

An English glassworks

Diderot

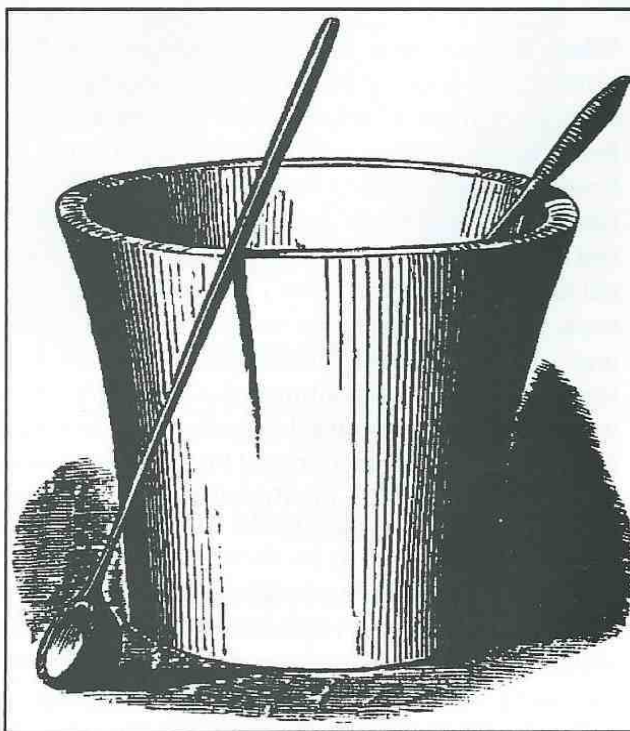
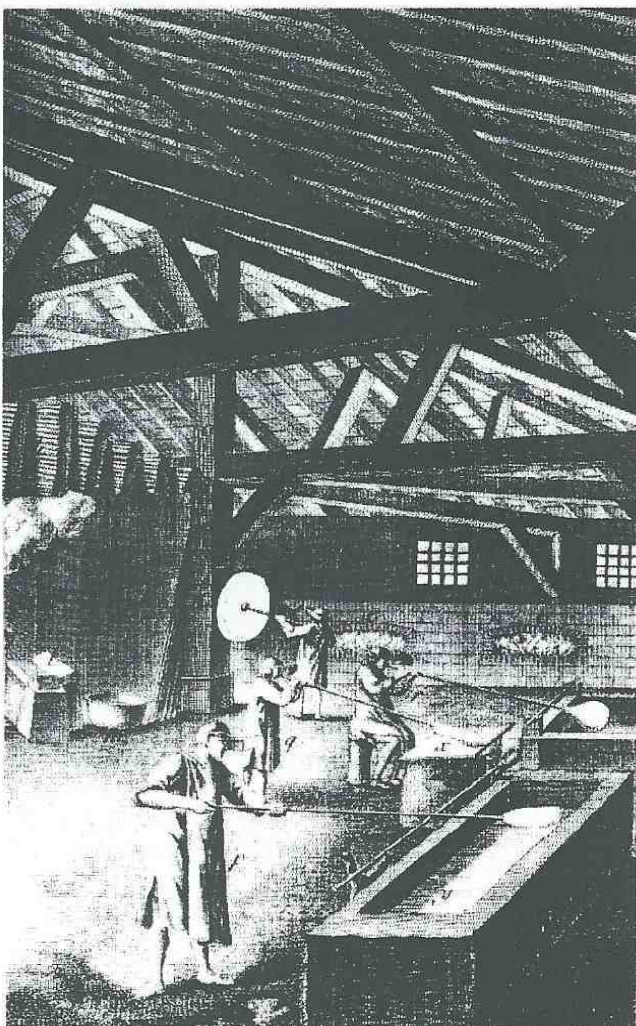
Crown glass manufacture: blowing, rotating and spinning glass

Diderot

Eighteenth-century illustrations from *A Diderot Encyclopedia of Trades and Industry* ed C.C. Gillispie (New York, 1959)

Crucible or glass-pot for use in manufacture of bottle, crown and plate glass

Muspratt's Chemistry 2 (1860)



The Early Years of the Nailsea Glassworks

Harry E. Dommett

Sir Hugh Chance CBE, DL, MA, a member of a family closely associated with John Robert Lucas in the early days of the Nailsea Glassworks, commented in an article 'Nailsea Glass' printed by the *Circle of Glass Collectors* in January 1992:

'It is strange that practically nothing has occurred that can be used to write a history of the rise and fall of glassmaking in Bristol, and thus very little research has been carried out.'

Such a comment appears unkind to the work of Bristol glass historians A.C. Powell and Francis Buckley. However it is considered his remark was not critical of the historians, but rather an expression of regret at the lack of knowledge of the technical processes practised in the Bristol glasshouses. Sir Hugh also commented:

'Though there are many individual glass working operations in the United Kingdom during the eighteenth and nineteenth centuries, not much recorded evidence of their technical business has survived from which the economic historian can build a story of their activity Perhaps there are documents lurking in dusty deed boxes still to be discovered.'

He was right. Information on Nailsea coalmining came to light when deed boxes were released from a solicitors office for storage in the Somerset archives, details of which were printed in *BIAS Journal* 28, and valuable information on the technology practice in the Nailsea Glassworks 1835/36 were located in the depths of a storage space at one of the older houses in Nailsea, details of which were described in *BIAS Journal* 19.

The origin of the glassworks in Nailsea has been one of conjecture, the founder thought to be John Robert Lucas in 1788, perhaps influenced by Isaac White who had coal interests here. The fact that there were ten glassworkers settled in Nailsea by 1768, indicates that a glasshouse had already been constructed to receive them. At that time John Robert Lucas was only 13 years of age. As will be discussed, Nailsea Glassworks was not founded by John Robert Lucas in 1788. but by his father Robert in 1768. It is thought that the death of Richard Warren, owner of the Warren Glassworks, the possible supplier of bottles for the Lucas wine business, was the factor behind Robert Lucas' decision to found his own bottle producing facility in Nailsea.

The Warren Glasshouse

Francis Buckley wrote that the Warren Glasshouse was located at 69/70 St. Thomas Street, a matter of 200 yards north of St Mary Redcliffe Church in Bristol and founded by William Clark. William took apprentices between the years of 1687 and 1712, the last being turned over to John Barker or Baker in 1715. As to the last year of his ownership of the factory many questions remain unanswered. What is known is that an advertisement in the *London Postman* of 17 May 1712, traced by A.C. Powell, indicates that the factory had changed ownership:

'At Richard Warren and Company, Glasshouse in St. Thomas Street, Bristol, are to be sold all sorts of good bottles, all sold as cheap as any in England.'

Apprentices were taken by Richard Warren and his wife Sarah from 1714 to 1725, by Thomas Warren in 1715, and John Warren from 1736 to 1758. During 1752 a man from the Warren Glasshouse was committed to Newgate on a charge of stealing 'one brass mould valued at 18 shillings'. The man was acquitted, but the report surprised glass historians with the knowledge that moulds were used at such an early date. During March 1767 it was announced that Richard had died suddenly at Redcliff, a large house situated in Somerset side of the Avon opposite Hotwells. He had been much respected in Bristol and mourned also for his service as a Captain of the Gloucester Militia.

It must be surmised that a successor to the glasshouse had not been nominated as work was suspended and a list of glassworks employees, dated 15 October 1768, includes their duties together with their weekly pay. It is possible that this listing was the one traced in the Bristol archives.

Warren Glasshouse Staff 1768

Name	Occupation	£-s-d
No 1		
Thomas Smart	Finisher and blower	1-7-0
Robert Smart	Finisher and blower	1-7-0
Henry Bartlett	Blower	15-6
Charles Middleton	Put-up Pipes	5-10
Robert Smart	Taker-in	4-8
No 2		
William Savage	Finisher and blower	1-7-0
Edward Smart	Finisher and blower	1-7-0
Abram Jones	Gatherer	9-6
Abram Newth	Put-up Pipes	5-10
Tim Savage	Taker-in	4-8
No 3		
Benjamin Dully	Finisher and blower	1-8-0

John Grisles	Finisher and blower	1-7-0
John Jonson	Blower	1-1-6
Edward Birket	Put-up Pipes	5-10
John Sims	Taker-in	4-8
No 4		
Samuel Glover	Finisher and blower	1-7-0
Edward Philips	Finisher and blower	1-7-0
Thomas Sims	Blower	10-6
John Barley	Put-up Pipes	5-10
John Dear	Taker-in	4-8
Miscellaneous Duties		
Daniel Spratt	Packer	1-1-0
William Warren	Blower	6-0
William Hopkins	Taker-in	1-4
William Froggat	Day Teazer	4-0
Founders		
Robert Sims	Founder	1-3-0
Jacob Jones	Night Teazer	1-3-0
William Cottle	Night Teazer	13-0
Jacob Houghton	Night Spareman	14-2
James Curtis Day	Teazer	19-7
James Powell	Day Spareman	11-9
Joseph Winson	Upper Caveman	10-6
George Thit	Upper Caveman	7-0
Ash Shifters Pay		7-0
Yard Men and Miscellaneous		Tim Gillet
Bottle Sorter	10-0	
... Thomas	Labourer	7-0
James Powell	Labourer	7-0
Jacob Porate	Yardsman	8-0
William Bartlett	Yardsman	8-0
William Shipton	Haulier	8-0
William Cannisford	Haulier	8-0
William Palmer	Millman	8-0
Thomas Yates	Labourer	7-0
William Blackmore	Labourer	7-0
William Cole	Labourer	5-10
Charles Blake	Labourer	7-0
Fanny Noble	Clay Picker	5-0
Hugh Noble	Yard Manager	15-0
Hugh Jones	Blacksmith	7-0
Bottle Washing and Measuring		4-0
Mending Teazer Line Holes		11-0
Carrying out Bottles		2-0

A notice was issued that:

'persons indebted to Richard Warren and Bros, and Warren Co. in Britain were to pay William Gay, an Attorney, and L. T Warren, Richard Cannington, Richard Reynolds and William Cowles take this method to inform the friends of Messrs Warren and the public in general, that they have entered into partnership in the Crown Glass trade which has heretofore been carried on by the said T T Warren and will continue the same in Thomas Street'

It is considered this was a bold move in the face of fiscal interference with the glass trade as early as 1729. Such interference was aimed to prevent smuggling and the import of wine in bottles and small casks was prohibited. Glassmakers and merchants petitioned against the proposal, stating that many

thousands of persons were employed in making bottles for export that were then re-imported filled with wine. Stoppage of the use of bottles would be disastrous, not only to the glassmaking industry, but those businesses who depended on glass for the promotion of their trade. All such petitioning was of no avail, increased difficulties were caused by the imposition of the *Glass Excise Act* of 1746. After 25 March 1746 an excise duty of 9s 4d was levied 'upon the materials of metal out of which flint glass was made'. The glass was taxed by weight and the duty was applied when the metal was in the pot, or as the Act demanded, 'at the furnace mouth'. Additionally, no allowances were made for breakages during the later stages of manufacture or during transport. This Act, with those of 1777 and 1778, were considered as pieces of legislative folly that did considerable harm to the nation. Statistics reveal that in the hundred years following 1745 many towns, particularly in England, increased to more than double their former size. The production of bricks in this period increased by 90%, whereas the increase in glass production in the same period did not reach 2%. It was not until the *Glass Excise Act* was repealed in 1845, did the glass industry finally recover.

Robert Lucas

Robert Lucas, father of John Robert Lucas, came from Hanbury in Worcestershire to Warren to establish himself as a cooper, but later enjoyed prosperity as a wine merchant, the export of wine to the colonies being particularly lucrative. He was therefore one who suffered financially as a result of the *Glass Excise Act* because of the escalating cost of glass bottles.

There is little doubt that Robert Lucas sought an answer to the problem, and at this juncture it must be speculated that he met Alexander White who described Nailsea as having a massive reserve of easily-mined coal. Robert would certainly have thought a great deal about the conversation, particularly the economics of funding a small factory for the production of bottles, and their transport by sea to Bristol to be filled with wine.

From speculation we can now turn to fact and the ten former employees of the Warrens Glasshouse who were settled in Nailsea in 1768:

Name	Occupation	£-s-d
Benjamin Dullely	Finisher and blower	£1-8-0
Hugh Noble	Yard Manager	15-0
Fanny Noble	Clay Picker	5-0
Robert Sims	Glass Founder	3-0
Thomas Sims	Glass Blower	10-0

Thomas Smart	Finisher and Blower	£1-7-0
Robert Smart	Taker-in	4-0
James Powell	Labourer	£1-2-0
James Powell	Day Spareman	11-9
Robert Smart	Finisher and Blower	£1-7-0

Legally, 'settlement' was acquired at birth, and a poor man could only change his place of settlement if he fulfilled certain conditions. One of these was to the effect that a person had to reside for 40 consecutive days in a parish without complaint from the churchwarden. Thus the settlement listed above implies that the glassworkers were working in a newly-constructed glasshouse and had not been a charge to the vestry in 1768.

The founding of the Nailsea Glasshouse in 1768 invites speculation on the amount of time needed to plan the project before construction could begin. John Robert Lucas was only 13 years of age and, although he was intelligent, his involvement in the establishment of the glasshouse or indeed the decision to construct a glasshouse in Nailsea was unlikely, although it is considered he would have been intensely interested in development.

The establishment of a glasshouse as early as 1768 also explains the existence of three yeomen mining operations, those of Goddins, Wedmore and Young, whose combined output would have well exceeded the amount of fuel needed to satisfy the requirements of the local villages. The existence of a small glasshouse needed such production.

From 1788 it seems the Nailsea Glassworks was well established and recruitment of experienced glassworkers began.

The conversion from the production of bottles to window glass suggests expansion, and the need for coal far outstripped the ability of the surface miners to provide it. A decision was made to sink a mine to the coal seams, Settlement records indicate the recruitment of experienced miners and so began the Nailsea coal mining industry. No doubt Nailsea miners worked on the development, but the expertise was provided by the recruits of 1780, Joseph Hodges and Charles Hodges of Pensford and Benjamin Watts of Kilminster. In 1786 Moses Horler of Camerton and Caleb Hedges of Publow were settled. These were followed in 1789 by Humphry Prine from Ilfracombe, and John and William Rogers from Bitton. Isaac Rich of Mangotsfield appears to have been the last miner to be recruited in this phase, thereafter a large labour force of Nailsea miners developed as the number of mines increased.

John Robert Lucas - Entrepreneur

In 1788, encouraged by the success of his Nailsea factory, J.R. Lucas decided to dispose of his wine and cider business and use his capital to expand his glassmaking interests by investing in the Limekiln works, a factory in Bristol producing bottles, This was a logical step as he had converted the Nailsea concern to the production of window glass. But, Whether this was wise is questionable in View of his

Nailsea Glassworks from 1788

Name	Birthplace	Service	Recruitment
William Birch	West Riding (Yorks)	Hastonat Grassington's Fenton	approx 1795
Benjamin Brooks	East Smithfield	Holmes of Whitefriars (7yrs)	1790
James Brook	St Philip & Jacob	General Labourer	unknown
William Bromley	Whitechapel London	Not Specified	unknown
William Gorton	Temple Bristol	King & C0 1763	unknown
James Groves	St Philip & Jacob	Cannington 1772 (7yrs) Journeyman 3 Years	unknown
William Hammet	St Mary Redcliffe	James Stevens 7 Years	1795
Samuel Hopkins	St Philip & Jacob	Cannington 1772 (7yrs) Journeyman 3 Years	unknown
Thomas Lewis	St Philips & Jacob	William King 1772 3yrs	1791
John Moggs	St Mary Radcliffe	Cannington 1765	unknown
Joseph Moss	St Philip & Jacob	Hurst Wilcox 1782	1784
Richard Moss	St Philip & Jacob	William King 1773	unknown
Thomas Powell	St Philip & Jacob	Glass Labourer	1784
James Pye	Christmas St Bristol	Demon of Chepstow 1yr King & Co 1770	unknown
Thomas Raybould	Stourbridge	James Stevens 1787	unknown
James Sims	St Philip & Jacob	Apprentice J.R. Lucas	1788
William Statland	Yatton	Apprentice Cannington	unknown
William Tilley	St Mary Reclcliffe	Hurst & Wilcox 1782	Date unknown

interests in the Stanton Wick factory, as indicated below.

What is known is that in 1793 he withdrew his investment in the Limekiln glassworks, as was announced on 27 July 1793 in *Felix Farley's Diary*:

'The partnership later subsisting between John Nicholas, Richard Stratton and John Robert Lucas of the City of Bristol, Manufacturers of Glass bottles was dissolved by mutual consent on the 13th March last, and the business is carried on by the said John Nicholas and Richard Stratton only under the firm of John Nicholas and Co'.

On 5 December 1795,

'the co-partnership in the Glass Bottle Manufacturing carried on at the Glasshouse of the Limekilns, and elsewhere under the firm of John Nicholas and Co was dissolved on the 31st March last, so far as respects Richard Stratton also withdrew therefrom, but the same business will still be continued under the former firm'.

As mentioned in 'Nailsea and the Glassworks' in *BIAS Journal 18*, 1985:

'Felix Farley's Bristol Journal shows the year 1793 as being particularly perilous. The issue of 25 March 1793 gives notice that the partnerships of John Robert Lucas, Henry Pater and William Coathupe was to be dissolved by mutual consent and succeeded by that of John Robert Lucas, W Chance, Edward Homer and William Coathupe.'

Stanton Wick Glasshouse

A study of the Stanton Wick Glasshouse was published in *BIAS Journal 19*, largely as a result of the research carried out by the late B.J. Greenhill, a BIAS member. The glasshouse had its origin during the seventeenth century and towards the end of the following century was managed by John Adams, who died in 1786, and thereafter by John Robert Lucas until its closure in 1815.

Whether John Robert Lucas actually managed the glasshouse is open to doubt. He had married Anna Adams, the daughter of John, on 3 September 1781, and possibly satisfied with the performance of the existing staff, allowed them to continue its operation. Eventually J .R. Lucas closed the Stanton Wick Glasshouse, whether on the recommendation of

Stanton Wick glassworkers settled in Nailsea in 1816

Name	Birthplace	Service
William Bailey	St Philip & Jacob	Apprenticed to a Bristol ropemaker
Richard Batten	St Philip & Jacob	Apprenticed to Wilcox & Co, 1810 Stanton Wick
George Churchill		Two terms of 7 years with J .R. Lucas
Louis Detardy	France	Weekly hiring manager coalmaster
Samuel Evans	St Giles Reading	1807 with J.R. Lucas
John Greave	Peebles Tweedale	Apprenticed at 15 to Atchball & Co Edinburgh Glass South Leith 1814
Cornelius Groves	St Philip & Jacob	1789
Jacob Hanney	Stanton Drew	Glassmaker
Charles Hindmill	Publow	10 years at Stanton Wick
William Hopkins	St Philip & Jacob	J.R. Lucas
James Noble	Stanton Drew	1806 Glassmaker J.R. Lucas
John Noble	Stanton Drew	Adams & Co
William Noble	Stanton Drew	Apprentice at 14 to J .R. Lucas Stanton Wick
William Perry	St Augustines	Stanton Drew
William Perry	Chew Magna	Lucas & Co
John Phillip	St Philip & Jacob	Blower 1803 Miles & Co, 6½yrs. 1809 J.R. Lucas Stanton Wick
John Price	Stourbridge Staffs	Journeyman 2yrs with J.R. Lucas
John Robinson	All Saints Newcastle	Apprenticed 17yrs, 7yrs with Isaac Cookson, 7yrs with J .R. Lucas
Samuel Smallman	Warrington	Apprentice 14yrs to Isaac Cookson, 7yrs Gridlies South Leith
Robert Smart	Stanton Drew	Richard Lawson
Thomas Smart	Stanton Drew	Journeyman Apprentice to J .R. Lucas at Stanton Wick
Nathaniel Warren	Stanton Drew	Stanton Wick since 1787
Robert Warren	Stanton Drew	Stanton wick since 1788
George Williamson	Stanton Drew	Stanton Wick since 1788
William Williamson	Stanton Drew	Aged 62 worked with Adams and then J.R. Lucas from boyhood
William Williamson	Stanton Drew	Recruited by J .R. Lucas
Charles Windmill	Publow	Worked 10 years for J .R. Lucas
In 1817		
Thomas Williamson	Stanton Drew	1790 4 years with J .R. Lucas and became a sailor
In 1818		
James Hickey	St Thomas Dublin	Apprenticed at 14, worked for Jacob Dickenson, Dumbarton Also worked at Newcastle and South Leith
John Smart (Snr)	Stanton Drew	Worked for J.R. Lucas in 1790
John Smart (Jnr)	Stanton Drew	Worked for J.R. Lucas 5-7 years

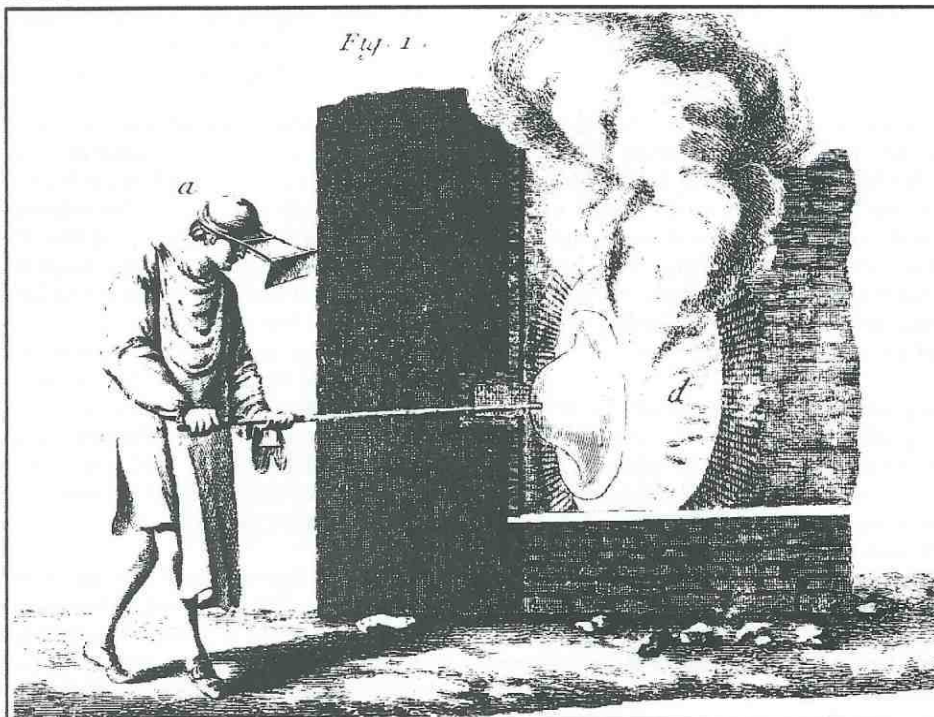
Robert Lucas Chance, his gifted young manager. or on his own consideration is unknown.

The transfer of staff to Nailsea appears to have been a carefully planned operation, a list of the workers transferred is shown below. It may be concluded that the development of the Nailsea Glassworks was nearer the modern interpretation of a 'factory', rather than the traditional glasshouse. However, it is clear that the Nailsea Glassworks developed to hold a special place in British glassmaking history.

Sources

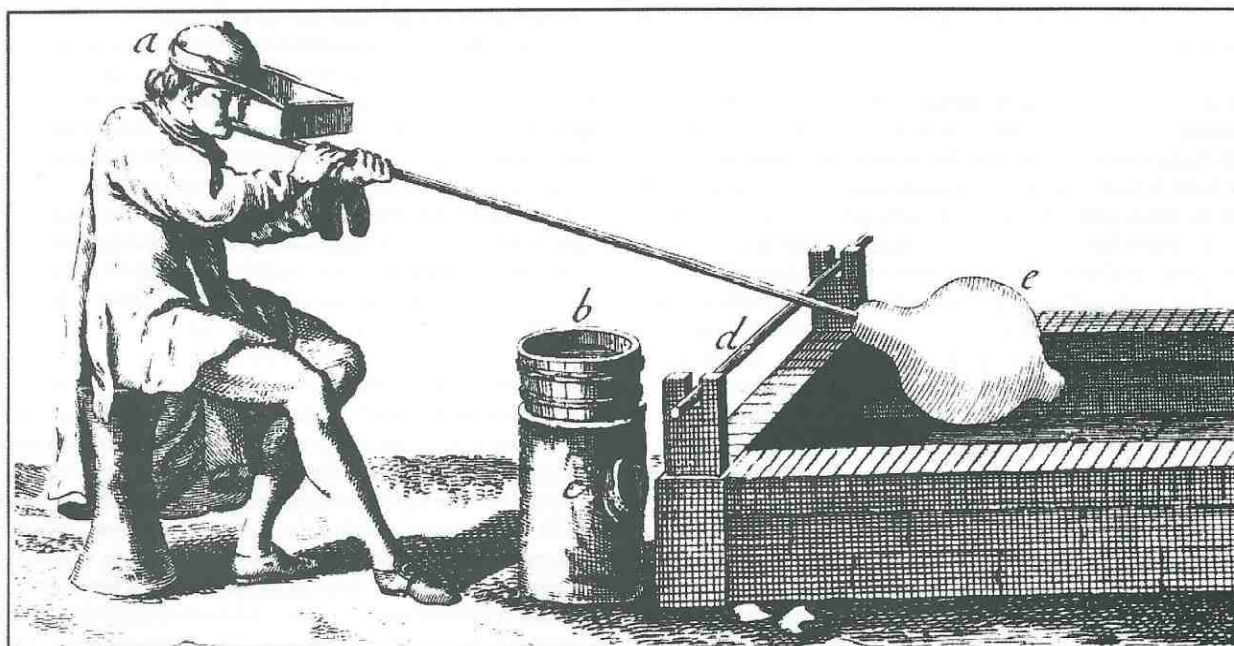
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Crown glass manufacture:



The opened neck of the glass is softened by the flame

Diderot



Blowing continues after an 'eye' has been rolled. The eye will serve as the point of attachment for the rod on which the disc is spun flat.

Diderot