

CHAPTER TWO

OWNERSHIP, ORGANISATION AND RISK

During the sixteenth century, it was possible to recognise two distinct categories of ironmaster in the Weald; owner-occupiers and tenants. By and large, the former were responsible for the fixed capital assets of a site, the buildings and machinery, while the latter provided the stock and raw materials, the working capital. In a number of cases, tenants provided both, with fixed assets ultimately forming part of the leased property, and an accommodation being made in the rent. Partnerships became increasingly common towards the end of the sixteenth century, some formalised by a legal agreement, allowing a greater chance for the vertical integration of raw materials and manufacturing processes. Also, the great majority of Wealden ironmasters at that time were local, having their main dwelling close to their works (Goring 1978: 205-11).

By the second half of the eighteenth century, the owner-occupier category had greatly diminished, and the majority of those who occupied the furnaces and forges were short-term leaseholders. The few owner-occupiers can not be simply categorised, for they are represented by a variety of personalities. William Harrison, a London merchant, had purchased the Manors of Birchden and Orznash, in Rotherfield and Withyham, which included Hamsell furnace. Harrison died in 1745 and the property, heavily mortgaged, was left to his sons, Andrews and John.¹ The Harrisons occupied, as tenants, several other ironworks but Hamsell seems to have been the only one they owned outright. William Bowen probably began his career in London, but his

entry into Wealden ironfounding was marked by his purchase, in 1741, of the freehold of Woolcoombs Farm, Cowden, of which Cowden furnace was a part.² It is not known whether his tenure of Barden furnace was freehold or under a lease. When Bowen died in 1771, he was residing in Tonbridge. The best known of the owner-occupiers is the Fuller family, who owned Heathfield furnace and Burwash forge. Their ownership of these sites is characterised by their sustained use over a century and, while the Fullers have probably attracted greater attention than any of the other Wealden ironmasters of this period, their status as owner-occupiers is far from typical.

The inherent fragility of the gun trade must have been an influential factor in the decision as to whether to buy or lease. Owner-occupation had the advantages of greater control over the supply of raw materials if it included resources of coppiced woodland or iron ore. The Fullers ensured that all ore and timber was reserved to them when formalising agreements with tenants (Saville 1983: 136). A tenant labour force might also be available. There was no annual payment as with a rent, although the initial outlay was greater, but sub-letting of parts of a property, which could generate an income, could be considered. By the mid-eighteenth century, it is unlikely that any potential occupiers of furnaces or forges would have been prepared to consider a virgin site. The Fullers' purchase of the site of Heathfield furnace in the 1690s was at a time when there was a growing market for Wealden guns, so the considerable expense of construction could be placed in the context of a long-term business venture, and with the support of an agricultural estate. By the period from 1750-70, the Fullers' ironworks contributed a significant element in the family's income; an income which only temporarily suffered when they were undercut by the Carron Company in the mid-1760s, because of the increasing

profitability of their Jamaican estates, and other sources of income.

Fuller Family Income 1750-69

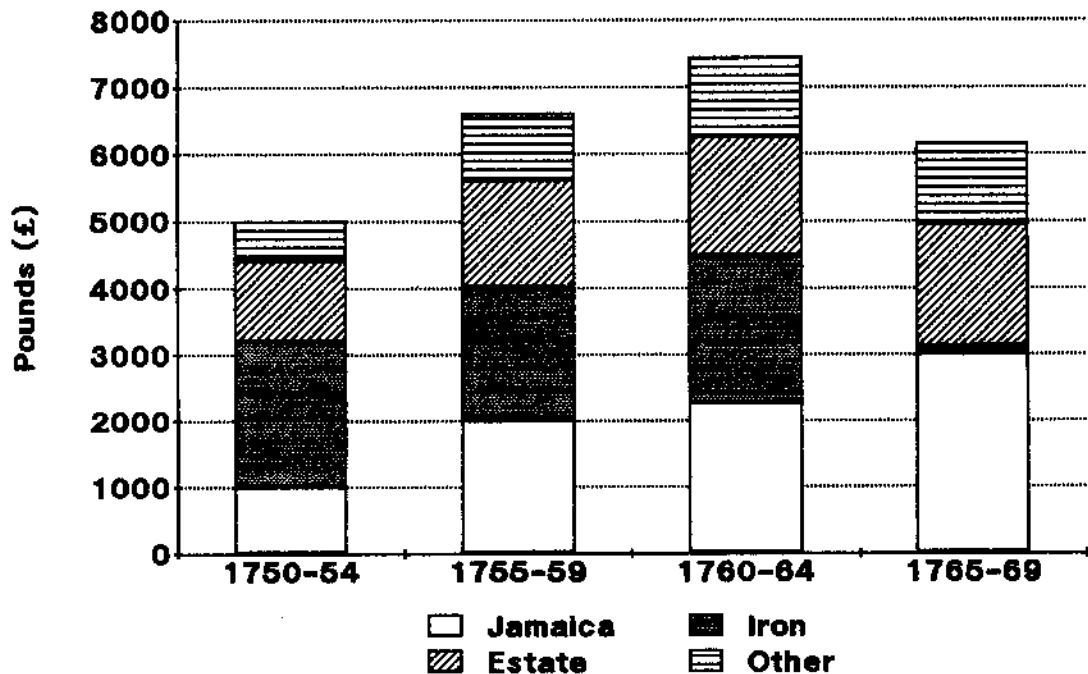


Fig.3

(Saville 1983: 143 Table 5)

Both Harrison's and Bowen's purchases, while probably for different motives, would have taken into consideration the state of existing buildings and water systems at the time of purchase. Leasing ironworks carried less responsibility and liability; most were concerned with landlords' rights to timber or fish, but lessees' responsibilities in respect of the condition of the works at the end of the term seem to have caused some problems. Negotiations had to be carried out between Sir Whistler Webster and George Jukes before John Churchill was satisfied with the condition of Robertsbridge forge prior to taking a lease of the site in 1754 (Whittick 1992: 56-62). Premature termination of a lease was also a cause for concern; the condition of Hawksden forge, following the bankruptcy of Richard Tapsell in 1765, led to difficulties for the Bishop of Durham's estate in trying to secure a tenant.³ Ultimately leasing was a short-term means by which

ironmasters could acquire works. Even so, Legas's lease of the Gloucester furnace at Lamberhurst, continued by Tapsell, was to last for over forty years. In a number of instances, the landlords of ironworks were themselves descendents of ironmasters; the Gotts, Pelhams and Ashburnhams had all, in the past, been directly involved in the production of iron. Even the Websters, who purchased the Battle Abbey estate in 1725, worked Beech furnace until about 1737, so they had limited direct experience of the industry (Whittick 1992: 34-5, 54).

The majority of the ironmasters were leaseholders and they can be divided into a number of overlapping groups according to the characteristics of their involvement both in the industry and in the region. Of all the leaseholders, up to the mid-eighteenth century, the Crowley family's involvement in Ashburnham furnace was, contrary to the view expressed by Flinn (1962: 101), the longest of any. Its antecedents dated back to the Browne and Foley families' use of the site a century before and, through the Foleys to the interest of Ambrose Crowley and John Hanbury in the early 1700s (Johnson 1951: 171-2; Cleere & Crossley 1985: 195-6). The link was strengthened in 1756 with the marriage of Elizabeth Crowley, co-heiress of the Crowley fortune, to John, 2nd Earl of Ashburnham. The Crowley family's business remained in the hands of Elizabeth's mother, Theodosia, who had taken over the year before, after her sons, Ambrose and John, had died (Flinn 1962: 87-8). The Crowleys may have been influential in the involvement of Edward Raby in the Weald, Raby's father having been apprenticed to Sir Ambrose Crowley in the early years of the century, and both Crowley and Raby junior, albeit at different times, being associated with the Drapers' Company in London. Edward Raby had been apprenticed to Alexander Master, himself an apprentice of Crowley, and father of Raby's erstwhile partner.⁴

Raby was one of a distinct group of ironmasters in the Weald, whose business origins were in London. Others include the Harrisons, the Jukes brothers, William Bowen and Joseph Wright. This group variously described themselves as merchants or ironmongers, having addresses or yards in Southwark, although Raby and Master started in Smithfield, and William Harrison had a house in the City. Despite moving into ordnance manufacture in the Weald sooner or later, all retained their Southwark yards and presumably, in the cases of Bowen and Wright, their brassworks. The Jukes brothers retired from gunfounding after they gave up the lease of Robertsbridge furnace, and concentrated on a merchant role. They continued to do business with founders in the Weald, as well as elsewhere.⁵ The Harrison brothers inherited their father's estate when they came of age in 1750, after a period during which John Legas and Samuel Remnant acted as trustees. The partnership with Legas, which was to continue under their father's will, included Gloucester and Beckley furnaces, Westfield forge and a boring mill at Horsmonden. All were leased from the Gott family. In addition, the partnership had subsequently leased Waldron and Brede furnaces, as well as the forges at Hawksden, Bivelham and Brightling. The precise arrangements whereby the sites were leased are obscure, and the documentary evidence has not survived in every case. From the Land Tax returns, it would appear that Tapsell was the nominated holder of the partnership's property in Sussex, but they appear to have acted largely in concert when contracting to cast for the Board of Ordnance, Tapsell's name being omitted from time to time from 1756-8, although not subsequently. Whether this is an omission of the clerk of the Board, or a reflection of the source of the ordnance referred to, is not clear.⁶ In addition to Tapsell and the Harrisons, an important figure who, on William Harrison's testamentary recommendation, joined

the partnership, was Robert Bagshaw. Formerly Harrison's clerk, Bagshaw may have been the most commercially active partner.

Tapsell, together with his uncle, John Legas, although in partnership with London merchants, were members of a smaller group of leaseholding ironmasters who had Wealden origins; the others were John Butler, and William Clutton. Resident in Wadhurst, Legas's involvement in the Weald started in the 1720s and was strengthened, after fifteen years, by his partnership with William Harrison. Legas died in 1752 and, like Harrison, was of an older generation, but their partnership had a profound effect on the iron industry in the Weald, particularly into the 1750-70 period, under Tapsell and Harrison's two sons. John Butler's family history in the Bramshott area is well documented but his career as an ironmaster is shadowy (Cochrane 1967: 46-7). Apparently in business by the late 1730s, his occupancy of Northpark furnace is only confirmed when it ended in 1769.⁷ His name is not one of those supplying the Board of Ordnance, and a passing reference to a partnership with a Mr Eade suggests that Butler may have been one of the suppliers for Eade & Wilton's wide ranging merchant organisation (Butler & Butler 1845: 10). William Clutton's foray into Wealden gunfounding was brief and seemingly impetuous. His two year career is better documented than the thirty years of John Butler, with whom he had in common an absence from the list of Ordnance Board suppliers, and a sub-contract with Eade & Wilton. Clutton was a young man and his spell as an ironmaster, and his consequent bankruptcy, was to have little apparent effect on his later life (Hodgkinson 1989: 27-33).

John Churchill and his son do not fit into the groups already mentioned, for their business origin lay in the Midlands. Churchill

senior was an established ironmaster in Staffordshire, where he retained a residence, and his interest in the Robertsbridge works came at a time when enquiries were being made by others from outside the Weald/London area; a Mr Cotton, who may be associated with the family of the same name who had ironworks in the north Midlands, and Thomas Braxtone from Titchfield, near Fareham, where a forge had long been established. Churchill's informant was a John Botton of Derbyshire, and clearly knowledge of the state of the Wealden iron sites was available to those who sought it. Churchill's successor at Robertsbridge, at the very end of this period, James Bourne, was a kinsman who had presumably moved to Sussex from Staffordshire with Churchill, for he was initially employed as his clerk. Churchill appears to have worked Darwell furnace, although there is no direct evidence for this. In 1757 he doubled the quantity of iron he proposed to cast for the Board, above the capacity of Robertsbridge furnace. The Crowleys had operated Darwell in the 1730s and 40s, so it was in working order, and James Bourne was subsequently recorded as occupying it (Hodgkinson 1979: 13).⁸ Surviving evidence of the marking on the trunnions of cannon corroborates this assumption (Brown 1989: 326). Although apparently the only Midlands ironmaster to move directly into the Weald, Churchill's origins were shared by Raby and possibly by the Jukes brothers, both of whose families came from the Stour valley area of Worcestershire.⁹

Partnerships

Partnerships figure in many of the ironfounding operations in the Weald. Harrison and Legas's was formalised and was equal in the financial commitment of each party. Alexander Master and Edward Raby were bankrupted together, although it appears likely that Raby was in

charge of the blast furnace operation, leaving Master at the partnership's ironmongery works in London.¹⁰ But not all partnerships appear to have been equal. John Norden escaped the bankruptcy that affected his partner, William Clutton, possibly because the latter had financial responsibility, leaving practical matters to Norden. Joseph Wright may have taken Thomas Prickett into partnership when they moved out of London, again perhaps for his technical ability. It is possible that some of these associations fell short of actual partnership. In some instances, family ties gave rise to partnerships, such as William and George Jukes. When William died, George joined with his other brothers, Thomas and James, in the merchant trade. Churchill's son, John, is unlikely to have been an equal partner as, despite inheriting the ironworks in Staffordshire and Sussex, he did not continue to operate them after his father's death. A partnership of particular interest is that of Jonathan Eade and William Wilton. Based at Wapping, their interests included general victualling and, in another partnership, Eade & Bridges, the manufacture of gunpowder (West 1991: 144). There is no evidence which suggests that Eade & Wilton operated their own blast furnace, but the regularity of their supply of new guns cast out of ore for the Board of Ordnance, both during and after the Seven Years' War, suggests a regular sub-contract with one or more gunfounders. Clutton, at Gravetye, was certainly one, but for only a short period, and the output of Northpark furnace, for which evidence of its disposal elsewhere is lacking, seems a candidate for another.

Merchants

As merchants, Eade & Wilton purchased guns for the fitting out of vessels involved in overseas trade, privateering, and coastal traffic. A

number of sources existed for this; guns transferred from ships going out of service, prizes from captured foreign vessels (although these often proved problematical, needing different sized shot), guns cast specially for the merchant trade by gunfounders in the Weald and elsewhere, and at air furnaces in London, and guns rejected by the Board because of minor flaws in their casting. Although some derided the trade, its existence was essential to gunfounders, both as an alternative to the Board of Ordnance during periods of peace, and also to enable them to cover the losses caused by failure.¹¹ A 12 pounder cast for the Board in 1757 might fetch £20 a ton, but as scrap it would only be worth £5 a ton; a price of £9 a ton sold to a merchant vessel, including commission, would diminish the loss to the founder. Several Wealden ironmasters involved themselves in the merchant trade, either as direct manufacturers or as dealers offering a service to other founders. The Churchills and Crowleys both set aside a proportion of their production specifically for merchant vessels, the former assuming the merchant role personally when, for example, he sold refused shot to shipowners in Rye, and in Gainsborough in Lincolnshire.¹² Robert Bagshaw, Eade & Wilton and the Jukes brothers acted for, among others, the Fullers in finding markets for surplus or sub-standard Wealden ordnance.¹³ Other merchants confined their activities to buying and selling. The Privy Council registers record several individuals who sought to traffic in guns during the war years, such as Richard Green, who did business with Isaac Wilkinson as well as in the Weald, and Joseph Wright, who later was to move into iron founding in the region.¹⁴

Agents

The Crowleys' agent was their manager, Roger Hanmer, whose responsibilities embraced the whole of the family's ironworking activities. A London agent was essential for those who were based in the Weald, most notably the Fullers, but less so for those ironmasters who were based in the city, where the principal civilian market for ordnance was to be found. It was common practice for country gentry business interests to be handled by agents, to avoid the necessity of frequent and often difficult travel to conduct business personally. The Fullers employed an agent for their Jamaican business, and Stephen Fuller, who was later to act as agent for the Jamaican Assembly in England, managed the ironworking part of the Fuller estate for his brother, Rose (Crossley & Saville 1991: xxiv-xxvii). The role of the agent was similar, in many ways, to that of a merchant except that, whereas the merchant was free to ply for trade with anybody, an agent was expected to act in the interests of his employer, and it is clear that John Fuller felt that the two roles were becoming blurred when he dispensed with the services of Samuel Remnant as his agent in 1750 (Crossley & Saville 1991: 260). Subsequently the Fullers enjoyed the services of Jefferson Miles and, later, James Cooper, both civil servants at the Tower of London. Samuel Remnant exerted considerable influence over the Wealden iron industry, even after his death in 1752. Apart from his long connection with the Fullers, he acted as agent for John Legas, with whom he was executor of William Harrison's will, and trustee of the partnership for five years. He had been a neighbour of Harrison and made a small bequest to Andrews and John, Harrison's sons, in his will. William Bowen is also mentioned as a "friend" in the will, suggesting some influence in his career.¹⁵ Bowen later bequeathed property to Remnant's son, Stephen.¹⁶ As part-owner of two East

Indiamen, as well as having a productive foundry at Woolwich, Remnant was ideally placed to derive the maximum advantage in business dealings with both the Board and the merchant trade.

Sub-contracting

The Fuller letters suggest that sub-contracting between gunfounders in the Weald was common in the 1730s and 40s. Board of Ordnance warrants did not always suit the gunfounders in the blend of gun types that were required. Most preferred to cast the smallest guns first, gradually increasing the size as the hearth itself grew larger. Thus a founder casting small guns might help another who was contracted to supply the same but who was already committed to casting larger calibres. The Fullers had informal arrangements from time to time with Bowen, Harrison and the Jukes brothers, although the Jukes's fraudulent casting of John Fuller's monogram on the guns they were making for him brought theirs to an end (Crossley & Saville 1991: 250-1). The period of greatest sub-contracting activity involving the Fullers generally ceases in 1750 with their abandonment of Samuel Remnant as agent, and it seems very probable that his unique contact with this group of ironmasters enabled him to arrange sub-contracts to everybody's advantage. Other examples of this practice occur throughout the war period, and not only within the Weald itself. During the previous hostilities the Fullers had agreed to supply some guns for the Sones at Sowley furnace, in Hampshire (Crossley & Saville 1991: 216-23). Later, after the outbreak of the Seven Years' War, Thomas Pryce, who had a furnace at Neath, in South Wales, offered to cast guns for the Fullers in 1757. In the following year he tendered for a contract with the Board of Ordnance.¹⁷ There is no evidence that the offer to Fuller was taken up, and Pryce's guns subsequently failed the

Board's proof so badly that he never cast guns for them again.¹⁸ Edward Raby sub-contracted to an unknown founder in the Bristol area for round shot in 1759 within the first year of his gun and shot warrants for the Board.¹⁹ It is clear that Raby's decision to sub-contract was made prior to his proposing to cast for the Board. His intention to cast the shot, as well as the guns, out of ore precludes the use of any air furnaces he and Alexander Master might have had at their works in Smithfield, and to offer to cast 400 tons of iron at a Sussex furnace was unrealistic.²⁰ Different motives drove Robert Morgan, of Carmarthen, to sub-contract to John Churchill for guns. Uncertainty about the availability of a suitably skilled gunfounder, together with Morgan's own pessimistic assessment of the risk involved in selling guns to the Board, persuaded him to come to an agreement with the ironmaster at Robertsbridge to pay Morgan £1 a ton for guns cast for him in 1762 (Williams 1959: 42-3). Churchill, who was a gunfounder with a good proof record, had lost his contract with the Board in 1761.²¹ Where Eade & Wilton differed was that they do not appear to have had any casting facility. To attempt to purchase from other gunfounders to service the Board's warrants would have entailed too great a risk, so they must have relied on sub-contractors to service their warrants for the Board. The accounts of the carrier at Gravetye furnace show William Clutton to have been one such contractor; evidence suggests that John Butler, at Northpark furnace, may have been another (Hodgkinson 1978: 16-8).²² The bankruptcy of William Clutton in 1762 may have caused some problems for Eade & Wilton despite being able to carry away a substantial quantity of the bankrupt's stock (Hodgkinson 1978: 28-9).

Finance and Bankruptcy

Of the ironmasters working in the Weald in this period, bankruptcy afflicted five: William Clutton in October 1762, Edward Raby and Alexander Master in November 1764, Richard Tapsell in January 1765, and John Churchill in July 1767.²³ The iron industry was more prone to financial failure than most, because of the dependency on government contracts during wartime and the possibility of their sudden withdrawal at the onset of peace. Ironmasters had only limited control over their business environment. Many were not based near their works, and they manufactured goods for purchasers who were often at a great distance. Also many of those who were casting guns in the Weald were relatively new to the venture. Cash flow was a problem; the Board of Ordnance and the East India Company were notoriously slow at paying, and therefore the ironmasters' requirement for credit would have been considerable. During wartime, the demand for money, particularly by the government, raised interest rates, making it difficult to obtain funds except at high cost (Hoppit 1987: 98-110, 123-9, 177-8). As late as 1773, Rose Fuller complained that "...the delay of payment sometimes for years without interest...is unprecedented in any other Trade and...one great cause of the ruin of most of the Gunfounders during the last War."²⁴ The evidence suggests that Fuller was overstating his case, although his cause may have been just. As Clutton did not supply the Board directly, his failure cannot be laid at their door. Raby's ruin was only temporary, and Churchill's occurred four years after hostilities ceased. Even Tapsell's bankruptcy, with which Fuller may have been most acquainted, did not occur until the beginning of 1765. Of the rest, all continued to cast in the reduced circumstances that peacetime afforded. What remains unknown is the extent to which the gunfounders, both those that failed and those that

survived, were weakened financially, even terminally, by the Board's payment system, especially after 1763.

To reach firm conclusions on the individual causes of bankruptcy among the Wealden ironmasters is not possible from the available evidence. Bankruptcy records only reveal the minimum of information. What is known is that to have been declared bankrupt an individual trader had debts in excess of £100 to one creditor, or more to a greater number. Assignees, to administer the bankrupt's property, were appointed by a meeting of the creditors so it is likely that they were of their number, and probably of some importance (Hoppit 1987: 36-8). William Clutton's assignees included his elder brother, who was the petitioning creditor, and his father-in-law. Given that he was back in business before receiving a Certificate of Conformity, his bankruptcy may have been arranged for his own good (Hodgkinson 1989: 31). The stigma of untrustworthiness does not seem to have attached itself to Clutton, nor to Edward Raby. Master and Raby's petitioning creditor was Robert Macky, a fellow ironmonger, and both were seen to be co-operating with their creditors, a Certificate being granted within eighteen months.²⁵ After which, Raby, this time alone, was back casting guns at Warren furnace and with sufficient funds to purchase the remainder of the lease to Clutton's furnace at Gravetye. The bankruptcy of Richard Tapsell seems to have ended somewhat differently. Lower (1849: 213) refers to his imprudence and to his decline into indigence, and in his subsequent career there was no noticeable return to ironfounding. The petitioning creditor was Robert Bagshaw, his business associate, and Lower's description suggests that Tapsell may have been endangering the stability of what had once been a powerful and profitable partnership. From the date of his bankruptcy, the existence of Harrison & Co., as a major force in the

Weald, came to an end; and one must assume that, as it was precipitated by Bagshaw, it was a deliberate act. Harrisons' continued to exist as merchants and as suppliers to the Board of Ordnance, but sub-contracted, notably to Wilkinson & Co. (Brown 1988: 106-8). Little is known of the bankruptcy of John Churchill. Its effect is concealed by his death a month or two after. The operation of his works was not affected, for a partnership headed by Churchill's kinsman, James Bourne, leased the furnace and forge at Robertsbridge in the following year (Whittick 1992: 48-9).

The economic climate which was the background to these bankruptcies suggests that, in general, they were brought about less by national factors than by individual circumstances. The period from mid-1759 until mid-1766 was one of relative economic prosperity, with bankruptcy levels below average (Hoppit 1987: 107, 123). Crises occurred in 1761 and in 1763 and there would have been a general demand for cash, particularly in the latter year when private finances were more affected (Hoppit 1986: 44-50). The entry of Spain into the war in 1762 caused a fall in exports and increased interest rates, giving rise to the possibility of credit strain between the metropolis and the provinces (John 1955: 342). Borrowing money became very expensive in the early 1760s because there had been a fall in the number of deposits and interest rates had risen (Joslin 1960: 170). William Clutton's failure may have been precipitated by pressure on his creditors. The end of the war and its consequent downturn in business would have particularly affected gunfounders; Raby & Masters might well have suffered for this reason, as they had entered the gunfounding business three years into the war period and, given the great delay in payment by the Board, could easily have found themselves in difficulties. The same excuse cannot be made for Tapsell,

who had been in the business on his own account since John Legas's death in 1752. The viability of John Churchill's Staffordshire iron works may have contributed to his bankruptcy during a period of relative national economic stability.

The Fullers used Child & Backwell, in London, to hold money for them, and to pay out when requested. They also had substantial deposits in the Bank of England (Crossley & Saville 1991: 244, 279-80, xxix). A passing reference to the Churchills issuing instructions to Henton, Brown & Co., who were based in Lombard Street, London, to pay for some cord wood, is the only other record of the banking arrangements of the Wealden ironmasters.²⁶ Less difficult to assess are the sources of finance for the ironworks in the Weald. In the case of the Fullers, their landed estates, both in England and in Jamaica, together with their long involvement in the ordnance trade, provide the answer. Similarly, the Crowleys' substantial ironmongering business located on Tyneside and at Greenwich, together with a large personal fortune, enabled them to sustain a casting branch in the Weald. Whereas the Wealden ironmasters of the sixteenth century often had an agrarian background, those who worked in the region in the period around the Seven Years' War had a largely mercantile background. The Harrison brothers and Richard Tapsell built on the profits and reputation of the Harrison-Legas partnership. William Bowen had a foundry in Southwark for nearly twenty years before purchasing Cowden furnace in 1741; while Raby had married, to great advantage, the daughter of his employer, and had succeeded to a foundry and ironmonger's shop in Smithfield.²⁷ Churchill had an established iron smelting and forging business in Staffordshire. John Butler may have had agrarian roots but had probably been in the iron business for long enough to have a firm manufacturing base by the onset of war in 1756. Only Clutton's source

of finance is a complete mystery, and the very brevity of his ironmaking career calls into question the secure basis upon which it was founded. For those who operated forges, a capital outlay was less important. Charcoal and pig iron requirements were small, and the cash flow much more immediate.

Notes and References

- 1 PRO PROB11 737 f.15.
- 2 See Appendix I. KAO U1280 T.2.
- 3 ESRO GLY 2770, 2771.
- 4 Drapers' Company records; ex. inf. G.E.Buttriss.
- 5 PRO PC2 105, 108. ESRO SAS RF16/V/10-11.
- 6 PRO W051 ff.196-229.
- 7 WSRO Cowdray 1443, 1444.
- 8 SKRO HAI/GD/2/3.
- 9 ex inf. G.E.Buttriss.
- 10 PRO B4 17 p.166.
- 11 In his letter to Charles Frederick (23 October 1749), John Fuller likened the risk in casting great guns to that in gambling at cards; he dismissed the merchant trade's foundries as "Tinkers Shops" (Crossley & Saville 1991: 254).
- 12 PRO PC2 109 f.20.
- 13 Crossley & Saville 1991: 228 & 278. ESRO SAS RF/16/V/10 & 11.
- 14 PRO PC2 105-9; 106, f.446.
- 15 PRO PROB11 794.
- 16 PRO PROB11 973.
- 17 ESRO SAS RF16/V/13. PRO W047 51 f.98.

- 18 PRO W047 53 f.582; 54 f.39.
- 19 PRO W047 54 f.507.
- 20 PRO W047 52 f.216.
- 21 ESRO SAS RF16/V/47.
- 22 see Appendix I.
- 23 PRO B4 16 p.238; 17 p.166; 17 p.185; 18 index.
- 24 ESRO RAF/F/6/1.
- 25 PRO B6 3 p.132.
- 26 KAO U1776 E19A.
- 27 *Gentleman's Magazine*, 9th July 1746; Miss Mary Master brought £15,000 to her marriage with Edward Raby.