

CHAPTER I

ROMAN GLASS IN ENGLAND

A BIOGRAPHER examines the ancestry of the man whose life he records in order to trace the development of peculiar traits and talents. Similarly, in order to understand the technique of a craft its

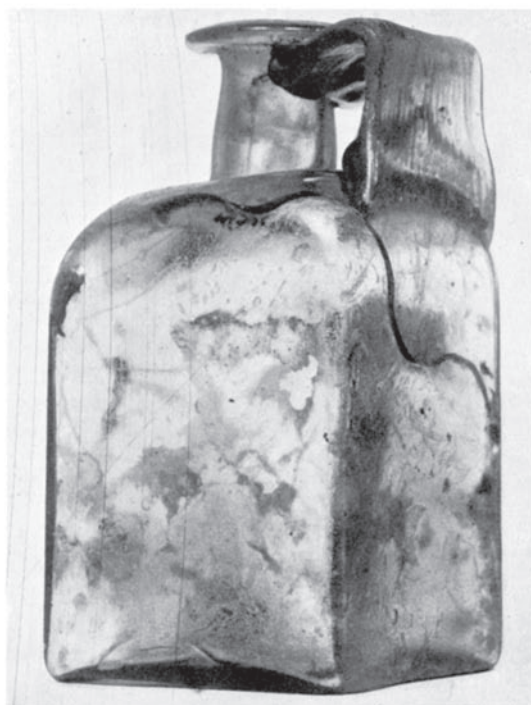


Fig. 1. Square jug, made in mould, with strongly fixed handle. British Museum.

ancestry must be investigated. The technique of English glass-blowers can be traced back to the glass-blowers of Imperial Rome and to the Roman provinces of Syria, Egypt and Gaul.

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It does not appear that during the Roman occupation glass-working, except the making of beads and, possibly, of small cups and bottles, was carried on in any part of the British Isles. It is claimed that at Wilderspool, near Warrington, the foundation of a Roman glass-furnace, together with fragments of glass and a piece of a crucible, have been discovered. The remains, however, are so insignificant that the glass-factory

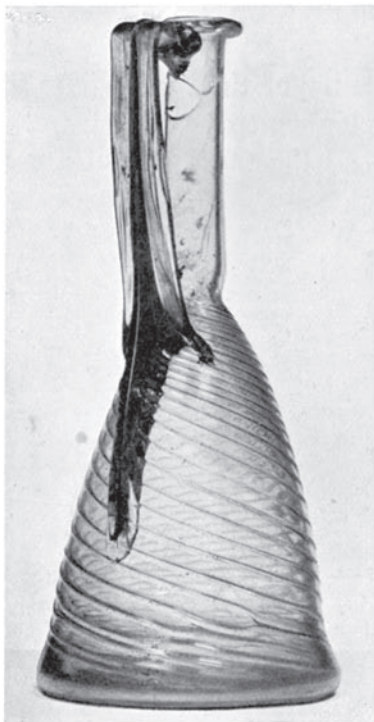


Fig. 2

Fig. 2. Roman jug with strongly fixed handle; threaded decoration. Found at Barnwell, Cambridge. British Museum.

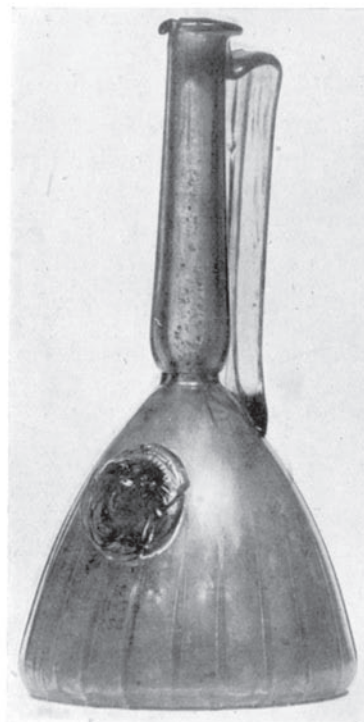


Fig. 3

Fig. 3. Roman jug, with glass impressed seal. Surface ribbed by moulding. Found near Sittingbourne. British Museum.

must have been of small extent. But even if Roman glass-works did not flourish in Britain, the vessels and fragments of vessels scattered broadcast through the land prove by their technique how much modern glass-workers owe to their Roman predecessors. The similarity in form, and in chemical composition of Roman glass vessels, whether found in

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England, on the Continent, in Syria or Egypt, makes it probable that there were only a few centres of glass manufacture, and that the vessels were distributed from these centres through the whole empire.

At Silchester and on the sites of other Roman settlements fragments have been found of window glass, both sheet and plate, differing but slightly in composition from that of modern glass. The moulds used for



Fig. 4. Roman cut crystal-glass cup, height $5\frac{3}{8}$ ". Found at Barnwell, Cambridge. British Museum.

shaping vessels and for impressing patterns on their surface were as perfect for the purposes for which they were intended as those of the present day. The handles of the Roman jugs and jars were perfectly constructed and scientifically attached (Figs. 1 and 2), the strain of leverage being amply allowed for. Spouts were formed as they are formed now, and seals or "prunts" of glass and coils and loops of glass-thread (Figs. 6 and 7) were added as forms of decoration. Pliny describes how patterns were cut by pressing the surface of vessels against revolving wheels of hard stone. At Wilderspool fragments of Roman glass, cut with patterns (Fig. 5), have been found and also a small stone cutting-wheel. In the

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British Museum is an almost colourless Roman glass cup (Fig. 4), cut with hexagonal hollows, which was found at Barnwell, near Cambridge.



Fig. 5. Fragment of cut Roman glass, found, with a small cutting wheel, at Wilderspool. Warrington Museum.

Roman cutting consists of patterns composed of lines and shallow concave hollows, circular, hexagonal or octagonal in shape. This shallow-cut



Fig. 6. Roman vases with decoration of loops and trailed lines of glass.

decoration sufficiently brings out the brilliancy of the material without distorting the outline of the vessel to which it is applied, and in this respect is superior to most modern cut decoration, in which grace of outline is too often sacrificed in order to secure brilliancy by deep cutting.

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Glass-making in England is therefore in debt to Imperial Rome for much of its technique and for the chemical composition of at least one of the many kinds of glass which are now made.



Fig. 7. Vase with handles; coil of thread as decoration; found in Colchester. Colchester Museum.

BLUE-TINTED ROMAN GLASS

The composition of the blue-tinted glass, of which so many of the larger Roman jugs and cinerary jars are formed, throws an interesting light on Pliny's account of the discovery of glass. His attribution of the discovery to certain Phoenician merchants shipwrecked on the coast of Syria, near the mouth of the river Belus, may be inaccurate, but the development of a durable glass from the deliquescent silicate of soda, which the merchants found mixed with the ashes of their camp fires, is precisely and scientifically traced. If, as Pliny states, the cooking pots

were supported on blocks of natron (impure carbonate of soda) the heat of the fire would bring about the combination of soda with the seashore sand, and the glass-like substance, silicate of soda, would be formed. Experience must soon have shown that sand and soda, alone, could not produce a stable, workable glass, and Pliny, in the chapter which follows the description of the wreck, states that “after a time a material called *Magnes lapis* began to be added.” In a subsequent chapter five different kinds of *Magnes lapis* are described: “the fifth is white, resembles pumice powder, does not attract iron and is found in *Magnesia*.” This undoubtedly is magnesian limestone, and no better material could have been introduced into the mixture of sand and soda in order to make a durable glass. Analysis shows that these are the materials from which the blue-tinted Roman vessels were made, and the preservation of the glass is sufficient proof of its durability.

“ANGLO-SAXON” GLASSES

In the Museum of Saint Germain is a curious Roman glass vessel (Fig. 8 B), which is cup-shaped and has eight hollow excrescences or

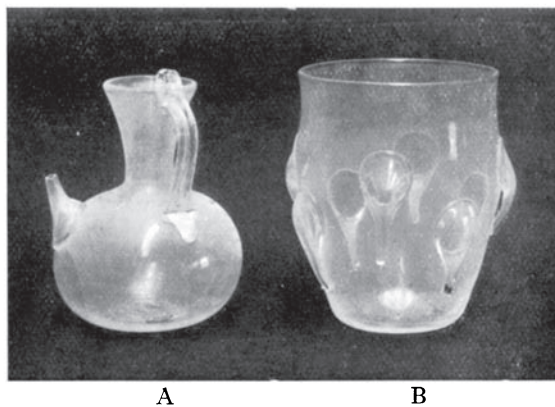


Fig. 8. A, Roman feeding bottle with glass spout.
 B, Roman vase with hollow depressed lobes.
 St Germain's Museum.

lobes, made like small spouts, but with the ends turned downwards and fused to the side of the cup. This little vase, for it is difficult to imagine that it had any domestic use except as an ornament, forms an important

“ANGLO-SAXON” GLASSES

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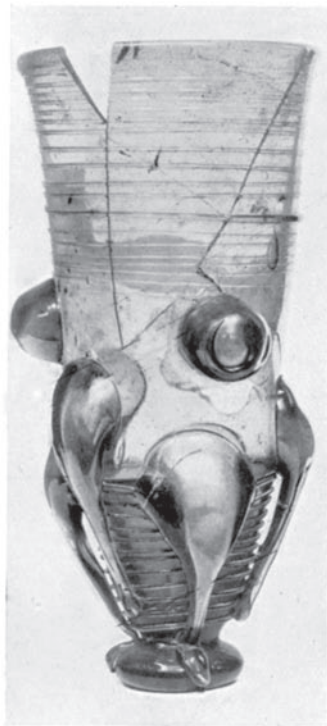


Fig. 9

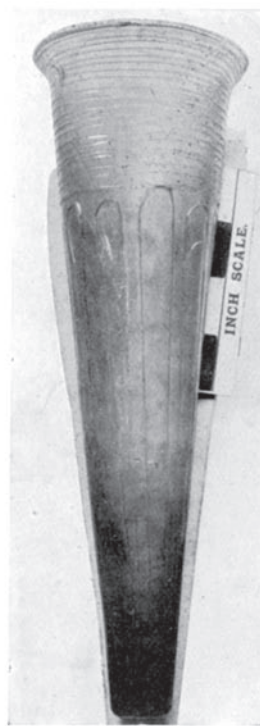


Fig. 10



A

Fig. 11

B

Fig. 9. Threaded mouth and base; hollow lobes. Found near Sittingbourne. British Museum.
 Fig. 10. Threaded mouth and loops of thread. Alfriston, Sussex. Photo by Mr J. C. Stenning.
 Fig. 11. A, Threaded mouth. B, Strap decoration. Found at King's Field, Faversham.

“ANGLO-SAXON” GLASSES

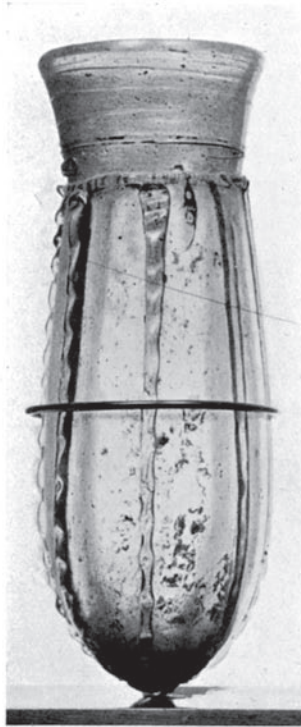


Fig. 12

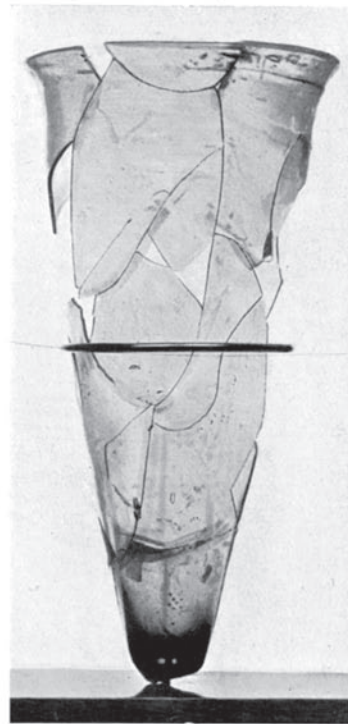


Fig. 13



A

Fig. 14

B

Fig. 12. Threaded mouth, notched lines. King's Field, Faversham. British Museum.
 Fig. 13. Found at King's Field, Faversham. British Museum.
 Fig. 14. A, Found at Coombe, near Sandwich. B, Found at Bishopsbourne, Kent.

“ANGLO-SAXON” GLASSES

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link between Roman glasses and the so-called “Anglo-Saxon” glasses which have been found in Anglo-Saxon graves of the sixth and seventh centuries of our era. There are several varieties of these glasses but the most important are from six to nine inches in height, have small bases, threaded mouths, and a number of hollow spout-like lobes, formed like the lobes on the Roman cup in the Saint Germain’s Museum. (Fig. 9.) Similar vessels are found in graves of the same period in France and Germany. Roman technique survived in certain parts of Germany, notably in the Cologne district, and from this centre the vessels may have found their way to England as well as throughout the rest of Europe.

In England the largest number of Anglo-Saxon glasses have been found in Kent, which provided the most convenient landing-places for imports from abroad, but specimens have also been found near Cambridge and Oxford as well as in Northamptonshire, Suffolk and Sussex. Associated with the “lobed” glasses are various forms of drinking vessels. There are simple bowl-shaped cups, similar to some depicted in the Bayeux tapestry; conical and trumpet-shaped tumblers, ornamented with long loops of glass-thread (Fig. 10), and spindle-shaped vessels with threaded mouths and notched strings or tears of glass running nearly their full length (Fig. 12). The notched strings or “tears,” as well as the hollow lobes and the threaded necks, are survivals of Roman technique. Some of the simple bowl-shaped cups may have been of local manufacture.



Fig. 15. Rib-moulded cup. Found at Alfriston, Sussex.

CHAPTER II

GLASS-MAKING IN ENGLAND

CHIDDINGFOLD

AMONGST the ancient maps painted on the panels of the cupboards of the *Guarda Roba* of the *Palazzo Vecchio* in Florence is a map of England, in which the county of Surrey contains only two names, Guildford and “Chedingfield” (Chiddingfold). The map was painted in 1565 and suggests that Chiddingfold, which is now a sleepy village, was then regarded in Italy as of not less importance than a county town. This may have been due to the fact that for centuries Chiddingfold had been recognised as the chief centre of glass-making in England.

Chiddingfold is in the Haslemere district, south of Godalming, and close to the boundary line of Sussex. The neighbourhood is still thickly wooded, and a large-scale Ordnance map bears witness to the existence in times past of tracts of dense forest. Sites, too, are marked of disused sand-pits and limekilns, and names, such as “Glass-house-copse,” “Glass-house piece,” and “Kiln-copse,” tell the story of a dead industry which required for its sustenance sand and lime as well as the fuel and alkali supplied in abundance by the woods. It is not known when the industry was started, but in the sixteenth century it was already of great antiquity. At first probably the manufacture was restricted to rude cups and bowls for domestic use roughly made of coarse greenish glass. Such primitive drinking vessels, which may well be native products, have been found in Anglo-Saxon graves associated with lordly and elaborate beakers of foreign origin. The fact that in the seventh and eighth centuries it was necessary to send abroad for skilled artisans to manufacture glass windows and ecclesiastical vessels, does not disprove the existence of makers of humbler products in the wilds of Surrey.

The information which has been gathered about the early glass-workers in Surrey and Sussex is almost entirely due to the researches carried on through a number of years by the late Rev. T. S. Cooper of