

## Nailsea and the Glass-works

H E Dommett

The research of an 18th to 19th century glassworks where only fragments of the structure remain and whose records were destroyed by enemy action is a difficult task but, supported by archaeological excavations, is now yielding interesting information. But such research has the power of reminding the researcher that a factory is not merely a layout of machines and foundries, but an organism having a life of its own. This broader aspect is explored here by an examination of the works' environment, the character of Nailsea village, the impact of the new glassworks on the community and later its production.

### The Village of Nailsea

Eighteenth-century Nailsea was a small village situated on a wild scrubby and, in places, tree-covered triangle of land having its base spanning the valley between Wraxall and Backwell with an apex two to three miles distant in the direction of the sea. Surrounded by treacherous marshland, the triangle was connected only by fords to the mainland and isolated for weeks during periods of bad weather. In earlier times, pennant stone taken from the area is thought to have been used in Iron Age settlements and quarried for use as paving slabs in the Roman location at Gatcombe Farm, near Long Ashton. Coal is also believed to have been used at the same site which could quite well have been mined in Nailsea. Analysis by the National Coal Board of coal discovered at the Starr Roman villa at Shipham showed it to be identical in structure to that found in the Nailsea measures. Even in the present day, seams are known to surface not far distant from the Wraxall Roman villa site so that few if any deep shafts were driven until the end of the 18th century. A story, passed by word of mouth over several generations, told that 'by looking into the holes you could see the men working.'

The trading of coal was practised as early as 1508 according to an entry in the churchwardens' accounts of Yatton church. Despite the quarrying and mining the village economy was based firmly on agriculture. Even in the life of the glassworks when mining was also at a peak agriculture remained the most prominent labour that the church records indicate throughout. The vestry, consisting of yeomen and farmers, was a progressive, human administration. By the year 1767 its members had arranged for the education of poor children, and in 1769 had founded a Friendly Society. In April 1784 the vestry employed a teacher, an appointment preceding the foundation of the Hannah More School by quite a few years. At one time Martha More was infuriated enough to describe the villagers as 'these savage, proud people', an accurate description. The vestry was indeed independently minded, and fiercely protective of rights gained over many centuries.

It is clear that a vestry proclamation of April 1789 referred to the founding of the glassworks on Nailsea Heath. It reads 'Memorandum for the benefit of Posterity, that the inclosures on Nailsea Heath was all pulled down or gone over'. This was

followed two months later by another statement: 'Agreed that all the Gates adjoining the Commons shall be kept by the Church rate ie the gate at West End, the gate at North Street, the gate at Kingshill, the gate at Crede (or Brede), the gate at John Goddins'. One gains the impression that gates, designed to prevent the straying of animals through the village, had become the gateways to a fortress. On the 5th May 1790, the vestry agreed to prosecute any person who should presume to enclose or build upon any part of Nailsea Heath, or put any beast upon the Moor who have no rights of Common. Such a strong statement must cast light on a news report in the *Bristol Gazette* in the same month:-

'On Thursday last a fire broke out in the new glasshouse at Nailsea belonging to Mr J R Lucas which burnt part of the roof. But by timely assistance, the other parts of the building belonging to both crown glasshouses were preserved'. Undoubtedly local feelings had run high and certain records suggest the employment of a mounted guard, but whether the opinions were of such intensity as to attempt arson, is a question that cannot be answered. Evidence exists, however, to suggest that the strained relationship between glassworks and village continued for some time, particularly with regard to the payment of poor rates. The aggrieved owners of the glassworks appealed at the Somerset Quarter Sessions at Taunton, October 1806,

'... against a poor Rate for the Parish of Nailsea dated 11th June being the first rate at 1/- in ye pound for 1806. For that in such rate they are assessed for their Glasshouse, £7.10.0. and for the profits in their Stock in Trade as Glass manufacturers £15 whereby they considered themselves aggrieved inasmuch in ye making thereof a deduction of one third part of ye Rents of all the Houses and Buildings belong to other Occupiers within ye said Parish was and is made, and allowed for ye repairs thereof or for any other purpose whereby they consider that they are overcharged, and that ye said rate is unequal.

And also inasmuch as the Profits on Stock in Trade are not as they are advised rateable to the relief of the Poor.

The appeal was dismissed with £32 costs and taxed at £32. Shocked, the partners appealed against the rate in the following year also, with the same results. With hindsight, it is possible to see that both sides of the dispute had cause for complaint. Considering the number of people already settled in the parish who qualified for poor relief, the vestry demands were justified. On the other hand, a glassworks, struggling for survival, had equal grounds to appeal against the size of the poor rate. Open warfare seems to have ceased thereafter, but relationships between one end of the village and the other remained cool throughout the life of the glassworks, and continued until some time after World War II when building swamped the area.

### The Founders

There is speculation as to how J R Lucas decided to site a

glassworks in such an isolated locality. One writer has suggested that Anna, wife of Lucas and daughter of John Adams, the manager of Stanton Wick Glasshouse, having knowledge of Nailsea was responsible for the recommendation but evidence has not been found to support this view. A possible reason lies in the documents relating to the Nailsea Coal Company, founded before the glassworks. J R Lucas was a partner with Peter Cox, gentleman of Wrington, James Whitchurch a local doctor and Isaac White. Nailsea born, Isaac White is described in land negotiations either as yeoman or cooper, but had gained an intimate knowledge of the coal workings by means of family connections. In 1775 the vestry paid John White for the supply of coal for the poor. White and Lucas could well have had dealings in the cooperage business, long before the industrial development of Nailsea had ever been considered.

The Abstract of Articles of Partnership of the Glassworks relating to the year 1807 shows Lucas as a man of vision who was not afraid to speculate and to back such speculation with sound business method. Regardless of economic problems the manufacture of good quality window glass was always the prime consideration. Even so, the decision to found the glassworks at Nailsea was not one to be taken lightly, and Lucas must have worked on a small margin of profit at the outset, particularly as the glass industry had faced near extinction because of heavy excise duties.

*Felix Farleys Bristol Journal* shows the year 1793 as being particularly perilous. The issue of 25th March 1793 gives notice of a change in the partnership of their Crown Window Glass and Bottle Manufacturers from that of John R Lucas, Henry Pater and William Coathupe, which by mutual consent was to be dissolved and succeeded by John R Lucas, W. Chance, Edward Homer and William Coathupe. On 10th August 1793 an advertisement dissolving the partnership of Nicholas, Stratton and Lucas shows that one Lucas enterprise had failed (possibly the Limekiln Glassworks at Bristol). On 2nd November 1793, a further item reads:-

We hear that all the Glass Bottle Manufacturers in Bristol, and its neighbourhood are obliged to discontinue their works in consequence of some later determinations in the Excise tending to their prejudice. The Houses in the North feel themselves equally aggrieved, so that we fear this extensive branch of manufacture which employs such numbers of labouring poor, aids the coal trade and contributes considerably to the Revenue will be totally lost to the country.'

One must conclude that the Nailsea Glassworks survived only because of a massive cash injection to the capital, of which Lucas owned one half, William Coathupe of Bristol one sixth, and William Chance and Edward Homer about one seventh each. Such an action speaks volumes for a man whose character must have inspired trust, and whose business sense demanded confidence.

### The Glassworks

Descriptions of the glassworks in 1792 and 1793 are to be found in *Mendip Annals* in which Martha More describes the experiences of Hannah and herself during the foundation of the Mendip schools. For 1792 she wrote:

'We now made our appearance for the first time among the glasshouse people, and entered nineteen houses in a row, little

hovels containing in all 200 people... Both sexes and all ages herded together, and voluptuous beyond belief. The work of a glasshouse is an irregular thing, uncertain whether by day or night, not only infringing upon man's rest, but constantly intruding upon the privileges of the Sabbath.

The wages high, the eating and drinking luxurious - the body scarcely covered, but fed with dainties of a shameful description. The high buildings of the glasshouses ranged before the doors of these cottages - the great furnaces roaring - the swearing, eating and drinking of these half-dressed, black looking beings gave it a most infernal and horrible appearance. One, if not two, joints of the finest meat were roasting in each of these little hot kitchens, pots of ale standing about, and plenty of early delicate-looking vegetables . . . We were in our usual luck respecting personal civility which we received even from the worst of these creatures, some welcoming us to 'Botany Bay', others to 'Little Hell' as they themselves shockingly called it. We talked to them a great deal, and indeed they all listened, and some with great, and I may add with truth, delighted attention'.

Of the 1793 visit, Martha More commented,

'From the cottages which exhibited the usual scene of filth, feasting and gross ignorance, we proceeded to enter the very glass-houses amidst black Cyclopean figures, and flaming horrible fires. However we were again agreeably surprised as well as affected, for everyone of these dismal looking beings laid down their tools, and immediately surrounded us speaking in the civillest terms, calling all the great boys out of their black holes, and using really persuasive language, to induce them to listen to us, and do what we wished . . .'

One must not question the integrity of the accounts; we have a writer describing a scene which offended her middle-class sensitivities. Had Hannah or Martha paused to discuss, rather than evangelize, their impressions could well have modified. Drink was necessary to replace the body fluids lost at the furnaces, courtesy to superiors was emphasised by those who held the Methodist faith. The Methodists would drink as much as those not of their faith, but confine themselves to barley water, a drink not unlike ale in appearance. Food was of good quality because the workers could afford such delicacies. All this does not imply an angelic work force, these men lived in a tough period. But the founding of such an enterprise attracted a variety of people whose purpose was not to work in the glasshouses but to provide diversions such as gambling, drinking and perhaps ladies of easy virtue. One can therefore detect the sardonic, hard, working-class humour of the glassworkers in their welcome of the sisters More to 'Botany Bay' and 'Little Hell'. Such humour is as strong today and just as misunderstood.

In fact the skilled craftsmen were an exclusive breed who were proud and jealously guarded the secrets of their craft. Quite a few could sign their settlement papers with their own name and as mentioned before, were Methodists who, in time, became pillars of the Nailsea Methodist Chapel. Such was the strength of their faith that they built a chapel within the glasshouse complex itself.

At the time of the glassworks foundation one can detect the existence of three separate work forces.

**Group A** consisted of those who could be related to village life as it expanded to include the coalmines and glassworks. They included blacksmiths, butchers, masons, shoemakers,

domestic servants and labourers; 29 individuals in all.

**Group B** comprised eleven names, of those who were described as coal miners. With one exception they came from the North Somerset or Bristol coalfields.

**Group C** consisted of those who could be placed in the glassworking industry. The records of glassworkers began from 1798 and an analysis of their papers gives a clear indication of the wealth of traditional skills inherited from the 18th century glasshouses of Bristol. From the **Soap Boilers' Bottle and Crown Glasshouse, Cheese Lane and Crews Hole**, the following workers joined the Nailsea glasshouse.

Name	Home Parish	Previous Employment
1 William Gorton	Temple	Messrs King and Co
2 Thomas Lewis	St Phillips	1764. William King & Co
3 Joseph Moss*	St Phillips	1782. Hurst, Wilcox & Miles
4 Richard Moss	St Phillips	1773. William King & Co
5 James Pye	St Phillips	1769. Worked for Isaac Hayes Dunker, Chepstow, then William King & Co

The Soap Boilers' Glasshouse had been founded in 1715, but by 1762 was chiefly in hands of William King and Thomas Harris. After acquiring Crews Hole glasshouse also belonging to William King, the business passed in 1793 to Samuel Peach, Isaac Elton Junior, William Miles, Robert Hurst and John Wilcox. They held at this time Sugar Boilers or Tyndalls in Cheese Lane, Sir Abraham Elton's glasshouse at St Phillips ferry, and Perrots at the bottom of Red Lane.

According to the Joseph Moss\* settlement papers he was employed on the basis of a lump sum of 21 guineas and thereafter a payment per week of 25 shillings. This was quite an inducement and displays another facet of Lucas, that of ruthlessness when occasion demanded. He wanted the best and was prepared to pay. A furious Isaac Elton Junior had reacted by recourse to law as follows in *Felix Farleys Bristol Journal*, Saturday 26 December 1789.

'A case of great importance was on Thursday sennight tried in the Court of Common Pleas before Mr Justice Watson and a special jury. The action was brought by Messrs Elton and Company, glass manufacturers of the city against Mr J R Lucas to recover a compensation in damages for seducing from the plaintiffs service John Phillips and six other of their covenant servants employed by them in the manufacture of glass. The jury after a trial of eight hours brought in a verdict for the plaintiff worth £100 damages.

in 1809 a John Phillips, glassblower of St Phillips did then join the Nailsea firm and was settled in Nailsea 1816. Whether he was the same man cannot be determined but the John Phillips settled in Nailsea had been for 10 years a seaman. A strange combination of experience considering a blower was highly regarded in the glass making trade, and the seaman of the time was often pressganged to service. It poses the questions: was John Phillips pressganged? Was he punished for breaking covenant by being sent to sea? Was he a volunteer? The answer to the questions may never be revealed.

Although not shown as such in the settlement papers, three more men could also have worked for the same company.

Name	Parish
6 James Brook	St Phillips
7 Thomas Powell	St Phillips
8 John Hall	St George, Gloucester

9 James Sims was born in Bristol but had no previous glassmaking experience. He appears to have been the first boy apprenticed to Lucas and Anna on 13th October 1788

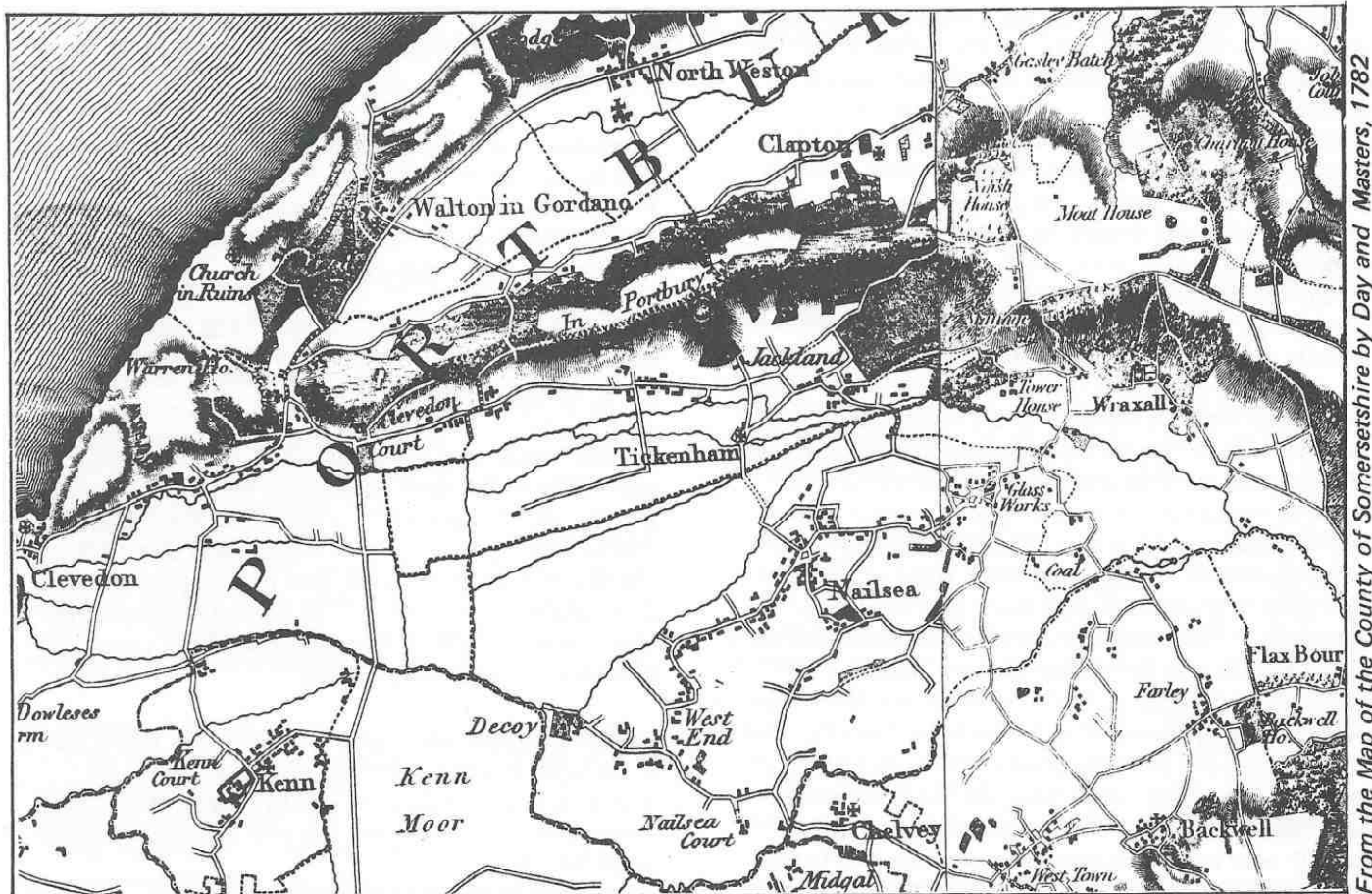
The following Bristol glasshouses are important because their histories are interconnected by the activities of the glassmaking family, Cannington.

**Warrens Glasshouse** was located on a site in St Thomas Street and founded in 1687 by William Clark, possibly in partnership with John Baker. In 1715 the firm was known as Richard Warrens & Co, Window Glass and bottles. In 1768 a new factory was apparently built and described:- **Glassworks on the Somerset side of the Avon opposite Hotwells**, which functioned under a partnership of William Gay, J & T Warren, Richard Cannington, Richard Reynolds and William Cowles. This factory and the Warrens Glasshouse appear to have closed at the same time, 1774, the stock of John and Thomas Warren and Richard Cannington and Company purchased by Vigar & Stephens Co of Redcliffe Back, later in 1798 it was sold again to Stevens. Cave and Co. Richard Cannington was in the Partnership of Hoopers Glassworks in 1767, a glassworks with an unusual foundation .

**Hoopers Glasshouse, adjacent to Soap Boilers Glasshouse.** This glasshouse was founded in the year 1720, when Robert Hiscox, a barber surgeon, obtained possession of a close of one acre adjacent to the Soap Boilers house. About two thirds of this acre was in the co-partnership of 17 persons including 5 hoopers, 1 potmaker, 1 maltster, 2 mariners, 3 merchants, 1 scrapmaker, 1 sugarboiler and 1 glassmaker, who built the glassworks. By 1767 Richard Cannington was in partnership with Richard Reynolds, the Quaker, William Cowles and Cornelius Fry trading as Cannington and Co. In 1775 he sold his share trading at the time as Cannington and Lawson Co. The Cannington period of speculation therefore covered a period from 1767 to 1775, having interest in three glasshouses.

Nailsea glassmakers with origins in this group were

Name	Parish	Previous Employment
10 James Groves	St Phillips	1764 Apprenticed to Mr Warren
11 Samuel Hopkins	St Phillips	Journeyman Glassworker who had also worked at Stourbridge and in Bristol for Mr Cannington
12 John Moggs	St Mary Redcliffe	1768 Cannington and Co
13 William Statland	Yatton	Cannington and Co Employed by J R Lucas at 18/- per week as a journeyman



From the Map of the County of Somersetshire by Day and Masters, 1782

The third group of Nailsea glassworkers were associated with another early glasshouse in Bristol. **The Glasshouse on Redcliffe Back** was founded in 1674 and associated until 1750 with the glassmaking family of Lowden. By 1770 it was owned by Vigor and Stevens and later, in 1775, by Vigor, Stevens and Hill. The entries of three Nailsea Glassworkers are clear as to the working partner.

Name	Parish	Previous Employment
14 Thomas Raybould	Stourbridge	Worked for James Stevens 1787
15 William Grant	Temple	Worked for James Stevens 1787
16 William Hammett	St Mary Redcliffe	Worked for James Stevens 1787
Two early glassmakers were recruited from elsewhere		
17 William Birch	West Riding	Apprenticed to Mr Fenton, Leeds
18 Benjamin Brook	East Smithfield	1783 for Mr Holmes of Whitefriars after contract of servitude with Isaac Cookson

It is clear that by 1798 John Robert Lucas had assembled a highly skilled, experienced team of men.

**The End of the Beginning**

One interesting question of Nailsea glasswork history is the reason why the works ever existed. A series of Excise Acts had succeeded in penalising the industry, almost to extinction. Flint glass in 1745 had been taxed by weight

at a penny for every pound measured at the pot, with no allowance made for breakage in later processes and in transportation. This has been calculated as an assessment of 9 shillings 6 pence per hundredweight. In 1777 a further duty had been imposed that raised the assessment to 18 shillings 8 pence, and again early in the nineteenth century to 4 pounds 18 shillings per hundredweight. The industry countered taxation by reducing the weight of finished articles, resulting not only in the evolution of glasscutting techniques but the development of superb lightweight 18th century glassware. By producing more saleable articles at higher prices from the same amount of glass in the pot, the white glassworks could survive, although operating on a financial tightrope. The window-glass factories had not escaped taxation. Their margin of profit was a little higher but their problems were increased by the imposition of Window Tax in 1792. Houses with 7 to 9 windows, were taxed at 2 shillings and those with 10 to 19 windows at 4 shillings. With the low profit levels which resulted from these measures, it is difficult to understand the reasons for the establishment of a glass-house at such an isolated spot.

There were, however, other considerations, the first of which is the suggestion that the factory was deliberately sited away from Bristol in order to preserve secrecy. Whilst functioning as a bottle and crown glass factory, Lucas had taken out a patent in 1805, for 'An Improvement in the Art of Method of Making Spreading and Flattening Sheet Glass, Plate Glass or any other Spread Glass requiring a" polished surface'.

Sheet glass was not a new idea. It was known as early as 1758, but in 1777, when the excise duty on glass was doubled, special provision was made for 'Glass called Sheet Glass'. It was taxed at twice the English broad glass



and at the same rate as crown glass. One can only guess the line of reason pursued by Lucas, for the difficulty with the production of sheet glass was the lack of techniques to develop a really thin glass. Taxation by weight was still prohibitive to its general manufacture and the finished product still required polishing. The production of crown glass was the better option. The glass quarries were thinner, furnace polished and cheaper to produce. Lucas's patent suggests an attempt to produce a thinner polished sheet glass which, if successful, would have been financially rewarding. Nailsea must have housed the experiments, but no evidence exists to suggest that sheet glass was produced at this time.

Financially, then, the move to Nailsea is still unexplained. One might suggest the advantages gained from the availability of certain raw materials and also of fuel for the furnaces would be negated by the need to import materials such as kelp and quality window sand. There was still the problem of transportation; the carting of heavy crates of glass over eight miles of unmetalled roads in all types of weather conditions. This requirement can be broken down into many components such as the number of horses needed to pull such loads; their stabling; the turn round time of unloading glass and loading raw materials for the return journey; could this be achieved in one day? What size of loads were possible over the badly rutted roads? What was the profitability of each load after payment of turnpike fees in and out of Bristol? How many carts and horses were required to cope with the glassworks output, and maintain stock at the Nicholas Street warehouse? Yet despite these problems, J R Lucas succeeded in establishing a profitable glassworks. One can surmise that an alternative mode of transport may have been available, and that could only mean transport by water. Unfortunately, the glassworks accounts which may have provided the facts, were lost in a Plymouth blitz during World War II.

However, the Churchwardens Accounts of Holy Trinity Church, Nailsea, offer clues enough to suggest that sea passage may have been possible in and out of the village. Seventeenth and eighteenth-century maps show the existence of an inlet from the sea to the north of Nailsea which before the drainage of the levels, was a tidal reach. This reaching could easily have catered for the shallow draught, trading boats reaching a point at Moor End Spout; no great distance from the glassworks.

Nailsea, therefore, may have been a useful landing point, one known by Isaac White who had, perhaps, coupled the argument of local coal stocks to the availability of sea transport which could carry loads from glassworks to Welsh Back near the warehouse at St Nicholas Street. Additionally the finer grade materials such as pot clay and low-oxide window sand, could be ferried from Stourbridge without storage at Bristol, as could Welsh coal. Folk lore memories include great-great-grandfathers remembering boats at Moorend Spout, and kelp being harvested at Lundy island; the crew running a fine trade of seagulls eggs with the glassmakers.

A most worthwhile fact is derived from the 1841 Census which shows three sailmakers in residence at Nailsea, with a sailor and two mariners in lodgings. Census returns subsequently show no such entries.

To end this opening stage of the Nailsea glassworks history one can only admire the courage and tenacity of John

Robert Lucas and his partners, who founded an enterprise which later had an important influence on 19th century glassmaking.

**Appendix.** The authority for information about the 18th century partners of the Nailsea Glassworks is Sir Hugh Chance. In a lecture to the Extra Mural Department of Birmingham entitled 'The Growth of a Family Business' he described the relationships one to each other.

**William Chance**, born May 1749, died 1828, was son of a cordwainer and mercer John Chance 1711-1750 in Bromsgrove. He was at school with -

**Edward Homer**, born 1749, died 1825. The two were apprenticed to the hardware business, Male and Rock of Birmingham. Edward, son of a Sutton Coldfield solicitor married Sarah Chance, sister of William, who died 1776. The two, William and Edward, later became partners in Birmingham as iron factors. 1778 Edward Homer married Mary Lucas, and William Chance married Sarah Lucas, both sisters of John Robert Lucas.

**William Coathope**, was originally a clerk in the Bristol office of the Lucas business in Bristol. Little is known of his origins, but Lucas could quite well have recognised an outstanding administrative talent and later offered partnership in the Nailsea concern.

**John Robert Lucas** was born September 8th 1754, son of a Worcester man who came from Hanbury near Bromsgrove and was originally a cooper but later traded in beer and cider. John succeeded to the business whilst still a boy, and one suspects that he like many of his contemporaries, recognised the advantage of an organisation that included not only the bottling of wines, beer and cider, but the making of the bottles to contain the liquids. He married Anna Adams of Chelwood, daughter of John Adams, manager of the Stanton Wick Glasshouse. At the time of the Nailsea venture he had interests in the Limekiln Glassworks in Bristol and the Stanton Wick business.

### Further Reading

1 Frances Buckley, *Journal of the Society of Glass Technology*. 'The Early Glasshouses of Bristol'.

2 Arthur Cecil Powell, *Transactions of the Bristol and Gloucestershire Archaeological Society*. 'Glassmaking in Bristol'.

3 Sir Hugh Chance, *Circle of Glass Collectors, No.128, January 1962*. 'Nailsea Glass'.

4 Sir Hugh Chance, 'The Nailsea Glassworks'. Sir Hugh Chance, 'The Growth of a Family Business'. (Talk given to the extra mural department of Birmingham University).

5 H St George Gray, *The Connoisseur*, June 1911. 'Nailsea Glass'.

6 H St George Gray, *The Connoisseur*, March 1923. 'Notes on Nailsea Glassworks'.

7 Churchwardens Accounts, Holy Trinity Church, Nailsea at Nailsea Public Library.