworkers rivalled '... all the world in elegance and cheapness ...'.[137] He was aware of the popularity of French craftsmanship in Russia.[138] George III bought the Neo-classical metalwork of Robert-Joseph Auguste[139] and Boulton was aware of the widespread popularity of the Frenchman's work.[140] In the early 1760s and early 1770s Boulton was keen to export ormolu[141] and silver, as well as achieve sales at home;[142] it was therefore desirable to obtain French models to imitate.

Amongst the earliest surviving silver by the partners is a pair of candlesticks dated 1768-9 (Plate 10)[143] which they called the 'Lyon'[144] or 'Lyon-faced' candlestick.[145] This pattern originated in France and is identical to an ormolu candlestick (Plate 7)[146] attributed to Pierre Gouthière. His candlestick cannot be dated precisely[147] but is stylistically consistent with the earliest phase of French Neo-classicism in the use of lion heads and paws, the Greek key-fret, a stem derived from the classical term, and a clear separation of the parts into basic and contrasting geometrical forms. The candlestick pattern is closely related to the legs of a cylinder-top desk made by J. F. Leleu c1772[148] (Plate 8). Although the design originated in France it is possible that Boulton obtained it from the work of an English silversmith: Thomas Heming of London, whose work was also strongly influenced by French Neo-classicism[149] used the pattern in 1771 (Plate 9) and he may have done so earlier. The 'Lyon' candlestick was one of the most popular in the partners' range up to the mid-1770s (Plate 11).[150]

Boulton particularly associated surface richness with French metalwork[151] and in the early 1770s he approved of that characteristic. He felt that it was almost impossible to make silver look very elegant without a contrast of bright burnished parts and areas of matt-chasing. He argued that elegance should be the priority and that the difficulties of cleaning matt-chasing had to be tolerated; however, to minimise that practical problem he intended to provide customers with instructions about cleaning silver plate.[152] These points were made to Lord Shelburne with his recent purchase of 'Lyon' candlesticks in mind;[153] the pattern incorporated rich ornament

and chasing with contrasting smooth surfaces.

The Soho Manufactory used a number of motifs which were characteristic of French Neo-classical metalwork. That impact was pronounced on the partners' ormolu in the early 1770s where they used the following: laurel leaf mounts, sometimes in association with ribbans; beads; stems with twisted flutes; lion masks and snakes.[154] The partners derived from French metalwork a candle-branch which began with a right-angled section; this was used at Soho for ormolu[155] and the design (Plate 12) was probably used for silver since it was associated with the 'Lyon' candlestick.[156] Some motifs widely used by French metalworkers appear on the partners' silver: snakes used as handles on a cup and cover of 1776-7 (Plate 81); lion heads (Plate 11) and beads, used as a border (Plate 17). Flat-fluting, also widely used by French silversmiths,[157] was used by the partners (e.g. Plate 67). The impact of French Neo-classicism on Boulton's work in the late 1760s and early 1770s was strong even though it generally lacked the richness of their work.[158]

Increasingly Boulton's silver was being influenced by English Neo-classicism which in time gave his firm's work a different character[159] and by the mid-1770s he became hostile to French design;[160] however, at an earlier date his appreciation of French work was reinforced by his contacts with Sir William Chambers who visited France, as well as Italy, between 1749 and 1755. In Paris Chambers was influenced by the pioneers of Neo-classicism[161] and in Italy he studied the architecture of ancient Rome, the Renaissance, and later periods. He became the leading official architect in England.[162] On 6 March 1770 Boulton breakfasted with the King's architect who supplied a number of models and a sketch for the foot of a vase.[163] This sketch was almost certainly used for a large candle vase supplied to George III in 1771.[164] (Plate 3) and Chambers designed the 'King's' clock case supplied to the King in 1771 (Plate 4).[165] Chambers also supplied some models: these included two tritons and a griffin.[166] One of the tritons may have been a model used for figures supporting the 'King's' vase and the other may have been used for a triton candlestick.[167] The model of a griffin might have been used for the 'Griffin' vase perfume burner, a pattern introduced by 1771.[168] Models for the grotesque masks and sphinxes for the 'Sphinx' ormolu-mounted vases supplied by the partners to George III in 1771 may also

have come from Chambers.[169]

Although it has been implied that Chambers also sometimes supplied designs for silver[170] there is no evidence for this; however, some of the models and designs supplied by him for ormolu were adapted for silver at Soho. The stepped foot of the 'King's' vase supported by short peg-feet appeared in a simplified form in a number of designs for tea-urns (Plate 39). The use of animals as supporting figures was continued as a theme in a number of silver designs. In 1771, Mr Udney was sent a drawing of a silver coffee-pot, with a lamp and stand supported by three sphinxes.[171] A sphinx was used on one of the partners' designs for a silver tureen (Plate 40) and another of the motifs introduced to the partners' designs by Chambers - the griffin - also occurs on a tureen (Plate 41). The plump festoons of laurel on both George III's clock-case (Plate 4) and candle vase (Plate 3) re-appeared on the partners' silver tea-urn of 1775-6 (Plate 42). In 1770 Boulton claimed that he had purchased all of Chambers' publications and these included *A Treatise on Civil Architecture...*, published in 1759;[172] this added to Soho's fund of knowledge about classicism.

The sculptors John Bacon[173] and John Flaxman Snr[174] supplied Soho with a number of models in the early 1770s and some large figures from them were used for elaborate ormolu pieces. However, in 1770 Boulton paid Flaxman 12s. 0d. for a model of a lion, 4s. 0d. for a relief of a lion, and 8s. 0d. for a ram's head[175] and it is likely that these were used both for ormolu[176] and silver. For the latter, a lion was used as a tureen support (Plate 43) and the lion's head occurs not only on candlesticks (Plate 11) but also on tureens (Plate 44); moreover, a ram's head was used as a handle on a tureen (Plate 44).

One of Boulton's more significant contacts amongst architects was with James Stuart, who with Nicholas Revett went to Greece in 1751-5. Stuart and Revett published *The Antiquities of Athens ...*; the first volume appeared in 1762[177] and Boulton probably bought a copy.[178] Stuart was a pioneer of the Greek revival: his garden temple at Hagley, Worcestershire, 1758, was the earliest monument of the Greek Doric revival in Europe.[179] Stuart provided Boulton with a number of designs, though in some cases it is not clear if they were executed or whether they were for silver.[180]

Only one design by Stuart is known to have been executed in silver

by the partners though they used the design on two occasions. In 1771 they supplied the Admiralty with a tureen and dish.[181] Stuart's design is in the firm's pattern book (Plate 14). The marine theme is clear: a triton blowing a trumpet in the shape of a conch-shell surmounts the cover, and four dolphins[182] support the body of the tureen. The models for the dolphins were supplied by the potter Josiah Wedgwood.[183] Another tureen and dish, to the same design and using the same models for the dolphins,[184] were supplied to the Admiralty in 1781.[185]

The tripod was widely adopted by Neo-classicists[186] and Stuart played a major rôle in establishing its popularity in England.[187] Stuart and Revett suggested a reconstruction which once surmounted the Choragic Monument of Lysicrates in Athens, built in the fourth century B.C. (Plate 45). As Stuart observed from inscriptions on the building, it was erected by Lysicrates as a memorial to the victory of the youths of the tribe of Akamantis in a drama contest. Stuart also knew that in ancient Greece tripods were generally regarded as symbols of victory and used as prizes for literary and athletic achievements.[188] Designs by Stuart, based on his and Revett's reconstruction, were used by Boulton for a large bronze tripod which surmounted the Lanthorn for Demosthenes (also designed by Stuart) in the garden of Shugborough Hall, Staffordshire, in 1769, as well as for a number of ormolu perfume-burners with candle-branches and tripod-bases in later years.[189] There is no evidence that the partners made tripods of this kind in silver though the possibility of doing so was discussed with customers.[190] However, the tripod was adapted for a silver cassolette (i.e. a perfume-burner)[191] of 1778-9 (Plate 70) which combines a tripod with a vase-shaped body. Some designs for jugs supported by tripod base occur in the partners' pattern book[192] (e.g. Plate 72).

One of the most popular forms associated with Neo-classicism was the vase or urn. Boulton's archaeological publications provided him with prototypes from antiquity,[193] but he also owned at least[194] one modern book of designs for vases: this was probably *A New Book of Ornaments in the Present (Antique) Taste ...* by Matthias Darly, published in London in 1772.[195] In 1768 the Earl of Dartmouth lent Boulton a vase for use as a design source[196] and in 1770 Boulton had a copy made of a vase in the Earl of Shelburne's collection;[197] Boulton

was also interested in seeing ancient vases in the British Museum.[198] He bought vases[199] and was well aware that manufacturers such as Josiah Wedgwood;[200] and French craftsmen, were exploiting the widespread popularity of vases.[201]

Boulton collected this information when the production of ormolu-mounted vases was at its height and it was primarily of benefit for that purpose.[202] However, the form was used for silver by the partners: in 1772 a pair of goat's head vases was made; the material used for the bodies is not known but they were mounted with silver.[203] At about the same time the partners made a pair of tea-canisters, described as being in the '...form of vases'.[204] This tendency to adapt the vase for hollow-ware was widespread amongst Neo-classical silversmiths who used it for such items as cups and hot-water jugs.[205]

The popularity of the classical vase was partly responsible for the widespread use of tea-urns. The enormous increase in tea-drinking in England during the eighteenth century[206] led both to the introduction of the tea-kitchen (or tea-kettle as it was later described)[207] which was heated from below with a spirit lamp, and also the tea-urn, heated with a red-hot iron in its centre. The water was transferred to the teapot in the former by a spout and in the latter by a tap. The tea-kettle, introduced in the early eighteenth century, gave way to the tea-urn which was more easily adapted to the classical shape. Although the tea-urn was introduced in Denmark c.1730 and subsequently used in England and elsewhere, it was rare before the 1760s when Neo-classicism began to make its impact.[208] The association of this type with classical antiquity is suggested by the use of the terms tea-urn[209] or tea-vase[210] in Boulton and Fothergill's correspondence.

The partners' tea-urn of 1773-4 (Plate 46) reflects contemporary adaptations of ancient vases by architects. The partners' tea-urn was ultimately based upon the ancient amphora (Plate 47), a tall two-handled pot with a narrow neck which was variously used for carrying and storing liquids, or as a grave-marker, or for a prize.[211] However, ancient examples were generally more bulky[212] than Neo-classical architects' designs, such as those by Robert Adam (Plates 48 and 49), and the partners' tea-urn follows the contemporary trend. Eighteenth-century knowledge of ancient vases was largely confined to Greek ceramic examples of the fifth and fourth centuries B.C.[213] which

did not have pedestal bases;[214] however, the form did occur in some ancient vases which were published in the eighteenth century (Plate 50). Neo-classical architects normally used a pedestal base (Plates 48 and 49) to enhance the height and elegance of the overall shape; the partners' tea-urn adheres to this pattern. Whether the silhouette of the partners' tea-urn was based directly on architects' drawings or whether it reflected the work of other silversmiths who were influenced by architects, is not clear; although architects of Boulton's acquaintance had produced related designs by 1773,[215] similar tea-urns had been made by that date by other firms.[216] The pronounced handles on the partners' tea-urn which spring from a low point, loosely follow ancient Krater vases (Plate 50); these vases had a large bowl with a wide mouth and were used for mixing wine.[217] Similar vases inspired a design by James Stuart c1760 (Plate 51). The partners' tea-urn combines a broad band of reeding at the top with ribbing on the underside. These decorative forms can be found in classical Greek silver plate[218] and in the designs of Neo-classical architects such as Chambers[219] and Adam (Plate 48). The contrast on the partners' tea-urn between limited areas of pronounced decoration and plain intervening sections, was characteristic of much design by architects[220] (Plate 52) and work by silversmiths[221] (Plate 53) in this early phase of Neo-classicism.

We have already seen that some pieces of the partners' silver have similarities with (though not necessarily direct influences from) the designs of Robert Adam. Although, as we shall see, this architect did influence the partners' silver, the extent to which they worked from Adam's designs was less extensive than was originally envisaged. In 1765 Lord Shelburne provided Boulton with a letter of introduction to Adam when Boulton was keen to absorb the architect's style.[222] In 1770 and 1771 Boulton corresponded with Robert's brother James over the possibility of a joint venture whereby the Adams would regularly provide patterns[223] and in 1771 James Adam sent designs.[224] However, this was as far as the scheme went. This was in part, perhaps, because the Adams were afraid that the large-scale production of pieces to their designs would lead to plagiarism. Moreover, the scheme was discussed in the context of jointly running a showroom at the Adelphi (to be stocked with silver plate and ormolu)[225] which also came to nothing.[226]

Apart from their correspondence, Boulton was in touch with the Adams and their work in other ways. Following their grand tour to France, Italy and Dalmatia between 1754 and 1758, Robert Adam published in 1764 the *Ruins of the Palace of the Emperor Dioletian, at Spalatro, in Dalmatia....* This was the result of the brothers' archaeological work there[227] and Boulton purchased a copy within a year of its publication,[228] specifically for use at the Soho Manufactory.[229] Boulton also visited houses on which Robert Adam worked, such as Kedleston Hall, Derbyshire, and Shelburne House, London.[230] Boulton knew James Adam well: they may have seen each other as early as 1758,[231] but between 1765 and 1771 they met on a number of occasions either at the Soho Manufactory or in London.[232] A note by Boulton in 1775 suggests that he had recently made contact with one of the Adam brothers.[233]

These connections, together with the traditional reputation of Robert Adam as the dominant influence on English architecture and the applied arts in the 1760s and 1770s, have led to exaggerated claims for the extent to which Boulton and Fothergill directly used his designs. This was true of their ormolu:[234] only three Adam designs are known to have been used.[235] It has been thought that a large number of his designs were used by the partners for silver[236] but this can only be shown to have happened to a very limited extent.

Only with one order is the partners' silver known to have followed an Adam design precisely. In 1772 a set of eleven door-knobs and escutcheons were supplied to the Earl of Ely for Ely House, Dublin[237] (Plate 16). These were a slightly simplified version of a set made earlier by the partners in ormolu. The models were supplied by Adam[238] and the design occurs in *The Works in Architecture of Robert and James Adam, Esquires* (Plate 15).

A candlestick design by Robert Adam was adapted by Boulton and Fothergill. The undated design by Adam (Plate 54) was used by at least two London firms: John Carter in 1767, and Sabastian and James Crespell in 1769.[239] The design could therefore have been known to Boulton and Fothergill from a variety of sources and they produced a set of four similar candlesticks in 1779-80 (Plate 55). These differ from Adam's design in the use of straight rather than spiral fluting; the detailing is simpler and the partners used concave sides and canted corners for their bases rather than a circular plan.

There were close connections between Adam's designs for tureens and the partners' silver. In 1775 three Adam drawings for tureens were sent to Soho on behalf of the Earl of Findlater.[240] Although these cannot be identified, others by Adam are generally similar to the partners' silver. Adam's designs were influenced by two-handled drinking cups from ancient Greece which occurred in archaeological publications (e.g. Plate 56, second image from right). A design by Adam (Plate 57) follows that prototype both in the use of a pedestal base and high looped handles; another design (Plate 58) similarly emphasises the handles but retains the use of legs which were to be found on earlier eighteenth-century tureens.[241] These two types were followed by other eighteenth-century silversmiths[242] who may have been responsible for bringing them to the attention of the partners. The closeness of the partners' designs for tureens (Plate 44) to the work of Adam suggests that they followed his example, either directly or indirectly, even though they were also aware of an ancient prototype (Plate 56).[243] The partners' use of light classical detailing on these tureen designs also followed the development of Adam's style.

Adam developed a distinctive phase of Neo-classicism which began to emerge in his interior design c1763 and reached maturity in the mid-1770s (Plate 59).[244] The essence of that style is its light decorativeness: the applied Neo-classical motifs were delicate and thin, and units tended to a smallness of scale. Forms were often an abstraction of classical decorative motifs and proportions were increasingly attenuated; these characteristics derived from the observation of the Italian architect and polemicist Giovanni Battista Piranesi (with whom Adam was acquainted)[245] that the Romans, in their interiors and smaller buildings, had allowed themselves considerable freedom in their ornament and proportions. Adam's style also relied upon the effect of movement which led to a linear weaving of motifs and the extreme richness of his early work gave way to greater restraint.[246]

Much of Boulton and Fothergill's silver in the mid-1770s was consistent with this Adam style. However, the style then used by the partners was due less to the direct influence of Adam than to his indirect effect through the partners' use of designs by James Wyatt whose style in the 1770s was dominated by Adam's influence.[247] Boulton took full advantage of his close connection with Wyatt[248] and

the latter's extraordinary success from the early 1770s;[249] Boulton not only used Wyatt's designs more extensively than those of any other architect but did so to a degree which was greater than has hitherto been thought.[250]

In 1770 Boulton noted Wyatt's popularity as a designer[251] and at least from 1771 a number of his designs were used at Soho for silver. Lord Clermont ordered a coffee-pot designed by Wyatt in 1771[252] and the architect probably played a part in designing a racing-cup supplied to Lord Clermont in the same year: the cup was sent to the partners' London agent with instructions not to show it to anyone apart from Wyatt before delivery.[253] It was probably in connection with this cup[254] that the firm obtained prints of race-horses from London to model from.[255] In 1772 Wyatt supplied separate drawings and models of coffee-pots for both Sir Harbord Harbord[256] and Lord Scarsdale[257] as well as drawings of an épergne for Sir Robert Rich[258] (Plate 60). In 1775 Wyatt also designed a tea-urn for Rich[259] and produced a number of designs in the following year for Lady Morton including a coffee-pot, a teapot,[260] and an unspecified number of further drawings.[261] In 1776 Wyatt visited the Duke of Holstein-Gottorp on behalf of the partners to discuss a commission for a tureen.[262]

Generally it was Boulton who took the initiative in seeking Wyatt's help with silver designs; on a number of occasions this occurred when Boulton felt that designs from his own firm either were not, or might not, be acceptable to his customers. It was suggested to the Duke of Holstein-Gottorp that Wyatt's help might be obtained if Soho's drawings were not to his liking and the partners proudly emphasised their connection with the architect by pointing out that their London agent, John, was James's cousin.[263] Sir Walter Blount wanted candlesticks to a particular design; he was asked to consult '... the best designer in the Kingdom', though it is not clear that he did so.[264] Wyatt's drawings for Lady Morton were obtained by Boulton as a direct consequence of her dissatisfaction with those supplied from the Soho Manufactory.[265]

Wyatt's inefficiency caused difficulties. The partners expressed their impatience at the delay in receiving his drawings for Scarsdale's coffee-pot[266] and Rich's épergne.[267] In July 1772 Sir Harbord Harbord was angered by the delay in receiving his coffee-pot;

the partners put the blame on Wyatt who had not delivered the drawings.[268] The partners reminded Wyatt in August[269] but the drawings arrived at Soho only at the end of the following month.[270] This prompted the partners to remark to Harbord that if they had been responsible for the design the commission would have been completed much earlier; here, unusually, the customer was responsible for involving Wyatt.[271]

The partners also frequently produced in the mid-1770s what they called 'Wyatt candlesticks', which were introduced to the firm's range in 1774.[272] A design by Wyatt (Plate 61) is close to candlesticks by the partners (Plates 62 and 63). The same basic design was adapted at Soho for a pair of tapersticks of 1776-7 (Plate 64). Although these pieces have bases which are different from Wyatt's designs they are otherwise the same: a fluted trumpet-shape supports a thin inverted baluster with acanthus, a swag of drapery, and fluting at the top. The nozzles are enriched with laurel leaves. These candlesticks are lighter, more attenuated, and simpler, than the partners' earlier work.[273] The design was also adapted for a cruet-stand (Plate 65).

Other designs by Wyatt can be related to the work of Boulton and Fothergill. Wyatt's design for a tureen, which surmounts a stand (Plate 66) is very close to a tureen by the partners of 1776-7 (Plate 67). Although Wyatt's sketch for an épergne (Plate 68) differs in several details from Rich's (Plate 60) they have in common a large basin, some smaller basins, and similar curvilinear branches. A sketch for a candelabrum and stand by Wyatt (Plate 69) has harpies and branches which closely relate to Rich's épergne. Although Rich's épergne does not precisely relate to known sketches by Wyatt, the partners did closely follow a sketch supplied by him[274] though some modifications were required later.[275] Rich's épergne relates to further pieces by the partners. The harpy was used for a silver perfume-burner of 1778-9 (Plate 70) and the same model (though without the wings) was used on ormolu-mounted perfume-burners c.1777.[276] The harpy was also used by Wyatt in a design for a jug and stand (Plate 71); this design is close to a design in the firm's pattern book (Plate 72).

Wyatt's design for a jug is also related to a number of designs for jugs and ewers produced at Soho. Although the ewer occupied an

established place before the Neo-classical movement for domestic and ecclesiastical use or display,[277] it was associated in the minds of Boulton's contemporaries with antiquity. Early in the 1770s the partners made a few ormolu-mounted stone ewers as ornaments (rather than for use).[278] Boulton was aware of ewers in archaeological publications[279] and a jug by the partners of 1776-7 (Plate 27) shows similarities with ancient examples in the pronounced emphasis on the high handle (Plate 73) and the bulbous shape of the body (Plate 74). However, it is unlikely that the partners were here directly referring to archaeological publications but relied rather upon Wyatt's elegant interpretation of antiquity: his design (Plate 71) is closer to the partners' work (Plate 27) in the use of a higher pedestal, a more slender body, and a more fluid curve to the handle, than was used in the ancient examples.

Wyatt's design was the basis for a number of other designs which survive in the firm's pattern book (Plates 75, 76 and 77). These provide examples of what Boulton maintained was the firm's frequent practice: the use of conventional classical ornament selected and arranged in a variety of new ways.[280] The first pattern is plain, apart from the acanthus at both ends of the handle, and the beading running round the lid and down the handle. The second is richer: fluting, drapery swags, festoons of husks tied in bows over paterae, and acanthus, combine to lightly cover most of the surface. The third, more simply, combines acanthus at the end of the handle with a festoon of husks which loops down over the belly of the jug and holds a medallion.

The partners' sacramental flagon of 1774-5 (Plate 17), though not as a whole precisely related to any known design by Wyatt, shows certain similarities with his design for a jug (Plate 71) particularly in the elegant handle, the curved profile of the neck and spout, and the attenuated proportion. However, the partners may have taken their design from other sources since these qualities, as well as the vase-shaped body with its almost right-angled junction with the neck, and the high pedestal base, can be paralleled in the work of other contemporary English silversmiths (e.g. Plate 78). All of these designs have origins in ancient prototypes of which Boulton was aware but the smooth elegance and attenuation of the partners' flagon which contrasts with precedents in antiquity (Plate 50, second from

right)[281] suggests that Soho was here again referring to contemporary interpretations of antiquity rather than to the ancient prototype.

In other cases the partners' silver relates more closely to classical antiquity. Their salt-cellar of 1775-6 (Plate 79) is virtually identical, in its shape, to a drinking cup illustrated in *Le Antichità di Ercolano Esposte* (second from right, Plate 57), a copy of which Boulton owned.[282] Two other illustrations in the same publication (Plates 50 and 80) relate to a cup and cover of 1777-8 (Plate 81). The broad vase-body in the ancient example in Plate 80 is close to the partners' cup and cover; normally Neo-classical vases were narrower (e.g. Plate 48). The handles on the ancient vases in Plate 50 are similar in their flowing outline to those on the cup and cover.

The design of the cup and cover incorporates a number of other influences. The decoration is light; the motifs are small and tend to cover most of the surface. These characteristics are generally consistent with Wyatt's designs (Plate 71) and the general character of the firm's work in the mid-1770s (Plate 67). The classical ornaments were available from a number of sources. The festoon of husks on the body of the cup[283] and the guilloche band around the base,[284] occurred widely in archaeological publications in Boulton's possession as well as in the work of contemporary designers of Boulton's acquaintance.

The cup and cover was designed at the Soho Manufactory by putting together elements from a variety of sources. Although this commission is well documented[285] there is nothing to suggest that the design was taken, as a whole, from an external source. This example provided substance for Boulton's claim that his firm '...invented ...' designs in the Grecian taste.[286] However, although the processes of inventing, adapting, and combining classical ornaments in new ways were carried out at the Soho Manufactory, Boulton's firm was generally guided by interpretations of classical antiquity provided by contemporary architects. Although very occasionally other contemporary manufacturers did precisely copy ancient examples,[287] the emphasis on building up a substantial knowledge of the classical tradition, but inventing designs while still working within that tradition, was fundamentally characteristic of the Neo-classicists approach.[288]

Boulton was familiar with other designers but there is no evidence that their designs influenced the firm's silver. In 1775 the architect Robert Mylne supplied a design for a candlestick, which Boulton liked; however, since the design was only marginally different from one already in the firm's range, Boulton was unwilling to produce it. There is no indication of what Mylne's design was like. At the same time the two men corresponded about silver ornaments for a chimney-piece but whether they were designed by Mylne or whether they were ordered is not clear.[289] The architect James Paine received candlesticks for Sir Harry Bridgman in 1775[290] but it is not certain that these were of silver or that Paine designed them. Michelangelo Pergolesi published *Designs for Various Ornaments* ... between 1777 and 1801;[291] Boulton obtained one design for a tureen published in 1782, but there is nothing to show that this influenced the partners' silver.[292]

The style which dominated silver produced at the Soho Manufactory during the mid-1770s was well-judged. The emphasis on what Boulton called '... elegant simplicity ...'[293] conformed with the latest phase of the Neo-classical style. The use of light, thin detail and smooth surfaces contrasted strongly with the richness and weight which, under French influence, were popular earlier in 1770s. The firm's silver, like that of other English manufacturers, was now largely based on the influence of English Neo-classical architects and appealed to those with anti-Gallican sentiments.[294] Boulton's hostility towards the '... dirty richness ...' of French craftsmanship made it easier as he pointed out in 1776 for customers to clean their plate;[295] this attitude strongly contrasts with his views in the early 1770s.[296] The simpler designs of the mid-1770s facilitated production and helped to maintain the firm's commitment to modest prices.[297]

With the declining popularity of not only early French Neo-classicism but also the Rococo by the mid-1770s,[298] Boulton knew that the simple and elegant Neo-classical style which he preferred would cause little conflict between him and his customers; he was well aware that he was conforming to a style which was becoming fashionable.[299] He acquired a confidence in recommending the style to those who lagged behind the new trend; for example, he pressed upon customers the ribbon-bound reeded border, which was based on classical antiquity, in preference to the traditional gadroon border that he

dismissed as '... old fashioned'.[300] Judging by the number of pieces produced at Soho with the ribbon-bound reeded border (e.g. Plates 35 and 67) Boulton's view frequently prevailed. Although he was willing to work in other styles if customers required him to do so[301] his flexibility was seldom tested. It was rare for the firm to use other styles: the salt-cellars of 1779-80 (Plate 82) - which in their bowl-shape and gadrooned border follow an early eighteenth-century pattern (Plate 83) - were an exception.

Customers liked to order silver from pieces executed by the partners to gain a clear idea of what their own silver might be like; it was also felt that customers were more likely to buy if they saw samples rather than drawings.[302] In 1774 Thomas Brazier, of Wolverhampton, who approved of a waiter made for a relation by the partners, ordered two of the same pattern.[303] In 1775 Mr Whateley of Walsall ordered six tablespoons from a pattern on show at the Soho Manufactory's Toy Room.[304] But the extent to which customers ordered from examples of the firm's work was limited: the partners were not generally able to afford the production of patterns.[305]

Customers, particularly for expensive items like silver, generally wanted an opportunity to exert their influence on design;[306] however, this need was largely satisfied by providing them with a range of drawings to choose from. This had the advantage of keeping down production and design costs by making it more likely than would otherwise have been the case that customers would purchase pieces within the firm's range. Richard Conway of London received eight sketches of tea-urns in 1775;[307] there is nothing to suggest that he was dissatisfied with them and an urn was made for him shortly afterwards.[308] In 1776 Thomas Stiff, also of London, bought two pairs of salt-cellars[309] from drawings[310] and there were many other similar instances with other articles and customers.[311]

However, customers were not always so easily satisfied. When they asked for a pattern outside the firm's range the partners normally resisted if dies were involved, because of the delays and additional costs of making new ones;[312] however, they were more easily able to adopt this stance because they generally persuaded customers to buy patterns already in the range. The partners refused to make spoons to a pattern supplied by the London merchant John Porzelius in 1781 since they did not have an appropriate die;[313] however they

offered to make spoons from an existing die and apparently this was accepted since spoons were completed within a few weeks.[314] On at least two occasions Boulton successfully persuaded customers to buy candlesticks in his range even though they were not originally inclined to do so.[315] Only on one occasion is the firm known to have made dies for candlesticks to meet a customer's individual requirements; this occurred with Lady Morton, but it only did so after the firm had initially rejected her request[316] and the decision was made in the context of a very large order which the firm was anxious to retain.[317] Only on two other occasions did Boulton offer to make candlesticks to designs outside the firm's range; with one, an important customer wanted a special design;[318] and with the other there was probably a need to make them stylistically consistent with other pieces required by the customer;[319] there is, however, no evidence that the candlesticks were made for either customer. Generally, Boulton was able to maintain the principle of standardization when using dies because of the popularity of the patterns introduced by the firm[320] and because of the choice offered to customers through interchanging the parts of candlesticks.[321]

Traditional methods of manufacture were more flexible and these were largely used for the most important orders which were necessarily made by the most valuable clients.[322] Here, Boulton was more receptive to customers' individual requirements[323] and was aware that their influence could improve the firm's stock of designs.[324] Sometimes Boulton invited customers to submit their own ideas; this occurred in 1775 when The Very Reverend Mr Addenbroke of Sudbury, Staffordshire, ordered flagons[325] and when in the following year Elizabeth Montagu commissioned cassolettes.[326] These invitations were extended even though both customers were initially sent a range of drawings.

Whether these two customers provided designs is not clear, but when silver was produced outside the firm's range the designs were usually derived from one of three sources. We have already seen that a number of items were made to architects' drawings which were often specially prepared for particular customers.[327] Secondly, on occasions, Boulton copied items for customers; for example, in 1774 Sir Robert Rich bought eight dishes reproduced from two that he supplied as patterns.[328] There were a few other instances of the partners

copying tablewares[329] or parts of military uniforms,[330] provided by customers. Thirdly, customers sometimes required modifications to drawings received from Soho. In 1775 Sir Edward Littleton received a number of drawings for cutlery; he made slight alterations[331] and these were incorporated when the order was executed.[332] In the same year St Bartholomew's Church, Birmingham, required a set of communion plate (Plate 18) basically like the one supplied earlier to St Mary's Chapel, Birmingham (Plate 17). However, certain changes were required which were conveyed to Francis Eginton by the Church's agent who wanted the handle of the ewer to swell out close to the foot, the base of the chalice to match exactly the base of the ewer, and the body of the chalice to be deeper and conform more closely to the profile of the ewer.[333] Eginton clearly complied with the second request but, judging from a comparison between the surviving sets, he paid little attention to the others.

Rather more substantial modifications were required by Lord Hope after receiving two designs for épergnes.[334] His response, which was sketched by the partners' agent under Hope's direction[335] (Plate 84), required numerous changes: an oval (rather than a circular) plan which would correspond better with a long table; an oval glass basin rather than a silver vase at the centre; a smaller basin at the top of the dome; branches which were more adaptable to serve both as candle-holders and fruit-dishes. Moreover, he wanted the fruit dishes to be placed under the plinth when not placed on the branches, and asked for casters so that the épergne could be lifted by those, rather than the plinth, which he thought might cause damage. He also wanted two sets of glass dishes (presumably one set was to be a spare).[336] Despite these alterations, the partners completed the épergne basically as required.[337]

Agreeing designs with customers could be difficult and the most demanding was Lady Morton. An extensive set of drawings for her service of silver plate, together with a list of prices, were sent in December 1775 and February 1776.[338] She was dissatisfied with some designs[339] and the partners were forced to obtain more from Wyatt,[340] though not all of those were acceptable to her. By March 1776 the partners' London agent, John Wyatt, was describing Morton as '... tedious, whimsical and ill-natured' and requested further drawings from Soho since she raised many objections to earlier ones: some were

'... old fashioned', some were too rich, and some were not stylistically consistent with others.[341] Soho considered abandoning the commission[342] but at length sent further drawings.[343] Lady Morton's order was substantially completed in May 1777[344] though remaining items were not sent until nearly a year later.[345]

Fearing later disputes and subsequent alterations, the partners insisted that customers agreed on designs before work began on the silver.[346] On a few occasions customers expressed dissatisfaction with the design after the silver was complete even though the design had previously been agreed. Sir Harbord Harbord was particularly difficult. A coffee-pot,[347] made to an agreed design[348] was later returned for a new lamp and stand to be fitted.[349] A cheese-toaster, supplied early in 1775,[350] was returned about a year later with a long list of criticisms. Cheese-toasters were box-shaped and the cheese, bread or rolls, were heated by hot water between the inner and outer walls and toasted by a fire; the underside of the opened lid was used to reflect the heat onto the food.[351] Sir Harbord thought the lid was not high enough to take rolls but the partners refused to alter it; however, they were prepared to change some ornament, add casters and alter the position of the hole for receiving hot water.[352] Sir Robert Rich's épergne (Plate 60) was similarly difficult; it was initially faithfully executed from a design by Wyatt,[353] but Rich then wanted the oval frame lengthened by four inches; this required a completely new frame and the modification of other parts to accommodate this change. He also wanted lighter festoons and the central bowl raised by two inches.[354] These changes were carried out by Francis Eginton[355] who visited Rich and Wyatt to discuss the design.[356]

The troublesome nature of some commissions was, as we shall see in the next chapter, a factor which led to the decision to reduce silversmithing at Soho after the mid-1770s; however, the problem was largely confined to important orders and was reduced by Boulton's determination to satisfy customers by initially providing them with acceptable designs and by quickly following changes in fashions.[357] His use of Neo-classicism in the late 1760s was amongst the earliest uses by English silversmiths;[358] he followed French influences at a time when they were gaining popularity in England[359] and he increasingly consulted those leading architects[360] and members of

society who were primarily responsible for changes in fashion.[361] Boulton also participated in the growing interest in classical antiquity through the purchase of numerous archaeological publications.[362]

Even so, Boulton was more dependent upon the elegant contemporary interpretations of classicism than upon the direct influence of antiquity; moreover, only on a limited number of occasions did the firm copy the designs of others. The copying of other firm's work was mainly characteristic of the earliest years of silver production.[363] Although later the partners did copy[364] (and jealously guard)[365] architects' designs, too much emphasis has sometimes been placed upon this approach at Soho;[366] more frequently the firm adapted those designs or worked generally within stylistic frameworks led by them.[367] Although the firm's designs were sometimes modified by the requirements of individual customers[368] there is no instance of the partners making silver to a design basically conceived by a member of the public.[369] Only once did Boulton comment upon the relationship between an ormolu design and an archaeological publication[370] and he is not known to have made a similar remark in connection with silver. Even though there were a few instances of close similarities between the shapes of the partners' silver and illustrations in archaeological publications[371] unconvincing claims have sometimes been made for the closeness of that relationship.[372] While some elements in the design of the firm's silver could either have been taken directly from publications on antiquity or from contemporary designs based upon them,[373] where influences can be demonstrated it is usually to the latter that they can be traced.[374]

Boulton and Francis Eginton were primarily responsible for the design of Soho's silver. Boulton kept in touch with authorities on this matter and gathered sources.[375] Since it was normally necessary to adapt and develop these sources rather than merely copy them,[376] a substantial amount of design was carried out at Soho; that responsibility lay mainly with Eginton whose rôle as a designer at the Manufactory has been underestimated.[377]

NOTES

CHAPTER IV

THE DESIGN OF SILVER

1 McKendrick, 'The Consumer Revolution of Eighteenth-century England', pp. 9-11.
2 See Appendix IV.
3 McKendrick, 'The Commercialization of Fashion', pp. 71-4.
4 ibid., p. 21.
5 See p. 24.
6 See p. 20 and p. 33.
7 Box E1, item 30, J. H. Ebbinghaus to M. B., 15 December 1767.
8 Box A, item 4, James Adam to M. B., 14 August 1770. (Adam was reporting earlier remarks by Shelburne.)
9 See pp. 24-5.
10 Goodison, *Ormolu*, p. 38.
11 See pp. 168-9.
12 See p. 113 and p. 173
13 Goodison, *Ormolu*, p. 111.
14 See Appendix IIIB and Appendix IIIC.
15 See pp. 24-5.
16 See p. 25.
17 See p. 183.
18 Goodison, *Ormolu*, p. 84.
19 ibid., pp. 59-60.
20 Letter Book C, p. 7, M. B. to J. Wendler [July 1767].
21 See pp. 58-9.
22 M. B. Diary, 1772, p. 7.
23 Box V, item 9, Sir Rodney Valltravers to B. & F., 30 September 1772.
24 In 1767 M. B. refused to purchase paintings and sculpture from an agent in Italy, J. Wendler, on the grounds that he could not afford art of the highest quality (Letter Book C, p. 8, M. B. to J. Wendler [July 1767]).
25 See Appendix V - entry on Eginton, Francis.
26 In 1758 John Taylor (see p. 15) and Samuel Garbett (see p. 39) stated that there were 'two or three' drawing schools in Birmingham and '30 or 40 Frenchmen or Germans employed in drawing and designing' (Petition to the House of Commons praying relief from the necessity to take out licences for dealing in silver, *Journal of the House of Commons*, XXVIII (1759), p. 496 quoted in Dickinson, *Boulton* p. 63).
27 Letter Book D, p. 29, M. B. to James Adam, 1 October 1770.
28 See Appendix V - entry on Eginton, John.
29 e.g. Sir Edward Littleton was sent drawings for silver knives (Letter Book G, p. 273, B. & F. to Sir Edward Littleton, 28 February 1775). Charles Marsham was sent drawings for a service of silver plate in 1776 (Letter Book G, pp. 713-4, B. & F. to Charles Marsham, 10 October 1776).
30 As was the case for both Littleton's and Marsham's drawings (mentioned in note 29 above) there was normally no mention of charging a customer for a drawing. However, in 1777 Francis Butcher was refused drawings for a silver tea-table unless he was prepared to pay three guineas for them; it seems likely

that the partners did not want the order (perhaps because they were busy) and were putting an obstacle in Butcher's way (Letter Book G, pp.864-5 [B. & F.] to Francis Butcher, 13 March 1777). Moreover, this example occurred when B. & F. were thinking about reducing silversmithing (see pp.216-7).

31 B.R.L., B.W.C., Pattern Book 1, 1762-90, New Number 169. The designs were bought by Elkington & Co., silversmiths and electro-platers, in 1850, and pasted into the volume (W. A. Seaby and R. J. Hetherington, 'The Matthew Boulton Pattern Books: Part 1', *Apollo*, Vol. LI, No.300 (February 1950), pp.48-50 (p.48)).

32 Very little evidence survives on this point. Nicholas Goodison (Goodison, *Ormolu*, pp.60-1) stated that the drawings in the Pattern Book (see note 31 above) were not working drawings but examples of the finished drawings sent to customers. References to a distinction between working drawings and finished drawings do not occur in the M.B.P. and one letter suggests that there was none: a customer for Sheffield plate candlesticks received an apology for the scruffy drawings being sent to him; this was attributed to the drawings being passed through a variety of hands and to '... workmen not troubling to keep drawings in a decent condition'. (Letter Book G, p.134, A. J. C. to Alexander Johnston & Son, 20 September 1774). Even drawings sent to customers were occasionally stated to have been no more than rough impressions (Letter Book E, pp.319-20, M. B. to Mussin Pushkin [December 1771]).

33 *Letters of Josiah Wedgwood*, ed. Finer and Savage, pp.68-9, Josiah Wedgwood to Thomas Bentley, 21 November 1768.

34 Letter Book E, p.7, B. & F. to Ince and Mayhew, 9 January 1771.

35 e.g. Letter Book G, p.559, B. & F. to The Prince of Holstein (i.e. Duke of Holstein-Gottorp, see Chapter 11, note 458), 28 February 1776; Letter Book E, pp.319-20, M. B. to Mussin Pushkin [December 1771]).

36 See Appendix V - entry on Eginton, Francis.

37 See Appendix V - entry on Bingley, William.

38 George Wickes established his silversmithing firm in London in 1722 (Barr, *George Wickes*, p.21). Barr suggested that later designing was probably carried out for Wickes by Samuel Netherton who studied under a drawing master, and John Parker (ibid., p.87). Netherton was apprenticed to Wickes in 1737 (ibid., p.41) and they became partners from 1750 until the two men retired in 1760; Parker became their apprentice in 1751 and in 1760 took over the firm in partnership with Edward Wakelin (ibid., p.91).

39 R. Campbell, *The London Tradesman* (London, 1747) quoted in Barr, *George Wickes*, p.47.

40 Letter Book E, p.159, J. S. to William Matthews, 31 July 1771.

41 Rococo, the modern term, was first used by the French Neo-classical painter Maurice Quai in 1796-7 as a dismissive adjective for the style. Earlier a number of other labels were used in France: 'the modern taste' (1713); 'the taste of the century' (1738) and 'the picturesque genre'. From c.1734 the word 'rocaille' (originally meaning rock-work and shellwork for the incrustation of grottos and fountains) was gradually given a broader meaning to describe the style. The word 'Rococo' was probably derived from 'rocaille' (Fiske

Kimball, *The Creation of the Rococo Decorative Style* (1943, reprint 1980), pp. 3-4, (hereafter cited as Kimball, *Rococo*).

42 ibid., pp. 110-1.

43 ibid., pp. 224-5.

44 ibid., pp. 154-5. Meissonier produced *Chandeliers de sculpture en argent inventé par J. Meissonier, architecte, en 1728*, which were engraved as Figures 10 to 12 of *Oeuvre de Juste Aurelle Meissonier, peintre, sculpteur, architecte et dèssinateur de la Chambre et Cabinet du Roy. Première partie executée sous la conduite de l'auteur à Paris chez Huquier*, n. d.

45 Fleming etc., *Dictionary*, p. 68.

46 Kimball, *Rococo*, p. 227.

47 Grimwade, *Rococo Silver*, p. 4.

48 Joseph Burke, *English Art 1714-1800*, (1976), p. 109 (hereafter cited as Burke, *English Art*).

49 ibid., p. 141.

50 Fastnedge, *Furniture Styles*, p. 135.

51 Burke, *English Art*, pp. 154-5.

52 Fastnedge, *Furniture Styles*, pp. 135-6 and Grimwade, *Rococo Silver*, p. 4.

53 Summerson, *Architecture in Britain*, pp. 317-8. An exception was Isaac Ware's Chesterfield House, Mayfair, designed c.1745 which exhibits a restrained Rococo (Burke, *English Art*, p. 125).

54 Burke, *English Art*, p. 132.

55 Summerson, *Architecture in Britain*, pp. 401-3.

56 e.g. Furniture (Fastnedge, *Furniture Styles*, pp. 132-54) and porcelain (George Savage, *Porcelain Through the Ages*, second edition (1963, reprint 1970) pp. 214-5, hereafter cited as Savage, *Porcelain*).

57 During the period 1685-1710, 120 French goldsmiths are known to have worked in London (Joan Evans, 'Huguenot Goldsmiths in England and Ireland' *Proceedings of the Huguenot Society*, Vol. XV, No. 4, cited in Burke, *English Art*, p. 149) and this tradition persisted (see text).

58 Grimwade, *Rococo Silver*, pp. 5-7.

59 e.g. George Wickes during the 1740s (Barr, *George Wickes*, pp. 86-7).

60 e.g. Furniture (Fastnedge, *Furniture Styles*, p. 152).

61 Grimwade, *Rococo Silver*, p. 7.

62 See pp. 166-7.

63 Boulton M. (Miss Anne Robinson. Mrs Boulton), item 27, M. B. to Mrs Boulton, 24 November 1765.

64 M. B. Diary, 1768.

65 *Letters of Josiah Wedgwood*, eds. Finer and Savage, pp. 68-9, Josiah Wedgwood to Thomas Bentley, 21 November 1768. Wedgwood presumably referred to Thomas Harrache, jeweller, goldsmith, and 'toyman' who between 1751 and 1773 had premises in Pall Mall (Heal, *The London Goldsmiths*, p. 169).

66 Letter Book E, p. 70, B. & F. to William Matthews, 16 March 1771.

67 Goodison, *Ormolu*, p. 73 and p. 187.

68 See Appendix V - entry on Dumée, note 2.

69 See pp. 110-3.

70 See Appendix V - entries on Duval, John and Dumée.

71 By 1771 B. & F. had not made any Gothic candlesticks (Letter Book E, p. 64, B. & F. to William Bent, 7 March 1771).

72 By the end of the 1760s the Rococo was no longer popular in silver (Grimwade, *Rococo Silver*, p.8) or in furniture (Fastnedge, *Furniture Styles*, p.181) though the style remained popular in porcelain (Savage, *Porcelain*, p.215). Chinoiserie was used by English silversmiths (e.g. tea-caddy by Thomas Freeman and James Marshall, 1765, Grimwade, *Rococo Silver*, Plate 67c). Gothic was occasionally used by English silversmiths in the mid-eighteenth century, e.g. Lord Coventry ordered a Gothic inkstand from Wilkes and Netherton in 1760 (Barr, *George Wickes*, p.130). The fashions for Gothic and Chinoiserie had largely passed after the 1760s (Burke, *English Art*, pp.132-42).

73 Letter Book G, p.514, [M. B.] to the Earl of Findlater, 20 January 1776.

74 e.g. M. B. was irritated by French craftsmen who bought cheap vases in London, ornamented them, and sold them to the English (Eliza Meteyard, *The Life of Josiah Wedgwood*, 2 vols. (1865-6), Vol.II, pp.77-8, Josiah Wedgwood to Thomas Bentley, 15 March 1768, hereafter cited as Meteyard, *Wedgwood*). M. B. advised his son '... Germany is the place to make a Man & Paris the place to make a Man of Fashion (i.e. a Gambler & a Rake)'. (Boulton, M. R. to Boulton, M. 1782-1793 (and Boulton, M. to M. R. B.), item 24, M. B. to Matthew Robinson Boulton [M. B.'s son], 8 June 1787.

75 Letter Book G, p.740, M. B. to Mrs Montagu, 12 November 1776.

76 Rudé, *Hanoverian London*, p.69.

77 Montagu, Mrs, item 1, Elizabeth Montagu to M. B., 31 October 1771.

78 Letter Book G, p.514 [M. B.] to the Earl of Findlater, 20 January 1776.

79 Carl Hernmarck, *The Art of the European Silversmith 1430-1830*, 2 vols (1977), Vol.1, p.150 (hereafter cited as Hernmarck, *European Silversmith*).

80 ibid., Vol.1, p.210.

81 ibid., Vol.1, pp.246-50.

82 ibid., Vol.1, p.160 and pp.210-2. The ribbon-bound reeded border used on the B. & F. cutlery was ultimately derived from antiquity (Letter Book G, p.437, B. & F. to N. Clements, 11 October 1775).

83 The term Neo-classicism is not known to have been used before the late 1870s. Edward Dowden wrote that the imagination of men during the life of the English poet, Edmund Spencer (1552-99) was affected by 'the neo-classical mythology of the Renaissance' (Edward Dowden, 'Middlemarch and Daniel Deronda', *Contemporary Review*, Vol.XXIX (February 1877), pp.348-69 (p.360). The term was subsequently used in art criticism, e.g. Anon. 'The Royal Academy', *The Times* (6 May 1893), p.17, columns 1-2 (column 2). During the Neo-classical period a variety of terms were used; these were sometimes general e.g. the 'true style', or they more precisely indicated the particular period of antiquity which was being revived e.g. the 'Greek taste' or the 'Etruscan taste' (Hugh Honour, *Neo-classicism* (1968), pp.21-9, hereafter cited as Honour, *Neo-classicism*).

84 ibid., p.13.

85 Svend Eriksen, *Early Neo-classicism in France ...*, Faber Monographs on Furniture, translated and edited by Peter Thornton (1974), p. 37 (hereafter cited as Eriksen, *Neo-classicism*).

86 ibid., p. 25.

87 Carlo Pietrangeli, 'Archaeological Excavations in Italy 1750-1850' in Council of Europe, *The Age of Neo-classicism*, exhibition catalogue (1972), pp. XLVI-LII (pp. XLVI-XLVIII). Hereafter cited as Pietrangeli, 'Archaeological Excavations'.

88 Nikolaus Pevsner and S. Lang 'The Doric Revival', in Nikolaus Pevsner, *Studies in Art, Architecture and Design, Vol. 1, From Mannerism to Romanticism* (1968), pp. 197-204. Article first published in *The Architectural Review*, Vol. CIV (1948) and hereafter cited as Pevsner and Lang, 'The Doric Revival').

89 L. D. Ettlinger, 'Wincklemann', in Council of Europe, *The Age of Neo-classicism*, exhibition catalogue (1972), pp. XXX-XXXIV.

90 John Wilton-Ely, *Piranesi*, Arts Council exhibition catalogue (1978), pp. 68-9 (hereafter cited as Wilton-Ely, *Piranesi*).

91 Early Accounts, 1751-1779, 17 December 1764.

92 That M. B. bought all fifteen volumes is confirmed by p. 85 of the Catalogue of the Library of Matthew Boulton and his Descendants at Tew Park, Oxfordshire, on loan to Christie, Manson and Woods Ltd, when a part of the library was auctioned there on 12 December 1986. In view of this there is no reason to suppose that M. B. purchased the 5 volumes (plus 5 supplementary volumes) published by David Humphreys as an English translation in London 1721-5 (*British Library General Catalogue of Printed Books to 1975* (London etc., 1982), Vol. 225, p. 261). This possibility was raised in Goodison, *Ormolu*, p. 183, note 74.

93 Box W2, item 36, P. J. Wendler (M. B.'s agent, writing from Venice) to M. B., 4 July 1767.

94 Österreichisches Staatsarchiv, Haus-, Hof-und Staatsarchiv, Wien, Kabinettsarchiv, Nachlaß Zinzendorf, Tagebücher des Grafen Karl von Zinzendorf und Pottendorf, Vol. 13 (1768), p. 127, 6 September 1768. (Information kindly supplied by Dr Brettner-Messler Horst.)

95 In 1776 Wendler (see note 93 above) was not sure when publication would be complete (Box W2, item 58, P. J. Wendler to M. B., 31 July 1776).

96 Pierre François Hughes D'Hancarville, *Collection of Etruscan, Greek and Roman Antiquities from the Cabinet of the Honourable William Hamilton...*, 4 vols (1766-7) Vol. 1, p. XVIII (hereafter cited as D'Hancarville, *Collection of Etruscan, Greek and Roman Antiquities*).

97 Letter Book C, p. 7, M. B. to P. J. Wendler, July 1767.

98 Pietrangeli, 'Archaeological Excavations', pp. XLVI-XLVIII.

99 The vases were found in Etruscan tombs but had Greek inscriptions (R. M. Cook, *Greek Painted Pottery*, second edition (1972), pp. 290-1, hereafter cited as Cook, *Greek Painted Pottery*). M. B.'s agent, Wendler, referred to the vases as Etruscan (Box W2, item 36, P. J. Wendler to M. B., 4 July 1767).

100 Wendler referred to '... the prints of all the curiosities and antiquities of Florence'. (Box W2, item 35, P. J. Wendler to M. B., 14 April 1767.) This was probably a reference to Antonio Francesco Gori, *Museum Florentinum...*, 12 vols (1731-66) hereafter cited as Gori, *Museum Florentinum*

101 Letter Book E, p.203, B. & F. to Peter Elmsley (a London bookseller), 28 September 1771. The 'remaining 14 numbers' were bought in 1802 (Walker Z. Jnr, item 49, Z. W. to M. B., 24 November 1802). This reference to '14 numbers' is inexplicable since only 12 volumes were produced (see text).

102 Letter Book E, p.227, M. B. to Peter Elmsley, 19 October 1771.

103 Letter Book E, p.227, M. B. to Peter Elmsley, 19 October 1771. Christie, Manson and Woods Ltd, Catalogue of the Library of Matthew Boulton and his Descendants at Tew Park, Oxfordshire, p.84 shows that the remaining four volumes were obtained by the family but this may have been after the B. & F. partnership.

104 Whitehurst, John, item 6, John Whitehurst to M. B., 12 April 1771.

105 B.R.L., B.W.C., Portions of a Letter Book, 1773, p.150, A. J. C. to William Matthews, 9 June 1773. M. B.'s copy, with his printed book-label, passed through the hands of B. Weinreb Ltd, London in 1981 (letter from Ben Weinreb to Brian Baumfield, City Librarian, Central Library, Birmingham, 29 November 1981).

106 M. B. Diary, 1767, refers to Antoine Desgodetz, *Les Edifices Antiques de Rome* (1682), but it is not clear that M. B. bought the book. Other publications may have been of an archaeological kind or modern designs for vases. In 1768 M. B. subscribed for an unspecified book of vases (Early Accounts, 1751-1779, 1768). M. B. also bought a book on vases in 1770 (M. B. Diary 1770, p.16). Christie, Manson and Woods Ltd, Catalogue of the Library of Matthew Boulton and his Descendants at Tew Park, Oxfordshire, lists many further publications: e.g. p.84 refers to Giovanni Battista Piranesi's *Della Magnificenza ed Architettura de' Romani* (1761)). While many were probably bought by M. B. during the B. & F. partnership, some were bought by him at a later date (see Chapter IV, note 101) and others may have been purchased by his descendants (see Chapter IV, note 178).

107 See p.169 and p.173.

108 There were, however, some exceptions: e.g. John Vardy, *Some Designs by Mr Inigo Jones and Mr William Kent* (London, 1744) which contained some designs by Kent for silver plate (Glanville, *Silver*, p.242); in 1745 George Wickes made a centrepiece and a mug which were both based on Kent's designs (Grimwade, *Rococo Silver*, p.4).

109 See p.161.

110 See pp.64-5.

111 James Adam complained that his own and his brother's designs for a variety of objects were widely pirated (Box A, item 5, James Adam to M. B., 5 November 1770).

112 Summerson, *Architecture in Britain*, pp.411-3.

113 Pevsner and Lang, 'The Doric Revival', p.203.

114 Nicholas Goodison, 'Mr Stuart's Tripod', *Burlington Magazine*, Vol.CXIV, No.835 (October 1972), pp.695-704 (pp.696-703), hereafter cited as Goodison, 'Mr Stuart's Tripod'.

115 Hernmarck, *European Silversmith*, Vol.1, pp.261-2.

116 Grimwade, *Rococo Silver*, p.55.

117 Hernmarck, *European Silversmith*, Vol.1, p.266.

118 Letter Book G, pp.633-4, B. & F. to William Matthews, 10 June 1776.

119 Hernmarck, *European Silversmith*, Vol.1, p.266.

120 Box J, item 93, note of order for Nathaniel Jefferys, 31 December 1765.
121 It has been thought that a pair of 1769-70 at the B.A.O. are in silver (Maurice H. Ridgway, *Chester Silver 1727-1837* (1985), p.62); in fact this pair is in Sheffield plate (information kindly supplied by B.A.O. librarian, Phyllis Benedikz).
122 Letter Book G, p.402, B. & F. to Sir Robert Murray Keith, 17 August 1775.
123 Eriksen, *Neo-classicism*, pp.30-1.
124 *Catalogue historique du cabinet de peinture et sculpture françoise de M. De Lalive* (Paris, 1764), p.110, cited in Eriksen, *Neo-classicism*, p.196.
125 Honour, *Neo-classicism*, pp.26-7.
126 Eriksen, *Neo-classicism*, p.46 and pp.363-4.
127 See p.22.
128 Eriksen, *Neo-classicism*, p.107 and pp.363-5.
129 Letter Book D, p.4, M. B. to Josiah Wedgwood, 28 December 1768.
130 Goodison, *Ormolu*, p.60 and Fothergill etc., item 64, J. F. to M. B., 1 September 1770.
131 Box P2, item 136, Thomas Pownall to M. B., 8 September 1769.
132 M. B. Diary, 1769, p.7.
133 Box F1, item 191, J. B. Ford to M. B. 18 July 1788.
134 Eriksen, *Neo-classicism*, p.315.
135 ibid., p.353.
136 ibid., p.134.
137 Goodison, *Ormolu*, p.271.
138 Box C1, item 194, Lord Cathcart to B. & F., 21 February 1772.
139 Rowe, *Adam Silver*, p.59. Auguste adopted the Neo-Classical style at least as early as 1761 (Eriksen, *Neo-classicism*, p.365).
140 Letter Book G, p.514, M. B. to the Earl of Findlater, 20 January 1776.
141 Letter Book D, p.14, M. B. to Solomon Hyman, 23 January 1769.
142 See pp.78-9.
143 The pair does not have the makers' marks, but the attribution is based partly on the similarity with other pieces by the partners (see Plate 11) and their frequent use of this pattern (see text). The candlesticks have the Chester mark used by B. & F. at this date (see p.27) and they are unlikely to have been made at Chester since silversmiths there seldom produced candlesticks at this time. (Information kindly supplied by Canon Maurice H. Ridgway.)
144 Letter Book E, p.89 [B. & F.] to William Matthews, 22 April 1771.
145 Letter Book E, p.314, B. & F. to Parker and Wakelin, 14 December 1771.
146 The present whereabouts of this candlestick is unknown, but the photograph, taken early in the twentieth century, is in the Department of Prints, Drawings and Photographs, VAM. (Information kindly supplied by Michael Snodin.)
147 Gouthière (1732-1813 or 1814) worked on the Quai Pelletier (now the Quai de Gesvres) in Paris from 1758. (Eriksen, *Neo-classicism*, pp.187-8). Gouthière's candlestick has an inscription 'Quai Peltier' which, despite the mis-spelling, identifies the candlestick as coming from his workshop.
148 Eriksen, *Neo-classicism*, pp.323-4.
149 Rowe, *Adam Silver*, pp.71-2.

150 e.g. In 1771 Sir Alexander Gilmour bought two pairs (Letter Book E, p.218, B. & F. to Sir Alexander Gilmour, 12 October 1771) and Mr Udney bought two pairs (Letter Book E, p.277, B. & F. to Parker and Wakelin, 16 November 1771). I am not aware of the pattern being used by B. & F. for silver candlesticks after the pair dated 1774-5 (Plate 11).

151 Letter Book G, p.514 [M. B.] to the Earl of Findlater, 20 January 1776.

152 Letter Book E, p.2, M. B. to the Earl of Shelburne, 7 January 1771.

153 A note scribbled on the back of a letter confirms that Shelburne bought 'Lyon' candlesticks (Box R1, item 286, J. Richardson to M. B., 27 March 1771).

154 Goodison, *Ormolu*, p.48.

155 ibid., p.150.

156 The pattern was used by Benjamin Laver in 1787 with the 'Lyon' candlestick pattern (Plate 9), and by B. & F. for two ormolu 'Lyon' candlesticks, 1772, at the National Museums & Galleries on Merseyside, Liverpool Museum, Accession Number 1980.684.

157 Shirley Bury, 'Assay Silver at Birmingham - II', *Country Life*, Vol.143 (20 June 1968), pp.1699-1702 (p.1700). (Hereafter cited as Bury, 'Assay Silver at Birmingham - II'.)

158 Goodison, *Ormolu*, p.48.

159 See pp.174-9.

160 Letter Book G, p.740, M. B. to Mrs Montagu, 12 November 1776.

161 John Harris, *Sir William Chambers* ..., Studies in Architecture, Vol.9 (1970), pp.28-30 (hereafter cited as Harris, *Chambers*).

162 ibid., pp.6-13.

163 Box Boulton M. (Miss Anne Robinson. Mrs Boulton), item 156, M. B. to Mrs Boulton [6 March 1770].

164 Goodison, *Ormolu*, p.51.

165 ibid., pp.113-4.

166 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp.62-3, A. J. C. to William Chambers, 23 March 1773.

167 Goodison, *Ormolu*, p.53.

168 ibid., pp.157-8.

169 ibid., p.165.

170 Rowe, *Adam Silver*, p.60.

171 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp.154-5, B. & F. to Mr Udney, 12 June 1773.

172 Fothergill etc., item 18, M. B. to Soho [1770]. If M. B. is taken literally he had the following publications by Chambers: *A Treatise on Civil Architecture*.. (1759), hereafter cited as Chambers, *Treatise; Designs of Chinese Buildings, Furniture, Dresses, Machines and Utensils by the Best Hands, From the Originals drawn in China by Mr Chambers*... (London, 1757); and *Plans, Elevations, Sections, and Perspective Views of The Gardens and Buildings at Kew*... (London 1763). These are all of Chambers' publications before 1770 (Harris, *Chambers*, p.257).

173 A figure of Urania, purchased in 1773, which may have been for a time-piece, two versions of which were included in the Christie and Ansell's sale of 1778 (Goodison, *Ormolu*, p.58).

174 Flaxman supplied in 1770 a group of three models (described nevertheless as a 'group of Hercules and Atlas') used for making the ormolu figures supporting the globe in the

partners' 'Geographical' clock, completed in 1772. These figures were copies of three of the four figures on a silver-gilt crucifix by Antonio Gentile de Faenza c1582 which may in turn have been based on earlier fifteenth-century figures by Michelangelo (ibid., p.109). A triton model, used by the partners for a candlestick in bronze in 1771, may have been modelled by Flaxman (ibid., p.102) from what was probably a seventeenth-century Roman bronze, an example of which is in the Art Institute, Chicago (Timothy Clifford, 'Ormolu by Boulton', *Burlington Magazine*, Vol.CXVI, No.861 (December 1974), pp.763-7 (p.764), hereafter cited as Clifford, 'Ormolu by Boulton').

175 Box F1, item 155, invoice M. B. to John Flaxman, 16 November 1770.

176 Rams' heads and lions' masks were used on B. & F.'s ormolu (Goodison, *Ormolu*, p.58).

177 Summerson, *Architecture in Britain*, pp.411-3.

178 Soho House, Garden, List of Prices, Estimates, Calculations, Returns, Reports, Inventories, *Important Sale at Soho Mansion, Soho Park, Handsworth near Birmingham, by George Shread... 3rd & 4th July 1860*, p.17, lot 449. This reference to Stuart and Revett's *'Antiquities of Athens'* may refer to any or all of the few volumes published in 1762, 1787, 1794 and 1816. This reference provides no evidence about the date or dates of purchase by M. B. or his descendants.

179 Pevsner and Lang 'The Doric Revival', p.203.

180 Stuart provided designs for a tea-kitchen (see p.171) on a tripod-stand and the border for a large tray (Box S3, item 274, James Stuart to M. B., 26 December 1769). Whether these were for silver or whether they were executed is not clear. Stuart designed an 'ornament' in an unspecified material for Mrs Montagu in 1779 which was made (Letter Book H, p.843 [B. & F.] to Mrs Montagu, 23 January 1779). In 1775 the partners hoped to obtain a design from Stuart for an épergne (Letter Book G, p.272, B. & F. to Philip Stevens, 27 February 1775); this could have been for silver (several were made at Soho about this time, see Appendix IIIC) but there is no evidence that this commission was executed.

181 Letter Book E, pp.212-3, B. & F. to James Stuart, 5 October 1771. This was almost certainly designed by Stuart: he secured the commission for B. & F. (Letter Book E, p.161, B. & F. to James Stuart [1 August 1771]) and he kept in touch with the progress and cost of the order (Letter Book E, pp.212-3, B. & F. to James Stuart, 5 October 1771).

182 Fothergill etc., item 247, J. F. to J. H., 1 April 1781.

183 Wedgwood etc., item 8, Josiah Wedgwood to M. B., 19 February 1771.

184 Fothergill etc., item 247, J. F. to J. H., 1 April 1781.

185 Letter Book I, pp.906-7 [B. & F.] to Philip Stevens, 27 December 1781.

186 e.g. A sketch for a tripod occurs in Chambers' 'Franco-Italian' sketch-book (Goodison, *Ormolu*, Plate 69). This sketch-book mainly contains work by Chambers between 1749 and 1755 (Harris, *Chambers*, p.191). A perfume-burner with an ormolu tripod-base was designed by the French architect, François-Joseph Belanger and executed by Pierre Gouthière, c.1772-5 (Eriksen, *Neo-classicism*, p.363).

187 A design for a tripod perfume-burner attributed to Stuart was probably used for an ormolu perfume-burner with candle-

branches at Kedleston Hall, Derbyshire; this was possibly made by Diederich Nicolaus Anderson c.1760. The design is the same as that used by B. & F. for four ormolu tripod perfume-burners made in 1777 for the Earl Gower (Goodison, 'Mr. Stuart's Tripod', pp. 695-704).

188 ibid., p. 699. Citing James Stuart and Nicholas and Revett's *The Antiquities of Athens*, Vol. 1, (1762), Chapter IV.

189 Goodison, 'Mr. Stuart's Tripod', pp. 700-1. In the Christie and Ansell's sale of 1771 the partners sold four ormolu tripods for burning incense; each tripod had three candle-branches. These were described as '... after a design of Mr Stuart's'. (See also Chapter IV, note 187.)

190 In 1775 Joseph Green was given details of an épergne with a tripod base but there is no evidence that this was made (Letter Book G, p. 233 [B. & F.] to Joseph Green, 21 January 1775). In 1772 Lord Kerry corresponded over a tea-kitchen (see p. 171) with a tripod base in ormolu (Letter Book E, p. 449, A. J. C. to Lord Kerry, 14 May 1772). Kerry later thought of having it made in silver, but there is no evidence that the tea-kitchen was made in either metal (Fothergill etc., item 93, J. F. to M. B., 13 May 1772).

191 Goodison, *Ormolu*, p. 24.

192 B.R.L., B.W.C., Pattern Book I, 1762-1790, New Number 169, p. 83 and p. 87. The former is close to a design by James Wyatt (see Plates 72 and 73 and pp. 176-7).

193 e.g. Accademia Ercolense, *Le Antichità di Ercolano Esposte*, 9 vols (1757-92), Vol. II (1760), Plate XIX and Vol. III (1762), Plate XIV (hereafter cited as *Antichità di Ercolano*).

194 See Chapter IV, note 106.

195 M. B. asked his London agent to go to '... Mr. Darby [sic] ... and buy his last Publication of Vases' (Letter Book E, p. 30, J. W. to William Matthews, 2 February 1771). M. B. also later referred to a publication by Darly (Letter Book G, pp. 582-4, B. & F. to Sir Robert Rich, 25 March 1776). Timothy Clifford suggested that these references were to the Darly publication mentioned in the text (Clifford, 'Ormolu by Boulton', pp. 764-5).

196 Goodison, *Ormolu*, p. 60.

197 ibid., p. 60.

198 In 1769 Dr Ash offered to seek permission for M. B. to have drawings made of vases in the British Museum (Box A, item 192, Dr J. Ash to M. B., 30 December 1769).

199 *Letters of Josiah Wedgwood*, eds Finer and Savage, pp. 68-9, Josiah Wedgwood to Thomas Bentley, 21 November 1768.

200 Meteyard, *Wedgwood*, Vol. II, p. 76, Josiah Wedgwood to Thomas Bentley, 3 January 1768.

201 ibid., pp. 77-8, Josiah Wedgwood to Thomas Bentley, 15 March 1768. (M. B. commented to Wedgwood that French craftsmen bought vases in London and ornamented them for re-sale)

202 See pp. 24-5.

203 Letter Book E, p. 437 [B. & F.] to William Matthews, 27 April 1772.

204 Letter Book E, p. 522, A. J. C. to James Folliott, 23 July 1772.

205 Rowe, *Adam Silver*, p. 32.

206 The estimated consumption of tea per head was 0.10 lb. per annum in the years 1726-30; the figure rose to 2.54 lb. per annum in 1796-1800 (W. A. Cole, 'Trends in Eighteenth-Century Smuggling', *Economic History Review*, Second Series, Vol.X, No.3 (April 1958), pp.395-409 (p.399).
207 Bradbury, *Sheffield Plate*, p.62.
208 Hernmarck, *European Silversmith*, Vol.I, pp.144-51.
209 Letter Book E, p.440, A. J. C. to William Matthews, 2 May 1772.
210 Montagu, Mrs, item 1, Elizabeth Montagu to M. B., 31 October 1771.
211 Cook, *Greek Painted Pottery*, pp.219-27.
212 This generalisation is based upon a survey of pottery vase-shapes in Robert S. Folsom, *Handbook of Greek Pottery...* (1967), pp.152-62 and pp.169-74, (hereafter cited as Folsom, *Greek Pottery*).
213 Cook, *Greek Painted Pottery*, p.291.
214 Folsom, *Greek Pottery*, pp.152-62 and pp.169-74.
215 The Adam drawing in Plate 49 is undated but was produced by 1770 since it was used by the London silversmiths Daniel Smith and Robert Sharp for their Richmond Race Cup, 1770 (Rowe, *Adam Silver*, Plate 8).
216 e.g. a tea-urn of 1772-3 by Andrew Fogelberg, London (Hernmarck, *European Silversmith*, Vol.II, Plate 323).
217 Cook, *Greek Painted Pottery*, pp.219-27.
218 An achaemenid phiale (a bowl with a flaring rim and shallow body) with a Greek inscription, but found in Alexandrovo, Bulgaria, has a band of reeding and a ribbed underside. This is tentatively dated to the fifth or fourth century B. C. (D. E. Strong, *Greek and Roman Gold and Silver Plate*, Methuen's Handbooks of Archaeology (1966), p.77 and Plate 16A).
219 The bowl surmounting the Wilton Tripod, (Chambers, *Treatise*, third edition, (1791), cited in Harris, *Chambers*, Plate 193). The date of the design is likely to have been much earlier: Chambers produced a number of designs for Wilton House, Wiltshire between 1757 and 1771 (ibid., p.251).
220 Apart from Plate 52, other examples include stone urns by Chambers for the Casino at Marino, near Dublin (Harris, *Chambers*, Plate 52) designed shortly before 1759 though construction was not complete even in 1771 (ibid., pp.42-3).
221 e.g. a silver-gilt soup tureen by James Young, 1778 (Rowe, *Adam Silver*, Plate 16).
222 Box S1, item 200, Lord Shelburne to Mr Adam, 16 April 1765.
223 Box A, item 4, James Adam to M. B., 14 August 1770 and Letter Book D, p.29, M. B. to 'Adams', 1 October 1770.
224 Box A, item 6, James Adam to M. B., 28 January 1771.
225 Box A, item 5, James Adam to M. B., 5 November 1770.
226 See p.66.
227 Summerson, *Architecture in Britain*, pp.411-2.
228 Box S1, item 200, Lord Shelburne to 'Mr Adams', 16 April 1765.
229 [M. B.] Notebook 4, 1765, p.1.
230 Goodison, *Ormolu*, p.50.
231 See p.65.
232 James Adam visited the the Soho Manufactory in 1771 (Box A, item 5, James Adam to M. B., 5 November 1770). M. B. met James Adam in London in 1765 (Box S1, item 200, Lord Shelburne to 'Mr. Adams', 16 April 1765) and again in 1770 (Box A, item 4, James Adam to M. B., 14 August 1770).

233 [M. B.] Notebook 11, 1775-6, p. 55, M. B. wrote 'Mr. Adams says their stucco for houses will be 4s. 6d. sq. yard'.

234 Nicholas Goodison drew attention to exaggerated claims by previous scholars (Goodison, *Ormolu*, p. 49).

235 ibid., p. 129 (a set of five escutcheons and door-knobs for the dining-room at Kedleston Hall, 1765-6); ibid., pp. 133-5 (mounts supplied for a cabinet for the Duchess of Manchester, 1776) and chains for Lord Shelburne, 1770 (Letter Book D, p. 31, M. B. to J. and R. Adam, p. 31).

236 Delieb and Roberts showed eighteen pieces (or pairs, or sets) of silver made during the partnership which they stated were designed by Adam or were 'probably' or 'apparently' designed by him. (Delieb and Roberts, *Silver Manufactory*, p. 40, p. 41, p. 46, p. 47, p. 48, p. 55, p. 56, p. 79, p. 83, p. 84, p. 85, p. 86, p. 88, p. 95). Confusingly, they also stated: 'silver ornament ascribed to the Adam brothers [in their book] is not necessarily from their own design' (ibid., p. 61) and stated that certain other pieces were 'typical' of Robert Adam's designs (ibid., pp. 59 and 77). Rowe stated that M. B. from time to time received Adam drawings for silverware to work from (Rowe, *Adam Silver*, p. 59). Dickinson also implied that the partners produced large amounts of metalwork to Robert Adam's designs (Dickinson, *Boulton*, p. 60). While these writers were right to imply a general stylistic similarity between some of B. & F.'s silver and Adam's designs (see text) none provided evidence that a piece of B. & F. silver was taken directly from an Adam design.

237 Nicholas, Goodison, 'The Door Furniture at Ely House', *Bulletin of the Irish Georgian Society*, Vol. XIII, Nos 2-3 (April - September 1970), pp. 45-8.

238 A set of five escutcheons and door-knobs for the dining-room at Kedleston Hall, Derbyshire, 1765-6. In 1765 Samuel Wyatt, Adam's clerk of works at Kedleston, sent M. B. the escutcheon and door-knob patterns for the Kedleston commission (Goodison, *Ormolu*, p. 129). These patterns were presumably retained for the Earl of Ely's commission.

239 Rowe, *Adam Silver*, p. 159.

240 Box C3, item 234, Thomas Coutts to M. B., September 1775.

241 Hernmarck, *European Silversmith*, Vol. 1, pp. 188-9.

242 e.g. James Young of London in 1778 produced a pair of tureens following the Adam type with two legs and a pair with a pedestal base (Rowe, *Adam Silver*, Plates 14 and 16 respectively).

243 Plate 56 occurs in a publication owned by M. B. (see pp. 164-5).

244 e.g. the gallery, Syon House, Middlesex, 1763-4 (Summerson, *Architecture in Britain*, pp. 433-4) and the Music Room, 20 Portman Square, London, 1775-7 (ibid., pp. 435-7).

245 Wilton-Ely, *Piranesi*, p. 64.

246 Summerson, *Architecture in Britain*, pp. 427-37.

247 Only in the 1780s did Wyatt's style move decisively in the direction of simplicity which made it noticeably different from his own and Adam's earlier style (ibid., pp. 458-61).

248 See p. 19.

249 See pp. 66-7.

250 Frances Fergusson largely demonstrated the importance of Wyatt's influence (Fergusson, 'Wyatt Silver', pp. 751-5). However, she

failed to note all of the Wyatt designs used by the partners. Her omissions include the commissions for Lord Clermont, Sir Harbord Harbord, Lord Scarsdale as well as Wyatt's involvement with the Duke of Holstein-Gottorp. Although she noted a connection with Sir Robert Rich's épergne, she wrongly implies that Wyatt was not responsible for the design (see text).

251 Fothergill etc., item 61, M. B. to J. F., 25 February 1770.
252 Letter Book E, p. 121, C. W. to William Matthews, 7 June 1771.
253 Letter Book E, pp. 137-8, J. S. to William Matthews, 1 July 1771.
254 Rowe, *Adam Silver*, p. 62.
255 Letter Book E, p. 101, J. S. to William Matthews, 10 May 1771.
256 Letter Book E, pp. 532-3, B. & F. to Sir Harbord Harbord, 1 August 1772.
257 Letter Book E, p. 555, A. J. C. to William Matthews, 25 August 1772.
258 Letter Book E, p. 544, A. J. C. to William Matthews, 9 August 1772.
259 Letter Book G, p. 291, B. & F. to Sir Robert Rich, 18 March 1775.
260 Wyatt Family, item 72, J. W. to B. & F., 27 February 1776.
261 Wyatt Family, item 76, J. W. to B. & F., 8 March 1776.
262 Wyatt Family, item 75, J. W. to B. & F., 4 March 1776. See Chapter II note 458.
263 Letter Book G, pp. 558-9, B. & F. to the Prince of Holstein (see Chapter II, note 458), 28 February 1776.
264 Letter Book G, p. 803, B. & F. to Sir Walter Blount, 18 January 1777.
265 Wyatt Family, item 72, J. W. to B. & F., 27 February 1776.
266 Letter Book E, p. 544, A. J. C. to William Matthews, 9 August 1772.
267 Letter Book E, p. 544, A. J. C. to William Matthews, 9 August 1772.
268 Letter Book E, pp. 532-3, B. & F. to Sir Harbord Harbord, 1 August 1772.
269 Letter Book E, p. 544, A. J. C. to William Matthews, 9 August 1772.
270 Letter Book E, p. 643, B. & F. to Sir Harbord Harbord, 22 November 1772.
271 Letter Book E, pp. 532-3, B. & F. to Sir Harbord Harbord, 1 August 1772. B. & F. remarked that Wyatt was to send drawings and models to Soho 'by your [i.e. Harbord's] directions'.
272 A pair was sold to Amos Green, Bath (Box G2, item 155, Amos Green to B. & F., 19 January 1774); two pairs to Mr Hewish of Nottingham (Cash Book 1772-82, 18 November 1774) and one pair to General Frazer (Wyatt Family, item 113, J. W. to B. & F., 30 November 1776).
273 See p. 167.
274 Letter Book G, p. 254, B. & F. to Sir Robert Rich [February] 1775.
275 See p. 182.
276 Two pairs are shown in Goodison, *Ormolu*, Plates 157 and 158.
277 Hernmarck, *European Silversmith*, Vol. 1, pp. 246-9.
278 In 1772 Sir Harbord Harbord asked for a pair of ormolu-mounted stone ewers '... such as are proper for the gods to drink nectar'. (Goodison, *Ormolu*, pp. 130-1).
279 M. B. owned the publications from which Plates 73 and 74 have been taken (see pp. 164-5).
280 Montagu, Mrs, item 3, M. B. to Mrs Montagu, 16 January 1772.
281 M. B. owned the publication from which Plate 50 has been taken (see pp. 164-5).
282 See p. 165.

283 e.g. [Accademia Ercolensel, *The Antiquities of Herculaneum*, translated by Thomas Martyn and John Lettice, (1773), Plates XL and XLI; Robert Adam, *Ruins of the Palace of the Emperor Diocletian, at Spalatro in Dalmatia...* (1764), Plate XIV, entitled 'Impost Cornice and Archivolt of the Porta Aurea' and *Antichità di Ercolano*, Vol.III, p.161.

284 e.g. Chambers, *Treatise*, Plate entitled 'Ornaments for Ceilings' and see James Wyatt's candlestick design (Plate 61).

285 e.g. Letter Book I, p.140, B. & F. to Cornelius O'Callaghan, 16 December 1777 and Letter Book H, pp.421-2 [B. & F.] to Cornelius O'Callaghan, 30 December 1777.

286 Letter Book E, p.236, M. B. to Lord Cathcart, 30 October 1771.

287 e.g. Although Josiah Wedgwood mainly adapted ancient examples, occasionally his work was very close to antiquity (Honour, *Neo-classicism*, p.48).

288 Sir Joshua Reynolds, *Discourses on Painting and the Fine Arts* (1837), Sixth Discourse, 1774, pp.91-6.

289 Letter Book G, pp.461-2, M. B. to Robert Mylne, 4 November 1775. Goodison, *Ormolu*, p.82 stated that the chimney-piece mounts were ordered but I can find no evidence for this.

290 Letter Book G, p.277, B. & F. to James Paine, 4 March 1775.

291 Simon Jervis, *The Penguin Dictionary of Design and Designers* (1984), p.376.

292 Rowe, *Adam Silver*, p.65. Rowe suggests, without evidence, that the design may have influenced a design used by B. & F. for a tureen.

293 Letter Book G, p.514 [B. & F.] to the Earl of Findlater, 20 January 1776.

294 See p.163.

295 Letter Book G, p.740, M. B. to Mrs Montagu, 12 November 1776.

296 See p.167.

297 See p.53.

298 See p.163 and p.168.

299 Montagu, Mrs, item 3, M. B. to Mrs Montagu, 16 January 1772.

300 Letter Book G, p.438, B. & F. to N. Clements, 11 October 1775 and Letter Book G, p.548, B. & F. to J. W., 27 February 1776.

301 Letter Book G, p.514 [B. & F.] to the Earl of Findlater, 20 January 1776.

302 Box S3, item 280, J. S. to M. B., 27 February 1779.

303 Letter Book G, p.102, J. H. to Thomas Brazier, 15 August 1774.

304 Box W2, item 86, note of order for Mr Whateley, 9 February 1775.

305 See p.56.

306 Boulton, M., Biograph etc., item 112, sheet 2, James Keir, 'Memorandums for the Memoir of M. Boulton', 3 December 1809.

307 Letter Book G, pp.242-3, B. & F. to Richard Conway, 28 January 1775.

308 Letter Book G, p.318, M. B. to Richard Conway, 26 April 1775.

309 Ledger 1776-8, p.206, 2 December 1776.

310 Wyatt Family, item 92, J. W. to B. & F., 19 July 1776.

311 e.g. Lister Dighton Clifford of Stratford-upon-Avon bought a coffee-pot ordered from a drawing (Letter Book G, pp.67-8, B. & F. to Lister Dighton Clifford, 14 July 1774). In 1772 Sir Robert Murray Keith was sent seven drawings of candlesticks (Letter Book E, pp.540-1 [B. & F.] to Sir Robert Keith, 6 August 1772). Keith subsequently bought six pairs of one pattern (Letter Book F, p.397 [B. & F.] to Sir Robert Murray Keith, 26 January 1776).

312 See p. 113.
313 Letter Book I, pp. 849-50 [B. & F.] to John Porzelius, 25 September 1781.
314 Letter Book I, pp. 854-5 [B. & F.] to John Porzelius, 20 October 1781.
315 See p. 114.
316 Letter Book G, p. 565, B. & F. to J. W., 9 March 1776.
317 Letter Book G, p. 573, B. & F. to J. W., 19 March 1776.
318 Sir Walter Blount (see p. 175).
319 Letter Book I, pp. 92-3 [B. & F.] to James Hewitt, 30 September 1777.
320 e.g. the 'Lyon' candlestick (see p. 167) and 'Wyatt candlesticks' (see p. 176).
321 I am not aware of any instance where B. & F. offered to interchange parts for silver candlesticks but it is likely that they did so; the principle was outlined to a customer for Sheffield plate candlesticks (Letter Book G, p. 134, A. J. C. to Alexander Johnston & Son, 20 September 1774) and used for ormolu candle-vases (Goodison, *Ormolu*, p. 153). Moreover, the parts for silver 'Wyatt candlesticks' were interchanged (see p. 176).
322 See pp. 116-8.
323 Boulton, M., Biograph etc., item 112, sheet 2, James Keir 'Memorandums for the Memoir of M. Boulton', 3 September 1809.
324 Letter Book D, p. 75, M. B. to Elizabeth Montagu, 14 December 1772.
325 Letter Book G, pp. 485-6, B. & F. to The Very Reverend Mr Addenbroke, 9 November 1775.
326 Letter Book G, pp. 786-7, B. & F. to Elizabeth Montagu, 23 December 1776.
327 See p. 175.
328 Letter Book G, p. 116, B. & F. to Sir Robert Rich, 1 September 1774.
329 e.g. In 1776 four silver-gilt copies of a monteith were made for the Duke of Ancaster (Letter Book G, p. 750, B. & F. to J. W., 21 November 1776).
330 e.g. Unspecified ornaments for the uniforms of Grenadier Guards from patterns provided by the Duke of Richmond (B.R.L., B.W.C., Portions of a Letter Book, 1773, p. 78, A. J. C. to William Matthews, 3 April 1773).
331 Box L2 Li to Lz, (hereafter cited as Box L2), item 83, Sir Edward Littleton to M. B., 5 March 1775.
332 Letter Book G, p. 341, B. & F. to Sir Edward Littleton, 12 May 1775.
333 Birmingham 2, 2 of 2 boxes (hereafter cited as Birmingham 2), item 113, a note for St Bartholomew's Chapel, Birmingham, 10 February 1775.
334 Letter Book G, p. 683, B. & F. to the Earl of Hopetown, 19 August 1776.
335 Wyatt Family, item 70, J. W. to B. & F., 26 February 1776. The drawing appears on this letter.
337 Lord Hope ordered that the épergne should be made to the agreed design but that small modifications might be made to keep the price down to the required level (Wyatt Family, item 83, John Wyatt to B. & F., 22 March 1776). The épergne was completed (Letter Book G, p. 683, B. & F. to the Earl of Hopetown, 19 August 1776).

338 Letter Book G, pp. 492-3 [B. & F.] to William Matthews, 22 December 1775.
339 Letter Book G, p. 544, B. & F. to J. W., 24 February 1776.
340 Wyatt Family, item 72, J. W. to B. & F., 27 February 1776.
341 Wyatt Family, item 78, J. W. to B. & F., 8 March 1776.
342 Letter Book G, p. 567 [B. & F.] to J. W., 12 March 1776.
343 Letter Book G, p. 572, J. H. to J. W., 16 March 1776.
344 Ledger 1776-8, p. 239, 7 May 1777.
345 Letter Book I, p. 194, J. H. to John Stuart, 30 March 1778.
346 A customer wanted a waiter and was content to leave the design to B. & F.; the partners insisted that he choose a design and a set of drawings was sent to him (Letter Book G, p. 38, A. J. C. to Wharton Emerson, 24 June 1774).
347 Letter Book G, p. 132, B. & F. to Sir Harbord Harbord, 17 September 1774.
348 Letter Book G, p. 204, B. & F. to Sir Harbord Harbord, 19 December 1774.
349 Letter Book G, p. 363, B. & F. to Sir Harbord Harbord, June 1775.
350 Letter Book G, pp. 203-4, B. & F. to Sir Harbord Harbord, 19 December 1774.
351 Bradbury, *Sheffield Plate*, p. 251.
352 Letter Book G, p. 534 [B. & F.] to Sir Harbord Harbord, 15 February 1776.
353 Letter Book G, p. 254, B. & F. to Sir Robert Rich, February 1775.
354 Letter Book G, p. 583, B. & F. to Sir Robert Rich, 25 March 1776.
355 Letter Book G, p. 610, B. & F. to J. W., 13 May 1776.
356 Letter Book G, p. 291, B. & F. to Sir Robert Rich, 18 March 1775.
357 See p. 163 and p. 180.
358 Amongst the earliest examples of English Neo-classical silver were an urn-shaped race cup with winged terminal figure handles, 1767, by Daniel Smith and Robert Sharp and a set of oviform urn-shaped tea-vases with satyr's mask handles by Augustine Le Sage, 1768 (Grimwade, *Rococo Silver*, p. 8).
359 See p. 163 and p. 167.
360 See pp. 169-79.
361 See p. 163 and pp. 166-7.
362 See pp. 164-5.
363 See p. 162 and p. 167.
364 See p. 173 and p. 175.
365 M. B. once asked a customer not to show two pairs of B. & F. candlesticks to anyone who might copy them since the pattern was new (Letter Book G, pp. 147-8, B. & F. to Alexander Johnston & Son, 1 October 1774). It is virtually certain that these candlesticks were made to James Wyatt's design (see p. 176).
366 e.g. Rowe, *Adam Silver*, pp. 56-7, and Delieb and Roberts, *Silver Manufactory*, pp. 61-102.
367 See p. 173 and p. 177.
368 See pp. 182-3.
369 A possible exception occurred when the Duke of Richmond ordered a teapot to be made from a design which he supplied; however, it is not clear that he was personally responsible for that design (Box R1, item 293, Duke of Richmond to B. & F., 4 July 1773).
370 The figure of Titus in the 'Titus' clock-case (an example of which was sold to George III in 1772) was related by M. B. to a

plate in Bernard de Montfaucon's *L'Antiquité Expliquée et Representée en Figures*, 15 vols (1719), Vol. IV, part of Plate 99. The figure was, however, basically copied from Gori, *Museum Florentinum*, Vol. III (1734), Plate LXXXV (Goodison, *Ormolu*, p.56).

371 See p.178.

372 e.g. One shape used by B. & F. for jugs (Plates 36 and 37) has unconvincingly been related to a vase in D'Hancarville, *Collection of Etruscan, Greek and Roman Antiquities*, Vol. II, Plate 23 (Rowe, *Adam Silver*, p.65 and Plate 44).

373 e.g. See pp.177-8. The Vitruvian scroll (the lower band on the body of the ewer in Plate 37, occurs in Chambers, *Treatise*, Plate 'Regular Mouldings and their proper Ornaments' facing p.3 and D'Hancarville's *Collection of Etruscan, Greek and Roman Antiquities*, Vol. I, Plate 130. M. B. owned both publications (see p.164 and p.169).

374 See pp.171-2 and pp.175-6.

375 See pp.164-8.

376 e.g. See pp.176-8.

377 Delieb and Roberts failed to highlight Eginton's central rôle in designing at Soho, but mentioned him only in connection with making a print of the Soho Manufactory in 1798 (Delieb and Roberts, *Silver Manufactory*, p.29), as an agent taking patterns to London (ibid., p.51) and as a swordsmith (ibid., p.54). Dickinson mentioned only Eginton's rôle as a painter of 'toys' and his involvement with mechanical reproductions of paintings (Dickinson, *Boulton*, p.104). See Appendix V - entry on Eginton, Francis.

CHAPTER V

THE DECLINE OF SILVERSMITHING AND THE END OF THE BOULTON AND FOTHERGILL PARTNERSHIP

Silversmithing was sharply reduced at the Soho Manufactory during the later years of the Boulton and Fothergill partnership. This was primarily due to the dramatic reduction in assay silver; the partners had 11,831oz. marked at The Assay Office, Birmingham, in the assay year 1776-7 but the corresponding figure for the last assay year of the partnership, 1781-2, was only 1,174oz.[1] The production of filigree also dropped, though to a much smaller extent.[2]

The main purposes of this chapter are to describe and account for the decline. We will see that the national reduction in demand for silver was a significant factor, but the decline of silver plate manufacture was primarily due to Boulton's reluctant decision to cut production because of the difficulties and in particular the losses caused by silversmithing, as well as other problems which derived from his partnerships with Fothergill and Watt.

The decision to cut down silver plate production was partly determined by a number of difficulties which we have examined in earlier chapters. The partners failed to achieve satisfactory levels of efficiency: delays were frequent, the behaviour of some workmen disrupted production, and the idea of introducing piece-rates to increase efficiency was not widely implemented at Soho.[3]

We have also seen that difficulties with marketing were acute. The partners gradually realized that the financial risks of exporting silver and the differences in the intrinsic value of silver made in England and abroad created greater difficulties in building up sales outside Great Britain than they anticipated.[4] The partners were unable to overcome what they saw as the almost insurmountable difficulties of competing with silversmiths in London;[5] Boulton was aware that in some quarters there his firm's work did not have a strong reputation. Unlike other provincial manufacturers who

successfully opened shops in London, the partners were unable to afford this benefit. The firm did not have a workman in the capital; many customers objected since any articles which needed repairs or small modifications had to be returned to Soho. Delays and the expense of carriage were further difficulties caused by the distance between Soho and the capital. The partners also had to contend with another disadvantage: the intrinsic quality of silver passed at Goldsmiths' Hall was lower than that passed by The Assay Office, Birmingham.[6]

The significance of the marketing and production problems varied according to the different types of silver plate produced at Soho. We have seen that there were, broadly, two groups: items basically made by hand such as épergnes and most parts of services of plate and, secondly, articles which relied heavily on machinery, such as candlesticks and salt-cellars.[7]

Silver plate production would have gained substantially if the firm had produced more machine-made items. The highest annual total of silver candlesticks produced during the partnership was in the assay year 1773-4 when thirty-eight pairs plus one single candlestick were made. These were sent for assay with the following number of pairs in each batch: 6, 3, 1, 2, 5, 2, 3, 6, 4, 2, and 4, and a single candlestick was sent on a separate occasion. These were made in a variety of patterns;[8] even with candlesticks, which were the most numerous of the silver plate articles made at Soho[9] the firm was never in the position to achieve the economies which would have derived from making '... large quantities of one pattern at a time'.[10]

Boulton could have increased sales of machine-made items by offering the trade - which was often interested in purchasing such articles - greater incentives to do so;[11] however, such a policy would not have been particularly advantageous. Firstly, this would have forfeited some of Soho's reputation for making silver, especially if Boulton had often given in to the demands of trade customers wanting to place their makers' marks on pieces.[12] Secondly, such a policy would have involved giving discounts and thereby

undermining profits.[13] Although the level of sales was disappointing, it was not a very serious problem since the high cost of dies was mainly justified by their use for Sheffield plate which sold in larger quantities.[14]

The difficulties of the silver business did not come from machine-made items. The use of technology enabled the partners to obtain a substantial profit-margin, even though their prices were competitive.[15] Moreover, since the partners generally insisted that customers ordering machine-made silver confined themselves to patterns already in the firm's range, the trouble and the expense involved with the manufacture of such items was minimised.[16]

The problems of silversmithing largely derived from items which were substantially hand-made; quite apart from the difficulties of producing special items and services of plate to individual designs,[17] it was these articles which caused the financial losses. The extent of the losses is unclear (the accounts for silver plate were amalgamated with those for Sheffield plate and ormolu)[18] but they were serious enough to cause a dispute between Francis Eginton and Boulton.

With Boulton's fashioning charges for a service of plate in mind, Eginton once remarked that they were too low to make a profit.[19] Eginton was well aware that Boulton's prices were generally lower than those charged by London firms.[20] Boulton's lower fashioning charges per oz. were made more financially dangerous overall by his tendency to make lighter plate. Yet Boulton believed he had a basis for making the moderate profits he looked for.[21] He tended to concentrate on items where the fashioning charges were relatively high.[22] He thought that London retailers in particular made excessive charges but by the mid-1770s his charges were generally not very much lower.[23] Moreover, Boulton was able to gain small technical advantages over many of his competitors even with items substantially made by hand: although the use of rolled sheets was widespread, Boulton had his own rolling-mill and some ornaments were produced at Soho by mechanical methods.[24] Although some other firms gained economies through greater specialization on certain items, Boulton tended to avoid making them or

charged a higher price;[25] however, since manufacture was substantial at Soho, Boulton was sometimes able to gain advantage by making variations on basic designs[26] (Plates 36 and 37), or very occasionally, by reproducing patterns (Plates 79 and 86). By taking on services of plate there was some economy in both design and manufacture: the pair of sauce-tureens of 1776-7 (Plate 67) made for Mrs Montagu is identical to her soup-tureens (Plate 86), though the latter are considerably larger.[27]

Nevertheless, the financial viability of items made basically by the same methods,[28] but at a lower price than his competitors in London, was finely-balanced; the difficulties that Boulton encountered in the silver business were therefore more crucial than they were for items substantially made by machines. Given his policy of moderate charges, Boulton was particularly aware of the need to maximise the use of his models and designs;[29] the lower level of sales than he hoped for, reduced the extent to which he was able to do so. Moreover, the unreliability of some specialist silversmiths from London who made the elaborate items was marked[30] and, in Boulton's view, Eginton's lack of toughness as a manager[31] exacerbated the problems.[32]

Another major difficulty, which emerged as this business developed, and which particularly undermined the profitability of services of plate and other expensive silver items, was the inability of the partners to prevent this business suffering from the deficit on their Bill Account.[33] Some orders took a long time to execute and some customers delayed payment; in these circumstances the partners were forced to pay interest - at a rate of between seven-and-a-half and ten per cent per annum[34] - on the expenses incurred in manufacture. These difficulties arose despite the early efforts of the partners to contain them.

When the partners planned the silver business they were very conscious of the problems caused by late payment. In 1773 the deficit on their Bill Account was over £10,000[35] and this was substantially caused by customers' debts which at that time amounted to £8,033.[36] In May 1772 Fothergill was anxious about the gentry's late payments

following the ormolu sale at Christie and Ansell's in the preceding month.[37]

The partners' anxiety over the Bill Account, late payment, and the high cost of silver, led them to call silver plate a '... ready Money article.'[38] Although Boulton allowed trade customers a longer period to pay for most other items,[39] he normally insisted that they paid for silver plate within two months,[40] though very occasionally this was extended to three.[41] The public were treated with marginally more generosity: although they too were sometimes only allowed two months' credit[42] they were often given up to three months.[43] Even so, this was on balance marginally less generous than the partners' usual position with the public who were given three months to pay for other articles.[44]

The period that customers were permitted to make payment for silver plate was related to the length of credit given to the partners by their bullion dealers. Early in the partnership Boulton obtained silver from the Birmingham dealer, Samuel Garbett[45] but in 1772 the partners approached a London dealer, Robert Albion Cox, with a deal: if he was prepared to give the partners three months' credit they would give him the bulk of their orders. The partners were particularly anxious to obtain credit for silver because of its high cost;[46] in 1773 sterling silver cost 5s. 6d.[47] or 5s. 7d. per oz.[48] and fine silver (used for filigree)[49] was 6s. 3d. per oz.[50] The partners got what they wanted from Cox: from 1772 until 1778 he supplied the bulk of their silver[51] and he normally allowed the partners three months' credit.[52] This was a substantial benefit given the expansion of the silver business; the partners' purchases of sterling silver rose from 700oz. in the assay year 1772-3 to 11,058 oz. 19dwt. in 1776-7, which was the highest figure during the partnership.[53] From 1778 another London firm, Floyer and Price, supplied the majority of Boulton's requirements and they permitted either two or three months' credit.[54]

This credit was of utmost importance to the partners: if the period of manufacture was no more than a few weeks, and customers paid within the required period of two or three months, the partners would

avoid paying interest on their Bill Account for payments made by their bankers to the bullion dealers. The partners remarked to a customer in 1774 that if they allowed his credit '... to exceed this point [i.e. two or three months] we lose Money by the interest on silver'.[55] This detail was often stressed to customers.[56]

In some cases, the partners' plan worked perfectly well. In 1774 Alexander Johnson and Son of London was sent drawings of candlesticks to choose from on 20 September;[57] their response and production at Soho were both fast enough for two pairs to be sent to London on 1 October.[58] In 1773 Dr Wall, the Worcester porcelain manufacturer, ordered cream-buckets on 2 April and they were completed early in the following month.[59] In neither of these cases is there anything to suggest that the customer delayed payment.

When customers did not pay within the required period the partners were punctilious about sending reminders. Lord Lyttleton was reminded in January 1774 to pay for silver worth £9 16s. 6d. sent in October 1773.[60] There were many other similar instances and the reminders were normally sent about three months after the goods had been sent.[61]

Nevertheless, in many cases customers badly delayed payment. Captain Evans of Wolverhampton was sent silver spoons and buttons in May 1776;[62] despite two earlier reminders[63] the partners had to demand payment in August 1778.[64] When his bill was paid is not known. Lord Gormonston received a pair of candlesticks worth £19 12s. 6d. in March 1775;[65] despite three reminders[66] the bill had not been paid in April 1777[67] and the partners instructed a lawyer to recover the debt.[68] In both of these cases the partners delivered acceptable goods on time; here they were suffering from the same haughty behaviour of customers which caused immense financial problems for other eighteenth-century craftsmen.[69]

However, the partners were indirectly responsible for some late payments; in many cases these occurred (as they did with other craftsmen)[70] when customers had been given poor service. In December 1777 Cornelius O'Callaghan of Shanbally near Clonmel in Ireland was sent a number of silver items, including a cup and cover (Plate 81),

together worth £138 8s. 0d.[71] The cup was delayed and exceeded the price limit O'Callaghan had set;[72] requests for payment were sent to him[73] and his bankers during 1778[74] but in March 1779 the partners had still only received £100 and were then making further enquiries about how to obtain the remainder.[75] No further correspondence about this order survives. There were many instances of customers in England paying late after receiving poor service.[76]

Despite this, the partners only rarely charged customers interest. In 1768 three candlesticks were supplied to the Royal Lodge, Ancient Order of Free Masonry,[77] for £141 4s. 0d.[78] but only £50 0s. 0d. had been paid by 1772.[79] In 1776 the partners demanded interest of five per cent per annum on the outstanding £91 4s. 0d.[80] The Lodge paid £50 in 1777[81] but a further £30 due to have been paid later in that year was not paid then[82] and no further record about payment survives. On two other occasions the partners charged interest for late payments on silver plate and in each case the bill was paid in full.[83] The general reluctance of the partners to charge interest was marked, presumbly because it was a very emotive issue.

The partners' problems with interest payments also occurred when orders took a long time to execute. The partners purchased the 105oz. 13dwt. 12gr. of silver[84] required for Sir Robert Rich's silver-gilt épergne (Plate 60) early in 1774.[85] At this time sterling silver cost 5s. 6½d. per oz.[86] and the partners had to pay interest on the sum advanced by their bankers for the purchase of the bullion until Sir Robert paid off his account in January 1777.[87] Rich was not guilty of late payment, which was made only one month after his bill was sent.[88] However, in 1776 he thought the partners intended to make him pay their interest charges; under angry pressure from their client they ruled out this possiblity.[89] Rich felt that the delay in completing the épergne was due initially to Soho's slowness and the épergne had to be returned for further work in 1776[90] after Rich complained about poor workmanship[91] and a failure to assay and accurately weight the piece.[92] However, the partners also had reason to feel aggrieved: in 1775 Rich required substantial alterations[93] after the partners had faithfully made the épergne from James Wyatt's

design.[94] On two occasions Rich seriously delayed his replies to the firm's letters.[95] Further delay was caused by disagreement over the fashioning charge[96] which was only resolved after Wyatt arbitrated.[97] At one point during their lengthy dispute the partners remarked that the trouble and interest charges involved with silversmithing made it less profitable than the manufacture of buttons.[98]

When planning the silver business Fothergill in particular hoped to minimise the partners' interest payments on bullion by finding customers who wanted to trade-in old silver especially when Soho made services of plate. Fothergill pressed the point with Boulton on two occasions in February 1772.[99] The purchase of virgin silver for services of plate was likely to lead to interest payments because of the lengthy period of manufacture.[100]

However, even the use of old plate by silversmiths (which was common practice[101]) was not without its disadvantages. The profits on manufacturing were usually less since it was generally accepted that in these circumstances silversmiths would lower their fashioning charges;[102] although it is not clear that the partners always offered a concession[103] they frequently reduced their charge by 2d. per oz. when working on old plate.[104] Such silver had to be melted and valued at an assay office; although the partners passed on the Birmingham office's fees to the customer[105] they usually found, as did other silversmiths, that old plate was below the sterling standard;[106] in 1776 sterling silver cost either 5s. 6d.[107] or 5s. 7½d.[108] but silver supplied in that year by one customer was valued at 5s. 5½d, while another's was worth only 5s. 2½d.[109] The valuation of silver occasionally led to heated exchanges with customers: in 1775 a London merchant was not pleased to discover that some of his was worth only 4s. 10¾d. per oz. and another lot just 4s. 0¾d.[110] at a time when standard silver cost 5s. 6½d.[111]

The partners' experience with the financial problems of producing services of plate varied. Dr Gresley of Seal, near Burton-upon-Trent gave the partners little difficulty: in 1776 he provided 212oz. of old silver,[112] worth 5s. 6½d. per oz.;[113] the quality was satisfactory, the quantity was nearly sufficient for his new order,[114]

the old silver was supplied before work began on the service,[115] and he also paid promptly.[116] This combination of benefits rarely occurred. Elizabeth Montagu received a substantial part (worth £802 6s. 4d.) of her service early in 1777[117] but paid only £400 immediately. Payment was to be completed when the whole order was finished[118] but that did not happen until March 1778[119] and during the intervening period she received substantial additional items.[120] Moreover, her old silver was worth only £74 6s. 7d. and that was not supplied until May 1777,[121] by which time the bulk of the order had been made. Most customers supplied some old silver towards their service of plate[122] but not all did so.

The Earl of Malmesbury's service was made entirely from virgin silver and the financial difficulties which arose particularly angered the partners.[125] Malmesbury was sent plate to the value of £1,386 3s. 4d. in July 1778[124] and further items worth £159 16s. 0d. in the following month.[126] He failed to answer any of the firm's letters about payment in the following year[126] and only in January 1780 did he authorize payment for these and other items worth £1,637;[127] in April the partners were still enquiring whether the banker would permit payment of up to £1,000[128] and it is not clear when the whole bill was paid. At this time, Malmesbury was the British Ambassador to Russia[129] and this case confirmed the partners' general fears about receiving payment from abroad.[130]

Some customers other than those who ordered services also supplied old silver,[131] but even so the bulk of the silver used at Soho came from bullion dealers. In the assay year 1776-7 11,058oz. 9dwt. 0gr. of standard silver were obtained from dealers; only 1,877oz. 13dwt. 0gr. came from customers and most of that was below standard. The relative proportions of silver obtained from these two sources were generally similar in other years.[132]

The return of completed orders necessarily added further interest charges to the Bill Account. In some cases the reasons for the return of silver are not clear: this is true of orders for a James Jackson in 1776[133] and Richard Moland in 1774 and 1776[134] as well as for a few other customers.[135] Sometimes the firm suffered from its own

shortcomings: in a few instances customers required replacements for pieces which were too light[136] and some were returned for reasons of lateness, expense, or damage.[137]

The partners were particularly reluctant to take back silver with cyphers or coats of arms since only with difficulty could such pieces be modified for their customers.[138] For this reason, and because the partners were convinced that the order was properly and promptly executed, they refused to accept the return of buttons made in 1778 for Thomas Johnson of Manchester.[139] To keep the return of pieces to a minimum the partners sometimes felt obliged to make abatements: in 1778 Thomas Graham of Balgowan near Perth received a reduction of £2 14s. 0d. (which was fifty per cent of the original charge) after complaining about the cost of the crests on his plate.[140]

The partners sometimes avoided engraving arms or crests if they thought the customer might for some reason be dissatisfied. In 1777 a cup, made for Nigel Gresley of Drakelow near Burton-upon-Trent, was delayed during manufacture and the partners thought it might not be accepted. They omitted the engraving, but invited Gresley to return the cup for completion at a later date.[141] This ploy was adopted on other occasions when plate was sent late.[142]

Even when pieces did not have some form of personal mark, the partners' fear of adding to the deficit on their Bill Account led them to make abatements to dissatisfied customers. The most serious incident of this kind occurred with four monteiths for the Duke of Ancaster in 1777, for which he was initially charged £71 7s. 6d.[143] They were of gilded silver, as the partners' London agent asked for them to be;[144] however, Ancaster later insisted that he had ordered the pieces to be of gilt base metal. The partners reluctantly accepted this, reduced the bill to £59 4s. 10d.,[145] and Ancaster kept them. The partners forfeited the whole of the fashioning charge but thought that preferable to melting them down (which would have involved the expense of separating the gold from the silver) or finding another customer (which might take many years and would involve interest charges on the bullion).[146] There were other cases of compensation being given to trade or non-trade customers whose

service left something to be desired; this sometimes occurred when charges were thought by clients to be excessive[147] or when silver was delivered late.[148]

The financial difficulties of the silver business were inextricably linked with the Bill Account. According to senior staff at Soho the bankers' interest charges on the costs of manufacturing silver plate often exceeded the firm's fashioning charges.[149] The losses were therefore substantially due to the deficit on the Bill Account which, though exacerbated by the manufacture of silver plate, were largely caused by the firm's overall financial difficulties which worsened during the 1770s. Between 1767 and 1777 the partners' trading losses came to £11,000[150] and debts owed to them in 1779 amounted to £7,000.[151] These financial problems, on top of those accumulated in earlier years,[152] caused the partners' Bill Account to increase from £10,000 in 1773[153] to nearly £25,000 in 1777.[154]

Apart from the difficulties which gradually emerged during the 1770s, the Boulton and Fothergill partnership and in particular the silver business, came under further pressures from new factors which arose from the mid-1770s. One of these was Boulton's partnership with James Watt which began in 1775[155] and which Boulton felt would eventually yield handsome profits.[156] Under his agreement with Watt, Boulton was to pay all the expenses involved in the development of the steam-engine and receive two-thirds of the profits.[157] (Fothergill did not wish to be involved.)[158] Boulton initially put £6,000 of his own capital into the steam-engine business.[159] In 1775 Watt's original patent of 1769 for the separate condenser was extended for a further twenty-five years.[160] This partnership required Boulton to spend periods away from Soho to supervise the erection of steam-engines.[161] Between 1776 and the end of 1782, Boulton and Watt completed orders for fifty-five reciprocating-engines (for pumping or blowing).[162] Boulton was also keen to develop engines to provide rotary motion for which he saw a promising future;[163] for this purpose Watt patented his 'sun and planet' mechanism in 1781[164] and their first engine of this kind was completed in 1783.[165]

As early as 1776 Watt was promised by Boulton that the steam-

engine business would take priority over all his other ventures[166] and then Boulton allowed his capital in the Fothergill partnership to drop from the 1775 figure of £18,449 13s. 8d. to £16,520 3s. 7d (and Boulton's capital continued to decline in the next few years).[167] Also in 1776, Boulton refused to put capital into opening an impressive shop in London on the grounds that he wanted that money for the steam-engine business.[168]

From the mid-1770s Boulton was also unwilling to devote as much time as he had done earlier to the silver business.[169] During 1776 he abandoned his campaign to force Goldsmiths' Hall into passing silver only when it was up to the legal standard.[170] Boulton also found it difficult to supervise the execution of important orders: Lady Morton's service of plate was begun in 1776[171] but later, when absent from Soho, he was informed about progress[172] and on one occasion wrote reminding Eginton to complete it.[173]

Boulton also found little time for marketing silver. Earlier in the 1770s he had often visited important customers to pursue and discuss orders[174] but in 1776 he apologised to the Earl of Findlater for not visiting him in London and sent a clerk in his place to discuss sketches for silver plate.[175] This subsequently became Boulton's normal practice[176] and only very rarely did he visit customers.[177] Boulton had also frequently entertained customers at Soho in the earlier half of the 1770s[178] but later his absences frequently disappointed visitors.[179] Although routine letters to customers were often dealt with by clerks[180] and even though Francis Eginton occasionally received correspondence,[181] the business suffered since customers usually addressed letters to Boulton[182] and his replies were often delayed by his absences on steam-engine business; for this reason customers such as Sir Walter Blount,[183] Lady Morton[184] and Mussin Pushkin[185] were kept waiting. Boulton's preoccupations once led to a delay of three months in replying to Sir Harbord Harbord's enquiry about a special order for a large tray.[186]

Boulton's dilatory attention to correspondence contributed to his firm's reputation for inefficiency which increasingly lost orders. In 1775 Josiah Birch of Manchester bought candlesticks from London since two pairs bought earlier from the partners had been delayed.[187] In

1777 John Turton of Stafford cancelled the remaining part of an order for a service of plate because of the late delivery of the first part[188] and at about the same time several other orders were countermanded either entirely or in part for the same reason.[189] These examples give some substance to the view of one of the partners' London agents who once remarked (with the whole of the firm's range in mind) that if their reputation for delays had not been so bad he would have been able to secure ten times as many orders.[190]

The demand for silver and the commitment to silversmithing at Soho were also being undermined by the increasing success of Sheffield plate; because of the losses in silversmithing Eginton argued in 1776 that it should be stopped and Sheffield plate production increased.[191] There were many sound business reasons behind Eginton's opinion. The partners stood to lose far less on the interest charges involved in making Sheffield plate; prices of 0s. 6d., per oz. and 1s. 0d. per oz. were recorded in 1782 for different qualities of Sheffield plate[192] at a time when sterling silver cost 5s. 10d. per oz.[193] The relatively limited and yet varied demand for silver offered restricted opportunities for achieving economies in production.[194] In contrast, Sheffield plate was not only bought by the middle classes[195] but also by trade customers, who were encouraged by substantial discounts;[196] purchases by the latter just in November 1779 included orders of £53 10s. 0d.[197] and £27 16s. 0d.[198] During that month two customers each bought six pairs of identical candlesticks[199] and in all, the partners sold 190 pieces of Sheffield plate and 249 dozen silver-plated buttons.[200] The marketing of Sheffield plate posed fewer difficulties than silver: Boulton's absences mattered less since correspondence was normally dealt with by clerks[201] and the lower price of Sheffield plate[202] enabled the partners to keep their London agent well stocked with patterns.[203]

Apart from the lower price of Sheffield plate,[204] its mounting popularity was also due to the increasing tendency to make it an acceptable substitute. In the earliest days of Sheffield plate manufacture, hollow-ware was normally tinned on the inside,[205] but towards the end of the partnership it was usual to quote prices for

silver on both sides.[206] Early in the 1770s Soho seldom produced Sheffield plate with thick deposits of silver to provide extra durability[207] but later this was done frequently,[208] despite the expense: one customer was charged 8s. 0d. more per pair for candlesticks which were normally £2 10s. 0d. per pair.[209] There was also a tendency to use solid silver for parts of Sheffield plate where durability was particularly required, as on the handles of tankards, or where the copper on the back of the metal might be visible, as with the applied draperies used on 'Lyon' candlesticks[211] (Plate 13). The public's acceptance of the new material led to orders not just for utilitarian articles such as cruets[212] but also for more elaborate items such as épergnes.[213] The partners' production of Sheffield plate had begun just with candlesticks,[214] but by the end of the partnership there were very few items traditionally made in silver which they were not prepared to make in Sheffield Plate.[215]

Boulton's revision of his earlier dismissive attitude towards Sheffield plate for important orders[216] was encouraged by some of his most significant customers. He had been surprised when in 1774 Lord Ravensworth wanted four pairs of Sheffield plate candlesticks;[217] Boulton tried to persuade him to buy a new pattern in silver but Ravensworth insisted upon his original order.[218] Elizabeth Montagu's service, though mainly of silver,[219] included two ice pails[220] and probably four dish-covers in the substitute.[221] In 1778 the Earl of Inchiquin purchased a small service costing £28 17s. 0d.,[222] made entirely of Sheffield plate.[223]

The purchase of Sheffield plate even by customers who might have been expected to buy silver, suggests that demand for the latter was being depressed by the increasingly popular substitute. The national demand for silver was not only affected by Soho's production of Sheffield plate: similar technical improvements[224] and an increase in the range of articles occurred in the work of contemporary craftsmen in Sheffield.[225] Moreover, the popularity of Sheffield plate at the expense of silver increased in the second half of the 1770s because of economic depression.

Boulton was aware of the early signs of that depression in

1776,[226] but it intensified later in the decade. The recession was the consequence of the war against America which began in 1775; the effects on trade were intensified by the participation of France (from 1778) and Spain (from 1779).[227] Exports from England and Wales declined from £9.7 million in 1775 to £7.0 million in 1781[228] and public income and expenditure in Great Britain declined from a surplus of £747,000 in 1775 to an excess of expenditure in 1781 of £12,630,000.[229]

The depression significantly reduced the national demand for silver from 1777 but the extent of the drop in production varied in different places. The highest quantity of diet silver taken at Goldsmiths' Hall in the 1770s was 249oz. 10dwt. in 1776-7[230] but the figure declined in the following assay year to 225oz. 13dwt.[231] In Sheffield the reduction was proportionally greater; the amount of silver assayed there in the 1770s peaked in 1776-7 at 48,209oz. but declined to 37,696oz. in 1777-8.[232]

The ability of London's silversmiths to hold on to a substantial share of the market was partly due to their long-established reputations,[233] but it was also due to their increasingly competitive approach. Boulton's claims to make lighter pieces of plate than silversmiths in London[234] were increasingly being eroded by silversmiths there such as Hester Bateman. She, like Boulton and Fothergill,[235] extensively used wirework for a variety of purposes including supporting frameworks for glass bowls[236] and thin silver for articles such as straight-sided oval teapots.[237] Such teapots were easily made from sheets of silver[238] and by 1775 rolled sheets were widely available to the trade in London: Christopher Scott and Robert Kirton as well as another firm owned by Mary Godley had rolling-mills (which were either powered by hand or water).[239] London's silversmiths were increasingly competing on a more equal basis with both the partners[240] and Sheffield's silversmiths.[241] Changing circumstances increasingly placed the partners in an untenable situation. Their policy of undercutting London prices was producing a loss[242] yet it was impossible to put their prices at or above the level of London's silversmiths and still gain a large number of

orders: one customers remarked in 1776 that he only came to Boulton because of his claim to make silver at a lower price.[243]

By 1777 the arguments in favour of running down the silver business were so strong that in February an order for jugs was rejected from Preston & Co. of Liverpool (even though the partners were prepared to make a similar order for the firm in the previous year) and the partners remarked, for the first time, that they were '... about declining our silver branch'.[244] The enormous reduction in demand from 1777 (which was particularly acute in Soho's case because of its mounting reputation for delays[245] and Boulton's reduced involvement with marketing[246]) meant that it was seldom necessary for the partners to reject orders to achieve a lower level of production. The partners had rejected a trade order in 1776 on the grounds that they were too busy[247] and repeated this to another customer in 1777.[248] Only one order was turned down during the assay year 1777-8: the remaining part of a service of plate for a customer who was slow to pay for the first part.[249] Nevertheless, the partners' production of assay silver fell from its highest level of 11,831oz. in 1776-7 to 6,390oz. in 1777-8.[250]

Although the reduction was marked, the firm did not bring production to a halt. The partners had accepted some large orders at an earlier date and carried on with them.[251] They also took on some new orders.[252] They had to attempt to reduce silversmithing at a rate which matched the reduction in staffing. Since silversmiths had contracts,[253]the partners had to wait until these expired or until staff departed of their own accord: one left in 1777 and another did so in 1778[254] but the partners replaced neither.

Even though the firm was running down the silver business, there are signs that Boulton had reluctantly allowed this to happen under pressure from his partners. We have already seen that as early as April 1776 Eginton wanted to stop silversmithing[255] and he was then against the appointment of more silversmiths;[256] defiantly, Boulton recruited another in May[257] and, as we have also seen, delayed the decision to run down production until the following year. Even in 1778 Fothergill felt it necessary to press Boulton into rejecting

orders for services of plate.[258]

At the end of the decade Boulton's underlying commitment to the silver business (and the Soho Manufactory) re-emerged; this was due to significant changes in the firm's position - which were largely brought about by Boulton - that were designed to overcome the problems of the Manufactory and the difficulties of maintaining the silver business. James Keir, a friend of Boulton's with experience of glass manufacture in Stourbridge,[259] came to Soho in 1778[260] to relieve Boulton of the day-to-day management of the Manufactory.[261] Boulton also hoped to reduce the financial difficulties of his partnership with Fothergill by inviting Keir to become a third partner but after Keir arrived at Soho and discovered the precarious financial position there,he refused Boulton's offer.[262] However, Boulton was able to take other steps to improve the firm's financial position. He increased his capital in the Fothergill partnership from the 1778 figure of £13,599 6s. 1d. to £14,397 12s. 5d. in 1779.[263] During this period Boulton borrowed substantial sums: £500 from Keir,[264] £1,000 from a Mr Hoskins[265] and £7,000 from a Mr Wiss. The last was obtained on the security of the steam-engine business[266] and in 1778 that business was mortgaged to the bankers Lowe, Vere, Williams and Co. for credit of £14,000 to Boulton and Fothergill.[267]

The future of the silver business was also reconsidered in the light of changes in Francis Eginton's position. As his commitment to silversmithing declined about 1776 he developed two new enthusiasms: painted copper wares such as trays[268] and vases[269] which he called 'japanned wares',[270] and the reproduction of paintings by engravings (sometimes with hand-painted additions), called 'mechanical paintings'.[271] On 1 January 1779 Eginton formed a new partnership with Boulton and Fothergill just to produce 'japanned wares' and 'mechanical paintings';[272] at the same time William Bingley, who had previously worked in Eginton's department, entered a partnership with Boulton and Fothergill for silver, ormolu and Sheffield plate.[273] Eginton's transfer removed two difficulties about the continuation of the silver business: his opposition[274] and his mismanagement which in Boulton's view had contributed to losses.[275]

To Boulton, the significance of Eginton's departure was considerable. Immediately before, the firm maintained its policy of running down the silver business: in November 1778 three more customers were informed of this intention.[276] However, immediately after the formation of the Bingley partnership, Boulton asked Keir's opinion about accepting an order for a service of silver plate.[277] Keir was then conducting a thorough examination into the causes of losses in silversmithing.[278] While Keir agreed that the losses had partly been due to Eginton's mismanagement,[279] and while he thought there was a case for accepting the order both because the silversmiths had little to do and were in Boulton's debt,[280] Keir felt it was impossible to predict whether Bingley could profitably produce silver.[281] Keir's reservation was based upon knowledge of the difficulties of producing services of plate in the firm's precarious financial position[282] and he was aware of Eginton's criticism that Boulton underpriced silver.[283] Keir's verdict was therefore not encouraging and there was no further mention by Boulton of the service of plate; the firm was only prepared to accept orders for just single pieces of silver plate and then only if there was '... a probability of getting any profit'.[284]

There is, as we shall see, no sign that Boulton wished to revise this tougher policy in the last years of his partnership with Fothergill; the extreme difficulties which confronted him made a more committed approach untenable. The problems of managing Soho were only temporarily reduced by Keir since he left in 1780.[285] He had not found his two years there pleasant or successful and he failed to come to an agreement with Boulton over remuneration.[286] Keir had also proved to be less able than Boulton hoped.[287] Boulton was now forced to spend most of his time running the Manufactory, because of both Keir's departure and, more seriously, Fothergill's lengthy absences through illness from 1780.[288] In May 1781 Boulton feared that his partner's illness was fatal and Fothergill left Birmingham to recover his health;[289] although he returned in October he was still unable to work.[290] Boulton increasingly resented spending his time at Soho since he wished to devote his energy to the steam-engine business

which needed him to spend periods in Cornwall supervising the erection of engines.[291] Boulton reckoned in 1782 that his work at Soho in the previous few years had lost the steam-engine business several thousand pounds.[292]

Boulton's diminished commitment to Soho was also due to the hopelessness of the partners' financial position. In June 1780 Boulton was summoned to London by one of his bankers - Lowe, Vere, Williams & Co. - who threatened to sever their relationship entirely after Boulton had allowed the Bill Account to reach a deficit of £17,000 despite his earlier promises to reduce it to £15,000.[293] The interview, together with the accumulated pressures and increasing illness of recent years, led Boulton to contemplate going out of business.[294] At the end of the partnership that Bill Account was still in deficit by £15,200[295] and the partners had another with William Matthews, which was in deficit by £6,000 in 1781.[296] In 1780 Boulton's capital in the partnership was £8,893 16s. 3d. and Fothergill's was £6,569 8s. 0d.; their joint capital was under half of what it had been in 1774.[297]

Boulton was also burdened with loans. In 1781 he owed the following amounts: £8,000 to Van Orsoy of Amsterdam; £1,000 to Mrs Baskerville, the printer's wife, and a further £1,000 to a Mr Day. Although Boulton managed to repay Keir's loan of £500 by 1781[298] Boulton had more difficulty with other loans taken out in the late 1770s; at the end of the partnership he had still not repaid Mr Hoskins[299] and at that time still owed Mr Wiss £1,000 in capital and £50 in interest.[300] In 1781 Boulton borrowed £2,000 from Elliott and Praed, a Truro bank,[301] for the benefit of the Boulton and Fothergill partnership but raised on the security of Boulton and Watt.[302] The loan was repaid in June 1782.[303]

The relationship between Boulton and Fothergill had never been harmonious,[304] but it degenerated badly in the partnership's last two years. In 1781 Fothergill laid claim to a share of the steam-engine profits[305] on the grounds that Boulton's involvement with the Watt partnership had distracted Boulton from the hardware business at Soho

and that this was partly responsible for their losses. Boulton did not entirely deny the charge but contrasted his own high work-rate with Fothergill's and pointed to the advantages their partnership enjoyed from Keir's presence at Soho for two years.[306] Boulton also argued that the Fothergill partnership gained from the steam-engine business through both the free use of the Watt engine transferred from Kinneil to Soho, and the credit obtained on the security of the engine business.[307] More significantly, Boulton pointed out that Fothergill had contributed nothing to the steam-engine buiness[308] and this led to an agreement in November 1781 between their banker and agent William Matthews (who arbitrated in the dispute) and Fothergill's lawyer[309] that Fothergill had no legal claim.[310] Although the decision was firmly in Boulton's favour he intended to make his partner an allowance from the profits of the steam-engine business.[311]

The hostility generated by the dispute during 1781 led Boulton to contemplate breaking up the partnership. In July he proposed a new one between himself, Andrew J. Cabrit, a clerk, and Zacchaeus Walker, the firm's accountant.[312] Boulton did not inform Fothergill of this proposal, but early in November notified him that their partnership would terminate at the end of the year.[313] This did not happen since Boulton's attitude towards Fothergill softened after the dispute over the steam-engine profits was resolved;[314] Boulton then proposed a partnership between himself, Cabrit, Walker, and Fothergill.[315] Even this proposition was not implemented and - despite further attacks on Boulton by Fothergill and his wife early in 1782[316] - the old partnership survived the bitterness.

Boulton rescued Fothergill and their partnership from ruin at the end of 1781. In December Mrs Swellingrebel (who lent Fothergill the bulk of his capital in the partnership)[317] demanded immediate repayment, or failing that better security, on her loan of £8,900. Since Fothergill was unable to pay, she agreed to Boulton's offer to provide security on condition that the period of repayment was extended to 1790.[318] Boulton attributed his offer to pity for his partner[319] and a change in Fothergill's attitude towards him.[320] However, Boulton was also motivated by self-interest: he feared both

that her claim on Fothergill would become a claim on the partnership[321] and that if he acted differently the firm's financial predicament would become public knowledge.[322]

Against a background of overwhelming difficulties the production of assay silver continued to decline. No more orders for services of plate were accepted after 1778.[323] From the assay year 1779-80 to the end of the partnership only eight dishes and six dish-covers were made;[324] these were produced to finish an order for the Duke of Holstein-Gottorp which had been started in 1776.[325] No more plates were assayed after the assay year 1777-8.[326] The absence of these articles which formed the basis of services of plate accounted to a considerable extent for the reduction in the total of assay silver in the last years of the partnership. In 1776-7 the partners had assayed 11,831oz. 3dwt. 0gr.[327] and of that 4,978oz. 1dwt. 0gr. came just from dishes, dish-covers and plates.[328] None of those articles was made in 1779-80[329] when the partners produced only 1,824oz. 0dwt. 12gr. of assay silver.[330]

Fashioning charges were significantly increased in the last years of the partnership. In 1774 the partners had charged 8d. per oz. for a tankard (and this was reduced by 1d. after a complaint);[331] in 1780 they once charged 1s. 6d. per oz.[332] In 1776 the partners estimated the fashioning of a plain teapot at 2s. 6d. per oz.;[333] in 1781 they charged one customer about 3s. 7d.[334] In 1776 they charged 32s. 0d. for making a dozen tablespoons;[335] on one occasion in 1780 they charged 42s. 0d. for doing the same work.[336]

The firm's revision of its prices for fashioning caused disputes. In 1780 John Wise of Bristol bought twelve sugar-basins[337] and insisted that the fashioning charge was high. The partners first reduced that charge by a third (£12)[338] and after further pressure (when Wise insisted that Sheffield's prices were lower) the partners agreed to a further reduction of £11 off the total bill,[339] which was originally £89 16s. 2d.[340] A few other disputes occurred,[341] but the number was not large because the partners normally gave estimates of fashioning charges before work began.

These estimates show that Boulton was often pricing himself out

of the market for hand-made silver items. In 1780 he informed the London firm Wakelin and Taylor that the fashioning charge on a sugar-basin would be 63s. 0d. (which was comparable to the amount originally charged Wise[342]); the partners felt they were unable to make them for less and that the basins could probably be obtained more cheaply in London.[343] Wakelin and Taylor did not place an order. Others failed to place orders after receiving the firm's fashioning charges for épergnes: Mr Patterson, of London, was quoted 4s. 6d. per oz.[344] and another was given an estimate of 5s. 9d. per oz. for a four-branch épergne.[345] A few years earlier the partners had been told that a London silversmith would have charged 4s. 0d. at most for Sir Robert Rich's elaborate épergne[346] (Plate 60). No épergnes were produced in the last five assay years of the partnership.[347] Boulton was no longer seriously interested in competing even for the most prestigious commissions: in 1781 he was inclined to reject a repeat order from the Admiralty[348] for a tureen and dish[349] (Plate 14) but Bingley decided to accept it, though only at a price which would ensure a healthy profit.[350]

The partners remained competitive with London silversmiths in the manufacture of items which at Soho were made with machines. The fly-press was not used in the capital for silver plate and although dies were used there to some extent[351] they were not used with stamps for the manufacture of articles such as candlesticks. For this item - and for salt-cellars which were frequently made with fly-presses - the partners continued to benefit from easier methods of manufacture and the price differences deriving from the limited quantities of silver associated with these methods.[352] It is significant that the production of candlesticks and salt-cellars by the partners did not reduce as much as many other items in the last years of the partnership.[353] Their main competition was from Sheffield where large quantities of both articles were made with the same methods[354] and manufacturers there sold a substantial number of silver candlesticks in London.[355]

Although the sale of machine-made items held up rather better than other items, the overall effect of policies pursued at Soho led

to a decline in the production of assay silver which was much larger than the national reduction. At Goldsmiths' Hall the 1776-7 peak of 249oz. 10dwt. of diet silver[356] declined to 201oz. 13dwt. in 1781-2.[357] In Sheffield production reduced from 48,209oz. in 1776-7 to 29,098oz. in 1781-2.[358] During this period production in London dropped by nearly one fifth and in Sheffield by about two-fifths; in both cases this was substantially less than at Soho where production in the last assay year of the partnership (1781-2) was nearly one eleventh of the level achieved in the highest year of production, 1776-7.[359]

In comparison, silver filigree manufacture at Soho remained relatively consistent. However, the supply of silver to the filigree workshop shows that production dipped to a small degree after c1776[360] and in 1779 so little sold in London that the London agent's stock was returned.[361] Despite the partners' anxiety,[362] production continued since they were obliged to provide their filigree makers Thomas and George Caldecott with employment, presumably because they had contracts.[363] The partners were probably also willing to continue production since there was a regular demand from visitors to Soho's Toy Room[364] and the stock was not very expensive for them to maintain: silver filigree hat buckles and breast pins sold for only 1s. 0d. each.[365] In the early 1780s the situation improved. In 1780 the filigree workshop was fully occupied with orders and in 1781-2 over 200oz. of silver were used there; this represented a return to the approximate level of 1776-7.[366] While this reflected an up-turn in the national economy[367] the increase was probably also due to an enhancement in the public appeal of the firm's work: in 1778 the partners' London agent was asked to provide some up-to-date patterns to imitate.[368] Despite the increase in sales a substantial stock remained at the end of the partnership.[369]

Towards the end of the partnership the pressures on Boulton compelled him to concentrate on profitable enterprizes. The partners continued to produce large quantities of buttons[370] in partnership with John Scale[371] which was profitable.[372] Sheffield plate was also maintained: in 1779 Bingley's department yielded profits of

£6 19s.5½d. (in addition to a salary of £120) for himself, and Boulton and Fothergill's joint profit was £218 6s. 6d.[373] At the end of the partnership they kept their London agent well stocked with Sheffield plate patterns,[374] frequently mentioned in correspondence their concentration on Sheffield plate[375] but rarely mentioned assay silver and when they did so, stressed their limited level of production.[376] About 1780 the manufacture of tortoise-shell 'toys' was sharply reduced.[377] Since Francis Eginton's 'mechanical paintings' had lost £500 by February 1780[378] the production of these[379] and 'japanned wares'[380] was brought to an end by dismissing him in June 1780; as Boulton remarked, he was abandoning any ventures which were unprofitable or which occupied any of his time.[381]

Boulton's involvement with the steam-engine business was frequently used in correspondence with customers as the only reason for dropping loss-making products.[382] These letters - containing wording carefully worked out by Boulton for the use of his clerks[383] - exaggerated the degree of his day-to-day involvement in these enterprizes and could not convincingly be used to reject, for example, an order for a silver locket in 1782.[384] Only very occasionally were losses revealed to the public,[385] though profits were sometimes described as moderate during disputes with customers over charges.[386] Boulton was intent upon concealing the losses which led to the demise of several ventures including silversmithing.

It has been argued that the failure of the silver business was not due to mismanagement;[387] in fact managerial errors were largely responsible for its losses and these mistakes were Boulton's own. He insisted upon being the principal manager.[388] Although the business was not conducted with the same degree of recklessness that characterised ormolu production[389] and although he correctly identified many of the problems of the business at the planning stage, he was unable to overcome them. This applied to the difficulties which derived from the Bill Account,[390] his competition with London's silversmiths,[391] building up a large marketing network,[392] and the management of the Soho Manufactory.[393] The problems were acute with those prestigious commissions which Boulton particularly sought.[394]

Though it was a financial failure, silversmithing provided incalculable advantages to Boulton, Birmingham, and the Soho Manufactory. Although the imposing building and the ormolu business provided the basis of a prestigious reputation,[395] silversmithing enabled Boulton to maintain that reputation not only by the silver itself, but also through frequent contacts with the wealthy and influential.[396] The equipment used for silversmithing was often shared with Sheffield plate,[397] which provided the firm with substantial returns;[398] and the sales of that substitute as well as other cheaper products were enhanced by the silver business.[399] Important contacts gained through the design and sales of silver enabled Boulton to publicise the embryo steam-engine business in the highest circles.[400] According to a life-long friend of Boulton's, the prestigious but unprofitable enterprizes like silversmithing were mainly responsible for the honours he received.[401] These honours were numerous: for example, in 1782 he was elected a member of the Society for the Encouragement of Arts, Manufactures and Commerce;[402] in 1784 he was elected a Fellow of the Royal Society, and in 1795 he became High Sheriff of Staffordshire.[403] Boulton's initiative in the foundation of The Assay Office in Birmingham and his introduction of silver plate production to that area provided the basis of what was to become a major centre for silversmithing[404] and allied trades.[405]

Boulton's energy, and the size and range of his undertakings had led Wedgwood in 1769 to describe him as '... the first manufacturer in England';[406] yet it was only later in his career that Boulton managed to get his ventures onto a firm and profitable basis. After his partnership with Fothergill, which formally ended on 22 June 1782 (three days after Fothergill's death),[407] Boulton carried on the hardware business at Soho, concentrating on buttons and Sheffield plate.[408] Although the production of assay silver continued to decline (in 1782-3 only 263oz. were marked) it did revive later in the century (in 1789-90 2,345oz. 9dwt. 0gr. were marked).[409] By then, significantly, Boulton had reduced the Bill Account to negligible proportions.[410] This was largely due to the success of the steam-engine business: the profits just from 1780-91 amounted to

£76,000.[411] Boulton's share enabled him to pay Mrs Fothergill an allowance[412] and settle her former husband's dispute with Mrs Swellingrebel.[413] The steam-engine business expanded with the construction of the Soho Foundry in 1795 for the casting of steam-engine parts.[414] Boulton's other important achievement was the Soho Mint, constructed about 1786,[415] where with very limited staff and advanced technology he efficiently produced coins, medals, and tokens, in vast quantities and at low prices;[416] here his life-long vision of the potential of industrialization was fully realised.[417] At his death in 1809 Boulton's estate was valued at £150,000.[418]

Boulton's son, Matthew Robinson, increasingly sold off the various businesses at Soho[419] and in 1833 The Matthew Boulton and Plate Co. was also sold.[420] The Boulton family's connection with the Manufactory therefore gradually diminished, and by the middle of the century little production was being carried out at Soho even by others.[421] Following the expiry of the lease on the land,[422] the building was demolished in 1862.[423]

NOTES

CHAPTER V

THE DECLINE OF SILVERSMITHING AND THE END OF THE BOULTON AND FOTHERGILL PARTNERSHIP

1 See Appendix 1B.
2 See pp. 223-4.
3 See pp. 126-9.
4 See pp. 77-8.
5 Boulton M. Biograph etc., item 112, sheet 2, James Keir, 'Memorandums for the Memoir of M. Boulton', 3 December 1809.
6 See pp. 65-72.
7 See pp. 108-25.
8 B. A. O., Plate Register, Birmingham, 1773-92. Different weights were recorded for the candlesticks: e. g. one pair 16oz. 8dwt. 12gr., two pairs 34oz. 7dwt. 0gr., and four pairs 89oz 5dwt. 12gr.
9 See Appendix 111C.
10 Letter Book I, pp. 438-9, B. & F. to Morris & Son, 9 June 1779.
11 See pp. 57-8 and 71-2.
12 See p. 71.
13 See p. 57.
14 See Chapter III note 500.
15 See p. 133.
16 See pp. 180-1.
17 See pp. 181-3.
18 e. g. Journal 1778-81, p. 280, 31 December 1779.
19 Scale etc., item 23, J. S. to M. B., 21 April 1776.
20 Keir, James, item 40, James Keir to M. B. [1778-1780].
21 See p. 101.
22 See p. 135.
23 See pp. 124-5.
24 See pp. 105-8.
25 See pp. 132-4.
26 See pp. 176-7.
27 The soup-tureens are 16½ in. long and 10½ in. wide (J. B. Speed Art Museum, Louisville, *Matthew Boulton, Designer and Craftsman, 1728-1809*, exhibition catalogue (1976), item 12); the sauce-tureens are 10½ in. long and 4¾ in. wide (Delieb and Roberts, *Silver Manufactory*, p. 87).
28 See pp. 116-21.
29 See p. 176.
30 See p. 126.
31 Letter Book J, p. 31, M. B. to Mrs Watt, 14 October 1780.
32 See pp. 128-9
33 See pp. 31-2.
34 Cule, *Financial History*, p. 136.
35 See p. 31.
36 Fothergill etc., item 131, 'Account of Debts due in April and May', 1 May 1773.
37 Goodison, *Ormolu*, p. 36.
38 Letter Book G, pp. 378-9, B. & F. to Josiah Birch, 19 July 775.
39 See p. 57.

40 e.g. Letter Book F, pp.515-6, [B.&F.] to Adams and Son, 2 July 1774; Letter Book H, p.520, B. & F. to Thomas Wilson and Blanckenhagen, 11 April 1778.

41 e.g. Letter Book F, p.404, B. & F. to J. and W. Walmsley, Manchester, 11 February 1774.

42 e.g. Letter Book F, p.618, B. & F. to J. Scott, 23 November 1774.

43 e.g. Letter Book F, p.397, B. & F. to Sir Robert Murray Keith, 26 January 1774; Letter Book H, p.81 [B.&F.] to Y. D. Astley, 19 December 1776.

44 The Earl of Hertford was sent a reminder at the end of November 1772 to pay within one month for Sheffield plate candlesticks sent early in October 1772 (Letter Book F, p.102, B. & F. to the Earl of Hertford, 28 November 1772).

45 See Appendix IV.

46 Letter Book F, p.60, B. & F. to Robert Albion Cox, 26 September 1772.

47 Letter Book F, p.331 [B.&F.] to Robert Albion Cox, 30 September 1773.

48 Letter Book F, p.259 [B.&F.] to Robert Albion Cox, 7 July 1773.

49 See Appendix V, entry on Caldecott, George and Thomas.

50 Letter Book F, p.236 [B.&F.] to Robert Albion Cox, 7 June 1773.

51 See Appendix IV.

52 Letter Book F, pp.520-1, B. & F. to Robert Albion Cox, 6 July 1774.

53 See Appendix IV.

54 Letter Book H, p.706 [B.&F.] to Floyer and Price, 7 October 1778.

55 Letter Book F, p.618, B. & F. to Mr. Perrot, 23 November 1774.

56 Letter Book I, pp.65-6, B. & F. to Richard Moland, 14 August 1777 and Letter Book I, pp.382-3 [B.&F.] to Lord Webb Seymour, 2 March 1779.

57 Letter Book G, p.134, A.J.C. to Alexander Johnston and Son, 20 September 1774.

58 Letter Book G, pp.147-8, B. & F. to Alexander Johnston and Son, 1 October 1774.

59 B.R.L., B.W.C., Portions of a Letter Book, 1773, B. & F. to Dr Wall, 4 May 1773.

60 Letter Book F, p.392, B. & F. to Lord Lyttleton, 15 January 1774.

61 e.g. Christopher Wren, of Wroxall, near Warwick, was reminded in December 1773 to pay for silver worth £14 18s. 0d. sent in the previous September (Letter Book F, p.380 [B.& F.] to Christopher Wren, 29 December 1773). Other examples included Letter Book F, pp.625-6, B. & F. to Sir Robert Rich, 30 November 1774, and Letter Book H, p.77 [B.& F.] to John Myddleton, 17 December 1776.

62 Letter Book G, p.624, B. & F. to Captain Evans, 29 May 1776.

63 Letter Book H, p.74 [B.&F.] to Captain Evans, 17 December 1776 and Letter Book H, p.256 [B.& F.] to Bayley and Dyott, 28 June 1777.

64 Letter Book H, p.669 [B.&F.] to Captain Evans, 19 August 1778.

65 Letter Book G, p.273, J. H. to Mrs Hannah Piper, 28 February 1775.

66 Letter Book H, p. 4 [B. & F.] to Lord Gormonston, 18 September 1776; Letter Book H, pp. 114-5 [B. & F.] to Lord Gormonston, 25 January 1777 and Letter Book H pp. 129-30 [B. & F.] to Lord Gormonston, 14 February 1777.

67 Letter Book H, pp. 178-9 [B. & F.] to Lord Gormonston, 2 April 1777.

68 Letter Book H, pp. 131-2 [B. & F.] to Samuel Brooke, 14 February 1777.

69 e.g. Pierre Gouthière (1732-1813 or 1814), a maker of bronzes, worked for many patrons in France who were notoriously bad at paying bills (Erikson, *Neo-classicism*, pp. 188-9) See note 70 below.

70 Christopher Gilbert, *The Life and Work of Thomas Chippendale (1978)*, pp. 32-3. Although Chippendale (1718-79) suffered from the unreasonable behaviour of some clients, some paid late when he failed to complete orders on time.

71 Letter Book I, p. 141, B. & F. to John Staples, 17 December 1777.

72 Letter Book I, p. 140, B. & F. to Cornelius O'Callaghan, 16 December 1777.

73 Letter Book H, pp. 421-2, B. & F. to Cornelius O'Callaghan, 30 December 1777.

74 Letter Book H, pp. 457-8, B. & F. to Samuel Brooke, 4 February 1778 and Letter Book H, p. 805, B. & F. to Thomas Heartley & Son, 12 December 1778.

75 Letter Book H, p. 898, B. & F. to Travers Hartley and Son, 24 March 1779.

76 e.g. Paul Gieppi of Milan ordered silver articles in September 1778 (Letter Book I, p. 300, B. & F. to A. & B. Songa, 30 September 1778). B. & F. admitted they were responsible for delay (Letter Book I, p. 331, B. & F. to A. & B. Songa, 27 November 1778). The articles were sent late in November (Journal 1778-81, p. 51. 25 November 1778) and payment was only received in June 1779 (Letter Book H, p. 958, B. & F. to A. & B. Songa, 22 May 1779). Nigel Gresley of Drakelow near Burton-upon-Trent received a cup in April 1777 priced £29 10s. 4d. (Journal 1776-8; p. 308, 16 April 1777). B. & F. admitted a delay in manufacture (Letter Book G, p. 898, B. & F. to Nigel B. Gresley, 19 April 1777). In December 1777 the partners requested payment within a month (Letter Book H, p. 396 [B. & F.] to Nigel B. Gresley [11 or 12] December 1777). When payment was received is not clear. John Taylor of Berkeley Square, London, ordered two tureens in September 1776 and in February 1777 B. & F. apologised for the delay in making them (Letter Book G, p. 841, B. & F. to John Taylor, 22 February 1777). The tureens were sent in June 1777 (Journal 1776-8, p. 349, 17 June 1777). A reminder for payment was sent in September (Letter Book H, p. 334 [B. & F.] to John Taylor, 27 September 1777). When payment was received is not clear.

77 Box P1, item 89, George Patterson to M. B., 1 September 1768.

78 Letter Book G, p. 633, B. & F. to William Matthews, 10 June 1776.

79 [M. B.] Notebook 8, 1772, p. 2.

80 Letter Book G, pp. 633-4, B. & F. to William Matthews, 10 June 1776.

81 Letter Book H, pp. 235-6 [B. & F.] to George Patterson, 7 June 1777.

82 Matthews and Barton. Matthews, William, item 32, Matthews and Barton to B. & F., 30 December 1777.

83 In 1773 Sir Robert Murray Keith owed B. & F. £268 19s. 0d. (Walker Z. Snr. 1, item 12, Inland Debts, 26 April 1773); £222 18s 0d. of that was for six pairs of silver candlesticks and branches supplied in January 1773 (Letter Book F, p.397 [B.& F.] to Sir Robert Murray Keith, 26 January 1774). In addition he was sent a coffee-pot in May 1773 worth £30 0s. 0d. (Letter Book F, p.397, B. & F. to Sir Robert Murray Keith, 26 January 1774). A request for payment was ignored in September (Letter Book F, p.312, B. & F. to Sir Robert Murray Keith, 4 September 1774). In January 1774 he was charged nine months' interest on the candlesticks and branches (which amounted to £8 7s. 0d.) and six months' interest on the coffee-pot (which came to £0 12s. 6d.). The interest was calulated at 5% per annum (Letter Book F, p.397, B. & F. to Sir Robert Murray Keith, 26 January 1774). Sir Robert sent Payment in February 1774 (Letter Book F, p.432 [B.&F.] to Sir Robert Murray Keith, 16 March 1774).
In 1776 Patrick Robertson of Edinburgh was charged as follows:
'To interest on Silver Goods [amounting to] £33 9s. 1d. from December 1774 to October 1775 which is 10 months, 3 months' credit, leaves 7 months over at 5% [per] annum is £1 7s. 11d. but say £1 1s. 0d. (Letter Book G, p.530, B. & F. to Patrick Robertson, 13 February 1776). There is nothing to suggest that this was not paid in full.
On one occasion a customer paid interest which was not asked for: in November 1774 James Brazier of Bewdley was reminded to pay for two waiters worth £10 2s. 0d. (Letter Book F, p 619 [B.& F.] to James Brazier, 24 November 1774) which had been sent in August 1774 (Letter Book G, p.86, B. & F. to James Brazier, 4 August 1774). Brazier sent £10 3s 6d. which included interest of 1s. 6d. (Letter Book F, p.624 [B.& F.] to James Brazier, 28 November 1774).

84 B.A.O., Plate Register, Birmingham, 1773-92, 4 June 1776.

85 Letter Book G, p.512, B. & F. to Sir Robert Rich, 9 November 1775.

86 Letter Book F, p.566 [B.& F.] to Robert Albion Cox, 29 August 1774.

87 Letter Book H, p.86 [B.& F.] to Sir Robert Rich, 23 December 1776.

88 Letter Book G, p.800, B. & F. to Sir Robert Rich, December 1776.

89 Letter Book G, pp.582-4, B. & F. to Sir Robert Rich, 25 March 1776.

90 Letter Book G, p.610, B. & F. to J. W., 13 May 1776.

91 Wyatt Family, item 73, J. W. to B, & F., 29 February 1776.

92 Letter Book G, p.610, B. & F. to J. W., 13 May 1776.

93 Letter Book G, p.583, B. & F. to Sir Robert Rich, 25 March 1776.

94 Letter Book G, p.254, B. & F. to Sir Robert Rich, February 1775.

95 In September 1775 Rich was asked where the épergne should be sent (Letter Book G, p.419, B. & F. to Sir Robert Rich); since Rich did not reply, a reminder was sent (Letter Book G, p.441, B. & F. to Sir Robert Rich, 13 October 1775).

96 Wyatt Family, item 73, J. W. to B. & F., 29 February 1776.

97 Letter Book G, p.800, B. & F. to Sir Robert Rich, December 1776.
98 Letter Book G, p.512, B. & F. to Sir Robert Rich, 9 November 1775.
99 Fothergill etc., item 83, J. F. to M. B., 4 February 1772 and Fothergill etc., item 84, J. F. to M. B., 6 February 1772.
100 Letter Book G, pp.830-1, B. & F. to Elizabeth Montagu, 15 February 1777.
101 Grimwade, *Rococo Silver*, p.60
102 Letter Book G, pp.200-2, B. & F. to R. A. Wedderburn, 19 December [1774].
103 There is no evidence that this concession was offered to Dr Gresley (Box G2, item 216, note concerning Dr Gresley's order, 30 August 1776) or to John Turton (Letter Book G, p.799, B. & F. to John Turton, 9 January 1777). For information about the old plate supplied by these customers see text and note 122 below.
104 e.g. This concession was offered to Lady Morton (Letter Book G, p.544, B. & F. to J. W., 24 February 1776) and Mr Douglas of London (Letter Book G, pp.550-1, J. H. to J. W., 28 February 1776).
105 Dr Short of Lichfield was charged 10d. for 48oz. 8dwt. (Letter Book G, p.782, B. & F. to Dr Short, 21 December 1776).
106 The old silver plate may have been below standard because of the excessive use of solder which traditionally contained two parts of silver to one part of brass (Wilson, *Silverwork and Jewellery*, p.88). There was also a widespread view that silver plate made in London in the mid-eighteenth century was frequently below the sterling standard (see pp.30-1).
107 Journal 1776-8, p.77, 19 April 1776.
108 Journal 1776-8, p.138, 22 June 1776.
109 Lady Morton and Dr Short of Lichfield (Journal 1776-8, p.244, 31 December 1776).
110 Letter Book G, pp.219-20, B. & F. to Samuel Friedeberg, 6 January 1775.
111 Letter Book F, p.460 [B.&F.] to Robert Albion Cox, 21 April 1774.
112 Journal 1776-8, p.244, 31 December 1776. 113 Box G2, item 216, note of Dr Gresley's order, 30 August 1776.
114 The order came to £114 13s. 5d; this included the fashioning charges and the value of the silver (Box G2, item 216, note of Dr Gresley's order, 30 August 1776). When the value of his own silver was deducted he owed £49 11s. 7d. (Letter Book G, pp.744-5, B. & F. to Dr Gresley, 16 November 1776).
115 Box G2, item 216, note about Dr Gresley's order, 30 August 1776.
116 The order was sent on 27 October 1776 (Letter Book G, p.726, B. & F. to Dr Gresley, 27 October 1776) and 16 November 1776 (Letter Book G, pp.744-5, B. & F. to Dr Gresley, 16 November 1776) and 17 December 1776 (Journal 1776-8, p.233, 17 December 1776). Gresley sent a draft on 21 December 1776, (Letter Book H, p.88. [B.& F.] to J. and T. Wilkes, 25 December 1776).
117 Ledger 1776-8, p.214, 15 February 1777. Not all of the order was for silver plate (Letter Book G, pp.797-8, B. & F. to Elizabeth Montagu, 6 January 1777).
118 Matthews and Barton. Matthews, William, item 25, William Matthews to B. & F., 21 February 1777.

119 Letter Book I, p. f90, J. S. to John Stuart, 25 March 1778.
120 Four dishes and two dozen plates (Letter Book G, pp. 837-8, J. H. to J. W., 19 February 1777). Further items cost £289 19s. 3d. (Letter Book H, p. 424 [B. & F.] to Elizabeth Montagu, 31 December 1777) though £10 10s. 0d. of that total was for Sheffield plate (Ledger 1776-8 p. 282, 16 December 1777).
121 Ledger 1776-8, p. 292, 3 February 1778 (for 8 May 1777).
122 e.g. John Turton, near Stafford, supplied 135oz. 11dwt. worth £36 14s. 3d. (Letter Book G, p. 799, B. & F. to John Turton, 9 January 1777) and Thomas Graham (of Balgowan near Perth) supplied 551oz. 19dwt. (Ledger 1776-8, p. 294, 11 March 1778).
123 Boulton M. Biograph etc., item 112, sheet 2, James Keir, 'Memorandums for the Memoir of M. Boulton', 3 December 1809. Keir did not name Malmesbury, but his remarks fit this case.
124 Letter Book I, p. 273, J. H. to Matthews and Barton, 9 July 1778.
125 Journal 1778-81, p. 1, 12 August 1778.
126 Fothergill etc., item 224, J. F. to M. B., 10 May 1779.
127 Fothergill etc., item 233, J. F. to M. B., 29 January 1780.
128 Fothergill etc., item 235, J. F. to M. B. [April 1780].
129 Letter Book I, p. 282, B. & F. to Thomas Graham, 27 July 1778.
130 See pp. 77-8.
131 e.g. John Williamson of Stafford wanted two pairs of candlesticks (Letter Book G, p. 2, B. & F. to John Williamson, 20 May 1774) and supplied 95oz. 12dwt. 12gr. of silver worth £25 9s. 8d. (Letter Book G, p. 157, B. & F. to John Williamson, 13 October 1774). The Earl of Warwick bought plates worth £18 16s. 0d. from which the value of two old plates was deducted (Letter Book G, p. 120, B. & F. to the Earl of Warwick, 6 September1774).
132 See Appendix IV.
133 A coffee-pot (Ledger 1776-8, p. 2, 14 February 1776) and two winebottle labels (Journal 1776-8, p. 77, 13 March 1776).
134 An instrument case (Letter Book G, p. 20, B. & F. to Richard Moland, 7 June 1774) and a sugar-basin (Letter Book G, p. 640, B. & F. to Richard Moland, 15 June 1776).
135 e.g. A Dr Withering returned a cruet-frame (Ledger 1776-8, p. 206, 25 November 1776); a Mr. Fischer returned a cheese-toaster (Journal 1776-8, p. 343, 10 June 1777).
136 See p. 130.
137 e.g. T. & R. Gray of London, returned a lamp because it was late and too expensive (Letter Book I, p. 367 [B. & F.] to John Stuart, 16 January 1779). An argyle (a gravy-holder, Bradbury, *Sheffield Plate*, p. 203) returned because it was damaged (Letter Book G, p. 188, B. & F. to J. C. Talbot, Ingestre, Stafford, 1 December 1774).
138 Letter Book G, pp. 755-6 [B. & F.] to W. Roe, 26 November 1776.
139 Letter Book I, p. 268, B. & F. to Thomas Johnson, 13 April 1778.
140 Letter Book I, p. 310, B. & F. to Thomas Graham, 20 October 1778.
141 Letter Book G, p. 898, B. & F. to Nigel Gresley, 19 April 1777.
142 e.g. Sir George Shuckburgh (Letter Book G, p. 757, J. H. to J. W., 30 November 1776) and Alexander Blair, London Letter Book I, pp. 147-8, B. & F. to Alexander Blair, 31 December 1777).

143 Letter Book G, p.802, B. & F. to the Duke of Ancaster, 18 January 1777.

144 Wyatt Family, item 106, J. W. to B. & F., 19 November 1776.

145 Journal 1776-8, p.303, 25 March 1777.

146 Letter Book G, pp.832-3, B. & F. to the Duchess of Ancaster, 14 February 1777.

147 e.g. The Reverend Mr Arden wanted to return a tureen because of its high price; B. & F. refused because they were reluctant to tie up capital in stock and because they were unlikely to find another purchaser for this special item (Letter Book G, pp.721-2, J. S. to the Reverend Mr Arden, 8 October 1776). He was given a discount of £2 2s. 0d. (Journal 1776-8, p.362, 10 July 1777). John Glover of Bewdley was dissatisfied with the price and delay in receiving a coffee-pot; however, the offer of 6d. per oz. off the fashioning charge (Letter Book G, p.901, B. & F. to John Glover, 21 April 1777) led him to keep it (LetterBook I, p.13, [B. & F.] to John Glover, 7 June 1777). In 1779 a tea-urn for Mrs Dundass, Edinburgh required more silver than originally estimated and to compensate the fashioning charge was kept to a low level (Letter Book I, p.461, B. & F. to Patrick Robertson, 15 July 1779). A similar situation occurred with another tea-urn for Robert Hinde, London (Letter Book I, p.481, J. H. to John Stuart [October 1779]).

148 See note 147 above. Other examples include John Wright, a goldsmith of Chesterfield who exceptionally (see p.57) was permitted a reduction of 5% for prompt payment on five tankards (Letter Book G, p.145, B. & F. to John Wright, 1 October 1774). This almost certainly occurred because on 3 September 1774 he was promised the tankards in two weeks (Letter Book G, p.118, B. & F. to John Wright, 3 September 1774). Only two were sent on time, three were sent on 25 September and one during the following week (Letter Book G, p.142, B. & F. to John Wright, 25 September 1774). A dissatified Wright returned one tankard (Letter Book G, p.145, B. & F. to John Wright, 1 October 1774). In 1776 Benjamin May, a Birmingham retailer, was also allowed a 5% reduction for prompt payment but only after he complained of late delivery (Letter Book G, p.590 [B. & F.] to Benjamin May, 1 April 1776).

149 Boulton M. Biograph etc. item 112, sheet 2, James Keir 'Memorandums for the Memoir of M. Boulton', 3 December 1809.

150 Cule, *Financial History*, p.74.

151 ibid., pp.86-7.

152 See p.31-5.

153 Cule, *Financial History*, pp.56-7.

154 ibid., p.74.

155 See p.106.

156 Letter Book H, p.449, [M. B.] to Josiah Wedgwood, 24 January 1778.

157 Cule, *Financial History*, pp.51-5.

158 Boulton M. Biograph etc., item 111, 'Memorandum concerning Mr Boulton' by James Watt, 17 September 1809.

159 In 1772 M. B. sold his Packington Estate for £15,000. It has been thought that the whole sum was used for the steam-engine business (Cule, *Financial History*, p.291) but

according to M. B.'s account he paid off a mortgage of £4,000, put £5,000 into B. & F. and reserved the remainder for the Watt partnership (Fothergill etc., item 254, History of Facts B. & F. [c1782]).

160 Cule, *Financial History*, p.55.

161 e.g. M. B. was in Cornwall between 16 November 1779 and 22 February 1780 (M. B. Diary, 1779-80).

162 *The Selected Papers of Boulton and Watt: Vol. I the Engine Partnership 1775-1825*, edited by Dr Jennifer Tann (1981) pp.5-6 (hereafter cited as *Papers of Boulton and Watt, Vol. 1*, ed. Tann).

163 Dickinson, *Boulton*, p.113.

164 Watt, James 1780 to 1781, 2 of 5 boxes (hereafter cited as Watt 2), item 122, 'Steam Engine respecting rotative motion', Specification of Patent, 1781.

165 *Papers of Boulton and Watt, Vol. 1*, ed. Tann, p.7.

166 Dickinson, *Boulton*, p.90.

167 Fothergill etc., item 238, Cash Statement M. B. & J. F. Profit and Loss [1782]. In 1778 M. B.'s capital in B. & F. was £13,599 6s. 1d., however, his capital did increase in 1779 (see p.218).

168 Letter Book G, pp.742-3, B. & F. to J. W., 15 November 1776. See also p.70.

169 See pp.26-9 and pp.159-60.

170 See p.71.

171 Letter Book G, p.567 [B.& F.] to J. W., 12 March 1776.

172 Hodges, John, item 5, J. H. to M. B., 23 April 1777.

173 Fothergill etc., item 175, M. B. to J. F., 2 February 1778.

174 See p.64.

175 Letter Book G, p.514, M. B. to the Earl of Findlater, 20 January 1776.

176 e.g. John Stuart, B. & F's London agent, visited Mussin Pushkin (Letter Book I, p.157, J. H. to John Stuart, 17 February 1778) and Lady Morton (Letter Book I, p.221, J. H. to John Stuart, 6 May 1778) to discuss silver plate orders.

177 Exceptionally, M. B. delivered a tea-urn to Sir Harbord Harbord in 1778 (Hodges, John, item 8, J. H. to M. B., 10 May 1778).

178 See p.58-9.

179 Hodges, John, item 19, J. H. to M. B., 12 September 1780.

180 e.g. An order for two pairs of silver candlesticks for Thomas Stiff, London (Letter Book G, p.739, J. H. to J. W., 9 November 1776) and an order for a pair of candlestick-branches for Parker and Wakelin, London (Letter Book I, p.512, J. H. to Wakelin and Taylor, 11 December 1779).

181 e.g. Richard Moland (Letter Book I, pp.65-6, B. & F. to Richard Moland, 14 August 1777) and Amos Green (Box G2, item 160, Amos Green to Francis Eginton, 11 February 1774).

182 e.g. A letter of introduction for the Duke of Holstein-Gottorp, (Box P2, item 118, Mussin Pushkin to M. B., 14 June 1775) and Elizabeth Montagu (Montagu, Mrs, item 9, Elizabeth Montagu to M. B., 8 April 1776).

183 Letter Book G, p.803, B. & F. to Sir Walter Blount, 18 January 1777.

184 Letter Book G, pp.869-70, B. & F. to Lady Morton, 15 March 1777.

185 Letter Book H, pp.401-2, B. & F. to Mussin Pushkin, 13 December 1777.

186 Letter Book G, p.203, B. & F. to Sir Harbord Harbord, 19 December 1774.
187 Letter Book G, p.379, B. & F. to Josiah Birch & Son, 19 July 1775.
188 Letter Book G, p.799, B. & F. to John Turton, 9 January 1777.
189 e.g. Mr. Stiff, of London, cancelled one out of three pairs of candlesticks because of delays (Wyatt Family, item 106, J. W. to B. & F., 19 November 1776); Thomas Graham, of Balgowan, near Perth, cancelled an order for salt-cellars and cruets (Letter Book I, pp.334-5, B. & F. to Thomas Graham, 28 November 1778) after he complained about the delay in sending another part of the order (Letter Book I, p.282, B. & F. to Thomas Graham, 27 July 1778) and excessive charges (Letter Book I, p.310, B. & F. to Thomas Graham, 20 October 1778). Charles Marsham of Soho, London, did not proceed with an order for a service of plate because of the long delay in receiving drawings (Wyatt Family, item 99, J. W. to B. & F., 5 November 1776).
190 Wyatt Family, item 83, J. W. to B. & F., 22 March 1776.
191 Scale etc., item 23, J. S. to M. B., 21 April 1776.
192 Soho Inventory, 1782, p.114.
193 Letter Book N, p.9, B. & F. to Messrs. Walley and Jones, 12 July 1782.
194 See pp.181-3.
195 e.g. Order of £24 15s. 6d. for Captain John Callander, Newcastle-under-Lyme (Day Book 1779-81, pp. 630-1, 18 April 1781) and an order for John Oseland, Handsworth for £3 1s. 6d. (Day Book 1779-81, p.123, 8 February 1780).
196 See p.57.
197 Day Book 1779-81, p.43, order for Glover Son & Frey, London, 19 November 1779.
198 Day Book 1779-81, p.29, order for Edward Lock, London, 6 November 1779.
199 Day Book 1779-81, p.26, order for James de Cote & Co, London, 3 November 1779 and Day Book 1779-81, p.36, order for Alexander Baxter & Co., London, 12 November 1779.
200 Day Book 1779-81, pp.24-56, November 1779.
201 Fothergill etc., item 233, note by M. B., on letter J. F. to M. B. 29 January 1780.
202 See pp.54-5.
203 Letter Book I, p.671 [B.& F.] to Joseph Dyott, 23 December 1780.
204 See pp.54-5.
205 Bradbury, *Sheffield Plate*, p.75.
206 Letter Book I, p.606, J. H. to John Le Coq, 6 July 1780.
207 Letter Book E, p.158, J. W. to Jefferys and Drury, 31 July 1771.
208 e.g. Day Book 1779-81, p.361 (a tankard), 29 July 1780 and Day Book 1779-81, p.331 (candlesticks) 11 July 1780.
209 Day Book 1779-81, p.302, 24 June 1780.
210 Cash Book, 1772-82, 11 November 1776.
211 Day Book 1779-81, p.179, 23 March 1780.
212 Day Book 1779-81, p.352, 26 July 1780.
213 Letter Book I, p.810, J.H. to Samuel Glover, 25 July 1781.
214 See p.18.
215 There were exceptions: e.g. spoons, which they seldom made

See Chapter III, note 529) and buckles (Letter Book I, p. 899, J. H. to Goodall and Birch, 17 December 1781) since Sheffield plate lacked durability and the work involved was excessive (Bradbury, *Sheffield Plate*, p. 22).

216 See p. 54.

217 Letter Book G, p. 24, B. & F. to Lord Ravensworth, 11 June 1774.

218 Letter Book G, p. 94, B. & F. to Lord Ravensworth [about 11 August 1774].

219 Letter Book G, pp. 830-1, B. & F. to Elizabeth Montagu, 15 February 1777.

220 Journal 1776-8, p. 444, 16 December 1777.

221 Letter Book I, p. 139, J. H. to Elizabeth Montagu, 13 December 1777. There were probably four covers since she bought four silver dishes (Letter Book G, p. 909, B. & F. to Elizabeth Montagu, 1 May 1777).

222 Letter Book I, pp. 196-7, J. H. to the Earl of Inchiquin, 28 March 1778.

223 Box I Ia to Iz (hereafter cited as Box I), item 13, Earl of Inchiquin to B. & F., 19 January 1778.

224 Bradbury, *Sheffield Plate*, p. 75.

225 ibid., p. 14.

226 In 1776 Arthur Young reported that the nailers working on the road between Soho and Birmingham were complaining that their trade was declining through disputes with America. (Berg, *Age of Manufactures* pp. 294-5, citing E. 1. Davies, *The Handmade Nail Trade of Birmingham and District*, Master of Commerce Thesis, University of Birmingham (1933), p. 265).

227 Ashton, *Economic Flunctuations*, pp. 162-4.

228 ibid., p. 184.

229 ibid., p. 186.

230 G. H. L., Goldsmiths' Company, Court and Committee Book, Vol. 1, 1776-85. No. 1708: B39 pp. 24-5, Report of the Diet, 28 May 1777.

231 G. H. L., Goldsmiths' Company, Court and Committee Book, Vol. 1, 1776-85. No. 1708: B39 p. 91, Report of the Diet, 28 May 1779.

232 S. A. O., Plate Book 1, September 1773-September 1781 (information kindly supplied by D. G. Johnson, Assay Master).

233 See p. 30.

234 See p. 124.

235 See p. 115 and p. 118.

236 Bateman registered her mark at Goldsmiths' Hall in 1761 (Shure, *Bateman*, p. 14) and retired in 1790 (ibid., p. 23). She produced a glass bowl supported by silver wire in 1784 (ibid Plate XXXVIII).

237 Culme, *Nineteenth Century Silver*, p. 15.

238 See p. 118.

239 Culme, *Nineteenth Century Silver*, p. 14

240 See pp. 105-7.

241 See pp. 107-8.

242 Keir, James, item 40, James Keir to M. B. [1778-80].

243 Letter Book G, pp. 582-4, B. & F. to Sir Robert Rich, 25 March 1776.

244 Letter Book G, p. 823, B. & F. to Preston & Co., 8 February 1777.

245 See pp. 213-4.

246 See pp. 213-4.
247 See p. 74.
248 Letter Book G, pp. 864-5 [B. & F.] to Francis Butcher, 13 March 1777.
249 Fothergill etc., item 194, J. F. to M. B., 9 May 1778. The order would have been for Lord Malmesbury (see p. 210).
250 See Appendix 1B.
251 e. g. Elizabeth Montagu's service of plate was ordered in 1776 (Montagu, Mrs, item 9, Elizabeth Montagu to M. B., 8 April 1776) but was not completed until 1778 (Letter Book I, p. 190, J. H. to John Stuart, 25 March 1778). See also p. 222.
252 e. g. Mr Bacchus's punch ladle (Journal 1778-81, p. 18, 8 September 1778) and a coffee-pot for John Taylor, London. (Journal 1778-81, p. 23, 25 September 1778).
253 Although contracts have not survived for several of the silversmiths at Soho (see Appendix V, entries on e. g. Burn, Anthony and Edstrom, Stephen) it is virtually certain that they all had them: contracts have survived for some (see Appendix V, entries on Bunbury, Thomas and Fellowes, John), and this was the partners normal practice (see p. 125).
254 See Appendix V, entries on Burn, Anthony and Edstrom, Stephen.
255 See pp. 213-4.
256 Scale etc., item 23, J. S. to M. B., 21 April 1776.
257 See Appendix V, entry on Burn, Anthony.
258 Fothergill etc., item 195, J. F. to M. B., 10 May 1778.
259 Keir, James, item 17, James Keir to M. B., n. d.
260 Keir, James, item 70, envelope entitled 'M. B. and J. Keir', n. d.
261 Letter Book J, M. Boulton, 1780-1781 (hereafter cited as Letter Book J), pp. 69-70, M. B. to J. F., 11 December 1780.
262 Boulton M. Biograph etc. item 112, James Keir to Matthew Robinson Boulton, 3 December 1809.
263 Fothergill etc., item 238, Cash Statement M. B. and J. F. Profit and Loss [1782].
264 The sum was borrowed in 1778 (Cule, *Financial History*, p. 109).
265 Box H3 Hom to Hz (hereafter cited as Box H3), item 41, Abraham Hoskins to M. B. [November 1781]. The sum had been borrowed by 1778 (Box H3, item 82, Mr Holbrooks to M. B., 22 December 1778).
266 The sum had been advanced by February 1779 (Cule, *Financial History*, p. 83).
267 ibid., p. 77.
268 Day Book 1779-81, p. 360, 29 July 1780.
269 Letter Book I, p. 586 [B. & F.] to John Stuart, 9 May 1780.
270 Letter Book I, p. 5, B. & F. to William Dunn, 22 May 1777. The term 'japanning' indicated the use of a lacquered surface in imitation of the techniques and sometimes the styles of the East; these were used on a variety of materials such as wood, for furniture (Fastnedge, *Furniture Styles*, pp. 92-105) or papier mãché, for such items as trays or boxes (Shirley Spaulding DeVoe, *English Papier Mâché of the Georgian and Victorian Periods* (1971), pp. 135-82).
271 Dickinson, *Boulton*, pp. 104-5. A 'Picture Acount' was entered in B. & F.'s ledgers from 1776 (Ledger 1776-8, p. 221).
272 Journal 1778-81, p. 92, 1 January 1779.
273 See Appendix V, entry on Bingley, William.

274 See pp. 213-4.
275 See p. 205.
276 Letter Book I, p. 331, B. & F. to A. & B. Songa, merchants, London, 27 November 1778; Letter Book I, pp. 335-6, B. & F. to John Motteux, merchant, London, 2 December 1778 and Letter Book I, pp. 334-5, B. & F. to Thomas Graham, 28 November 1778.
277 Keir, James, item 40, James Keir to M. B., 11 February [1779].
278 Keir, James, item 70, envelope entitled 'M. B. and J. Keir', n. d.
279 Keir, James, item 26, James Keir to M. B., 14 October 1778.
280 A number of silversmiths are known to have been in M. B.'s debt at earlier dates (see Appendix V - entries on Edstrom, Stephen and Burn, Anthony).
281 Keir, James, item 40, James Keir to M. B., 11 February [1779].
282 Boulton M. Biograph etc., item 112, sheet 2, 'Memorandums for the Memoir of M. Boulton', 3 December 1809.
283 Keir, James, item 40, James Keir to M. B., n. d. [1778 or 1779].
284 Letter Book I, p. 356 [B. & F.] to John Stuart, 5 January 1779.
285 Dickinson, *Boulton*, p. 103.
286 Boulton M. Biograph etc., item 112, James Keir to Matthew Robinson Boulton, 3 December 1809.
287 Letter Book J, pp. 69-70, M. B. to J. F., 11 December 1780.
288 Letter Book L, p. 12, M. B. to J. F., 30 June 1780.
289 Letter Book M, p. 25, M. B. to Mr Capper, 12 May 1781.
290 Letter Book M, p. 208, M. B. to Mr Henderson, 3 November 1781.
291 Letter Book M, p. 56, M. B. to William Matthews, 28 June 1781. See pp. 212-3.
292 Fothergill etc., item 254, 'Narrative relative to the dispute between them' [i. e. M. B. and J. F.] [1782].
293 Cule, *Financial History*, pp. 95-6.
294 Boulton M. (Miss Anne Robinson. Mrs Boulton), item 86, M. B. to Mrs Boulton, 28 June 1780.
295 Cule, *Financial History*, p. 148.
296 Walker Z. Snr. 1, item 44, Z. W. to M. B., 11 April 1781.
297 Walker Z. Snr. 1, item 35, M. B. and J. F. Profit and Loss Account, 1780. In 1774 M. B.'s capital was £18, 449 13s. 8d. and J. F.'s was £13, 031 9s. 10d.
298 Cule, *Financial History*, p. 109. See p. 218.
299 Box H3, item 45, Abraham Hoskins to M. B., 6 July 1782. See p. 218.
300 Box W3, item 30, J. Wiss to M. B., 14 October 1782. See p. 218.
301 Cule, *Financial History*, p. 148.
302 ibid., p. 292.
303 ibid., p. 148.
304 See pp. 15-7 and pp. 31-5.
305 Cule, *Financial History*, p. 115.
306 Boulton and Fothergill, 1782, M. B. to William Matthews, 13 February 1782.
307 Boulton and Fothergill, 'Partnership with [J.] F.' [1782].
308 Boulton and Fothergill, 'Partnership with [J.] F.' [1782].
309 Letter Book M, p. 213, M. B. to James Watt, 1 November 1781.
310 Letter Book M, p. 214, M. B. to James Watt, 13 November 1781.
311 Letter Book M, pp. 205-6, M. B. to James Watt, 3 November 1781.
312 Box C1, item 7, A. J. C., to M. B., 10 July 1781.
313 Fothergill etc., item 251, 'Copy of a Notice I [M. B.] delivered to Mr Fothergill', 2 November 1781.

314 Letter Book M, p. 228, M. B. to James Watt, 29 December 1781.
315 Letter Book M, p. 222, M. B. to William Matthews, 29 November 1781.
316 Boulton and Fothergill, 1782, M. B. to ?, 3 February 1782.
317 See pp. 33-5.
318 Cule, *Financial History*, pp. 119-20.
319 Letter Book M, pp. 248-9, M. B. to James Watt, 4 February 1782.
320 Letter Book M, p. 236, M. B. to James Watt, 9 February 1782.
321 Matthews and Barton, Matthews William, item 58, M. B. to William Matthews, 6 December 1781.
322 Boulton and Fothergill, 1782, M. B. to ?, 3 February 1782.
323 The last was for Thomas Graham in 1778 (Letter Book I, p. 310, B. & F. to Thomas Graham, 20 October 1778).
324 See Appendix IIIC.
325 Letter Book G, p. 528, B. & F. to J. W., 10 February 1776.
326 See Appendix IIIC.
327 See Appendix IB.
328 B. A. O., Plate Register, Birmingham, 1773-92.
329 See Appendix IIIC.
330 See Appendix IB.
331 Letter Book G, p. 169, B. & F. to John Turner, 31 October 1774.
332 Day Book 1779-81, pp. 561-2, 9 February 1781.
333 Letter Book G, p. 544, B. & F. to J. W., 24 February 1776.
334 The fashioning charge was £2 0s. 0d. for a teapot weighing 13oz. 7dwt. 0gr. (Day Book 1779-81, p. 555, 2 February 1781).
335 Letter Book G, p. 544, B. & F. to J. W., 24 February 1776.
336 Day Book 1779-81, pp. 173-4, 20 March 1780.
337 Letter Book I, p. 652, B. & F. to John Wise, 26 October 1780.
338 Letter Book I, p. 754, B. & F. to John Wise, 19 May 1781.
339 Letter Book I, p. 773, B. & F. to John Wise, 29 May 1781.
340 Day Book 1779-81, p. 455, 16 October 1780.
341 Mr Hacker, of Worcester, was given a reduction on salt-cellars after complaining of the fashioning charge (Letter Book I, p. 369 [B. & F.] to Mr Hacker, 20 January 1779). Mr Wilkes, of Birmingham, was given a reduction of 5d. per oz. on a tankard and cup (Letter Book I, p. 658, J. H. to John Wilkes, [November 1780]).
342 The charges for Wise varied between 52s. 6d. and 67s. 6d per basin (Day Book 1779-81, p. 455, 16 October 1780).
343 Letter Book I, p. 886, J. H. to Wakelin and Tayler, 5 December 1781.
344 Letter Book I, p. 356 [B. & F.] to John Stuart, 5 January 1779.
345 Letter Book I, pp. 917-8 [B. & F.] to David Story, 5 February 1782.
346 Wyatt Family, item 73, J. W. to B. & F., 29 February 1776.
347 See Appendix IIIC.
348 See p. 66.
349 Fothergill etc., item 247, J. F. to J. H. (quoting M. B. to J. F., 30 March 1781), 1 April 1781.
350 Fothergill etc., item 249, J. F. to M. B., 7 April 1781.
351 Hester Bateman used dies to create beaded borders (Culme, *Nineteenth Century Silver*, p. 15).
352 See pp. 110-3.
353 See Appendix IIIC.
354 See pp. 107-14. Salt-cellars (Bradbury, *Sheffield Plate*, p. 309).
355 ibid., p. 219.

356 G.H.L. Goldsmiths' Company, Court and Committee Book, Vol. 1, 1776-85, No. 1708: B39, pp.24-5, Report of the Diet, 28 May 1777.
357 G.H.L. Goldsmiths' Company Court and Committee Book, Vol. 1, 1776-85, No. 1708: B39, Report of the Diet, 28 May 1782.
358 S.A.O., Plate Book 1, September 1773-September 1781 and Plate Book 2, October 1781-July 1788. (Information kindly supplied by D. G. Johnson, Assay Master.)
359 See Appendix IB.
360 See Appendix V, entry on Caldecott, George and Thomas.
361 Letter Book I, p.450, J. H. to John Stuart, 22 June 1779.
362 Letter Book I, p.367 [B.& F.] to John Stuart, 16 January 1779.
363 See Appendix V, entry on Caldecott, George and Thomas.
364 See pp.59-60..
365 Day Book 1779-81, p.4, 17 November 1779.
366 See Appendix V, entry on Caldecott, George and Thomas.
367 Ashton, *Economic Fluctuations*, pp.162-4.
368 See Appendix V, entry on Caldecott, George and Thomas.
369 See Appendix IIIB.
370 Letter Book I, p.621, B. & F. to William Pagan, 12 August 1780.
371 Ledger 1776-8, p.243, 1777.
372 Cule, *Financial History*, p.207.
373 Journal 1778-81, p.280, 31 December 1779.
374 Letter Book I, p.671 [B.& F.] to Joseph Dyott, 23 December 1780.
375 e.g. Letter Book I, p.806, J. H. to Andrew Grain, 27 June 1781 and Letter Book I, p.487, J. H. to M. A. Le Sage, 23 October 1779.
376 Letter Book I, p.921 [B.& F.] to Skyrin & Co., 21 January 1782.
377 Letter Book I, p.601, B. & F. to John Heath, 20 June 1780.
378 Dickinson, *Boulton*, pp.105-6.
379 Paintings were, however, sometimes made after Eginton's departure with either the assistance of an outside painter, J. Barney, or Eginton (ibid., pp.105-6).
380 Orders were later met only if they could be supplied from stock (Letter Book I, p.723 [B.& F.] to Skyrin and Bailiff, 17 March 1781).
381 Box E2, item 11, M. B. to Francis Eginton, 28 June 1780.
382 Letter Book I, p.703, B. & F. to Richard Barwell, 30 January 1781 and Letter Book I, p.722 [B.& F.] to John Garnett, 13 March 1781 (enquiries about 'mechanical pictures').
383 The letter to Barwell (note 382 above) was written by the clerk J. H. after he had consulted M. B. about the reply (Hodges, John, item 23, J. H. to M. B., 31 October 1780). The wording for the replies appears in M. B.'s hand on the back of a letter (Fothergill etc., item 233, J. F. to M. B., 29 January 1780).
384 Letter Book I, pp.974-5 [B.& F.] to Mr Fielding, 25 May 1782.
385 e.g. Letter Book G, p.823, B. & F. to Preston & Co., 8 February 1777.
386 e.g. Letter Book I, p.652 [B.& F.] to John Wise, 26 October 1780 and Letter Book G, p.512, B. & F. to Sir Robert Rich, 9 November 1775.
387 Christopher Lever, *Goldsmiths and Silversmiths of England* (1975), p.90.
388 See p.21.
389 See pp.24-5 and pp.158-9.

390 See pp. 205-12
391 See p. 63-72.
392 See p. 56, pp. 69-71 and pp. 213-4.
393 See pp. 125-9.
394 See pp. 181-3 and pp. 207-12.
395 See pp. 19-25 and p. 158.
396 See p. 64.
397 See pp. 105-15.
398 See pp. 224-5.
399 e.g. Together with an order for three pairs of silver candle-sticks and two pairs of silver snuffer-pans, Thomas Barrow of Manchester bought two pairs of steel snuffers withsilver bows (Day Book 1779-81, p. 364, 1 August 1780).
400 M. B.'s interest in the development of the steam-engine was mentioned to the architects James and Robert Adam as early as 1770 (Letter Book D, p. 31, M. B. to Mr Adam, 1 October 1770) and to many subsequent customers for silver (see p. 213).
401 Boulton M. Biograph etc., item 112, 'Memorandums for the Memoir of M. Boulton', by James Keir, 3 December 1809.
402 Box S2 Simp to Spen (hereafter cited as Box S2), item 236, Richard Samuel to M. B., 7 March 1782.
403 Dickinson, *Boulton*, p. 199.
404 See p. 13.
405 e.g. Electroplating, patented in 1840 by the Birmingham manufacturers George Richards Elkington and Henry Elkington (Culme, *Nineteenth Century Silver*, p. 116).
406 Meteyard, *Wedgwood*, Vol. II, p. 81, Josiah Wedgwood to John Bentley, 27 September 1769.
407 Letter Book M, p. 304, M. B. to ?, 21 June 1782.
408 Cule, *Financial History*, p. 293.
409 B. A. O., Plate Register, Birmingham, 1773-92.
410 Cule, *Financial History*, p. 294.
411 ibid., p. 218.
412 ibid., pp. 145-6.
413 Box L2, item 10, Van Liender to M. B., 7 September 1787.
414 Dickinson, *Boulton*, pp. 168-70.
415 ibid., p. 136.
416 Apart from medals and other coins, 45, 407, 440 penny pieces were minted at Soho for the British government between June 1797 and 21 August 1799 (ibid., p. 150). The Soho Mint utilized steam-powered presses (Delieb and Roberts, *Silver Manufactory*, pp. 111-2) but few staff: 13 men, 27 women and 16 boys (Berg, *Age of Manufactures*, p. 307). M. B. executed halfpenny coinage at a price not exceeding half that incurred at the time by the London Mint (Dickinson *Boulton*, p. 137).
417 Boulton M. Biograph etc., item 112, sheet 2, James Keir. 'Memorandums for the memoir of M. Boulton', 3 December 1809.
418 Delieb and Roberts, *Silver Manufactory*, pp. 122-3.
419 e.g. The Matthew Boulton and Button Co. was sold in 1809 (Bownas J. and Co. (Successors to M. B. and Button Co.) Murdock and Toney (hereafter cited as Bownas etc.), item 27, Agreement between J. Bownas and Matthew Robinson Boulton, 1809).

420 Boulton M & Plate Co. Robinson Edkins and Aston, item 131, 'Proposition for purchasing the Plate trade at Soho', 7 November 1833.

421 W. C. Aitken, *A Slight Sketch of the Manipulatory Processes in Electro-Metallurgy, Glass and Papier Mâché Manufacture, Steel Pen and Button making, Brassfounding, Coining etc.* (1851), p. 24.

422 See p. 15.

423 B. R. L. Manuscript Number 661022, Joseph Hill, Notebook, Vol. 16, Handsworth and Perry Barr, p. 96.

APPENDIX I

ANNUAL TOTALS OF ASSAY SILVER

APPENDIX 1A. Up to 1772-3.

This appendix lists the available evidence for the production of assay silver in each assay year up to the foundation of The Assay Office, Birmingham, in 1773. The actual production was almost certainly greater than these figures suggest, since they are based mainly upon the Matthew Boulton Papers, which are particularly incomplete before the mid-1770s[1] and which contain many references to pieces which may or may not have been in silver that are omitted here.[2] That source is supplemented by other documentation and surviving pieces of silver.

The totals are based just upon the silver known to have been sent for assay. The weights of pieces were normally recorded in Boulton and Fothergill's correspondence with James Folliott, their agent in Chester, who arranged the assaying of the partners' silver there.[3] In some cases, however, only descriptions of the type of article were included in that correspondence[4] and in these cases the articles have been added to this list. A few additional surviving pieces of silver have also been added to the total where it is both clear that they are not included within figures based upon the Folliott correspondence and where it is evident from the assay marks on them that they were assayed.

Other pieces of silver which, according to the Act of 12 Geo. II.c.26 (1738) should have been assayed,[5] are included in brackets below; in at least one case, the tea-urn made for Lord Boston in November 1772[6], the silver was not assayed by the partners, but in other cases it is unclear whether pieces were assayed.[7] In addition to exempting certain types of articles such as chains and small cases, the 1738 Act also excluded all articles weighing less than 10 dwts. and any which might, by reason of their fineness, have been damaged by the assaying or hallmarking processes;[8] since the descriptions of certain articles by the partners are vague and may have been excluded by the Act, these doubtful cases have been excluded here.[9]

Unless otherwise indicated the information listed here is derived from the Matthew Boulton Papers.

1765-6	6 pairs of candlesticks.
1766-7	-
1767-8	-
1768-9	2 pairs of candlesticks.[10]
	(3 candlesticks.)
1769-70	1 mazarine.[11]
	(4 pairs of candlesticks; an order for an unspecified number of candlesticks; a tea-urn; a set of mounts for a tea-urn.)
1770-1	144oz. 10dwt. 0gr. plus 2 pairs of candlesticks.
	(7 pairs of candlesticks plus two orders for candlesticks each for an unspecified number.)
1771-2	1,340oz. 14dwt. 0gr. plus a tureen.
	(2 pairs of candlesticks, 2 tea-canisters, 9 dozen whip-caps, 1 set of mounts for a tea-urn, and at least 11 sets of door-knobs and escutcheons.)
1772-3	515oz. 2dwt. 12gr. plus 1 pair of candlesticks.
	(2 drinking-cups, 2 cream-jugs, 1 pair of bottle-stands, 1 set of mounts for a pair of vases.)

1 See Bibliography, Primary Sources, B.R.L., M.B.P.

2 e.g. Fothergill etc., item 58, M. B. to Soho, 29 May 1769 (an order for 16 pairs of candlesticks) and Letter Book E, p.37, J. W. to William Matthews, 10 February 1771 (an order for candlesticks).

3 e.g. Letter Book E, p.140, C. W. to James Folliott, 10 July 1771 (a tea-urn weighing 54oz. 10dwt.).

4 e.g. Letter Book E, p.51, J. W. to James Folliott, 22 February 1771 (2 pairs of candlesticks).

5 de Castro, *Law and Practice of Hall-marking*, pp.71-2.

6 Letter Book E, pp.626-7, B. & F. to Lord Boston, 1 November 1772.

7 See p.28.

8 de Castro, *Law and Practice of Hall-marking*, pp.71-2.

9 e.g. B.R.L., Timmins, Collection of Original Letters, Part 1, p.11. William Fothergill to B. & F., 6 June 1769 is an order for 2 pairs of buckles and 2 'sets' of buckles. (What was meant by 'sets' of buckles is unclear.) The weights are not stated; any buckle below 10 dwt. in weight was exempt from assay (de Castro, *Law and Practice of Hall-marking*, pp.71-2). Later, variations in the weights of B. & F. buckles, meant that some were assayed (see Appendix IIIC) while others were not (see Appendix IIIB).

10 See Plates 5 and 10.

11 B.A.O., Ref. No.23.

APPENDIX 1B. 1773-4 to 1781-2.

These totals, arranged in assay years, have been calculated from the quantities of silver sent by Boulton and Fothergill to The Assay Office, Birmingham, and recorded in relevant parts of The Register of Plate and Silver Wares Assayed and Marked or Broke at the Birmingham Assay Office, August 31st 1773 - March 20th 1792. The totals given below exclude the limited amount of silver found to be unsatisfactory, which applied to only two assay years: 88oz. 18dwt. 12gr. in 1773-4 and 46oz. 13dwt. 12gr. in 1774-5. The totals are the amounts of silver received by The Assay Office rather than the weights returned to the partners after scrapings had been taken for assay purposes; the differences between the two were very small so that in 1773-4, for example, 9,833oz. 5dwt. 12gr. were received and 9,819oz. 7dwt. 16gr. returned. Virtually all of the silver recorded here was made by the partners at Soho but the figure for 1776-7 includes four boxes weighing 10oz. 1dwt. 12gr. made by John Bentley of Birmingham and assayed under Boulton and Fothergill's names;[1] it is also possible that some buckles made by Thomas Mynd of Birmingham were assayed under the partners' names.[2] The partners hardly ever failed to send silver to The Assay Office which should have been sent there; the exceptions were two pairs of candlesticks sent to Patrick Robertson of Edinburgh in 1776.[3] The end of the assay year 1781-2, which occurred on 1 July 1782, nearly coincided with the death of Fothergill on 19 June and the formal end of their partnership on 22 June;[4] no more silver was sent to The Assay Office between the end of the partnership and the end of the assay year. An inventory taken at the end of the partnership shows that 198oz. 13dwt. 9gr. of silver plate[5] and a few other silver items were in stock;[6] whether these figures were included in those listed below is not clear since it is not known if they had already been assayed.

Assay years generally ended and began early in July; for example, the assay year 1774-5 began on 4 July and the assay year 1775-6 on 3 July. The first assay year at The Assay Office, Birmingham, was an exception, beginning on 31 August 1773.

1773-4	9,833oz.	5dwt.	12gr.
1774-5	7,524oz.	6dwt.	16gr.
1775-6	5,023oz.	4dwt.	18gr.

1776-7	11,831oz.	3dwt.	12gr.
1777-8	6,390oz.	10dwt.	7gr.
1778-9	3,254oz.	12dwt.	12gr.
1779-80	1,824oz.	0dwt.	12gr
1780-1	2,887oz.	5dwt.	0gr.
1781-2	1,174oz.	17dwt.	0gr.

1 Journal 1776-8, p.360, 21 July 1777.
2 See Appendix II.
3 Letter Book G, p.658, B. & F. to Patrick Robertson, 13 July 1776.
4 Letter Book M, p.304, M. B. to ?, 21 June 1782.
5 Soho Inventory, 1782, p.154, 10oz. 1dwt., p.168, 6oz. 17dwt. 0gr., and p.186, 191oz. 6dwt. 8gr.
6 Soho Inventory, 1782, p.94, lists 5½ pairs of salt-cellars, 1 candlestick, 1 sugar-basin and 1 punch-ladle and p.154 lists 7 sugar-tongs and 3 punch-ladles.

APPENDIX II

FACTORED SILVER

Only a limited amount of silver was sold on commission by Boulton and Fothergill. The firms of two men listed below, Thomas Mynd and John Bentley, were used as outworkers by the partners; both had earlier worked at Soho and both later set up businesses in Birmingham.[1] Four boxes made in Birmingham by Bentley in 1777[2] were assayed under the partners' names[3] and it is possible that buckles made in Birmingham by Mynd in 1773 and 1774[4] were also amongst the buckles assayed by the partners in those years.[5] There is nothing to suggest a similarly close relationship between the partners and their other suppliers. This list is almost certainly not a complete catalogue of articles factored by the partners since it is based upon the incomplete survival of the Matthew Boulton Papers.[6]

Three spoons from London, July 1772.[7]

Three spoons from London, August 1772.[8]

Five dozen scissors with silver bows from Benjamin Withers & Co., Sheffield, September 1772.[9]

One knife and one fork, three dozen trinket-knives with silver blades from Charles and Luke Proctor, Sheffield, October 1772.[10]

Spoons from London, January 1773.[11]

Two spoons, 1773.[12]

One watch, March 1773.[13]

Three knife-blades from Charles and Luke Proctor, Sheffield, April 1773.[14]

One-and-a-half dozen button-tops from London, June 1773.[15]

Cutlery from Charles and Luke Proctor, Sheffield, August 1773.[16]

Buckles from Thomas Mynd, Birmingham, April 1773.[17]

One pair of buckles from Thomas Mynd, Birmingham, November 1773.[18]

Buckles from Thomas Mynd, Birmingham, March 1774.[19]

One spoon from London, January 1776.[20]

Fourteen buttons from London, April 1776.[21]

Buckles from C. Herman, Manchester, May 1776.[22]

Watch, February 1777.[23]

Buckles from Birmingham, February 1777.[24]

One pair of snuffers from Benjamin May, Birmingham, February 1777.[25]

Four boxes from John Bentley, Birmingham, July 1777.[26]

One dozen tablespoons, one dozen teaspoons, two gravy-spoons from London, August 1777.[27]

Three dozen teaspoons from Edward Sawyer, Birmingham, February 1779.[28]

One pair of buckles from Willmore and Alston, Birmingham, January 1782.[29]

1 See Appendix V, entries on Bentley, John and Mynd, Thomas.
2 Journal 1776-8, p.360, 2 July 1777.
3 B.A.O., Plate Register, Birmingham, 1773-92, 1 July 1777.
4 See list below text.
5 See Appendix IIIC.
6 See Bibliography, Primary Sources, B.R.L., M.B.P.
7 Letter Book E, p.500, A. J. C. to William Matthews, 12 July 1772.
8 Letter Book E, p.544, A. J. C. to William Matthews, 9 August 1772.
9 Letter Book F, p.51 [B. & F.] to Benjamin Withers & Co., 15 September 1772.
10 Letter Book E, p.604, F. Jukes to Charles and Luke Proctor, 14 October 1772.
11 Fothergill etc., item 101, J. F. to M. B., 23 January 1773.
12 Scale, John, item 15, J. S. to M. B., 8 February 1773.
13 Cash Book 1772-82, 17 March 1773.
14 B.R.L., B.W.C., Portions of a Letter Book, 1773, p.89, A. J. C. to Charles and Luke Proctor, 15 April 1773.
15 B.R.L., B.W.C., Portions of a Letter Book, 1773, pp.157-8, B. & F. to William Matthews [June] 1773.
16 B.R.L., B.W.C., Portions of a Letter Book, 1773, p.89, A. J. C. to Charles and Luke Proctor, 15 August 1773.
17 Fothergill etc., item 139, M. B. to J. F., 28 April 1773.
18 Cash Book 1772-82, 10 November 1773.
19 Box G2, item 158, A. Green to J. S., 5 March 1774.
20 Letter Book G, p.519, B. & F. to the Earl of Macclesfield, 27 January 1776.
21 Letter Book G, p.589 [B. & F.] to William Matthews, 3 April 1776.
22 Letter Book G, p.616, B. & F. to C. Herman, 20 May 1776.
23 Letter Book H, p.120 [B. & F.] to T. Bradshaw, 3 February 1777.
24 Letter Book G, p.835 [B. & F.] to Alexander Wilson [February] 1777.
25 Journal 1776-8, p.285, 11 February 1777.
26 Journal 1776-8, p.360, 2 July 1777.
27 Letter Book I, p.59, B. & F. to Bayley and Dyott, 4 August 1777.
28 Journal 1778-81, p.117, 25 February 1779.
29 Journal 1781-3, p.106, 5 January 1782.

APPENDIX III

THE PRODUCTION OF SILVER ARTICLES

A number of sources together provide an extensive record of the number of different types of articles produced during the Boulton and Fothergill partnership. The completeness of that record varies from period to period and according to whether or not the silver was assayed.

Appendix IIIA, covering the period up to the assay year 1772-3, is based almost entirely upon correspondence in the Matthew Boulton Papers; where other documentary sources or surviving pieces of silver provide evidence, these are indicated in footnotes. This Appendix almost certainly understates production because the Matthew Boulton Papers are particularly incomplete before the mid-1770s and, since many references there are to articles which may or may not have been in silver, these are omitted here.[1]

Particularly before 1776, the same limitations apply to Appendix IIIB, covering non-assay silver from 1773-4 to 1781-2. From 1776 correspondence is supplemented by sales ledgers and journals,[2] though even these provide incomplete information since many articles which may have been in silver were referred to as 'goods'.[3] The only complete record is provided by the Boulton and Fothergill Day Book, 1779-81 and it is this (rather than an increase in production) which accounts for the significantly higher figures for that period.[4] The articles included in this Appendix were, according to the Act of 12 Geo. II.c.26 (1738), exempt from assay;[5] those few articles which for particular reasons were not assayed but which according to that Act should have been assayed, are referred to in Appendix IIIC. Though articles in Appendix IIIB were not assayed, the information has been arranged in assay years to provide comparisons with the assay silver in Appendix IIIC. The articles listed in the final column of Appendix IIIB were in stock at the end of the partnership; these items were produced in addition to those in earlier columns since the figures in the latter are based on sales. All of the information in this Appendix is from the Matthew Boulton Papers.

Appendix IIIC is based upon the relevant parts of the Register of Plate and Silver Wares Assayed and Marked or Broke at The Birmingham

Assay Office, August 31st 1773 - March 20th 1792. The figures given in this Appendix exclude the limited amount of unsatisfactory silver returned by The Assay Office; in the assay year 1773-4 two waiters and twenty-five spoons were returned and in 1774-5 thirty-four punch-ladles, three instrument-cases, and unspecified silver weighing 15oz. 18dwt. were also returned, though these lapses did not occur in later years. Almost without exception, articles sent to The Assay Office were named; however, one piece of silver weighing 9oz. 8dwt. 0gr. was assayed in 1777-8 and in 1779-80 unspecified sundries weighing 27oz. 15dwt. 0gr. were assayed. Four boxes made in Birmingham by John Bentley during the assay year 1776-7 were assayed under the partners' names.[6] Two pairs of candlesticks supplied to Patrick Robertson of Edinburgh during the assay year 1776-7 were not assayed by the partners.[7] The end of the assay year 1781-2, which occurred on 1 July 1782, nearly coincided with the death of Fothergill on 19 June 1782 and the formal end of the partnership on 22 June 1782; no more silver was sent to The Assay Office between Fothergill's death and the beginning of the following assay year.[8] An inventory taken at the end of the partnership listed the following items in stock: 6 teaspoons; 2 cream-pails; 3 mustard-pots; 7 sugar-tongs; 4 punch-ladles; 5½ pairs of salt-cellars; 1 pair and 1 single candlestick; 1 sugar-basin; 1 pannikin-stand (stand for a small drinking vessel[9]); 2 cruet-stands; 3 pairs of bottle-stands; 1 pair of salt-cellars; 2 cream-jugs; 1 two-handled cup; 1 venison-lamp (a lamp to warm a venison-dish); 1 cheese-plate and one coffee-ewer.[10] Whether these items had already been assayed is not clear.

1 See Appendix IA.
2 See Bibliography, Primary Sources, B.R.L., M.B.P.
3 e.g. Ledger 1778-82, p.344, under Filigree Work, goods sent Samuel Silver, £15 6s. 10d., 27 May 1782.
4 See Bibliography, Primary Sources, B.R.L., M.B.P.
5 See Appendix IA.
6 See Appendix II.
7 Letter Book G, p.658, B. & F. to Patrick Robertson, 13 July 1776.
8 See Appendix IB.
9 O E D.
10 Soho Inventory, 1782, pp.94-186.

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
BOTTLE-STANDS (pairs)	0	0	0	0	0	0	0	1
BOXES	0	0	0	0	0	0	0	1
BUCKLES (singles)	0	0	0	0	0	0	0	2[1]
BUCKLES (pairs)	0	0	0	2[2]	0	0	1	3
BUCKLES (sets)	0	0	0	2[2]	0	0	0	6
BUTTONS - COAT	0	0	0	0	0	0	12	18
BUTTONS - VEST	0	0	0	0	0	0	12	27

1. Plus one order for an unspecified number.
2. One pair of buckles and both sets of buckles supplied in 1768-9 referred to in B.R.L., Timmins, Collection of Original Letters. Part 1, p.11.

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3

ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
BUTTONS (unspecified)	0	0	0	0	0	0	2[1]	*[2]
CANDLESTICKS (pairs)	6	0	0	2[3]	4[4]	9[5]	31	10
CANDLESTICKS (singles)	0	0	0	3	0	0	0	0
CANDLESTICK-BRANCHES (pairs)	0	0	0	0	0	0	3	7
CAP-PIECES	0	0	0	0	0	0	0	*[6]
CASES - filigree	0	0	0	0	0	0	0	1[7]
CASES WITH BOOKS - filigree	0	0	0	0	0	0	0	1

1. Plus an order for an unspecified number.
2. An order for an unspecified number.
3. One pair in the collection of B.A.O., Ref. No. 1140 and the other on loan to the Grosvenor Museum, Chester.
4. Plus an order for an unspecified number.
5. Plus two orders each for an unspecified number.
6. One order for an unspecified number.
7. Plus one order for an unspecified number

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
CHEESE-TOASTERS (a part for)	0	0	0	0	0	0	0	1
COFFEE-POTS	0	0	0	0	0	0	0	3
COFFEE-POTS WITH STANDS	0	0	0	0	0	0	2	0
CREAM-EWERS	0	0	0	0	0	0	0	3
CRUET-FRAMES	0	0	0	0	0	0	0	1
CUPS	0	0	0	0	0	2	0	2[1]
ESCUTCHEONS AND DOOR-KNOBS	0	0	0	0	0	0	11[2]	0

1. These cups were returned to B.& F.
2. Eleven sets survive; it is possible that more were made (Goodison, 'Door Furniture at Ely House').

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
FILIGREE ARTICLES (number of orders)	0	0	0	0	0	0	2[1]	1[1]
FISH-TROWELS	0	0	0	0	0	0	1	0
INSTRUMENT-CASES	0	0	0	0	0	0	3	0
MAZARINES	0	0	0	0	1[2]	0	0	0
MEDALS	0	0	0	0	0	0	100	0
MONEY-BOXES - filigree	0	0	0	0	0	0	0	1
MOUNTS FOR SNUFF-BOXES IN TORTOISE-SHELL	0	0	0	0	0	0	1	0

1. These orders were for an unspecified number and type of filigree articles.
2. B.A.O., Ref. No.23.

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
MOUNTS - SETS OF FOR TEA-URNS	0	0	0	0	1	0	1	0
MOUNTS - SETS OF, FOR PAIRS OF VASES	0	0	0	0	0	0	1	1
NEEDLE-BOOK - filigree	0	0	0	0	0	0	3	0
PENCIL-CASES	0	0	0	0	0	0	0	1
PINCUSHION - filigree	0	0	0	0	0	0	1	0
PLATES	0	0	0	0	0	0	2	0
PLATES - FOR FISH	0	0	0	0	0	0	1	0

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
SMELLING-BOTTLES - filigree	0	0	0	0	0	0	7	0
SPURS	0	0	0	0	0	0	0	*[1]
SUGAR-BASKETS - filigree	0	0	0	0	0	0	1	0
SUGAR-BASKETS (pairs)	0	0	0	0	0	0	1	0
SUGAR-DISHES	0	0	0	0	0	0	0	1
TEA-CANISTERS	0	0	0	0	0	0	0	2

1. One order for an unspecified number.

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
TEA-CANISTERS - filigree	0	0	0	0	0	0	0	1
TEA-URNS	0	0	0	0	1	1	0	1
THIMBLES - filigree	0	0	0	0	0	0	0	6
TOOTHPICK-CASES - filigree	0	0	0	0	1	0	0	0
TRINKET-CARDS - filigree	0	0	0	0	0	0	1	0
TUBES	0	0	0	0	0	0	0	9
TUREENS	0	0	0	0	0	0	1	0

APPENDIX IIIA

PRODUCTION OF SILVER UP TO 1772-3								
ARTICLES	1765-6	1766-7	1767-8	1768-9	1769-70	1770-1	1771-2	1772-3
WHIP-CAPS -	0	0	0	0	0	0	108	0

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
"BITTS" (ornaments for military uniforms)[1]	0	*[3]	0	0	0	0	0	0	0	0
BODKINS	0	0	0	0	0	0	0	3	0	0
BOUGIE-BOXES filigree (to hold a wax-taper coil, also called a taper-box)[2]	0	0	0	1	0	1	0	0	0	6
BOWS for STEEL SCISSORS	0	0	0	0	12	0	6	0	0	*[3]
BOWS for STEEL SNUFFERS (pairs)	0	0	1	0	0	0	0	5	0	0
BUCKLES (single)	0	0	0	0	0	*[4]	0	0	0	1
BUCKLES (pairs)	0	0	0	0	1	1[5]	0	1[6]	0	0
BUCKLES (sets)	0	0	0	0	0	0	0	0	0	1

1. Bitts weighing 979 ozs. 5 dwts. returned by the customer.
2. Harold Newman, An Illustrated Dictionary of Silverware (1987), p.45 (hereafter cited as Newman, Dictionary).
3. An unspecified number.
4. Two orders each for an unspecified number.
5. These were probably not assayed because they were made for M. B.'s son.
6. Described as 'stone silver shoe buckles'.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
BUCKLES: BREAST	0	0	0	0	0	0	0	0	0	1
BUCKLES: SHOE (pairs)	0	0	0	0	0	0	1	0	0	0
BUCKLES - filigree (pairs)	0	0	0	1[1]	0	0	1	1	0	24[2]
BUCKLES: HAT - filigree (card)	0	0	0	0	0	0	2	0	0	0
BUCKLES: HAT - filigree	0	0	0	0	0	0	115[3]	0	0	1
BUCKLES: SHOE - filigree (pairs)	0	0	0	0	0	0	7	1	0	0
BUCKLES (sets)	0	0	0	0	0	0	0	0	0	1[4]
BUFFONTS - filigree (for holding hair in position)[5]	0	0	0	0	0	0	0	1	0	185
BUTTONS (unspecified)	*[6]	0	0	0	0	0	0	0	0	0

1. Plus a further unspecified number for one order.
2. Silver with gilding.
3. Twelve of these were identified as 'hat or glove' buckles.
4. Silver with gilt parts.
5. Soho Inventory, 1782, p.182.
6. Buttons worth £28 4s. 0d. produced between 12 June 1773 and 31 December 1773.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
BUTTONS: BREAST	18	0	0	0	0	0	18	0	0	0
BUTTONS: COAT	18	0	0	0	0	0	18	0	0	0
BUTTONS: filigree	*[1]	0	324[2]	0	0	*[3]	0	0	0	111
BUTTONS - silver-gilt[4] unspecified	0	0	0	0	0	0	432	2868	0	0
BUTTONS - silver-gilt[5] pierced	0	0	0	0	0	0	1152[6]	288	0	0
BUTTONS: BREAST - silver-gilt pierced	0	0	0	0	0	0	144	0	0	0
BUTTONS: BREAST - silver-gilt	0	0	0	0	0	0	24	18	0	0

1. An unspecified number in one order.
2. This includes 3 dozen returned to B.& F.
3. 1 card.
4. These, and other silver-gilt buttons referred to in this Appendix, were described by B.& F. as 'argent d'oré'.
5. These, and other pierced silver-gilt buttons referred to in this Appendix, were probably pierced silver foil over a silver-gilt base (information supplied by Gerald Whiles, Head of the School of Jewellery, Birmingham Polytechnic).
6. Plus $12\frac{1}{2}$ dozen "pierced plated and argent d'oré".

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
BUTTONS: COAT - silver-gilt, pierced	0	0	0	0	0	0	576	0	0	0
BUTTONS: COAT - silver-gilt	0	0	0	0	0	0	186	30	0	0
CARTRIDGE-TOP ORNAMENTS (used with sets of ornamental pistols)[1]	0	0	2	0	0	0	0	0	0	0
CHAINS	0	0	*[2]	0	0	0	0	0	0	0
COCONUT-LINING (lining for a coconut, used for a standing-cup)[3]	0	0	0	0	0	0	0	1	0	0
CRUET-FRAME	0	0	0	0	0	0	0	0	0	2
CREAM-PAIL - filigree	0	0	0	0	0	0	0	0	0	2
DECANTER-CORKS	0	0	0	0	0	0	8	0	0	0

1. Information supplied by Susan Hare, Librarian, G.H.L.
2. One order for an unspecified number.
3. Newman, Dictionary, p.79.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
FILIGREE ARTICLES (cards of)	0	0	0	0	0	0	1 [1]	0	0	0
FILIGREE ARTICLES (number of orders)	0	0	0	0	0	* [2]	1	0	0	0
HAIR RUNNER: LADIES - filigree	0	0	0	0	0	0	0	1	0	0
HANDKERCHIEF-PINS - filigree	0	0	0	0	0	0	0	0	0	8
HANDKERCHIEF-RUNNER - filigree	0	0	0	0	0	0	0	1	0	71 [3]
HANDKERCHIEF-SLIDES - filigree	0	0	0	0	0	0	6	0	0	0
HANDKERCHIEF-TIES - filigree	0	0	0	0	0	0	12	0	0	0
INKPOT	0	0	0	0	0	1 [4]	0	0	0	0
INKSTAND	1	0	0	0	0	0	0	0	0	0
INSTRUMENTS	0	0	0	0	0	0	0	0	0	* [5]

1. Plus two cards of silver and gilt filigree articles.
2. Unspecified number sent to Finch & Co.
3. Fourteen of which were silver with gilding.
4. This was probably not assayed because it was made for M. B.'s son.
5. Weighing 30 oz. 16.5 dwt.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
INSTRUMENT-CASES - filigree	1[1]	0	0	0	0	0	1	0	0	1
INSTRUMENT-CASES	0	0	4	0	0	0	0	1	0	0
LOCKET	0	0	0	0	0	0	0	0	0	1
MEASURES - filigree	0	0	0	0	2	0	1	0	0	4[2]
MEDALS	0	0	22[3]	0	1	0	0	0	0	0
MEMORANDUM-CASE - filigree	0	0	0	0	0	0	0	0	0	1
MONEY-BOXES - filigree	1	1	0	0	0	0	11	0	0	3
MOUNTS FOR BOXES[4]	0	0	0	0	0	0	0	0	0	4[4]
MOUNTS sets of, for CASES	0	0	0	0	0	0	0	1	0	1[5]
MOUNTS for COCONUTS	1	0	0	0	0	0	0	0	0	0
MOUNTS for INSTRUMENT-CASES	0	0	0	0	0	0	0	0	0	8[6]

1. This was returned to B. & F.
2. Yard measures.
3. Silver-gilt.
4. One in tortoise-shell, one in pearl, two unspecified.
5. Case of shagreen (green leather, O E D).
6. Assorted metal or leather cases.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
MOUNTS - sets of, for SHELLS	0	0	0	0	0	0	0	1	0	0
MOUNTS for STONE GEMS	0	0	1	0	0	0	0	0	0	0
MOUNTS for LOCKETS	0	1[1]	0	0	0	0	0	0	0	0
MUFFINEERS - filigree (small castor for sprinkling spices)[2]	0	0	0	0	0	0	0	0	0	3
NECKCLOTH-RUNNERS - filigree	0	0	0	0	0	0	31	6	0	0
NECKCLOTH-SLIDES - filigree	0	0	0	0	0	0	11	*[3]	0	0
NEEDLE-CASES	0	0	0	0	0	0	0	0	0	12
PATCH-BOX	0	0	0	0	0	0	0	0	0	1
PEN-CASES	0	0	0	6	0	0	0	0	0	0
PENCIL-CASES	0	0	0	0	0	2	0	0	2	0

1. This was returned to B. & F.
2. Newman, Dictionary, p.218.
3. '24 sorted gilt and filigree neckcloth slides.'

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
PINS: BREAST - filigree	0	0	0	0	0	0	2	14[1]	0	0
PINS: CAP	0	0	0	0	0	0	60	6	0	17
PINS: for HAIR-WORK	0	0	0	0	0	0	0	0	0	144
PINS: with hair	0	0	0	0	0	0	0	7	0	1
PINS: HANDKERCHIEF - filigree	0	0	0	0	0	0	*[2]	14	0	0
PINS: HAT - filigree (card)	0	0	0	0	0	0	1	0	0	0
PINS: HAT - filigree	0	0	0	0	0	0	48	42[3]	0	18
PINS: SHIRT - filigree	0	0	0	0	0	0	*[4]	2	0	37

1. Twelve of these were silver-gilt.
2. Eighteen "filigree gilt and silver sorted".
3. Thirty-six were returned to B. & F.
4. Two orders, each of one dozen silver and gilt filigree shirt-pins mixed.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
PINS - filigree	0	0	0	0	0	0	6	9	0	9
PURSE-RUNNERS - filigree (pairs) (clasps for the tops of purses)[1]	0	0	0	0	0	0	11	6	0	73½[2]
PURSE-RUNNERS - filigree	0	0	0	0	0	0	74	70	0	14
QUADRILLE POOL-BOXES - filigree (for keeping counters used in the card-game, quadrille)[3]	0	0	0	0	0	0	0	2	0	3
RIMS for TOOTHPICK-CASES	0	0	0	2	0	0	0	0	0	0
RIMS (unspecified)	0	0	0	*[4]	0	0	0	0	0	0
RINGS (pairs)	0	0	*[5]	0	0	0	2	0	0	0

1. Information supplied by Susan Hare, Librarian, G.H.L.
2. 17½ pairs were in silver with gilding.
3. Percy Macquoid and Ralph Edwards, The Dictionary of English Furniture, 3 vols (1927), Vol.III, p.192.
4. One order for an unspecified number.
5. One order for an unspecified number.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
RUNNERS - filigree	0	0	0	0	0	0	0	2	0	0
SALT-CELLARS - filigree	0	0	0	0	0	0	0	0	0	3
SHUTTLES	0	0	0	1[1]	0	0	0	0	0	5
SHUTTLE TOOTHPICK-CASES - filigree (a combination of a shuttle and a toothpick case)	0	0	0	0	0	0	3	1	0	0
SMELLING-BOTTLES - filigree	0	0	0	0	0	0	0	0	1	45
SMELLING-BOTTLE CASES - filigree	0	0	0	0	0	0	5	0	0	4
STUDS - filigree (pairs)	0	0	0	0	0	0	0	0	0	8[2]
SUGAR-BASKETS - filigree	0	0	0	0	0	2	0	0	0	7

1. Silver with coral decoration.
2. Silver-gilt.

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
TEA-CADDY SHELLS	0	0	0	0	0	0	0	2	0	0
TEA-MEASURES - filigree	0	0	0	0	0	0	1	2	0	31
THIMBLES - filigree	0	0	0	0	0	0	1	2	0	39
THIMBLE SMELLING-BOTTLES - filigree (a combination of a thimble and a smelling bottle)	0	0	0	0	0	0	4	3	0	10
THIMBLE SMELLING-BOTTLE CASES-filigree	0	0	0	0	0	0	23	2	0	0
TOAST-FRAME	0	0	0	0	0	0	0	0	0	2
TOAST-TRAY - filigree	0	0	0	0	0	0	0	0	0	2
TOOTHPICKS - filigree (cards)	0	0	0	0	0	0	1	0	0	0
TOOTHPICK-CASES - filigree	0	0	0	0	0	0	5	1	0	24
TOOTHPICK AND SMELLING-BOTTLE CASES - filigree	0	0	0	0	0	0	0	0	0	17

APPENDIX IIIB

PRODUCTION OF NON-ASSAY SILVER FROM 1773-4 TO 1781-2										
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2	IN STOCK 1782
TOPELLS - filigree (balls for children's rattles)[1]	0	0	0	0	0	0	0	4	0	0
TRINKET - filigree	0	0	12	0	0	0	0	0	0	0
WATCH-CASES	0	0	0	0	0	0	0	0	0	2

1. Information provided by Phil Moody, Pattern Metal Rollings Ltd., Birmingham.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
ARGYLES	3	1	0	0	0	1	0	0	0
BASINS	0	3	1	0	0	0	0	0	0
BASKET RIMS	0	0	0	0	0	0	0	1	0
BELLS	1	0	0	0	0	0	0	0	0
BOTTLE-LABELS (single)	112	52	42	41	0	2	0	12	0
BOTTLE-LABELS (pairs)	0	0	0	0	0	25	0	0	0
BOTTLE-STANDS (singles)	33	8	4	0	4	6	0	4	6

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
BOTTLE-STANDS (pairs)	2	4	7	4	3	0	0	0	0
BOXES	6	0	1	10[2]	0	0	0	0	1
BREAD-BASKETS	0	0	1	1	2	1	0	2	0
BUCKLES (singles)	0	1	0	0	0	0	0	0	0
BUCKLES (pairs)	30[1]	66	1	4	0	0	0	0	0
BUTTER-BOATS (pairs)	1	0	0	0	0	0	0	0	0
BUTTONS:BREAST	0	0	0	55	0	0	0	0	0

1. Plus an unspecified number of buckles weighing 40 oz. 18 dwt.
2. Four of these, though assayed by B.& F., were made by John Bentley of Birmingham (Journal 1776-8, p.360, 2 July 1777).

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
BUTTONS:COAT	0	0	0	157	0	0	0	0	0
BUTTONS (unspecified)	0	34	269	334	0	0	0	0	0
CANDLESTICKS (single)	1	2	3	0	0	0	0	4	0
CANDLESTICKS (pairs)	38	33	30	25[1]	14	6	18	7	5
CANDLESTICKS: HAND (pairs)	0	0	0	0	3	2	0	0	0
CANDLESTICK-BOTTOMS: HAND	0	0	0	2	1	0	0	0	0
CANDLESTICKS: TABLE (pairs)	0	0	0	0	0	2	0	0	0

1. In addition, two pairs were made for Patrick Robertson of Edinburgh which were not assayed by the partners (Letter Book G, p.658, B.& F. to Patrick Robertson, 13 July 1776).

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
CANDLESTICK-BRANCHES (single)	1	3	6	0	0	0	4	2	0
CANDLESTICK-BRANCHES (pairs)	2	0	0	0	2	0	0	1	1
CANDLESTICK-BRANCH PANS	0	0	4	1	0	0	0	0	0
CANE-HEADS	0	0	0	1	0	0	0	0	0
CANISTERS	3	6	2	3	0	0	0	0	0
CASES	0	0	3	3	0	0	0	0	0
CASSOLETTES	0	0	0	0	0	0	2	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
CASTORS	1	0	2	0	3	0	0	0	0
CASTOR-TOPS	0	0	0	0	0	100	0	0	0
CHEESE-PLATES	0	0	0	1	0	0	1	1	0
CHEESE-TOASTERS	0	4	0	0	1	0	0	0	0
CLASPS (singles)	3	0	0	0	0	0	0	0	0
CLASPS (pairs)	7	6	0	0	0	0	0	0	0
CLOCKS	0	0	0	0	0	0	0	1	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
COLLARS	1	0	0	0	0	0	0	0	0
COFFEE-POTS	10	21	14	14	8	3	2	0	2
COFFEE-POT COVERS	1	5	0	0	0	0	0	0	0
COFFEE-POT LAMPS	3	0	0	0	1	0	0	0	0
COFFEE-POT LAMPS AND STANDS	0	6	0	1	3	0	0	0	0
COFFEE-POT STANDS	1	0	2	3	0	0	0	0	0
COFFEE-POT FEET	0	0	0	0	0	1	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
COVERS	0	0	0	1	0	0	0	0	0
CREAM-BOATS	0	0	0	1	0	0	1	0	0
CREAM-EWERS	6	3	6	11	2	3	4	5	1
CREAM-PAILS	0	0	0	0	0	0	0	6	0
CRUET-FRAMES	3	8	3	7	4	12	7	4[1]	1
CRUET-FRAMES WITH HANDLES	0	0	0	0	0	49	0	0	0
CRUET-FRAME HANDLES	0	0	0	0	0	7	0	0	0

1. Plus a further unspecified number.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
CRUET-TOPS	0	0	0	0	0	172	2	0	0
CUPS	7	6	3	5	0	1	0	1	0
CUPS: TWO-HANDLED	1	1	0	0	0	0	0	0	0
CUPS WITH COVERS	0	0	0	0	1	1	0	0	0
CUP-COVERS	1	0	0	0	1	0	0	0	0
CUPS: PINT	0	1	0	0	0	1	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
CUPS: CHALICE	0	2	0	0	1	0	0	0	0
CUPS: CHALICE with COVERS	0	0	0	0	1	0	0	0	0
CUPS: SACRAMENT	1	3	0	0	0	0	0	0	0
DÉJEUNER (lunch dish)[1]	0	1	0	2	0	0	0	0	0
DISHES	28	14	11	34	34	14	0	8	0
DISHES with HANDLES	0	0	0	0	2	0	0	0	0
DISH-COVERS	0	0	0	18	4	0	0	6	0

1. Information supplied by Susan Hare, Librarian, G.H.L.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
DISH-CROSSES	1	1	1	3	0	0	0	1	0
DISH-LAMPS	0	0	0	0	1	0	0	0	0
DISH-RINGS and LAMPS	0	0	0	0	0	0	1	0	0
DISH-STANDS	0	1	0	2	0	0	0	0	0
DISH-STANDS with LAMPS and HANDLES	0	0	0	0	1	0	0	0	0
DRAM-BOTTLE	0	1	0	0	0	0	0	0	0
EGG-STANDS (singles)	0	7	0	0	0	0	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
EGG-STANDS (pairs)	1	12	0	0	0	0	0	0	0
ÉPERGNES	1	2	1	1[1]	0	0	0	0	0
ÉPERGNE BASKETS and SAUCERS	0	7	0	0	0	0	0	0	0
ÉPERGNE-BRANCHES	1	*[2]	0	0	0	0	0	0	0
ÉPERGNE LININGS	1	0	0	0	0	0	0	0	0
EWERS	0	0	0	2	0	0	1	0	0
EXTINGUISHERS	0	1	0	*[3]	8	0	0	0	0

1. Plus part of an épergne weighing 46 oz. 16 dwt. 0 gr.
2. An unspecified number.
3. An unspecified number.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
FEEDING-BOATS	0	2	0	0	0	0	0	0	0
FISH-TROWELS	0	2	5	0	3	0	0	1	0
FLAGONS	1	0	0	0	1	0	0	1	0
FORKS	186	146	66	151	38	126	18	0	36
FORK-HANDLES	0	0	182	25	1	0	36[1]	0	0
FORK-HANDLES: DESSERT	0	0	0	0	0	0	0	36	0
FORK-and KNIFE-HANDLES (assayed together)	126	0	101	209	0	73[2]	0	0	0

1. Plus an unspecified number weighing 11 oz. 16 dwt.
2. Plus an unspecified number weighing 36 oz. 15 dwt.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
GOBLETS (singles)	0	2	2	3	0	0	0	1	0
GOBLETS (pairs)	0	0	0	0	0	1	0	0	0
HANDLES	0	1	1	0	0	0	0	0	0
HALF-PINTS	0	1	1	0	0	0	0	0	0
HEARTS	0	0	134	0	0	0	0	0	0
INKSTANDS	0	0	1	3	1	0	0	0	0
INSTRUMENT-CASES	0	3	10	0	0	0	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
JOINTS (hinges)[1]	0	6	0	0	0	0	0	0	0
JUGS	0	1	0	1	0	0	0	0	0
JUGS with BASINS	0	0	0	0	0	0	0	0	1
KNIFE-BLADES	0	0	0	0	0	84	0	0	36
KNIFE-BLADES: DESSERT	0	0	0	0	0	0	0	36	0
KNIFE-HANDLES (see fork-and knife-handles)	121	195	304	166	44	222	53[2]	124	75
KNIFE-HANDLES: CARVING	0	0	0	0	0	0	0	2	0

1. Information supplied by Gerald Whiles, Head of the School of Jewellery, Birmingham Polytechnic.
2. Plus an unspecified number weighing 239 oz. 7 dwt.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
KNIFE-HANDLES: TABLE	0	0	0	0	0	0	1	0	0
LABELS (unspecified - see also bottle-labels)	0	26	0	25	25	0	0	0	0
LADLES: CREAM	0	1	0	0	42	24	0	60	60
LADLES: PUNCH	44	34	23	63	24	49	0	15	0
LADLES: SALT	0	0	0	0	0	36	0	0	0
LADLES: SAUCE	0	0	0	0	12	4	2	4	0
LADLES: SOUP	3	4	5	2	2	0	1	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
LADLES: TUREEN	0	0	0	0	0	4	0	2	0
LADLES (unspecified, see also spoons and ladles)	24	11	2	18	3	42	24	12	2
LAMPS	1	0	0	0	1	0	0	0	0
LAMPS with STANDS	0	0	0	1	1	0	0	0	0
MAZARINES	2	0	0	2	0	0	0	0	0
MILK-VASES	0	0	0	0	0	0	0	3	0
MONTEITHS	0	0	0	4	0	0	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
MOUNTS - for GOBLETS and GLASSES	0	0	0	0	2	*[1]	0	0	0
MOUNTS - (sets of) for GLASS BASINS	6	5[2]	0	0	0	0	0	0	0
MOUNTS - for ÉPERGNE BASINS	0	*[3]	0	0	0	0	0	0	0
MOUNTS - (sets of) for GLASS CRUETS and CASTORS	10	4	0	1	7	4	0	0	1
MOUNTS - (sets of) for CRUET-FRAMES	0	0	0	0	0	0	0	0	1
MOUNTS - (sets of) for HORNS	0	0	0	0	0	0	2	0	0
MOUNTS - (sets of) for KNIFE-CASES	0	6	3	0	1	0	0	0	0

1. An unspecified number weighing 9 oz. 2 dwt. 0 gr.
2. Plus an unspecified number.
3. An unspecified number.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
MOUNTS - (sets of) for TEA-URNS	*[1]	4	0	2	0	0	0	0	0
MUFFINEERS	0	0	0	0	1	0	0	0	0
MUSTARD-POTS	0	0	0	0	0	0	6	6	0
MUSTARD-TANKARDS	0	0	0	0	1	0	0	0	0
NOZZLES (singles, for candlesticks)	0	3	0	2[2]	29	0	0	0	0
NOZZLES (pairs)	5	5	0	2	1	1	0	0	0
OYSTER-SHELLS	0	0	0	0	0	0	0	3	0

1. Tea-urn furniture weighing 4 oz. 12 dwt. 0 gr.
2. Plus an unspecified number.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
PAP-BOATS (for feeding pap to infants or invalids)[1]	0	1	0	0	0	0	0	0	0
PANNIKINS	0	0	0	1	0	0	0	1	0
PEPPER CASTORS	4	0	0	0	0	0	0	0	0
PIN-CASES	0	0	0	6	0	0	0	0	0
PINTS	9	0	1	0	0	0	3	0	0
PLATES	85	1	15	175	48	0	0	0	0
PLATE FOR A CHEESE-TOASTER	0	1	0	0	0	0	0	0	0

1. Newman, Dictionary, p.233.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
PLINTHS for GLASSES	0	0	0	0	1	0	0	0	0
PUNCH-BOWLS	0	0	2	0	0	0	0	0	0
PUNCH-STRAINERS	1	0	0	0	1	0	0	0	0
RAGOUT-HANDLES (clip-on handle for a serving-dish)	0	0	0	0	0	0	0	2	0
RINGS	0	17	0	0	0	0	0	0	0
SALVERS	0	0	0	0	1	2	0	0	0

1. Information supplied by Susan Hare, Librarian, G.H.L.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
SALT-CELLARS (single)	6	4	2	20	61	6	0	0	0
SALT-CELLARS (pairs)	20	18	11	14	96	11	19	27	21
SAUCE-BOATS (single)	10	4	1	14	4	1	1	4	0
SAUCE-BOATS (pairs)	2	0	0	0	0	0	0	0	0
SAUCE-BOAT DISHES	0	0	0	0	0	0	0	4	0
SAUCE-BOATS and COVERS	0	0	0	0	0	4	0	0	0
SAUCEPANS	1	0	0	0	0	0	1	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
SCONCES (pairs)	1	0	0	0	0	0	0	0	0
SKEWERS	7	5	2	2	6	0	0	0	4
SLOP-BASINS	0	0	1	2	0	0	0	0	0
SNUFF-BOXES	1	0	0	0	0	0	0	0	0
SNUFFER-BOWS	0	0	0	4	0	0	0	0	0
SNUFFER-PANS	7	0	5	1	3	0	0	0	0
SNUFFER-STANDS	0	0	0	0	0	0	0	2	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
SOCKETS for CANDLESTICK-BRANCHES	0	4	16	0	0	0	0	0	0
SPOONS (miscellaneous)	496	931[1]	282	555	1	61	45[2]	80	11
SPOONS: DESSERT	0	0	0	0	97	24	1	48	6
SPOONS: GRAVY	0	0	0	0	13	4	0	4	0
SPOONS: MARROW	2	0	1	0	0	0	0	0	0
SPOONS: SALT (including shovels)	8	0	14	6	40	24	38	0	12
SPOONS: SOUP	0	0	0	0	0	0	2	0	3

1. Plus further spoons weighing 197 oz. 2 dwt.
2. Plus further spoons weighing together with two cruet frames 70 oz. 4 dwt.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
SPOONS: TABLE	0	0	0	0	163	24	49	24	44
SPOONS: TEA	6	60	18	0	106	32	30	12	42
SPOONS: TUREEN	0	0	0	0	0	0	0	2	1
SPOONS and FORKS (combined)	0	0	10	0	0	0	0	0	0
SPOONS and LADLES (combined)	0	0	0	64	0	0	0	0	0
SPURS (pairs)	1	0	0	0	0	0	0	0	0
STEW-PANS and COVERS	0	0	0	0	4	0	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
SUGAR-BASKETS	1	2	0	0	6	0	0	0	0
SUGAR-BASINS	0	2	0	0	0	1	1	15	0
SUGAR-CASTORS	0	0	0	0	0	1	0	0	0
SUGAR-DISHES	10	7	3	3	1	0	0	0	0
SUGAR-DISHES with COVERS	0	0	0	1	0	0	0	0	0
SWORD-HILTS	1	0	0	0	0	0	0	0	0
TABLE-RIMS (large tray-rims)[1]	0	1	0	0	0	0	0	0	0

1. Delieb & Roberts, Silver Manufactory, p.53.

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
TANKARDS	14	16	0	0	0	1	6	5	2
TANKARD-COVERS	0	0	0	0	1	0	0	0	0
TAPER-STANDS	0	1	0	0	0	0	0	0	0
TEA-CANISTERS	0	0	0	1	0	0	0	0	0
TEAPOTS	2	0	2	7	1	0	1	3	1
TEA-URNS	4	3	4	2	3	2	1	1	0
TOAST-RACKS	0	0	0	7	0	0	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
TOAST-TRAYS	0	0	0	1	0	0	0	0	0
TONGS: ASPARAGUS	0	0	0	0	1	0	0	0	0
TONGS: SUGAR	0	0	16	0	0	0	0	4	1
TONGS: TEA	26	67	23	25	36	8	0	18	0
TONGS (unspecified)	0	1	0	0	0	0	0	0	0
TRAY-POTS	0	0	0	0	1	0	0	0	0
TROWELS	3	0	0	0	0	0	0	0	0

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
TUMBLERS	5	3	2	2	0	0	0	0	0
TUREENS	2	0	0	6	0	0	0	0	0
TUREENS and COVERS	0	0	0	0	5	0	0	0	0
TUREEN-DISHES	0	0	0	0	0	0	0	0	1
TUREEN-LINING	3	0	0	4	10	0	0	0	0
TUREEN-LINING and COVERS	0	0	0	0	1	0	0	0	0
TUREEN and MOUNTS	0	0	0	0	0	0	0	0	1

APPENDIX IIIC

PRODUCTION OF ASSAY SILVER FROM 1773-4 TO 1781-2									
ARTICLES	1773-4	1774-5	1775-6	1776-7	1777-8	1778-9	1779-80	1780-1	1781-2
WAITERS	35	30	18	20	10	0	2	5	4
WAITER-PLATES and BORDERS	0	0	0	0	0	0	0	1	0
WHIP-CAPS	4	0	0	0	0	0	0	0	0
WINE-FUNNELS	1	0	0	0	0	0	0	0	0
WINE-STRAINERS	5	16	0	1	1	0	0	0	0
VENISON-LAMPS	0	0	0	0	0	3	0	0	0

APPENDIX IV

STERLING SILVER SUPPLIES

The assay silver produced by Boulton and Fothergill was of sterling (or standard) silver which contained 11oz. 2dwt. of fine silver and 18dwt. of alloy in each troy pound, which were the legal proportions for such silver.[1] Sterling silver was also used for small articles[2] which were not required to be assayed by the Act of 12 Geo. 11. c. 26, of 1738,[3] though some other small silver articles produced at Soho were made of pure (or fine) silver.[4] Nevertheless, the bulk of the silver produced at the Soho Manufactory was made from sterling silver and this was obtained from two main sources: bullion dealers and customers who supplied old plate for melting down.

Boulton and Fothergill used a number of bullion dealers. Up to 1772 the bulk of their supplies came from Samuel Garbett, a Birmingham dealer,[5] and to a smaller degree Garbett also supplied silver later.[6] From 1772 the majority of the partners' silver was supplied by Robert Albion Cox, a London refiner,[7] but that connection came to an end early in 1778.[8] Floyer and Price (also of London) who had supplied small quantities early in the 1770s,[9] supplied most of Boulton and Fothergill's requirements from 1778[10] to the end of the latters' partnership.[11] They also received silver from time to time from other London refiners, Taylor and Lloyd,[12] Ward,[13] and Player & Co.,[14] as well as John Read of Sheffield.[15] On one occasion diet silver was supplied by The Assay Office, Birmingham.[16]

In 1773 Garbett stated that Boulton and Fothergill bought '...several thousand pounds worth of silver from him in a year'.[17] This is at least partly confirmed by payments made to Garbett recorded in the Matthew Boulton Papers;[18] these were often noted by Boulton,[19] or recorded as being for the 'Silver and Gold Account',[20] though in no case does a payment specify whether it was for gold, fine silver, or standard silver. A large amount of fine silver was required for Sheffield plate by 1764[21] and much gold was used for ormolu from about 1768.[22] The annual totals of payment to Garbett arranged in assay years, were as follows:

1762-3	£	60	5s.	2d.
1763-4	£	367	6s.	6d.
1764-5	£	989	15s.	4d.

1765-6	£ 732	3s.	0d.
1766-7	£ 1,490	0s.	0d.
1767-8	£ 1,200	0s.	0d.
1768-9	£ 3,561	8s.	6d.
1769-70	£ 4,169	12s.	4d.
1770-1	£ 4,640	12s.	6d.
1771-2	£ 5,113	6s.	4d.
July - October 1772	£ 1,700	0s.	0d.

From the assay year 1772-3 evidence in the Matthew Boulton Papers shows that the following quantities of sterling silver were supplied:

1772-3	700oz.	0dwt.	0gr.
1773-4	3,500oz.	0dwt.	0gr.
1774-5	4,300oz.	0dwt.	0gr.
1775-6	8,006oz.	5dwt.	0gr.
1776-7	11,058oz.	9dwt.	0gr.
1777-8	6,577oz.	2dwt.	0gr.
1778-9	4,100oz.	9dwt.	12gr.
1779-80	604oz.	0dwt.	0gr.
1780-1	601oz.	7dwt.	0gr.
1781-2	400oz.	0dwt.	0gr.

In addition, customers supplied old plate which was re-used for plate. For example, Elizabeth Montagu was credited in May 1777 with £74 6s. 7d. for 270oz. 6dwt. of old plate[23] at a time when a new service was being made for her.[24] In other cases customers supplied old plate to be set against the cost of new articles other than silver.[25] Old plate (mainly because of the solder within it) was usually found to be below the value of sterling silver. In July 1775, for example, a Mr Gough sent a dish weighing 36oz. 17dwt. which when assayed was found to be 3½dwt. per oz. below standard,[26] and quantities of pure silver would have been added when the new plate was fashioned. In the figures below the total weight of old plate sent by customers has been used for calculation rather than the amount of sterling silver contained within that total. These figures are arranged in assay years and are based upon evidence in the Matthew Boulton Papers:

1760-1	26oz.	8dwt.	0gr.
1773-4	8oz.	14dwt.	0gr.
1774-5	527oz.	15dwt.	0gr. plus 2 dishes.

1775-6 414oz. 15dwt. 0gr. plus £30 12s. 10d. of silver.

1776-7 1,877oz. 13dwt. 0gr. plus £38 5s. 8d. of silver and £12 16s. 6d. of gold and silver.

1777-8 562oz. 4dwt. 0gr. plus £27 0s. 0d. of silver.

1778-9 431oz. 15dwt. 0gr. plus £20 0s. 0d. of silver.

1779-80 197oz. 7dwt. 0gr. plus £30 12s. 0d. of silver plus one lot of unspecified silver.

1780-1 151oz. 0dwt. 0gr. plus £28 2s. 0d. of silver and 1 coffee pot and 1 pair of candlesticks.

1781-2 £24 12s. 7d. of silver plus 7 spoons and 1 lot of unspecified silver.

The figures given above, both for the supply of old plate and bullion, are incomplete up to 1775, in part because they are based upon correspondence which has survived in an incomplete form;[28] moreover, on occasions it is not clear whether letters refer to fine or sterling silver and such cases have not been included in these figures. That the documentation is incomplete for this period is demonstrated by the disparity between the amount of silver known to have been supplied and the amount produced by the partners; in 1773-4, for example, only 3,500oz. of sterling silver from bullion dealers, together with the small amounts from customers, are known to have been supplied (see above) but the total assayed by the partners during that assay year was 9,833oz. 5dwt. 12gr.[29] and further items of non-assay silver were produced.[30] The survival of ledgers from 1775[31] provides complete evidence and for the following few years the supply of sterling silver roughly matches the production figures: in 1777-8 6,390oz. 10dwt. 7gr. were assayed[32] and other pieces of non-assay silver were also produced;[33] during that period 6,577oz. 2dwt. 0gr. were supplied by bullion dealers as well as a considerable amount by customers (see above). In the last years of the partnership, however, the known supply of sterling silver does not match the production figures: in 1780-1, for example, 2,887oz. 5dwt. 0gr.[34] were assayed and other non-assay pieces produced[35] but only 601oz. 7dwt. 0gr. of sterling silver were supplied plus a relatively small amount from customers (see above).

Apart from the sterling bullion and old plate supplied to Boulton and Fothergill, other silver was also supplied which reduces the apparent disparity between production and supply. Substantial quantities of fine silver were also purchased;[36] some was used for the production of such non-assay silver items as filigree,[37] buttons,[38] and 'toys',[39] though sterling silver was also supplied for making these articles.[40] It is also quite possible that some fine silver was used for making sterling silver at Soho, since refining was carried out there,[41] but the bulk of the fine silver was not used for silver articles but for Sheffield plate.[42] However, a substantial amount of silver, especially in the later years of the partnership was obtained from dollars: in June 1779, for example, John Bentley of Birmingham supplied 453 dollars and they were valued at 4s. 5d. each.[43] Exactly what these dollars were used for is not always clear[44] but on occasions they were specifically supplied for producing silver plate.[45] The dollars were less pure than sterling: for example, in May 1775 48oz. 12dwt. 0gr. of Hungarian dollars were valued at 4s. 10½d. per oz.[46] and in March 1775 further dollars weighing 34oz. 13dwt. were valued at 5s. 2d. per oz. at a time when sterling cost 5s. 4½d. per oz.[47] For melted dollars to be made into silver plate it was necessary for pure silver to be added to them.[48] The total amounts of dollars supplied in each assay year are listed below; the figures before 1775, which are based only on incomplete correspondence, are less complete than later totals derived from ledgers in addition to correspondence in the Matthew Boulton Papers.[49]

1768-9	584oz. 6dwt. 0gr.
1773-4	61 dollars.
1774-5	45 dollars plus £300 7s. 6d. of dollars, plus 48oz. 4dwt. 0gr.
1778-9	£407 4s. 1d. of dollars plus 26oz. 12 dwt. 0gr.
1779-80	3,254 dollars.
1781-2	4 dollars.

1 de Castro, *Law and Practice of Hall-marking*, p. 8.
2 See note 39 below.
3 de Castro, *Law and Practice of Hall-marking*, pp. 71-2.
4 See notes 36, 37, and 38 below.
5 Letter Book B, p. 51, M. B. to Robert Albion Cox, 19 January 1765.
6 Journal 1778-82, p. 318, 13 March 1780.

7 Letter Book F, p.60, B. & F. to Robert Albion Cox, 26 September 1772.
8 Fothergill etc., item 179, J. F. to M. B., 14 February 1778.
9 Box F1, item 179, Peter Floyer to B. & F., 14 September 1772.
10 Letter Book H, p.537 [B. & F.] to Floyer and Price, 25 April 1778.
11 Ledger 1778-82, p.88, 8 September 1781.
12 Ledger 1776-8, p.141, 19 October 1776.
13 Ledger 1776-8, p.19, 17 April 1776.
14 Ledger 1775-8 and 1787-9, p.68, 1 September 1778.
15 Journal 1778-81, p.383, 26 July 1780.
16 Ledger 1775-8 and 1787-9, p.5, 22 July 1775.
17 Dickinson, *Boulton*, p.67.
18 From two sources: Cash Book 1763-5 and M. B. Diaries from 1766 to 1772.
19 M. B. Diary, 1771, 25 January 1771.
20 e.g. Cash Book 1763-5, 28 February 1764.
21 See p.18.
22 Goodison, *Ormolu*, p.25.
23 Ledger 1776-8, p.292, 3 February 1778 (for 8 May 1777).
24 Letter Book G, p.877, B. & F. to Elizabeth Montagu, 22 March 1777.
25 Letter Book G, p.797, B. & F. to Thomas Fletcher, 6 January 1777. Old silver supplied towards the cost of Sheffield Plate candlesticks.
26 Ledger 1775-8 and 1787-9, p.5, 19 July 1775.
27 Matthews and Barton, Matthews, William, item 112, William Matthews to M. B., 15 October 1772.
28 See Bibliography, Primary Sources, B.R.L., M.B.P.
29 See Appendix IB.
30 See Appendix IIIC.
31 Ledger 1775-8 and 1787-9.
32 See Appendix IB.
33 See Appendix IIIC.
34 See Appendix IB.
35 See Appendix IIIC.
36 Letter Book F, p.201, B. & F. to Robert Albion Cox, 27 April 1773. An order for 300oz. of fine silver.
37 Journal 1776-8, p.88, 30 April 1776. Standard silver was also supplied for filigree manufacture (Ledger 1776-8, p.52, 30 July 1776).
38 Journal 1776-8, p.114, 15 June 1776. A proportion of this fine silver was also sent for the making of Sheffield Plate buttons (Ledger 1776-8, p.154, 2 July 1776).
39 Journal 1778-81, p.126, 7 April 1779. Some of this was, however, sent for the production of Sheffield Plate (Journal 1778-81, p.105, 6 March 1779).
40 Sterling was also supplied for filigree (Ledger 1776-8, p.52, 30 July 1776) buttons (Ledger 1776-8, p.138, 15 June 1776) and 'toys' (Ledger 1776-8, p.71, 26 February 1776).
41 e.g. Journal 1778-81, p.278, 31 December 1779 for 38 meltings of silver to this date £1 18s. 0d; Journal 1778-81, p.555, 6 April 1781, Refining at Sundry Times 97oz. silver; Ledger 1778-82, p.326, 16 October 1781 for refining 103oz. silver.
42 Letter Book E, p.685, B. & F. to J. B. Rogler, 28 December 1772.
43 Journal 1778-81, p.170, 28 June 1779.
44 Cash Book 1772-82, 1773. Supply of 60 dollars worth £13 10s. 0d.

45 Letter Book G, p. 144, B. & F. to Adams and Son, 30 September 1774; Ledger 1778-82, p. 351, 18 February 1782.

46 Ledger 1775-8 and 1787-9, p. 3.

47 Letter Book G, p. 282, B. & F. to Walmsley and Hulme, 8 March 1775.

48 e.g. Ledger 1778-82, p. 351, 18 February 1782. Silver valued above sterling at 5s. 11½d. weighing 2oz. 15dwt. was added to the 4 dollars to make 4 salts.

49 Ledger 1775-8 and 1787-9. See Bibliography, Primary Sources, B.R.L., and M.B.P.

APPENDIX V

BOULTON AND FOTHERGILL'S SILVERSMITHS

This Appendix lists all the staff who are known to have worked on silver. The most important were those who specialised in producing silver plate, working within the department at the Soho Manufactory devoted to the production of ormolu, silver and Sheffield plate which was managed by Francis Eginton and (from 1779) by William Bingley. This Appendix also includes the makers of silver 'toys' and buttons who worked in other departments. Many staff (and particularly those who made the small silver items) used a variety of metals; a brief indication of their range has been given so that the manufacture of silver can be understood in the broad context of production. In addition to those staff who worked at the Soho Manufactory this Appendix also includes the few outworkers who supplied silver items to the partners.

ALLEN, JOHN

A caster. He was working at Soho by 1763.[1] In 1773 he was criticised for poor workmanship which it was estimated had cost the firm £100.[2] In 1776 he was recorded as being in charge of a casting workshop specifically devoted to silver and jointly in charge of another with Middlehurst.[3] At the same time Allen supplied parts for the manufacture of clocks.[4] He rented a dwelling from Boulton and Fothergill.[5] The last reference to him at Soho was in 1778.[6]

1 Cash Book 1762-4, p. 133, 22 June 1763.
2 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
3 Bownas etc., Packet B, item 10, 'Measurement of the Shops in the Soho Manufactory' [1776].
4 Ledger 1776-8, p. 134, 4 May 1776.
5 Allen's rent was £5 per annum and his tenancy lasted at least from 1773 (Cash Book 1772-82, 24 December 1773) until 1778 (Cash Book 1772-82, 7 March 1778).
6 Cash Book 1772-82, 24 December 1778.

ALLEN, H.

Recorded as burnishing a silver box in 1779.[1]

1 Journal 1778-81, p. 141, 3 May 1779.

ALLEN

A filigree maker.[1]

1 Fothergill etc., item 60, Account, 8 December 1769 to 5 February 1770.

BAKER

A James Baker was first referred to in 1763[1] and a George Baker was first referred to in 1764.[2] Either man could be the Baker referred to in 1773 as a candlestick-maker. He was dismissed by Fothergill after refusing to mend a foot on a tea-urn (in an unspecified metal).[3] Baker had been paid an average weekly wage of £2 16s. 3d. Later Baker worked for John Taylor of Birmingham.[4] This man was probably the same Baker who in 1780 was intending to set up a firm in Birmingham and who had been enticing candlestick-makers from Soho.[5]

1 Cash Book, Soho Boulton and Fothergill Cash Book 1763-1766 (hereafter cited as Cash Book 1763-6), p. 10, 11 May 1763.
2 Cash Book 1762-4, p. 207, 28 January 1764.
3 Scale etc., item 13, J. S. to M. B., 7 February 1773.
4 Scale etc., item 10, J. S. to M. B., 23 January 1773.
5 Hodges, John, item 24, J. H. to M. B., 27 November 1780.

BATES, E.

Mentioned in 1773 as a silversmith earning 14s. 0d. per week.[1]

1 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].

BENTLEY, JOHN

The son of Richard Bentley, who also worked for Boulton and Fothergill.[1] John was born in 1746, employed by the Boulton family from 1753, and c. 1755 worked at Sarehole Mill.[2]

Bentley worked at Soho by 1763.[3] In 1770 Boulton complained that the gilt work of Bentley (and others) tarnished too easily[4] and in 1772 Boulton insisted that all of Bentley's chasing must be approved by Francis Eginton[5] to guard against poor workmanship.[6] Later Bentley produced a variety of 'toys' in a number of materials[7] including silver chains,[8] silver inkpots[9] and silver pen-cases.[10]

Perhaps because of Boulton's dissatisfaction with Bentley's workmanship, the latter left Soho in 1776 and set up a business in Birmingham.[11] Initially, Bentley wanted a partnership with

Boulton and Fothergill[12] but this did not come about. The partners lent Bentley £900 in tools, materials, and money[13] for his business. During the next few years, however, Bentley was used as an outworker. Boulton and Fothergill supplied him with silver bullion[14] and Bentley supplied silver items to the partners: these included chaining[15] and four boxes. The latter were assayed under the partners' names[16] but for this service they charged Bentley 1s. 0d.[17] He also supplied a range of non-silver articles.[18] By July 1778 Bentley had delivered to Soho various goods valued at about £1,400 and on these he allowed a discount of ten per cent plus a further five per cent for prompt payment.[19] Bentley also took orders independently of Boulton and Fothergill and they directed customers to him.[20] Bentley did not pay off his loan from the partners until some time after 1779.[21]

About 1779 Bentley formed a partnership[22] with a certain Forty[23] and continued business at Great Charles Street, Birmingham. He also continued to supply Soho with goods.[24] Bentley's business was unsuccessful and he regretted his departure from Soho. Bentley was a second cousin to Boulton.[25]

1 Cash Book 1763-6, p. 14, 4 June 1763.
2 Box B2, item 200, John Bentley to Matthew Robinson Boulton [M. B.'s son], 13 August 1808.
3 Cash Book 1762-4, p. 122, 21 May 1763.
4 Fothergill etc., item 56, M. B. to J. F. [February to March] 1770.
5 See entry on Eginton, Francis, in this Appendix.
6 Fothergill etc., item 91, M. B. to J. F., 9 May 1772.
7 For example: tortoise-shell and gilt boxes (Fothergill etc., item 153, M. B. to J. F. [May 1773]). He also made chains of gold, gilt metal, and silver-plated wire (Journal 1776-8, p. 1, 1 January 1776).
8 Journal 1776-8, p. 1, 1 January 1776.
9 Ledger 1776-8, p. 172, 17 December 1776.
10 Ledger 1776-8, p. 136, 3 August 1776.
11 Letter Book G, p. 785, B. & F. to Adams and Sons, 23 December 1776.
12 Scale etc., item 34, J. S. to M. B., 1 July 1778.
13 Letter Book H, pp. 929-30 [B. & F.] to T. Richards, 23 April 1779.
14 In the assay year 1776-7, Bentley received silver worth £6 15s. 5½d. plus 75oz. 8dwt. 12gr. of sterling silver (Ledger 1776-8, p. 223, 1 January 1777 to 12 June 1777). In the following year he received 34oz. 2dwt. 0gr. of sterling silver and 14oz. of fine silver (Ledger 1776-8, p. 252, 1 July 1777 - 7 April 1778 and p. 306, 23 April 1778 - 13 June 1778).
15 The silver chains were worth 15s. 8½d. and weighed 1oz. 17dwt. 0gr. (Journal 1778-81, p. 172, 8 July 1779).
16 Assayed on 1 July 1777 (B. A. O. Plate Register, Birmingham, 1773-92).
17 Ledger 1776-8, p. 252, 2 July 1777.
18 e. g. gilt chains (Cash Book 1772-82, 24 August 1776) and silver-plated buttons (Cash Book 1772-82, 21 August 1776).

19 Scale etc., item 34, J. S. to M. B., 1 July 1778.
20 Letter Book G, p.785, B. & F. to Adams and Sons, 23 December 1776.
21 The repayments were delayed and caused some bitterness. In 1778 Bentley proposed to pay by four payments over two years (Fothergill etc., item 206, J. F. to M. B., 27 May 1778). The partners demanded that a part be repaid by Midsummer 1779 (Letter Book H, pp.929-30 [B. & F.] to T. Richards, 23 April 1779). When the repayments were completed is not clear, but they were made (Box B2, Ba to Baz, hereafter cited as Box B2, item 200, John Bentley to Matthew Robinson Boulton [M. B.'s son], 13 August 1808).
22 Letter Book H, pp.929-30 [B. & F.] to T. Richards, 23 April 1779.
23 Ledger 1778-82, p.362, 21 June 1782.
24 Box B2, item 167, John Bentley to M. B., August 1787.
25 Box B2, item 203, John Bentley to Matthew Robinson Boulton [M. B.'s son], 21 February 1811.

BINGLEY, WILLIAM

Bingley worked at Soho by 1762.[1] In 1771 he was asked to look at silver candlesticks returned from London,[2] perhaps to carry out repairs, and at about the same time he was involved with ormolu.[3] In the mid-1770s he worked in Francis Eginton's department,[4] and had his own workshop[5] and an apprentice.[6] Bingley rented a house and garden from Boulton and Fothergill.[7]

When Francis Eginton left the department producing silver, ormolu and Sheffield Plate in 1778,[8] Fothergill recommended that Bingley should be put in charge;[9] Keir recommended that Boulton and Fothergill should take Bingley into partnership and pay him a salary as well as a share of the profits.[10] The partnership began on 1 January 1779;[11] Bingley received a salary of £120 0s. 0d. in 1779[12] and £100 per annum thereafter until 1782.[13] Bingley also received a share of the profits: in 1779 his share came to £6 19s. 5½d.[14]

Bingley undertook a variety of managerial responsibilities: paying out wages,[15] calculating the prices of silver,[16] and supervising the production of silver orders.[17] At least on one occasion he visited London with patterns.[18]

1 Cash Book 1762-4, p.11, 5 August 1762.
2 Letter Book E, p.87, B. & F. to William Matthews, 19 April 1771.
3 Goodison, *Ormolu*, pp.146-7. 'Bingley vases', presumably named after William Bingley, were sold to customers in 1771 and 1772.
4 See entry on Eginton, Francis, in this Appendix.
5 Bownas etc., Packet B, item 10, 'Measurement of Shops in the Soho Manufactory' [1776].
6 Cash Book 1772-82, 14 March 1778.
7 Bingley rented the house for £6 6s. 0d. per annum from at least 1776 (Ledger 1776-8, p.67, 1776) until the end of the partnership (Cash Book, p.366, 22 June 1782).

8 See entry on Eginton, Francis, in this Appendix.
9 Fothergill etc., item 195, J. F. to M. B., 10 May 1778.
10 Keir, James, item 28, James Keir to M. B., 20 October 1778.
11 Ledger 1778-82, p. 128. The partnership began on 29 January 1779 and the department was called 'Silver, Plated etc., Goods in Partnership with William Bingley'. The word ormolu which had formerly been in the title, was dropped (Ledger 1778-82, p. 113, 31 December 1778-28 January 1779).
12 Journal 1778-81, p. 280, 31 December 1779.
13 Journal 1781-3, p. 165, 22 June 1782.
14 Journal 1778-81, p. 280, 31 December 1779.
15 Ledger 1778-82, p. 119, 12 June 1778.
16 Letter Book I, p. 738, J. H. to M. B., 4 April 1781.
17 Hodges, John, item 19, J. H. to M. B., 12 September 1780.
18 Letter Book I, p. 964 [B. & F.] to John Stuart, 14 May 1782.

BRADBURY, THOMAS

A gilder. In 1768 Boulton complained about the standard of Bradbury's gilt chains.[1] In the early 1770s Bradbury was involved with the development of recipes for colouring the gilding on ormolu.[2] On one occasion in 1773 Fothergill was incensed at Bradbury's drunkenness which stopped him working.[3] In 1774 a gilding hearth was built for Bradbury's use,[4] and in 1776 he was recorded as being in charge of a workshop.[5] In 1782 he left Soho leaving all his tools behind.[6]

1 Fothergill etc., item 55, M. B. to J. F., 12 October 1768.
2 Goodison, *Ormolu*, p. 74.
3 Fothergill etc., item 71, J. F. to M. B., 4 April 1770.
4 Box H1, item 252, 6 June 1774.
5 Bowmas etc., Packet B, item 10, 'Measurement of Shops in the Soho Manufactory' [1776].
6 Journal 1781-3, p. 179, 22 June 1782.

BUNBURY, THOMAS

Signed an agreement in 1770 by which he agreed to work for the partners for three years. He was described as a silversmith '... late of Dublin, now of Handsworth...'. He was to be supplied with materials and tools and paid one guinea per week as well as six guineas more at the end of each year.[1] In 1771 he was so busy that work was delayed on a silver tureen,[2] probably for the Admiralty.,[3]

1 Box B6, item 54, 'Articles of Agreement Indented between Thomas Bunbury ... and M. B. and J. F.', 27 November 1770.
2 Letter Book E, p. 89 [B. & F.] to William Matthews, 22 April 1771.
3 Letter Book E, pp. 212-3, B. & F. to James Stuart, 5 October 1771.

BURN, ANTHONY

A silversmith.[1] He came to Soho from London in May 1776. He was described as 'fickle' and 'indifferent' as a workman but was nevertheless invited and his travelling expenses paid by the partners. He was required to undergo a trial period and invited to stipulate his own terms of employment.[2] Burn's wife, then in London, was paid an allowance of half a guinea per week from her husband's wages[3] but late in 1776 she moved to Soho.[4] Burn was paid for the tools he brought with him.[5] He rented a house from the partners.[6] Burn worked in Francis Eginton's department.[7] In July 1777 Burn abruptly left Soho owing the partners £25 1s. 11d.;[8] he was credited with furniture he left behind[9] but he still owed the partners £11 2s. 3d. at the end of 1781.[10] Whether the debt was paid off is not clear.

1 Cash Book 1772-82, 5 July 1776.
2 Letter Book G, p.620, B. & F. to William Matthews, 23 May 1776.
3 Letter Book G, p.635, J. H. to William Matthews, 11 June 1776.
4 Letter Book G, p.734, B. & F. to William Matthews, 2 November 1776.
5 Journal 1776-8, p.180, 24 September 1776. The tools were worth £11 18s. 7d.
6 He rented the house and garden from October 1776 (Journal 1776-8, p.246, 13 December 1776) until August 1777 (Ledger 1776-8, p.218, 19 August 1777).
7 Cash Book 1772-82, 12 April 1777.
8 Letter Book I, p.50, B. & F. to Anthony Burn, 22 July 1777.
9 Journal 1776-8, p.414, 14 October 1777. The furniture was bought by a later occupant for £14 4s. 0d.
10 Ledger 1778-82, p.53, 31 December 1781.

CALDECOTT, GEORGE and THOMAS

Filigree makers.[1] One was the father of the other (though which was which is not clear). They were first mentioned in 1770.[2] It was presumably the father who was described as a satisfactory workman in 1771[3] but in 1773 his poor work was reckoned to have cost the firm £306.[4]

The Caldecotts had their own workshop.[5] They were regularly supplied with silver which provides evidence for the size of their production.[6] From January 1776 until July 1776 they received 54oz. 7dwt. 0gr. of fine silver plus £7 9s. 11d. of unspecified silver. They later received the following amounts (arranged in assay years):

1776-7	161oz.	8dwt.	12gr.	fine silver
	38oz.	18dwt.	0gr.	sterling silver

	£ 5	6s.	0¾d.	unspecified silver
1777-8	77oz.	9dwt.	12gr.	fine silver
	£13	2s.	7¾d.	unspecified silver
1778-9	105oz.	9dwt.	12gr.	fine silver
	3oz.	8dwt.	0gr.	sterling silver
		17s.	6d.	unspecified silver
1779-80	105oz.	12dwt.	0gr.	fine silver
	40oz.	13dwt.	0gr.	sterling silver
1780-1	86oz.	15dwt.	0gr.	fine silver
	28oz.	0dwt.	12gr.	sterling silver
1781-2	171oz.	14dwt.	0gr.	fine silver
	31oz.	18dwt.	12gr.	sterling silver
	£29	3s.	8¾d.	unspecified silver[7].

In 1777 and 1778 they were together paid wages of £1 10s. 0d. per week though in 1779 this declined to £1 4s. 8d.[8] They rented a house from the partners.[9]

The Caldecotts caused several problems in the later years of the partnership. They were difficult to manage during Boulton's absences.[10] In 1778 it was difficult to sell filigree and the partners (who were reluctant to get rid of the Caldecotts) went to the trouble of obtaining the latest patterns from London for them to copy in the hope that this would improve sales.[11] Later the Caldecotts became much busier[12] but in 1780 they had a fire at their workshop.[13]

George was last referred to in 1780.[14] Subsequently, Thomas alone was in charge of filigree production[15] and was at Soho at the end of the Boulton and Fothergill partnership.[16] The contents of this workshop were listed in an inventory of 1782.[17]

1 Letter Book I, pp. 554-5 [B. & F.] to Thomas Salt, 10 March 1780.
2 Fothergill etc., item 71, J. F. to M. B., 4 April 1770. This letter refers to 'Mr Caldecott and his son...'.
3 Fothergill etc., item 71, J. F. to M. B., 4 April 1771.
4 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
5 Ledger 1776-8, p. 120, 5 April 1776.
6 The evidence for their production of silver filigree is patchy (see Appendix IIIB); most of the evidence does not specify which metal was used e.g. 'for filigree thimbles sent Sarah Florry' (Ledger 1776-8, p. 8, 25 March 1776).
7 These figures have been calculated from the following: Ledger 1776-8, Journal 1776-8, Ledger 1778-82, Journal 1778-81, Journal 1781-3.
8 Cash Book 1772-82, 4 October 1777, 24 December 1778, and 24 July 1779.

9 They rented the house for £8 per annum from at least 1772 (Cash Book 1772-82, 18 April 1772) until 1780 (Cash Book 1772-82, 23 December 1780).
10 Scale etc., item 133, J. S. to M. B., 17 May 1778.
11 Letter Book I, p. 188 [B. & F.] to John Stuart, 18 March 1778.
12 Hodges, John, item 19, J. H. to M. B., 12 September 1780. The Caldecotts were stated to be fully employed.
13 Walker, Z. Snr I, item 36, Z. W. to M. B., 8 June 1780. The partners sent Royal Exchange Assurance a bill of £71 14s. 11d; insurance did not cover the Caldecotts' personal property valued at £8 13s. 5d.
14 Ledger 1778-82, p. 185, 31 July 1780.
15 Ledger 1778-82, p. 255, 30 December 1780.
16 Ledger 1778-82, p. 360, May-June 1782.
17 See Appendix VI, 'Tools etc., in Caldecott's old shop'.

CALLOW, MRS and JOSHUA

He was recorded in 1776 as being in charge of a workshop for cutting out blanks for button manufacture.[1] Probably following his death, Mrs Callow was in charge of the same workshop, the contents of which were listed in an inventory of 1782.[2]

1 Bowmas etc., Packet B, item 10, 'Measurements of the Shops in the Soho Manufactory' [1776].
2 See Appendix VI, entry on 'Tools etc. in Mrs Callow's Cutting-out Shop'.

DIXON, THOMAS

Worked with John Smith, a silversmith.[1] Dixon is only known to have been at Soho from 1779.[2] He was still there at the end of the partnership when the contents of his workshop were recorded in an inventory,[3] showing that by then at least he was primarily involved with Sheffield plate and French plating (plating usually copper or brass with silver foil by pressure and heat).[4]

1 See entry on Smith, John, in this Appendix.
2 Ledger 1778-82, p. 184, 28 December 1779.
3 See Appendix VI - 'Thos. Dixon's Shop'.
4 Newman, *Dictionary*, p. 142.

DODD, ROBERT

Dodd is known to have been at Soho in 1770[1] and by 1776 was both in partnership with Boulton and Fothergill[2] and in charge of two workshops,[3] specialising in tortoise-shell work and gilt boxes,[4] though he also produced silver boxes.[5] In 1777 Henry Partridge signed an agreement to work for Dodd, Boulton, and Fothergill for five years.[6] Dodd was constantly warned for inefficiency,[7] but was still

at Soho at the end of the Boulton and Fothergill partnership.*

1 1 Bundle Cash Accounts, June 1769 to July 1774, 14 April 1770.
2 Ledger 1776-8, p. 71, 1 January 1776.
3 Bownas etc., Packet B, item 10, 'Measurement of Shops in the Soho Manufactory', Christmas 1776.
4 Ledger 1776-8, p. 71, 1 January 1776.
5 Journal 1776-8, p. 297, 18 March 1777. Silver boxes sent 'ANQ' £12 12s. 6d.
6 Box P2, item 82, 'Articles of Agreement between Henry Partridge, Handsworth, and B. & F. and Robert Dodd, Handsworth, Toymakers', 11 February 1777.
7 Letter Book I, p. 181, J. H. to Barnard and Savory, 28 February 1778.
8 Cash Book 1772-82, 16 March 1782.

DUMÉE

Before coming to Soho, Dumée was described as a mediocre chaser and cousin of the celebrated London goldsmith Nicholas Dumée[1] (with whom he has been confused).[2] Dumée came from London perhaps in 1771[3] but certainly by 1772.[4] In 1773 John Scale accused Dumée of poor chasing on a silver coffee-pot[5] and later in 1773 Dumée tendered his resignation after Francis Eginton refused to allow him to chase another coffee-pot.[6] Soon afterwards Dumée was back in London.[7]

1 Letter Book E, p. 10 [B. & F.] to William Matthews, 9 January 1771.
2 Bury, 'Assay Silver at Birmingham - 1', p. 1615. Bury thought that Nicholas Dumée may have come to work at Soho in 1768 because of the marked similarity between a 1767 candlestick by him and his partner Butty (Plate 6) and a pair produced at Soho in the assay year 1768-9 (Plate 5). Dumée was however in partnership with Butty in London until at least 8 March 1773 (Grimwade, *London Goldsmiths*, p. 497) but the Soho Dumée is known to have been at the Soho Manufactory until at least 15 March 1773 (see note 6 below).
3 Letter Book E, p. 40, J. W. to William Matthews, 13 February 1771. A reference to a chaser arriving from London.
4 Letter Book E, p. 430, B. & F. to William Matthews, 19 April 1772.
5 Scale etc., item 10, J. S. to M. B., 23 January 1773.
6 Box D2, item 198, Dumée to M. B., 15 March 1773.
7 B.R.L., B.W.C., Portions of a Letter Book, 1773, p. 88, A. J. C. to William Matthews, 14 April 1773. A parcel was sent to London for Dumée.

DUVAL, JOHN

Duval is known to have been at Soho in 1770.[1] In the early 1770s he worked on ormolu clocks[2] and vases[3] and on one occasion in 1771 went to London to fix ormolu chimney-piece mounts in position for a

customer.[4] In 1772 Duval worked on silver candlesticks and branches[5] and in 1773 was mentioned as improving the chasing and soldering on the handle of a silver coffee-pot;[6] later, he smoothed the surface of the pot.[7]

In 1770 Fothergill had an indifferent opinion of Duval who owed the partners a considerable amount of money.[8] Later, Boulton complained of Duval's delays in completing work.[9] Scale reckoned that Duval's mistakes had cost the firm £100 and implied that Duval was unwilling to take orders from him.[10]

Duval came from London[11] and may have been connected with firms bearing his name in the capital.[12] Duval had knowledge of silversmiths in London: in 1771 he wrote to Hanckel, inviting him to Soho on behalf of the partners.[13] Hanckel came to Soho[14] but others contacted by Duval did not.[15]

Duval was recorded in 1776 as being in charge of a workshop[16] within Eginton's department.[17] Duval rented a house from the partners.[18] It seems likely that he left Soho in 1777.[19]

1 Fothergill etc., item 71, J. F. to M. B., 4 April 1770.
2 Fothergill etc., item 90, M. B. to J. F., 9 April 1772, and Boulton, M. (Miss Anne Robinson, Mrs Boulton), item 93, M. B. to Mrs Boulton, 4 April [1772].
3 Fothergill etc., item 71, J. F. to M. B., 4 April 1770.
4 Goodison, *Ormolu*, pp. 103-4. The customer was the Earl of Kerry, Portman Square.
5 Scale etc., item 6, J. S. to M. B., 6 February 1772.
6 Scale etc., item 10, J. S. to M. B., 23 January 1773.
7 Scale etc., item 11, J. S. to M. B., 28 January 1773.
8 Fothergill etc., item 71, J. F. to M. B., 4 April 1770.
9 Fothergill etc., item 90, M. B. to J. F. [9 April 1772].
10 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
11 William Matthews was asked to pay Duval's wife 10s. 6d. per week in London (Letter Book E, pp. 14-5, J. W. to William Matthews, 17 January 1771).
12 The London firm of John and Peter Duval existed between 1765 and 1768, John Duval and Sons existed between 1777 and 1781, and John Duval Sons & Co., was in business between 1784 and 1796. All three firms were probably closely connected since all were jewellers and all had premises at 5 Warnford Court, Throgmorton Street (Heal, *The London Goldsmiths*, p. 145). Whether the Duval working at Soho was the same Duval working in London is uncertain but it is perhaps not without significance that the dates when John Duval is known to have been working at Soho (1770-1777, see text) were dates when there is no evidence for the existence of these firms in London.
13 Letter Book E, p. 117 [B. & F.] to William Matthews [4 or 5] June 1771.

14 See entry on Hanckel in this Appendix.
15 In the letter referred to in note 13 above, mention was made of letters from Duval to two other workmen in London, Harrison and Richards. There is no evidence that these two came to Soho.
16 Bownas etc., Packet B, item 10, 'Measurements of the Shops in the Soho Manufactory' [1776].
17 Cash Book 1772-82, 2 March 1776.
18 Duval paid £7 7s. 0d. for one year's house rent in 1776 (Ledger 1776-8, p. 162, 31 December 1776). Duval's wife paid rent of £5 15s. 6d. in October 1777 (Cash Book 1772-82, 8 October 1777).
19 There are no references in the M. B. P. to Duval after 1777 apart from an entry in a Ledger of 1778 to the effect that he owed the partners £41 12s. 7d. (Ledger 1776-8, p. 162, 31 July 1778).

EDSTROM, STEPHEN

Edstrom was recommended to Boulton by George Wyon[1] in 1776 when Edstrom was an outworker for Kandler, a London goldsmith;[2] Edstrom hesitated to come to Soho initially[3] but was later invited by Boulton for a trial period.[4] Edstrom came in 1776,[5] rented a house from the partners,[6] but returned to London in 1778 without paying off certain debts to Boulton. Subsequently Edstrom offered to return to Soho for a weekly wage of £1 6s. 0d. plus his lodging and gradually pay off his debt.[7] There is no evidence of a reply or of Edstrom working later at Soho.

1 See entry on Wyon, George, in this Appendix.
2 This could either be Frederick Kandler, Jermyn Street or Charles II Kandler also of Jermyn Street (Grimwade, *London Goldsmiths*, p. 567).
3 Box E1, item 108, Stephen Edstrom to George Wyon, 15 May 1776.
4 Letter Book G, p. 631, George Wyon to Stephen Edstrom, 6 June 1776.
5 Journal 1776-8, p. 184, 30 September 1776. £0 0s. 2d. paid to Edstrom for porterage on 28 August 1776.
6 Journal 1776-8, p. 336, 4 June 1777.
7 Box E1, item 109, Stephen Edstrom to M. B., 10 June 1778.

EGINTON, FRANCIS[1]

Francis Eginton was born in 1737 and died in 1805.[2] In 1759 he was described as a chaser and engraver.[3] Eginton was probably working at Soho in 1764[4] and during the following few years he became friendly with Boulton.[5] In 1767 Eginton was working on candlesticks[6] and in 1768 reference was made to a candlestick design by him;[7] whether these were silver candlesticks is not clear. In 1767 Eginton had an apprentice.[8]

In 1769 Boulton wrote of the possibility of Eginton visiting London for the firm.[9] In 1771 Eginton took to the capital details of silver candlesticks for a customer[10] and in 1772 went again, probably to assist with the ormolu sale at Christie and Ansells.[11] In 1773 Boulton suggested that Eginton should look round for design ideas in London[12] and that he should make visits to members of the aristocracy and architects.[13] In 1778 Eginton assisted with the sale at Christie and Ansell's.[14]

Eginton did a range of artistic work at Soho: in 1771 he was referred to as the firm's 'chief designer'[15] and in the early 1770s he designed a sword[16] and a tea-kitchen.[17] He took casts from models[18] and painted boxes [19] and modelled handles in the form of goats' heads for ormolu ice pails.[20]

Eginton was responsible for the design of silver: for example, he made drawings for a service of plate in 1776.[21] He personally received instructions from customers about the design of silver orders on at least a few occasions[22] and Eginton sometimes corresponded with customers over the weights and prices of silver.[23] When designs were supplied by architects it was Eginton's responsibility to ensure that pieces were executed accordingly.[24]

At the same time, Eginton's other responsibilities for the production of ormolu, silver and Sheffield plate gradually increased. In 1771 he was in charge of producing candlesticks whether in silver or ormolu.[25] In 1772 he was responsible for calculating the cost of ormolu vases and clocks,[26] and gave Duval[27] instructions for finishing a clock-case.[28] Eginton was by then generally in charge of producing expensive metalwork[29] and checking all chasing.[30] In 1773 the weekly cost of employing Eginton and his apprentices was £2 10s. 0d.[31] An inventory of 1776 shows that he was personally in charge of a chasing workshop, a warehouse, and another room.[32]

By 1776 Eginton had been taken into partnership by Boulton and Fothergill for the production of silver, Sheffield plate and ormolu.[33] The terms of their agreement are not known. Eginton ordered materials for the workmen in his department who included those who made Sheffield plate (e.g. William Hancock[34]), ormolu (e.g. Richard Bentley[35]), as well as those who worked on silver: Thomas Dixon, (another) William Hancock, William Wilson, Charles Pass, Edward Hodges, George Wyon, William Bingley and Thomas Moore.[36] Eginton

also made regular payments to men within his department who worked on silver: Thomas Moore, John Duval, Henry Gillings, John Smith, George Wyon, James Watt and Anthony Burn.[37]

During the mid-1770s Eginton became hostile to producing silver, because the prices at which Boulton took orders were too low to make a profit. Eginton wanted to increase the production of Sheffield plate.[38] Eginton's partnership with Boulton and Fothergill terminated in 1778[39] and in the following year Boulton and Fothergill formed a partnership with William Bingley.[40]

Before 1778 Eginton had been producing within his department, japanned wares[41] and mechanical reproductions of paintings[42] in addition to metalwork. At the end of 1778 Eginton formed another partnership with Boulton and Fothergill just for mechanical paintings and japanned wares.[43] This partnership was terminated by Boulton in 1780[44] because it was unprofitable, and at the same time Eginton was dismissed from the Soho Manufactory.[45]

Boulton felt some sympathy for Eginton[46] and helped him to carry on elsewhere by lending him pictures to copy as well as copper plates made earlier at Soho.[47] In 1781 Fothergill thought about getting Eginton to chase a silver tureen for the Admiralty[48] but the work was eventually done at Soho.[49] Later, Eginton made a reputation for himself as a painter of stained glass.[50]

1 His name has been variously spelt as Eggington, Egginton and Edginton, but he used Eginton. (W. C. Aitken, 'Francis Eginton' *Birmingham and Midland Institute, Archaeological Section, Transactions, Excursions and Reports*, Vol. III (15 February 1872), pp. 27-43 (p. 27).

2 ibid., p. 27.

3 B.R.L., St Philip's Church [later, Birmingham Cathedral] Marriage Register, Vol. I, 1754-60, p. 69, 8 January 1759.

4 Cash Book 1762-4, p. 265, 23 July 1764. A payment to an Eginton which could have been John Eginton (see entry on Eginton, John, in this Appendix).

5 [M. B.] Notebook 4, 1765, p. 32, 12 November 1765. A payment of £6 6s. 0d. from M. B. to Eginton for an unspecified purpose. In Scale etc., item 4, J. S. to M. B., 11 November 1765, reference was made to the health of Mrs Eginton.

6 Cash Book 1767-77, p. 1, 12 January 1767, 'Fr. Egginton Candlesticks £1 11s. 6d'; p. 2, 26 January 1767 'Fr. Egginton Candlesticks'. There is a reference to the supply of modelling wax to Eginton (Cash Book 1767-77, p. 1, 12 January 1767).

7 Fothergill etc., item 55, M. B. to J. F., 12 October 1768. The design cannot be identified.

8 Cash Book 1767-77, p. 2, 26 January 1767.

9 Boulton, M. (Miss Anne Robinson, Mrs Boulton) item 37, M. B. to Mrs Boulton, 17 November 1769.
10 Letter Book E, p.89 [B. & F.] to William Matthews, 22 April 1771. A pair of silver candlesticks for Mr Morris.
11 Boulton, M. (Miss Anne Robinson, Mrs Boulton), item 93, M. B. to Mrs Boulton, 4 April [1772].
12 Boulton, M. (Miss Anne Robinson, Mrs Boulton), item 47, M. B. to Mrs Boulton [1773].
13 [M. B.] Notebook 10, 1773, p.19. The architects were Robert Mylne and James Paine.
14 Letter Book I, p.226, B. & F. to John Stuart, 9 May 1778.
15 Letter Book E, p.94, C. W. to William Evill, 4 May 1771. This letter does not specifically name Francis Eginton but implies that the firm's chief designer was in London at some point between late March and early May 1771. That this refers to Eginton is confirmed by the fact that he left for London late in April 1771 (Letter Book E, p.89 [B. & F.] to William Matthews, 22 April 1771).
16 [M. B.] Notebook 10, 1773, p.2. A sword for Lord Denbigh.
17 Box G2, item 89, Sir John Goodricke to [B. & F.], n.d.
18 Fothergill etc., item 18, M. B. to 'Soho' [1770].
19 B.R.L., B.W.C., Portions of a Letter Book, 1773, p.78, A. J. C. to William Matthews, 3 April 1773.
20 Fothergill etc., item 143, M. B. to 'Soho', 30 April 1773.
21 Letter Book G, p.559, B. & F. to the Prince of Holstein (the Duke of Holstein-Gottorp, see Chapter II, note 458), 28 February 1776.
22 e.g. Birmingham 2, item 113, note on the service for St Bartholomew's Chapel, Birmingham, 10 February 1775, and Box E1, item 98, note of order from Richard L. Edgeworth, 1 August 1776, referring to correspondence with Eginton.
23 e.g. Box G2, item 160, A. Green to Francis Eginton, 11 February 1774. Correspondence about the weight and price of sauce-boats. Also, Letter Book I, pp.65-6, B. & F. to Richard Moland, 14 August 1777, a letter about ecclesiastical plate.
24 Letter Book G, p.291, B. & F. to Sir Robert Rich, 18 March 1775. An épergne designed by James Wyatt.
25 Letter Book E, p.89 [B. & F.] to William Matthews, 22 April 1771.
26 Goodison, *Ormolu*, p.204, note 479.
27 See entry on Duval, John, in this Appendix.
28 Goodison, *Ormolu*, p.125.
29 Letter Book E, p.640, A. J. C. to Henry Meredyth, 18 November 1772.
30 Fothergill etc., item 91, M. B. to J. F., 9 May 1772.
31 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773]. The number of apprentices was not specified.
32 Bownas etc., Packet B, item 10, 'Measurements of Shops in the Soho Manufactory' [1776].
33 Ledger 1776-8, p.2, 1 January 1776.
34 Letter Book G, pp.453-4, M. B. to William Hancock, 'Plater in Sheffield', 31 October 1775.
35 Goodison, *Ormolu*, p.68.
36 See entries on these workmen in this Appendix. Information on materials ordered for workmen taken from Ledger 1775-8 and 1787-9.

37 Cash Book 1772-82. See entries on these silversmiths in this Appendix. These regular payments were for amounts between 2s. 6d. and 11s. 0d. per week, but the average was around 4s. 6d. The purpose of these payments is unclear but they may have been for the wages of apprentices.
38 Scale etc., item 23, J. S. to M. B., 21 April 1776.
39 The partnership came to an end on 24 September 1778 (Ledger 1778-82, p. 90, 24 September 1778). However, the accounts of the partnership were to be settled on 31 December 1778 (Ledger 1778-82, p. 99, 7 November 1778).
40 See entry in this Appendix on Bingley, William.
41 Letter Book I, p. 5, B. & F. to William Dunn, 22 May 1777.
42 Dickinson, *Boulton*, pp. 104-5. The impressions were made with a copper plate printing press; there were two or more plates applying colours, though there were sometimes also hand additions.
43 Ledger 1778-82, p. 124, 31 December 1778.
44 Dickinson, *Boulton*, pp. 105-6.
45 Box E2, item 11, M. B. to Francis Eginton, 28 June 1780.
46 Letter Book J, p. 31, M. B. to Mrs Watt, 14 October 1780.
47 Box E2, item 15, Francis Eginton to J. H., 29 May 1781.
48 Fothergill etc., item 247, J. F. to J. H., 1 April 1781.
49 Fothergill etc., item 249, J. F. to M. B., 7 April 1781.
50 Anon. 'Glass Painters of Birmingham, Francis Eginton, 1737-1805', *Journal of the British Society of Master Glass-Painters*, Vol. II, No. 2 (October 1927), pp. 63-71.

EGINTON, JOHN

John was the brother of Francis Eginton,[1] and was working at Soho at least by 1768.[2] John worked on a very large range of goods at Soho including ormolu[3] and later a wide variety of 'toys' in a number of metals.[4] He also made silver instrument-cases[5] and silver boxes.[6]

John Eginton was recorded in 1776 as being in charge of two workshops for making dies and watches, and three other rooms.[7] He did engraving[8] and taught apprentices both to engrave[9] and draw.[10] When these apprentices were proficient at drawing some became chasers.[11]

In 1777 John was dismissed[12] and entered a partnership in Birmingham[13] with some capital from Boulton and Fothergill on which the latter party charged interest.[14] In 1780 John wished to return to Soho for 100 guineas per annum and replace the chaser and die-sinker Wilson[15] or make button dies;[16] alternatively he wanted to do chasing for Soho on piece-work rates at his own home.[17] None of these things happened but Boulton later asked Eginton to instruct an employee in drawing.[18]

1 See entry on Eginton, Francis, in this Appendix.
2 Wedgwood etc., item 7, Josiah Wedgwood to M. B., 24 March 1768, but see entry on Eginton, Francis, in this Appendix, note 4.

3 John helped with the preparations for the ormolu sale at Christie and Ansells in 1772 (Letter Book E, pp. 418-9, B. & F. to William Matthews, 4 April 1772).
4 e.g. gilt snuff-boxes (Ledger 1776-8, p. 155, 30 September 1776); seals (Ledger 1776-8, p. 4, 7 March 1776); gilt chains (Ledger 1776-8, p. 303, 7 February 1776); cane-heads (Ledger 1776-8, p. 155, 6 August 1776).
5 Ledger 1776-8, p. 4, 26 February 1776.
6 Ledger 1776-8, p. 4, 18 June 1776.
7 Bownas etc., Packet B, item 10, 'Measurement of Shops in the Soho Manufactory' [1776].
8 Journal 1776-8, p. 104, 21 May 1776. This engraving was done for Robert Dodd (see entry on Dodd, Robert, in this Appendix).
9 Cash Book 1772-82, 30 June 1774.
10 Ledger 1776-8, p. 204, 11 March 1778. A payment of £7 9s. 3d. to Eginton for teaching apprentices to draw.
11 Scale etc., item 16, J. S. to M. B., February 1773.
12 Scale etc., item 38, J. S. to M. B., 10 April 1780.
13 Journal 1776-8, p. 360, 2 July 1777. The partner was E. Jee. Eric Robinson stated that John Eginton (with E. Jee) produced mechanical paintings but this seems to be a confusion with Francis Eginton (see entry on Eginton, Francis, in this Appendix, and Eric Robinson, 'Matthew Boulton, Patron of the Arts' *Annals of Science*, Vol. IX, No. 4 (1953) pp. 368-76 (pp. 371-6)).
14 Letter Book J, pp. 69a-70, M. B. to J. F., 11 December 1780.
15 See entry on Wilson, William, in this Appendix.
16 Scale etc., item 38, J. S. to M. B., 10 April 1780.
17 Box B3, item 35, William Bingley to M. B., 12 April 1780.
18 Letter Book M, p. 118, M. B. to Mr Capper, August 1781. The employee was Capper's son.

FELLOWES, JOHN

In 1776 Fellowes, and Boulton and Fothergill, signed an agreement to last seven years. Fellowes was required to: make candlesticks or any other articles directed by the partners; avoid divulging the firm's secrets to other manufacturers; and work from 6.00 a.m. to 7.00 p.m. in summer, and from 7.00 a.m. to 8.00 p.m. in winter, with half an hour for breakfast and one hour for dinner. Fellowes' wages were to be 18s. 0d. per week for the first three years and increased annually by 1s. 0d. per week to reach 22s. 0d. per week in his seventh year. The partners were to supply Fellowes with tools and he was specifically warned against stealing or damaging the partners' property.'

1 Box F1, item 76. 'Articles of Agreement Indented between John Fellowes, candlestick maker, M. B. and J. F.', December 1776.

FONTAINE, JOHN DE LA

He came to Soho from Wolverhampton in 1767 when he signed an

agreement with Boulton and Fothergill to work for five years. The main points of the agreement were that De la Fontaine was to produce 'toys' or any other articles required of him and his wages were to be 14s. 0d. per week for the first three years, 15s. 0d. for the fourth year and 16s. 0d. for the fifth year.[1] The other parts of the agreement were the same as for other journeymen.[2] De la Fontaine made Sheffield plate[3] and also silver since in 1773 he or William Bingley[4] were regarded as suitable witnesses to prove (to the Parliamentary committees dealing with Boulton's application for an assay office in Birmingham), that silver plate was being made at Soho.[5] De la Fontaine left Soho in 1773 under a cloud: he owed the partners £20 and had been responsible for poor workmanship.[6] However, he returned[7] and was still at Soho in 1781.[8]

1 Box D1, item 332, 'Articles of Agreement between John de la Fontaine from Wolverhampton and M. B. and J. F.', 1767.
2 See entry on Fellowes, John, in this Appendix.
3 Cash Book 1772-82, 24 April 1772.
4 See entry on Bingley, William, in this Appendix.
5 Scale etc., item 15, J. S. to M. B., 8 February 1773.
6 Scale etc., item 14, 'Proposal to B. & F. by J. S.' [1773].
7 De la Fontaine returned by 1776 (Ledger 1776-8, p. 47, 1 January 1776).
8 Ledger 1778-82, p. 17, 31 December 1781.

GEANOR, JOHN

Made unspecified silver articles in 1782.[1] The contents of his workshop were listed in an inventory of 1782.[2]

1 Ledger 1778-82, p. 362, 30 May 1782.
2 See Appendix VI, 'John Geanor's Shop'.

GILLINGS, HENRY

A chaser.[1] Gillings, a Londoner, was recommended to Boulton and Fothergill and invited to Soho in 1775 for a trial period[2] and paid two guineas for his expenses to Birmingham.[3] Later in 1775 he signed an agreement with Boulton and Fothergill whereby he was to work three years for them and be paid 22s. 0d. per week.[4] He worked thereafter in the Silver, Plated and Ormolu department[5] and was still at Soho at the end of the Boulton and Fothergill partnership.[6]

1 Ledger 1776-8, p. 66, 1 January 1776.
2 Box G1, item 295, Henry Gillings to B. & F., 6 August 17774.
3 Letter Book G, p. 95, B. & F. to Henry Gillings, 11 August 1775.

4 Box G1, item 296, 'Articles of Agreement Indented between Henry Gillings and B. & F.', 25 November 1775.
5 Cash Book 1772-82, 2 March 1776.
6 Ledger 1778-82, p.372, 22 June 1782.

HANCKEL

A silversmith.[1] Hanckel was contacted in 1771 by Duval, an employee of Boulton and Fothergill's. Duval thought that Hanckel worked for Emick Romer, in London.[2] Hanckel was also contacted on the partners' behalf by a certain Kelly, another London plateworker, who thought that Hanckel worked with 'Mr Hemmings'.[3] This 'Hemmings' may have referred to Thomas Heming or the separate firm of George Heming's.[4] Although Hanckel made acceptable proposals to Boulton in 1771, the latter was not yet ready to employ more silversmiths.[5] Hanckel arrived at Soho either late in 1772 or early in 1773.[6] In 1773 Hanckel's wages were £1 6s. 0d. per week.[7] Hanckel remained at Soho until the end of 1781.[8]

1 Ledger 1776-8, p.47, 1 January 1776.
2 Letter Book E, p.117 [B. & F.] to William Matthews [4 or 5] June 1771. Duval stated that Romer worked in High Holborn. See entry on Duval, John, in this Appendix.
3 Letter Book E, pp.119-20, J. S. to William Matthews, 6 July 1771.
4 Grimwade, *London Goldsmiths*, pp.542-3. Thomas Heming, New Bond Street, London, was Principal Goldsmith to the King between 1760 and 1782. George Heming worked, at this time, in Piccadilly.
5 Letter Book E, pp.134-5, B. & F. to William Matthews, 23 June 1771. Hanckel replied that he was willing to wait until he heard further from M. B. (Matthews and Boulton; Matthews, William, item 5, William Matthews to M. B., 27 June 1771).
6 Hanckel was in London in February 1772 (Letter Book E, p.361, A. J. C. to William Matthews, 1 February 1772). Hanckel was at Soho by 14 March 1773 (1 Bundle Cash Accounts, June 1769-July 1774, 14 March 1773. Payment of 3s. 6d. to Hanckel for mending a watch).
7 Scale etc., item 14, 'Proposals to B. & F. by J. S.' [1773].
8 Ledger 1778-82, p.17, 31 December 1781.

HANCOCK, WILLIAM

Hancock worked at Soho by 1763.[1] In April 1771 he was very busy producing silver candlesticks.[2] Fothergill wrote in 1772 that 'Hancock neglects his work greatly'.[3] In 1776 he was recorded as being in charge of a workshop.[4] Hancock also worked with ormolu[5] and Sheffield plate.[6] He rented part of a house from the partners at

£7 0s. 0d. per annum from at least 1777[7] until at least 1780.[8] He found it difficult to pay his rent and fell into debt.[9] At the end of the partnership, Hancock was in charge of a workshop which contained tools for the manufacture of various sorts of tableware.[10]

1 Cash Book 1763-66, p. 10, 7 May 1763. Payment to Hancock of 3s. 4d.
2 Letter Book E, p. 89 [B. & F.] to William Matthews, 22 April 1771.
3 Fothergill etc., item 84, J. F. to M. B., 6 February 1772.
4 Bownas etc., Packet B, item 10, 'Measurement of Shops in the Soho Manufactory' [1776].
5 Goodison, *Ormolu*, p. 68.
6 Ledger 1775-8 and 1787-9, p. 8, 16 November 1775. Supplied with metal for making Sheffield plate.
7 Ledger 1776-8, p. 286, 31 December 1777.
8 Ledger 1778-82, p. 205, 30 December 1780.
9 At Christmas 1778 Hancock's arrears of rent were £12 5s. 0d. (Soho House etc., 'List of the Annual Rent of Houses with the arrears due at Christmas 1778) and in 1780 Hancock tried to borrow six guineas from J. S. (Household Accounts 1 of 2 boxes, 21 October 1780).
10 See Appendix VI, 'Will^m Hancock's Shop'.

HAYWOOD, JOHN

Members of the Haywood family worked at Soho and it is difficult to distinguish between them. Payments were made in 1762 to John Haywood,[1] John Haywood and sons,[2] and John Haywood Junior.[3] Thereafter references are just to John Haywood. From 1766 he worked with Joseph Sanders, a piercer.[4] In 1776 they were in charge of a 'press' workshop and two 'tool' workshops.[5] In 1782 Haywood was in charge of a piercing workshop in that part of Soho which produced silver and Sheffield plate[6] and jointly in charge, with Sanders, of piercing workshops for button making.[7]

1 Cash Book 1762-4, p. 2, 1 July 1762.
2 Cash Book 1762-4, p. 5, 10 July 1762.
3 Cash Book 1762-4, p. 50, 6 November 1762.
4 Cash Book 1763-6, p. 235, 13 September 1766.
5 Bownas etc., Packet B, item 10, 'Measurement of Shops in the Soho Manufactory' [1776].
6 See Appendix VI - 'John Haywood's Shop'.
7 Soho Inventory, 1782, p. 8. See Chapter III note 152.

HODGES, EDWARD,

An apprentice in the Silver, Plated and Ormolu department from at least 1776[1] until the end of the Boulton and Fothergill partnership.[2]

Throughout this period Hodges was paid 7s. 0d. per week[3] and 5s. 3d. per week was paid by the partners for his board and lodging.[4] Hodges' workshop was included in an inventory of 1782 and references there to die blanks and Plaster of Paris show that he was involved with both die sinking and casting.[5]

1 Journal 1776-8, p.251, 31 December 1776.
2 Journal 1781-3, p.165, 22 June 1782.
3 Journal 1776-8, p.251, 31 December 1776, Ledger 1778-82, p.28, 31 December 1779 and Journal 1781-3, p.165, 22 June 1782.
4 Journal 1778-81, p.504, 10 March 1781.
5 See Appendix VI - 'Edward Hodges' Shop'.

HOLME, S.

Known to have been working in 1767 at Soho with Strickland,[1] who (at a later date), was referred to as a silversmith.[2] Holme was similarly referred to in 1775 and this was the last reference to him.[3]

1 Cash Book 1767-77, p.5, 25 March 1767.
2 See entry on Strickland in this Appendix.
3 Cash Book 1772-82, p.3, 15 July 1775.

HOOKER

Mentioned as being suitable for carrying out chasing on the silver tureen supplied to the Admiralty in 1781.[1]

1 Hodges, John, item 26, J. H. to M. B., 2 April 1781.

HUGHES, JOHN

A silver polisher at Soho at least from 1773[1] until 1777.[2] Hughes worked in the Silver, Plated and Ormolu department.[3]

1 Cash Book 1772-82, 31 December 1773.
2 Ledger 1776-8, p.65, 10 February 1777.
3 Cash Book 1772-82, 23 March 1776.

KASSTERREL

Mentioned in 1773 as a chaser of silver.[1]

1 Box D2, item 198, Dumée to M. B., 15 March 1773.

LEONARD

Recorded in 1775 as working with Henry Tyson[1] on silver buckles.[2]

1 See entry on Tyson, Henry, in this Appendix.
2 Cash Book 1772-82, 31 January 1775.

MOORE, THOMAS

Moore worked at Soho by 1762 when he was paid 14s. 0d. per week for himself and his son.[1] Moore was referred to as a stamper.[2] In an inventory taken in 1776, three workshops for pressing, stamping, and die-sinking were listed under Moore's name.[3] At that time Moore's wages and those of his assistants were paid by Francis Eginton which indicates that Moore worked for the Silver, Plated and Ormolu department.[4] In 1781 he sunk a die for silver medals.[5] Moore's workshops were recorded in an inventory taken in 1782.[6] Moore rented a house and garden from the partners,[7] as did his son.[8]

1 Cash Book 1762-4, p. 2, 1 July 1762.
2 Cash Book 1762-4, p. 6, 17 July 1762.
3 Bownas etc., Packet B, item 10, 'Measurements of Shops in the Soho Manufactory' [1776].
4 Cash Book 1772-82. Payments of, for example, £6 6s. 0d. for 3 February 1776 and £8 8s. 0d. for 10 February 1776 (Ledger 1776-8, p. 64, 12 February 1776).
5 Hodges, John, item 28, J. H. to M. B., 9 April 1781.
6 See Appendix IV - entry on 'Thos. Moore'.
7 Moore rented the house and garden at least from 1776 (Ledger 1776-8, p. 215, 31 December 1776) until 1782 for £6 6s. 0d. per annum (Cash Book 1772-82, 30 March 1782).
8 Cash Book 1772-82, payments began on 1 May 1780 and finished on 27 November 1780.

MYND, THOMAS

Mynd was Boulton's brother-in-law.[1] Mynd worked at Soho by 1762.[2] In 1765 he was making candlesticks[3] and in 1768 Boulton asked Fothergill to ensure that all candlesticks were checked by Mynd before they were despatched from Soho.[4] During this period there was a close personal relationship between Boulton, Mynd and Francis Eginton.[5]

By 1773[6] Mynd had left Soho and established a business in Birmingham, but the partners obtained buckles both in pinchbeck (an alloy of copper and zinc resembling gold[7]) and silver from him because they were of a higher quality than those produced at Soho.[8] Mynd was supplied with sterling silver by the partners[9] and Boulton provided him with at least one loan, presumably to support the new business.[10]

1 Mynd married M. B.'s sister, Catherine (Delieb and Roberts, *Silver Manufactory*, p. 135).
2 Cash Book 1762-4, p. 11, 3 August 1762.
3 Fothergill etc., item 48, J. F. to M. B., 23 December 1765.

4 Fothergill etc., item 55, M. B. to J. F., 12 October 1768.
5 In 1765 Boulton gave Eginton and Mynd £6 6s. 0d. each - for a reason that is not clear ([M. B.] Notebook 4, 1765, p.32, 12 November 1765). In a letter to M. B. by J. S. passing reference was made to the health of Mrs Mynd and Mrs Eginton (Scale etc., item 4, J. S. to M. B., 11 November 1765). See entry on Eginton, Francis, in this Appendix.
6 Mynd may have left Soho by 1770 since in that year he received £20 0s. 0d. from the partners which may have been for goods supplied to them. (1 Bundle Cash Accounts, June 1769 to July 1774, 21 February 1770.) However, the letter in note 8 below provides the first firm evidence that Mynd had left Soho.
7 *O E D.*
8 Fothergill etc., item 139, M. B. to J. F., 28 April 1773. See Appendix II for instances of silver buckles supplied by Mynd to the partners in 1773 and 1774. The supply of silver to Mynd in later years (see note 9 below) would suggest that Mynd supplied further articles later in the mid-1770s.
9 In 1776 Mynd received 8 oz. sterling silver (Ledger 1776-8, p. 181, 19 September 1776). Mynd also returned 5 oz. 10 dwt. (Ledger 1776-8, p. 181, 25 September 1776) and 2 oz. 10 dwt. (Journal 1776-8, p. 197, 24 October 1776). In 1777 Mynd was sent 60 oz. of sterling silver (Journal 1776-8, p. 280, 14 February 1777).
10 Box M2, item 333, 'Indenture with M. B.', 21 December 1780. M. B. lent Mynd £100 12s. 4d.

OTLEY, JOHN

Otley was recorded in 1776[1] and 1782 as being in charge of a burnishing workshop for button manufacture, the contents of which were listed in an inventory of 1782.[2]

1 Bownas etc., Packet B, item 10, 'Measurements of Shops in the Soho Manufactory' [1776].
2 See Appendix VI - entry on 'Tools etc. in John Otley's Burnishing Shop'.

PARKER, WILLIAM

A candlestick maker,[1] who took over Baker's work when he left in 1773; it is not clear whether Parker had worked at Soho before or whether he had arrived recently.[2] Parker worked in Francis Eginton's department prior to his departure from Soho in 1776.[3]

1 Ledger 1776-8, p. 46, 1 January 1776.
2 Scale etc., item 10, J. S. to M. B., 23 January 1773. See entry on Baker in this Appendix.
3 Cash Book 1772-82, 20 April 1776.

RYLEY, ISAAC

He worked at Soho at least from 1771[1] as a caster preparing a variety of metals such as Sheffield plate[2] and white metal[3] (an alloy of tin, antimony, and copper resembling silver[4]). He cast silver for the button department[5] as well as Francis Eginton's department.[6] Ryley had an apprentice.[7] Ryley was working at Soho at the end of the Boulton and Fothergill partnership.[8] He rented a house from the partners.[9]

1 1 Bundle Cash Accounts June 1769-July 1774, 6 November 1771.
2 Ledger 1776-8, p. 54, 27 February 1776. Metal prepared for Sheffield plate for the use of William Hancock who worked in Francis Eginton's department (see entry on Eginton, Francis, in this Appendix).
3 Ledger 1776-8, p. 278, 11 November 1777.
4 Bradbury, *Sheffield Plate*, pp. 494-6. M. B. noted the resemblance of white metal to silver and c. 1770 thought of using it for a wide variety of articles such as candlesticks, cutlery, buttons and chains ([M. B.] Notebook 6, 1768-75, pp. 17-18 [c. 1770]). M. B. later decided not to use the metal to a large extent since Sheffield plate was better and cheaper (Letter Book D, p. 65, M. B. to Rodney Valltravers, [November 1772]). Later in the eighteenth century and nineteenth century, white metal (which was called Britannia metal in the nineteenth century), was widely used, particularly in Sheffield, to make a large range of plate (Bradbury, *Sheffield Plate*, pp. 494-6).
5 Silver cast by Ryley for the 'Button Co. in partnership with Charles Wyatt' (Ledger 1776-8, p. 120, 13 May 1776).
6 Ryley melted silver for the manufacture of silver plate (Cash Book 1772-82, 30 March 1782).
7 Cash Book 1772-82, 15 May 1780.
8 Cash Book 1772-82, 30 March 1782.
9 In 1777 Ryley's rent was £6 6s. 0d. (Ledger 1776-8, p. 278, 31 December 1777).

SANDERS, JOSEPH

He worked at Soho by 1762[1] and was later variously referred to as a stamper,[2] presser,[3] and piercer.[4] He worked with John Haywood[5] and in 1776 they were in charge of three workshops, one of which contained presses;[6] they made buttons[7] and the contents of their workshops were listed in an inventory of 1782.[8] Sanders rented a house from the partners.[9]

1 Cash Book 1762-4, p. 33, 25 September 1762.
2 Cash Book 1763-6, p. 144, 24 December 1765.
3 Cash Book 1763-6, p. 144, 27 December 1765.
4 Cash Book 1772-82, 31 December 1773.

5 See entry on Haywood, John, in this Appendix. They worked together from at least 1766 (Cash Book 1763-6, p.235, 13 September 1766) until 1777 (Ledger 1776-8, p.227, 16 October 1777).

6 Bownas etc., Packet B, item 10, 'Measurements of Shops in the Soho Manufactory' [1776].

7 Scale etc., item 30, M. B. to J. S., 14 September 1778.

8 Soho Inventory, 1782, p.8. See Chapter III note 152.

9 Sanders rented a house from at least 1773 (Cash Book 1772-82, 31 December 1773) until the end of the partnership (Cash Book 1772-82, 12 January 1782) for £5 10s. 0d. per annum (Ledger 1776-8, p.62, 31 December 1776).

SMITH, JOHN

He may have worked at Soho as early as 1762, as a chape-maker,[1] and probably worked in a silversmith's shop referred to in an inventory of 1776.[2] At this time he worked in the Silver, Plated, and Ormolu department.[3] The contents of Smith's workshop were listed in an inventory of 1782 and this shows that he made a number of articles including silver spoons.[4]

1 A John Smith was referred to as a 'chape'-maker (Cash Book 1762-4, 31 July 1762).

2 Bownas etc., Packet B, item 10, 'Measurements of Shops in the Soho Manufactory' [1776]. Dimensions of this shop, 22 feet by 15 feet, were identical to those of the workshop later used by 'Mr Smith, Silversmith' (Soho Manufactory, 'Particulars of the Houses and Workshops & Mills of Soho 1789 and 1790').

3 Cash Book 1772-82, 2 March 1776.

4 See Appendix VI, 'John Smith's Shop'. Reference was made to a 'lever spoon scraper' i.e. a scraper for smoothing the bowl of a spoon (information provided by Gerald Whiles, Head of the School of Jewellery, Birmingham Polytechnic). This was presumably used for silver spoons since the partners refused to make spoons in Sheffield plate (Letter Book E, p.595, A. J. C. to William Hackett, 8 October 1772).

STRICKLAND

He was working at Soho by 1767,[1] and in the mid-1770s he produced Sheffield plate[2] and silver.[3] In 1776 he was working in the Silver, Plated and Ormolu department[4] and he probably left Soho in that year.[5]

1 Cash Book 1767-77, p.5, 25 March 1767. At this time Strickland was working with Holme who (at a later date) was referred to as a silversmith (see entry on Holme, S. in this Appendix).

2 He was referred to in connection with a Sheffield plate cup (Cash Book 1772-82, p.5, 18 August 1775).

3 He was referred to in connection with a silver coffee-pot and stand (Ledger 1775-8 and 1787-9, p.3, 3 May 1775).

4 The reference in note 3 above occurs in a Ledger used by Francis Eginton.
5 The last reference to him at Soho occurred in 1776 (Cash Book 1772-82, 27 November 1776).

TRABA

He was dismissed in 1773 after stealing an ounce of silver in the branch of a 'Lyon' candlestick and replacing that silver with lead.[1]

1 Scale etc., item 13, J. S. to M. B., 7 February 1773.

TYSON, HENRY

The earliest reference to Tyson was in 1767.[1] In 1773 he was paid for mending a sauce-boat in an unspecified material.[2] In 1775 he produced silver buckles with Leonard.[3] In the following year he was in charge of a department making a variety of 'toys',[4] many of which were in steel.[5] Tyson rented a house from the partners.[6] He probably left Soho at the end of 1776.[7]

1 Cash Book 1767-77, p. 1, 19 January 1767.
2 Cash Book 1772-82, 13 February 1773.
3 Cash Book 1772-82, 31 January 1775.
4 e.g. Keys (Ledger 1776-8, p. 139, 27 June 1776) and scabbard mounts (Ledger 1776-8, p. 182, 18 November 1776). The metals used for these articles were not specified.
5 For example: steel chains (Cash Book 1772-82, 3 September 1776) and steel sword-hilts (Ledger 1776-8, p. 182, 14 November 1776).
6 Cash Book 1772-82, 11 May 1776.
7 The department referred to as 'Tyson & Co.' came to an end in 1776 (Ledger 1776-8, p. 207, 31 December 1776) and there are no further references to Tyson.

WATT, JAMES

A silversmith.[1] Watt, when working in London, was recommended to the partners by George Wyon[2] and Boulton offered Watt generous terms: his expenses from London; one guinea per week (the same as his previous wages) plus five guineas more at Christmas; a workshop; an assistant chosen by Watt who would be paid by the partners whatever Watt thought appropriate; a job for Watt's wife; employment for at least five years and the possibility of working in future on piece-work rates.[3]

Watt arrived at Soho in 1775 and rented a house and garden from the partners.[4] He worked for the Silver, Plated and Ormolu department[5] and the contents of his workshop were recorded in 1782.[6]

1 Cash Book 1772-82, 12 April 1777.
2 See entry on Wyon, George, in this Appendix.
3 Letter Book G, p.267, B. & F. to James Watt, 7 February 1775.
4 Watt rented the property from 21 November 1775 (Ledger 1776-8, p.218, 31 December 1776). He continued to pay rent of £5 0s. 0d. per annum until the end of the B. & F. partnership (Cash Book 1772-82, 30 March 1782).
5 Cash Book 1772-82, 12 April 1777.
6 See Appendix VI, 'James Watt's Shop'.

WILSON, WILLIAM

Until[1] 1778 Wilson was an apprentice earning 7s. 0d per week.[2] On one occasion in 1778 Wilson received £1 12s. 4½d. for nine and a quarter days of die-sinking at 3s. 6d. per day.[3] In 1780 John Eginton wanted to return to Soho in place of Wilson.[4] In 1781 Wilson was regarded as a suitable employee to chase a silver tureen.[5] He rented a room in a house owned by the partners early in 1782 but left that[6] and the Soho Manufactory later in the year.[7]

1 The earliest evidence that Wilson was an apprentice was in 1776. (Journal 1776-8, p.251, 31 December 1776).
2 Ledger 1775-8 and 1787-9, 29 August 1778.
3 Journal 1778-81, p.64, 31 December 1778.
4 See entry on Eginton, John, in this Appendix.
5 Hodges, John, item 26, J. H. to M. B., 2 April 1781.
6 Cash Book 1772-82. He paid rent of £2 2s. 0d. per annum between 7 February 1782 and 23 March 1782.
7 Hodges, John, item 33, J. H. to M. B., 28 February 1782.

WYATT, CHARLES

Served an apprenticeship at Soho.[1] In 1771 Charles with his brother John (both of whom were cousins of the architect James Wyatt)[2] took charge of the Counting House at Soho.[3] In 1773 Charles admitted to his poor management.[4]

By 1773 Wyatt produced buttons[5] and by 1776 he was in partnership with Boulton and Fothergill in the production of buttons,[6] which he made in a variety of metals and materials,[7] including silver.[8] In 1777 Wyatt was accused of misappropriating materials[9] and dismissed.[10] His father's later efforts to get Wyatt reinstated were unsuccessful.[11]

1 Wyatt Family, item 17, C. W. to M. B., 9 November 1770.
2 Goodison, *Ormolu*, p. 189, note 31.
3 Box W1, Wa to Wat, item 18, John Walker to M. B., 11 May 1771.
4 Wyatt Family, item 19, C. W. to M. B., 4 February 1773.
5 Box Miscellaneous Papers, 'Extract of Buttons delivered by Charles Wyatt, 12 June 1773-31 December 1773'.
6 Ledger 1776-8, p. 7, 1 January 1776.
7 e.g. inlaid gold, silver-plated, and enamelled (Ledger 1776-8, p. 101, 21 February 1776, 5 March 1776 and 11 March 1776).
8 Between 12 June 1773 and 31 December 1773 C. W. produced silver buttons worth £28 4s. 0d. (Box Miscellaneous Papers, 'Extract of Buttons delivered by Charles Wyatt, 12 June 1773-31 December 1773'). Wyatt was later supplied with silver for button manufacture (Journal 1776-8, p. 114, 15 June 1776).
9 C. W. was accused of stealing gilt waste (Wyatt Family, item 20, C. W. to M. B., 19 March 1777).
10 Letter Book G, p. 868, B. & F. to Messrs Hall & Shiers, 15 March 1777.
11 Wyatt Family, item 248, William Wyatt to M. B., 22 September 1777.

WYON, GEORGE

After persuasion from the partners,[1] James Watt (the engineer),[2] and Francis Eginton, Wyon came to Soho in 1775[3] and worked in the Silver, Plated, and Ormolu department.[4] Wyon rented a house from the partners[5] until the end of 1778 but accumulated arrears of rent;[6] nevertheless, he was still working at Soho at the end of the Boulton and Fothergill partnership.[7]

1 Box W3, item 244, George Wyon to B. & F., 17 November 1774.
2 Box Watt 1, item 45, James Watt to M. B., 31 January 1775.
3 Box W3, item 245, George Wyon to Francis Eginton, 22 September 1775.
4 Ledger 1775-8 and 1787-9, p. 62, 17 June 1778.
5 Wyon's rent was £14 0s. 0d. per annum (Ledger 1776-8, p. 218, 31 December 1776).
6 At Christmas 1778 the arrears amounted to £43 16s. 9d. (Soho House etc., 'List of the Annual Rents of Houses, with the arrears due at Xmas 1778'). In August 1779 B. & F. demanded that Wyon settle his account (Letter Book I, p. 466, J. S. to George Wyon, 10 August 1779).
7 Ledger 1778-82, p. 347, 24 June 1782.

APPENDIX VI

EXTRACTS FROM THE SOHO INVENTORY, 1782

Following Fothergill's death on 19 June 1782 and the formal dissolution of his partnership with Boulton on 22 June,[1] an inventory was made of the Soho Manufactory to assess their assets in the firm.[2]

The Soho Inventory included tools, machines, stock, and work-in-hand for the whole Manufactory, but not all of this is included below. The silver in stock is included in Appendix III.[3] Only those workshops which are known to have produced silver are listed here, though in many of these workshops other metals were also used for other products.[4]

The Soho Inventory lists the storerooms and workshops for buttons and 'toy' making on pages 1 to 77; the storerooms and workshops for plate manufacture were listed on pages 102 to 144. The page numbers in brackets against the names of workshops below, refer to the pages in the Soho Inventory from which the information has been taken.

Apart from the addition of explanations in square brackets, the text of the Soho Inventory has not been altered.

<u>Tools etc. in Gilding Shops above stairs (pp. 2-3)</u>	£	s.	d.
A large vice 9/-, Bench 2/-, A Cupboard 1/6, A Waxing Pan 5/-		17	6
A long Table 2/6, 2 Pair Clams to Split Pearls 2/-		4	6
A Drilling Machine the Lathe Part is one of Philips Lathes and a lathe for necking Buttons, one rest serves both, Drums, Bench, Bands, Clams, and all Tools		4	4
A Machine for scoring Pearls but of no use except Iron say		3	0
A Furnace for melting Gold cost 30/- say	1	0	0
An Iron ladle 1/-, 4 new Brushes 6/8 15½ lb. Aqua Fortis [nitric acid] @ 2/- = 31/-	1	18	8
A two Quart Stone Bottle & 20 lb. Mercury	4	0	0
A Water Cock 1/-, 5 Stools 2/6, A Chair 1/-		4	6
4 large Laps & Spindles to grind Pearls on wt. 65 lb. @ 6d	1	12	6

Tools etc. in Gilding Shops above stairs cont'd	£	s.	d.
2 large Copper Lap Pans & 12 small Copper Pans & Pipes {wt. 27 1/4 lb. @ 10d.}	1	2	8
Frame for Laps, included Iron Work cost 50/-	2	0	0
3 Hammers 1/6, A Copper Riddle [sieve] 7/-, A Twig do. 8d.		9	2
A long Brush & Mop 1/-, Wire for Cages 5/-		6	0
In Gilding Shop below stairs			
4 Gilding Brushes 3/4, 8 Gilding Pots cost 15/- say 12/-		15	4
Boxes of all sorts 7/6, 2 Pair Scales 2/		9	6
2 Gilding Muffles for heating work during gilding process complete charged to Button Company	5	16	0
1 1/4 lb. old lead 3d., 3 small Brushes 1/6		1	9
4 Gilders charged to Button Co. 42/- say now	1	5	0
A small Table 2/-, head Pipe & Cock 10/-		12	0
23 lb. old Iron & 4 lb. old Files together say		3	0
Sundry waste Pearl in the Upper shop say worth	3	3	0
Old cast Iron Pot 1/-, A Milk Pan 4d, & cast Iron Plate wt. 60 lb. 2/6		3	10
	30	11	11

Tools etc. in Mrs Callow's Cutting-out Shop (p. 4)			
A Press to cut out with ch^{d} 95/-	4	7	6
A Vice 21 lb. 7/-, A Hammer 6d, Box 1/-, Mortar & Pestle 4/		12	6
Stool & Benches 2/-, 14 Beds & 27 Punches wt. 36 lb. @ 6d. [18/-]	1	0	0
2 Skimming Lathes ch^{d} 36/- [for smoothing rough surfaces]	1	13	0
	7	13	0

Tools in John Otley's Burnishing Shop (p. 7)			
A Water Cask & Stool 18/-, 3 Brushes 3d., 3 Pails 4/-	1	2	3

Tools in John Otley's Burnishing Shop cont'd	£	s.	d.
A Tub 3/-, A Steel Pot 8d., A Copper Kettle 2/6		6	2
A Large Cupboard 2/6, 2 cast Metal saw Dust Plates [12/-]		14	6
30 Bowls 5/-, 2 Buckets 6/-, 4 Shaking Bags 4/-, Beer Tub 2/6		17	6
A Bench & 2 Buffs 3/, Oil-stone 4/-, A Hose 1/6		8	6
A Small Bench next to the Fire Place		2	0
A Bench to lay out Buttons upon 11 ft. 3 in. x 1 ft. 10 in		5	0
8 Burnishing Lathes ch^{d} £7 4s. 0d. say	6	0	0
A Bobbin Lathe [for polishing with felt or hide bobs]		9	0
3 Twig Riddles 1/6, 8 Boxes to Lathes 4/-		5	6
11 Joint[hinged]Candlesticks 5/6, 9 Turning Tools 1/6		7	0
Sundry Boxes 11/6, Lead 4d.		12	0
62 Burnishing Stones 31/6, 3 Frames for Saw Dust {12/-	2	3	6
A Scuttle 3d., A Coal Box 6d.		0	9
A new Bench cost 78/- say	2	18	6
A lathe with a centre head wch Furley had to turn Tin Buttons		18	0
Otley has a copy of the above & is to leave all good or pay for them. NB. The 8 Burnishing Lathes in his copy are ch^{d} 18/- each & the Bench 63/-			
		17	10 2

Tools etc in Die Sinking Shop (pp. 10-11)			
2974 Dies in use charged 2/- each	297	8	0
208 plain Dies 3d.	2	12	0
3182 Dies weight 7487 lb. @ 4d. per lb.	124	15	8
2408 Die-sinking punches in J. Scale's little Room	20	0	0
269 Originals in use wt. 168 lb @ 4d. the workmanship Nothing on acct of the Dies being reckoned	2	16	0
Deduct for overcharge same as was done in June 1778	80	0	0
48 new steeled Dies wt. 252 lb. @ 4d.	4	4	0
896 lb. of old Dies out of use at 1½ lb. for steeling	5	12	0
A Spangle Lathe or Lathe to gloss Dies	1	11	6

Tools etc in Die Sinking Shop cont'd	£	s.	d.
A Lathe with 12 Dishes ch^{d} 42/-	1	16	0
4 Stools 2/-, Oilstone 2/-, 2 Vices 21/-, 3 Pair Tongs 1/6	1	6	6
Die Dish 5/-, Coal Hammer 3d., Screw Dish 7/6		12	9
A Frame to put punches on 1/-, Snuffers 1d., 3 Hammers 2/3		3	4
A Stock for sinking Originals 2/-, Bucket 1/6		3	6
Drill-bow 1/-, Blow Pipe 1/6		2	6
A Dish containing Punches 7/-, 21 Die Boxes 21/-	1	8	0
Old Dies and Originals taken into Thos. Kellet's Warehouse to sell wt. 14cwt. Oqtr. 19lb. @14/-	9	18	4
	394	10	1
Deduct 159 Dies which are plain that are included in the 2974 & should only be charged 3d. each instead of 2/- Difference 1/9 each	13	18	3
	380	11	10

Casting Shop (p. 102)

Loam & sand		1	1	0
½ cwt of Sal enixen [potassium sulphate]			1	9
2 Cast Iron Ladles			6	0
3 Ingots for Pincebeck [pinchbeck]			3	0
3 do for Silver			3	0
Screws for the Ingots			4	0
9 Ingots of different sorts			5	0
58 lb cast Figures	@ 2/-	5	16	0
15 Wood Boxes			12	0
74 casting Pots	4/doz	1	4	8
91 do	3/doz	1	2	9

Casting Shop cont'd	£	s.	d.
1 old Vice		7	6
Coaks [coke]		3	6
4 pr Tongs, Poker & Pot Cover		10	6
1 pr Scales & Weights from 4 lb		4	0
1 Cast Iron Mortar broke & Saw		8	0
1 Pestle		4	0
1 Fine Brass Wire Sieve		7	6
1 Board & Roller		1	0
4 Iron Wire Riddles & a Hair Sieve		10	0
1 Bow Saw		2	6
Bellows, Brushes etc		3	0
1 Half Hogshead, Barrel & Cover		6	0
2 Iron Hooped Tubs		18	0
1 Bench with 4 Feet		1	6
1 Spade & Bucket		1	6
1 Iron Trunk		7	6
1 Hair Sieve		1	0
Bricks		2	6
2 Hammers & a Chisel		1	6
1 Wood Bowl for Washing Dirt			9
32 Sides of Brass Moulds of Sundry Sizes Wt. 1.3.23 @ 65/cwt [Weight 1cwt.3qtrs.23lbs.]	6	7	0
12 sides of common sized Wood Moulds 1/-		12	0
3 sides of small square do 9d		2	3
5 middle sized Wood Screws 6d		2	6
2 large sized do 9d		1	6
2 small sized do 4d		2	0
7 common Boards, 1 small do & 1 large do, all very bad		4	0
		23.	12. 2.

Thos. Moore's Shop (p. 104)			
1 large Stamp & 3 Hammers	32	0	0
2 small do & 3 do	32	10	0
4 Wrenches included in the above value			
3.1.17 of Iron & Steel Bottoms [3cwt.1qtr.17lb.] 4d.	6	7	0
1 Ladder		4	0
3 Pickle Tubs		12	0
1 Scouring Bench		1	0
1 Box & Frame for Saw Dust		2	0

Thos. Moore's Shop cont'd		£	s.	d.
1 Boil Kettle			2	0
1 Lathe Wheel & Bench		12	3	0
1 Vice		1	0	0
1 Grinding Stone & Frame			4	0
9 Boxes			4	0
1 pr Shop Hearth Bellows, Lead Pipe & Frame		1	10	0
1 Annealing Stove & 2 Cast Iron Plates		1	0	0
1 Cupboard to put Dyes in			2	6
3 Forging Hammers			3	6
2 Stools			1	6
2 pr Shears			3	0
1 Lathe Bench & Wheel			8	0
Vice Benching in both Shops			7	0
1 Oil Stone 3/- 6 pr Tongs 3/-			6	0
Iron Ladle			1	0
1 pr Dyes for flattening copper for Plating	6d	2	0	0
Copper Forces 83 lb	9½d	3	5	8½
1 Anvil 111 lb	3d	1	7	9
		96.	4.	11½

John Geanor's Shop (p. 107)				
1 Anvil Block			1	0
1 Vice No 219 - 28 lb			9	4
1 Anvil No 3 - 19½ lb	4d	1	7	8
1 do No 4 - 63½ lb				
1 Bazel Skin [thick leather for an apron]			1	0
1 Dish Rack			1	0
		2.	0.	0.

John Smith's Shop (pp. 107-9)				
1 pr Shop Hearth Bellows with Lead Pipe		1	0	0
1 pr smaller do			10	0
1 Vice each No 205 - 13/- No 210 11/4		1	4	4
1 Bucket			1	6
2 Copper Kettles			10	0
1 Copper Lamp; useless, wt. 4 lb			2	8
1 Oil Stone			4	6
9 Stools			6	9
5 Anvil Blocks			5	0

John Smith's Shop cont'd		£	s.	d.
2 Towels				6
2 pr Hand Bellows			3	6
4 pr Pliers			4	0
1 pr Hand Shears			1	6
5 pr Compasses			7	6
3 pr Pincers			3	0
1 pr Nippers				9
4 Brushes for Silver				4
4 pr Tongs			3	0
1 Anvil No 1 203 lb 1 do No 2 146 lb	4d	5	16	4
Cratches for File Dust [racks for storing filings]			2	0
1 Soldering Pan			4	0
1 Iron Stove			8	0
2 Iron Shovels				8
5 File Dust Skins			1	0
2 pr Swages No 1 & 2 for Boxes			3	0
Braziery Tools 627 lb [tools for brass work[5]]	4d	10	9	0
48 Hammers			1	1	0
Vice Benching 45 feet by 14 inches			11	10
2 Flat Stones			6	6
1 Shelf 14 feet by 9 inches			1	6
1 do 14 do by 10 do 2 in thick			4	0
2 Hammer Racks			3	0
2 Cupboards			10	0
1 Lever Spoon Scraper				6
Copper & Iron candks			1	0
1 Copper Lemel Box [lemel is scrap from filings]			1	6
5 Spoon Punches			2	0
1 Board to lay Tools on			1	0
1 pr small Scales			2	0
1 Mustard Tankard Glass				6
1 Triblet 14 lb [rod for fashioning tubes or rings[6]]			1	9
4 Boxes			2	0
2 Ingots			1	6
1 Screw Plate			2	6
Spoon die 1 Brass Square			1	6

John Smith's Shop cont'd		£	s.	d.
1 Wimble Brace [for drilling holes]			3	0
1 Iron Hand & Wood Horse			2	6
1 Copper Chasing Block				6
1 Swage Press			10	6
2 Flat Boards			1	6
1 Wood Taper Stake			1	0
Plated Metal 70 oz	1/-	3	10	0
Brass Copper 7 lb			7	0

Edward Hodges' Shop (pp. 111-2)		31.	4.	5.
7 doz & 6 Files			12	0
6 Wood Rasps			1	6
16 Chisels			5	4
6 doz & 9 Riflers [shaped, coarse files]			13	6
1 large Hand Hammer			2	0
5 Hammers			5	6
2 Rubbers			3	6
7 doz & 7 Chasing Tools	2/-		15	2
3 doz & 9 Die-sinking Tools			1	10½
15 doz Die-sinking Blanks 33 lb	1/-	1	13	0
9 doz & 5 File Handles	6d		4	9
2 Boxes of old Punches, of little use			7	0
1 Vice each lb 17, lb 63, lb 90 = 170 lb	4d	2	16	8
2 pr Scissors			1	0
2 Iron Joint Candks	}			
1 Drawing do	}		1	6
1 Handle do	}			
1 Hand Vice			1	0
6 Stocks			4	6
1 Hand Brush				3
8 Boxes			4	0
1 Oil Stone			7	6
1 Pump Drill with a Lead Ball			2	6
1 pr Snuffers				4
1 pr Shop Tongs & a Fire Shovel			1	0
3 Tin & Copper Cups			1	0
2 pr Spring Dividers			2	0

Edward Hodges' Shop cont'd			£	s.	d.
Fire Plate					4
1 Drawing Desk, Board & Square				9	0
1 Brass Strait Edge				1	0
Joint & Spring Die Levels				3	0
2 pr callipers [compasses with bowed legs for measuring curved surfaces]				3	6
2 Copper clay Pans				3	6
1 Box of Plaister of Paris [for making casts]				2	0
1 Flattening Stone				8	0
1 round Rack for Gravers					6
127 new Die Blanks		10d	5	5	10
1 Die Dish for the oval Lathe				10	6
1 Modelling Stand of little Use					6
Sheet Copper				2	0
1 Piece of Marble for Colours				1	0
Vice Benching 16 Feet by 18 Inches				10	0
Shelves				2	0
Drawers				1	0
1 Bench				1	0
1 Turning Lathe			3	15	0
Bar Steel				1	6
2 Outside Window Blinds				5	0
Wood Bench & Crosses not put up				2	6
Tin Laps 27 lb		8½d		19	1½
Lead 10 lb				1	8
				22. 17.	10.

Tho^{s} Dixon's Shop (pp. 113-4)					
1 Pair Shop Hearth Bellows & Frame			1	5	0
Vice Benching 27 Feet by 21 Inches				9	6
1 copper lamp				5	0
1 Flat Stone				3	6
4 Anvil Blocks				8	0
1 Turkey Oil Stone				4	0
2 Cupboards				6	6
1 Tub				3	0
1 Bucket					6
1 Pair Hand Bellows					8
1 Vice ca No 207, 33½ lb, No 285, 30½ lb .... 64 lb		4d	1	1	4
10 Standards for Vice Bench					

Thos Dixon's Shop cont'd		£	s.	d.
1 Milling Stone			2	6
36 Hammers	1/-	1	16	0
1 Hand Vice			1	0
1 Pair Shears			1	6
28 pr large & small Swages	2/6	3	10	0
3 File Dust Skins			1	6
Cratches for File Dust			3	0
3 Pr large Compasses			3	0
1 Pr small do			1	0
1 Copper Lemel Box			1	0
5 Pr Tongs			3	0
6 Stools			3	0
5 Soldering Irons			5	0
1 Foot Bench				9
2 Copper Candks			1	0
2 Iron do			1	0
3 Boxes			2	0
2 Braces			3	0
1 Bow Saw			2	6
1 Pair large Nippers			1	6
1 Anvil No 10 .... 123 lb	bad @ 3½	1	15	10½
1 do No 7 .... 23½ lb	bad @ 3½		6	0
1 Pair large Shears			4	0
2 Pr Pliers			2	0
1 Pair Calipers			1	0
1 Pr Wire-drawing Pliers			1	0
1 Box of French Plating Tools			5	0
2 Solder Boxes			1	0
Plated Solder 1¼ oz	4/6		5	7½
Large French Plating Tools			2	0
Leaf Silver			1	0
Rack & Bench for Braziery Tools			2	6
2 Boil Kettles			8	0
12 oz Plated Metal			6	0
5 oz of 4040 do	1/-		5	0
Work on the above				3
Swage Wire 39 oz	7d	1	2	9
477 lb Braziers Tools	C4	7	19	0
		13.	18.	1½.

Polishing Shop (pp. 114-5)		£	s.	d.
1 large Wheel & Stand		1	10	0
1 small Foot Lathe			15	0
1 Vice No 17 - 19½ lb very bad	3d		4	10½
1 Bucket			1	0
1 Pr Hand Shears			1	6
1 large Stool			1	0
2 small Stools			1	6
1 Oil Jar				6
1 Sieve			1	0
1 Copper Kettle			2	0
1 Box				6
4 Tin Cans				4
1 Pole Lathe			1	0
1 Bench 6 Feet by 3 Feet			1	6
30 Wood Chocks [chucks for use on a lathe]				
10 Two-row'd Brushes				
4 Three-row'd do			2	0
2 Four-row'd do				
20 small Box Brushes				6
50 Brush Stocks	1d		4	2
1 Quart Bottle				3
1 Hammer				6
1 Joint Candlestick				6
1 Tin do				2
2 Towels				4
2 Wood Bowls				9
1 Drawer				8
Rotten Stone & Oil			2	6
1 Grate				
4 small Boxes			1	0
			3. 15.	0½.

Burnishing Shop (pp. 115-6)				
9 doz & 10 Burnishers [steel to burnish metal]	3d	1	9	6
10 long do			5	0
17 Finishing Stone Burnishers	1/6	1	5	6
21 common do	6d		10	6
10 Stools	9d		7	6

Burnishing Shop cont'd	£	s.	d.
3 chairs (now repaired)		1	6
2 Earthen Vessels			6
2 Buckets		4	0
1 Lead Tub		10	6
1 Glue Pot		2	6
1 Copper Sauce Pan		1	0
3 Iron Sauce Pans		8	0
1 Cupboard		2	0
2 Candlesticks			3
Blocks to burnish on		5	0
Iron stove destroy'd		10	6
1 Pr Tongs & Fender		2	0
1 Pestle & Mortar		3	0
4 Boxes		4	0
1 Block Stool		1	0
4 Boxes for Putty etc		2	0
1 Pumice Sieve		1	0
Benches & Standards		6	9
4 Drawers with Locks		5	0
1 Scouring Sink		3	0
1 Iron Trivot [trivet, iron tripod for holding vessels over heat.8]		2	0
2 Cement Irons			4
1 new cupboard		8	0
1 copper pan		1	6
1 Barrel & cock, Tub & Tun (Dish)	1	0	0
1 Pickle Bottle			6
4 Scouring Aprons		1	0
1 Mop & Brush		2	0
1 Rolling Press for Copper Plate Printing		4	4
	13.	10.	10.

Gilding Shops (p. 116)			
1 Scratching-Lathe & Cover		12	0
5 Stools 3/6 A Hammer 8d		4	2
1 fine Wire Sieve			6
7 Boxes		2	6
1 large round Tub in the finishing shop		8	0
1 two Inch Plank 13½ Ft long & 18 In broad		1	6
1 Saw Dust Tub			6

Gilding Shops cont'd	£	s.	d.
1 Deal Cupboard & Lock		1	3
1 Square Table		2	0
1 large oval Tub		12	0
1 large Hogshead		6	0
1 Wood Pail		1	6
1 Bar Iron to hold Figures on 8 lb		1	0
37 Feet Shelves		4	6
2 Benches		4	0
1 Stone Sink		2	6
	3.	3.	11.

Will[m] Hancock's Shop (pp. 117-8)			
2 Tubs		4	6
1 Bucket		2	0
3 Boil Kettles 27 lb	1	7	0
1 Scouring Bench 3½ Feet by 15 Inches		2	6
5 Stools		3	6
1 Cast Iron Stamp Anvil)			
1 Block for do)		15	0
9 Boxes		6	6
1 Milling Stone		1	6
1 Filling Rack		1	0
1 Blue Flat Stone		2	6
1 Lathe & Box	4	5	0
1 Bench 7½ ft by 15 Inches		2	6
1 Shelf 14 ft by 11 Inches		2	4
Hammer Rack			6
1 Lamp & Dish		11	0
1 Scuttle			5
1 Hand Brush			2
1 Cupboard & Lock		4	0
1 Drawer		1	0
1 Shelf 18 Feet by 11 Inches		3	0
1 do 7 Feet by 11 Inches		1	2
1 Pr Shop Hearth Bellows & Frame	1	16	0
1 Grate		1	6
1 Cement Kettle		7	0
12 Hammers		17	6
7 Pr Swages 2/6			

Will[m] Hancock's Shop cont'd

			£	s.	d.
1 Shelf 8 Feet by 11 Inches				1	4
3 plain Mandrills [rod of metal for tube-drawing or for making rings or chains i.e. a mandrel][9]				4	0
7 skin Frames & 7 File Dust Skins				8	0
1 Punch for Gill Dobbin [drinking vessel]					
1 do for an Underside of Egg Stand Lining				8	6
1 do for Candlesticks No 526					
Work on the above					
Vice Benching 35 ft by 18 In				8	9
5 Soldering Irons				4	0
2 Pr Tongs				1	6
1 Pr Copper Tongs				1	3
1 Cast Iron Ladle & an old shovel				1	6
Cratches for File Dust				2	0
1 round Anvil 11¼ lb				1	6
1 Vice ea No 20 116 2 15 24 133 lb lb lb lb lb lb 33 23½ 23 31½ 25¼ 30	166¼ lb	4d	2	15	5
Copper Wire 22 lb			1	2	0
2 old Iron Knife Case Pedestals & Plinths				1	0
1 Octagon Maundrill for 605 Cruet frame - out of use [mandrel]					6
1 Solder Pestle & Mortar (old Iron)					8
1 large Bottom Stake 65 lb	C4		1	1	8
Sundry odd Forming Tools 115 lb	C1			9	7
1 long Maundrill for Tubes [mandrel]				2	6
1 Swage Press 47 lb	1½d			3	11
1 Punch for French Horn Branch Vase				4	0
9 Pr Holster Swages					6
1 Cast Iron Punch Bowl 37 lb					9
1 Cast Iron Metering Trough				5	0
1 Block to set Tool on 39 In by 11 In					6
1 Beak Iron Anvil 81 lb [anvil with pointed head[10]]	3d				3
1 Block for do				1	6
Sundry Copper Gages				3	0
French Plated Wire 9 oz	7d			5	3
Plated Solder 1½ oz	4/6			6	9
2 Solder Boxes				1	0
Branch Wire 8 oz	4d			2	8
1 Candlestick wants mending				5	0

Will[m] Hancock's Shop cont'd		£	s.	d.
10 lb Cement			3	4
1 Brass Strait Edge				8
			22. 18.	10.
James Watt's Shop (pp. 119-20)				
1 Pr Shop Hearth Bellows & Frame			13	0
2 Pr small compasses			3	0
1 Pr large do			1	0
1 Pr Nippers				6
1 Pr Pliers			1	0
1 Hand Vice			1	6
1 Rule				8
40 Hammers	1/-	2	0	0
1 Vice No 209 36 lb	4d		12	0
2 File Dust Skins			2	0
4 Stools			3	0
1 Oil Stone			2	6
1 Cupboard			2	6
2 Hammer Racks			4	0
1 Bench 4 Feet by 15 Inches			2	6
1 do 4 Feet by 23 In & 2 In thick			4	6
1 Scouring Bench			3	0
1 Shelf 8 Ft by 18½ In			1	6
3 do 2 Ft 5 In by 11 In			2	6
2 Towels				6
1 Joint Candlestick				6
1 Anvil No 5 - 24 lb	)			
1 do No 6 - 85 lb	)	1	16	4
1 Pr large Gadroon Swages			2	6
1 Pr Forging Tongs			1	6
1 Pr large Hand Shears, broke				9
Cratches for File Dust			1	0
1 Boil Kettle 6 lb			6	0
1 Swage Frame for Waiters	)			
6 Bolts for do	)	1	4	0
11 Pr Swages	2/6	1	7	6
3 Anvil Blocks			5	0
1 Screw Vice			4	0
1 Bazel Skin				3

James Watt's Shop cont'd			£	s.	d.
1 Pickle Tub					6
1 Dish Rack				1	0
3 Cruet Frame Claws	6d			1	6
Plated Wire 66½ oz	7d		1	18	9½
1 Cement Block & Cement				1	0
260 lb Brazier's Tools			4	6	8
1 Pr Scissors					6
			10.	11.	0.

Chasing Shop (pp. 126-7)						
9 doz Flat Chasing Punches	6/-			2	14	0
30 Cutting Tools	3d				7	6
10½ doz Riflers		2/6		1	6	3
9 Chasing Hammers	1/3				11	3
8 Scalpers [a graver used for hollowing out bottom of sunken designs]	2d				1	4
8 Rings	6d				4	0
2 Cement Kettles & Ladles					5	0
1 Hand Brush						4
1 Long Brush					1	6
7 Stools					5	3
3 Pieces of Iron	1/-				3	0
3 Pieces of do to warm the Balls on					5	0
9 Drawers					4	6
3 Copper Sauce Pans					4	6
6 Wood Candlesticks	1/6				9	0
4 Pair of Snuffers						8
1 Screw Vice					3	0
1 Vice ea No 14 (26 lb) & 444 (94 lb)	120 lb	4d		2	0	0
1 Hand Vice					2	0
3 Sand Bags					2	0
1 Desk					2	0
1 Copper Cement Ball					3	0
27 Iron Cement Balls, mostly out of use				1	0	0
4 Wood do					3	0
2 Boxes & 2 Casks					3	0
1 Cast Iron Die for a Coffee Pot, never was, nor is likely to be, used					1	0
Cement Boards					3	0
1 Coal Hammer					1	6

Chasing Shop cont'd		£	s.	d.
3 Pr Compasses			3	6
3 Snarling Irons [long levers for bossing out articles from the inside]			1	6
Files in Use			1	0
2 Pr Pliers			2	0
1 Pr Tongs & a Shovel			2	6
Vice Benching 23 Ft by 18 Inches	3d		5	9
1 Scoring Bench			2	0
1 small Bench			1	0
File Rack				6
Pitch & Cement			10	0
1 Pr Calipers			2	0
2½ doz Brindles [punches for texturing embossed surfaces 11]	2/-		5	0
3 Pr Wood Clams				9
1 Copper Water Pot with a Cock			5	0
1 Copper Tube for the Water			1	6
1 Bucket			1	0
1 large Sand Bag made for the Terrine			1	0
Plated Chasing Gages			3	0
1 small Stake to chase on			5	0
4 Boxes with Bronze			6	0
4 Figures chased for Japan Clock Case of no use but to melt				6
1 Pickle Tub			1	0
1 Scuttle				4
1 Oil Stone			2	6
1 Copper Pan for damping Paper			4	0
3¾ lb. Metal-Work	1/8		6	3
Chasing on the above			9	0
2 Stithies 40 lb [Anvils]			10	0
2 Heads of Voltaire - 1 Chased, which is a Waster			3	6
44 doz. Chasing Tools	2/-	4	8	0
8 Chasing Cans			2	6
Drawing Instrument sorted with a Case			5	0
		20.	19.	2.

Wire Drawing Shops (p. 130)				
Wire Drawing Machine from Watson's Shop		2	12	6
4 Plates for Fluted Wire		1	10	0
1 Box containing a Set of large Bolsters for draw. Wire		7	7	0

Wire Drawing Shops cont'd	£	s.	d.
4 Plates to follow the Bolsters	2	10	0
1 Copper Cover		15	0
	14.	14.	6.

John Haywood's Shop (p. 134)

					£	s.	d.
366 pairs sorted Piercing & Clipping Tools for Salts [receptacle for salt 12]							
Cruet frames, Claws, Sugar Tongs etc.							
viz.	110 pairs in use	£25		)			
	118 pairs, little used	1 : 10 : 0		)	28	4	6
	138 pairs (out of use)	1 : 14 : 6		)			
1 Piercing Press each 21/-		21/-	21/-		3	3	0
2 do	do	87/- each			8	14	0
19 pairs large Tools for Clipping etc 91 lb				)			
Workmanship on do				)	25/-	1	5	0
					41.	6.	6.

I am grateful to Gerald Whiles, Head of the School of Jewellery, Birmingham Polyechnic, for help in understanding technical terms; except where a note is given below, he has provided the information given in square brackets above.

1 Letter Book M, p. 304, M.B. to ?, 21 June 1782.
2 Letter Book M, pp. 302-3, M.B. to William Matthews [?], [June] 1782.
3 See Appendix III.
4 See Chapter III.
5 *OED.*
6 ibid.
7 ibid.
8 ibid.
9 ibid.
10 ibid.
11 Information provided by Phil Moody, Pattern Metal Rollings Ltd., Birmingham.
12 *OED.*

BIBLIOGRAPHY

Except in foreign titles, the initial letters of the first word and of all subsequent principal words are capitalized even when they were originally printed in lower-case.

PRIMARY SOURCES

Manuscripts

BIRMINGHAM

<u>The Assay Office</u>

The Register of Plate and Silver Wares Assayed and Marked or Broke at the Birmingham Assay Office, August 31st 1773 - March 20th 1792.

<u>Birmingham Reference Library</u>

Archives Department

Boulton and Watt Collection

This collection, which is of very limited significance for this thesis, mainly covers the steam-engine and gas-lighting businesses. The nucleus of the collection was presented to the City in 1911 by George Tangye. The collection contains about one thousand one hundred portfolios of steam-engine drawings, 150 boxes consisting mainly of incoming correspondence, and 550 volumes of copies of outgoing letters, ledgers, journals, cash-books, and day-books.

The collection also contains eight pattern books. Seven contain designs for plate which were bought by Elkington & Co. (the Birmingham silver and electro-plate manufacturer) from the Soho Manufactory in 1850. Although some of the patterns had been collected at Soho from other firms,[1] and outside designers,[2] most were designed there. Elkington & Co. presented the pattern books to the library in 1940. The eighth pattern book, which covers Soho's production of 'toys' and buttons, was given to the library in 1896 by Tangye.[3]

The items used in this thesis are listed below:

Pattern Book I, 1762-1790, New Number 169

Boulton and Fothergill. Portions of a Letter Book, 1773 [a photocopy exists in the M.B.P.]

Box 25

1 Pattern Book 1, 1762-90, New Number 169, contains plates from the catalogue of the 1780s by the Sheffield firm Tudor and Leader (Michael Snodin, 'Matthew Boulton's Sheffield Plate Catalogues' *Apollo*, Vol. CXXVI, No. 305 New Series, (July 1987), pp. 25-32 (p.32 note 48)).

2 Pattern Book 1, 1762-90, New Number 169, contains a design for a tureen by Michelangelo Pergolesi published in 1782 (Rowe, *Adam Silver*, p.65 and Plate 46).

3 Information about the B.W.C. supplied by the former B.R.L. archivist John Davies.

Matthew Boulton Papers

This thesis is mainly based upon the Matthew Boulton Papers. The collection contains 217 volumes and 260 boxes of material. These papers essentially cover the Boulton family's personal, household, and business affairs (apart from the steam-engine and gas-lighting businesses covered by the Boulton and Watt Collection) from the mid-eighteenth to the mid-nineteenth century.[1] The Matthew Boulton Papers therefore contain much material in addition to that for the study of Boulton and Fothergill silver.

The basis of the collection was selected by Boulton's son, Matthew Robinson (1770-1842),[2] from tons of material which survived at Soho; this selection showed some bias towards documentation directly concerning Boulton,[3] but much was included for the period after his death[4] in 1809.[5] Boulton's son transferred the material to his house, Tew Park, in Oxfordshire.[6] Further material was moved there from Soho[7] by Boulton's grandson, Matthew Piers Watt Boulton,[8] to cover the final years of the family's connection with Soho (the Manufactory was demolished in 1862).[9] The grandson gave scholars access to the papers[10] which led to some loss of material.[11] Further papers not

connected with Soho but concerning Boulton's son[12] and grandson[13] were added to the collection before it was transferred to The Assay Office, Birmingham, in 1926, where a small amount of material unconnected with the Boulton family was also added.[14] The collection was transferred to the Birmingham Reference Library in 1974 and is the property of the Matthew Boulton Trustees.[15]

Later losses, together with the firm's tendency to adopt the widespread practice of destroying books ('waste books')[16] after their contents had been transcribed to permanent records (journals and ledgers) have led to gaps in the financial records of the Soho Manufactory during the Boulton and Fothergill partnership; however, enough survives for the later years of the partnership to show that then at least the partners used accounting methods adopted by large firms at that date.[17] Accounts were kept within workshops[18] but only one, made by Francis Eginton between 1775-8 for the department of silver, ormolu and Sheffield Plate, has survived; this ledger provided him with a personal check of sales and expenditure[19] when (at least for most of that period) he was in partnership with Boulton and Fothergill for these items.[20] A series of cash-books, only some of which survive,[21] recorded for the whole Manufactory the daily expenses of production (e.g. wages[22] and materials[23]), sales at Soho,[24] and the rents from employees.[25] Stock-taking was carried out at the end of each year[26] but only one inventory, dated 1782, survives.[27] Detailed records of orders for the whole Manufactory were kept in day-books[28] but only one, dated 1779-81, remains.[29] The raw material provided by all of these sources was collected together, often in a summarised form, first in the journals and then in the ledgers. Tracing information through these books was aided by cross-referencing.[30] The journals listed debits[31] and credits[32] for the whole Manufactory and the ledgers provided this information under departmental headings by the double-entry method.[33] Journals and ledgers (of this kind)[34] only survive from 1776 to the end of the partnership.[35]

Accounts were also kept at the Birmingham warehouse by Zacchaeus Walker, the firm's accountant,[36] and the commission business was conducted there by Fothergill.[37] Since Walker was responsible for calculating the firm's overall financial position it was also

necessary for him to regularly check transactions with John Scale who both managed the Soho Manufactory[38] and looked after accounts there.[39] While the detail of transactions at Soho (e.g. for worker's rents[40] and sales[41]) was kept there, Walker kept track of the overall sums[42] and provided cash for wages.[43] Walker was sent full details to deal with payments to suppliers[44] and payments from customers.[45] The despatch of goods was also organised at Birmingham.[46] Although some of the cash-books[47] and some loose accounts from the Birmingham warehouse have survived,[48] the main account books have not.[49]

The firm's surviving correspondence is extensive but incomplete. Most of the outgoing letters[50] were copied into letter books either at Soho or in Birmingham; some of the letter books have survived from both places.[51] Incoming correspondence is arranged alphabetically in boxes[52] (though other boxes contain other material);[53] some boxes have been entirely reserved for the partners' most prolific correspondents.[54] Much of the incoming correspondence has not survived[55] and this is particularly true with letters for the Birmingham warehouse.[56]

A large number of Boulton's personal papers have survived. These include copies of his outgoing letters,[57] correspondence,[58] accounts,[59] and almost complete sets of both his diaries[60] and notebooks.[61] Many of these papers include information about his business affairs.[62]

Only those documents which have been referred to in this thesis are listed below. These are listed here in the order they occur in the catalogue under book and non-book items.

Book Items

Mint Book [Number 61] Mint and Coinage Cashbook	1845-1849
Journal Soho Boulton and Fothergill Journal	1776-1778

Ledger Soho Boulton and Fothergill Ledger	1776-1778
Journal Soho Boulton and Fothergill Journal	1778-1781
Boulton and Fothergill Day Book	1779-1781
Journal Soho Boulton and Fothergill, in part Matthew Boulton Journal	1781-1783
Cash Book Soho Boulton and Fothergill Workmen	1762-1764
Cash Book Birmingham Boulton and Fothergill Cash Book	1763-1765
Cash Book Soho Boulton and Fothergill Cash Book	1763-1766
Cash Book Birmingham Boulton and Fothergill Petty Cash Book	1767-1777
Cash Book Soho Boulton and Fothergill Cash DR Book	1772-1782
Boulton and Fothergill	1782
Soho Inventory	1782
Letter Book [A] Boulton and Fothergill	1757-1765
Letter Book B Boulton and Fothergill	1764-1766
Letter Book C M. Boulton	1766-1768
Letter Book D M. Boulton	1768-1773
Letter Book E Boulton and Fothergill	1771-1773
Boulton and Fothergill Portions of a Letter Book [photocopy]	1773
Letter Book F Boulton and Fothergill	1772-1774
Letter Book G Boulton and Fothergill	1774-1777
Letter Book H Boulton and Fothergill	1776-1779

Letter Book I Boulton and Fothergill	1777-1782
Letter Book J M. Boulton	1780-1781
Letter Book K Boulton and Fothergill	1780-1781
Letter Book L M. Boulton	1780-1789
[Private] Letter Book M M. Boulton	1781-1783
Letter Book N Matthew Boulton	1782-1786
Letter Book Copies of Letters Soho	1827-1830
Ledger M. B. Ledger	1775-1778 1787-1789
Ledger Soho Boulton and Fothergill	1778-1782
Ledger M. B. Private	1768-1772
Journal Great Tew Journal	1816-1818
Ledger Private Scroll Ledger	1842-1846

Non-book Items

Boxes of Incoming letters

Box	A	Aa to Az
"	B1	Ba to Baz
"	B2	Ba to Baz
"	B3	Bia to Bly
"	B4	Boa to Boz
"	B6	Bua to Bz
"	C1	Ca to Caz

Box	C2	Ce to Cog
"	C3	Col to Cz
"	D1	Da to Del
"	D2	Dem to Dz
"	E1	Ea to Edw
"	E2	Ef to Ez
"	F1	Fa to Foz
"	G1	Ga to Gle
"	G2	Gle to Gz
"	H1	Ha to Hau
"	H2	Hav to Hol
"	H3	Hom to Hz
"	I	Ia to Iz
"	J	Ja to Jz
"	K	Ka to Kz
"	L2	Li to Lz
"	M1	Ma to Mit
"	M2	Mol to Mz
"	O	Oa to Oz
"	P1	Pa to Pin
"	P2	Pio to Pz
"	R1	Ra to Riz
"	R2	Boa to Rz
"	S1	Sa to Sime
"	S2	Simp to Spen
"	S3	Spil to Sz
"	T1	Ta to Tor
"	T2	Tou to Tz
"	V	Va to Vz

Box W1 Wa to Wat

" W2 We to Wil

" W3 Wim to Wz

" YZ Ya to Zz

Boxes Devoted to One Person, Family or Topic

Household Accounts 1 of 2 Boxes

Early Accounts 1751-1779

Birmingham 1 1 of 2 Boxes

Birmingham 2 2 of 2 boxes

Birmingham Commercial Committee

Boulton, M. (Miss Anne Robinson. Mrs Boulton)

Boulton, M. R. to Boulton, M. 1782 to 1793 (and Boulton M. to M.R.B.)

Boulton M. and Plate Co. Robinson Edkins and Acton

Boulton M. Biograph. Memoir. Decease. Funeral.
Prints. Medals

Bownas J. and Co. (Successors to M.B. and Button Co.) Murdock and
Toney

Chamber of Manufactures

Darwin, Erasmus and Darwin Family

Fothergill, John (Boulton and Fothergill) and
Fothergill Family

Garbett, Samuel and Garbett Family, 1765 to 1785
1 of 3 boxes

Garbett, Samuel, 1786-1797,
2 of 3 boxes

Hodges, John

Keir, James

Matthews and Barton. Matthews, William

Montagu, Mrs

Motteux, John Snr, Motteux, John Jnr

Rennie, John

Scale, John. Boulton and Scale. (M.B. and Boulton Co)
Scale Family

Soho House, Garden, List of Prices, Estimates, Calculations, Returns, Reports, Inventories

Soho Manufactory

Watt, James 1768 to 1780 — 1 of 5 boxes

Watt, James 1780 to 1781 — 2 of 5 boxes

Walker, Z. Snr — 1 of 2 boxes

Walker, Z. Jnr

Wedgwood, Josiah, Wedgwood Family,
Wedgwood, J. Jnr, and Bryerley

Whitehurst, John

Wyatt Family

[M.B.] Notebooks

Notebooks 1 to 16 1751-1778

" 17 to 30 1778-1782

" 31 to 46 1782-1786

1 Box The Diaries of Matthew Boulton 1766-1808

Box Miscellaneous Papers

1 Bundle Cash Acounts, June 1769 to July 1774

1 Bundle Stock Taking

1 Parcel Tew Manuscript Drawings and Tracings of Plans etc.

1 Box Photostats Shelburne - Garbett Papers in the William Clements Library, U.S.A.

1 Box New Assay Process for the Estimation of Platinum

1 Information kindly supplied by the former B.R.L. archivist John Davies.
2 Delieb and Roberts, *Silver Manufactory*, p. 136.
3 Smiles, *Boulton and Watt*, p. vi.
4 e.g. Letter Book, Copies of Letters Soho, 1827-30.
5 See p. 227.
6 Smiles, *Boulton and Watt*, pp. v-vi.

7 Much Soho material dates from after M.B's son's death in 1842 (see text) e.g. Mint Book [Number 61] Mint and Coinage Cashbook 1845-1849.

8 Smiles, *Boulton and Watt*, p.v.

9 See p.227.

10 e.g. Samuel Smiles (Smiles, *Boulton and Watt*, p.v).

11 B.R.L. Timmins, Collection of Original Letters, Part I, contains some material which would otherwise have formed a part of the M.B.P. e.g. p.11, William Fothergill to B. & F., 6 June 1769. Llewellyan Jewitt used a letter in *The Wedgwoods...* (1865) from the M.B.P. but the original letter has not survived (see Chapter III, note 34).

12 e.g. Journal, Great Tew Journal 1816-1818.

13 e.g. Ledger, Private Scroll Ledger 1842-1846.

14 e.g. 1 Box New Assay Process for the Estimation of Platinum.

15 Information supplied by the former B.R.L. archivist, John Davies.

16 A Bundle Cash Accounts, June 1769 to July 1774, Soho Cash Account with Birmingham, 10 July 1770 refers to a 'waste book'.

17 The system followed Luca Pacioli's *Summa de Arithmetica...* (1494) which involved three basic books: memorial or waste-book, journal or day-book, and ledger. However, the term memorial book does not occur in the M.B.P. and the terms journal and day-book were not synonymous for B. & F. (see text). The use of ancillary records by B & F was parallelled elsewhere (G. A. Lee, 'Historical Business Accounting Records', *Business Archives*, No. 46 (November 1980), New Series Vol. 4, No. 2, pp.7-14 (pp.9-12)).

18 e.g. 'his Book Turner ... £2 12s. 6d.', Cash Book 1762-4, p.13, 7 August 1762.

19 Ledger 1775-8 and 1787-9 (only the first part was used by Francis Eginton).

20 See Appendix V, entry on Eginton, Francis.

21 No cash-books from the Soho Manufactory survive from the period 1766-72.

22 e.g. Payment of £2 9s. 9½d. to John Allen, (Cash Book 1762-4, p. 133, 22 June 1763). See Appendix V, entry on Allen, John.

23 e.g. 3d. paid to Osborne for sawdust (Cash Book 1762-4, p.88, 5 February 1763).

24 e.g. Two pairs of silver candlesticks sold to Mr. Hewish of Nottingham (Cash Book 1772-82, 18 November 1774).

25 e.g. 4s. 6d. paid by James Watt (Cash Book 1772-82, 21 May 1777). See Appendix V, entry on Watt, James

26 An inventory was completed on 31 December 1775 (Journal 1776-8, p.1).

27 Soho Inventory, 1782.

28 '2 pr. silver Candks. sent [John] Leviston pr. Day Book £21 2s. 11½d.' (Journal 1776-8, p.12, 12 January 1776).

29 Day Book 1779-81.

30 'One pair silver two-light branches for Wakelyn and Tayler. Pattern No. 973719 26oz. 5dwt. @ 5s. 6½d. per oz. = £7 5s. 6d.; fashion £2 12s. 6d., box 9d.; total £9 18s. 9d.'; reference to p.249; initials of J. S. (Day Book 1779-81 p.73). '184 Silver Co. [i.e. Silver, Plated etc. Goods in Partnership with William Bingley] for goods sent Wakelyn and Tayler £9. 18s. 0d.; 174 pair of boxes for box account sent

ditto 9d' (Journal 1778-81, p.249, 14 December 1779). Under the Department of Silver, Plated etc. Goods in Partnership with William Bingley, 'general sales for goods sent Wakelyn and Tayler 249 183 £9. 18s. 0d.' (Ledger 1778-82 p.184, 14 December 1779). Under Packing Boxes, 'general sales sent Wakelyn and Co. 249 183 9d' (Ledger 1778-82, p.174, 14 December 1779).

31 e.g. Silver Co. [i.e. Silver, Ormolu,and Sheffield plate department] for 500 oz. standard silver @ 5s. 6½d. = £138 10s. 10d. (Journal 1776-8, p. 68, 30 March 1776).

32 See note 29 above.

33 e.g. The accounts for the department producing silver, ormolu, and Sheffield plate at the beginning of 1776 are on p.2 of Ledger 1776-8.

34 The Ledger 1775-8 and 1787-89 was just a cash-book in the period 1775-8 for Francis Eginton.

35 Ledger 1776-8; Journal 1776-8; Ledger 1778-82 and Journal 1778-81.

36 See p.22.

37 See p.22.

38 See p.32

39 1 Bundle Cash Accounts, June 1769 to July 1774, contains a Soho Cash Account with Birmingham, 14 April 1770 sent to Z. W. for checking and then returned to J. S.; 1 Bundle Stock Taking, Soho Cash Account with Birmingham Warehouse, 30 September 1773—4 January 1775 contains an account of 2 March 1774 sent by Z. W. to J. S.

40 e.g. 4s. 6d. paid by James Watt (Cash Book 1772-82, 21 May 1777) See Appendix V, entry on Watt, James.

41 e.g. Cash Book 1772-82, contains 'An Account of Sundries sold at Soho'. See note 23 above.

42 e.g. 'By Trade [paid] Workmen & Pettys since 14th inst' £87 15s. 9d. (Cash Book 1763-5, 18 February 1763); 'To Amount of goods sold at Soho £1 1s. 10d.' 29 August 1774 (1 Bundle Stock Taking, Soho Cash Account with Birmingham Warehouse, 22 August to 29 August 1774).

43 e.g. '[Birmingham] Warehouse ... to Cash for ... [amount] paid Workmen etc. to this date as on this and preceeding page £859 17s. 0½d.' (Journal 1776-8, p.47, 26 February 1776).

44 e.g. Sending Floyer and Price £148 19s. 2d. by means of a draft payable in two months on B. & F.'s banker's Matthews and Barton for standard silver sent on 16 February 1778.(Letter Book H, p.495, B. & F. to Floyer and Price, 14 March 1778. Letter Book H was kept at the Birmingham warehouse)

45 e.g. A demand for £250 2s. 7d. for silver sent Lord Hope (Letter H, pp.159-60, B. & F. to Lord Hope, 8 March 1777). Letter Book H was kept at the Birmingham warehouse.

46 e.g. 'Box pr. Swan Coach to Parker and Wakelin 2s. 7d.' (Cash Book 1767-77, 16 February 1776). This was for two pairs of silver candlesticks (Journal 1776-8, p.39, 16 February 1776).

47 e.g. Cash Book 1763-5.

48 e.g. 1 Bundle Cash Accounts June 1769 to July 1774.

49 A reference to 'Birmingham Books' in the context of accounts (1 Bundle Cash Accounts, June 1769 to July 1774, 27 July 1773).

50 Copies were not made of all letters: a letter to the Reverend Mr Arden refers to an earlier letter sent on 9 September 1776 (Letter Book G, p. 707, B. & F. to Reverend Mr Arden, 28 September 1776) but no copy survives in letter books for that period.

51 The following surviving letter books from the B. & F. partnership were kept at Birmingham: A (1757-65); B (1764-6); F (1772-4); H (1776-9) and K (1780-1). The following surviving letter books from the B. & F. partnership were kept at Soho: E (1771-3); B.R.L., B.W.C., Portions of a Letter Book, 1773; G (1774-7) and I (1777-82).

52 e.g. Box A contains letters from correspondents whose surnames began with A.

53 e.g. [M. B.] Notebooks.

54 e.g. Keir, James.

55 e.g. B. & F. received a letter from Elizabeth Montagu dated 1 February 1777 (Letter Book G, pp.818-9, B. & F. to Elizabeth Montagu, 5 February 1777) which has not survived (Montagu, Mrs).

56 Box E2 contains 151 letters; only one of these was addressed to the Birmingham warehouse. The rest were addressed to Soho.

57 The following M. B. private letter books survive from the period of the B. & F. partnership: C (1766-8); D (1768-73); J (1780-1); L (1780-9); M (1781-3) and N (1782-6)

58 e.g. Montagu, Mrs, item 13, Elizabeth Montagu to M. B., 25 July 1778.

59 e.g. Ledger M. B. Private 1768-72.

60 Twelve of M. B.'s diaries survive from the period of the B. & F. partnership (1 Box The Diaries of Matthew Boulton 1766-1800).

61 Twenty-seven of M. B.'s surviving notebooks fall entirely or partly within the B. & F. partnership; in addition two survive from earlier dates ([M. B.] Notebooks).

62 e.g. A letter from Elizabeth Montagu to M. B. was both a polite social communication as well as an enquiry about a service of silver plate (Montagu, Mrs, item 9, Elizabeth Montagu to M. B., 8 April 1776).

Other Manuscripts

Hill, Joseph, Notebook, Vol.16, Handsworth and Perry Barr. Manuscript Number 661022

Lease entitled 'John Wyrley to Mr Ruston and Mr. Eaves for ninety-nine years from Lady Day, 1757.' Manuscript Number 324197

St. Philip's Church [later Birmingham Cathedral] Marriage Register, Vol.1, 1754-1760

Timmins, Samuel, Collection of Original Letters, Newspaper Cuttings, Portraits etc., relating to Matthew Boulton, James Watt and Soho. Part 1 1760 etc. Manuscript Number 82934.

History and Georgraphy Department

Sir Benjamin Stone Collection of Photographs. Manuscript Number 292214

Box 14

Local Studies Department

Botham, S., A Plan of the Township of Handsworth in the County of Stafford (1794). Manuscript Number 601704

Plan of Land and Property at Handsworth, West of Hockley Brook and Adjoining the Wolverhampton to Birmingham Turnpike Road. Showing Soho Works and Open Water in Neighbourhood (1805). Manuscript Number 383089

University of Birmingham

Heslop Room

Abstract of the County Registers, Apprenticeship Registers 1710-1808, Public Record Office, Kew

LONDON

British Museum

Department of Prints and Drawings

Drawing of the Painted Room at Spencer House, London, 1759, by James Stuart. Register Number 1955-4-16-13

Christie, Manson & Woods Ltd.

Catalogue of the Library of Matthew Boulton and his Descendants at Tew Park, Oxfordshire (on loan, December 1986)

Goldsmiths' Hall

The Worshipful Company of Goldsmiths

Goldsmiths' Company, Court Minute Book, 1742 to 1754. New Series 15; No. 1558: B39

Goldsmiths' Company, Court Minute Book, 1754 to 1767. New Series 16; No. 1559: B39

Goldsmiths' Company, Court Minute Book, 1767 to 1777. New Series 17; No. 1560: B39

Goldsmiths' Company, Court and Committee Book, Vol.1, 1776 to 1785.
No. 1708: B39

Sir John Soane's Museum

Adam Drawings, Vol.25

Victoria and Albert Museum

National Art Library, Archive of Art and Design
Garrard Ledgers

John Parker and Edward Wakelin, Gentlemen's Ledger, 1765-1775, Vol.7
(VAM 7)

John Parker and Edward Wakelin, Workmen's Ledger, No. 2, 1766-1772,
Vol.3 (VAM 8)

John Parker and Edward Wakelin, Workmen's Ledger, No. 2, 1766-1772,
Vol.7 (VAM 8)

John Parker and Edward Wakelin, Gentlemen's Ledger, 1773-1776, Vol.3
(VAM 10)

John Wakelin and William Tayler, Gentlemen's Ledger, 1776-1782, Vol.8
(VAM 11)

John Wakelin and William Tayler, Gentlemen's Ledger, 1777-1787, Vol.9
(VAM 12)

PARIS

Vicomte de Noailles Collection

A Wyatt album

SHEFFIELD

Assay Office, Sheffield

Plate Book 1, September 1773 - September 1781

Plate Book 2, October 1781 - July 1788

VIENNA

Österreichisches Staatsarchiv, Haus -, Hof- und Staatsarchiv, Wien,
Kabinettsarchiv

Naclaß Zinzendorf

Tagebücher des Grafen Karl von Zinzendorf und Pottendorf, Vol. 13
(1768)

Printed Primary Sources

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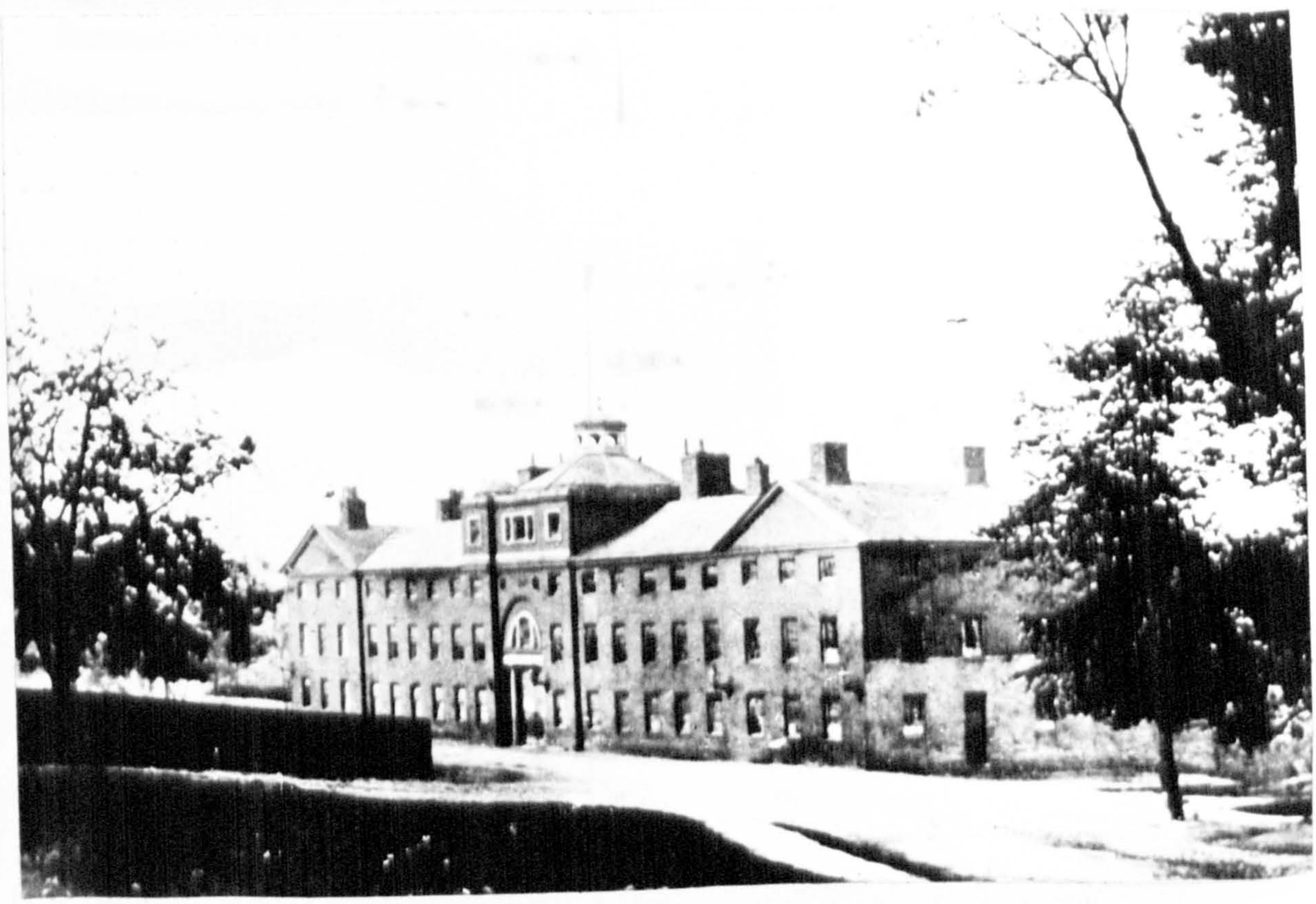
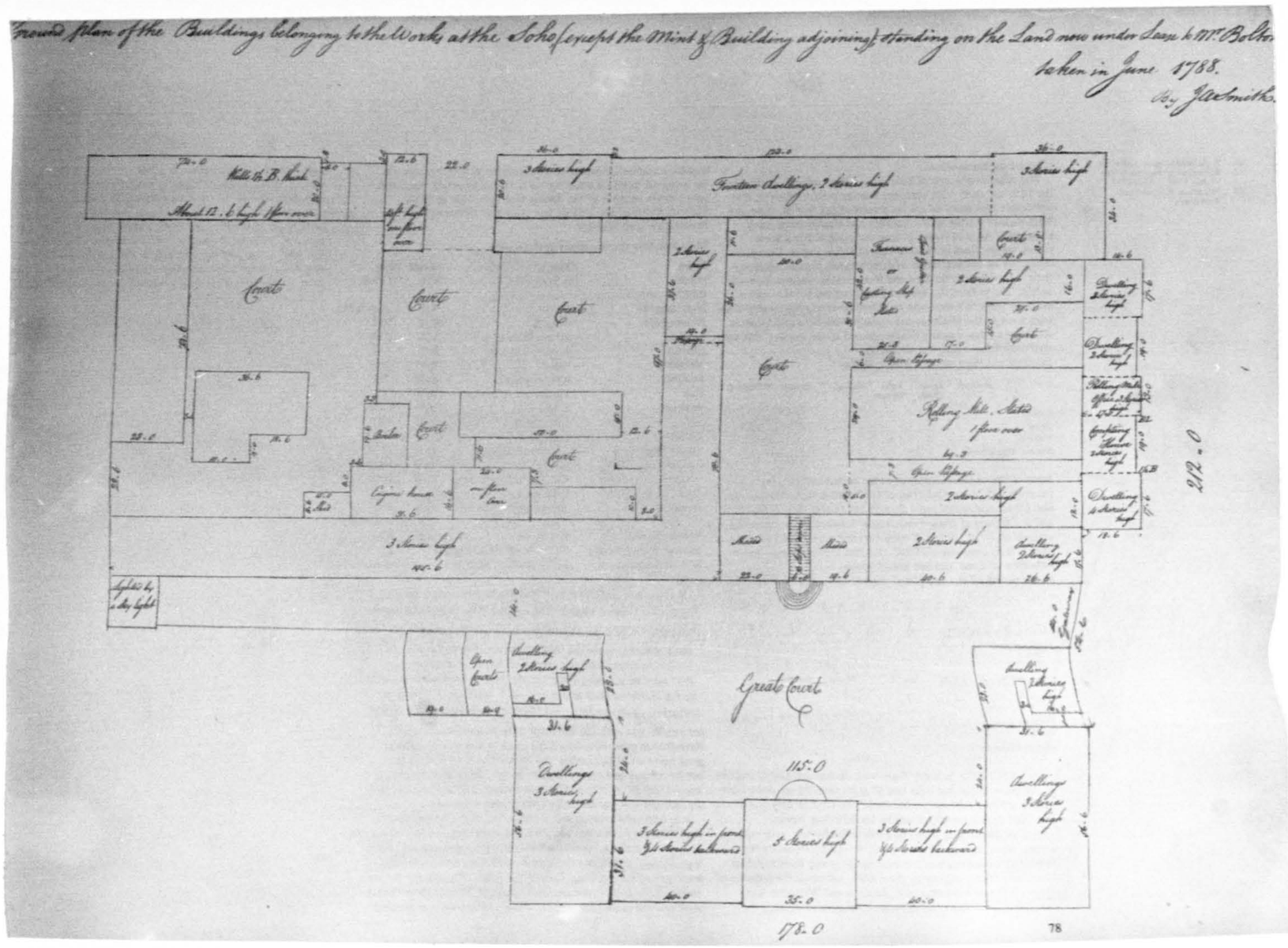
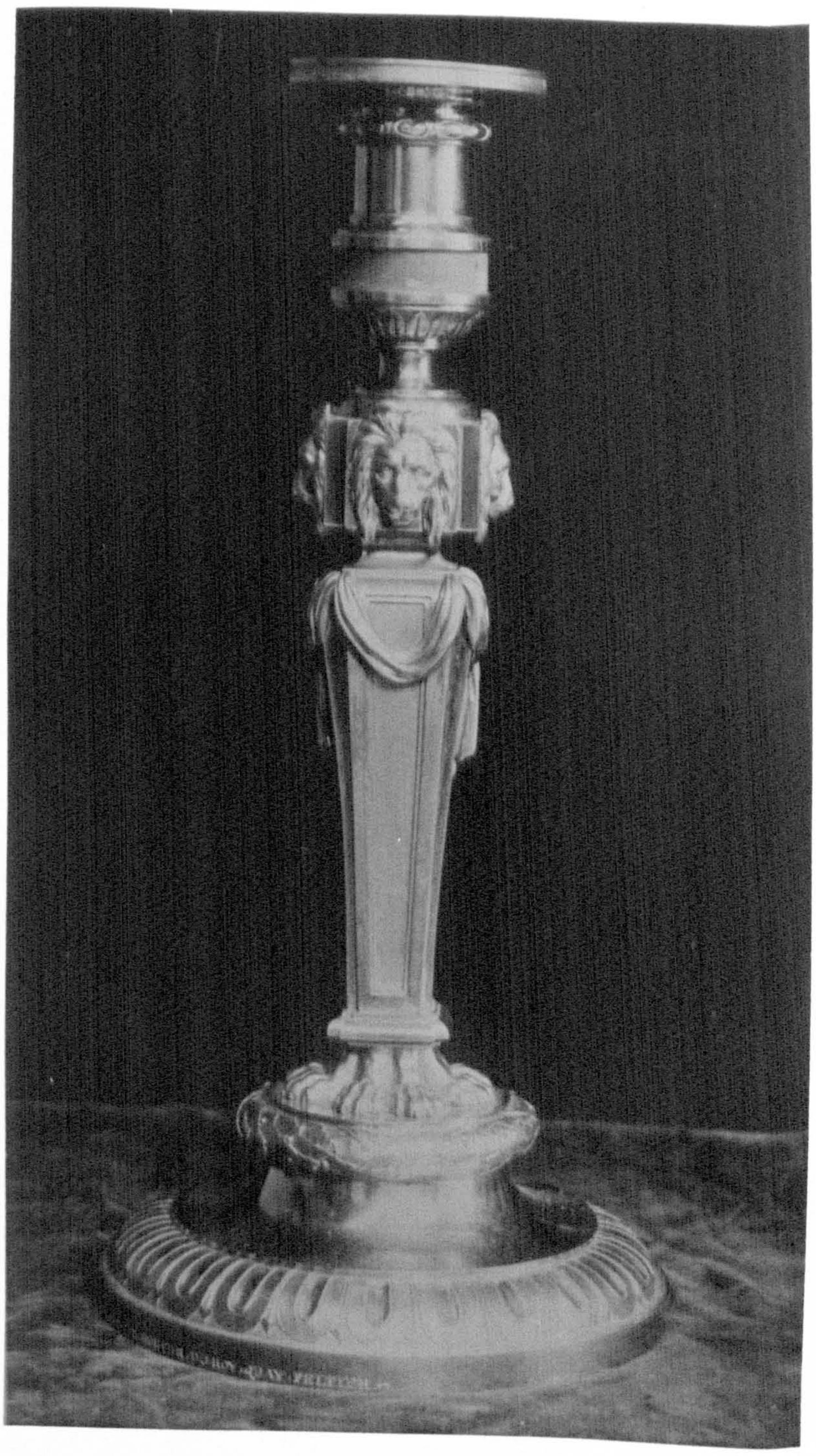
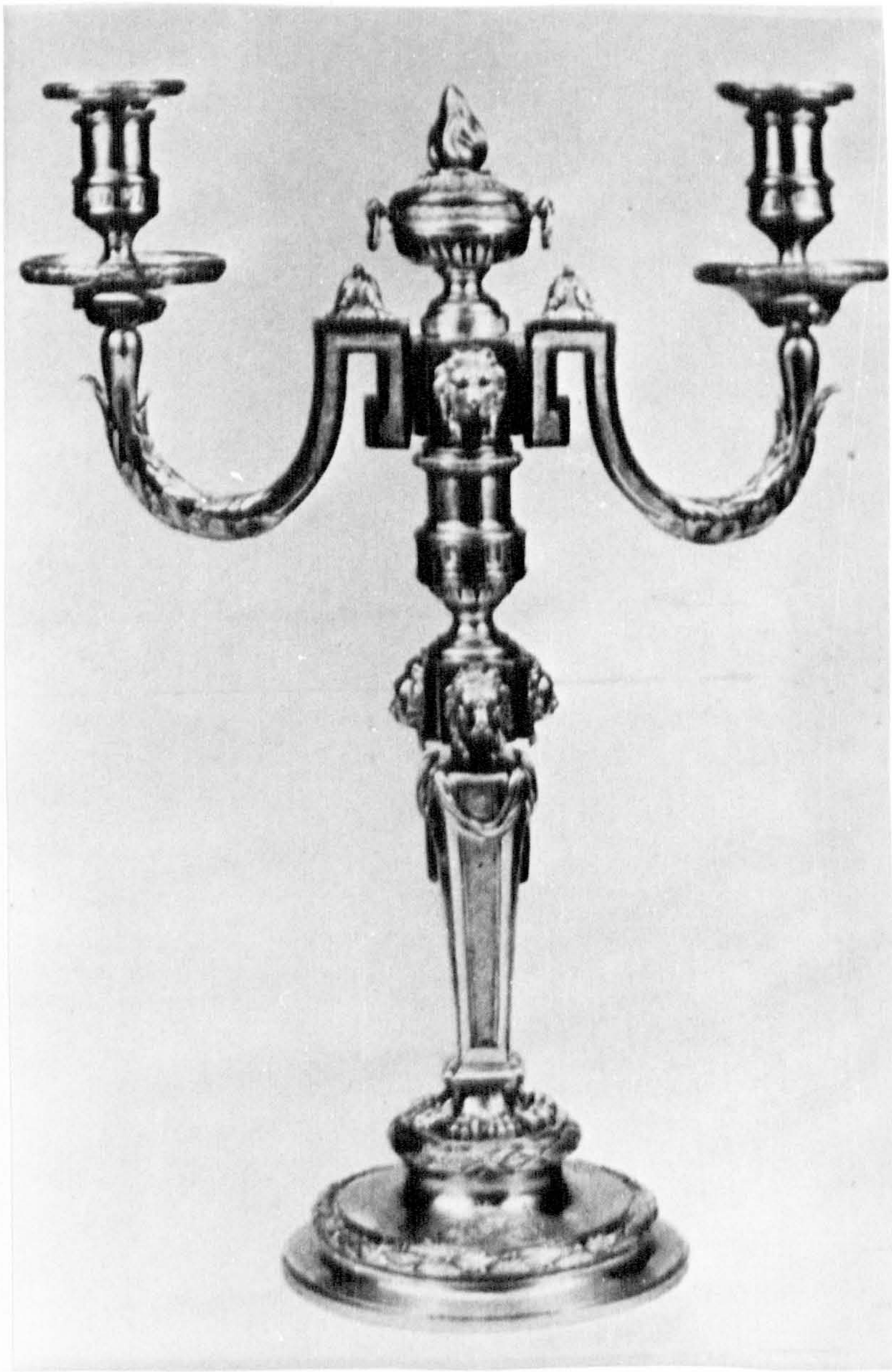
PLATES

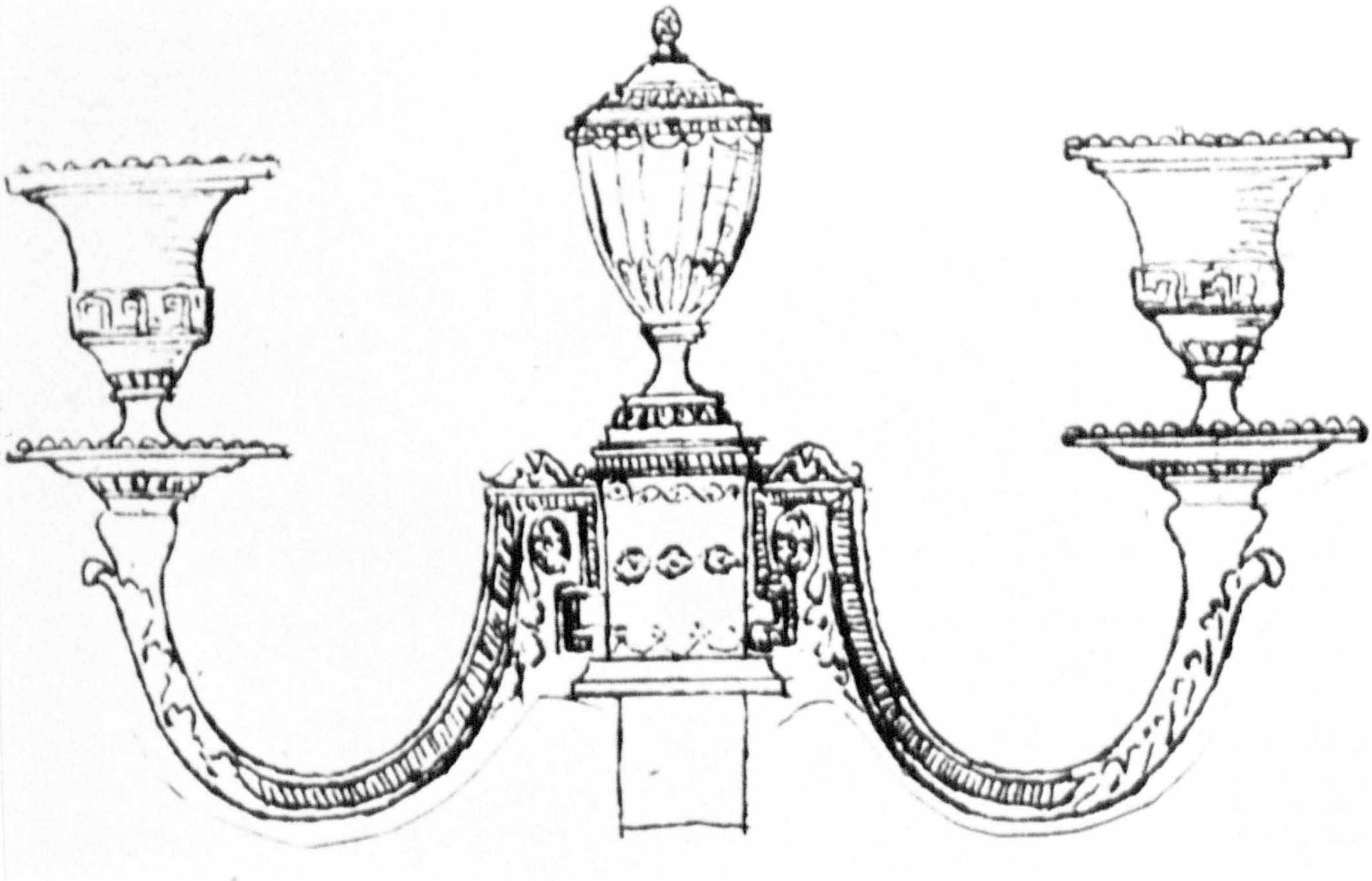


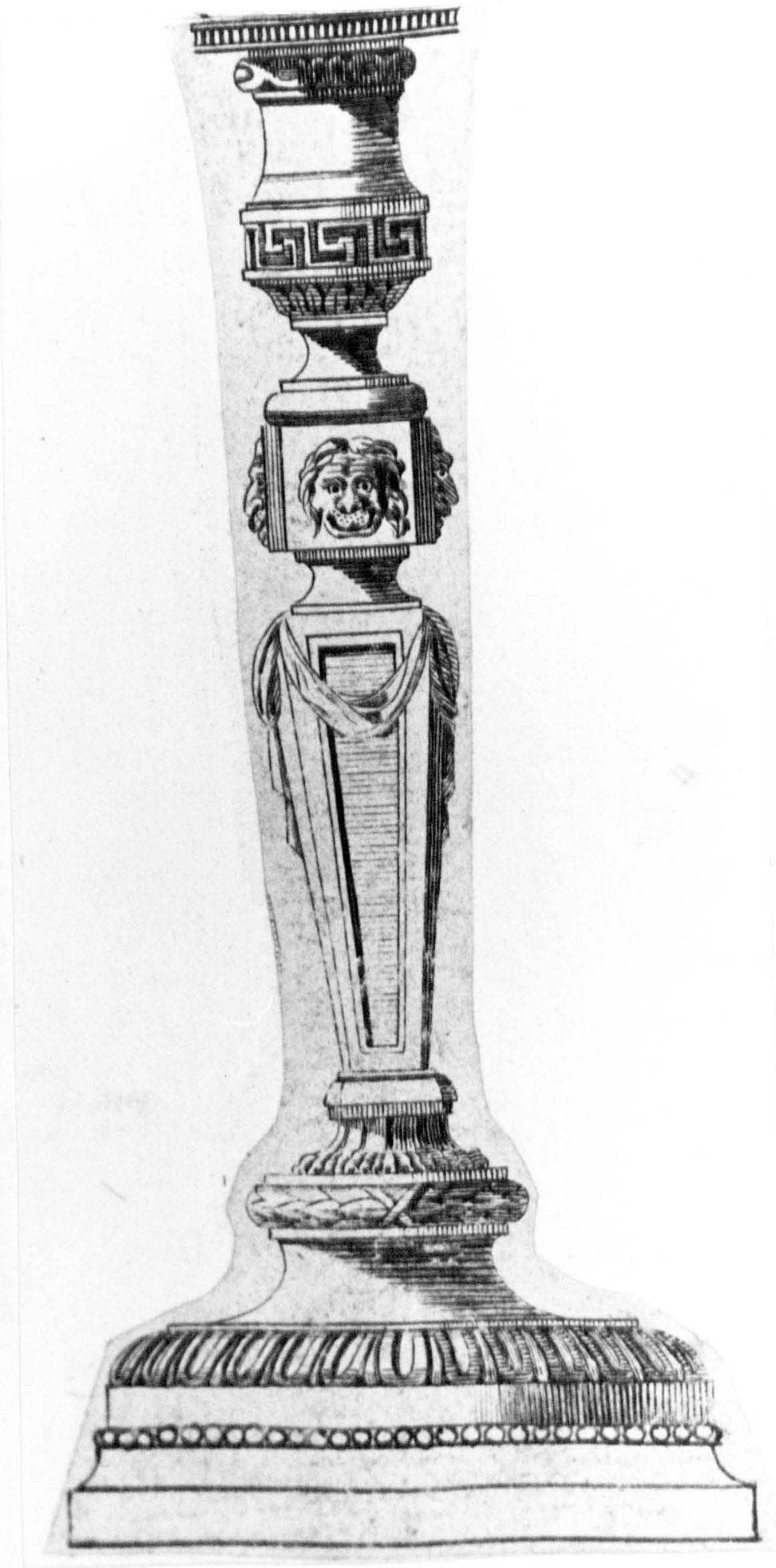
Premises plan of the Buildings Belonging to the Works at the Soho (except the Mint & Building adjoining) standing on the Land now under Lease to Mr. Bolton
taken in June 1788.
By Jas Smith.

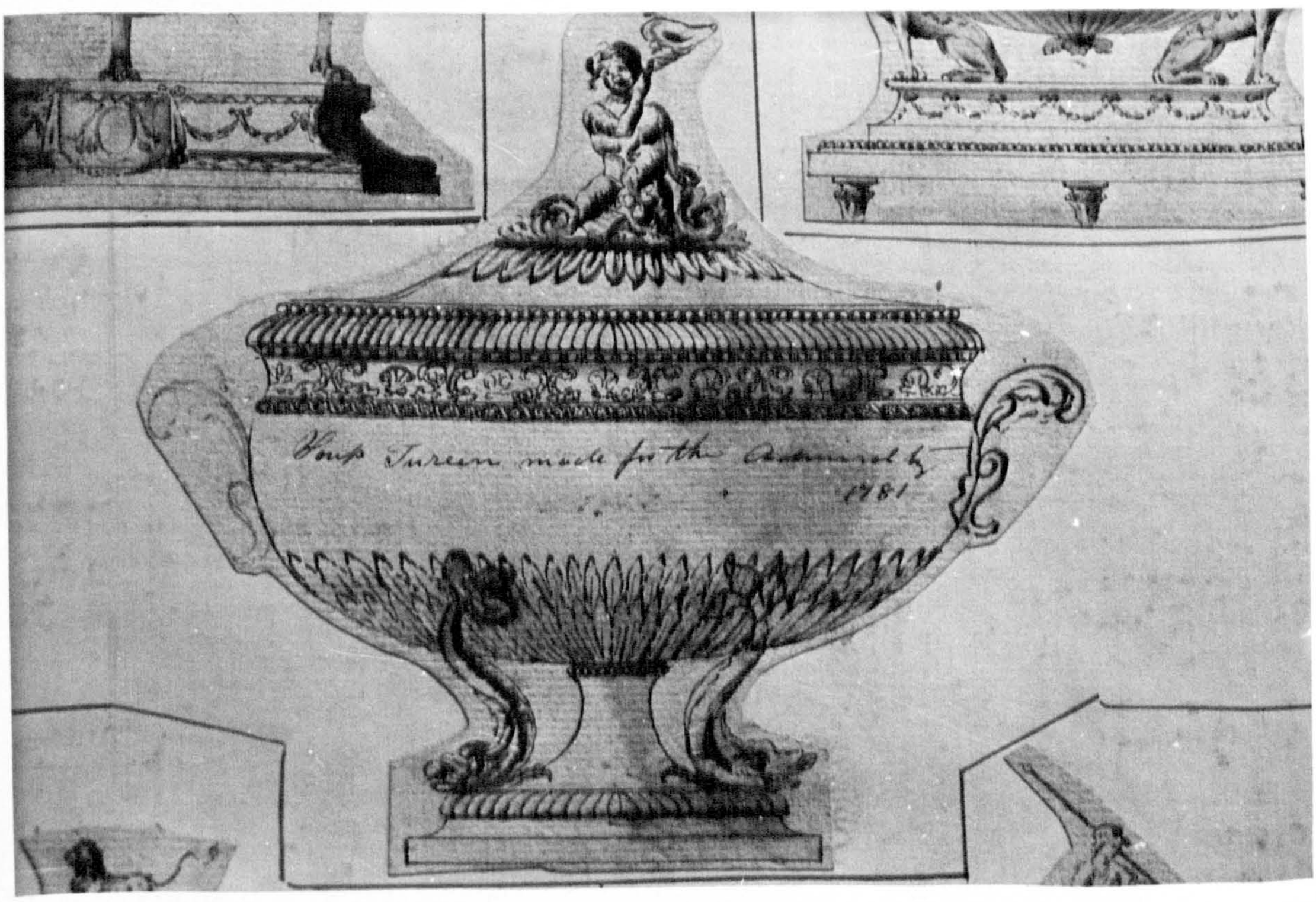


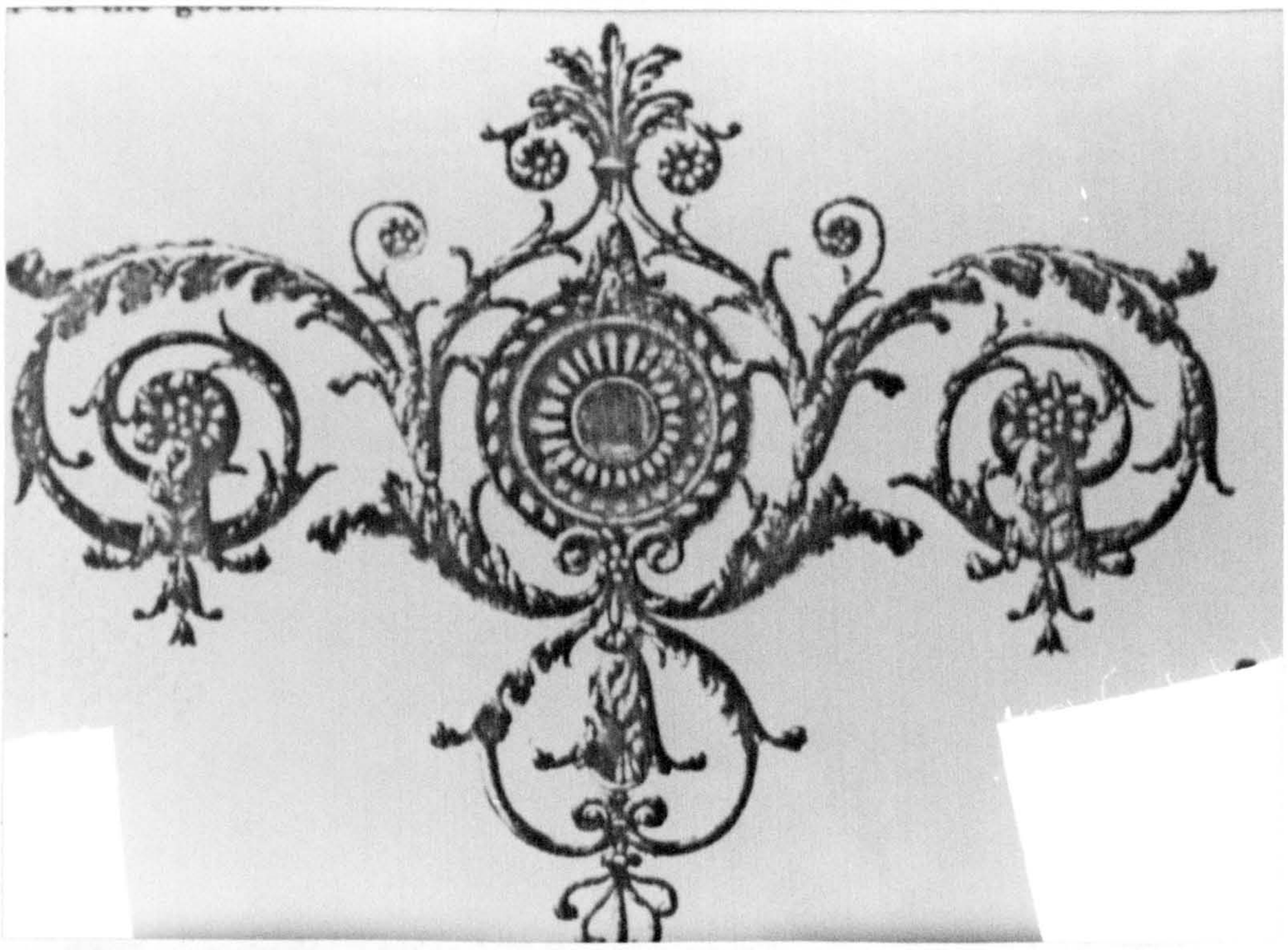


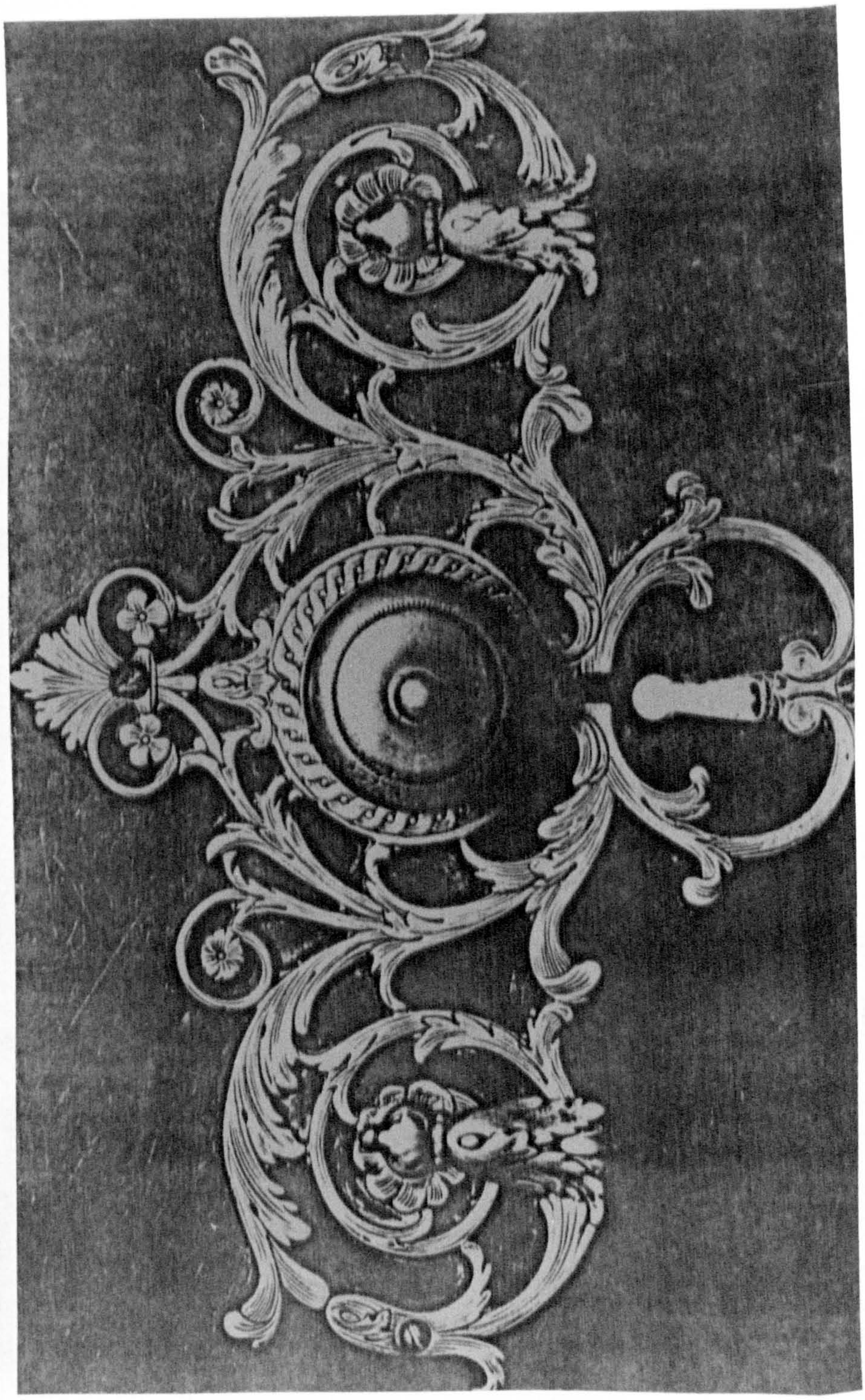


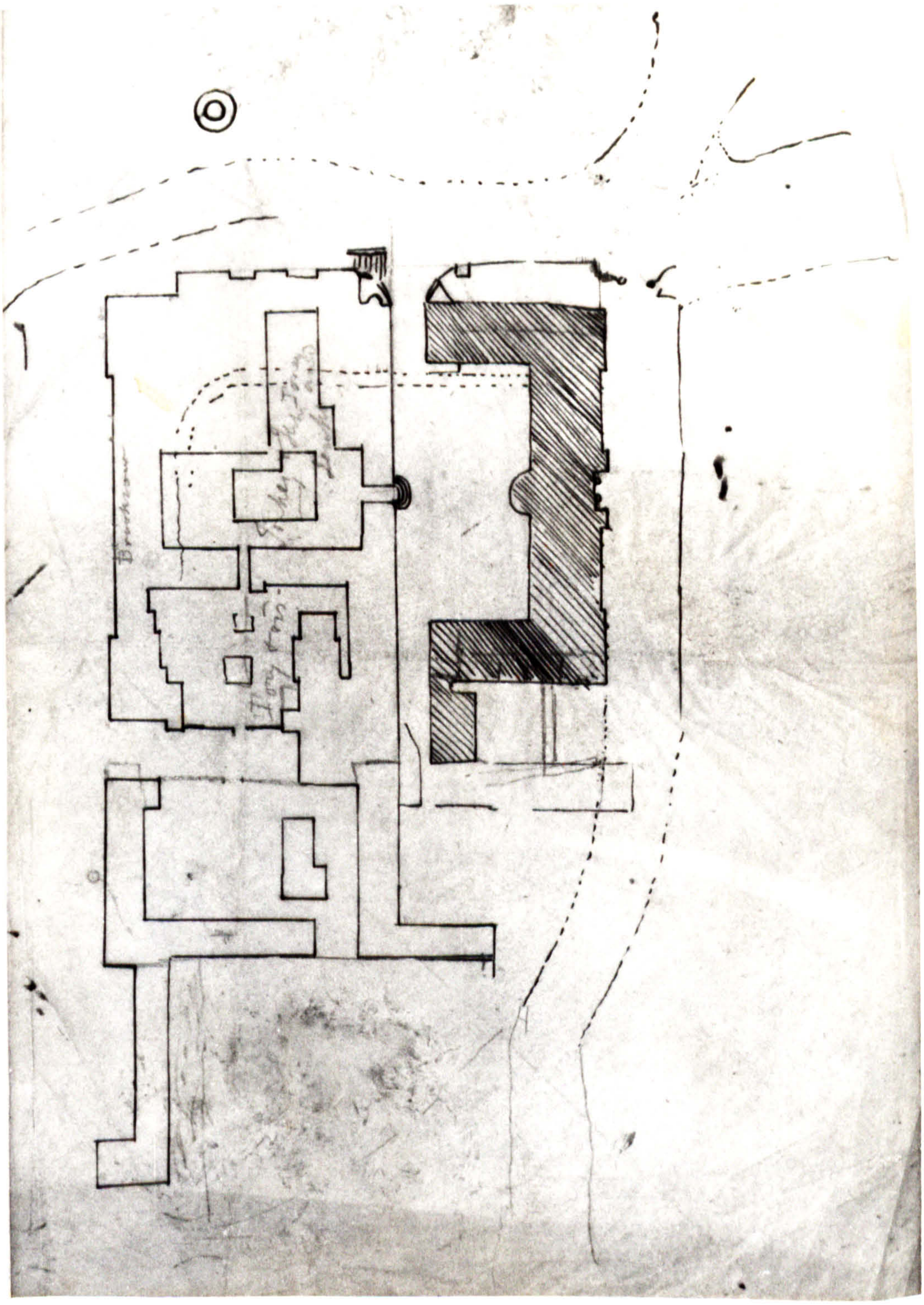


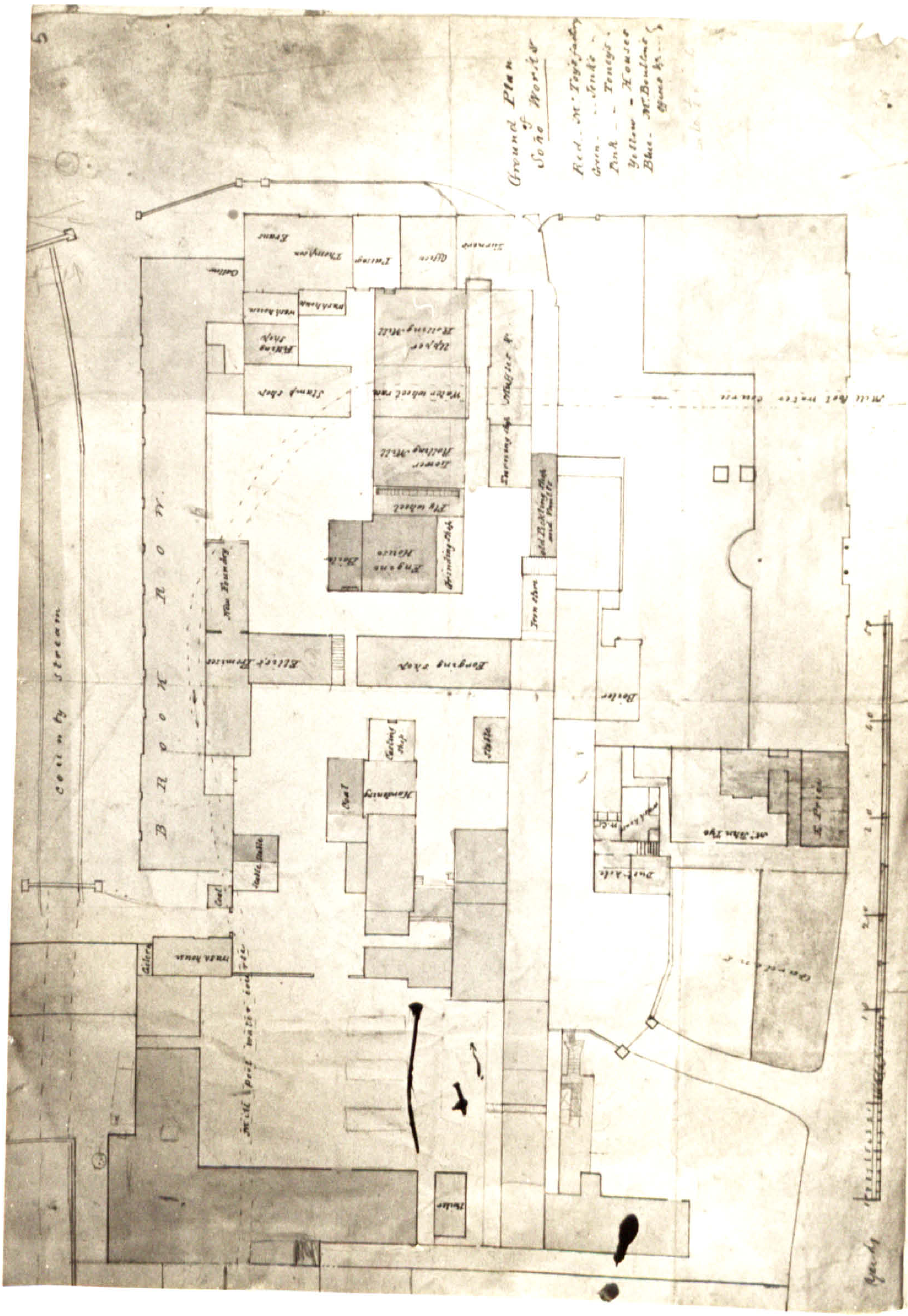


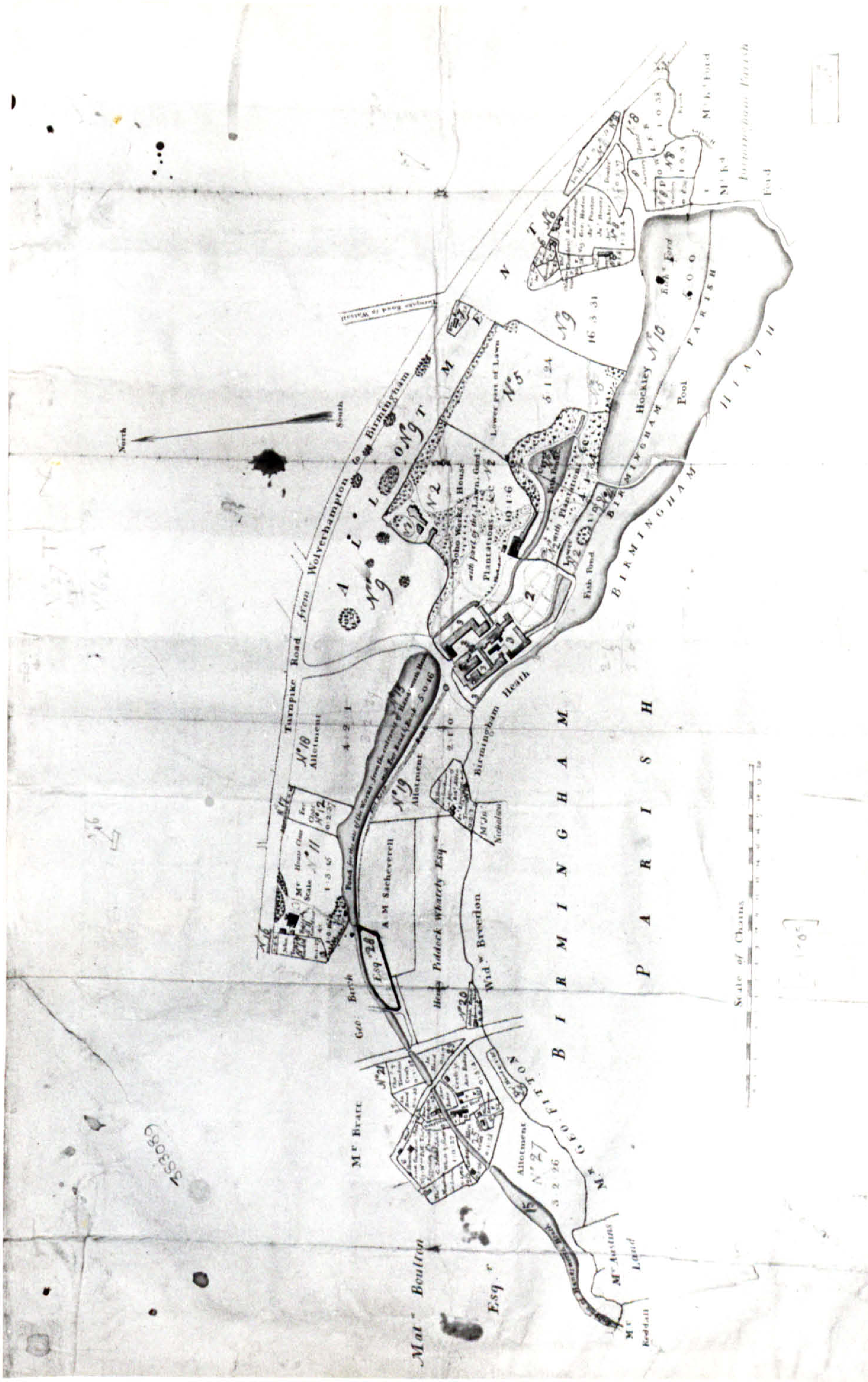

Soup Tureen made for the Admiral
1781

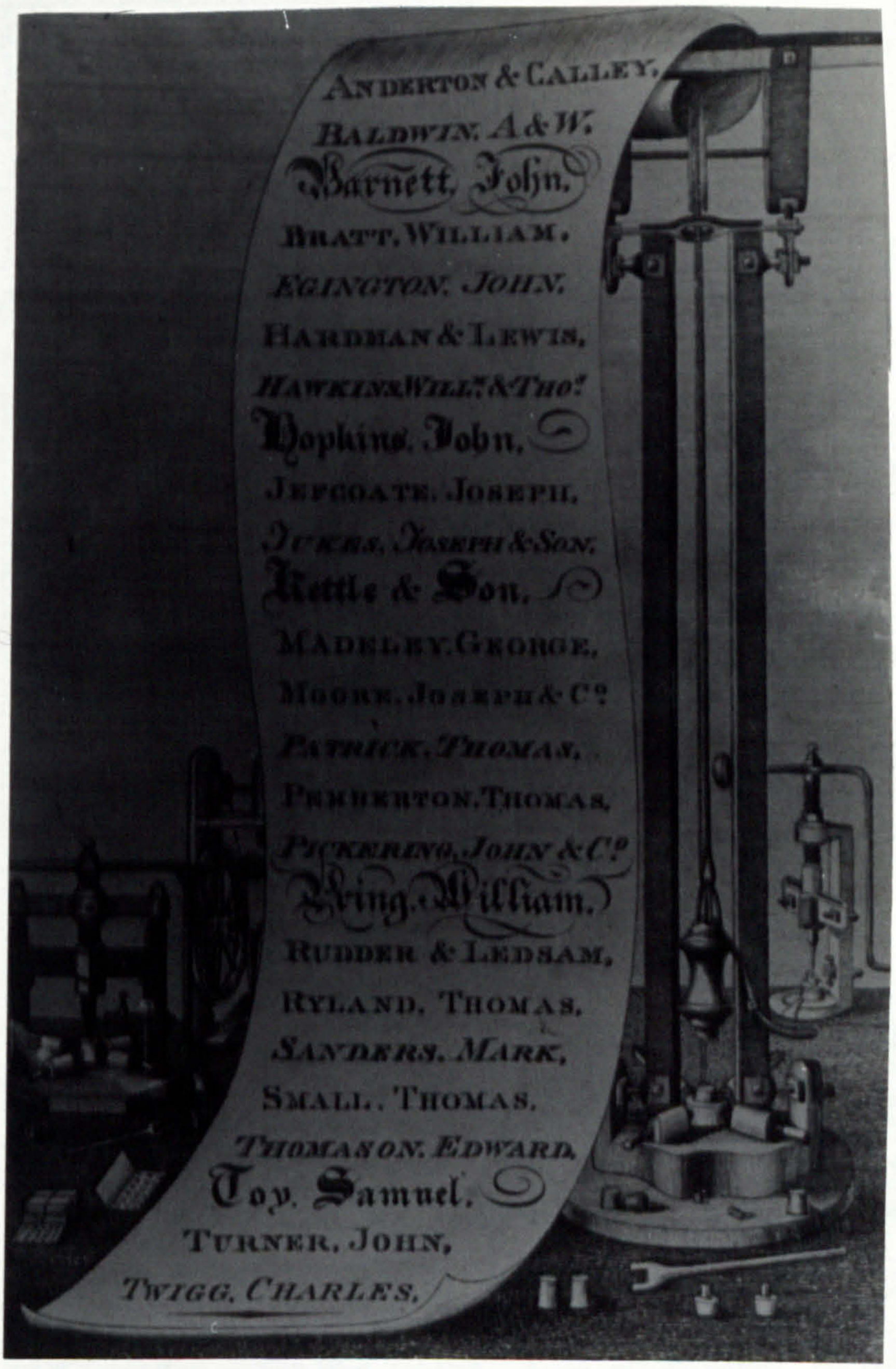







Ground Plan of Soho Works
County Stream
Brook Row
Mill pool water course
Mill Pool water course
Upper Rolling Mill
Water wheel race
Lower Rolling Mill
Fly wheel
Engine House
Grinding Shop
New Foundry
Forging shop
Stamp shop
Coal
Hardening
Casting Shop
Stable
Turning shop
Muffles &c
Iron store
Office
Boiler
Dust hole
Wash house
Yards


North
South
Turnpike Road from Wolverhampton to Birmingham
Turnpike Road to Walsall
Soho Works & House
with part of the Lawn, Gard.
Plantations &c
Lower part of Lawn
Hockley
Pool
Fish Pond
Birmingham Heath
BIRMINGHAM PARISH
BIRMINGHAM HEATH
Allotment
A M Sacheverell
Widw Breedon
Geo. Birch Esq.
Mr Bratt
Mat. Boulton Esq.r
Mr Geo. Fitton
Mr Austins Land
Mr Reddall
Mr Scale
Scale of Chains
353089


Anderton & Calley,
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Barnett, John,
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Hardman & Lewis,
Hawkins, Will.m & Tho.s
Hopkins, John,
Jefcoate, Joseph,
Jukes, Joseph & Son,
Kettle & Son,
Madeley, George,
Moore, Joseph & Co.
Patrick, Thomas,
Perkerton, Thomas,
Pickering, John & Co.
Pring, William,
Rudder & Ledsam,
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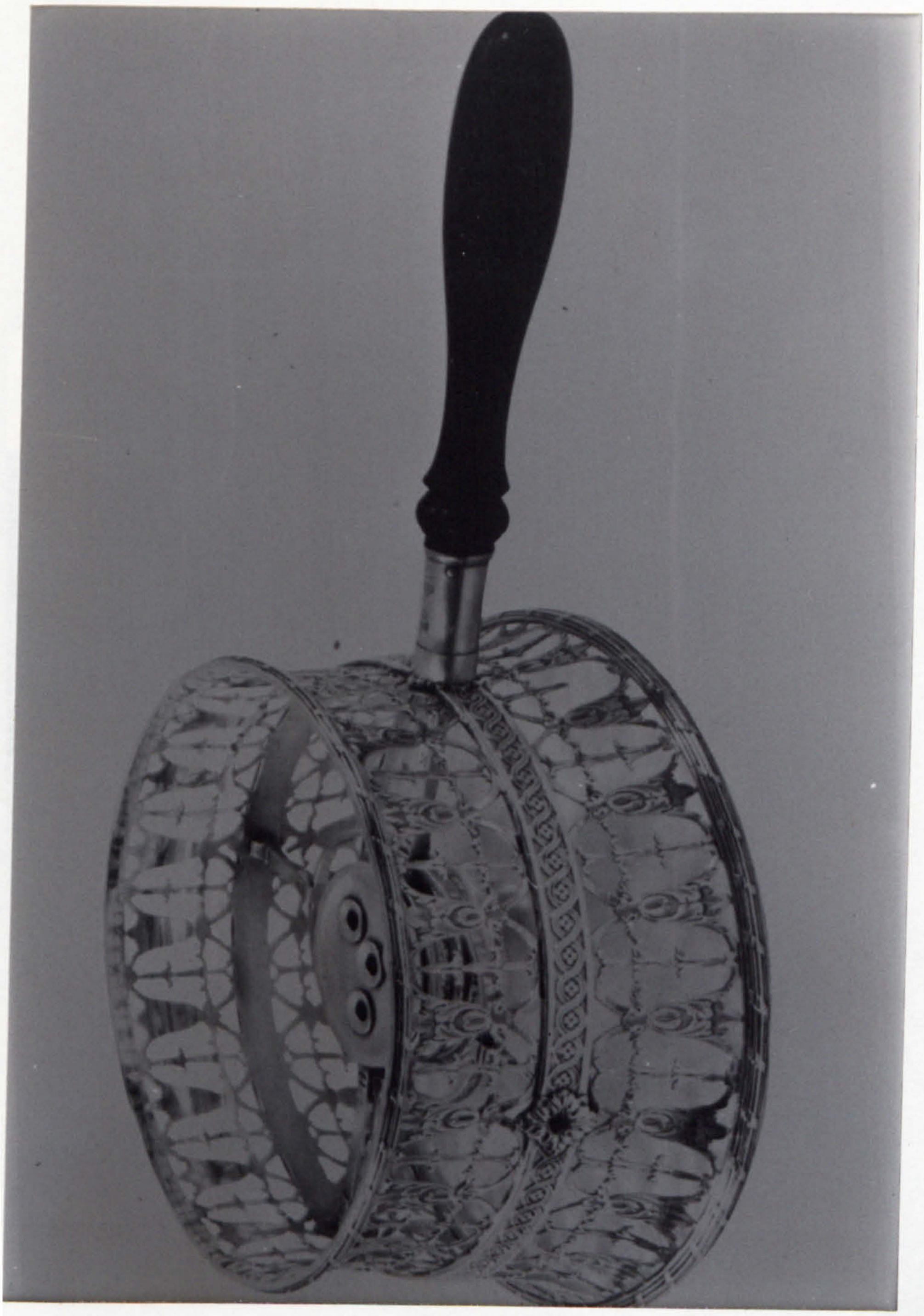
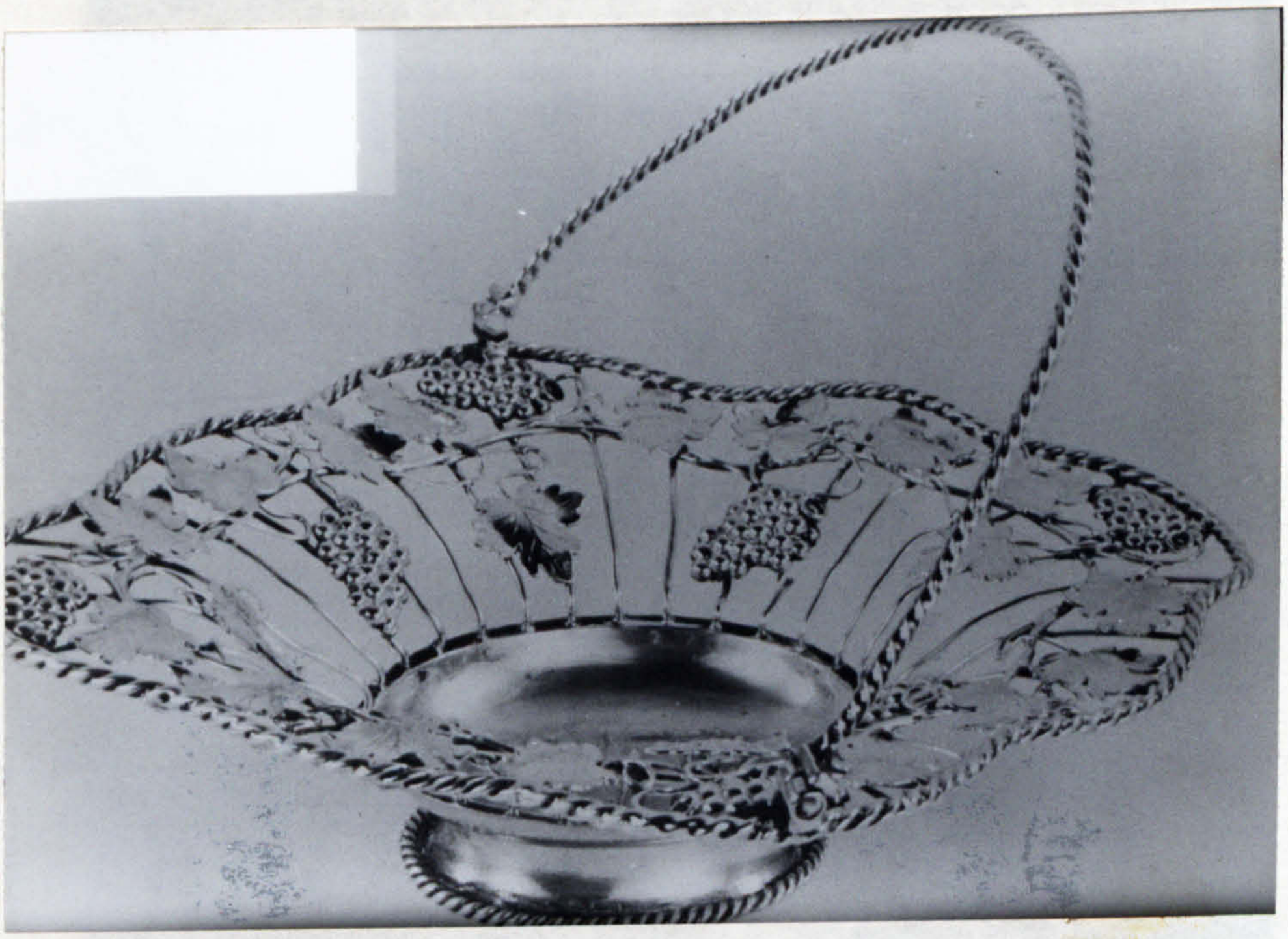
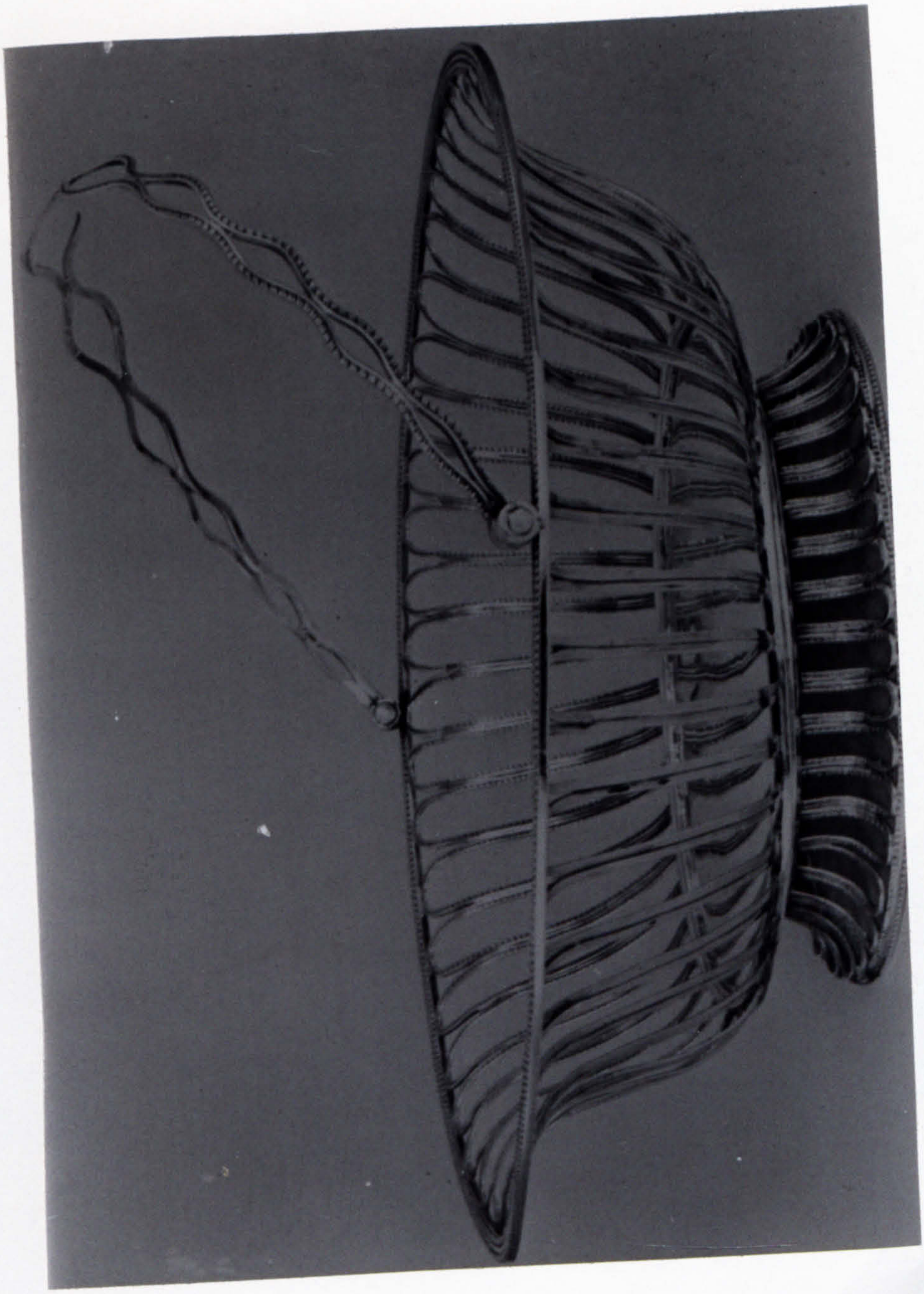
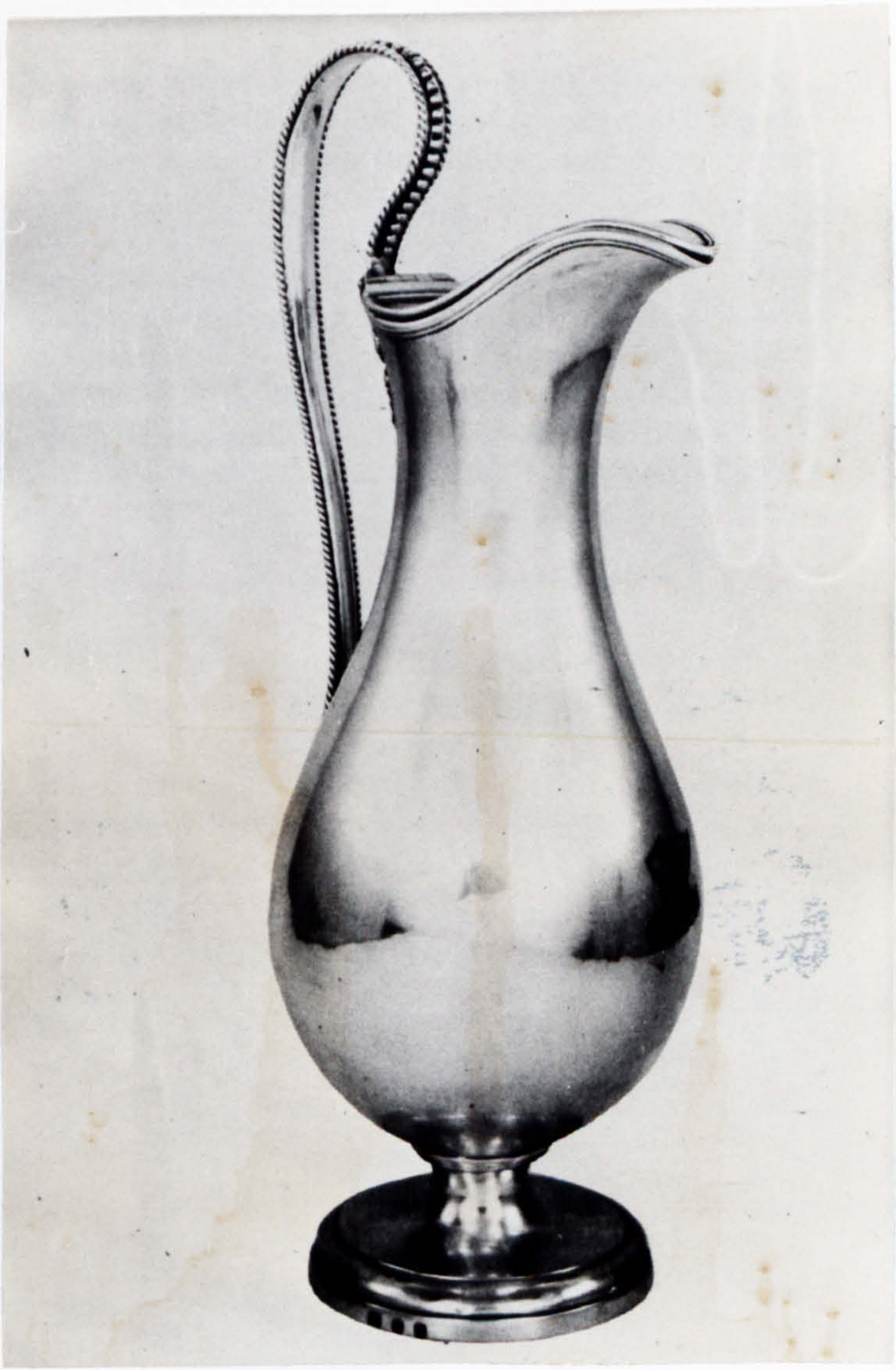
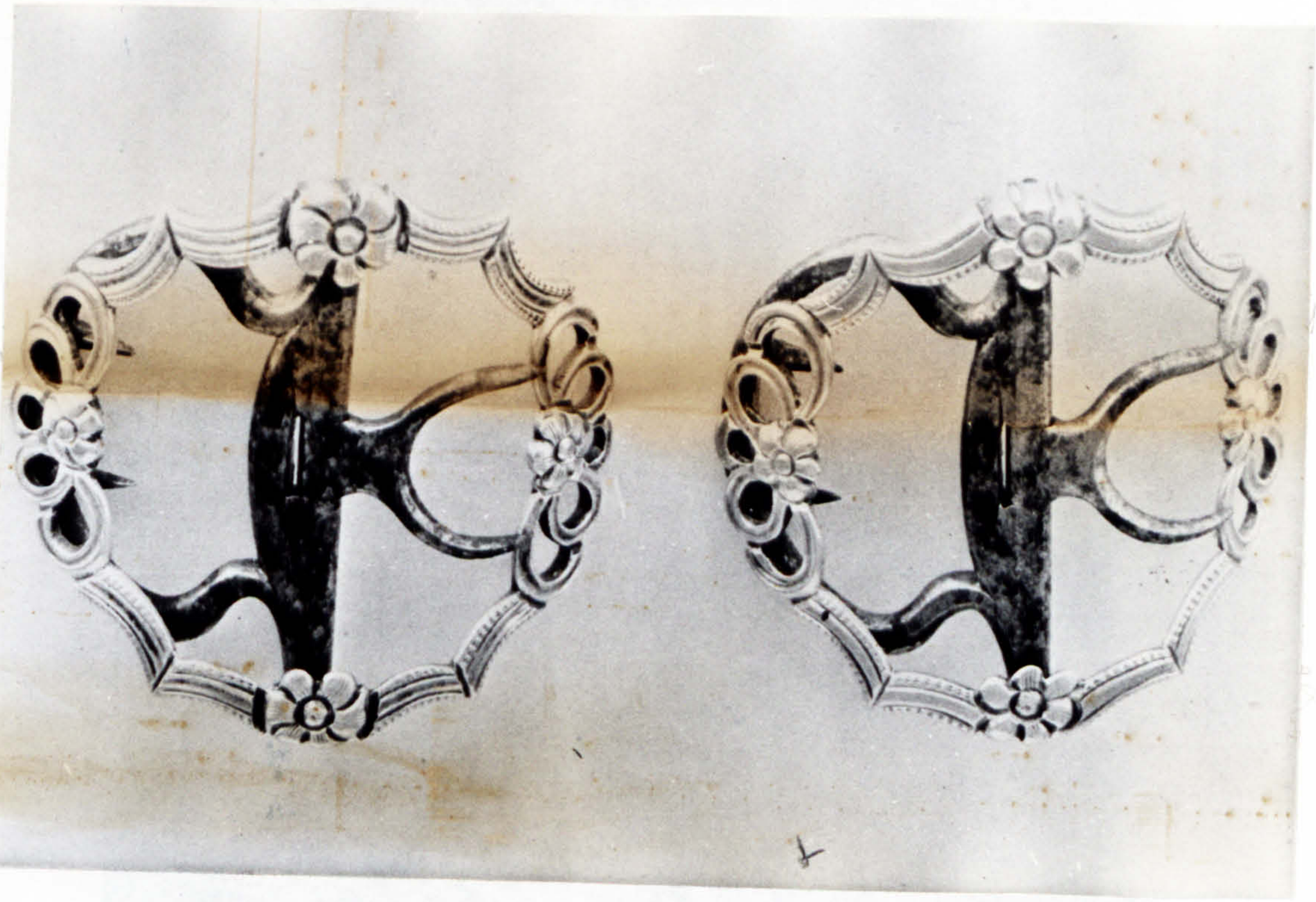
Turner, John,
Twigg, Charles,

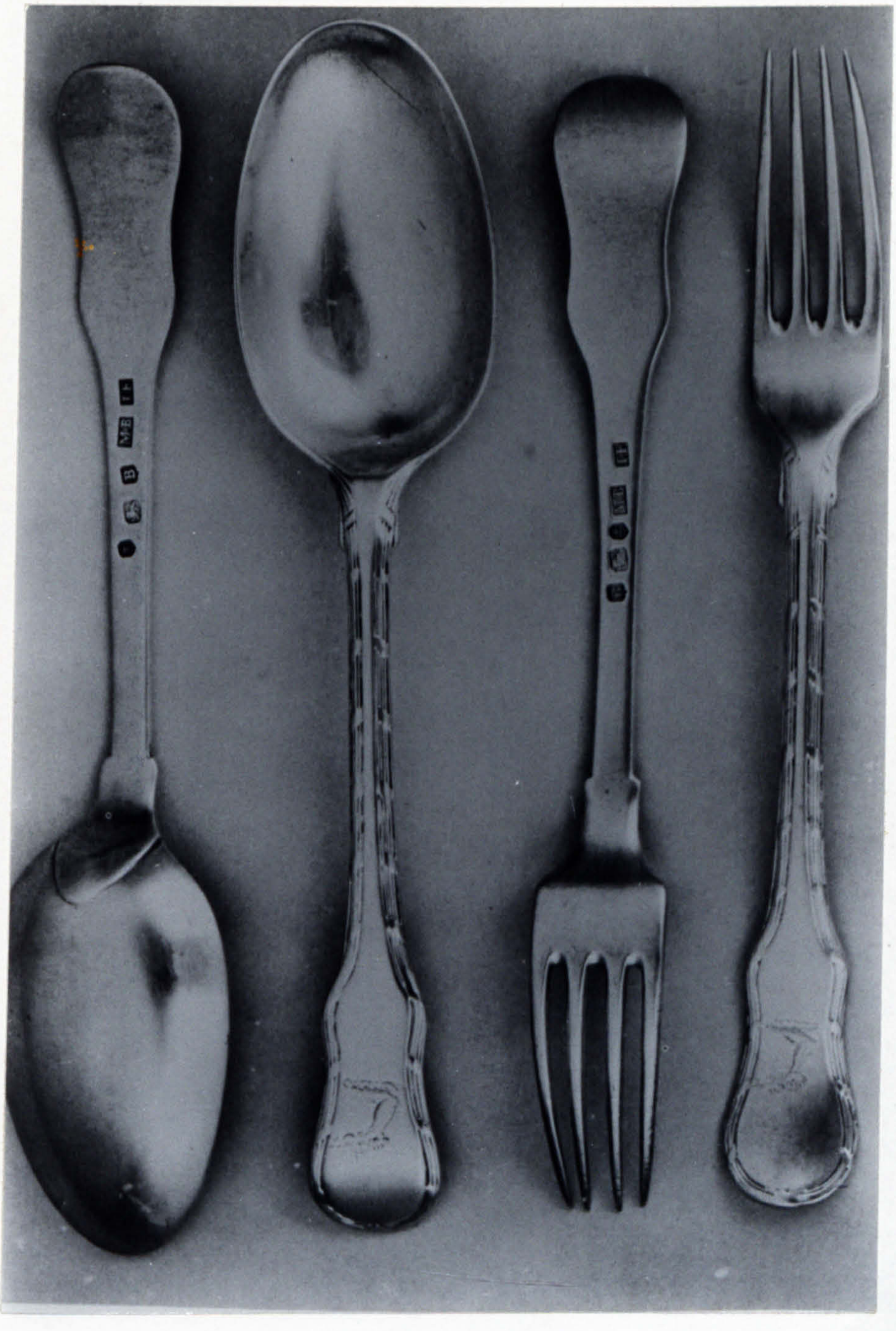










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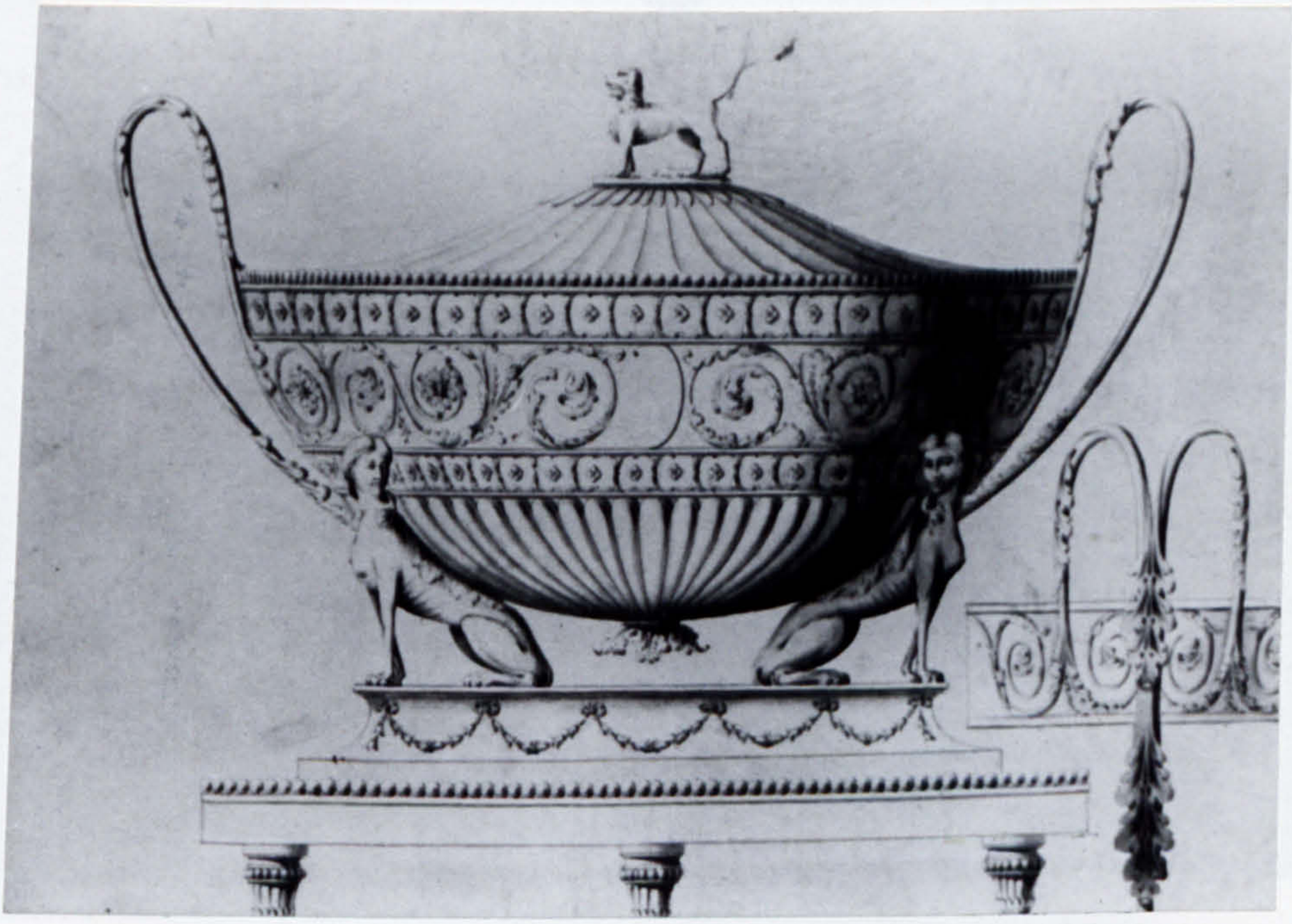

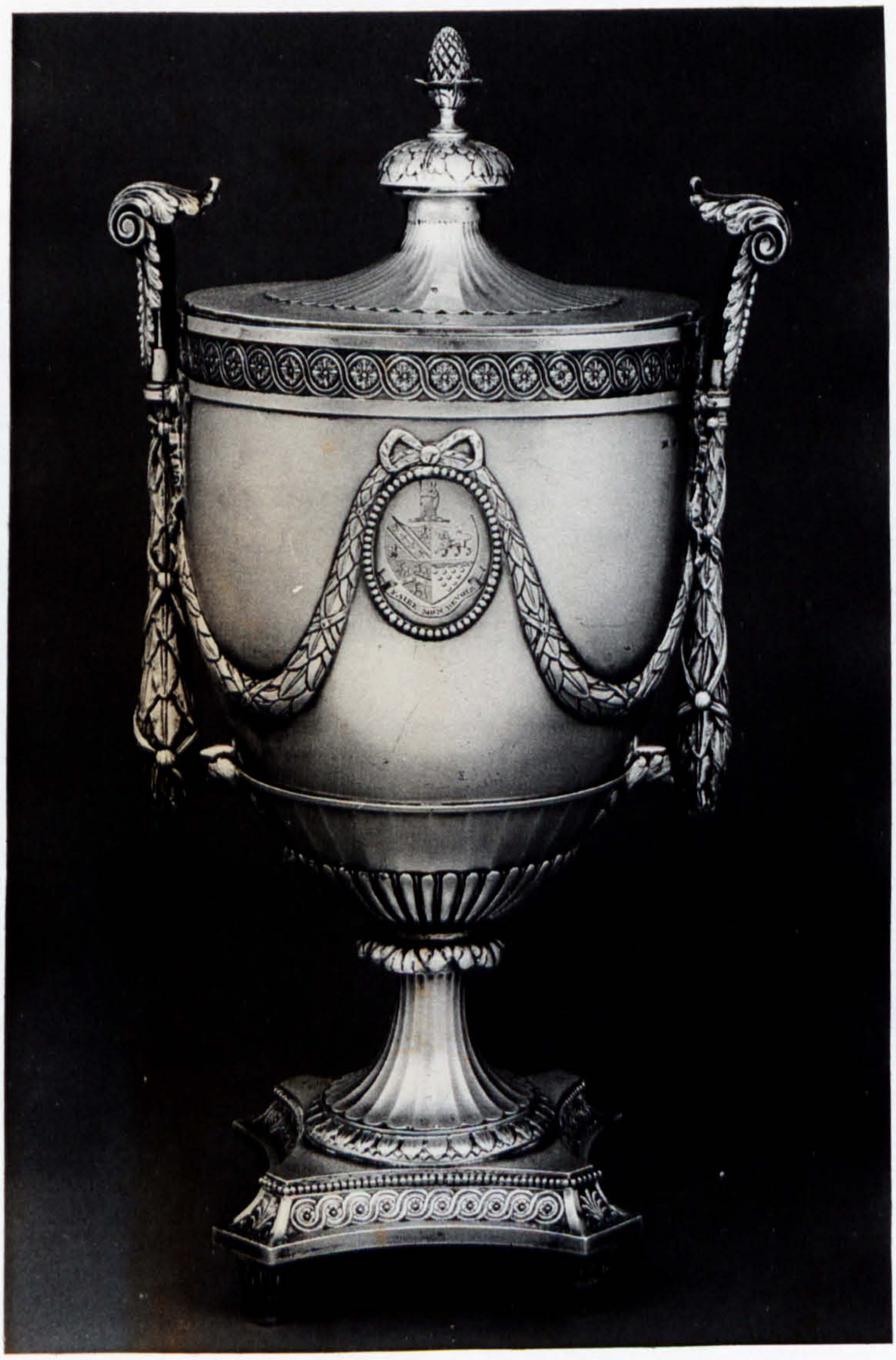

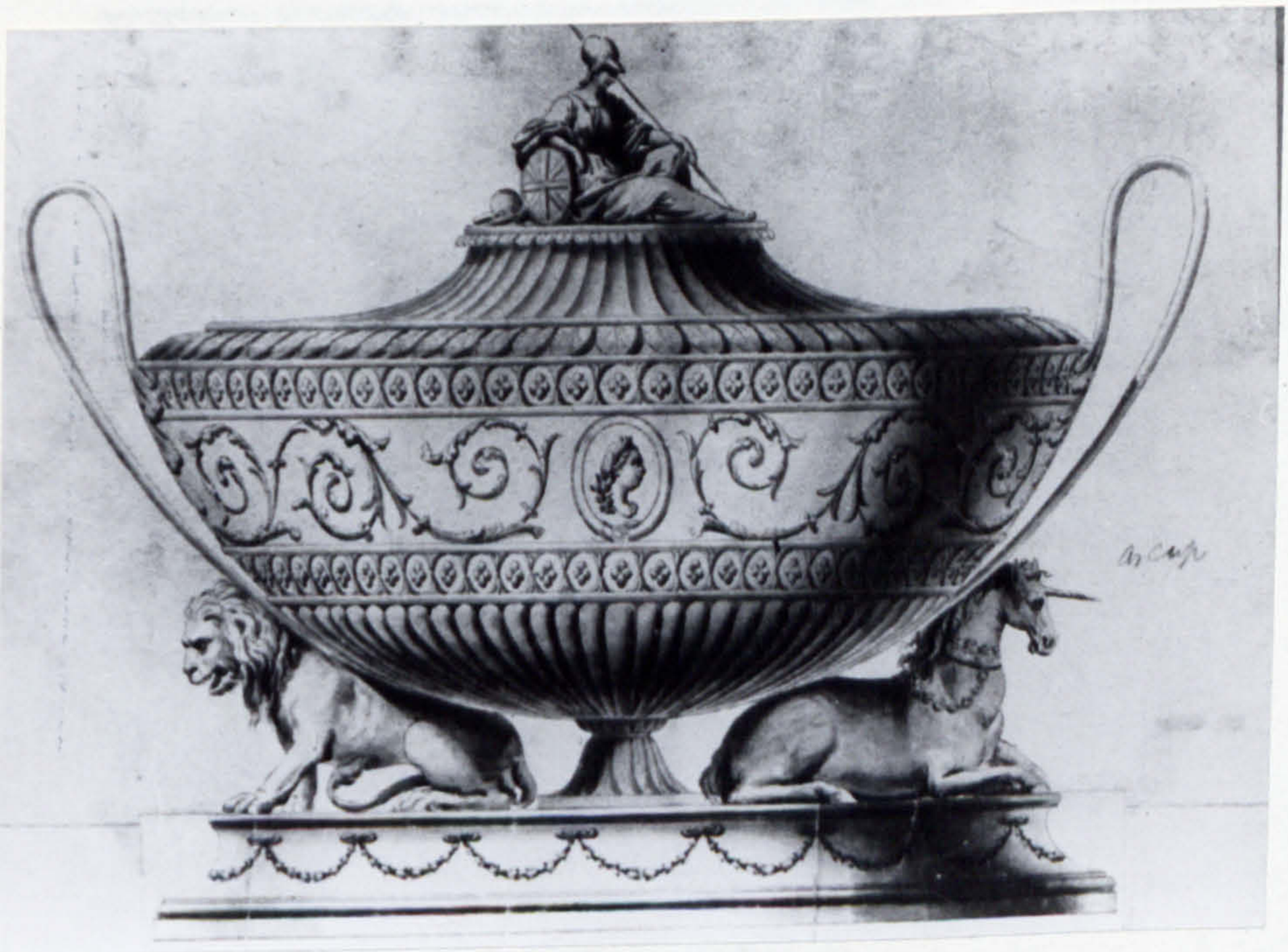

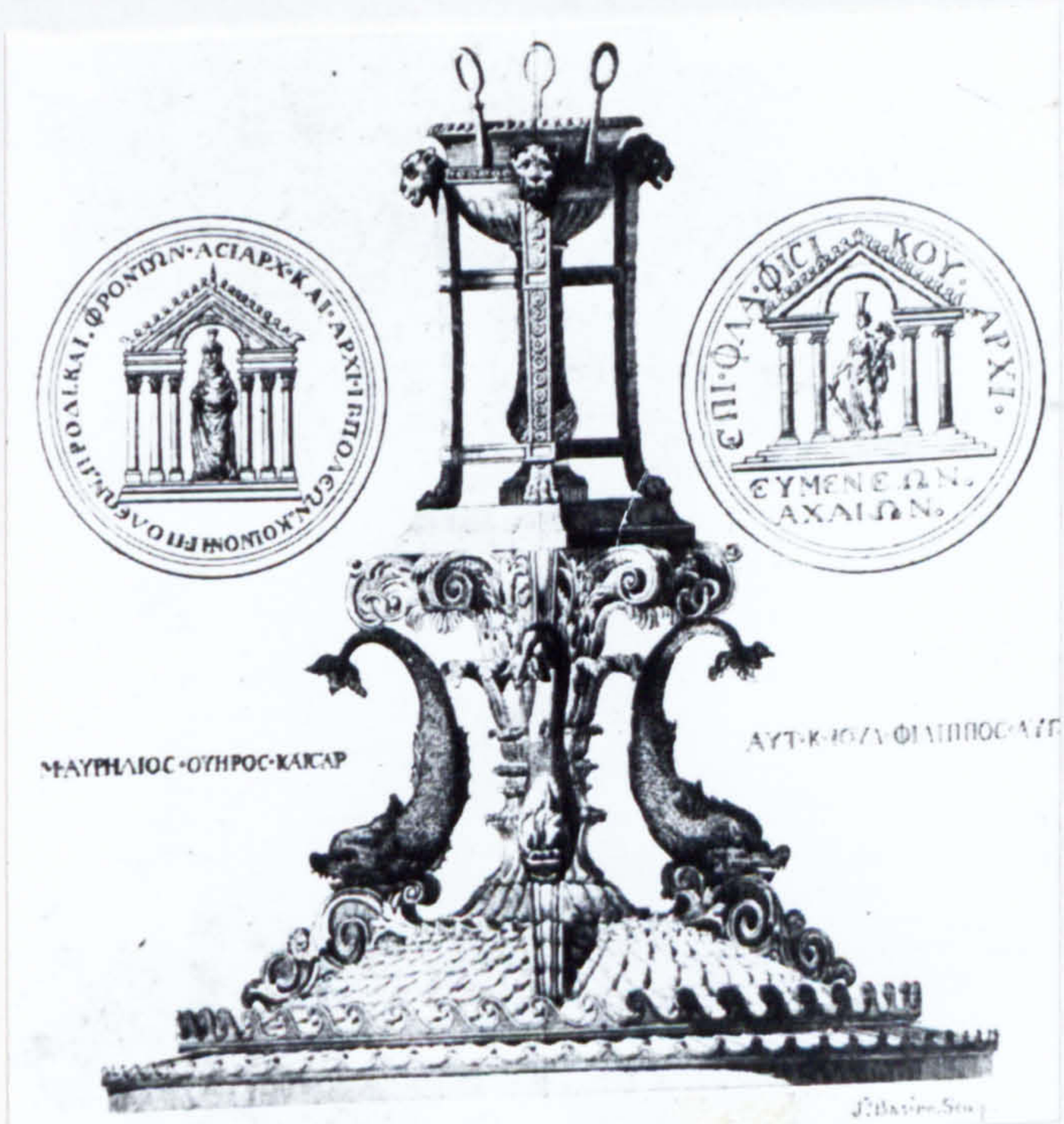
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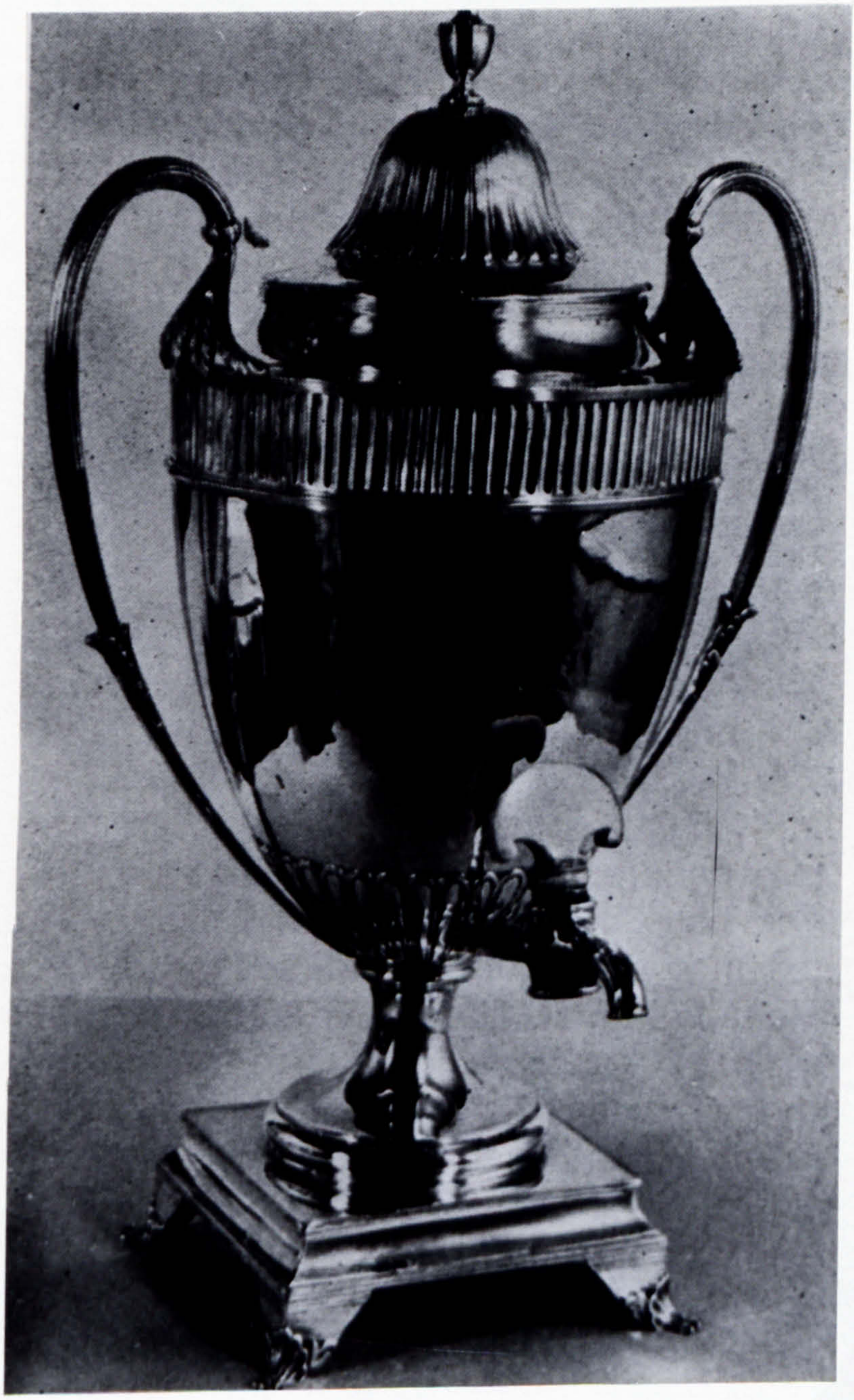

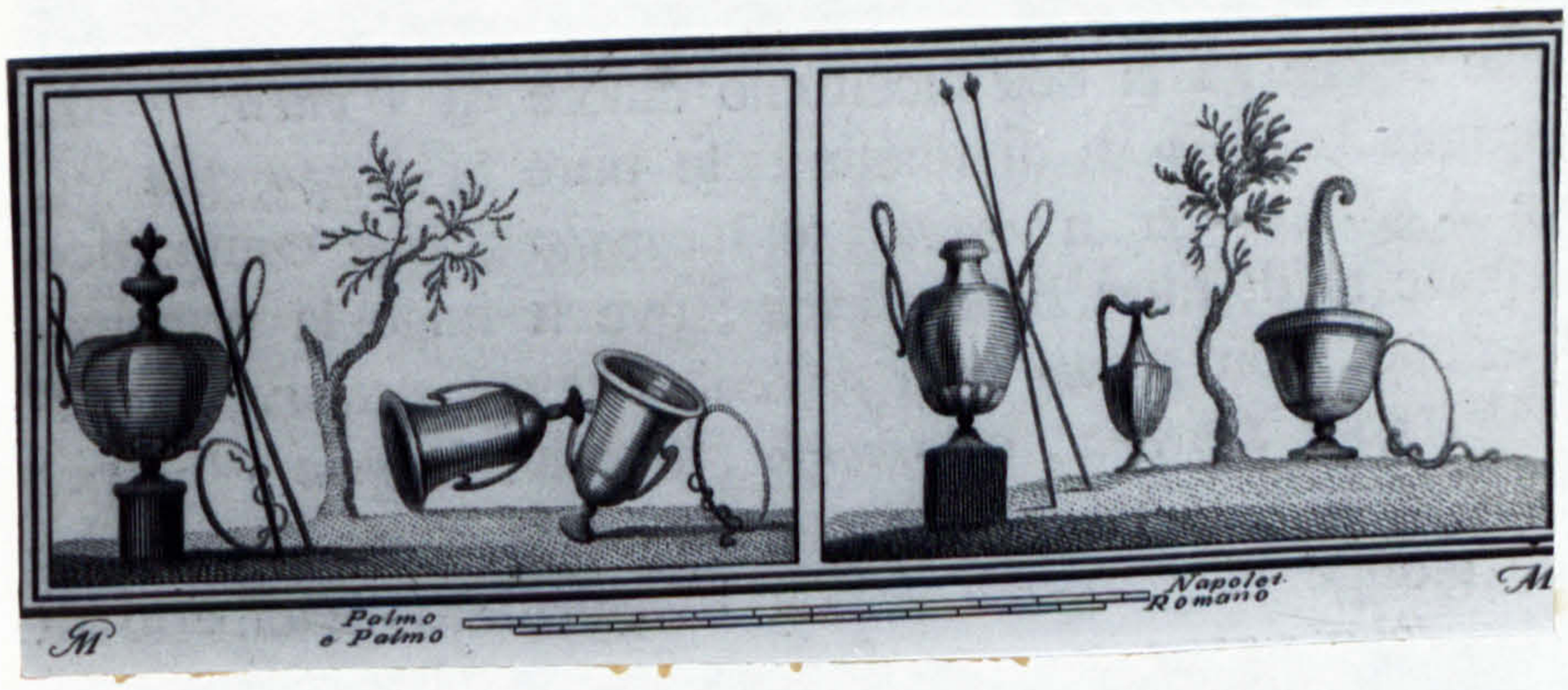
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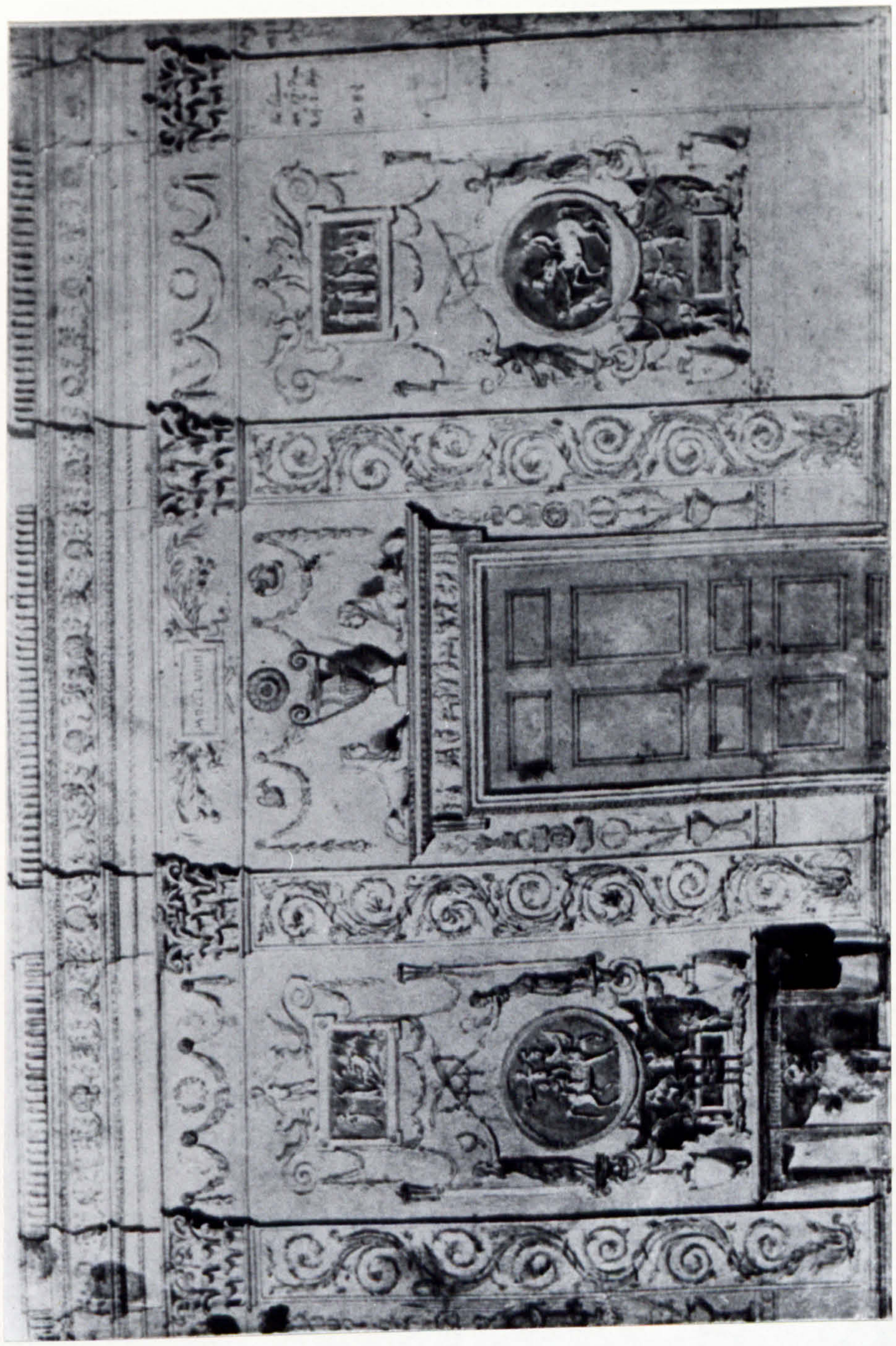

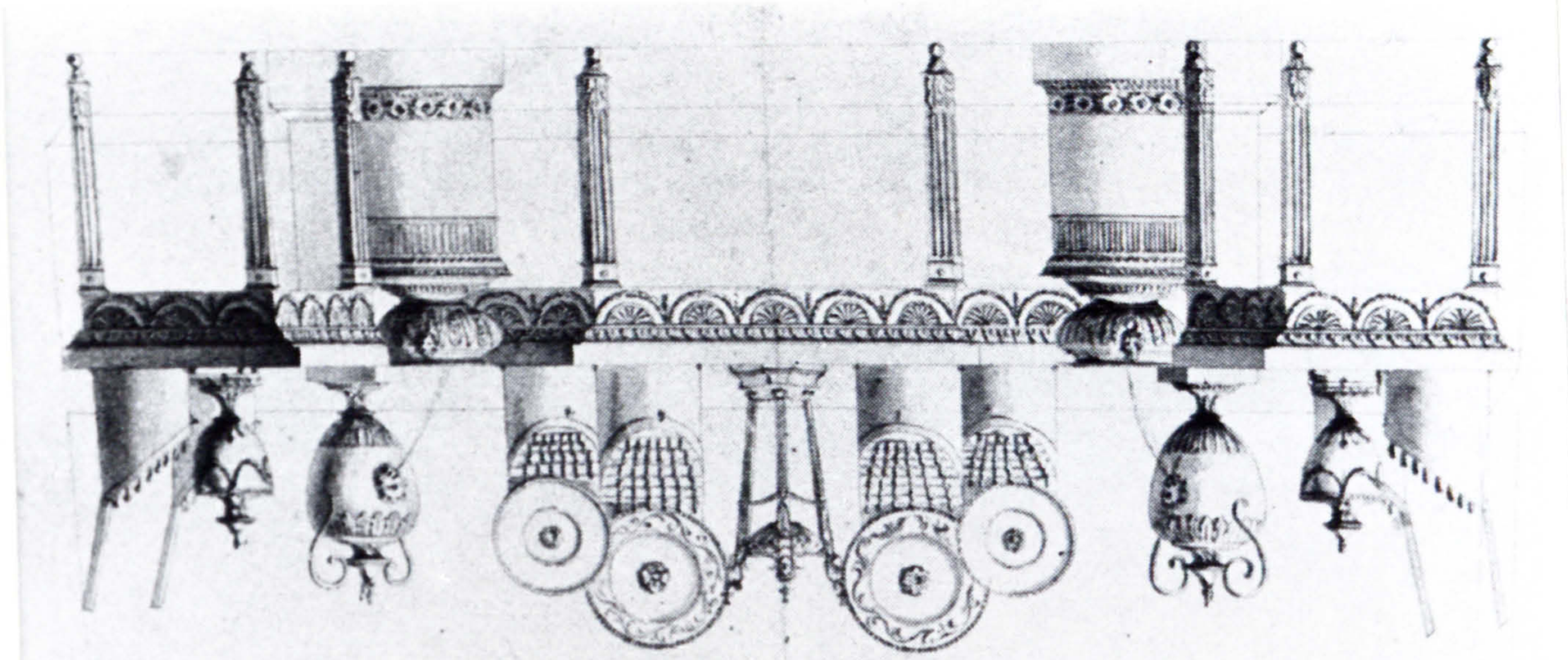

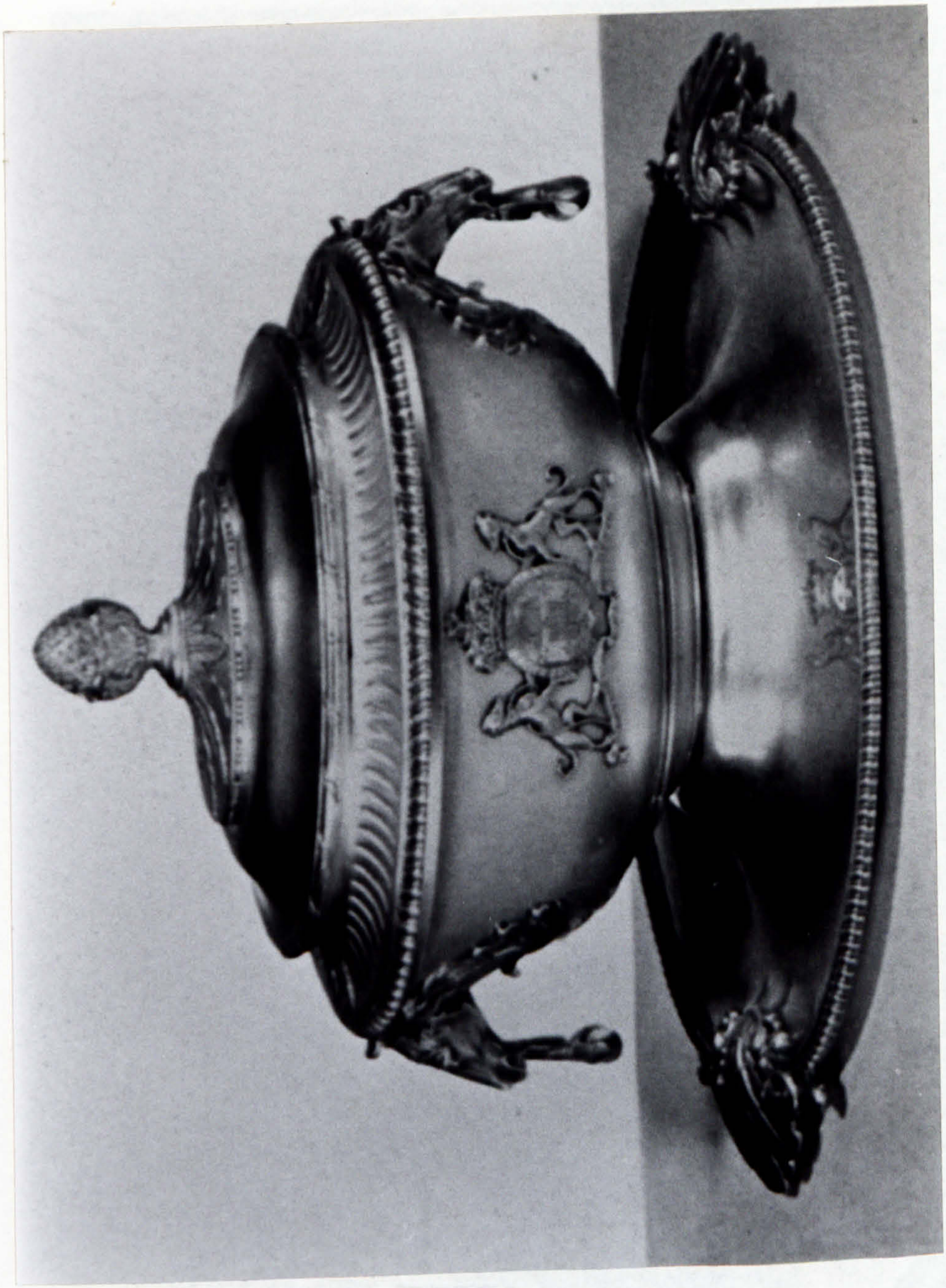

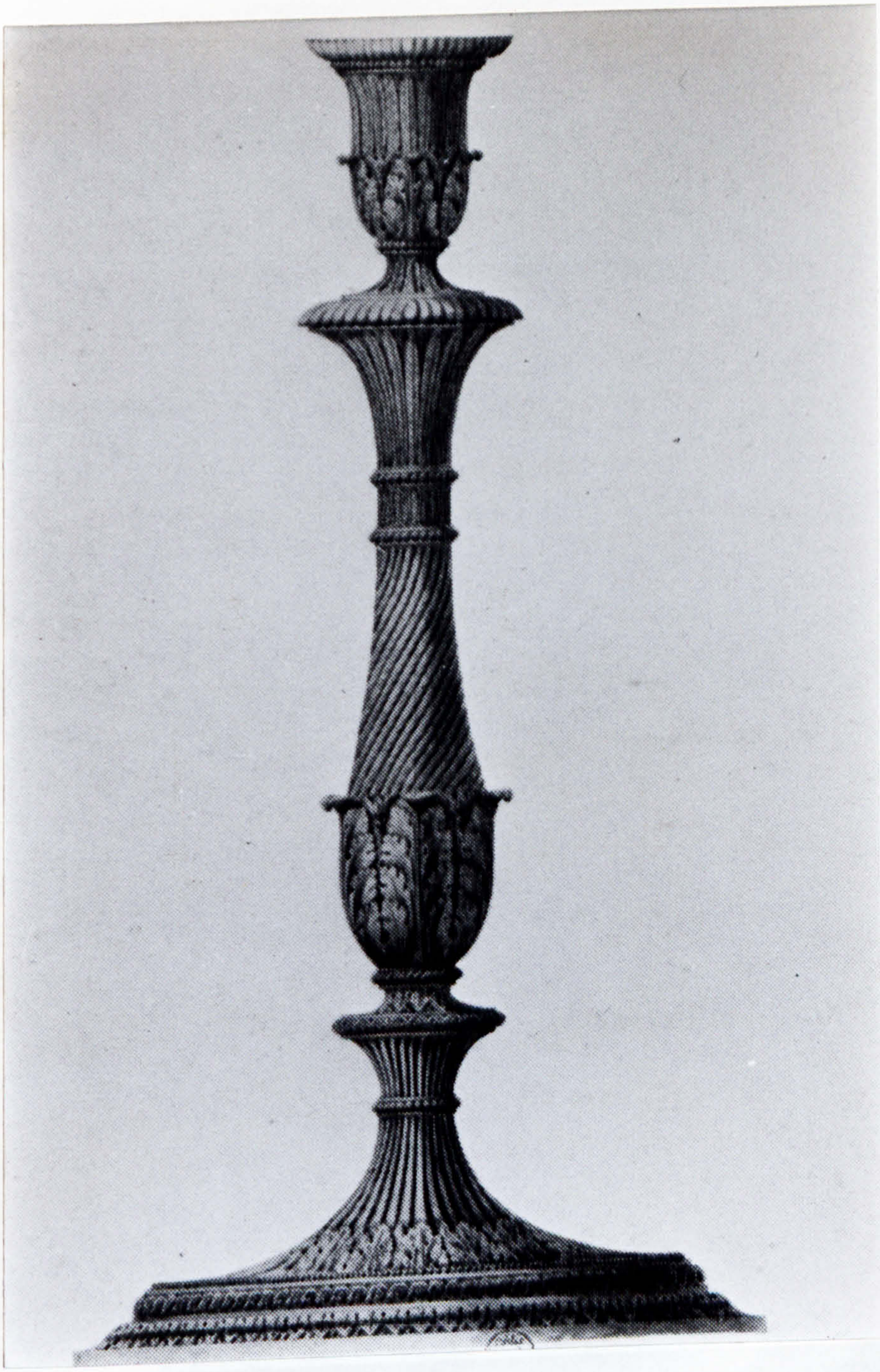

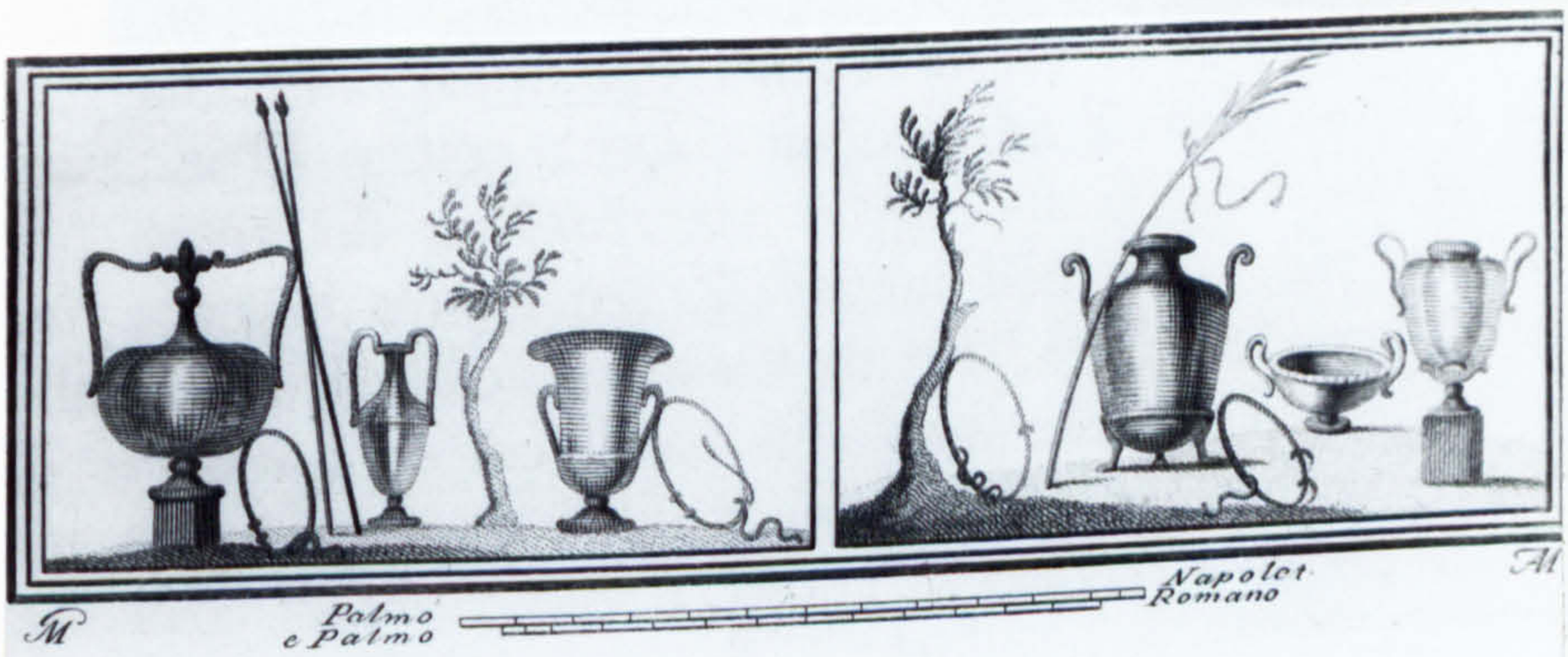

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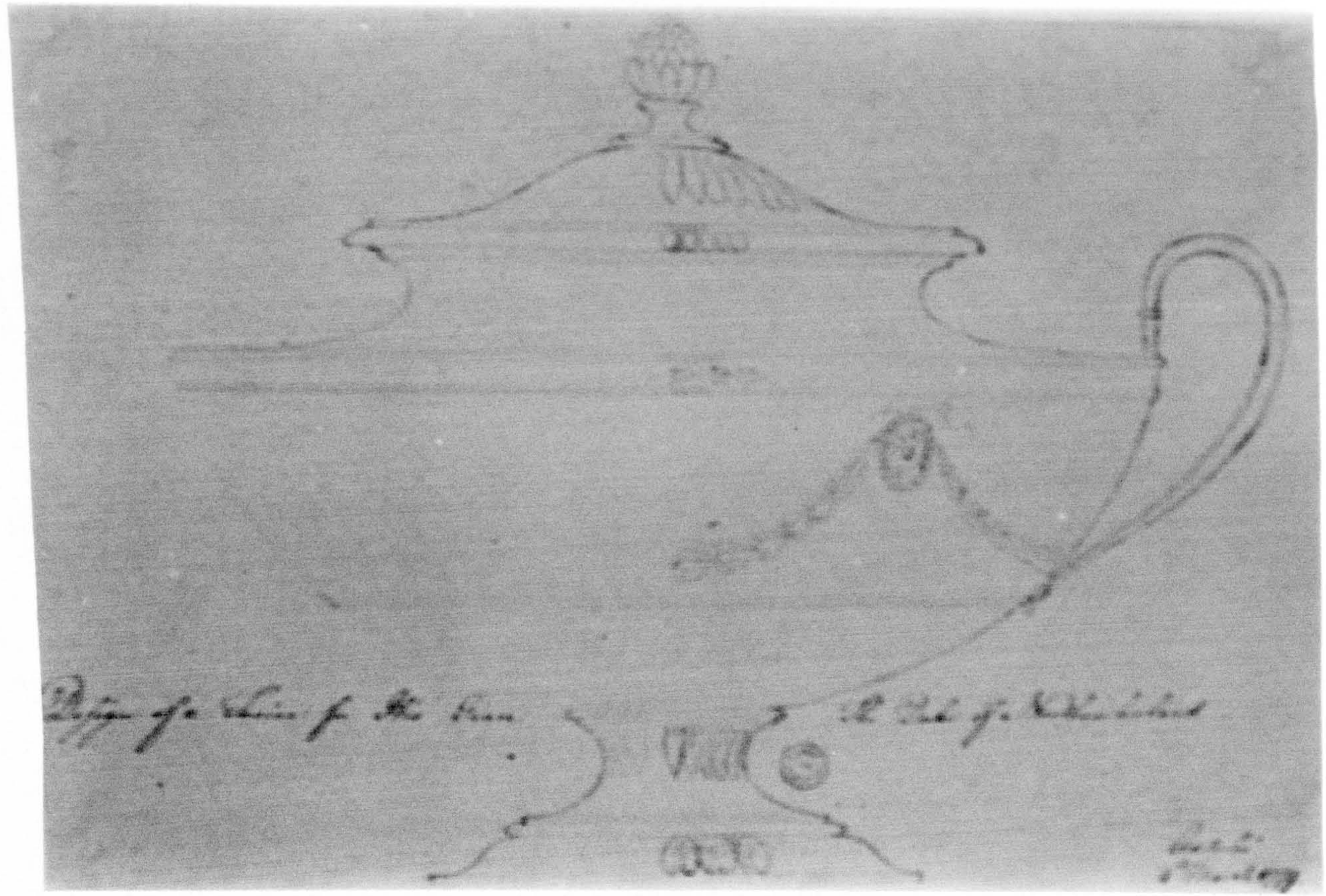

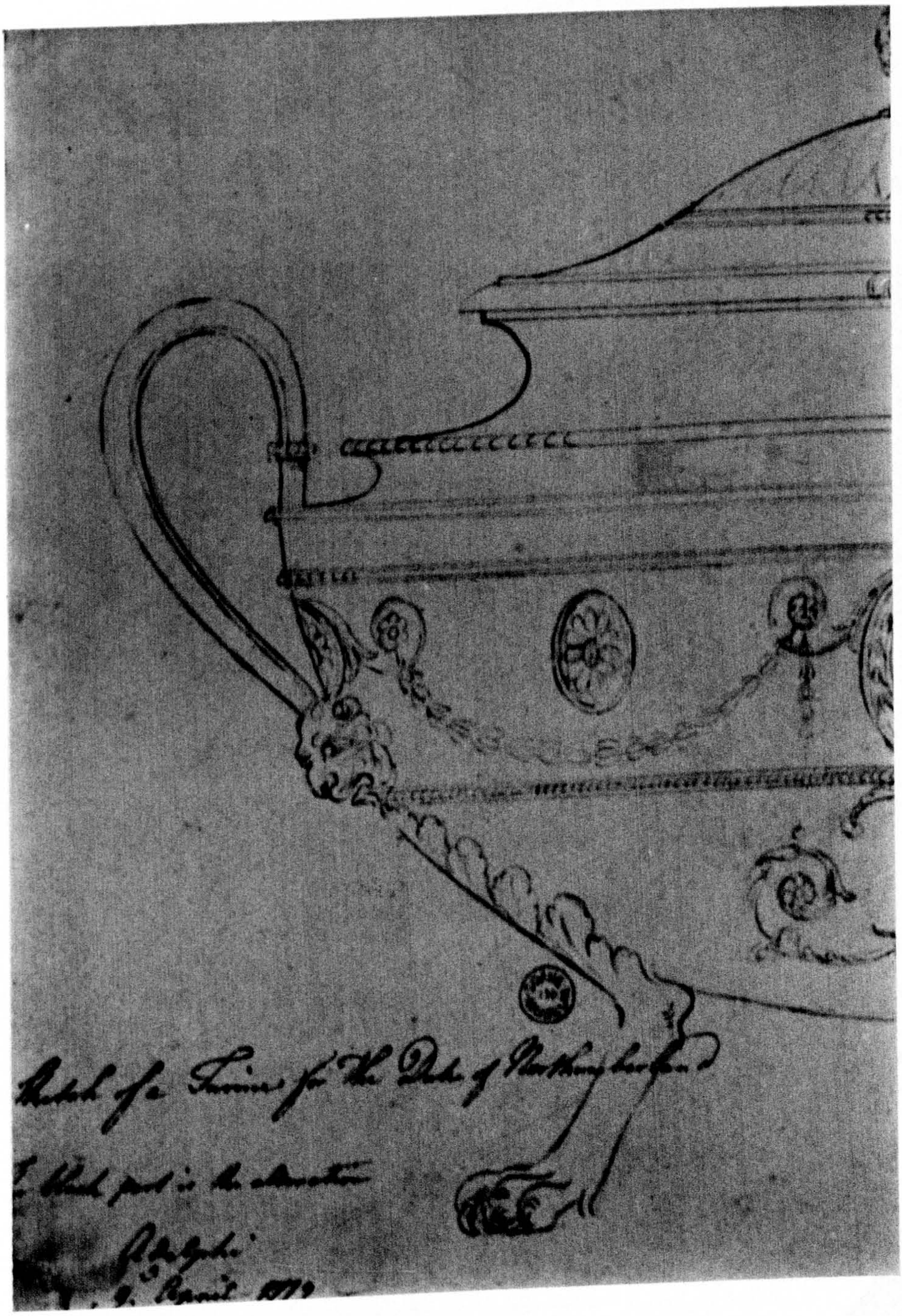

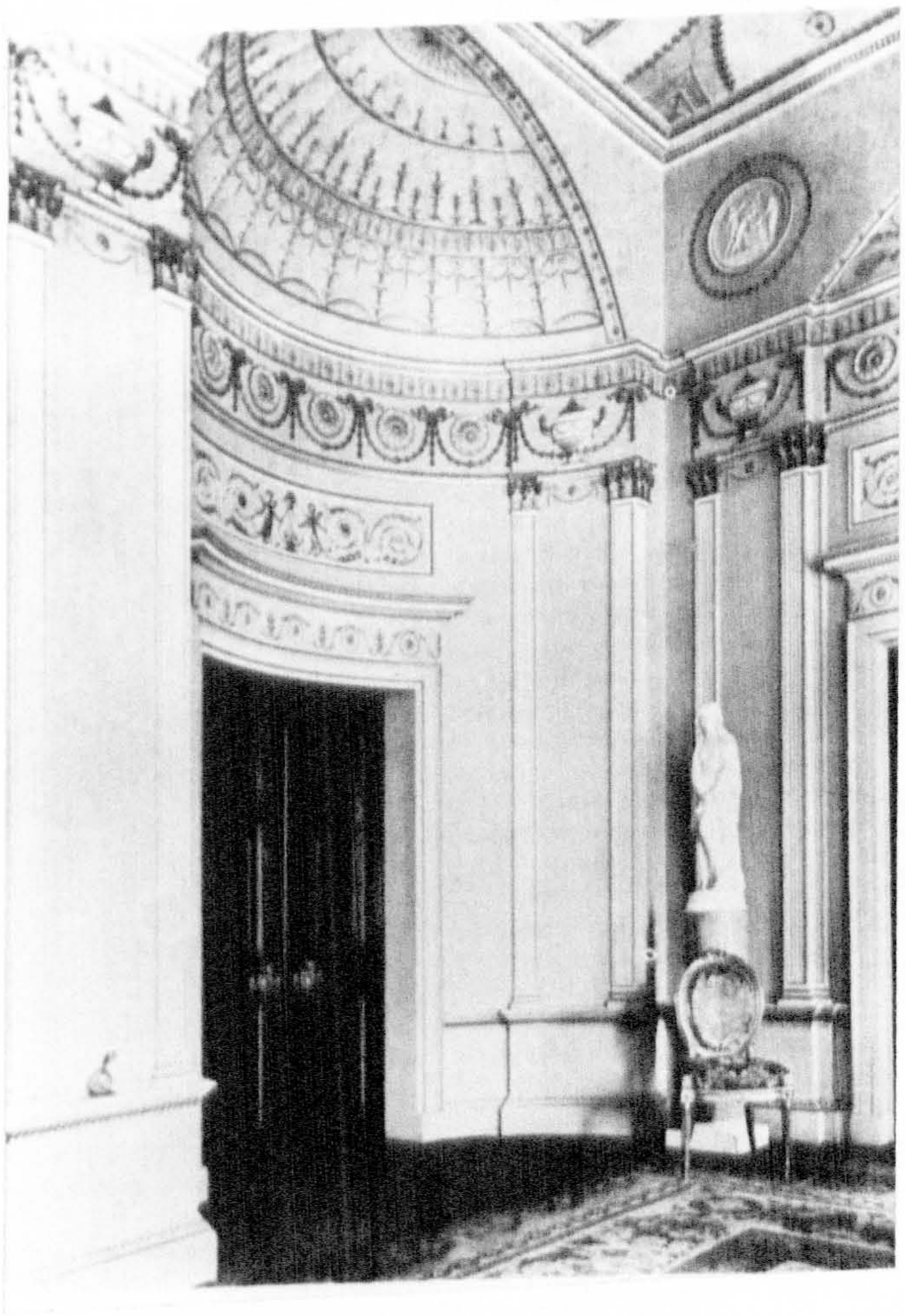

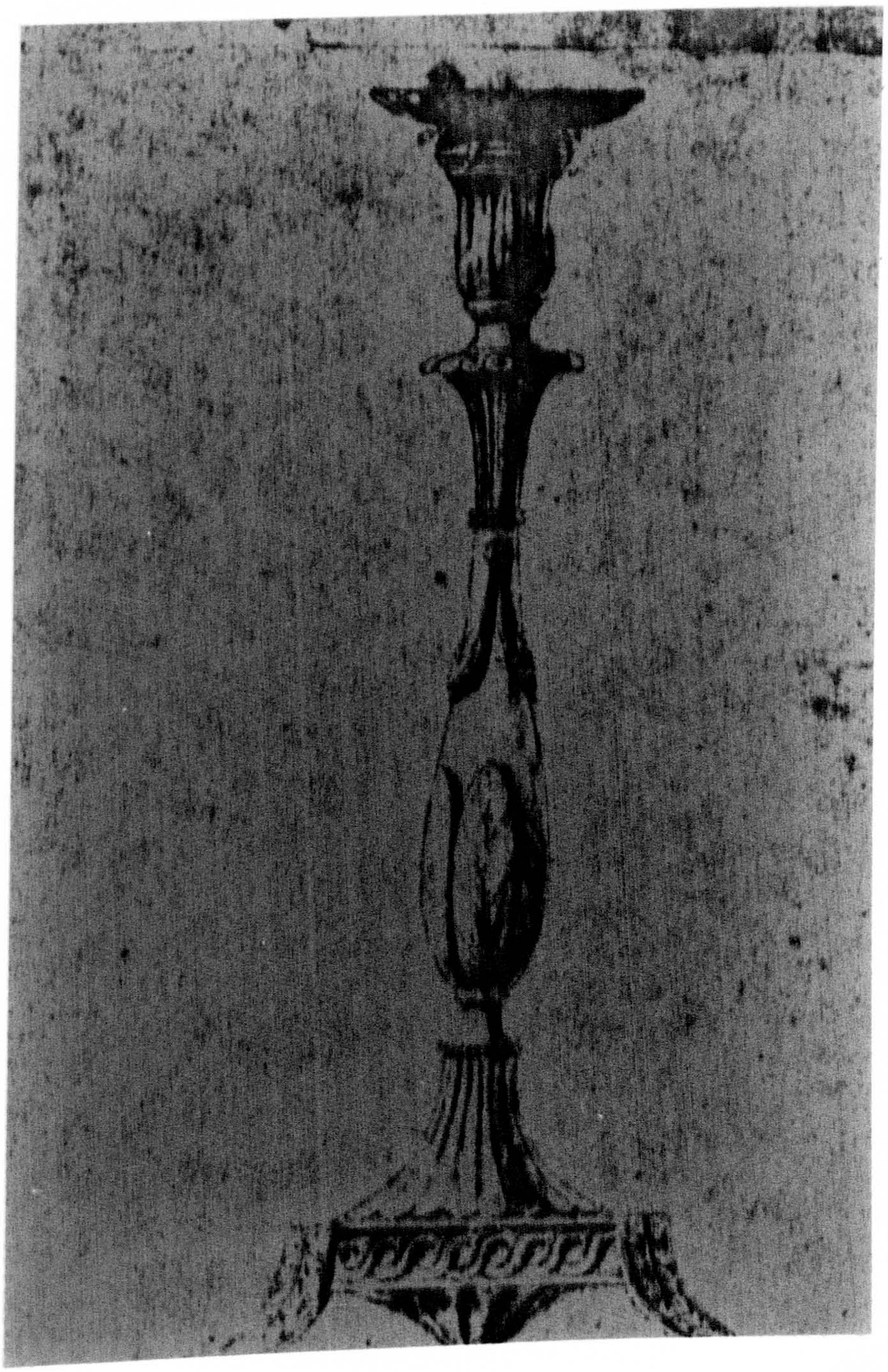

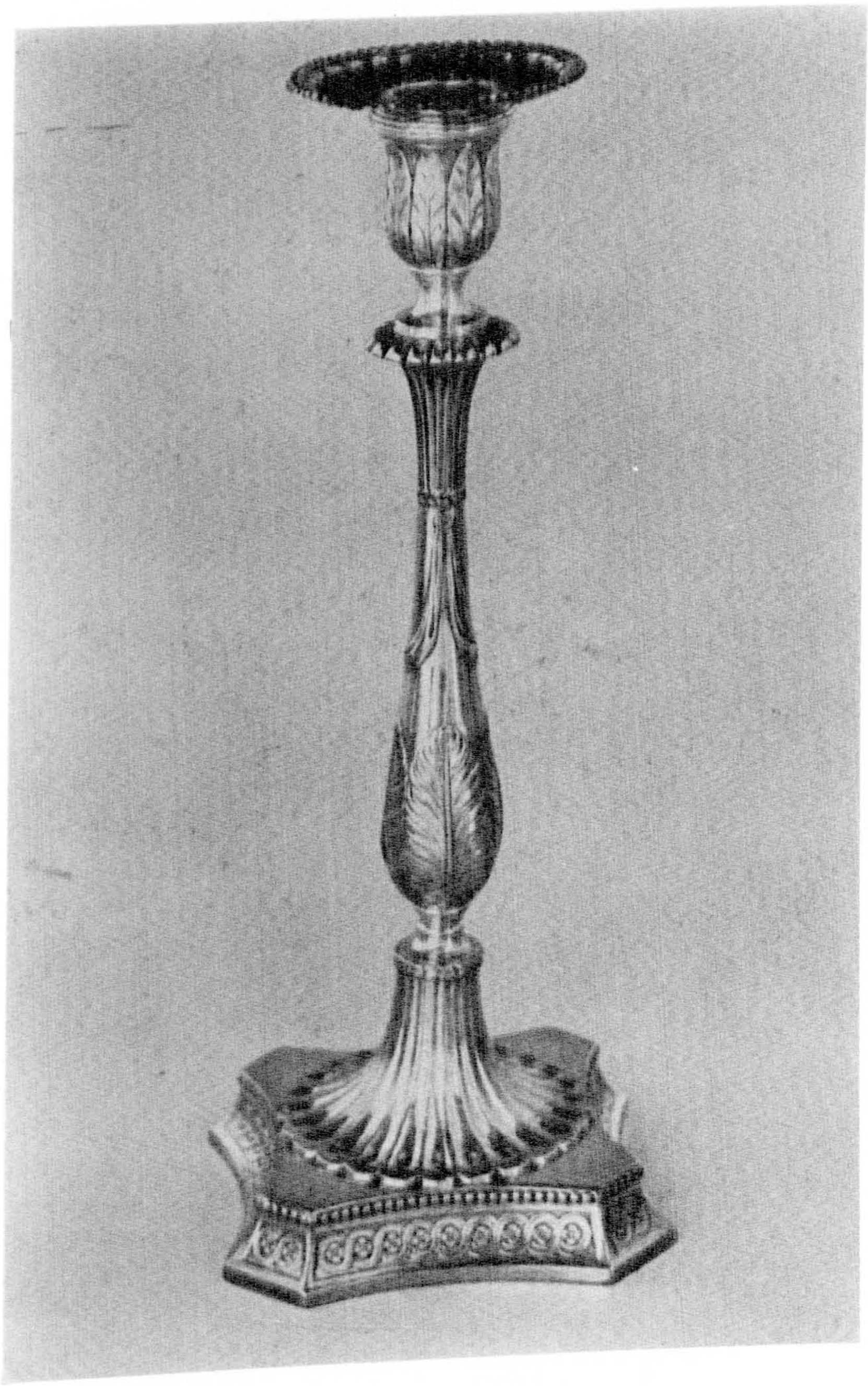

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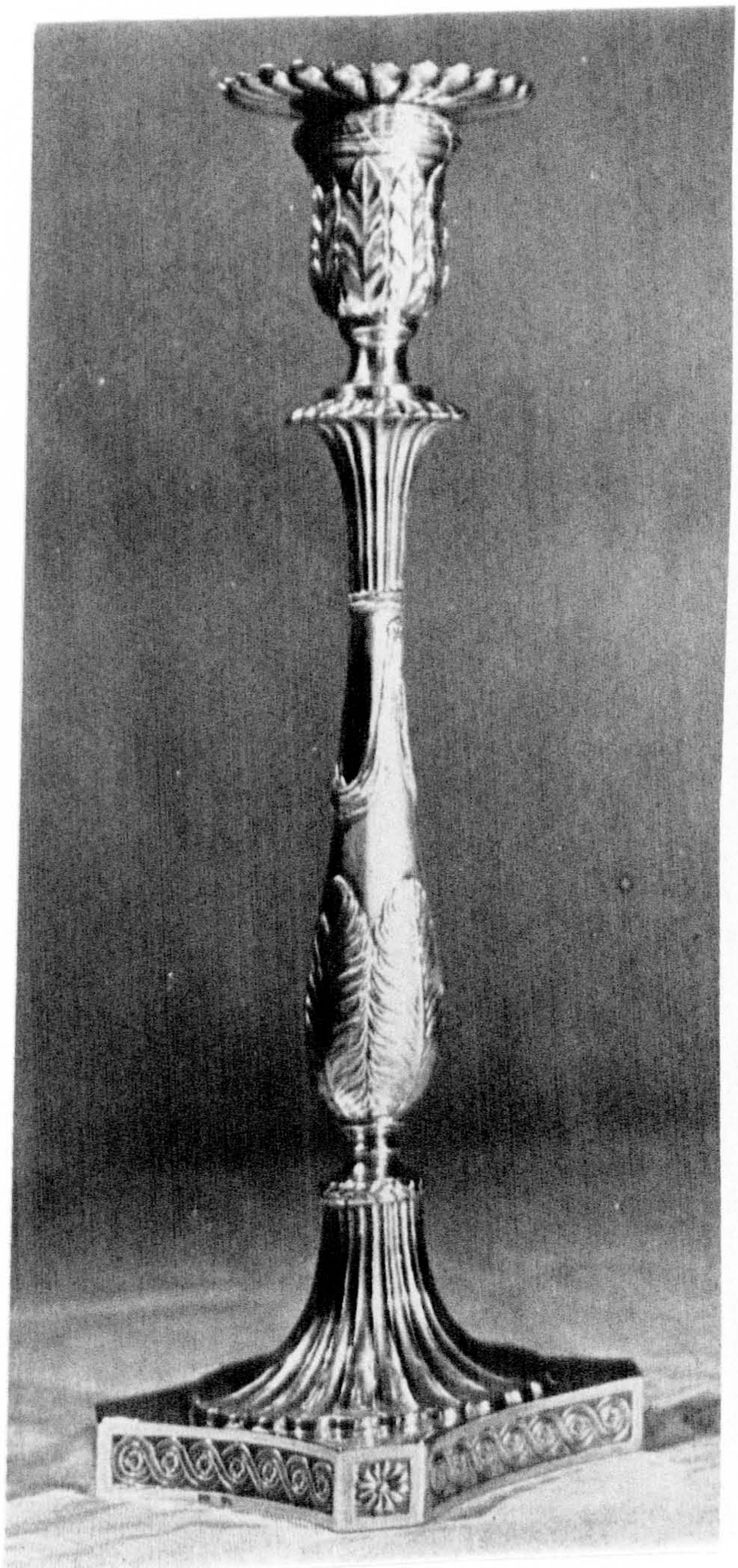

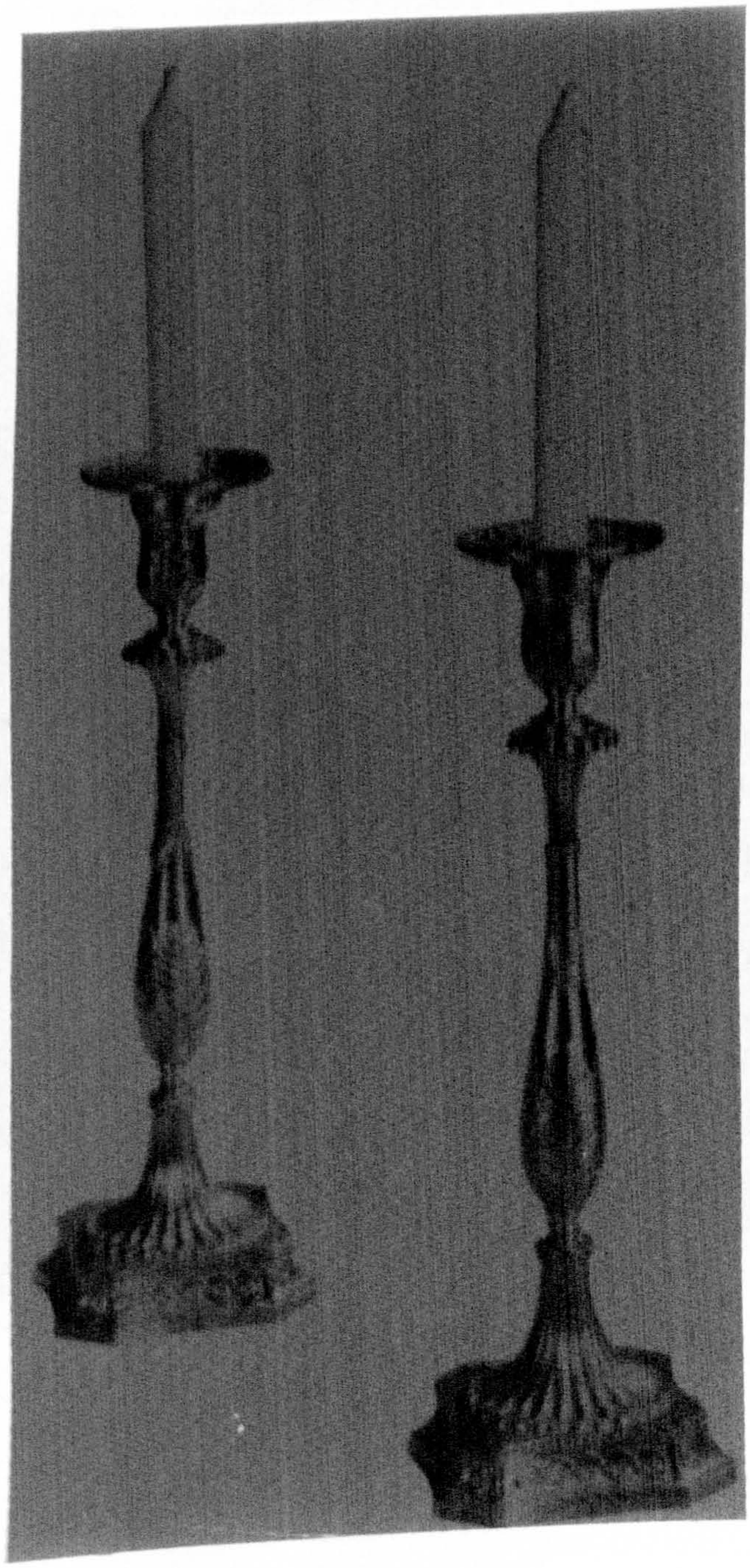

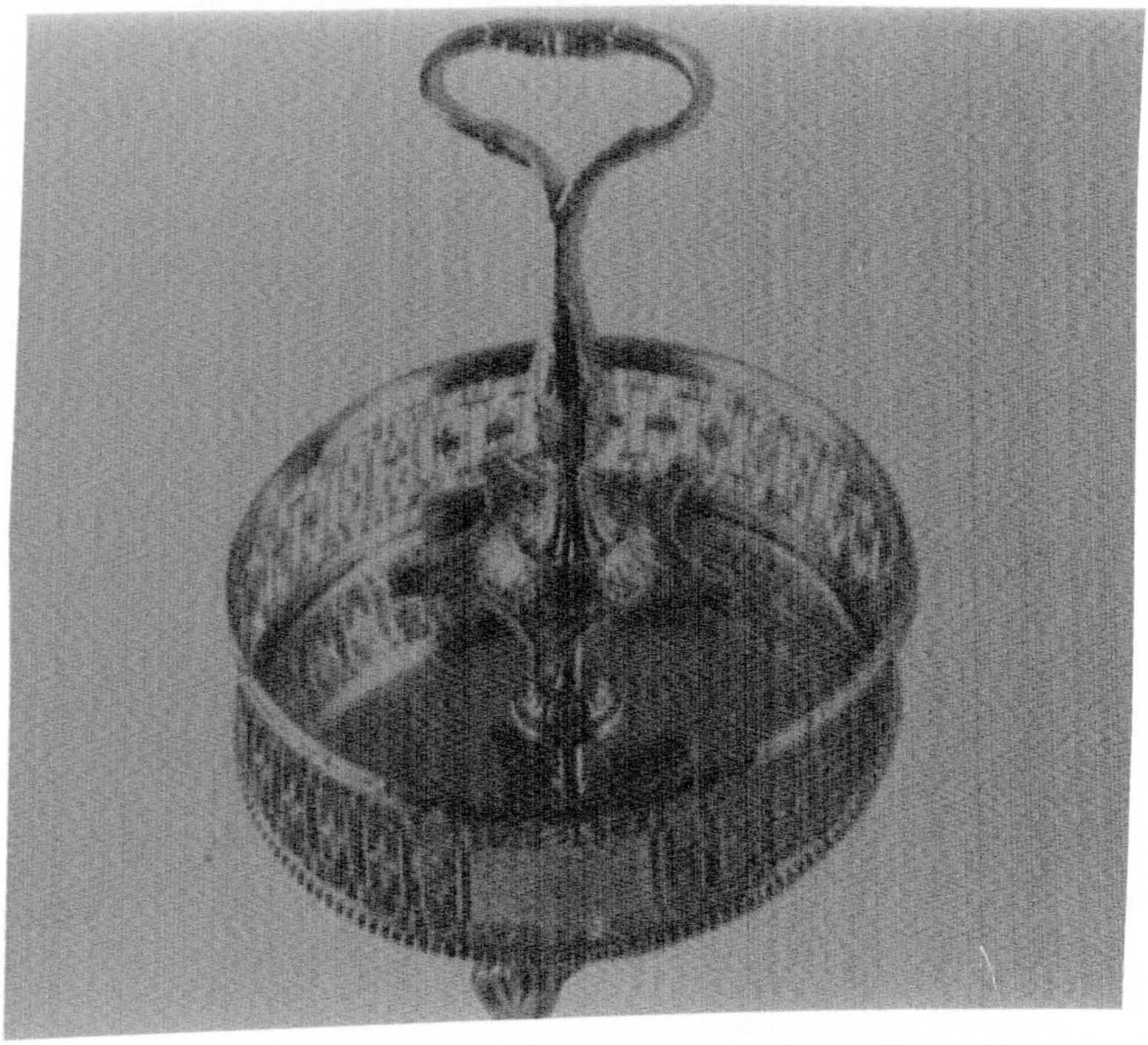

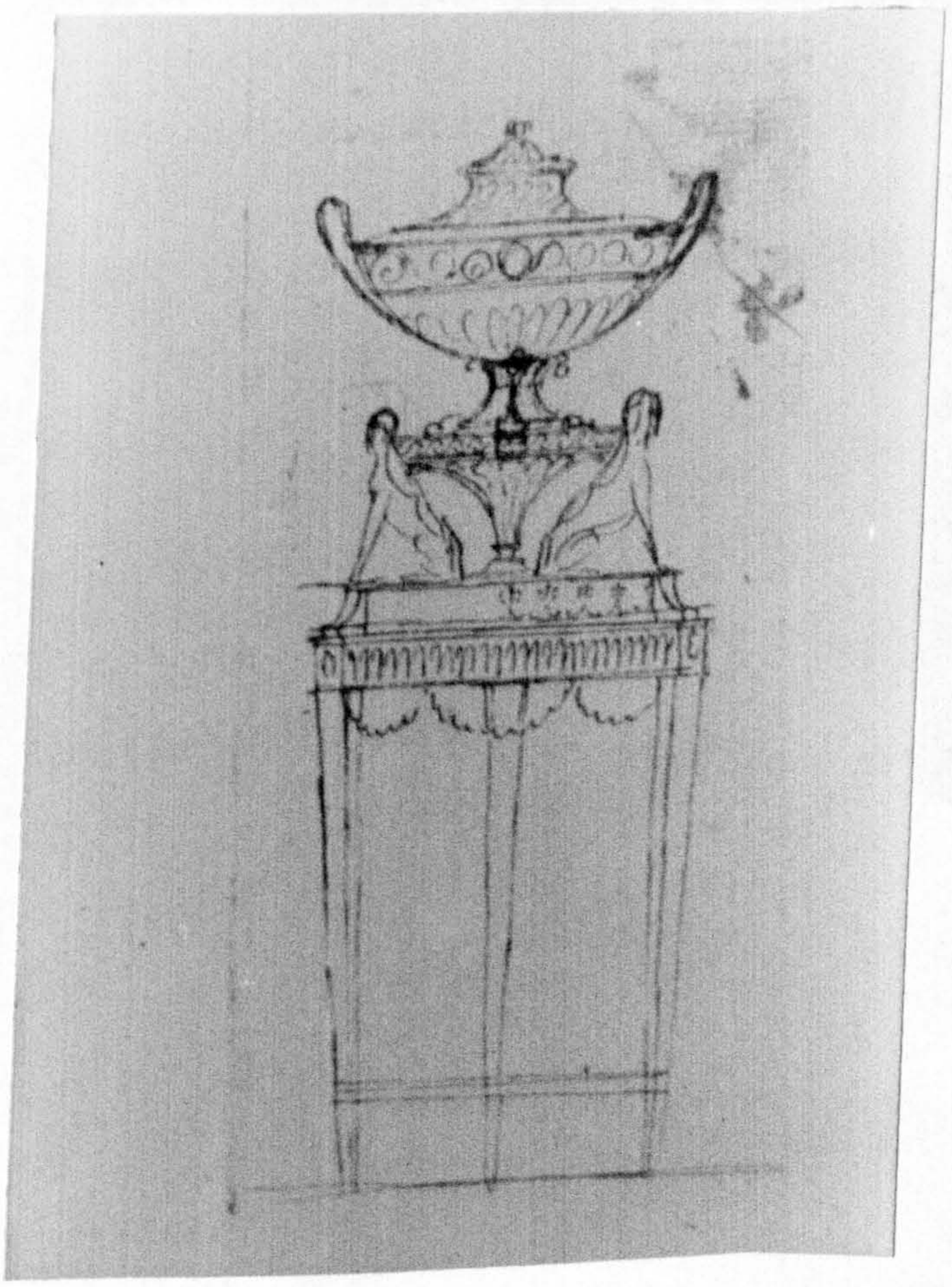

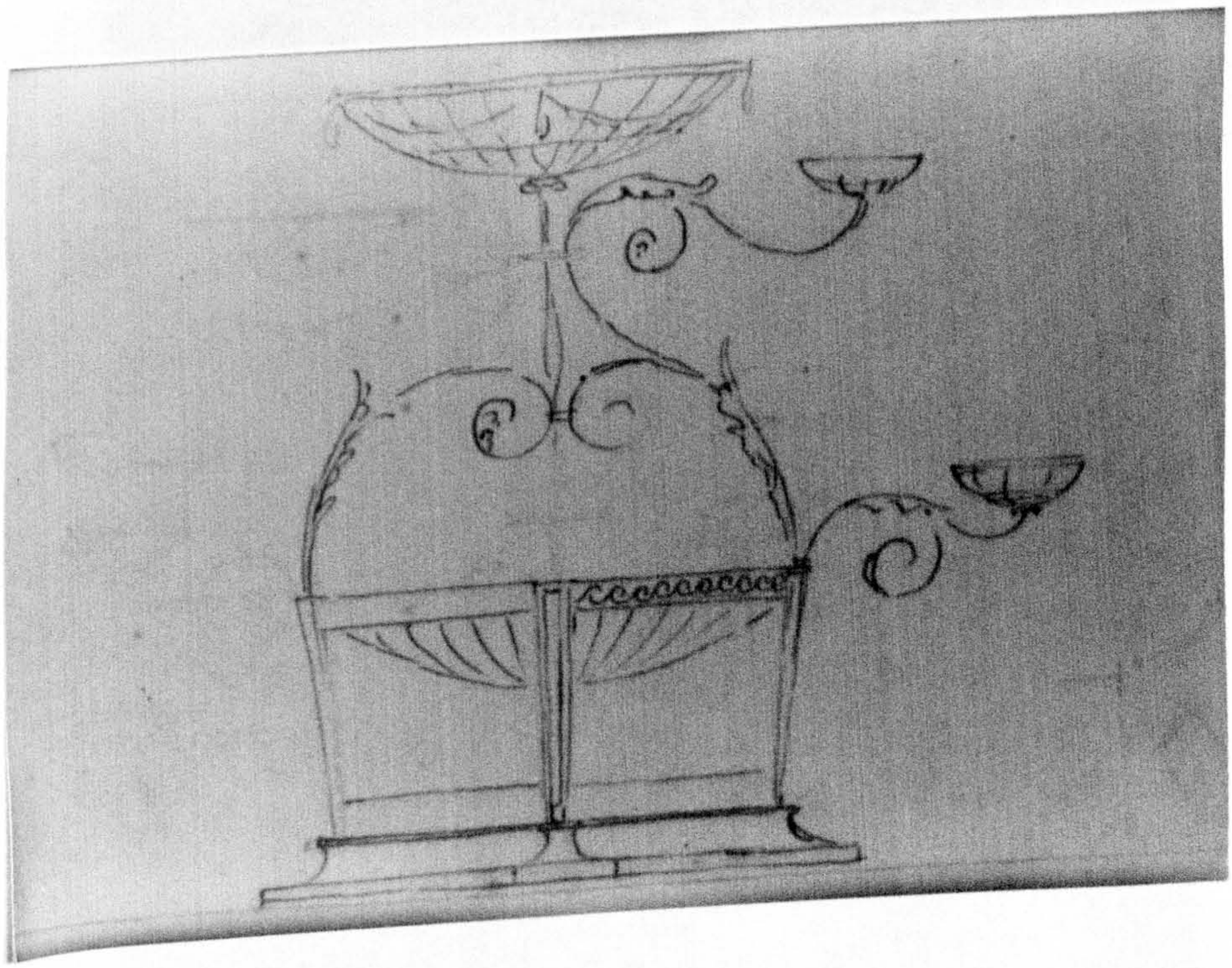

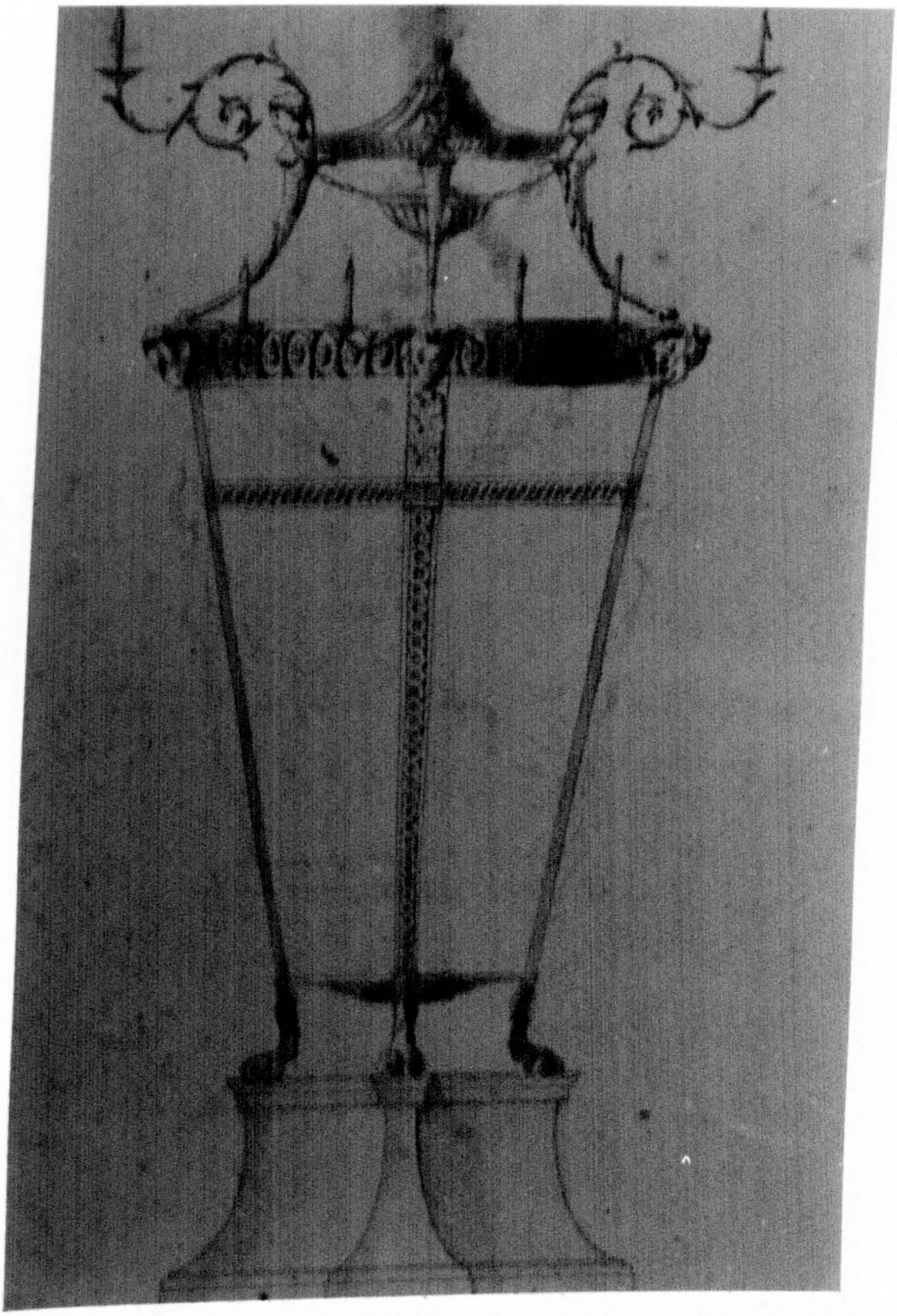

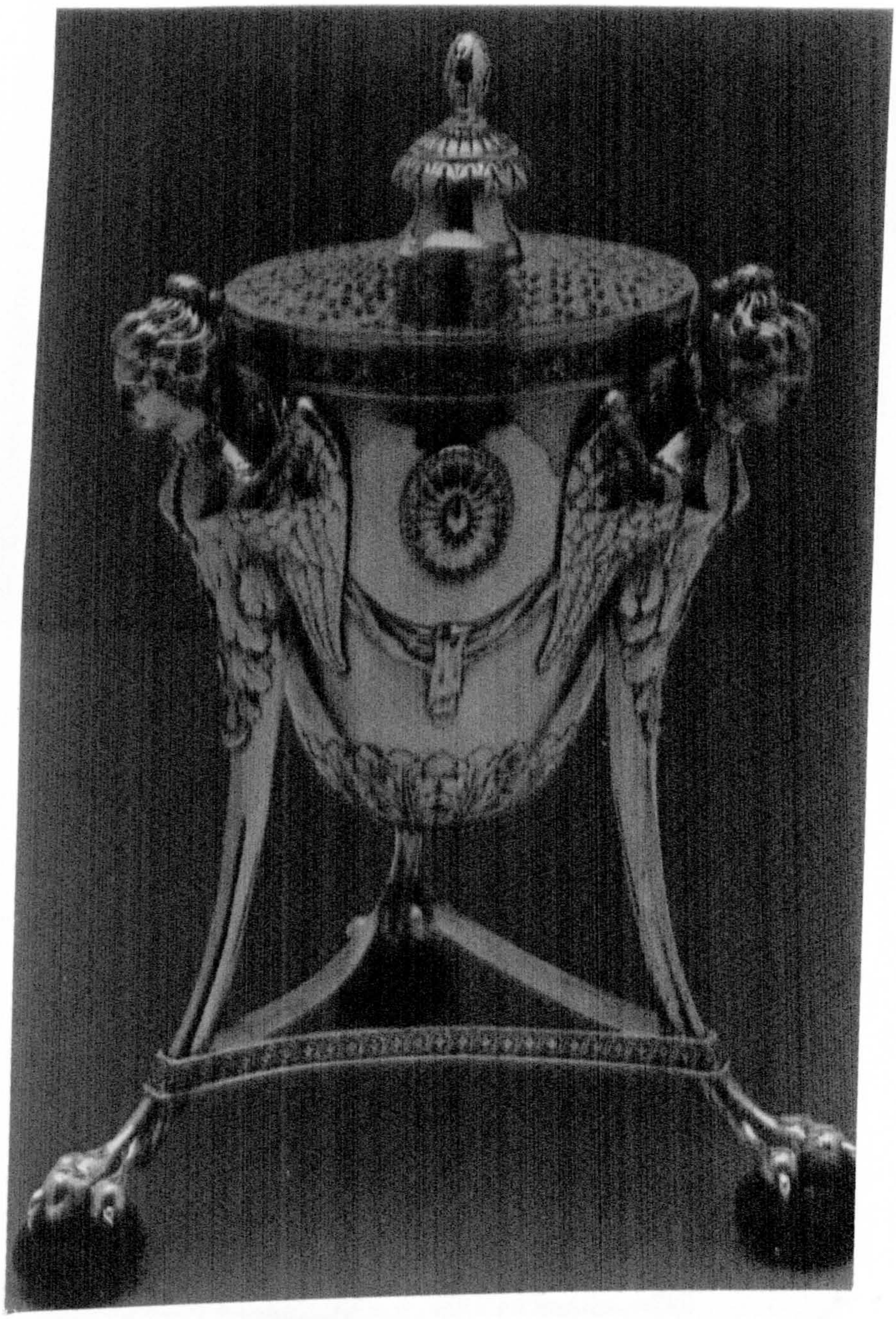

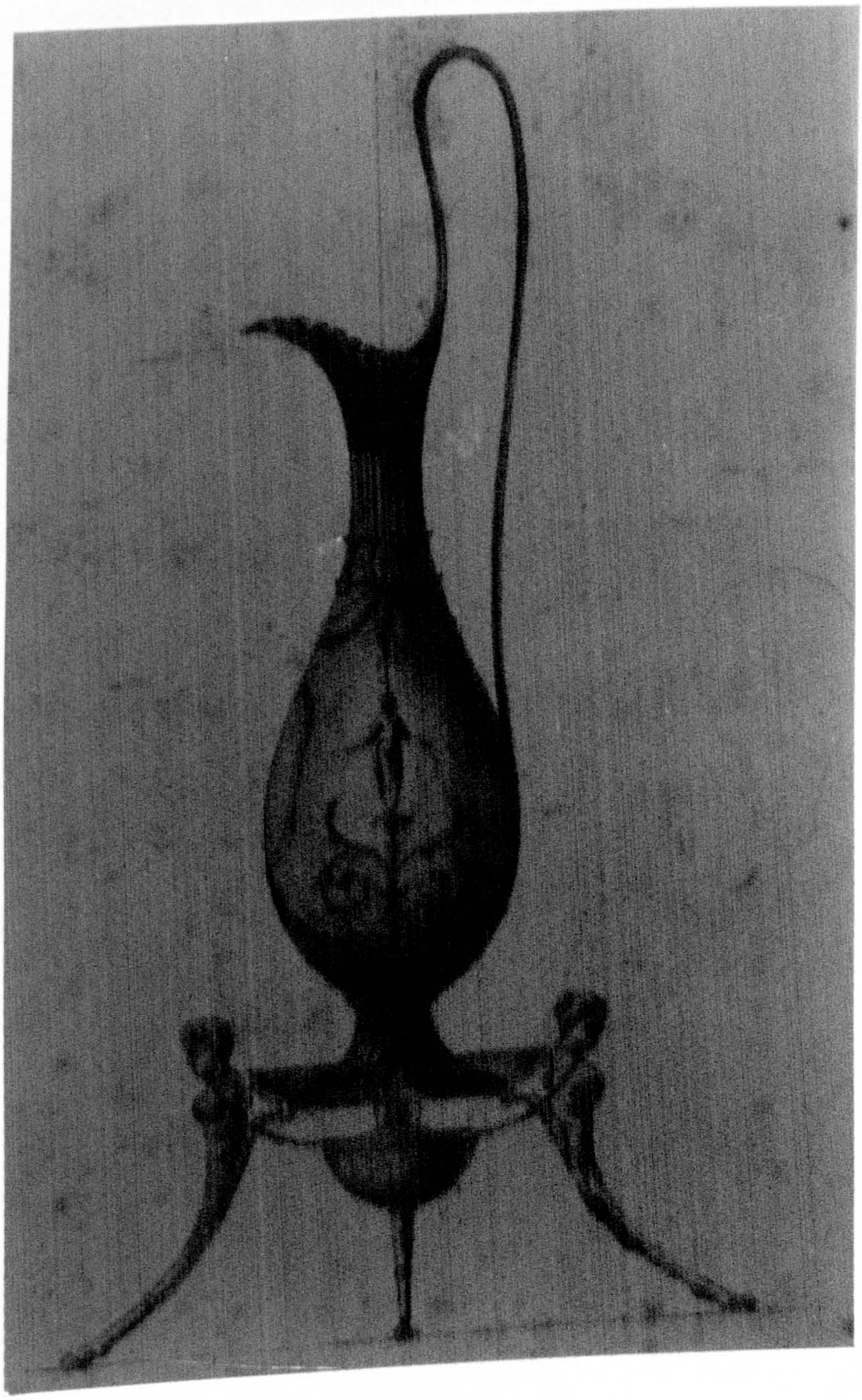

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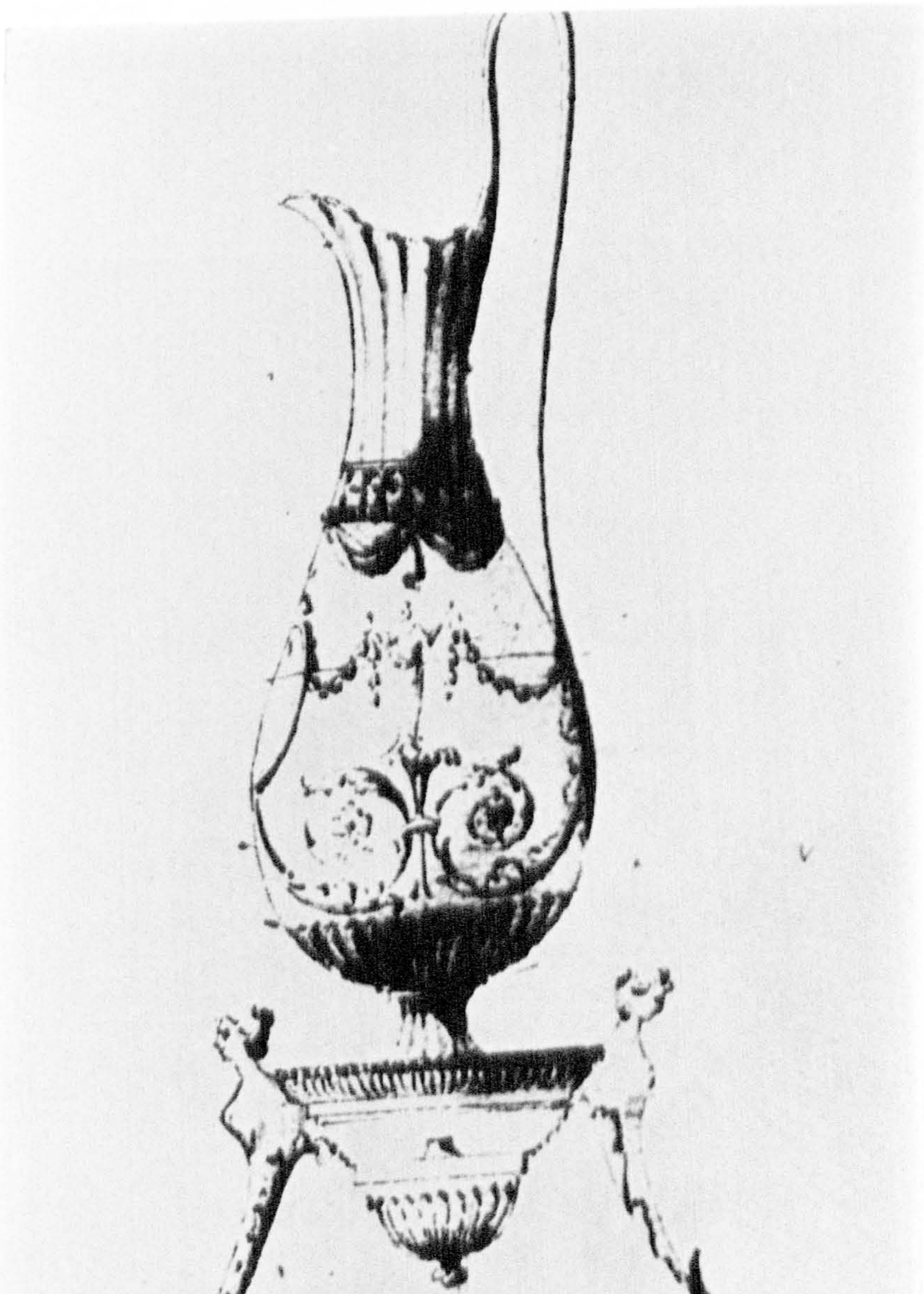

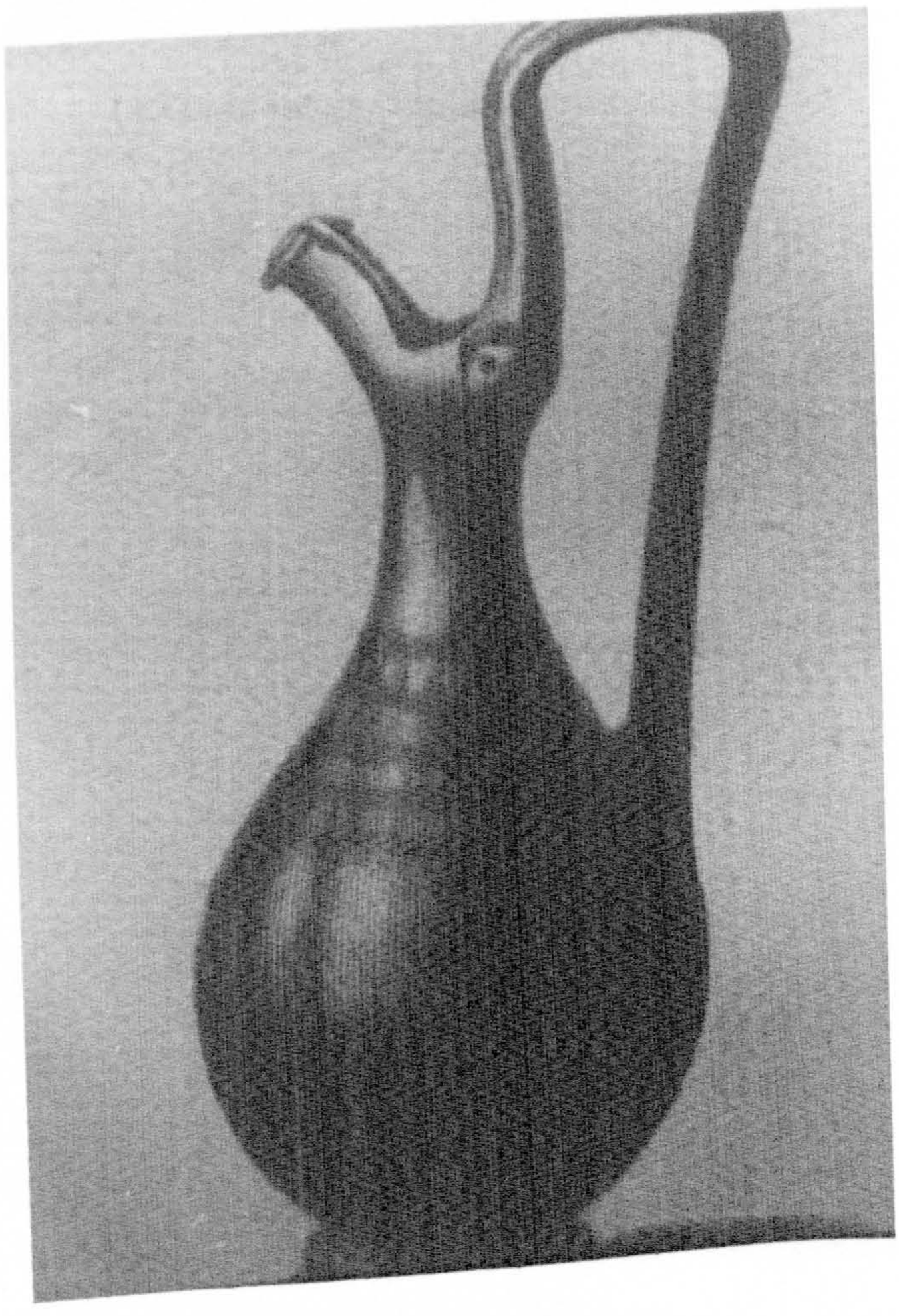

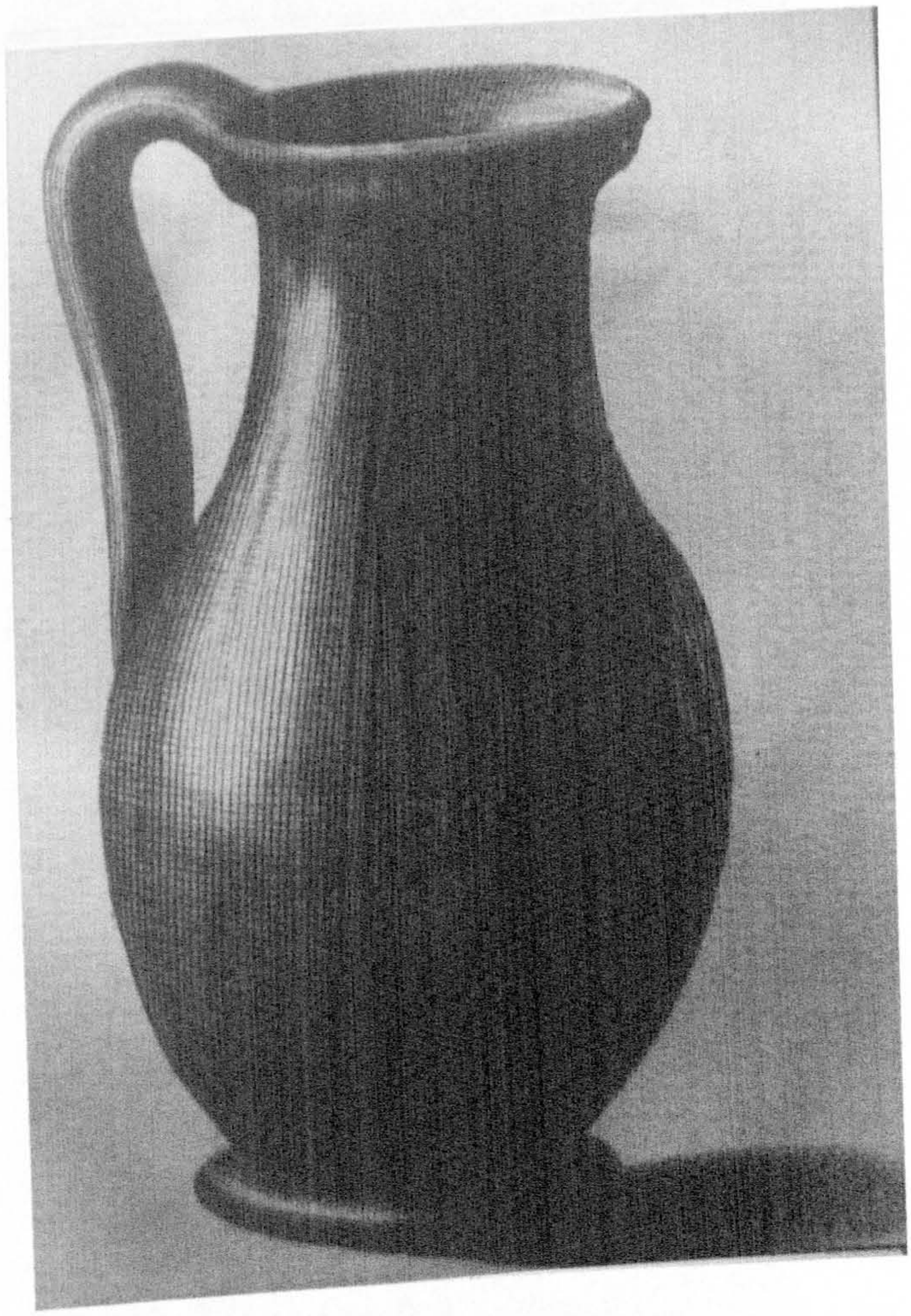

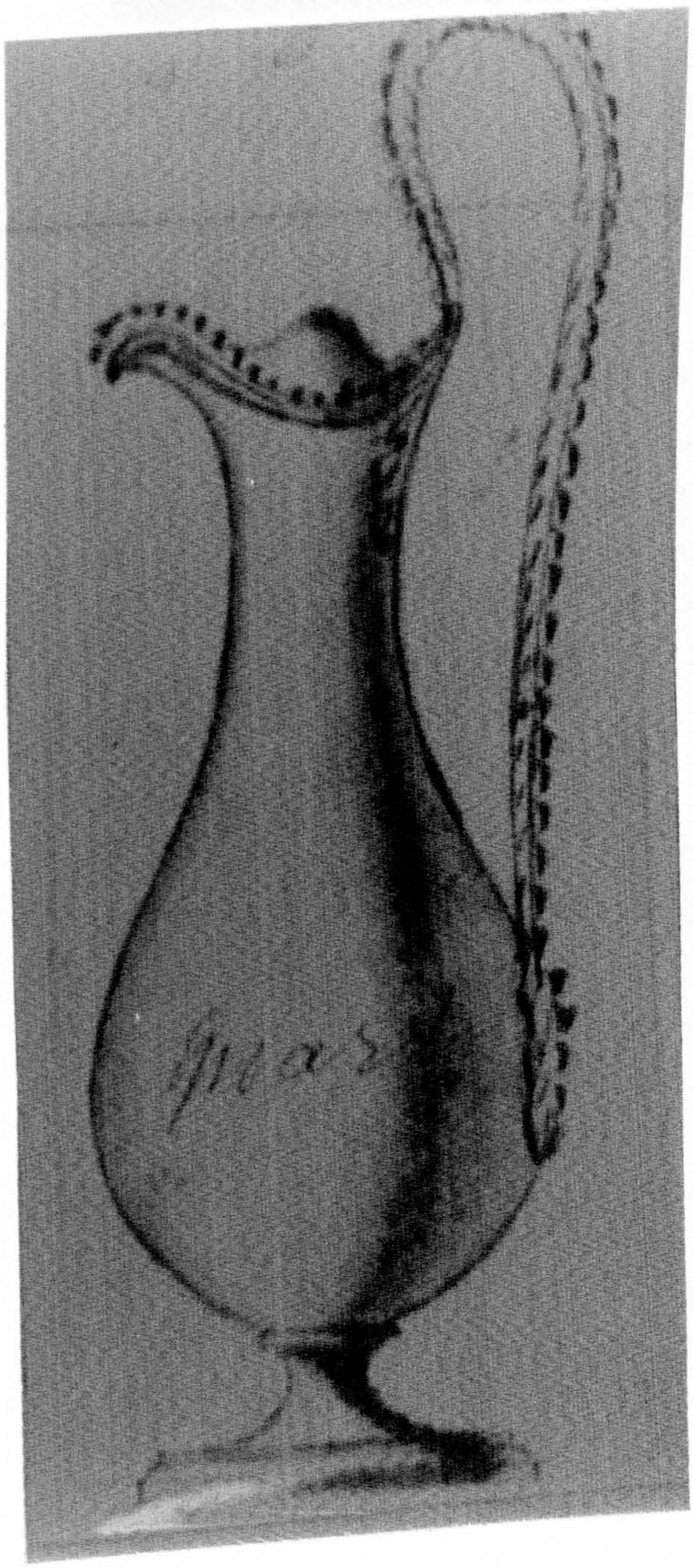

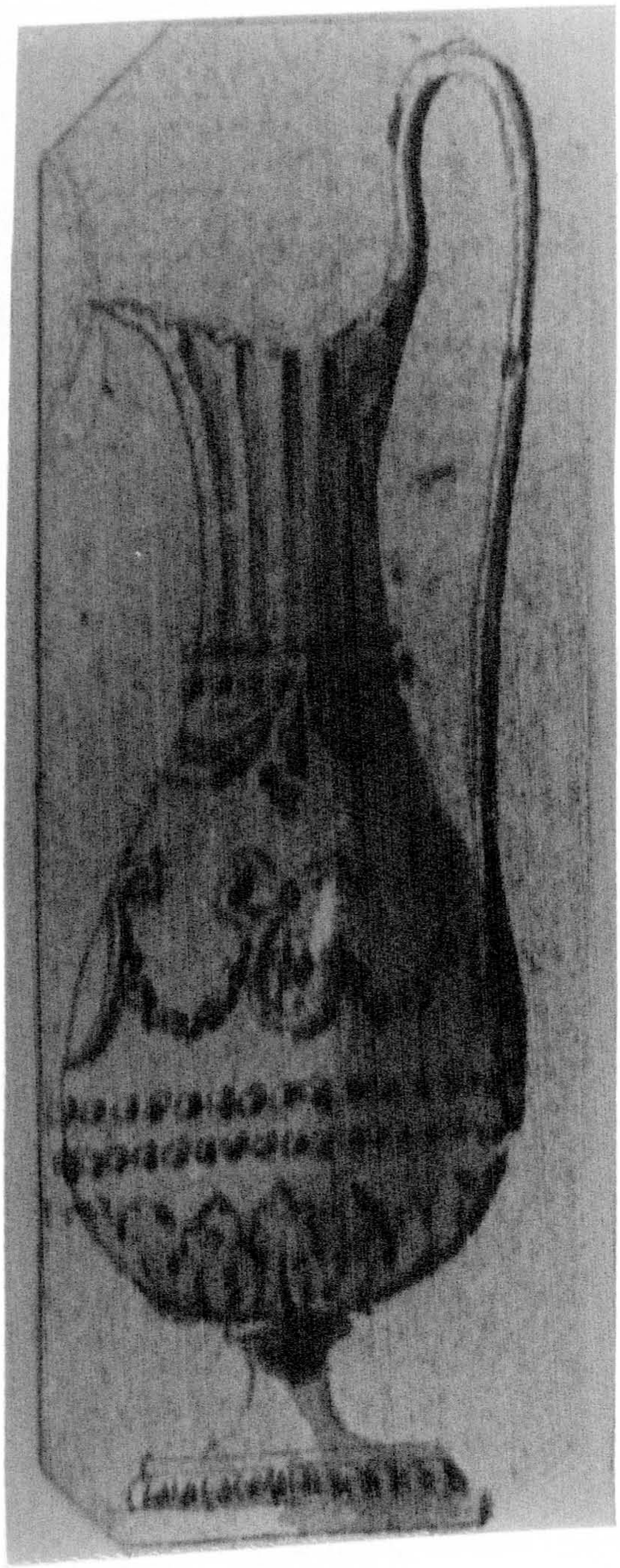

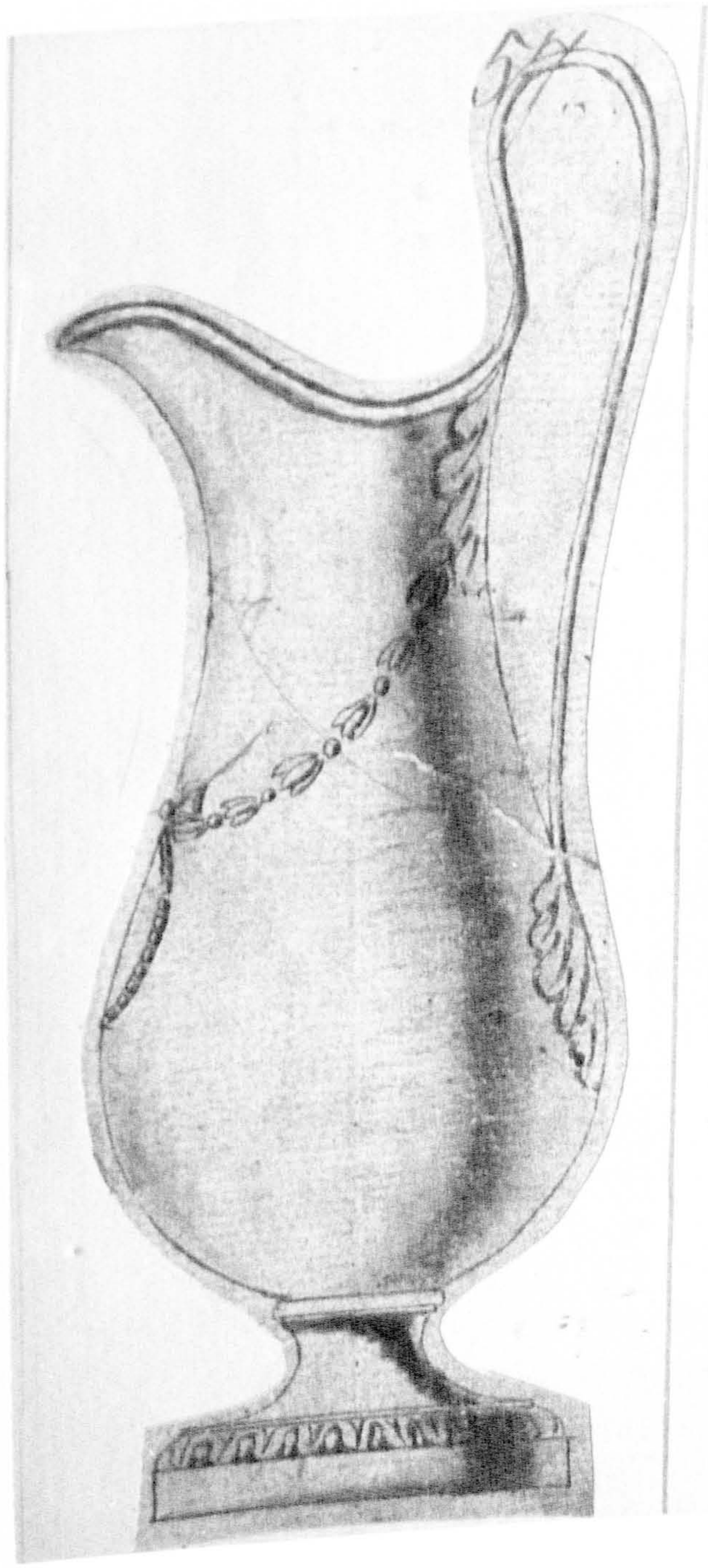

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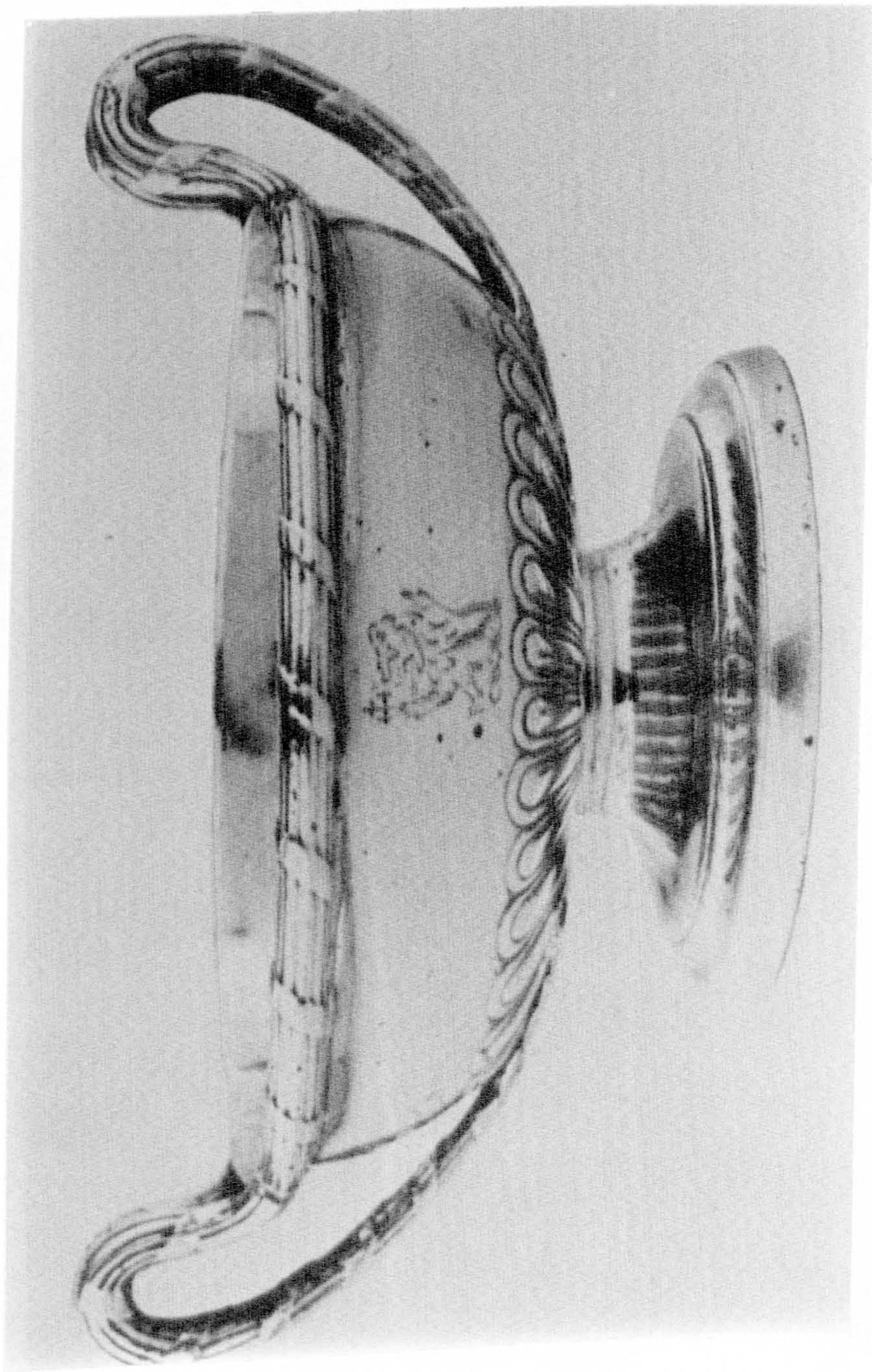

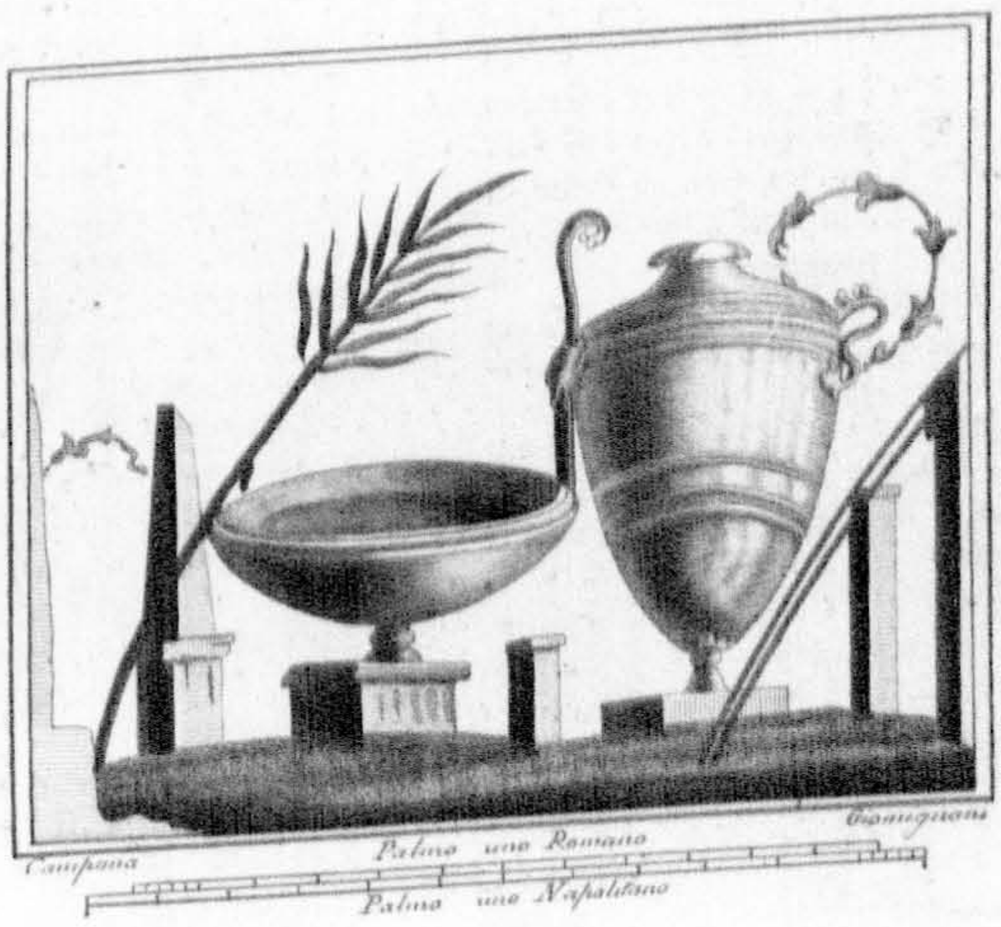
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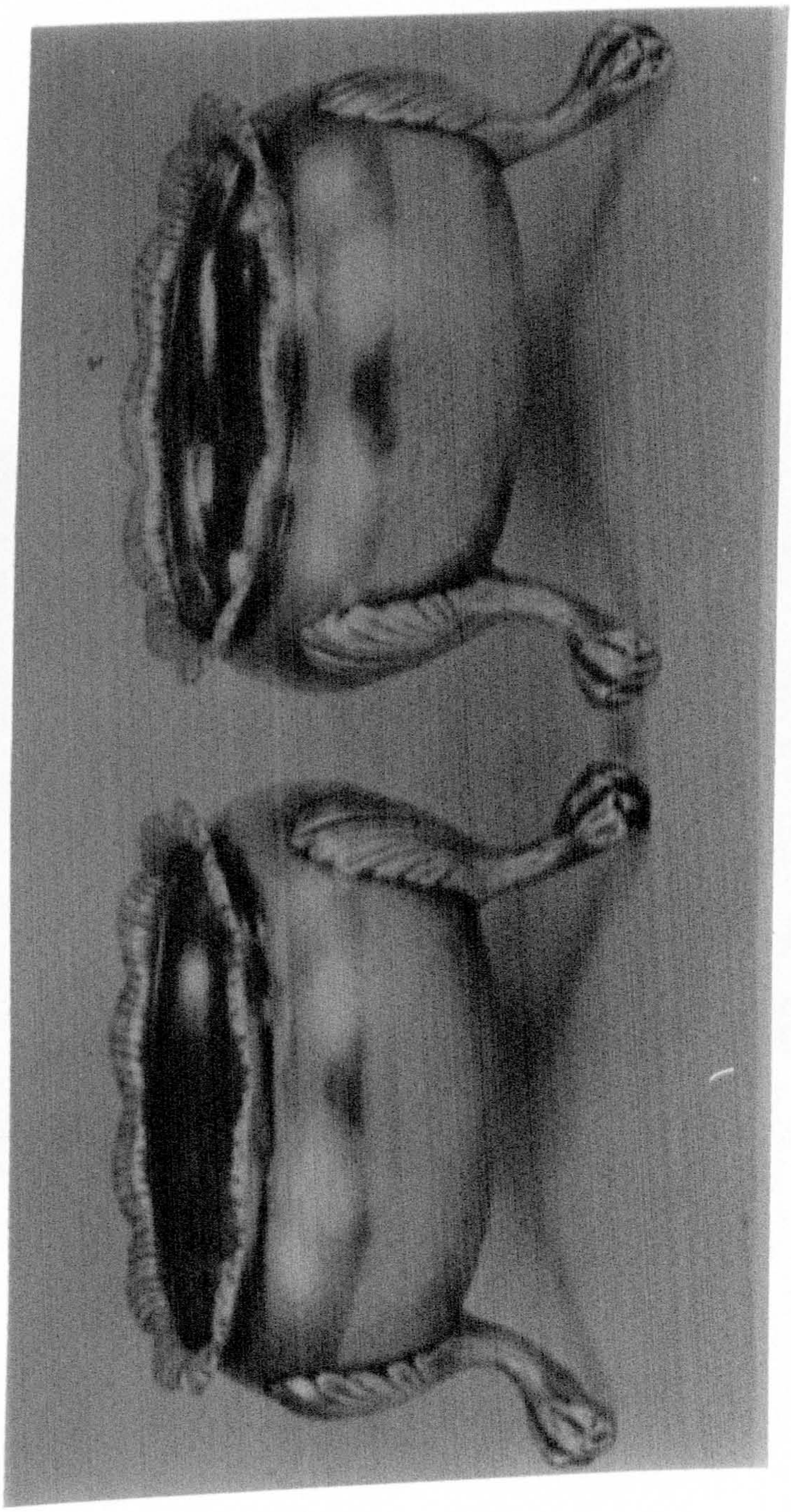

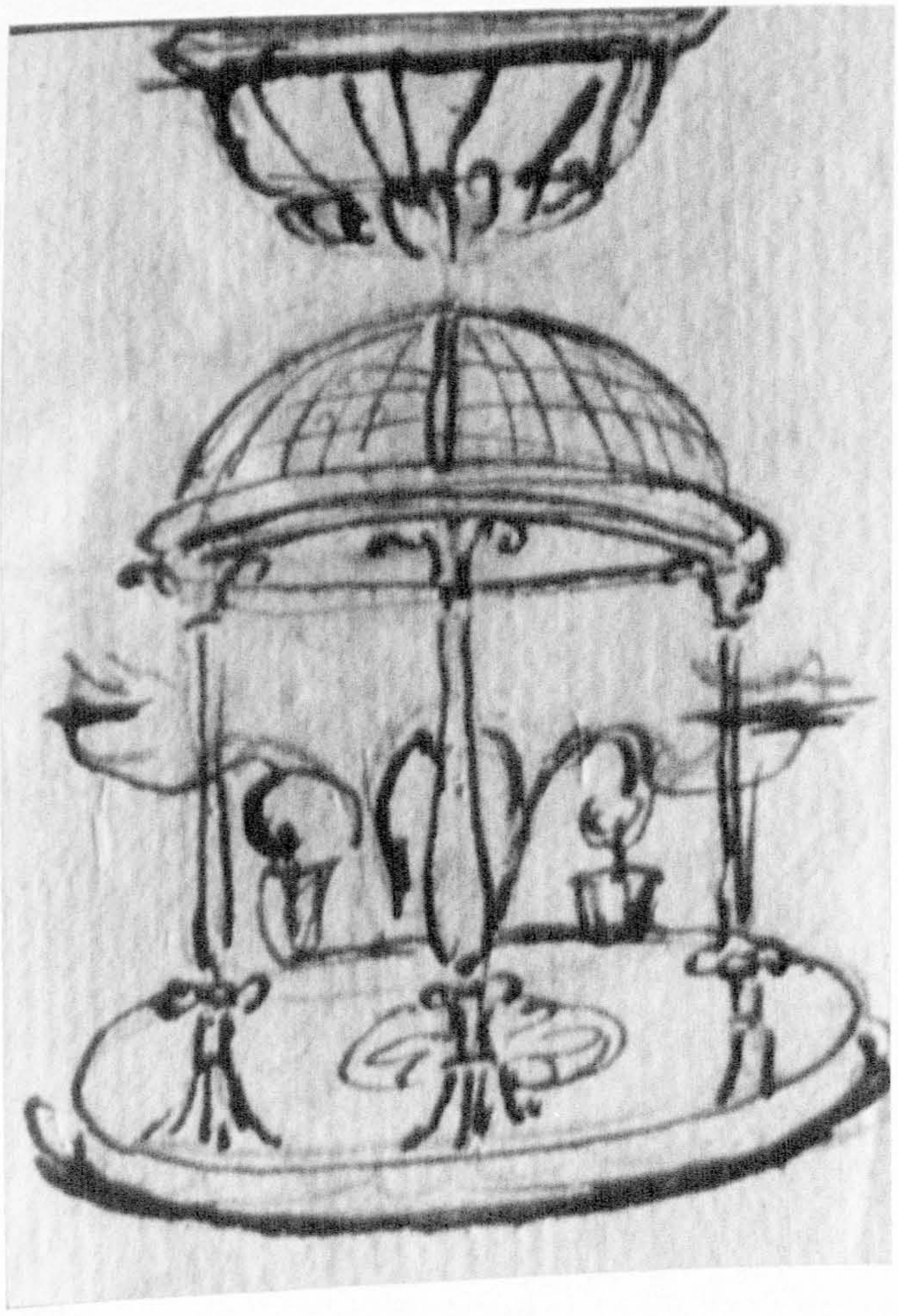

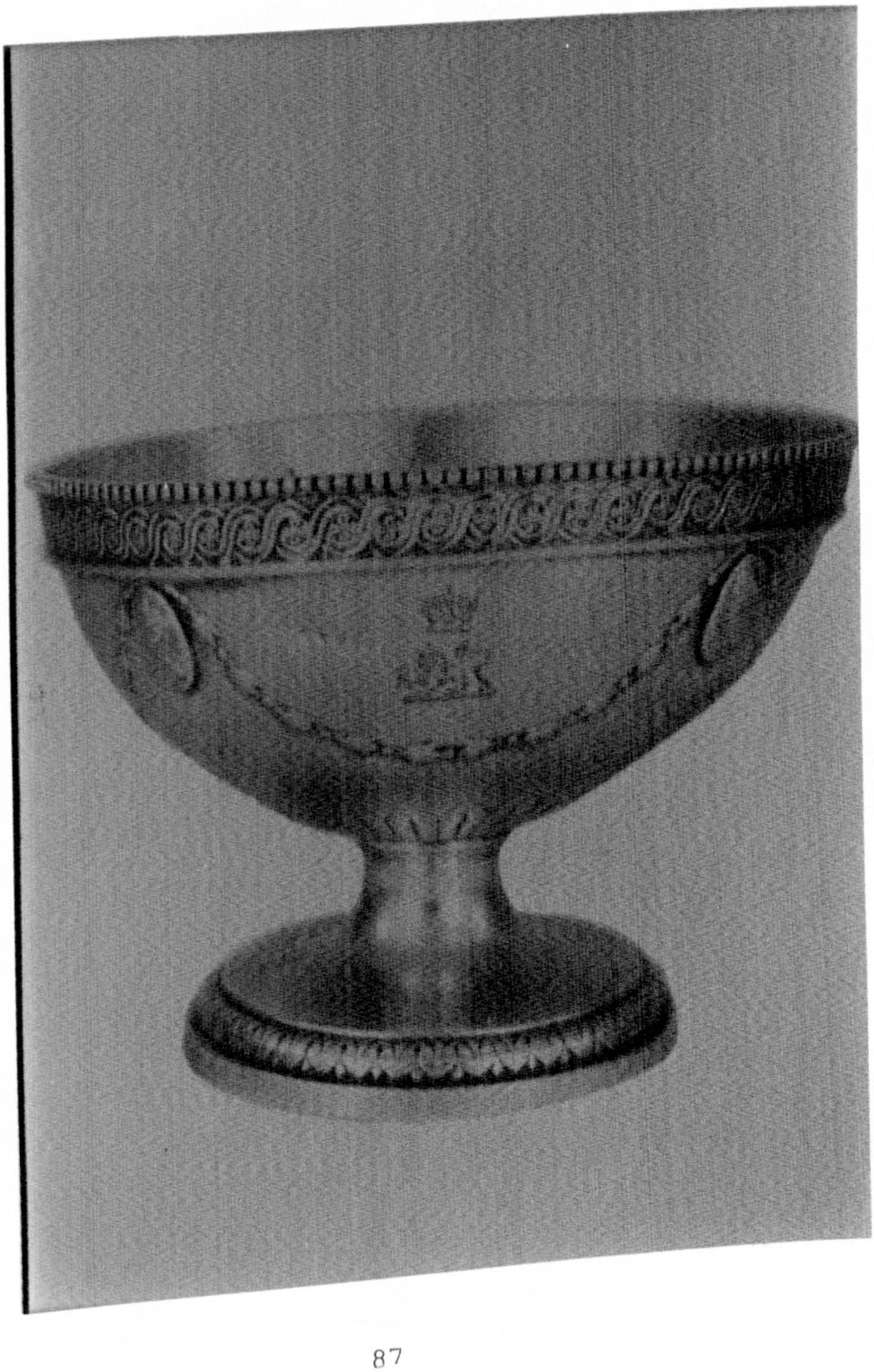

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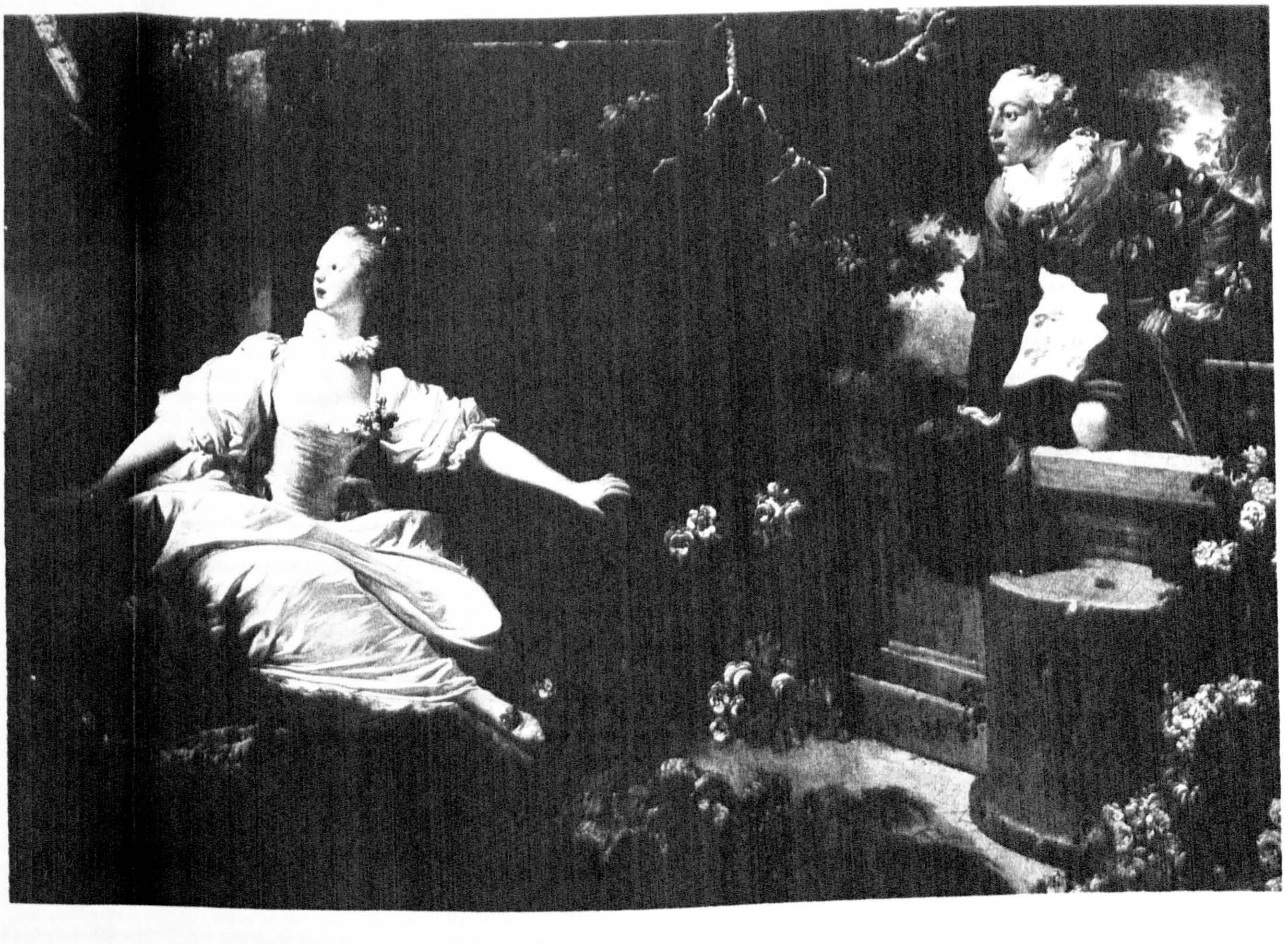

Detail from *The Meeting*, by Fragonard. (Frick Collection, New York).

June 1986

The enamelling of Sèvres porcelain. F. G. Stephens, Pre-Raphaelite art critic. Silver by James Wyatt and a sideboard by William Burges. Notes on Correggio, Largillierre and Fuseli. Gilbert at the Academy, and nineteenth-century sculpture in Paris. Contemporary exhibitions in London and San Francisco.

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*Boulton and Fothergill silver: an épergne designed by James Wyatt**

BY KENNETH QUICKENDEN

A silver gilt épergne has come to light (Fig.33)[1] which was designed by James Wyatt and made by the hardware manufacturers Matthew Boulton and John Fothergill at their Soho Manufactory near Birmingham.[2] The épergne was supplied to Sir Robert Rich in 1776.[3]

While Boulton was building up the production of silver,[4] he noted Rich's name in 1772 and 1773;[5] Boulton probably intended to visit him to discuss the épergne and some other commissions.[6] At this time Wyatt was achieving prominence primarily as an architect,[7] but he supplied Boulton with a number of designs for silver;[8] their acquaintance suggests that Boulton, rather than Rich, involved Wyatt in the design for the épergne.[9] Wyatt's design for this commission was supplied in, or shortly after, 1772.[10]

The design for Sir Robert's épergne has not survived but it has marked similarities with other designs by Wyatt in an album belonging to the Vicomte de Noailles, Paris.[11] The harpies, surmounting tapered curved legs terminating in claw feet, occur in a design for a jug and stand (Fig.36). These motifs were used, together with curvilinear branches, for a candelabrum and stand (Fig.34). The sketch for an épergne (Fig.35) differs in several details from Rich's, but they have in common a large basin and a number of smaller basins with curvilinear branches supported by a stand.

Wyatt's designs belong to the neo-classical style which began in England at the end of the 1750s.[12] His motifs are classical: harpies, acanthus, rams' heads, festoons of husks and flower-heads. Sir Robert's épergne is light, curvilinear and elegant; these qualities were derived from Robert Adam,[13] who pioneered them in his interior design from the late 1760s, and they contrast with the richness and weight which characterised the first phase of neo-classicism.[14]

Significant comparisons can be made between Rich's épergne and some produced by Thomas Pitts of London about the same time. Pitts made épergnes which also have a frame supported on four legs as well as eight small baskets and one large basket at the top.[15] Sir Robert's épergne weighed 105 oz 13 dwt 12 gr when it was assayed.[16] In 1769 and 1773 Pitts made épergnes which were roughly comparable in size with Rich's but they weighed 130 oz 4 dwt[17] and 166 oz 1 dwt respectively.[18] Since silver was expensive,[19] these differences were a significant factor behind Boulton's claim to Sir Robert that he produced silver plate at a lower price than his rivals in London.[20]

Rich was informed that the épergne was basically finished in November 1774; Boulton wanted him to see and approve the work before the gilding was added.[21] Sir Robert's reply was delayed and as a result the épergne was not sent to his house in Grosvenor Square, London, until March 1775. Boulton apologised for the unsightly screws (which fastened the festoons) but was confident they would be concealed by the gilding.[22] The large glass bowl and the small dishes were also sent at this time;

* I am grateful to Mrs A. C. Weston (Garrard & Co Ltd, London), Philippa Glanville (Victoria and Albert Museum, London), Frances Fergusson (Bucknell University, Pennsylvania), Elaine Barr and Shirley Bury for their help with research for this article.

Some of the statistical information in this article has been taken from 'The Register of Plate and Silver Wares Assayed and Marked or Broke at the Birmingham Assay Office, 31st August 1773 – 20th March 1792.' This document, which is referred to in these notes as the Plate Register, Birmingham, 1773-1792, is in the possession of the Assay Office, Birmingham. Many other references have been taken from the Matthew Boulton Papers (hereafter cited as M. B. P.), which are the property of The Matthew Boulton Trust; these are deposited at the Birmingham Reference Library. Further information has been taken from the ledgers of the London partnership of John Parker and Edward Wakelin; these are now at the Victoria and Albert Museum, London.

[1] The épergne passed through Garrard & Co Ltd, London in 1984.

[2] The partnership lasted from 1762 to 1782, the partners producing a wide variety of mainly metal items such as buttons and chains. They also produced Sheffield plate tablewares (silver on one or both sides of copper) and ormolu (gilt brass or bronze mounts used mainly on vases or clocks). K. QUICKENDEN: Boulton and Fothergill silver: business plans and miscalculations', *Art History*, Vol.3, No.3 [September 1980], pp.274-88.

[3] Sir Robert Rich (1714-1785) achieved prominence through his army career. He served in the Grenadier Guards and was almost fatally wounded at Culloden in 1746. After his recovery he became Colonel of the 4th or King's Own Regiment and, in 1756, was appointed Governor of Londonderry and Culmore Fort when he resigned his Colonelcy. In 1760 he advanced to the rank of Lieutenant-general. Rich's later life was clouded with difficulties: his health deteriorated and, following disputes over his father's conduct as Colonel of the 4th Dragoons (for which the son, as one of the elder Rich's executors, was accountable), Rich was dismissed by the King in 1774 from his post as Governor of Londonderry and from the service. See *Dictionary of National Biography*, Vol. XLVIII, London [1896], pp.135-36.

[4] The production of silver plate at the Soho Manufactory began c.1766 (H. W. DICKINSON: *Matthew Boulton*, Cambridge, [1937], p.67). In the assay year 1773-74 9833 oz 5 dwt 12 gr of silver by Boulton and Fothergill were marked at the Assay Office, Birmingham (figures calculated from Plate Register, Birmingham, 1773-1792).

[5] Boulton noted Rich's name, in 1772 (M. B. P. Matthew Boulton's Notebook 8, p.5, 1772) and 1773 (*ibid.*, 10, p.52, 1773).

[6] Apart from the épergne, Rich bought from Boulton and Fothergill eight silver dishes (M. B. P. Letter Book G p.116, Boulton and Fothergill to Sir Robert Rich, 1st September 1774). He also bought a silver tea urn (*ibid.*, p.512, Boulton and Fothergill to Sir Robert Rich, 9th November 1775).

[7] Wyatt achieved celebrity as the architect of the Pantheon, Oxford Street, London, completed in 1772 (J. SUMMERSON: *Architecture in Britain 1530-1830*, 5th ed., Harmondsworth [1970], pp.458-60).

[8] F. FERGUSSON: 'Wyatt Silver'. THE BURLINGTON MAGAZINE, Vol.116 [1974] pp.751-55, provided, for the first time, visual evidence for Wyatt's influence on Boulton and Fothergill's silver. This was supported by documentary evidence, already noted by e.g. R. ROWE: *Adam Silver 1765-1795*, London [1965], p.60.

[9] John Wyatt, one of Boulton and Fothergill's London agents, was James Wyatt's cousin (M.B.P. Letter Book G, p.558, Boulton and Fothergill to His Highness the Prince Holstein, 28th February 1776). Boulton noted in 1770 that he dined on one occasion with three members of the Wyatt family (M.B.P. Box Boulton M. Miss Anne Robinson, Mrs Boulton, Item 56, Matthew Boulton to Mrs Boulton, 6th March 1770).

[10] In 1772 the partners remarked that they were impatient to receive the design (M.B.P. Letter Book E, p.544, [Boulton and Fothergill] to William Matthews (a London agent), 9th August 1772).

[11] A photographic copy in the Victoria and Albert Museum has been consulted for this article.

[12] In 1758 James Stuart built a temple in the gardens at Hagley which was the earliest Greek Doric Revival building in Europe. From 1759 to c.1765 he designed the neo-classical interior decoration and furnishings for Spencer House, St James's, London which influenced Robert Adam's style. (See c. MUSGRAVE: *Adam and Hepplewhite and other Neo-classical Furniture*, London [1966] p.40.

[13] SUMMERSON, *op.cit.* at note 7 above, pp.460-61.

[14] *Ibid.*, pp.433-34.

[15] ROWE, *op.cit.* at note 8 above. Plates 36 and 37A show épergnes dated 1778 and 1777 respectively.

[16] Plate register, Birmingham, 1773-92, 4th June 1776. The épergne now weighs 103 oz 10 dwt, which reflects the wear and tear of subsequent years and perhaps later modifications.

[17] John Parker and Edward Wakelin, Workmen's ledger No.2, 1766-72 p.43, 27th May 1769. Pitts supplied the épergne to Parker and Wakelin. This épergne supported a basin, two baskets and four saucers.

[18] *Ibid.*, p.200, 18th March 1773. This épergne, which supported eight branches and a basin, was supplied by Pitts to Parker and Wakelin.

[19] In 1774 sterling silver cost 5s 6½d per oz. (M.B.P. Letter Book F, p.460, Boulton and Fothergill to R. A. Cox [a London bullion dealer], 21st April 1774). In November 1776 sterling silver cost 5s 7½d per oz. (M.B.P. Boulton and Fothergill Journal, 1776-78, p.217, 23rd November 1776).

[20] M.B.P. Box Wyatt Family Item 73, John Wyatt (see note 9) to Boulton and Fothergill, 29th February 1776.

[21] M.B.P. Letter Book F, pp.625-26, Boulton and Fothergill to Sir Robert Rich, 30th November 1774.

[22] *Ibid.*, G, p.291, The same to the same, 18th March 1775.

these were retained by Rich when the épergne was returned to Soho for further work.[23]

Even though Wyatt's design had been faithfully executed,[24] Sir Robert wanted the oval frame lengthened by four inches; this necessitated making a new frame and the modification of other parts to accommodate this change. He also wanted lighter festoons and the central bowl raised by two inches.[25] In September 1775 these alterations were complete and Rich was asked where the épergne should be sent;[26] he failed to reply and a reminder had to be sent the following month.[27] The épergne was not sent to London until November.[28]

By February 1776 Boulton was becoming anxious about payment and asked his London agent to visit their client.[29] The agent found Sir Robert in an angry mood: the latter complained that the épergne had ill-fitting screws, poor burnishing and a festoon which had broken in transit.[30] Alterations (which do not seem to have been entirely successful)[31] were subsequently carried out at the Soho Manufactory.[32] Moreover since the épergne had been inaccurately weighed and not assayed (other matters over which the client complained), it was necessary to remedy these faults too[33] before the épergne was finally sent to London, probably in June 1776.[34]

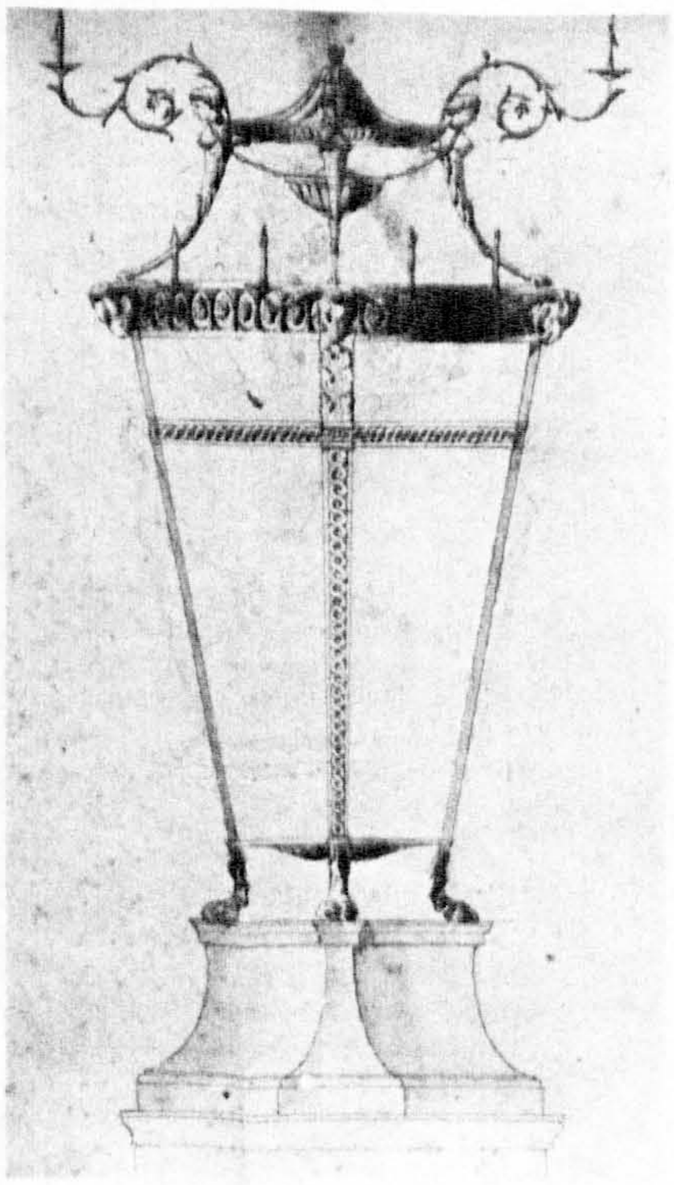
Further dispute arose over Boulton's fashioning charge. Rich felt it conflicted with Boulton's claim to make silver at a lower price than his competitors. Boulton charged 5s 6d per oz while Sir Robert reckoned, on the basis of advice from London silversmiths, that they would have charged 4s 0d per oz at most.[35] While épergnes were made at about this lower figure in London,[36] Boulton pointed out that Rich's épergne required new models and that it was particularly elaborate. Boulton also resisted the claim that the extra £20 charged for enlarging the frame was unreasonable since Sir Robert had changed his mind about the design and this led to substantial extra work. However, to resolve the dispute, Boulton proposed that Rich should nominate a reputable architect to arbitrate;[37] Sir Robert chose Wyatt,[38] who reduced the bill by £20 and to this Boulton agreed.[39]

The partners suffered further loss[40] since they had a substantial overdraft.[41] They paid for the bullion with which the épergne was made early in 1774[42] and were fored to pay interest on that sum[43] until Rich paid off his account in January 1777.[44] At one point during this period Sir Robert thought the partners intended to pass on their interest charges to him. The partners, under pressure from their client, ruled out this possibility.[45] Clearly both parties were responsible for the delay: while Rich was right to insist that Soho was guilty of inefficiency,[46] his second thoughts about the design and his delays in sending letters were also contributory factors. Rich's erratic behaviour was probably partly due to his preoccupation at this time with more important matters.[47]

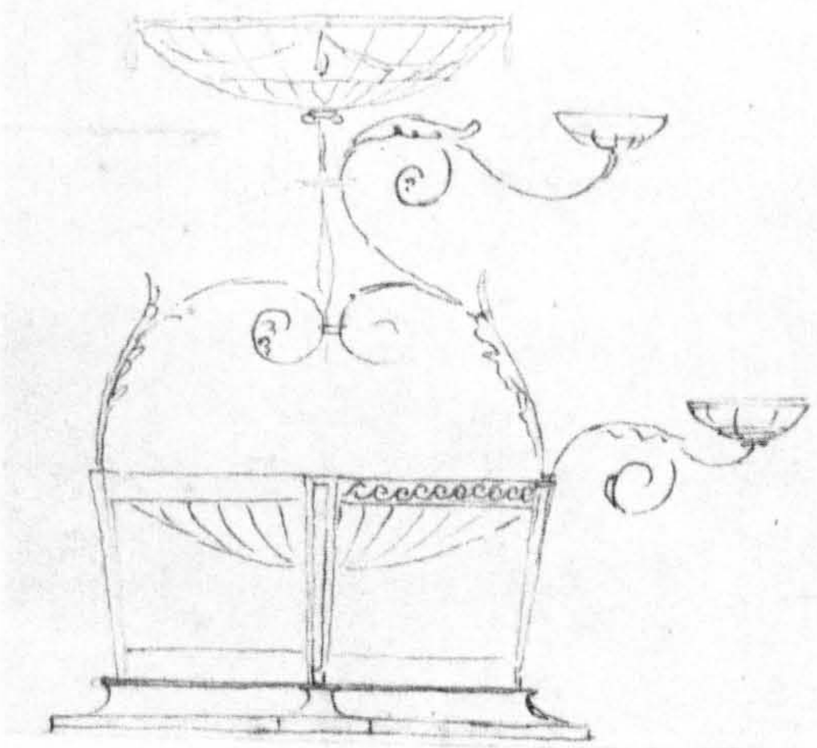
Although Boulton was able to recoup part of the high cost of making the models[48] by using them for other pieces of metalwork,[49] he lost money on making Rich's épergne.[50] While this was a particularly difficult commission, the problems encountered were by no means unique and the losses incurred in silversmithing[51] led Boulton to run down this branch of his activities at the Soho Manufactory[52] and concentrate on other products.[53]

[23] *Ibid.*, p.419, The same to the same, 14th September 1775.
[24] *Ibid.*, p.254, The same to the same, February 1775.
[25] *Ibid.*, p.583, The same to the same, 25th March 1776.
[26] *Ibid.*, p.419, The same to the same, 14th September 1775.
[27] *Ibid.*, p.441, The same to the same, 13th October 1775.
[28] *Ibid.*, p.512, The same to the same, 9th November 1775.
[29] *Ibid.*, p.545, The same to John Wyatt, 24th February 1776.
[30] M.B.P. Box Wyatt Family, Item 73, John Wyatt to Boulton and Fothergill, 29th February 1776.
[31] Recent inspection of the épergne suggests that several alterations were carried out on the festoons and on the rims around the bowls. Several screws were also missing – which reinforces one of Rich's complaints (see text).
[32] M.B.P. Letter Book G, p.610, Boulton and Fothergill to John Wyatt, 13th May 1776.
[33] *Ibid.* pp.582-84, the same to Sir Robert Rich, 25th March 1776.
[34] Plate Register, Birmingham, 1773-92. The épergne was assayed on 4th June 1776.
[35] M.B.P. Box Wyatt Family, Item 73, John Wyatt to Boulton and Fothergill, 29th February 1776.
[36] John Parker and Edward Wakelin, Gentlemen's Ledger, 1773-76, p.63, 2nd April 1774. Colonel Clements was charged 9s 3d per oz for a 'fine festoon épergne'. This figure included the cost of the silver which at that time was about 5s 6½d per oz, (see note 19).
[37] M.B.P. Letter Book G, pp.582-84, Boulton and Fothergill to Sir Robert Rich, 25th March 1776.
[38] M.B.P. Box Wyatt Family, Item 92, John Wyatt to Boulton and Fothergill, 19th July 1776.
[39] M.B.P. Letter Book G, p.800, Boulton and Fothergill to Sir Robert Rich, December 1776.
[40] *Ibid.*, p.661, John Hodges to John Wyatt, 13th July 1776.
[41] In 1773 this overdraft was £10,000 (J. E. CULE: The Financial History of Matthew Boulton, 1759-1800, unpublished thesis for the Degree of Master of Commerce, University of Birmingham [October] 1935, pp. 56-57). At the end of 1777 the overdraft increased to nearly £25,000 (*ibid.*, p.74).
[42] M.B.P. Letter Book G, p.512, Boulton and Fothergill to Sir Robert Rich, 9th November 1775.
[43] The bankers' interest and commission charges varied between 7½% and 10½% of the total sum in advance (CULE, op.cit., p.136).
[44] M.B.P. Letter Book H, p.86, Boulton and Fothergill to Sir Robert Rich, 23rd December 1776. A payment of £93 was to be made twenty days after this date. Given the fashioning charge, the costs of the silver, gold, glass and the alterations, the sum of £93 could have been just for the épergne. The sum certainly included the charge for the épergne, but the payment was made to balance an account which earlier in the year was estimated at between £300 and £400. This estimate included the charge for the épergne, a silver tea urn and perhaps other articles (M.B.P. Letter Book G, p.545, Boulton and Fothergill to John Wyatt, 24th February 1776). Presumably Rich paid a part of this account during 1776.
[45] *Ibid.*, p.583, Boulton and Fothergill to Sir Robert Rich, 25th March 1776.
[46] M.B.P. Box Wyatt Family, Item 72, John Wyatt to Boulton and Fothergill, 27th February 1776.
[47] See note 3.
[48] M.B.P. Letter Book G, p.583, Boulton and Fothergill to Sir Robert Rich, 25th March 1776.
[49] The harpy occurs on a silver perfume burner at Temple Newsam, Leeds, dated 1779. The model for the harpy (though without the wings) was also used for a pair of ormolu mounted vase perfume burners also at Temple Newsam, dated c.1777. Another almost identical pair of ormolu mounted vase perfume burners has also survived. These pieces of metalwork are conveniently grouped together in GOODISON, *op.cit.*, Plates 156, 157 and 158.
[50] M.B.P. Letter Book G, p.661, John Hodges (a clerk) to John Wyatt, 13th July 1776.
[51] James Keir occupied a managerial role at the Soho Manufactory for much of 1778 and 1779 (M.B.P. Box Keir, James, Item 70, Envelope entitled M.B. (Matthew Boulton) and J. Keir n.d. and Statement of Case M.B. & K. [Keir] n.d.). Keir later wrote that the silver business 'was not profitable in consequence of the great value of the material, the loss of interest upon which was not compensated by the additional price put upon it for workmanship.' M.B.P. Box Boulton M., Biograph, Memoir, Decease, Funeral, Prints, Medals, Item 112, Sheet 2, James Keir, Memorandums for the Memoir of M. Boulton, 3rd December 1809.
[52] Production peaked in the assay year 1776-77 when 11,831 oz 3 dwt 12 gr were hallmarked. Corresponding figures for some later assay years were as follows: 1777-78 6390 oz 10 dwt 7 gr; 1781-82 1174 oz 17 dwt 0 gr (figures calculated from the Plate Register, Birmingham, 1773-1792).
[53] The effort previously put into making silver was used to increase substantially the production of Sheffield plate. In addition to his partnership with Fothergill, Boulton began a partnership with James Watt in 1775 to produce steam engines. Boulton and Watt's income from steam engines amounted to £76,000 between 1780 and 1791 (QUICKENDEN, *loc.cit.* at note 2 above, pp.287-88).

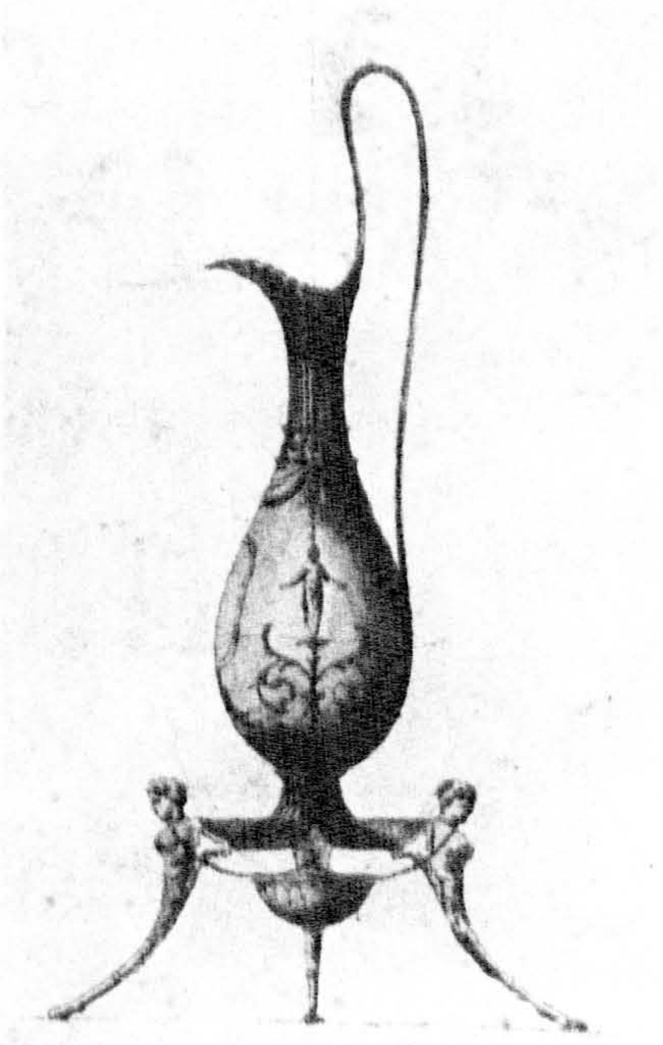
33. Silver gilt épergne, designed by James Wyatt and made by Boulton and Fothergill. 1774-6. (Formerly with Garrard & Co. Ltd, London).



34. Design for a candelabrum and stand by James Wyatt, (From an album of drawings in the collection of the Vicomte de Noailles, Paris).



35. Design for an épergne by James Wyatt, (from an album of drawings in the collection of the Vicomte de Noailles, Paris).



36. Design for a jug and stand by James Wyatt, (from an album of drawings in the collection of the Vicomte de Noailles, Paris).

In the context of Boulton and Fothergill's silver, Sir Robert Rich's épergne occupied an important place: it was amongst their most ambitious pieces of metalwork and one of only five silver épergnes produced during their partnership.[54] Moreover, the discovery of this épergne adds to our knowledge of James Wyatt's influence on the partners' silver.[55]

[54] Boulton and Fothergill produced one silver épergne in each of the assay years 1773-74, 1775-76, (the one made for Rich) and 1776-77. They made two in the assay year 1774-75 (Plate Register, Birmingham, 1773-1792).
[55] Although Frances Fergusson noted a connection between Rich's épergne and Wyatt (FERGUSSON, *op.cit.* at note 8 above, p.752), she did not realise that the architect was responsible for the design. Moreover, the épergne came to light long after she produced her article.

*Fuseli and the 'judicious adoption' of the antique in the 'Nightmare'**

BY MILES L. CHAPPELL

HENRY Fuseli has been described by Gert Schiff as a classicist in spite of himself.[1] This description seems especially fitting when one considers Fuseli's painting of the *Nightmare* painted in 1781 and exhibited in 1782 (Fig.37).[2] In an essay, to which this note is greatly indebted, the painting was discussed at length by Nicolas Powell, who showed that the *Nightmare* was 'more typical of its period and less in advance of it than might be supposed'.[3] Still, it is perhaps surprising to find that such a seemingly original work of art is in fact rooted in the classical tradition and, as will be proposed here, in a way more strongly than hitherto perceived.

Fuseli clearly venerated the classical tradition and the most classicising artists, in particular Michelangelo, as is implicit i virtually every drawing and painting of his *œuvre*. The learne Fuseli created his singular classicising style from the combin tion of his universal knowledge of art and theory with his ow ideas on the relationship of invention to expression. Fuseli ga clear articulation to the rôle of prior traditions in invention i his third Lecture (1801) wherein he spoke on the 'judicio adoption of figures in art':[4]

> Far from impairing the originality of invention, the unpr meditated discovery of an appropriate attitude or figure i the works of antiquity, or of the great old masters after th revival, and its adoption, or the apt transposition of on misplaced in some inferior work, will add lustre to a pe formance of commensurate or superior power, by a kind c coalition with the rest, immediately furnished by nature an the subject. In such a case, it is easily discovered whether subject have been chosen merely to borrow an idea, a attitude or figure, or whether their eminent fitness procure them their place.[5]

Some twenty years earlier and just after returning from his lon sojourn in Italy, Fuseli created the *Nightmare*, a work whic exemplifies his veneration for the antique and his view of the rôl of artful eclecticism in invention.

The principal motifs in the *Nightmare* have been traced vari ously to sources in the antique and in the classicising work which Fuseli would have known. These have been discussed b Powell but bear summarising here. Frederick Antal propose that Fuseli's source was the *Dream of Hecuba* by Giulio Roman in the Palazzo del Tè in Mantua. Observing Fuseli's own word on the 'judicious adoption of figures in art', Powell suggeste that the sleeping woman was adapted from the *Sleeping Ariadn* in the Vatican Museum and that the incubus was derived from classical types for Silenus and for Hellenistic portrayals of the hunchbacked beggar. Powell further observed that while the horse was reminiscent of the works of northern artists such a Hans Baldung Grien, the more likely source was one of the *Hors tamers* on the Quirinal. Similarly, the furnishings of the bed and the table appeared to be inspired by the fittings found at Pompeii and Herculaneum.[6] Peter Tomory proposed other sources for Fuseli: Fragonard's portrayals of the theme of the fainting sultana and the Hellenistic *Dying Amazon* in Naples.[7]

It is proposed here that Fuseli, through his sense of decorum for the subject, made a very studied adaptation of a more precise and more fitting source: the *Bacchanalian scene* on the marble sarcophagus now in the Museo Archeologico Nazionale of Naples (Fig.38). During Fuseli's Italian sojourn, the sarcophagus was in the Farnese Palace in Rome, moving to the Bourbon collection in Naples around 1787.[8] No drawings by Fuseli of this relief are known, but it is to be expected that, with his encyclopaedic knowledge of art, he was well acquainted with the Farnese Collection. This is borne out by the activities of

* For support and assistance in the preparation of this note, I should like to thank here the Committee on Research at the College of William and Mary, Wendy Watson, Curator at the Mount Holyoke College Museum, and Fausto Zevi, Soprintendente for the Soprintendenza Archeologica delle Provincie di Napoli e Caserta, and especially Prof. Gert Schiff at the Institute of Fine Arts, New York University.

[1] In G. SCHIFF and P. VIOTTO: *L'Opera completa di Füssli*, Milan [1977], pp.5-9.
[2] Principal discussions of the painting used here are: J. KNOWLES: *The Life and Writings of Henry Fuseli M.A., R.A.*, 3 Vols., London [1831]; A. FEDERMANN: *Johann Heinrich Füssli, Dichter und Maler*, Zürich [1927]; P. TOMORY: *The Life and Art of Henry Fuseli*, London [1972]. N. POWELL: *Fuseli: The 'Nightmare'*, London [1973]; G. SCHIFF: *Johann Heinrich Füssli: catalogue raisonné*, Zürich [1973], Nos.757-59. G. SCHIFF, et al: *Henry Fuseli, 1741-1825*, exh. cat., The Tate Gallery, London [1975], No.159. SCHIFF and VIOTTO, *op.cit.* at note 1 above, No.88. G. SCHIFF has kindly indicated the article by J. SCHNECK, M.D.,: 'Henry Fuseli, Nightmare and Sleep Paralysis', *The Journal of the American Medical Association*, Vol.207, no.427, [January 1969], pp.725-26.
[3] POWELL, *op.cit.* at note 2 above. p.67.
[4] FUSELI in KNOWLES, *op.cit.* at note 2 above, Vol.II, p.181. This passage was discussed effectively by POWELL, *op.cit.* at note 2 above, cap.4.
[5] KNOWLES, *op.cit.* at note 2 above, Vol II., p.181.
[6] POWELL, *op.cit.* at note 2 above, pp.67ff.
[7] TOMORY *op.cit.* at note 2 above, p.92.
[8] Museo Archeologico Nazionale of Naples, Inv.No.27710. G. FIORELLI: *Catalogo del Museo Nazionale di Napoli: raccolta pornografica*, Naples [1866], pp.6-7, No.42.

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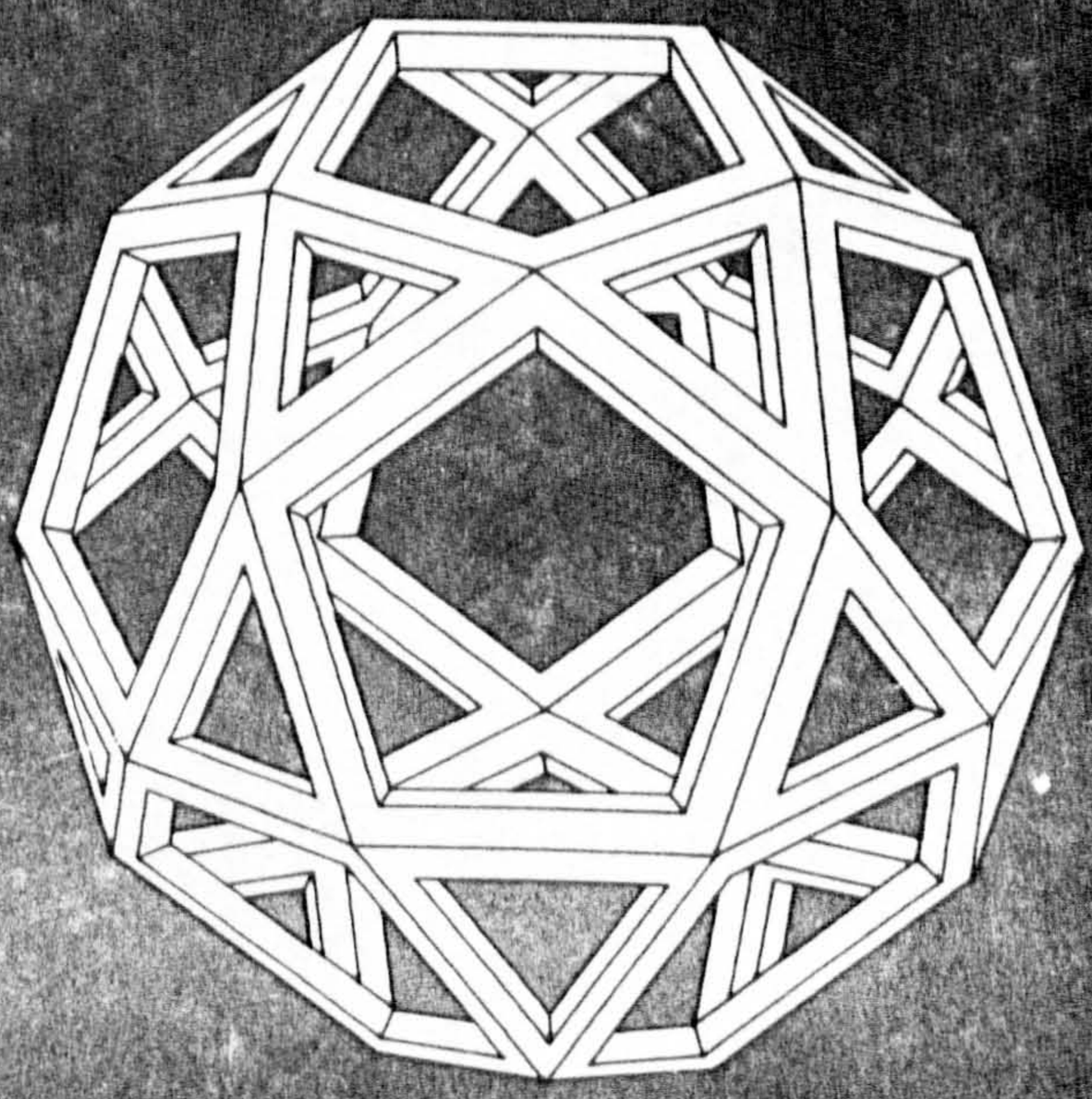

ART HISTORY

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BOULTON AND FOTHERGILL SILVER:

Business plans and miscalculations

KENNETH QUICKENDEN

Although much has been written on Boulton and Fothergill's silver, little attention has been paid to the business planning on which it was based and the miscalculations which led to its failure. This article seeks to fill this gap in our understanding of an important English silversmithing enterprise.

Several writers[1] have highlighted the grandiose motives behind the decision to produce silver. It was regarded as a prestige line to supplement the more mundane articles – buttons and 'toys' such as chains and buckles[2] – also produced at the partners' manufactory near Birmingham and by many other firms in Birmingham itself.[3] Boulton was determined to remove 'the prejudice that Birmingham hath so justly established against itself'.[4] Silversmithing was also a part of his general ambition, expressed in another letter of 1768, to establish 'the largest Hardware Manufactory in the World'.[5] Clearly pride and ambition were major motivations in Boulton's determination to become, as he wrote in a letter to Lord Shelburne in 1771, 'a great silversmith';[6] but these impulses were not so strong as to exclude attempts to place this venture on a profitable and businesslike footing.

When the partnership between Matthew Boulton and John Fothergill came into being in 1762,[7] Boulton had already begun to establish the Soho Manufactory. He had inherited his father's 'toy'-making business[8] at Snow Hill in Birmingham[9] on his death in 1759.[10] In 1761 he had purchased the lease on a piece of land in the parish of Handsworth, some one and a half miles from Birmingham, and bought outright various buildings on the site. In 1761 and 1762 Boulton rebuilt the water-mill and improved the house, as well as adding some dwellings for employees, a warehouse and several workshops.[11] Subsequent building there permitted the closure of the workshops at Snow Hill and, to quote from a letter of 1765 by Fothergill, the '. . . collecting all our Manuf. together upon one spott and are now actually Building one Building that will hold 400 workmen'.[12]

Plate 19,[13] a plan of the workshops and dwellings at the Soho Manufactory taken in June 1788, shows the results of this programme of expansion. Another undated

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plan[14] (plate 20) indicates the line of the watercourse which ran underneath the Works from the Mill Pool, through the Rolling Mill (the position of which is indicated in plate 19) and from there turned sharply left before entering Hockley Pool – in all a drop of 24 feet.[15] Hockley Pool was slightly outside the area covered by the plans; the Mill Pool is not indicated though one end of it came up to the road shown on the right-hand side of plate 25.[16] Since, during the summer months, the amount of water in the higher pool was often inadequate for driving the rolling mill, a horse mill was connected to the water wheel.[17] In 1775, however, this was replaced by a Watt pumping engine which returned water from the lower to the higher pool to increase the supply.[18]

By 1766 the partners had built not only a suitably large manufactory to permit the great increase in production of buttons and toys – turnover between 1763 and 1767 increased from £7,000 to £30,000[19] – but also one which provided, at least from the main approach to it, a noble setting for the sale and production of more expensive items including silver. This may be judged from a photograph[20] of the neo-classical main façade taken *c.* 1860 (plate 21) even though by then the building had been abandoned shortly before its demolition in 1862.[21]

The ambition to produce silver dates at least from 1763. A letter sent to a French customer on 13 December 1763 claimed:

> . . . nous avon commencé une fabrique des Chandeliers d'argent fourre ou du metal mis en lame du mielleur gout aussi bien que – des poilons Chaudiere & Chaudrons des Tables, & des chandeliers & d'autres Articles tout d'argent pur dont nous en fournissons des grandes quantites continuellement aux negotiants de Londres & serons charme d'avoir votre permission de vous envoyer quelque modelles.[22]

Though the letter makes clear a willingness to supply silver there is nothing to substantiate the claim that this metal was being used at that time. The earliest recorded order for silver was made on 13 February 1766 and Benjamin Molineux of Wolverhampton, who made the order, received the reply, '. . . we rarely keep any quantity of the . . . [silver candlesticks] . . . reddy made, therefore shall be somewhat hurried to get you 6 pair of Silver ones compleat'd to the limitt'd time'.[23] Whether these were later sent is not clear. Three candlesticks were supplied in December 1768 to a Mr Patterson for 'The Free Masons Lodge';[24] two sets and one pair of silver buckles were ordered by William Fothergill on 6 June 1769.[25] The earliest surviving silver also dates from this assay year – one pair of candlesticks in the possession of the Assay Office, Birmingham, and another pair on loan to the Grosvenor Museum, Chester.[26]

The main reason for the low level of production at this time was explained in a letter by Boulton written in 1771 – '. . . although I am very desirous of becoming a great Silver-smith [*sic*], yet I am now determined never to take up that Branch in the Large Way I intended unless powers can be obtain'd to have a Marking Hall at Birm[m]'.[27] Until that was achieved in 1773 the partners' silver was sent to the Assay office

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at Chester for assay and hallmarking,[28] which, though the closest Assay Office to Birmingham, was some seventy-two miles away[29] and considerable disadvantages resulted from sending silver so far. These difficulties were summed up in a document written by Boulton in 1773:

> By these means, Delays are occasioned, which offend and disappoint their customers; their Works, especially the richest and most delicate of them, are very often damaged, and sometimes ruined, by Accidents in Carriage, and careless packing and repacking at the Assayers; a great price is paid for Carriage, and their fresh Designs, which have often cost them considerable Sums of Money, and always Pains and Time, are communicated to Rivals before the Inventors have reaped Benefit from them.[30]

In the late 1760s and early 1770s the partners largely diverted their ambitions from silversmithing to the production of another luxury product – ormolu – which did not have to be assayed.[31] Ormolu was used for a wide range of decorative objects but chiefly for mounts on vases of different sorts.[32] According to Nicholas Goodison, production was begun in earnest about 1768,[33] and demand peaked in 1771,[34] but declined soon afterwards. This was signalled by the failure of a sale at Christie and Ansell's in Pall Mall of 1772: several valuable pieces were not sold and many pieces had to be reduced in price to gain purchasers.[35] At about this time Fothergill's enthusiasm for the production of luxury items waned and he urged Boulton to concentrate upon commoner articles such as buttons.[36] Although such articles were produced thereafter in considerable quantities,[37] as they had been before, Boulton effectively ignored Fothergill's advice. As it became apparent that the ormolu business had little future he reverted to his earlier intention of producing silver in quantity.

The production of silver was increased. In the (calendar) year of 1772 1196 ozs 4 dwts 12 grs (plus one further pair of candlesticks – the weight of which was not recorded) were sent to Chester for marking.[38] This increased his reputation for silversmithing and strengthened his case for the establishment of an Assay Office at Birmingham. To this end, Boulton spent long periods in London during the first half of 1773[39] and secured supporters for the Bill within Parliament. These included the Earls of Dartmouth and Shelburne, the Duke of Richmond[40] and Thomas Gilbert, M.P. for Lichfield.[41] Boulton also corresponded with a representative of the Sheffield silversmiths who hoped to establish an Assay Office there.[42] The Bill, which brought into existence the Assay Offices of both towns, was given the Royal Assent on 28 May 1773.[43]. This success removed one of Boulton's main difficulties in producing silver but a great deal of thought and effort had to be used at about the same time in attempts to solve others.

The ormolu business failed, as we have seen, mainly because Boulton could not find enough customers for the large scale production he envisaged. On the face of it he was now taking another enormous risk in hoping to attract a large number of customers for another expensive product. In fact, however, there was here a firm basis for Boulton's optimism. In 1719 a duty of sixpence an ounce had been imposed on all

plate imported into or made in Great Britain, but this was taken off in 1758.[44] As a result the demand for plate in London increased substantially. This may be deduced from the annual totals of Diett[45] silver taken at Goldsmiths' Hall. These totals, which were roughly proportional to the amount of silver hallmarked, more than doubled in the 1760s compared with both the 1750s and 1740s. The precise figures at ten yearly intervals were as follows: 1743 – 91 ozs 18 dwts;[46] 1753 – 80 ozs;[47] 1763 – 189 ozs.[48] This level was maintained: in 1773 the figure was 194 ozs 10 dwts.[49] Unfortunately records do not survive which provide precise totals for the amount of silver assayed and marked at Goldsmiths' Hall between 1743 and 1765; but they do survive for the period between 1766 and 1772. The figures were consistently around 100,000 lb.: for 1766 – 94,232 lbs. 11 ozs 3 dwts and for 1772 – 104,641 lbs. 4 ozs 15 dwts.

The figures for the total amount of silver assayed at the Goldsmiths' Hall between 1766 and 1772 were certainly known to Boulton by 1773 since they were before a committee appointed to 'enquire into the manner of conducting' Assay Offices in England and were published in that year.[50] The work of this committee formed a part of the investigations made at the time when attempts were being made to secure assay offices for Birmingham and Sheffield; as we have seen, Boulton was deeply involved with these efforts. In another document, also produced in 1773, by the silversmiths of Birmingham and Sheffield, reference was made to 'the very Prevailing Taste for plate . . .'.[51] This remark suggests that these silversmiths knew that the demand for plate had lately increased and the evidence conclusively shows that the demand for silver in London was known by Boulton to be substantial – before he began to produce it on a very large scale.

Yet the main demand was in London – a little over 110 miles away from Boulton and Fothergill's manufactory. As was written in the same document referred to above by the silversmiths of Sheffield and Birmingham, the London silversmiths '. . . live in the only great Market for Plate in the Nation; have they have in their favour long and general Prejudice; and they have great Wealth . . .'.[52] Boulton's intention of competing with them was helped by improved communications: the first public stage coach to run regularly from Birmingham to London was established in 1731 and the journey took two and a half days; in 1742 the time was reduced to two days.[53] But it nevertheless required a great deal of effort to steal orders from underneath the noses of London silversmiths.

The ormolu business – though a failure – established the partners' reputation for high quality metalwork and provided some customers for silver. In 1772, for example, the Duke of Northumberland bought a tripod, a perfume burner, a pair of vases and another 'wing-figured' vase.[54] These were in ormolu or had ormolu mounts. Later, in 1774, he bought two pairs of silver candlesticks.[55] At the partners' ormolu sale in April 1772 at Christie and Ansell's in London a Mr Knight ordered two pairs of silver candlesticks.[56] Lord Kerry also bought two silver pairs, but at the mainly ormolu sale of 1771 in the same saleroom;[57] in the following year he bought a further pair and three pairs of matching branches which were sent to his home in Portman Square.[58]

According to James Keir, who had once been a manager at the Soho Manufactory,[59] Boulton had the acquaintance of many persons '. . . distinguished for rank influence and knowledge in the Kingdom'.[60] These included Mrs Montagu, the leader of a London salon and the first 'blue-stocking', who was related to both Boulton's first and second wives.[61] She was supplied with a service of plate.[62] In 1772 Sir Harbord Harbord ordered two tea canisters and Boulton called on him at his home in Albemarle Street, London, to discuss the order.[63] Conversely, as James Keir later wrote, 'The desire of visiting Soho became a fashion among the higher and opulent ranks, foreigners of distinction, and all who could gain access to it. He [Boulton] received his visitants with so much courtesy and desire of pleasing (which were very distinguishing traits in his manner) that however agreeably their curiosity was satisfied, they were still more pleased with the proprietor.'[64] Not surprisingly, many orders were made for silver items by these visitors. In 1771, for example, Sir Alexander Gilmour of Curzon Street, Mayfair, was notified that two pairs of candlesticks were being forwarded, the order for which 'you were pleas'd to give us when you honour'd Soho with your Presence'.[65] Later in the 1770s, when the silver business had been more firmly established, orders continued to come from visitors. In 1777 a Mr Taylor in Grafton Street, Berkeley Square, was sent two tureens ordered earlier when he was at Soho.[66]

Boulton's connections with fashionable London-based architects were also important since these men not only provided designs but also, because of their influential positions, were able to supply orders. In 1771 a tureen was completed for the Admiralty and James Stuart, whom Boulton knew as early as 1758,[67] almost certainly put the commission his way. This much may be judged from a letter sent to Stuart in 1771. 'I am', wrote Boulton, 'very sorry that for your good will towards me that you should be rewarded with so much cause for chagrin'.[68] The order was sent late and came to far more than was originally intended – £40 16*s*. more, in fact.[69] But, as far as silversmithing was concerned, Boulton's most valuable contact among London architects was James Wyatt. As Frances Fergusson has shown,[70] some surviving James Wyatt designs in an album in the Vicomte de Noailles collection, Paris, closely resemble Boulton and Fothergill pieces. A candlestick in the Assay Office, Birmingham, dated 1774–5 (plate 22) is, apart from the base, identical to a Wyatt design in that album. In such designs he was responsible for bringing to Boulton and Fothergill silver a light, simple and attenuated form of neo-classicism. Wyatt was sometimes supplied with silver. For example, in May 1774 he was sent four pairs of silver candlesticks.[71] Boulton used the prestigious Wyatt connection to good effect. In 1776 John Wyatt was sent to London to become one of his agents there.[72] In a letter of the same year to His Highness the Prince Holstein Boulton wrote that tureen drawings were being sent, '. . . via Mr Wyatt whose cousin is the celebrated Architect that built the panthien[73] and will procure the assistance of his said Cousin to make any such alterations as your highness will condescend to point out'.[74]

Boulton's efforts to attract orders from London customers met with considerable success, and he was also successful in meeting more local demands. Here

Boulton had very little competition. As James Keir pointed out, although many firms in Birmingham made small silver articles during the second half of the eighteenth century, none, apart from Boulton and Fothergill, made large services of plate and other large articles.[75] Certainly Boulton did sell a considerable amount in the west Midlands. In 1774, for example, a service of plate was supplied to a J. C. Talbot who lived near Stafford,[76] and various silver articles were sent in the same year to the Earl of Warwick[77] and a James Brazier at Bewdley.[78] The majority of customers lived either relatively close to Birmingham or in London, but some lived elsewhere. In 1774, for example, a silver cup was sent to the Dean of Asaph in North Wales,[79] and in 1776 various silver articles were sent to the Reverend Levett, West Wycombe, Buckinghamshire.[80]

In addition to direct contacts with private customers, Boulton hoped in the early 1770s, when planning the silver business, to sell to the trade and to export. In 1772 copies of a letter were sent to eight London silversmithing firms who were informed that William Matthews – another of the partners' London agents – had been sent a large consignment of goods, which included silver items, and asked them to 'take a view of them'.[81] Earlier, in 1771, Parker and Wakelin, one of the firms to whom a copy of this letter was sent, had bought two pairs of candlesticks[82] and the partners also sold to trade customers elsewhere. Several articles were sent to Messrs. Adams and Sons of Walsall in 1774.[83] Equally, Boulton hoped to export. In 1773 he wrote to a William Baker, 'In consequence of our Assay Office I shall . . . make many curt articles in silver for exportation.'[84] Boulton was well placed to do so. In a letter to James Adam in 1770 he claimed that he had 'established a correspondence in almost every mercantile town in Europe'.[85] These connections had been built up for his other products but, as we shall see, the evidence for the later 1770s does not suggest that Boulton did take very much advantage of them as far as silver production was concerned. The reason for this, and the reasons for the comparatively small sale also to the trade in England, will later become apparent in this article.

Nevertheless, judging by the amount of silver sent by the partners to the Assay Office in Birmingham in the few years following its foundation in 1773, Boulton's marketing efforts were, it would seem, largely successful. In the assay year 1773–4, 9833 ozs 5 dwts 12 grs were marked and in 1776–7 11,831 ozs 3 dwts 12 grs. The latter figure was the highest achieved during the Boulton and Fothergill partnership.[86]

But this success cannot just be attributed to Boulton's energy and useful connections; a large part of it must also be attributed to his willingness to make a very large range of items at a lower price than his main competitors – the London silversmiths. In 1772 Sir Robert Murray Keith was told 'not only can we make such terrine as low but lower in price than any silversmith in London'.[87] In fact Boulton concentrated on these ornamental items in part at least for sound business reasons. As was explained to a Stephen Branston in 1775, 'We do not profess ourselves makers of the commonest Articles in Silver, such as quite plain spoons, Tankards, Muggs, etc., which are sold very low in London and other places, indeed we do not intend rivaling with them in the common way, having in general sufficient orders for ornamented Plate'.[88] In

fact the partners did sometimes make tankards for local customers[89] but their general position was on the whole maintained and in a letter of 1777 to a Thomas Miller in Kendal, the partners explained why, 'Pints and Tankards we make none in silver, as we have not means to render them so cheap as other manufacturers'.[90]

Exactly what means these other manufacturers used is not clear from the letter; it is, however, possible to explain the means by which Boulton hoped to make a profit on ornamental items while at the same time undercutting his competitors in London.

'It was always on Mr Boulton's mind', wrote James Keir, 'to convert such trades as were usually carried on by individuals into Great Manufactures by the help of machinery, which might enable the articles to be made with greater precision and cheaper, than those commonly sold.'[91] A plate in J. Bisset's *A Poetic Survey Round Birmingham* (plate 23) shows a collection of machines – a lathe, fly presses and a stamp – used by Birmingham button makers. As early as 1769 Boulton wrote in his notebook (in the context of producing silver) '. . . all our ornaments may be stamped or may be press[ed] in the fly press . . .'.[92] The calculations behind the use of machinery, and the consequences of doing so, can be understood by examining one of these – the stamp, immediately to the right of the 'scroll' in plate 23 – and the production of candlesticks like the pair of 'lion' candlesticks of 1774–5 (plate 24) at the Goldsmiths' Company, London.

Initially, a set of steel dies was sunk (one for each of the sections of the candlestick) and placed in turn at the bottom of the stamp and held firmly in the centre of the upright rods with the aid of four large screws and wedges of various sizes, called 'dogs'. Molten lead was then poured into the die to form a 'force' (the male die). A 'lickup' (a block of wrought iron toothed like a rasp) was fixed to the underside of the hammer head and lowered to pick up the molten lead after it had cooled and taken the impression of the die. The hammer (together with the 'lickup' and 'force') guided by grooved sides fitting the inside of the upright rods was first raised manually to the top of the stamp. When it was released the 'force' on its underside stamped a sheet of silver, and a set of protective copper linings placed on the die, into the pattern required. The copper sheets (which prevented the silver from cracking by too quickly assuming the pattern of the die and also prevented deposits of lead from attaching themselves to the silver) were taken away one by one as the hammer was successively raised and lowered. The stamping therefore received a progressively clearer impression of the details on the die.[93]

Stamps of this type were used in that part of the Soho Manufactory where silver was produced. In an inventory of 1782 'one large stamp and three hammers' and 'two small stamps and three Hammers' were listed in Thomas Moore's shop.[94] Although some parts of the 'lion candlesticks' (plate 25) were possibly made by other methods most exhibit the absolute uniformity to be expected of sections struck from the same die. For example, each of the panels on the terms contains one hundred and five horizontal grooves below the swags. Typical too of stamped candlesticks was the use of thinly rolled silver which – in order to provide sufficient weight and strength – necessitated their being filled with a substance which hardened on drying (plaster of

Paris or resin were used) and the insertion of a metal rod up the centre of the candlesticks.[95] Both of these additions have been made to the 'lion candlesticks' and may be detected by examining them underneath.

In 1773, John Scale, a manager at Soho, wrote to Boulton, who was then in London, providing him with statistical information which reveals their business calculations behind the production of 'lion candlesticks'. Although Scale put his firm's fashioning charge at 3*s*. 3*d*. per oz. as opposed to the 2*s*. 6*d*. per oz. he reckoned was charged by the London makers for the same pattern, the total cost of a pair of these candlesticks from the Soho Manufactory was substantially less – £17 2*s*. 0*d*. as against £44 11*s*. 0*d*. Scale went on to explain this enormous difference in price. The weight of silver needed for a pair of cast 'lion candlesticks' (as made by London silversmiths) was 108 ozs as opposed to only 38 ozs for those made with dies. Yet Scale clearly thought that dies produced candlesticks of high quality. In his letter to Boulton he added that he was sending (for inspection by prospective customers) 'a silver lion candlestick by which you may convince any reasonable impartial person of the utility of our machines (say stamps and dies, etc.)'.[96] Scale's confidence may in part be explained by the purchase of steel for dies from Benjamin Huntsman,[97] which was of a higher quality than that used before Huntsman's development in 1740 of the crucible process for making cast steel.[98] This steel made finer detailing when dies were sunk, this producing finer stamped details particularly where thin silver was used, and removed the earlier necessity for chasing details after the silver had been stamped.[99]

On the face of it, the production of candlesticks with dies would seem to fit exactly Boulton's general ambitions as stated by Keir. By this method large quantities of high quality pieces could be made easily and sold relatively cheaply. But despite the major marketing effort of the mid 1770s very considerable quantities were not sold. The largest number of candlesticks (to all patterns) marked in any assay year of the partnership was in 1773–4, when thirty-eight pairs plus one single candlestick were sent to the Birmingham Assay Office.[100]

This low figure can partly be explained by competition from Sheffield firms which made silver candlesticks by the same method.[101] Also, although Boulton offered customers a range of patterns (in 1775 Sir Robert Murray Keith was offered six patterns to choose from)[102] he nevertheless sometimes felt obliged to turn down orders when the customer required a pattern not already in the firm's range. The reasons for doing so were explained in a letter of 1776 to one of their London agents, 'Please to acquaint her ladyship our reason for not sending a drawing of the Cand^{k} she wanted Triangular, . . . to make it triangular [we] must be obliged to sink new Dyes which is very expensive work, and besides takes a long time in execution, so that if [we] were to make new Dyes [we] apprehend she would not chuse to wait so long and therefore thought best to decline it.'[103] The determination to maintain the principles of mass production was strong where the use of dies was involved. But, as will become apparent later in this article, customers who bought craft-made items were more readily supplied with individual requirements.

Silver production also suffered from competition with Sheffield plate. This

material – a thin layer of silver over copper – could be used to make candlesticks which looked the same as those in silver but nevertheless cost substantially less. The discovery that the two metals could be fused with heat and rolled out to form a sheet without their separating was made by Thomas Boulsover of Sheffield in 1743.[104] This was subsequently used, especially in Sheffield, to make most types of goods which were also made in silver,[105] and Boulton used it before 1765, since in that year a Thomas Jeffries was informed that the partners had 'much improv'd in plated [i.e. Sheffield plate] Candlesticks'.[106] Boulton later obtained some very large orders for Sheffield plate. In 1781, for example, forty pairs in different patterns were sent to an agent abroad.[107] This contrasts with the very small orders for silver candlesticks from the trade. For example, in February 1776 Parker and Wakelin in London were supplied with only two pairs,[108] and in July 1775 Josiah Birch and Son of Manchester were supplied with the same quantity.[109]

The reasons for the much higher production figures for Sheffield plate candlesticks are not hard to find. Because of factors which will become apparent later in this article Boulton did not normally offer trade customers any discounts for silver, and this contrasts with the advantages given to the trade for purchases of Sheffield plate. During the partnership discounts were normally either fifteen per cent or twenty per cent if paid for in six months but with an additional discount of five per cent if paid for immediately.[110] For all customers, moreover, the prices of Sheffield plate candlesticks were considerably lower. In November 1772 Lady Hertford was sent two pairs of 'lyon-faced Candks' (an alternative description for the 'lion candlestick') in Sheffield plate.[111] Her husband was charged £15 17*s.* 0*d.* for them.[112] We have already seen that in the preceding year Sir Alexander Gilmour paid £35 9*s.* 0*d.* for two pairs in silver to the same pattern. The Sheffield plate pairs were probably made from the same dies as were used for the silver pairs; an engraving of a Sheffield plate candlestick[113] to the 'lion-faced' pattern appears in the firm's pattern book[114] (plate 25) and apart from the satyr-like faces on two sides and the deeper base is identical with the silver pair already discussed (plate 24). In the mid 1770s Boulton sometimes tried unsuccessfully to persuade customers who ordered Sheffield plate to buy silver. In June 1774 Lord Ravensworth ordered four pairs of 'lyon-faced' candlesticks in Sheffield plate. A reply from the firm included the remarks, 'We have just executed a pattern for Silver Candlesticks the most beautiful we ever saw or made but it is of a nature that does not admit of its being executed in Plated Metal. It is entirely new and not yet known in London and if your Lordship or any or your friends should wish to have handsome silver candlesticks we can furnish you with such as have as much, nay we think more right to that apellation than any we have seen.'[115] Lord Ravensworth could not be persuaded. In August 1774 he bought two pairs of 'lyon-faced' candlesticks in Sheffield plate for himself and paid for another two pairs, to the same pattern and also in Sheffield plate, for the Marquis of Rockingham.[116]

We have seen how, without as much success as Boulton hoped for, a machine was applied to the production of silver, but it is clear that for other items mainly traditional craft techniques were employed. Plate 26 is one of a pair of tureens; the

oval cartouches on the friezes bear the arms of Elizabeth Montagu for whom the tureens were made in 1777. The oval covers have been hand-raised (perhaps by hammering them into a hollowed out block) and wide punches used from the outside to shape the flutes, the edges of which have been sharpened up from the inside. Specially shaped punches were used from the underside to create the general shape of the husks which have been given precise definition with punches on the outside. A rim, made of silver wire, has been soldered on and the edge of the cover matt-chased. The surprisingly small finial consists of two cast pieces with a small oval sheet beneath – the soldering marks are visible between these parts. The body of the tureen has been shaped in the same way as the cover, but with the addition of an applied chased foliate scroll frieze. At its bottom edge a wire has been applied, which had perhaps been drawn through a swage block. At its top edge the ribbon-bound reeded moulding was perhaps shaped with the aid of dies. The high looped handles were made from silver wires with the addition of acanthus detailing cut from a sheet and then chased. The base was hand-raised (the hammer marks are visible underneath) and the everted acanthus circle (immediately under the tureen's body) chased. The detailing towards the bottom edge of the base has been punched from the back and chased at the front.[117]

By the firm's own standards these tureens were very rich in design and workmanship, and it is apparent that they were different from any previously produced, since Mrs. Montagu was informed at about the time they were sent, 'we never made any so rich before . . .'.[118] But other mainly hand-made pieces were more simple and to a considerable extent were variations on one basic design. Plates 27, 28 and 29[119] are all taken from the firm's pattern book and these jugs show an almost identical 'pear-shaped' body and high handle but also considerable variety in ornamentation. A wine-jug at the Assay Office, Birmingham, 1776–7, was made to plate 32. The body has been hand-raised from a disc of silver, and the distinctive profile at the top created by cutting away the silver on the right-hand side and 'squeezing' the other side upwards and inwards to form a lip. The handle consists of a long, bent strip of silver ornamented with fine twisted wires on the outer edges and in the centre a beading so regular that it has probably been shaped by some mechanical device. The handle is joined to the body at both ends with an acanthus leaf decoration cut from a silver sheet and chased. The base has been hand-raised, but silver wires have been added at its top and bottom edges while the general profile has been given a step which has possibly been sharpened up by turning it on a lathe. Exactly why the variations in detailing in plates 27, 28 and 29 were made is not known, but according to James Keir, customers expected to buy individually designed items. He wrote '. . . in all such articles of fancy every purchaser chuses to display his own taste (sometimes his want of taste) by chusing his designs . . .'.[120] Customers were usually sent designs but, where hand-made pieces were concerned, were sometimes invited to supply their own ideas. In 1776, for example, Mrs Montagu was sent sketches for cassolettes and the accompanying letter added, 'If there is any other taste which you have seen and that you think prettier, we should be obliged to you for a hint of it and we will make

designs accordingly.'[121] But through sending designs to customers the chances of being able to make a piece basically the same as others already made were increased. Also the varied detailing on the three jugs could have been made quite easily since it occurs on other pieces of Boulton and Fothergill silver. For example, the fluting at the top of plate 28 could well have been made with the same tools as were used for Mrs Montagu's tureens (plate 26) and the festoon of husks on plate 29 is the same as that on the cup and cover of 1777–8 (plate 30), made by applying cut out sheets of silver and chasing the details.

Exactly what was charged for the tureens and jug is not known, but, as we have seen, Boulton offered to make pieces below London prices. In a letter of 1777 to Mrs. Montagu she was told that her table plates had been charged (for the fashioning) at the rate of one shilling and twopence per ounce whereas a London silversmith would have charged one shilling and sixpence per ounce for the same work.[122] Because Boulton's charges were low he was not normally able to offer discounts to the trade. As Josiah Birch and Son of Manchester were informed in 1775, 'We do not allow any discount upon Silver Articles the fashions being so low . . .'.[123]

How then did Boulton propose to make a profit when for many pieces his silversmiths were using basically the same craft techniques as the Londoners, and when he charged his customers at a lower rate? He would have gained an advantage over them if a substantial number of items were made to the same pattern, but, as we have seen, some variations at least were required by customers and standarization was considerably less beneficial anyway where the inherently more flexible craft methods were involved than was the case when dies were employed. Exactly what benefits Boulton hoped for, and achieved, in standardization is not clear, but it seems very likely that he deliberately planned to be content with small profits on each article; though by making a great number he hoped to make overall a large profit. Such an interpretation of his intentions can be supported by a letter he wrote in 1774, when referring to his general philosophy of manufacturing: 'I understand my own interest too well to load any articles of my Manufactory with too extravagant a profit, as I rather choose to make great quantities with small profits, than small quantities with large profits'.[124] In silversmithing Boulton probably thought there was some room for manoeuvre because the profits of London makers were regarded by the Sheffield and Birmingham silversmiths as excessive. In the document by them produced shortly before the passing of the 1773 Act they wrote that the price of London plate was not 'so reasonable as to admit of its rivalling foreign plate'.[125]

According to Francis Eginton, who was in partnership with Boulton and Fothergill in the production of silver, Sheffield plate and ormolu by 1 January 1776, until 31 December 1778,[126] Boulton's willingness to take orders at below London prices was an error. James Keir informed Boulton in February 1779 that '. . . Mr Egginton says nothing can be made of it at the prices at which you took orders, which prices he knows to be under the London prices'.[127] This was not the first time that Boulton had been criticized by informed opinion within the Soho Manufactory for the way in which he priced products. In February 1773 John Scale, at that time a manager there, had the temerity to censure Boulton for fixing prices in a rough and

ready manner,[128] which was before silver production had begun in earnest and at a time when the partners' financial difficulties had become acute.

It is impossible to be certain whether or not Boulton could have secured orders by offering to make them at the same price as his London competitors. It is certain, however, that the lack of profit in silversmithing was also at least partly caused by the firm's general financial weakness.

In December 1772 a loss of £6946 7*s*. 5*d*. was recorded for the previous four years[129] and in 1773 the partners Bill Account stood at £10,000.[130] It has been estimated that the annual expenditure in interest and commission on this Bill Account with their bankers amounted to between seven and a half per cent and ten per cent of the total sum in advance.[131] Any time taken, therefore, between the firm's payments for raw materials and payments made by customers for goods made with those materials involved a temporary increase in their Bill Account and consequently an increase on the interest and commission charges made by the partners' bankers. This applied to all items made at the Soho Manufactory but the problem was particularly severe where, as with silversmithing, the material involved was expensive, and the quantities required were large. In July 1773 the partners paid, at the rate of 5*s*. 7*d*. per ounce,[132] for 500 ozs of sterling silver; in the following month they paid for a further 200 ozs,[133] and in the month after that they paid for another 500 ozs.[134] These figures provide a fair picture of the quantities required in the mid-1770s.

In order to minimize further strain on the Bill Account Boulton took two decisions. In 1772 he negotiated a three month period of credit with his supplier of silver, Robert Albion Cox, a London dealer. Cox was informed, 'as Gold and silver was [*sic*] almost the only articles in our Trade, by which we could receive any convenience from Credit, and although We have a very large sum employed in our Trade, Yet it is now so extensive that some indulgence in Time would be an inducing thing to us, that if he thought our draft at 5 months (paying interest for 2 months) would be agreeable to you, it would be quite satisfactory to us and be quite decisive upon that Head'.[135] This was the basis on which Boulton subsequently paid Cox for silver,[136] and from 1778 the basis on which he paid another silver supplier, Floyer and Price, also of London, though for some supplies the partners were given two rather than three months credit.[137] Secondly, Boulton attempted to secure payment from customers as quickly as possible and called silver 'a ready money article'.[138] They expected customers to pay within either two[139] or three months[140] of receiving the goods.

But Boulton had miscalculated; on far too many occasions customers failed to pay within these periods. A cup and cover (plate 30) was sent to Cornelius O'Callaghan in December 1777 with some other silver articles.[141] Almost exactly a year later payment was still being requested,[142] and that was not received until sometime early in 1779, and even then the account was not paid in full, since only £100[143] out of the original charge of £123 4*s*. 5*d*. was remitted. Yet several reminders had been sent long before this. In a letter of December 1778 to O'Callaghan it was pointed out that six months had elapsed since his letter of 20 June promising payment and that the partners had twice asked for payment since then.[144] Earlier in January,

after receiving the first request for payment, he had promised to pay about the middle of the following May.[145] Delays in receiving payment were by no means exceptional. Lady Morton had been sent, early in May 1778, a service of plate for which she was charged £52 12*s*. 11*d*.,[146] but payment was not received until January 1779.[147] In November 1778 an order which included silver articles was sent to a London merchant to be sent on to Paul Cieppi in Milan;[148] the payment of £39 1*s*. 0*d*. was permitted by the London agent for June 1779.[149] Difficulties in securing money from abroad were severe. In 1774 M. F. A. Muller was sent by the partners to Russia to visit 'old correspondents and to establish new ones' and took various samples including some in silver.[150] His travelling expenses alone came to £1,200 and he sent orders to the partners worth several thousands of pounds which were never paid for.[151]

Boulton's fear of adding to the Bill Account frequently led him to make reductions in the fashioning charges of articles to dissatisfied customers who he feared might return them. Because of a dispute in the price of a coffee pot made in 1777 for a John Glover the purchaser was offered a reduction of sixpence per ounce for the fashioning.[152] In the following year a Thomas Graham complained that the charge for the engraving of 108 crests on his plate was too high; he was allowed a reduction of £2 14*s*. 0*d*. which was fifty per cent of the original charge.[153] Plate marked with the crest of one patron would not be bought by another and such engraving was not easy to erase. Even when plate did not have crests or coats or arms the disadvantages of taking it back were clear enough. In 1777 four silver-gilt monteiths were supplied to the Duke of Ancaster for £71 7*s*. 6*d*.[154] It became apparent that the Duke had in fact required them in gilt base metal and although the responsibility for the error in the original order is not clear (they were ordered through one of the partners' London agents) it was decided to remove entirely the cost of the fashioning. The motives for doing so were explained to the Duchess of Ancaster: '. . . we shall not only sustain the loss of all the fashion, but the charge of seperating (by a Troublesome and expensive operation) the Gold from the Silver, and if we were to keep them for the chance of selling them it would still be worse, as we might keep them Ten years before we found a purchaser and at last sit down with the additional loss of ye Int[erest] of all the money . . .'.[155] The monteiths were reduced to £59 4*s*. 10*d*.[156]

Whereas Francis Eginton identified low prices as the cause of the financial failure of Boulton's ambitions in silversmithing, James Keir saw that the matter was in fact more complex. In 1809 he wrote that the silver business 'was not profitable in consequence of the great value of the material, the loss of interest upon which was not compensated by the additional price put upon it for workmanship'.[157]

But the lack of success in silver production was also due to other problems within the Manufactory. Because of the absence of a silversmithing tradition in Birmingham Boulton had to recruit some staff from London and the consequences of doing so were often far from happy. In January 1771 he invited an 'inordinate chaser', Dumée, a cousin of the more celebrated Nicholas Dumée[158] who was at that time in partnership with Francis Butty in London;[159] he resigned in March 1773 after Francis Eginton had prevented him from chasing some coffee pots.[160] Anthony Burn was invited to Soho in May 1776 despite a reputation for being 'fickle minded' and 'in-

different' as a workman;[161] he left in July 1777 owing the partners £25 1s. 11*d*.[162] Sometimes the silversmiths were blamed for the partners' inability to deliver goods on time. In February 1775 Lord Gower was told that the delay in sending a tea kitchen was due to the 'misfortunes we have met with in not getting silversmiths to our liking'.[163] But the inefficiency of the silversmiths was not the only reason for delay; two years later apologies had again to be sent to Lord Gower with a coffee pot and this delay was explained on the grounds that 'our Artificers in ye Silver Branch have been for some time past fully employed in executing two Services of plate'.[164] These delays sometimes had serious consequences for the firm. In July 1775 Josiah Birch and Sons of Manchester were told that the partners were 'sorry to perceive our delay in the execution of these Candks. should cause you to get others from London that you intended having of us'.[165]

As the difficulties and lack of profitability became apparent the partnership's general financial position deteriorated still further. In December 1777 the Bill Account had soared to only a little less than £25,000, which was partly due to losses incurred during the previous ten years of £11,000.[166] The Bill Account, according to Boulton, had originated in spending £10,000 on the buildings at Soho when he had initially intended to lay out £2,000.[167] The serious consequences of this miscalculation persisted throughout the partnership. Boulton's hopes for financial recovery were pinned on another enterprise – the production of the steam engine. In 1775 he had entered into a partnership with James Watt[168] (in addition to the separate partnership with Fothergill) to promote Watt's development of a separate condenser for the atmospheric engine.[169] This improvement, which had been patented in 1769,[170] resulted in a saving of between two-thirds and three-quarters of the amount of coal required as fuel, compared with the traditional Newcomen engine, to do the same amount of work.[171] In this venture Boulton and Watt were financially successful. The total income from the production of these engines and the rotative engines developed by Watt (and protected by patents of 1781, 1782 and 1784)[172] amounted to £76,000 just in the period from 1780 to 1791.[173]

From the mid-1770s Boulton devoted a very large proportion of his time to the marketing of the steam engine and in doing so largely deprived the silver business of its most able salesman. Time and time again letters to customers about silver orders were delayed because of his absences on steam engine business. For this reason, in 1777, for example, important customers like Sir Walter Blount,[174] Lady Morton[175] and Mouschin Poushkin[176] were kept waiting. As we have seen before, delays could lose orders, but this was not the only reason why customers might well have been persuaded to look elsewhere for silversmiths to provide their requirements. By law, standard silver had to contain 11 ozs 2 dwts of fine silver and 18 dwts of alloy in every troy pound. In 1773 it was pointed out by R. A. Cox, a London refiner, that these proportions were not normally adhered to either by the London silversmiths or at Goldsmiths' Hall. According to Mr Cox, it was 'found to be a custom to pass silver 2½ dwts worse than standard, and therefore they sold such'.[177] As was pointed out by the partners to a customer in October 1775, the Birmingham Assay Office passed silver only if it met the legal standard and the partners calculated that this added ½*d*. per

ounce to the price they had to charge their customers in comparison with their London rivals.[178] In 1774 the partners wrote to His Majesty's Solicitor General, pointing out the anomaly and pressing for a debate on the matter in Parliament,[179] but they subsequently still had to labour under this disadvantage and many letters were sent to customers anxiously explaining their difficulty. In February 1777 Mrs Montagu was given details of the price difference this caused for her silver order and the letter included the remarks, 'We fear you'll think silver price high, but 'tis no more than we pay for it ourselves, as you'll see by the inclosed letters of R. A. Cox.'[180] The quality of the 'standard' silver sold to Cox's London customers evidently differed from that which he sold to Boulton and Fothergill.

Faced with all these difficulties, silver production was gradually reduced. In the assay year of 1781–2 the partners sent only 1174 ozs 17 dwts for marking at the Birmingham Assay Office.[181] Production did not decline because of any sudden reduction in the demand for silver in England generally. Judging by the quantity they sent to their Assay Office, the production of Sheffield silversmiths remained fairly steady. In 1774–5 the total of wares marked there was 36,130 ozs and in 1782–3 30,988 ozs.[182] Boulton's other commitments made it more difficult to get orders but even when they were forthcoming in the late 1770s they were often rejected. In May 1778 Fothergill wrote to Boulton, who was then in London, 'I am glad you have determined to have the remainder of Harris' plate finish'd in London for we have certainly lost much money by that order'.[183] The inability to make a profit on silversmithing in the partners' precarious financial position was the decisive reason for reducing production. In February 1777 Preston and Co. of Liverpool were informed that their order for silver jugs was being rejected even though this item had been made for them only a year before. The letter continued, '. . . we are about declining our silver Branch, on account of the Interest of our Dead Stock running away with more than our Profit on this article . . .'.[184] The partners decided to concentrate their efforts on Sheffield plate at the expense of silver. In May 1778 Fothergill wrote to Boulton, 'Bill Bingley should be at the head of our Plated articles w^{ch} he could completely attend to provided we accept no more orders for Services of Plate . . .'.[185]

The partnership between Boulton and Fothergill came to an end with the latter's death in 1782.[186] Although Boulton resolved to carry on the hardware business at the Soho Manufactory, and split it into two branches – the Button Company and the Plated Company[187] – the production of silver declined still further immediately after Fothergill's death. In the assay year 1782–3 only 263 ozs were sent for marking.[188] As a business venture, silversmithing had been a failure, but it had enabled Boulton to achieve one of his ambitions. As James Keir wrote in a Memoir shortly after Boulton's death in 1809, if he 'did not receive from . . . the elegant branches of his manufacture, the intended recompense of all commercial industry, it is certain that they greatly tended to his celebrity and admiration of his various talents, taste and enterprise'.[189]

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NOTES

Many references have been taken from The Matthew Boulton Papers, which are the property of The Matthew Boulton Trust and are deposited at the Birmingham Reference Library. References from this source are indicated by the initals M.B.P. Much of the statistical information in this article has been taken from a photocopy of *The Register of Plate and Silver Wares Assayed and Marked or Broke at the Birmingham Assay Office, August 31st 1773–March 20th 1792*. The Plate Register, as it is usually referred to, is in the possession of the Assay Office, Birmingham, and its use in this article is indicated by the initials P.R. The figures given here are based on the amount of silver sent and marked.

1 E.g. Dickinson, H. W., *Matthew Boulton*, Cambridge, 1937, p. 65. Robinson, Eric. 'Eighteenth Century Commerce and Fashion: Matthew Boulton's Marketing Techniques', *Economic History Review*, 2nd series, Vol. XVI, No. 1, 1963, pp. 40–6.

2 M.B.P. Boulton and Fothergill to Reinhold, Vorwerk & Co. 5 November 1764. Letter Book A, pp. 183–4

3 Sketchley and Adams. *Tradesman's True Guide; or an Universal Directory for the Towns of Birmingham, Wolverhampton etc*, 1770, p. 12 and p. 54.

4 M.B.P. Boulton and Fothergill to John Motteux, 23 February 1768. Letter Book C, pp. 76–8.

5 M.B.P. Matthew Boulton to J. H. Ebbinghaus, 2 March 1768. Letter Book C, p. 68.

6 M.B.P. Matthew Boulton to Earl of Shelburne, 7 January 1771. Letter Book E, p. 2.

7 Dickinson, H. W., *op. cit.*, p. 45.

8 *Ibid.*, p. 25.

9 *Ibid.*, p. 25.

10 Cule, J. E., *The Financial History of Matthew Boulton 1759–1800*. Unpublished thesis for the Degree of Master of Commerce, Birmingham University, October 1935, p. 1.

11 Dickinson, H. W., *op. cit.*, pp. 42–3.

12 M.B.P. John Fothergill to Mr John Lewis Baumgartner, 13 July 1765. Letter Book B, p. 158.

13 Ground Plan of the Buildings belonging to the works at the Soho (except the Mint and building adjoining) standing on the land now under lease to Mr Boulton. Taken in June 1788 by J. A. Smith. Box 25, Boulton and Watt Collection, Birmingham Reference Library.

14 M.B.P. 1 Parcel Tew Manuscripts, Drawings and Tracings of Plans, etc., No. 4.

15 M.B.P. Matthew Boulton to Robert Mylne, 4 November 1775. Letter book G, p. 462.

16 Plan of Land and Property at Handsworth, etc., 1805. Birmingham Reference Library Manuscript No. 383089.

17 Pelham, R. A., 'The water power crisis in Birmingham in the eighteenth century', *University of Birmingham Historical Journal*, Vol. IX, No. 1, 1963, p. 33.

18 M.B.P. Matthew Boulton to Robert Mylne, 4 November 1775. Letter Book G, p. 462.

19 Cule, J. E., *op. cit.*, pp. 21–2.

20 The Sir Benjamin Stone Collection of Photographs, Birmingham Reference Library, Box 14, Print Number 33. Photograph here dated 1860–1866 but must be shortly before or during 1862 (see text).

21 Hill, J., *Notebook Handsworth and Perry Barr*. Birmingham Reference Library, Manuscript Number 661022, p. 96.

22 M.B.P. Boulton and Fothergill to 'Montreal' 15 December 1763. Letter Book A, p. 95. The reference to candlesticks constructed from thin sheets of silver and filled ('d'argent fourre ou du metal mis en lame') was the method employed in the production of 'lion candlesticks' discussed later in this article. Previous writers on Boulton and Fothergill have proposed a variety of dates for the beginning of their silver production. Delieb (Eric Delieb and Michael Robers, *The Great Silver Manufactory*, London 1971, p. 37) refers to a letter of 30 July 1763 as 'the very first mention of the use of silver, in buckles, at any rate, by Boulton and Fothergill'. The letter (M.B.P. Boulton and Fothergill to Conrad von der Becker, 30 July 1763, Letter Book A, p. 70) refers to the partners' production of 'heavy steel Chapes for Silver Buckles of W^ch we have a very considerable manufactory'. In my view the partners 'considerable manufactory' refers to the steel chapes and not the silver buckles. My view is supported by another letter written in the following year to 'Quebec' (like 'Montreal' a code name for an agent abroad) which refers to the partners' chapes 'dont nous en fournissons . . . aux orfèvres pour des Boucles d'argent . . .' (M.B.P. Boulton and Fothergill to 'Quebec', 7 November 1764, Letter Book A, p. 187). Dickinson, H. W. *op. cit.*, p. 53, gives 1765 as the earliest date for silver production.

23 M.B.P. Boulton and Fothergill to Benjamin Molineux, Wolverhampton, 28 February 1766. Letter Book B, p. 325.
24 M.B.P. Boulton and Fothergill to Mr Matthews, 10 June 1776. Letter Book G, p. 633.
25 Timmins, S. *Collection of Original Letters*, etc., part 1, p. 11. William Fothergill to Boulton and Fothergill, London, 6 June 1769. Birmingham Reference Library, Manuscript Number 82934.
26 The pair in the Grosvenor Museum does not have the makers' marks, but can be securely attributed to Boulton and Fothergill. The pattern is identical with another pair of 'lion candlesticks' at the Goldsmiths' Company with their makers' marks (plate 29).
27 M.B.P. Matthew Boulton to the Earl of Shelburne, 7 January 1771. Letter Book E, p. 2.
28 M.B.P. Boulton and Fothergill to Parker and Wakelin, 16 November 1771. Letter Book E, p. 277.
29 Dickinson, H. W., *op. cit.*, p. 63.
30 *Memorial Relative to Assaying and Marking Wrought Plate at Birmingham*, 1773. Quoted in Westwood, Arthur. *The Assay Office at Birmingham Part 1: Its Foundation*, Birmingham, 1936, p. 12.
31 Goodison, Nicholas, *Ormolu: The Work of Matthew Boulton*, London, 1974, p. 63. Goodison states that Boulton usually meant by ormolu a 'metal, normally brass but sometimes bronze or copper, which has been gilt by the process of mercurial gilding'.
32 *Ibid.*, p. 25.
33 *Ibid.*, p. 25.
34 *Ibid.*, p. 38.
35 *Ibid.*, p. 38.
36 *Ibid.*, p. 44.
37 M.B.P. Ledger, Soho, Boulton and Fothergill 1776–8. Several departments producing buttons are listed here, e.g. 'Buttons and Scale', p. 243; 'Solid, Shank'd, Gilt, and Plated Buttons', p. 106; and 'Buttons in partnership with Wyatt', p. 116.
38 M.B.P. These figures have been calculated from a series of letters sent to James Folliott, who arranged for the assaying and marking of the partners' silver in Chester. Letter Book E.
39 M.B.P. Boulton and Fothergill to David Melvill, Dublin, 24 February 1773. Letter Book F, p, 153.
40 Westwood, Arthur, *op. cit.*, pp. 3–8.
41 *Ibid.*, p. 16.
42 M.B.P. Boulton and Fothergill to Mr Gilbert Dixon, Attorney at Law in Sheffield, 24 December 1772. Letter Book E, pp. 680–1.
43 Westwood, Arthur, *op. cit.*, p. 29.
44 De Castro, J. Paul, *The Law and Practice of Hall-marking Gold and Silver Wares*, London, 1935, p. 54.
45 Diett silver is the silver scraped from articles by the assayers. Tests were carried out on these samples to determine whether or not the article contained the required percentage of pure silver. After tests had been carried out the scrapings were placed in a Diett box and weighed at the end of the assay year. These totals therefore provide a guide to the amount of silver assayed during each year. I am grateful to Mr J. S. Forbes, Deputy Warden, Assay Office, Goldsmiths' Hall, and Miss Susan Hare, Librarian of the Goldsmiths' Company for advice in the use of records in the possession of the Goldsmiths' Company.
46 Goldsmiths' Company. *Court Minute Book 1742 to 1754*. New Series 15, No. 1558:B39. Report of the Diet, 28 May 1743, pp. 34–5.
47 *Ibid.*, 28 May 1753, p. 390.
48 Goldsmiths' Company. *Court Minute Book 1754 to 1767*. New Series 16. No.1559:B39. Report of the Diet, 28 May 1763, pp. 281–2.
49 Goldsmiths' Company. *Court Minute Book 1767 to 1777*. New Series 17. No.1560:B39. Report of the Diet, 28 May 1773, pp. 241–2.
50 *Report from the Committee Appointed to Enquire into the Manner of Conducting the Several Assay Offices in London, York, Exeter, Bristol, Chester, Norwich and Newcastle-upon-Tyne*. London, 1773, p. 63.
51 *Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent*, quoted by Westwood, A., *op. cit.*, p. 21.
52 *Ibid.*, p. 21.
53 Dickinson, H. W., *op. cit.*, pp. 18–19.
54 Goodison, Nicholas, *op. cit.*, p. 38.
55 M.B.P. Boulton and Fothergill to the Duke of Northumberland, 14 September 1774. Letter Book G, p. 124.
56 M.B.P. A. J. Cabrit to William Matthews, 21 July 1772. Letter Book E, p. 520.
57 Goodison, Nicholas, *op. cit.*, p. 256.
58 M.B.P. A. J. Cabrit to Lord Kerry, 21 February 1772. Letter Book E, p. 372.
59 M.B.P. James Keir to Matthew Boulton? n.d. (probably 1777) in Box Keir, James. Item 17. In this letter Keir accepted a managerial role

at the Soho Manufactory, which was to begin on 1 January 1778. He had therefore once been in a good position to later write about the partners' business.

60 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, 3 December 1809, in Box Boulton M. Biograph. Memoir. Decease. Funeral. Prints. Medals. Item 112, Sheet 2.

61 Dickinson, H. W., *op. cit.*, p. 54. Mrs Montagu was by birth a Robinson, which was the maiden name of Boulton's first and second wife. His wives were sisters. Cf. *ibid.*, p. 34.

62 M.B.P. Boulton and Fothergill to Mrs Montagu, 30 November 1776. Letter Book G, p. 757.

63 M.B.P. Boulton and Fothergill to William Matthews, 19 January 1772. Letter Book E, p. 353.

64 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, etc., *op. cit.*, sheet 2.

65 M.B.P. Boulton and Fothergill to Sir Alexander Gilmour, 12 October 1771. Letter Book E, p. 218.

66 M.B.P. Boulton and Fothergill to Mr Taylor 22 February 1777. Letter Book G, p. 841.

67 Goodison, Nicholas, *op. cit.*, p. 53.

68 M.B.P. Boulton and Fothergill to James Stuart, n.d., about 1 August 1771. Letter Book E, p. 161.

69 M.B.P. Boulton and Fothergill to James Stuart, 5 October 1771. Letter Book E, pp. 212–13.

70 Fergusson, Frances, Wyatt Silver, *The Burlington Magazine*, Vol. 116, December 1974, pp. 751–5.

71 M.B.P. Boulton and Fothergill to James Wyatt, 4 June 1774. Letter Book F, pp. 498–9.

72 M.B.P. Boulton and Fothergill to Samuel Ballin, 11 January 1776. Letter Book G, p. 509.

73 The Pantheon, Oxford Street, London, 1770–2. Cf. Summerson, John, *Architecture in Britain, 1530–1830*, Harmondsworth, 5th edition 1970, p. 458.

74 M.B.P. Boulton and Fothergill to His Highness the Prince Holstein, 28 February 1776. Letter Book G, p. 558.

75 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, etc., *op. cit.*, sheet 1.

76 M.B.P. Boulton and Fothergill to J. C. Talbot, Ingestrie near Stafford, 24 September 1774. Letter Book G, p. 141.

77 M.B.P. Boulton and Fothergill to the Earl of Warwick, 6 September 1774. Letter Book G, p. 180.

78 M.B.P. Boulton and Fothergill to James Brazier, 4 August 1774. Letter Book G, p. 86.

79 M.B.P. Boulton and Fothergill to the Dean of St Asaph, Asaph Palace, North Wales, 1 August 1775. Letter Book G, pp. 390–1.

80 M.B.P. Boulton and Fothergill to the Reverend Levett, West Wycombe, 27 June 1776. Letter Book G, p. 647.

81 M.B.P. Boulton and Fothergill to Parker and Wakelin, William Townsend, Henry Morris, Stephen Unwin, Jefferys and Drury, Woolley and Heming, Edward Scales, William Webb, 29 February 1772. Letter Book E, p. 379.

82 M.B.P. Boulton and Fothergill to Parker and Wakelin, 16 November 1771. Letter Book E, p. 277.

83 M.B.P. Boulton and Fothergill to Messrs. Adams and Sons, Walsall, 18 June 1774. Letter Book G, p. 21. Also Boulton and Fothergill to Messrs. Adams and Sons, 26 May 1774. letter Book G, p. 9.

84 M.B.P. Matthew Boulton to William Baker, 14 June 1773. Letter Book D, p. 79.

85 M.B.P. Matthew Boulton to James Adam, 1 October 1770. Letter Book D, pp. 29–30.

86 The total given for 1776–7 includes four boxes weighing 10 ozs 1 dwt 12 grs assayed on 1 July 1777, which though entered in the Plate Register under Boulton and Fothergill's names and therefore received their makers' mark were in fact made by John Bentley of Birmingham. He was charged one shilling by the partners since they arranged for this marking to be done. (M.B.P. Ledger, Soho. Boulton and Fothergill Ledger, 1776–8, 2 July 1777, p. 252) The total for 1776–7 does not include two pairs of candlesticks sent to Patrick Robertson in Edinburgh during that assay year, which were not marked at Birmingham (M.B.P. Boulton and Fothergill to Patrick Robertson, Edinburgh, 13 July 1776. Letter Book G, p. 658). The weights for these candlesticks were not recorded in this letter to Robertson. It is quite possible that Boulton sent other pieces to customers during these years which were not marked at the Birmingham Assay Office – even though, as was pointed out in the letter to Robertson, the practice was illegal at that time.

87 M.B.P. Boulton and Fothergill to Sir Robert Murray Keith, 23 August 1772. Letter Book E, p. 553.

88 M.B.P. Boulton and Fothergill to Mr Stephen Branston, Hull, 25 August 1775. Letter Book G, p. 407.

89 M.B.P. A. J. Cabrit to Adams and Son, Walsall, 7 July 1774. Letter Book G, p. 59.

Letter accompanying invoice for a tankard.

90 M.B.P. Boulton and Fothergill to Thomas Miller, 25 October 1777. Letter Book I, p. 108.

91 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, etc., *op. cit.*, sheet 1.

92 Goodison, Nicholas, *op. cit.*, p. 65.

93 This paragraph is based on an account in Bradbury, Frederick, *History of Old Sheffield Plate*, Sheffield, reprint 1968, pp. 103–6.

94 M.B.P. Soho Inventory 1782, p. 104.

95 Bradbury, Frederick, *op. cit.*, p. 215. Bradbury discussed here silver candlesticks made in this way.

96 M.B.P. John Scale to Matthew Boulton, 7 February 1773, in Box Scale, John. Boulton and Scale (Matthew Boulton and Plate Co.) Scale Family Item 13.

97 M.B.P. Boulton and Fothergill to Benjamin Huntsman, 9 August 1764. Letter Book B, p. 8. An order for a bar of steel 'to forge into some fine dyes'.

98 Gale, W. K. V., *The British Iron and Steel Industry*, Newton Abbot, 1967, p. 36.

99 Culme, John, *Nineteenth Century Silver*, London, 1977, p. 12.

100 P.R.

101 Bradbury, Frederick, *op. cit.*, p. 215.

102 M.B.P. Boulton and Fothergill to Sir Robert Murray Keith 16 September 1775. Letter Book G, p. 421.

103 M.B.P. Boulton and Fothergill to John Wyatt, 9 March 1776. Letter Book G, p. 565.

104 Bradbury, Frederick, *op. cit.*, p. 13.

105 Bradbury, Frederick, *ibid.*, p. 40.

106 M.B.P. Boulton and Fothergill to Thomas Jeffries, 12 January 1765. Letter Book B, p. 50.

107 M.B.P. Boulton and Fothergill Day Book, 1779–81, p. 583, 2 March 1781. The agent was code-named 'AIK Timana'. Who exactly 'AIK Timana' was is not known but Boulton's foreign agents were regularly given code names (see note 22 for other examples).

108 M.B.P. Boulton and Fothergill to Parker and Wakelin, 16 February 1776. Letter Book G, p. 535.

109 M.B.P. Boulton and Fothergill to Josiah Birch, 3 July 1775. Letter Book G, p. 360.

110 M.B.P. Boulton and Fothergill to John Turner, Derby, 31 October 1774. Letter Book G, pp. 169–70.

111 M.B.P. Boulton and Fothergill to Lady Hertford, 11 November 1772. Letter Book E, p. 634.

112 M.B.P. Boulton and Fothergill to the Earl of Hertford, 28 November 1772. Letter Book F, p. 102.

113 This engraving was almost certainly cut from a 'Book of Plated Wares'. These catalogues were frequently sent to trade customers, e.g. 'AB2 Janeiro', 20 March 1780. M.B.P. Boulton and Fothergill Day Book, 1779–81, p. 174.

114 Boulton and Fothergill Pattern Book I, p. 47. New Number 169. Boulton and Watt Collection, Birmingham Reference Library.

115 M.B.P. Boulton and Fothergill to Lord Ravensworth, 11 June 1774. Letter Book G, p. 24.

116 M.B.P. Boulton and Fothergill to Lord Ravensworth, n.d. (about 11 August 1774). Letter Book G, p. 94.

117 I am grateful to Mr Gerald Whiles and Mr Stephen Fisher of the School of Jewellery and Silversmithing, Birmingham Polytechnic, for help in understanding technical aspects of silver production.

118 M.B.P. Boulton and Fothergill to Mrs Montagu, 15 February 1777. Letter Book G, p. 830.

119 All of these patterns are in the Boulton and Fothergill Pattern Book I, *op. cit.*, plate 27, p. 81j, plate 28, p. 79, plate 29, p. 87.

120 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, etc., *op. cit.*, sheet 2.

121 M.B.P. Boulton and Fothergill to Mrs Montagu, 23 December 1776. Letter Book G, pp. 786–7.

122 M.B.P. Boulton and Fothergill to Mrs Montagu, 15 February 1777. Letter Book G, p. 830.

123 M.B.P. Boulton and Fothergill to Josiah Birch and Son, Manchester, 19 July 1775. Letter Book G, pp. 378–9.

124 M.B.P. Matthew Boulton to Mr V. Green, 6 August 1774. Letter Book G, p. 87.

125 *Reply of the Petitioners from Birmingham and Sheffield to the Case of the Goldsmiths, Silversmiths, and Plateworkers of the City of London and Places Adjacent*, quoted by Westwood, A., *op. cit.*, 21.

126 Goodison, Nicholas, *op. cit.*, p. 184.

127 M.B.P. James Keir to Matthew Boulton, 11 February 1779, in Box Keir, James. Item 40.

128 Cule, J. E., *op. cit.*, p. 39.

129 *Ibid.*, p. 37.

130 *Ibid.*, pp. 56–7.

131 *Ibid.*, p. 136.

132 M.B.P. Boulton and Fothergill to R. A. Cox, 7 July 1773. Letter Book F, p. 259.

133 M.B.P. Boulton and Fothergill to R. A. Cox, 11 August 1773. Letter Book F, p. 294.

134 M.B.P. Boulton and Fothergill to R. A. Cox, 30 September 1773. Letter Book F, p. 331.
135 M.B.P. Boulton and Fothergill to R. A. Cox, 26 September 1772. Letter Book F, p. 60.
136 M.B.P. Boulton and Fothergill to R. A. Cox, 6 July 1774. Letter Book F, pp. 520–1.
137 M.B.P. Boulton and Fothergill to Floyer and Price, 7 October 1778. Letter Book H, p. 706.
138 M.B.P. Boulton and Fothergill to Josiah Birch and Son, Manchester, 19 July 1775. Letter Book G, pp. 378–9.
139 M.B.P. Boulton and Fothergill to Adams and Son, Walsall, 2 July 1774. Letter Book F, pp. 515–6.
140 M.B.P. Boulton and Fothergill to Robert Gray, 9 October 1776. Letter Book H, p. 24.
141 M.B.P. Boulton and Fothergill to Cornelius O'Callaghan, 16 December 1777. Letter Book I, p. 140.
142 M.B.P. Boulton and Fothergill to Cornelius O'Callaghan, 12 December 1778. Letter Book H, p. 803.
143 M.B.P. Boulton and Fothergill to Travers Hartley and Son, 24 March 1779. Letter Book H, p. 893.
144 M.B.P. Boulton and Fothergill to Cornelius O'Callaghan, 12 December 1778. Letter Book H, p. 803.
145 M.B.P. Boulton and Fothergill to Samuel Brooke, 4 February 1778. Letter Book H, pp. 457–8.
146 M.B.P. John Hodges to John Stuart, 6 May 1778. Letter Book I, p. 221.
147 M.B.P. Boulton and Fothergill to John Stuart, 19 December 1778. Letter Book H, p. 813.
148 M.B.P. Boulton and Fothergill to Antonio and Bartholomew Songa, n.d., (mid-May 1779). Letter Book H, pp. 953–4.
149 M.B.P. Boulton and Fothergill to A. and B. Songa, 22 May 1779. Letter Book H, p. 958.
150 M.B.P. Boulton and Fothergill to Mouschin Poushkin, Russian Minister in London, 15 October 1774. Letter Book F, pp. 595–7.
151 Cule, J. E., *op. cit.*, p. 62.
152 M.B.P. Boulton and Fothergill to John Glover, 21 April 1777. Letter Book G, p. 901.
153 M.B.P. Boulton and Fothergill to Thomas Graham near Perth, Scotland, 20 October 1778. Letter Book I, p. 310.
154 M.B.P. Boulton and Fothergill to the Duke of Ancaster, 18 January 1777. Letter Book G, p. 802.
155 M.B.P. Boulton and Fothergill to the Duchess of Ancaster, 14 February 1777. Letter Book G, pp. 832–3.
156 M.B.P. John Hodges to John Wyatt, 19 March 1777. Letter Book G, p. 872.
157 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, etc., *op. cit.*, sheet 1.
158 M.B.P. Boulton and Fothergill to William Matthews, 9 January 1771. Letter Book E, p. 10.
159 Grimwade, A. G. *London Goldsmiths 1697–1837*, London, 1976, p. 497.
160 M.B.P. Dumée to Matthew Boulton, 15 March 1773. Box D2. Item No. 198.
161 M.B.P. Boulton and Fothergill to William Matthews, 23 May 1776. Letter Book G, p. 620.
162 M.B.P. Boulton and Fothergill to Anthony Burn, 22 July 1777. Letter Book I, p. 50.
163 M.B.P. Boulton and Fothergill to Lord Gower, 'about February 10th', 1775. Letter Book G, pp. 255–6.
164 M.B.P. Boulton and Fothergill to Lord Gower, 21 February 1777. Letter Book G, p. 839.
165 M.B.P. Boulton and Fothergill to Josiah Birch and Son, Manchester, 19 July 1775. Letter Book G, p. 379.
166 Cule, J. E., *op. cit.*, p. 74.
167 *Ibid.*, p. 12.
168 Dickinson, H. W., *op. cit.*, p. 86.
169 *Ibid.*, p. 74.
170 *Ibid.*, p. 80.
171 *Ibid.*, p. 78.
172 *Ibid.*, pp. 114–15.
173 Cule, J. E., *op. cit.*, p. 218.
174 M.B.P. Boulton and Fothergill to Sir Walter Blount, 18 January 1777. Letter Book G, p. 803.
175 M.B.P. Boulton and Fothergill to Lady Morton, 15 March 1777. Letter Book G, pp. 869–70.
176 M.B.P. Boulton and Fothergill to Mouschin Poushkin, 13 December 1777. Letter Book H, pp. 401–2.
177 *Report from the Committee Appointed to Enquire into the Manner of Conducting the Several Assay Offices . . . op. cit.*, p. 33.
178 M.B.P. Boulton and Fothergill to R. Conway, 8 October 1775. Letter Book G, pp. 434–5.
179 M.B.P. Boulton and Fothergill to B. A. Wedderburn, His Majesty's Solicitor General, 19 December (1774). Letter Book G, p. 201.
180 M.B.P. Boulton and Fothergill to Mrs Montagu, 15 February 1777. Letter Book G, pp. 830–1.
181 P.R.
182 Information kindly supplied by Mr D. G.

Johnson, The Assay Master, Sheffield. These figures are based on the total amount of silver received there.

183 M.B.P. John Fothergill to Matthew Boulton, 9 May 1778, in Box Fothergill, John (Boulton and Fothergill) and Fothergill Family. Item 194.

184 M.B.P. Boulton and Fothergill to Preston and Company, Liverpool, 8 February 1777. Letter Book G, p. 823.

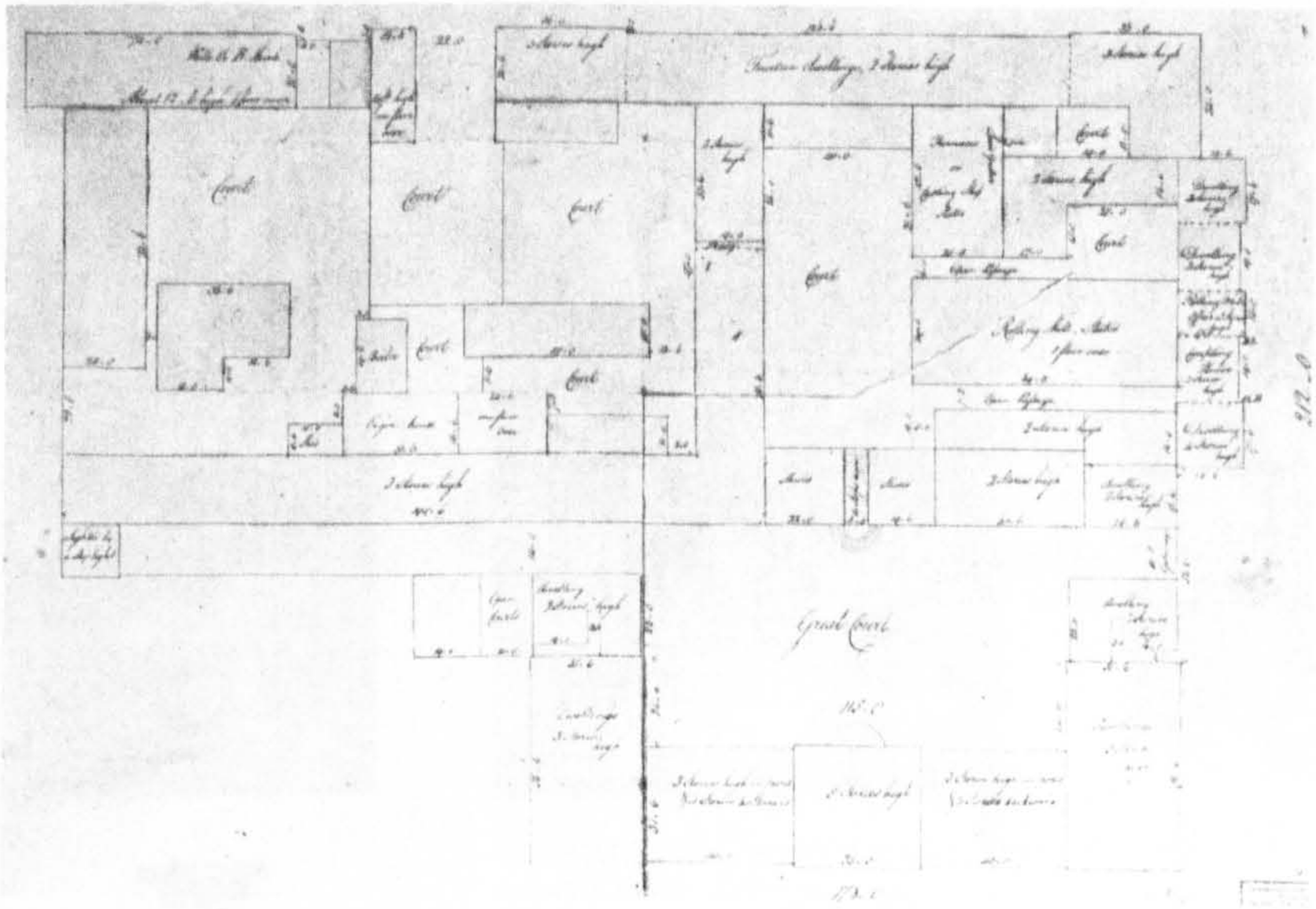
185 M.B.P. John Fothergill to Matthew Boulton, 10 May 1778, in Box Fothergill, John (Boulton and Fothergill) and Fothergill Family. Item 195.

186 M.B.P. Matthew Boulton to ?, 21 June 1782. Letter Book M, p. 304.

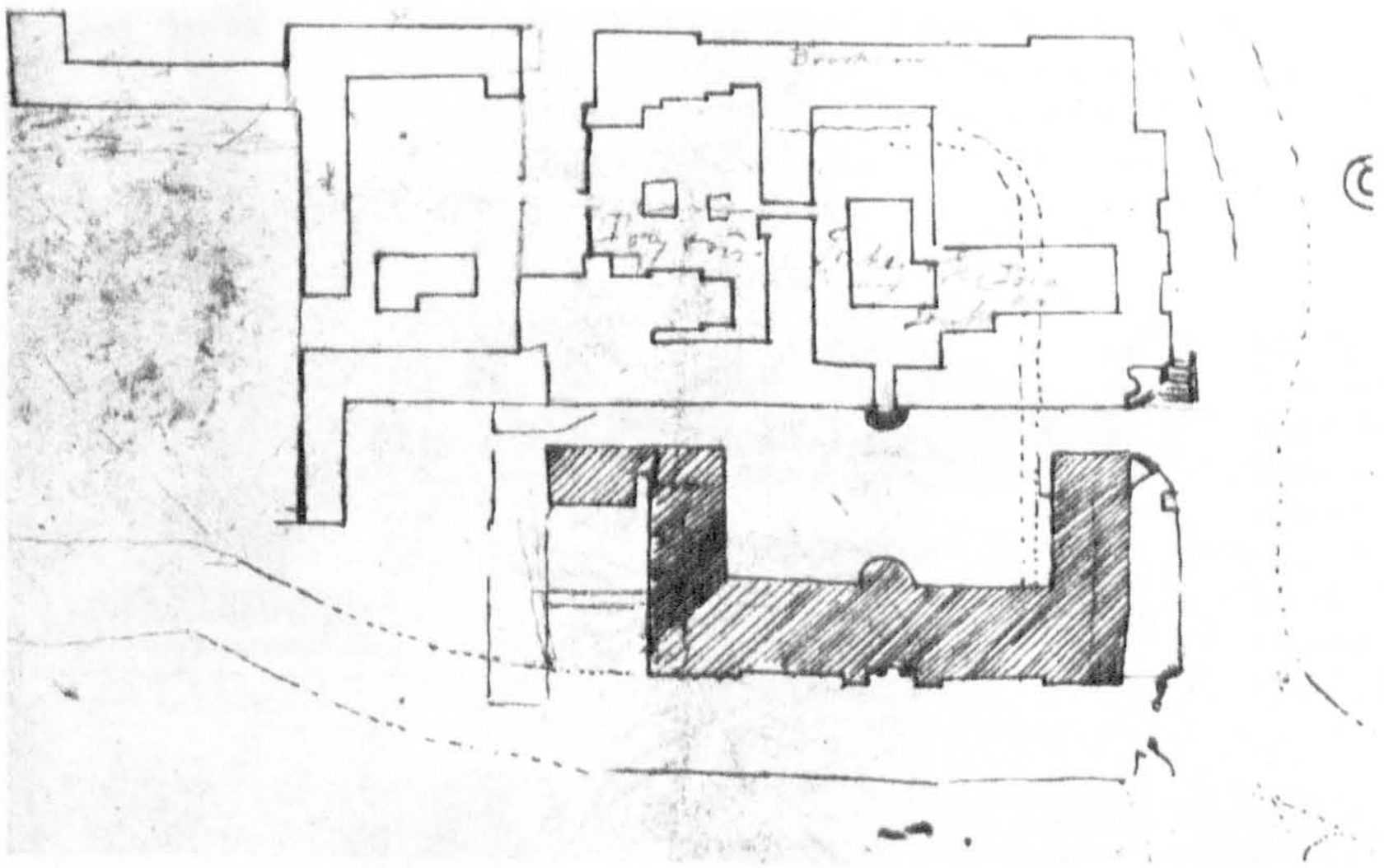
187 Cule, J. E., *op. cit.*, p. 293.

188 P.R.

189 M.B.P. James Keir, Memorandums for the Memoir of M. Boulton, etc., *op. cit.*, sheet 2.

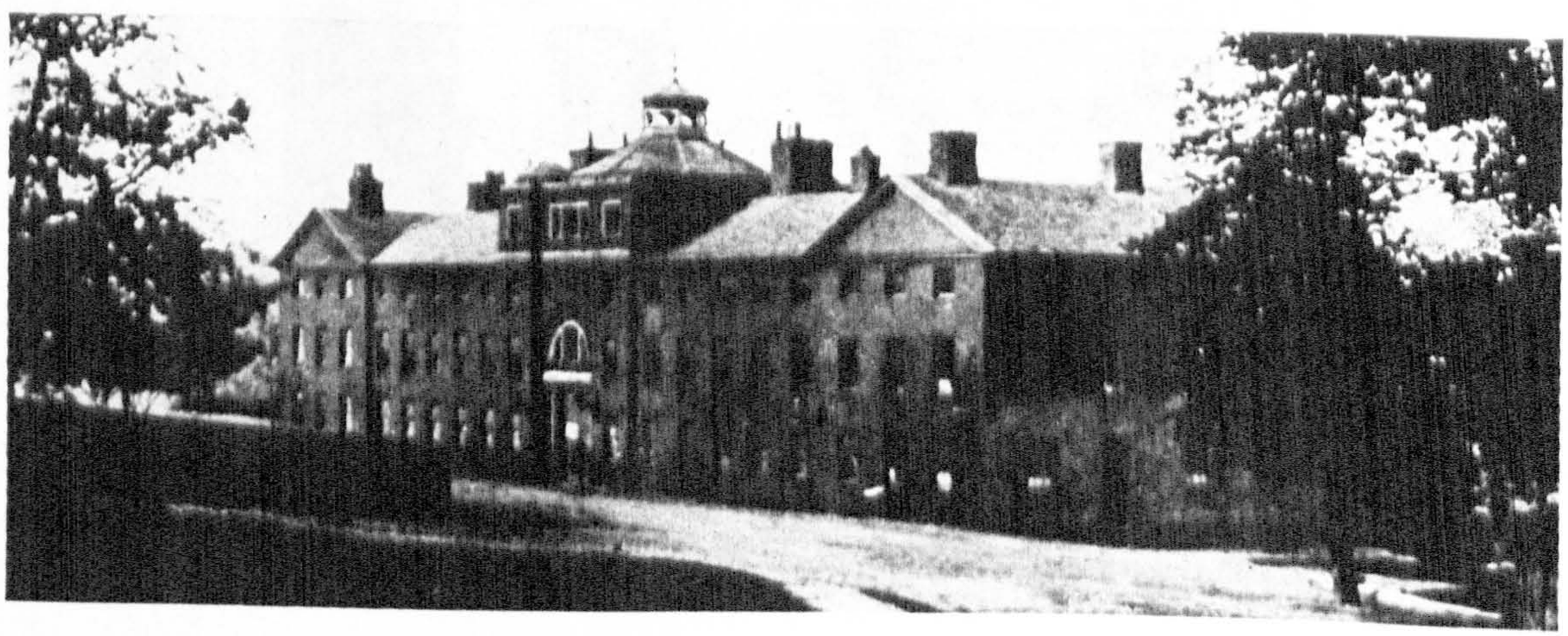


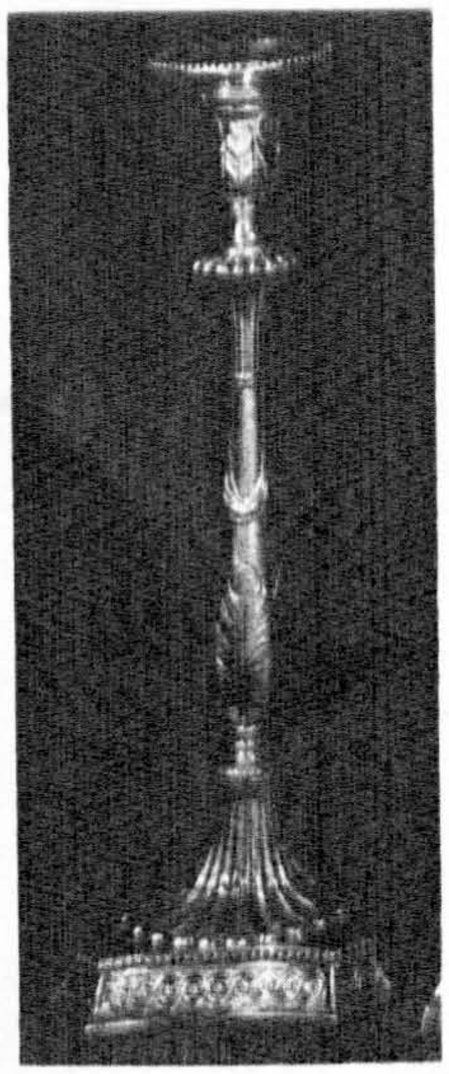
19 Ground plan of the buildings belonging to the works at Soho (except the Mint and building adjoining) standing on the land now under lease to Mr Boulton. Taken in June 1788 by J. A. Smith. Boulton and Watt Collection. (Photo: Birmingham Reference Library)



20 Plan of the Soho Manufactory. Undated. The Matthew Boulton Papers. (Photo: author)

21 (*below*) The Soho Manufactory *c.* 1860. The Sir Benjamin Stone Collection of Photographs. (Photo: Birmingham Reference Library)

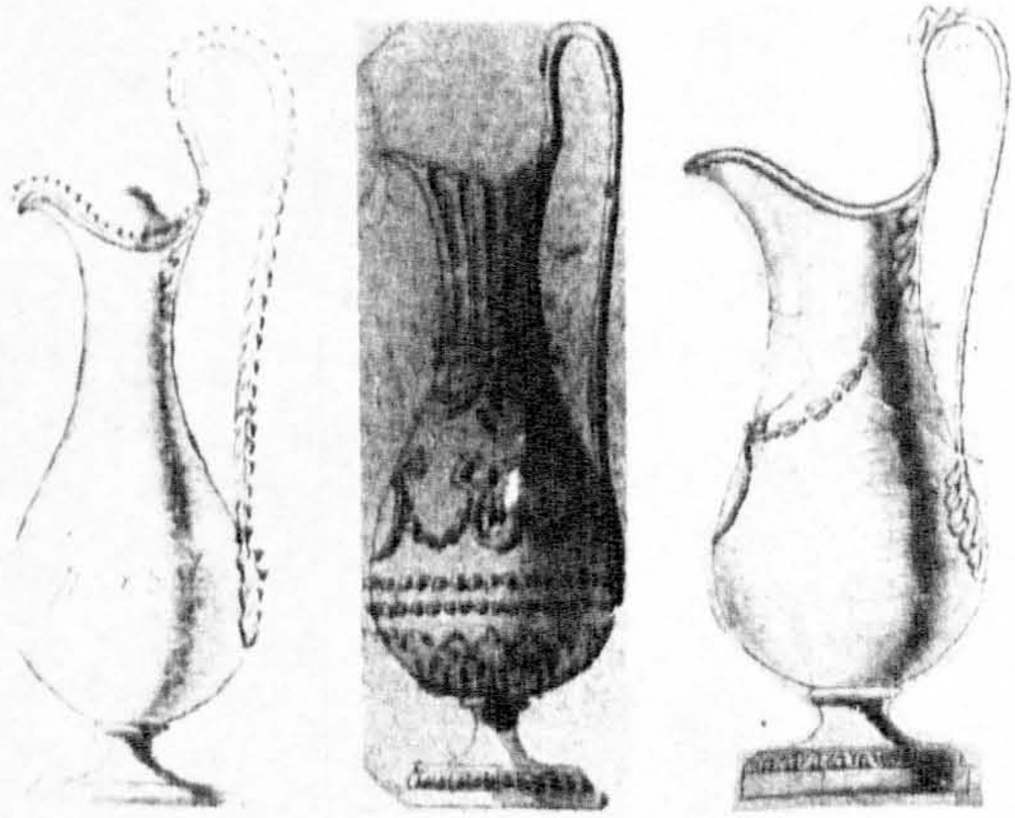




22 (*above, left*) Boulton and Fothergill candlestick. One of a pair, 1774–5. (Photo: Assay Office, Birmingham)
23 (*above, centre*) Button Makers in Birmingham from J. Bisset's *A Poetic Survey round Birmingham with A Brief Description of the Different Curiosities and Manufactories of the Place intended as a Guide to Strangers*. Plate R. Birmingham, 1800. (Photo:
24 (*above, right*) Boulton and Fothergill. Pair of 'lion' or 'lyon-faced' candlesticks. 1774–5. (Photo: The Worshipful Company of Goldsmiths, London)

25 (*far left*) Pattern for the 'lion' or 'lyon-faced' candlesticks in Sheffield plate. Boulton and Fothergill Pattern Book 1. Boulton and Watt Collection. (Photo: author)

26 (*left*) Boulton and Fothergill tureen. One of a pair, 1776–7. (Photo: Assay Office, Birmingham)



27, 28 and 29 (*above*) Patterns for jugs. Boulton and Fothergill Pattern Book 1. Boulton and Watt Collection. (Photos: author)

30 Boulton and Fothergill cup and cover, 1776–7. (Photo: Assay Office, Birmingham)