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THE EVOLUTION AND CHRONOLOGY OF ENGLISH CLAY TOBACCO PIPES

Adrian Oswald

IN past and present excavations in London and other cities the clay pipe is one of the commonest of finds in the upper deposits. These layers are often difficult to date on pottery alone since the common wares of the seventeenth and, to some extent, the eighteenth centuries have been little studied.¹ The clay pipe, by reason of its very short life, may materially help this dating and, here, as part of a much wider survey of the pipemaking industry, an attempt is made to produce a chronological typology from the seventeenth to the nineteenth century.²

For this purpose I have drawn and studied most of the large collections of pipes in our Museums and, in addition, have been able to draw on the dated groups which excavations in London and elsewhere since 1938 have yielded in ever increasing quantities.³

Before entering into typology and methods of dating it is necessary to say a little of the historical background of the industry. The earliest reference to pipes in this country appears to be that of William Harrison, who, in his "Chronologie" of 1588, states that in 1573 "the taking in of the smoke of the Indian herb called Tobacco, by an instrument formed like a little ladell . . . is greatly taken up and used in England." A little ladle is an apt description of the early form of the pipe. Thirty years later the references in the literature of this period make it clear that smoking was widely practised by all classes. In 1619 the Worshipful Company of Tobacco Pipemakers received a charter and, from excavations, it is clear that pipes were being made in quantity at this period although it is a matter of difficulty to trace makers in the first four decades of the seventeenth century.⁴

It is quite otherwise with the second half of the seventeenth century. From c. 1650 onwards many more records of the trades followed by individuals are available in the shape of the Freedom Rolls of towns, marriage licences, wills, and, to a lesser extent, parish registers. For the eighteenth century the Apprenticeship Rolls are invaluable, together with poll-tax returns and directories and, for the nineteenth century the directories give a fairly complete picture. A good many local studies from these sources have been made and more will follow, but it is clear that in the latter part of the seventeenth century most towns had their pipe industry.⁵ London, Bristol, Chester and Broseley can show the longest lists for this period, but there

were many workers at Salisbury, Canterbury, Taunton, Hull, York and Lynn. Both records and finds agree well with the general picture provided by the literature of the period in which pipe smoking is common among all classes.

In the eighteenth century snuff supplanted smoking in the fashionable world and, to judge by the comparatively rarity of pipemakers in the volumes of the Apprenticeship Rolls, the industry diminished in bulk. Certainly from the years 1700-1760 the names of pipemakers become rarer as time progresses, and some of the famous Broseley family of Legg became paupers at this time. There appears to have been a revival of the industry in the first three decades of the nineteenth century, but this may be due merely to more complete records. It is exceedingly unfortunate that the records of the Tobacco Pipemakers Company at Guildhall Library are very incomplete and only go back as far as 1800 with so many gaps that they are of little use.

Dating the product of the pipemaker can be done in four main ways. First, pipes carrying dates with their makers' marks do occur, although rarely, and these pipes have been used to check the typology set out here. Secondly, it is sometimes possible to identify the maker's marks with an individual mentioned in historical records. This method has been used by previous writers with varying degrees of success. The difficulty lies in the fact that the marks normally consist of only two initials, and these may equally apply to different persons or fathers, sons and grandsons. This form of dating should, clearly, only be used in connection with some form of chronological typology and the two have rarely been carefully combined. There are other pitfalls, such as gaps in records and Dutch makers' marks, although there is, fortunately, a very comprehensive record of these in the Bragg collection in the British Museum. Something must be said on the style of mark.

MARKS ON PIPES

These are found as follows :

1. *On flat heels*, from the beginning to the end of the seventeenth century. Incised stamps are found early in London, usually at Bristol throughout the century. After about 1630 London stamps are in relief, clearly made with a signet ring and hence often

identical. Three-letter marks do occur occasionally—mainly in London.

2. *On bowls*, usually from 1650 onwards, and on the back of the bowl incised or in relief. About 1690 some makers, usually from Bristol, incorporated the mark on one half of the mould so that it appears in relief on the side of the bowl. Marking on the bowl is unusual after the early eighteenth century but was revived in the early nineteenth century with a large incised mark. Some very late pipes, *c.* 1850, have marks stamped in an indelible ink.

3. *On spurs*. Pipes with spurs, as apart from flat heels, occur very early and bear occasionally incised rosette marks on the stem. By 1650 spurred pipes (the type known as a plague pipe) are sometimes marked on the bowl, but a few Broseley makers made the spur just large enough to carry a minute stamp. At the end of the seventeenth century a radical change took place in pipe shapes—the top of the bowl became parallel with the stem and the flat heel was replaced with a spur. Initials were incorporated on the mould and appear on each side of the spur with the bowl of the pipe pointing away from the body.

4. *On stems*. Initials occur, incised, by *c.* 1650. Full names are known from Salisbury, incised, by 1670, and the method was in common use at Broseley in the eighteenth century; also to some extent at Chester, *c.* 1700. By 1800 this method of marking was incorporated in the mould—generally with the full name of the maker on one side and the place on the other.

Thirdly, contemporary pictures and woodcuts may be used as a clue to the dating of pipes. This method has obvious deficiencies arising from the inaccuracy or licence of the artist and from the fact that most pictures showing pipes are of foreign origin. Dutch pipes differ to some extent in shape from English pipes and this means of dating must be used with all caution.

Fourth and lastly, pipes can be clearly dated when found in stratified association with dated groups of objects. The typology here attempted has employed all these methods of dating, but has relied, in the main, on a wide series of dated groups found in London excavations during the last ten years.

The basic types of pipes here illustrated have been evolved by constant sorting and comparison of quantities of examples. These pipes do not attempt to cover local varieties which some areas develop. For instance, the pipemakers of Broseley distinguished their products with extra heavy heart-shaped bases. These have received separate treatment.

UNUSUAL AND DECORATED PIPES

Decorated pipes occur as early as 1600, mainly in the London area. Patterns consist in the main of rosettes and fleur-de-lis, the latter in stamped lozenges. Both kinds are found incised and embossed.

An early group originates, probably from Ipswich, *c.* 1630–50. Patterns here consist of raised dots to form a flower or a bowl of grapes with foliage and stems, or large fleur-de-lis on both sides. These patterns are made in the mould. Derived from these

is another group of spurred pipes, *c.* 1650–70, with raised dots in a triangular pattern and a primitive stem. This group is found over the Midland area from Chester to Leicester. Specimens signed S.T. are known.

Patterns revive again in the latter part of the eighteenth and in the nineteenth century—generally consisting of oak leaves down the front of the bowl or fluted sides.

There are two main factors to consider in dating a pipe, as apart from marks. First, the size which tends to get steadily larger until the end of the eighteenth century when once again it decreases. Size is, however, not a consistent element and very large pipes do occur at early dates; nor is the cubic capacity any sounder guide. Secondly, the shape which varies constantly and is, therefore, of major importance in dating. The outline of a pipe in fact alters not merely with the period but, to a lesser degree with the place. At the turn of the seventeenth century there is one major change in the silhouette of the pipe, namely the angle of the lip of the bowl relative to the stem ceases to become acute and remains henceforward parallel with the stem. It is fully realised that no typology can be a rigid guide and intermediate and extraordinary examples will occur and, of course, in some cases there will be survival of form.

CHRONOLOGY OF TYPES

(See Figs. 1 and 2. Drawn Full Size)

1. *c.* 1580 — 1630

This type has a slim narrow bowl. Small and large varieties are illustrated. The bowl projects well forward. The base is flat and in the same plane as the bottom edge of the stem.

Marks. Very occasionally the base, which is often heart-shaped, carries an incuse mark—e.g., an oak leaf (Guildhall Museum and Ashmolean). There is a complete pipe of this kind with a very small bowl at Guildhall Museum with an overall length of 2½ ins. Scratched on the bowl of this pipe are the letters E.R. and what appear to be D.G.REGI... which may just possibly refer to Queen Elizabeth.

Dating. This type is found in a group from All Hallows, Lombard Street, with a date range of *c.* 1600–1666, and in another from Watling House, London, with purely 16th-century pottery and from Gateway House with associations to *c.* 1610. It does not occur in any groups after 1640. The same type was found at the bottom of the City Ditch at Cripplegate Buildings in deposits of the latter half of the 16th century. The only marks which can be possibly identified are WB, incuse on pipes at the British Museum and Guildhall Museum, and IR on pipes from London, Ipswich and Worcester. The former may refer to William Bachelor or others (see above) and the latter to John Rogers living in Ratcliffe Highway 1620.

In the illustrated title of Richard Braithwait's "The Smoaking Age" published in 1617, a rather similar pipe may be seen.

2. *c.* 1580 — 1620

This type has a flared, swollen and, normally, very

small bowl, projecting well forward. The base may be drooping, horizontal or inclined upward, but it is never stepped. About half of this type are handmade. Marks are found very rarely on the base and incuse.

Dating. One example was found in the All Hallows, Lombard Street, Group. *c.* 1600–1666.

An exaggerated figure of this type is shown on a cut from "Tabac van dem gar beilsam Wundkraut" of Johann Rodolf Wolffen of 1616. Pending further datable evidence judgment on this type must be reserved, but it is quite possible that it represents the earliest form of pipe. One was found in the Gateway House deposits noted above.

3. *c.* 1600 — 1640

This is a transitional type between groups 1 and 2 and 4. It is characterised by a markedly drooping base, which is clearly the forerunner of the stepped base. The bowl shape, usually, has the pinched-in waist below the lip which is a feature of the later types. More often than not there is a fine rouletted groove below the lip.

Dating. This type is found in the All Hallows, Lombard Street Group, the Watling House Group to *c.* 1600, the Gateway House, middle layer to *c.* 1640 and the City Ditch Group at Cripplegate Buildings of *c.* 1620–1640.

Marks are extremely rare, but there is a decorated pipe of this type from London marked BB on the stem (*Archaeological Journal*, VII, p. 236) which may perhaps be one of Benjamin Berriman's, the first Bristol maker, who took John Wall as an apprentice in 1619.

4. *c.* 1620 — 1660

This type is the common form of the first half of the seventeenth century. It combines the main features of Types 1 and 2, Sub-groups *a* and *b* deriving from Type 2, *c* and *d* from Type 1. The essential differences are the final development of a stepped or spurred foot, the pinched waist below the lip, combined usually with a rouletted or plain groove and, for the most part, an increase in size.

a. *c.* 1620 — 1650

Distinguishing feature is the marked swelling just below the rouletted lip at the rear of the bowl. The step of the base is usually small and embossed marks on the base are not uncommon.

Dating. This is the main type of a group from the top filling of the City Ditch at Cripplegate Buildings which date, from *c.* 1620–1640, and from the middle layer at Gateway House *c.* 1610–1640. There is a similar group from Bankside. A glass pane at Tolson Hall, Strickland Kettle, Westmorland, dated 1638, shows this type of pipe with a stem about six inches long. A pipe marked IW at Bristol of this type is attributed by Pritchard to John Wall *c.* 1640; another marked SW is probably by Samuel Willis of Stepney who died in 1661 and there are many other identifications in the first half of the 17th century.

b. *c.* 1620 — 1640

Many pipes in this group are smaller than the figured example. They are characterised by a spurred base, which in some examples curls forward. In shape

they can follow both *a* and *c*, although the majority have a swelling at the rear of the bowl as in *a*. Marks are very rare.

Dating. There is at present little evidence for close dating, the only considerable group occurring at Bankside in a deposit of the first three or four decades of the seventeenth century. They occur in the middle layer at Gateway House *c.* 1610–1640. There is a pipe marked on the back of the bowl EC probably by Edward Carrington of Stepney who died 1664.

c. *c.* 1630 — 1670

The pipes of this group are the most commonly found of this type. They differ from those of Type *a* in their more elongated appearance due to the symmetrical swell on both sides of the axis of the bowl. The step of the base is generally pronounced and the size increases with time eventually to merge in Type *6a*. Base marks, nearly always embossed, are relatively common.

Dating. These pipes are found in the City Ditch Group at Cripplegate Buildings, *c.* 1620–1640 but in a minority. They occur in pits filled with rubbish from the Great Fire, at Windsor Court in their larger form, and in the All Hallows, Lombard Street, Group. They are well dated by identification with makers, e.g., a pipe marked Edward Evans at Chester, whose daughter was baptised in 1646, another, also at Chester, marked AL may safely be attributed to Alexander Lanckton, whose name occurs in the registers of Holy Trinity as a witness to a marriage in 1657. There are considerable other identifications in London. The products of Charles Riggs admitted as a burgess of Newcastle-under-Lyme in 1649 and who died in 1676 belong to this group although they have some local characteristics.

d. *c.* 1640 — 1670

These pipes are intermediate in form between Types *4b* and *c*. They differ from the former in having a more swollen bowl and from the latter in the more bulbous sides. In size they fall between the two. Marks are rare but do occur sometimes on the back of the bowl or on the stem.

Dating. These pipes are found in the pits at Windsor Court which were filled with debris from the Great Fire, in the All Hallows, Lombard Street, Group 1600–1666 but not in the groups from the City Ditch which have a terminal date of *c.* 1640. No certain identification with a maker is yet possible, but some bowls in the Grosvenor Museum, Chester (the Potter Collection from the Meols seashore), stamped IB on the back may possibly be the work of John Baddeley (*ob.* 1675) or John Ball (*ob.* 1681) both of Newcastle-under-Lyme.

5. *c.* 1640 — 1670

This is the favourite shape of the Bristol makers and Winchester and Salisbury areas. The distinctive feature is the marked inward kink of the front edge of the bowl before the junction with the foot, thus leaving the upper part of the bowl hanging well forward. Two main varieties are figured. In *a* the front edge of the bowl drops almost vertically from the lip and the line of the lip of the bowl is nearly parallel to the line of the stem. In *b* the front edge curves inward from the lip and the line of the latter is at an acute angle to the stem. Specimens *c* of a very small size with a flat base, as in

Type 1, are found, particularly in the Salisbury area, with the Gauntlet mark and are certainly earlier than those described in this section. A pipe from Mr. Posnanski's excavations at Lamport, Northants, marked IH is akin to Type *c* and was probably made by John Harris working at Bristol before 1641. Marks on these pipes occur frequently, usually, but not uniformly incuse and often with the name in full.

Dating. The evidence rests mainly on identification with makers. Type *a* includes, among others, pipes marked IW attributed to John Wall, *c.* 1640 of Bristol, Nathaniel Howell and John Hunt admitted to the Freedom of Bristol 1651 and William Chearington, senior, admitted in 1660.

Type *b* includes pipes, among others, of Flower Hunt and John Hunt admitted Freeman of Bristol in 1651 and also of William Chearington as above. Finally there is a giant pipe of this kind marked GB and dated 1698 in the Salisbury Museum which may represent a survival of tradition.

6. *c.* 1650 — 1690

This type is the logical and larger successor of Type 4 from which it differs in the symmetrical inward curve on both the front and rear edges of the bowl just below the lip. The bowl has, in effect, a double waist, one below the lip, the other at the junction with the stem. These constrictions tend to disappear in the later examples and to merge with the straight-sided bowls of Type 7. These pipes, with local variations in the foot, are the main kinds used by the Broseley makers. Marks are found on the base, the back of the bowl and on the upper part of the stem.

a. *c.* 1650 — 1690

This group is typical of the Restoration Bristol pipes with a narrow elongated bowl.

Dating. The following Bristol makers made pipes of this type. The date given is the year of admission to the Freedom: John Hunt, 1651; James Fox, 1654; Richard Nonney, 1655; Timothy Risbett, 1669; Edward Lewis, 1678, and William Chearington, junior, 1690.

b. *c.* 1650 — 1680

This type has a wider bowl and foot and occurs in a group from Bankside of the second half of the seventeenth century and in a pit at Windsor Court as noted above. Pipes attributed to Isaac Cary, admitted Freeman of York in 1372, belong to this type and there is a local variety at Gloucester of Thomas Cullemore, 1666.

c. *c.* 1670 — 1690

This is the spurred variety of *b* which in the later examples tends to become straight-sided as in Type 7. Sometimes a mark is carried on the very narrow spur.

Dating. Examples occur in the Bankside Group *c.* 1650 — 1690 and from a cess-pit at Gresham Street, *c.* 1690 — 1720.

7. *c.* 1670 — 1710

This type marks the abandonment of the bulbous bowl in favour of a more straight-sided pipe which tends to become more elongated and narrower in the bowl with the passage of time. The essential difference between pipes of this group and Type 8 lies in the

junction of the front edge of the bowl with the base. In Type 7 there is little or no inward kink before the junction, in Type 8 this kink is well marked, producing the effect of a flat spur.

a. *c.* 1670 — 1710

This type is rather squat, straight-sided with a fairly wide bowl. Marks occur sometimes on the base.

Dating. This pipe is found in the Bankside Group of the second half of the seventeenth century and in a group from a cess-pit at Gresham Street of *c.* 1690–1720. A decorated pipe at Chester marked M and by its style attributable to Elias Massie 1688–1715 belongs to this group. Also of the same type are pipes marked as follows: John Hunt (junior) 1689 or 1694 of Bristol; IC at York, Hull, British Museum and Guildhall Museum, either John Chapman, admitted to the Freedom of Hull 1670, or Isaac Cary, Freeman of York, 1672, or James Chapman admitted Freeman of London 1682.

b. *c.* 1680 — 1710

This is a slimmer and more elongated variety which also occurs with a spur, forming a link between Types 6*c.* and 9*d.* These pipes are rarely marked although some marked AA on the side of the base have been found in London and were probably made by Anthony Andrews admitted Freeman 1693/4.

Dating. These pipes were found in the Bankside and Gresham Street Groups as above.

8. *c.* 1680 — 1720

The main difference between this and the preceding type has already been stated, but in addition the bowls of this group are very long and comparatively narrow with usually a slight inward curve on the back edge of the bowl just below the lip. Marks are found occasionally on the base, rarely on the back of the bowl.

a.

In this type the footstand of the base is wide, and there is little or no constriction where the bowl joins the stem.

Dating. There are pipes of this group from William III's camp at King's Gap, Hoylake (Chester Museum), also in the Gresham Street Group *c.* 1690–1720 and the Bankside Group *c.* 1650–1690. A pipe marked ID at Clifford's Tower, York, probably by John Dawson, who received the Freedom in 1677, also belongs to this type.

b.

Here the footstand is more pronounced, approaching the eighteenth-century type as in 9*a* and the constrictions above the stem and below the lip are more marked.

Dating. These pipes are found in both the Gresham Street and Bankside Groups as above. Both types were made by Richard Higgs, admitted Freeman of London 1689; examples occur in the British and Guildhall Museums. There are pipes marked TA at Guildhall, Coventry, Barston, Warwickshire, probably made by Thomas Avenue of Warwick who took an apprentice in 1718.

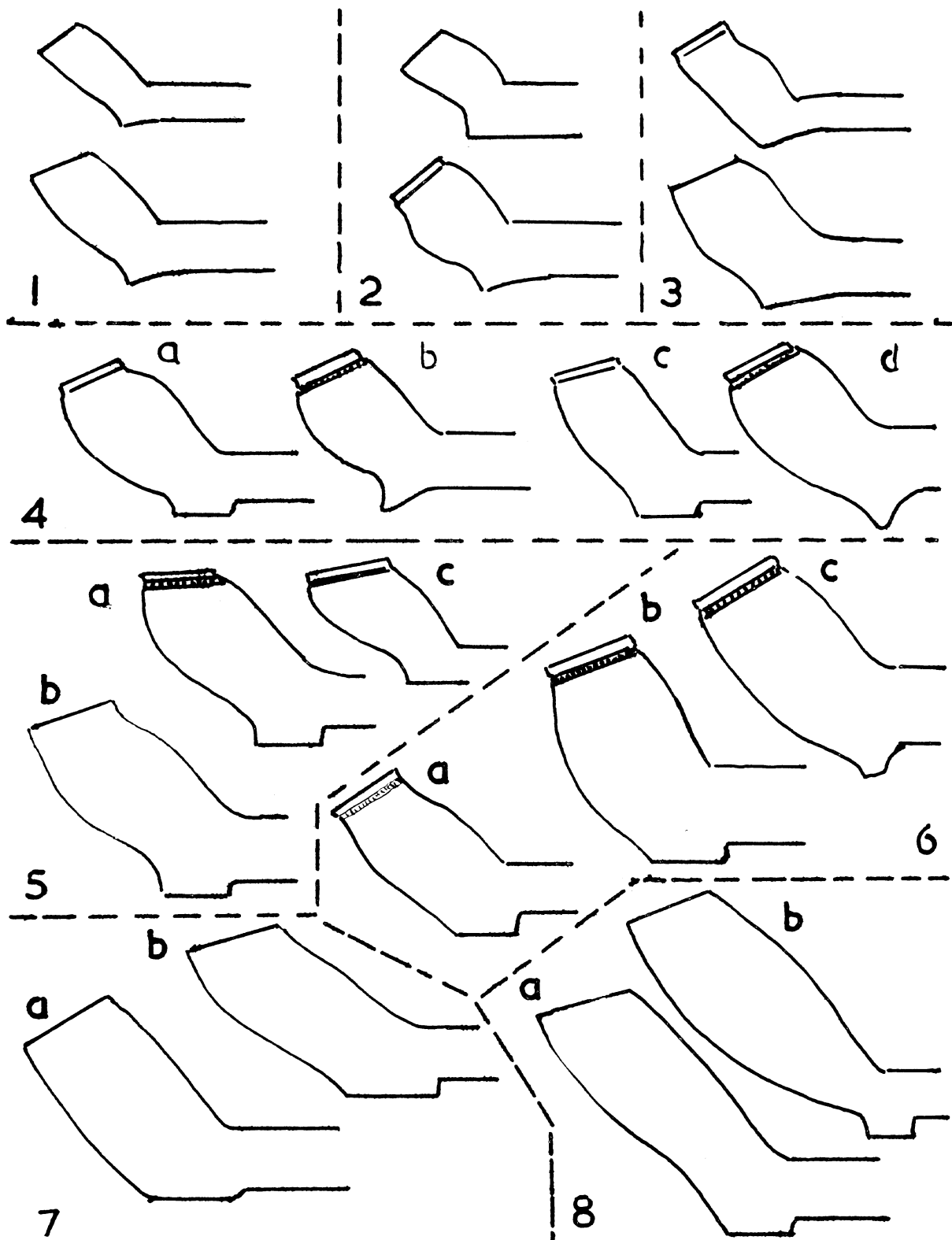


Fig. 1

9. *c.* 1680 — 1730

This type appeared before under the Category 9*d*. It occurs in this country as a spurred pipe, (a) principally in the West Country, (b) in London and the Home Counties. In America it is found as (c) basically the same pipe without the spur. It is possible the absence of a spur was to avoid breakage in transit. In 1679/9 over 7,000 gross of pipes were exported to New England alone. (*P.R.O. Cust.* 3.1. pt. 2.)

a. This often has a pinched-in top. Marks occur in the stem and moulded in fairly large circles in the sides of the bowl. Dated makers' identifications are found in the Salisbury Museum, e.g., Edward Higgins, married 1698 (Hants. M. Licence); Thomas Hill admitted Freeman at Bristol 1683. A pipe in Newbury Museum bears a date which is probably 1725.

b. This is usually taller than *a* and in shape comes nearer 10*b* and 10*c*, but it has a spur which often projects forward. There is a fine dating series of this class from London in Guildhall Museum bearing Royal Arms and Company Arms. It is hoped to publish in full later so the only identification which need be mentioned is that of a pipe from Bankside bearing the Royal Arms for 1694–1702 signed HB, probably Henry Browne who took the Freedom of London 1689.

c. These are common in America. In my view no certain maker's identification is yet established.

10. *Major part of 18th century*

This series covers the major part of the 18th century. Type *a* is a West Country product, a derivative of group 5, with the parallel lip and stem of the 18th century.

There is little to date this type as yet. There are no certain makers' identifications, but these pipes have been in association with late 17th-century remains at Taunton Castle and also associated with Type 10*b* so that a date range from 1680–1730 is probable.

b. c. 1690 — 1740

This pipe appears to be the earlier of the series. The bowl is comparatively narrow with sides almost parallel compared with the flaring bowl of Type *b*. It should be stated that *b* and *c* do merge and hence are sometimes difficult to differentiate.

Dating. These pipes occur in the Bankside and Gresham Street Groups above and also in a small pit at Bankside which was sealed about 1740, and in a coffee house group from Wood Street with a 1700–1740 date range. Seven examples are in a group of material at Chester with a wine bottle seal of John Bowker 1731 and other material of the same date. There are many identifications with makers from 1690 onwards, perhaps the most certain being many pipes from London excavations marked A/A by Anthony Andrews admitted Freeman 1693—and taking apprentices in 1716. His pipes include Types *b* and *c* and their intermediate varieties.

c. c. 1710 — 1780

This type covers the whole of the eighteenth century,

with a tendency to get smaller with the passage of time. The earlier examples have thick walls to the bowl with a circular section. By the middle of the century the bowls are oval in section with thin, rather brittle walls.

Dating. A group from Bankside associated with pottery of *c.* 1720–1770 contained pipes of the thick-walled round-sectioned variety. Another group from a brick-lined well at Cripplegate Buildings with a terminal date of about 1770 had pipes of both kinds of section. There is a pipe marked Henry Sefton and dated 1715 in Nottingham Castle Museum. There are again many identifications with makers, for instance pipes in Guildhall Museum marked R/M—Richard Manby or Manley admitted Freeman of London 1700—taking apprentices to 1720.

11. *c.* 1780 — 1850

Type *a* the same as the former Type 9*c*. It is a product of the late 18th century and first half of the 19th. It often bears much decoration on the bowl and stem which are thin and brittle.

Dating. This is the commonest type from a pit at Cripplegate filled in *c.* 1820, and from the filling of a cellar excavated by Dr. K. M. Kenyon, F.S.A., at Marshalsea. Several makers of pipes from this cellar have been identified from directories, e.g., John Jewester of the Borough working in 1817, John Ford of Stepney, working in 1832 also made this type of pipe and the shape persisted well into the nineteenth century—e.g., John Norris working at Reading in 1839 used this shape.

b. This type is narrower than *a* with thin sharp spur and rounded profile on the front of the bowl.

Dating. This is the commonest type from a well in Cripplegate dated *c.* 1790 — 1820. Makers' identifications range from 1789–1840. The mark is usually on the back of the bowl, e.g., a pipe stamped "Will Kent St." from Long Acre, the work of William and John Williamson working as late as 1840.

12. *c.* 1820 — 1870

These are late types with obvious affinities with briar pipes. Identifications for *a* include James Jones of City Road working 1820–1840; *b* James Critchfield of Bermondsey working 1840; and for *c* J. Webb of Portland Street working 1840.

NOTES

1. This situation is being remedied and the publication of finds from pits recently excavated or watched in Chester, London and elsewhere is resulting in closer dating of the pottery.

2. The whole inception of this survey was due to the late Mr. B. H. St. J. O'Neil, who, quite apart from promoting the idea, made over to me, with the greatest generosity, all his notes collected over many years. I am greatly indebted to many individuals for material and help, chief among them being Mr. J. F. Chalkley, Mr. G. Wilson Laurence, Mr. F. S. Collins, Mr. H. G. Omwake, Mrs. Helen Robinson, and Miss Lillico. I trust the remainder will allow me in this small space to thank them in bulk.

I have added later classes of pipes in this third edition

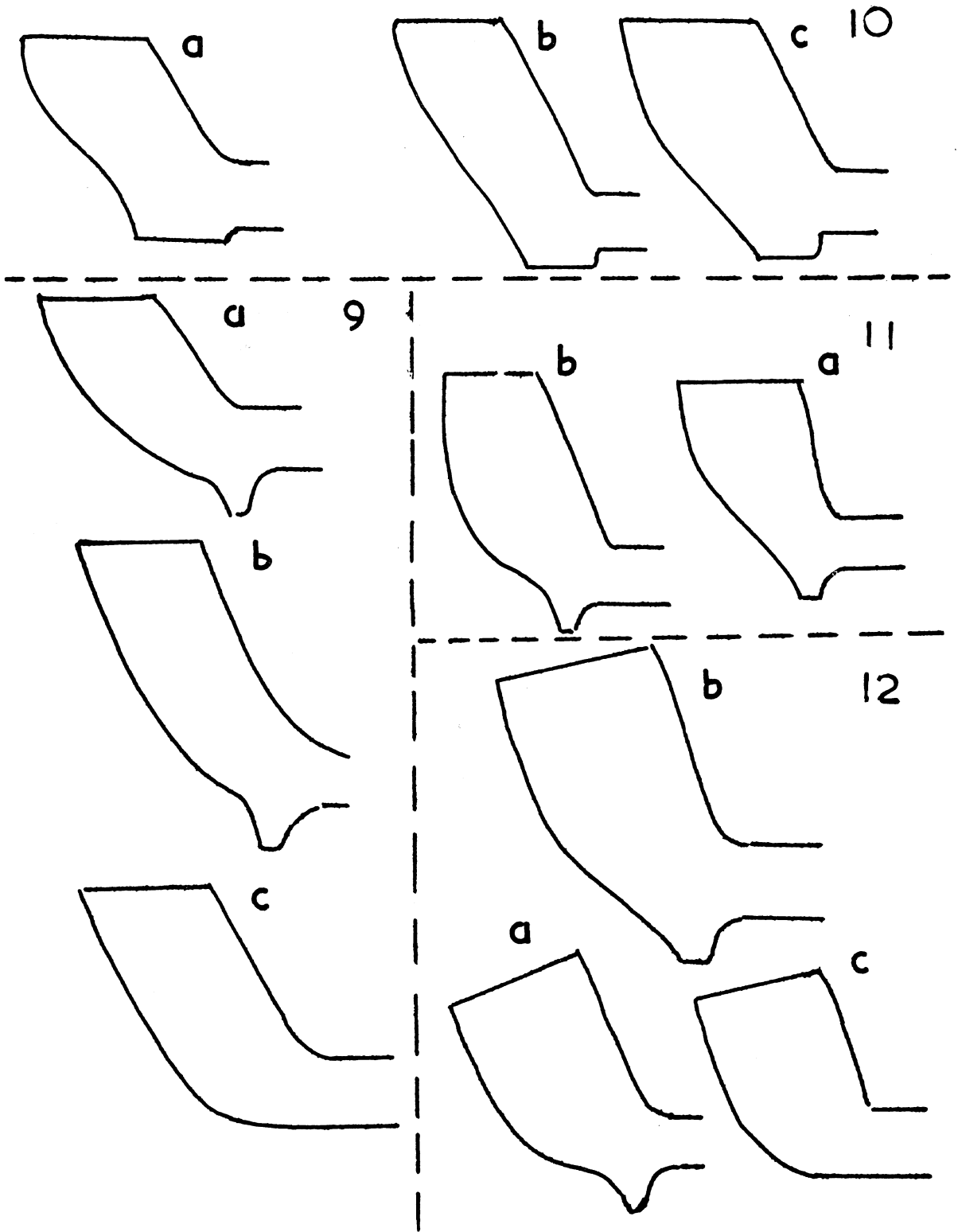


Fig. 2

of my original article and incorporated other material. A complete list of makers and the economic background with comments on marks can be found in Oswald A. 'The Archaeology and Economic History of English Clay Tobacco Pipes', *J.B.A.A.*, Vol. XXIII, 1960.

3. The collections which have been drawn include those at the British Museum, Guildhall Museum, Chester, Gloucester, Hanley, Birmingham, Coventry, Guildford, Ipswich, Leicester, Newcastle-under-Lyme, Norwich, Reading, Shrewsbury, Salisbury, Worcester and Winchester Museums among others and also some in private hands. To the Curators and Keepers of the above museums I owe a great debt and to many private correspondents as well. The excavations of the Roman and Medieval Excavation Council and Guildhall Museum in London have been of the greatest assistance in providing dated groups as also those of Dr. K. M. Kenyon in Southwark. Unfortunately, it is impossible to illustrate these groups here.

4. The difficulty lies in the absence of trades given in contemporary records. I would be most happy to receive any records of pipemakers of the early seventeenth century.

5. For a full bibliography see *J.B.A.A.*, Vol. XXIII, 1960. The most useful studies to date have been published by G. C. Spence on Chester pipes (*Lans. and Ches. Ant. Soc.*, LVI; p. 45 et seq.), J. E. Pritchard on Bristol pipes (*Bristol and Glos. Arch. Soc. Trans.* XLV. p. 165 et seq.). T. H. Thursfield on Broseley pipes (*Trans. Shrop. Arch. and N.H. Soc.* Ser III Vol. VII, p. 160 et seq.) figures many marks, but his dates are all faulty as they are based on first mention in the parish records with no distinction between birth, marriage or death; Oswald and James in *A.N.L.*, Vol. 5, Nos. 10 and 11, 'Tobacco Pipes of Broseley, Shropshire', have attempted to remedy this position. T. Sheppard's 'Early Hull Tobacco Pipes' (*Hull Musm. Pubns.*, No. 6) is useful but suffers from a lack of bowl forms. There are a great many other smaller studies and notes scattered through local archaeological publications and the indices of the Society of Antiquaries provide a sound guide to these. Of general works covering many aspects of smoking the most useful are *A History of Smoking*, by Count Corti (Harrap, 1931) with a most invaluable bibliography, particularly for foreign sources; *A Social History of Smoking*, by Apperson (London, 1914), and, although out of date in many ways, *Tobacco, its History and Associations*, by F. W. Fairholt (London, 1859) is still useful. The *Introduction of Tobacco into Europe*, by Berthold Laufer (Field Museum of Natural History, Chicago, 1924) is invaluable for the initial period. J. C. Harington in the *Quarterly Bulletin, Archaeological Society of Virginia*, Vol. 9, No. 1, states a case for dating pipe stems by the diameter of their bore. In dealing with large quantities his case has merits probably due to the pipes gradually getting longer over the centuries with consequent narrowing of the bore, but with individual examples the method cannot hold water. McInnes *Early English Tobacco Trade* is useful on the economic side. There are also Oswald, A., 'Tobacco pipes', *Connoisseur Concise Ency. of Antiques IV*, Webster, G. W., 1957, 'An 18th Cent. rubbish pit in Trinity Street, Chester'; *Ches. Arch. Soc.*, XLIV; Thurstan Shaw, 'Early Smoking Pipes in Africa, Europe and America', *Journ. of the Royal Anthropol. Inst.*, Vol. 90, Pt. 2, 1960.

6. For example, there is a pipe 9b in Guildhall Museum marked ER on the back of the bowl and also on each side of the foot, with the E on the left and the R on the right. This can be identified with Edward Randall who took an apprentice in London, 1719. A mould of William Buckley, who received the Freedom of Chester in 1831, is marked W on the left and B on the right of the foot of a Type 9d pipe. Considerable numbers of other parallels have been noted.

A HEADQUARTERS OF THE CORITANI ESTABLISHED

A hitherto unknown headquarters of the British tribe of the Coritani has been established during rescue excavations carried out by the Ministry of Works in the parish of Old Sleaford, Kesteven, Lincolnshire. The rescue excavations were put in hand because of building development plans at the site by Sleaford Urban District Council.

The Coritanian tribe had apparently settled on an area of gravel south of the river Slea some decades before the Roman Conquest. From the bones of sheep, ox and pig, and the carbonised grain that was found, it can be assumed that this tribe followed an agricultural economy.

Many of the ditches, pits and gullies associated with their settlement were traced, and, though no actual habitation was found, the settlement is thought to have been close to the river because of the large quantity of pottery found.

This pottery reflects the many elements of late Iron Age ceramics: imported Gallo-Belgic beakers and platters and their locally-made copies, Belgic and native wares, and an entirely new form of decoration applied to both hand-made and wheel-thrown jars. This resembles ware from southern Britain in sharing an ultimate inspiration from the continental La Tène culture but contains a distinctive rouletted feature in the design.

The most significant activity of this tribal headquarters was the minting of coinage. Besides mint debris of nearly one hundred fragments of clay moulds and a fragment of clay crucible, two silver coins of the Coritani (with a disintegrated horse on the obverse) have been found, as well as a bronze coin of the Gloucestershire tribe of the Dobuni.

Throughout the Roman period the settlement developed into an extensive roadside town astride the Roman road known as Mareham Lane; a widening of the road indicated its prosperity.

The most remarkable feature of Roman Sleaford was a circular corn-drier discovered last summer by the archaeological society of Carre's Grammar School, Sleaford. Roman levels had, however, become quite obliterated by the Middle Ages, a fact strikingly illustrated by the siting of the chancel of Old Sleaford Church on top of the Roman road and the digging of a steined wall through its very hard metalling.

The excavation was carried out almost continuously from October, 1960, and was supervised for the Ministry of Works by Mr. and Mrs. W. T. Jones of Hereford.

Drainage work on a building site at Rustington, Sussex, brought to light a number of Bronze Age axe-heads; unfortunately most of them were given away before the significance of the find was realised. It is hoped that it will be possible to trace them.