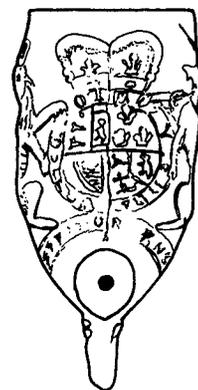


SURREY CLAY TOBACCO PIPES

DAVID
HIGGINS



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David Higgins

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INTRODUCTION

Despite the enormous increase in our knowledge of clay tobacco pipes over the past few decades many areas remain unexplored. In general terms the national development of the industry has been established, but local studies, so invaluable to the archaeologist, are sadly lacking. Usually pipes are scattered through museum shelves, archaeological stores and private collections in such a way that individual groups can only be seen in isolation. Too often identification of pipes relies on the nearest published study which can be totally misleading. This is the case for Surrey where although London (Atkinson & Oswald, 1969) and Sussex (Atkinson 1977) papers exist, virtually nothing has been written on Surrey itself. This paper attempts to bring together and discuss all the known pipes from Surrey in such a way as to make this information readily available.

The information is drawn from two main sources. Firstly museum collections which provide a useful sample of local pipes; secondly archaeological groups which although containing more pipes can tend to be biased to a specific period, e.g. Nonsuch Palace. This bias must not be overlooked by the fact that many areas have no collections or at best a handful of examples. The location map of Surrey towns and villages (Fig. 1) only includes places mentioned in the text thus demonstrating to some extent the bias of this information. All the available pipes have been studied and from these illustrations (Figs. 2-48) and lists of maker's marks (Appendix 1) have been compiled. Since the emphasis is on setting local groups in their context the drawings (Appendix 3) and the accompanying discussion are arranged in a roughly anticlockwise rotation of Surrey starting at Farnham. This enables the main Surrey industry, centred on Guildford, to be considered before the more peripheral areas in the north-east of the County, while keeping neighbouring groups together.

Due to County reorganisation and the inevitable overlap of pipes with neighbouring counties the geographical boundary is not strictly enforced. This enables neighbouring centres such as Horsham or Croydon which are vital to an understanding of trade patterns and pipes found in Surrey to be included, while the complex mass of London pipes in the north-east which rightly belongs to another study is excluded.

It has become realised that the abundance and close dating which proper identification can provide probably makes clay pipes the most important archaeological dating artefact for three centuries after c. 1610. With the growing interest in sites of this period the aim of this study is to provide archaeologists and other interested groups with the facilities to compare and identify their pipes correctly. To this end a considerable number of drawings has been included all of which cannot be commented upon in this paper. They represent however local variants of bowl types and illustrations of decorated and marked pipes. These will enable an individual to compare local groups within the context of Surrey pipes as a whole.

To save unnecessary repetition of the established range and development of pipemaking and marking it is assumed the reader is familiar with the general work by Oswald (1975) and the London Paper (Atkinson & Oswald 1969). Also of clear importance to Surrey is the Sussex book by Atkinson (1977). In the

text all the type numbers used refer to the Atkinson & Oswald typology (1969, 177-80) and figure numbers are simply given as a Figure number followed by the illustration number, e.g. 18.9.

THE PLAIN PIPES AND THEIR TYPOLOGY

Before considering any decorated or marked pipes it is important to remember the typological development of the plain pipes which is all that represents the larger part of the makers and their products. Being so close to London which was the earliest centre, and for much of the time that pipes were being produced the largest, it is not surprising that Surrey pipes follow the London trends fairly closely. For this reason no discrete Surrey typology is necessary since the London one (Atkinson & Oswald 1969, 177-80) adequately covers the dating and sequence, and dates are adapted from it.

What is attempted here is to bring out the greater range of forms which exist and highlight the local trends. During this study it has become apparent that each centre tends to have subtle but distinct forms suggesting that whoever made the moulds it was on a fairly local basis. When more accurately dated deposits become available it should be possible to order and date these more closely as an extension of the London typology, but at present these drawings (Figs. 2-43) are intended only as a corpus of forms with which new material can be compared. They represent both common local types and unusual isolated forms, but behind them all lies the common basic sequence.

This is best represented by the material found at Reigate and Guildford. Excavation at the Old Vicarage site at Reigate produced deposits around a drive which seem to be built up in an unbroken sequence from c. 1610-1730. With other additions this large group being domestic and central to Surrey provides a sound basic framework (Figs. 19-21). This is complemented by the collection at Guildford which although consisting of many isolated finds goes to build up a good picture of the types produced (Figs. 4-5).

The earliest pipes, types 1-3, have been recorded from Nonsuch Palace (Atkinson 1974, 1) where types 2 and 3 occur. These pipes are rare anywhere outside London and their occurrence here is clearly influenced by the Palace. The only other early example, c. 1600, comes from Egham (41.1) and is a little more bulbous than those from Nonsuch. There seems to be a sudden and widespread occurrence of pipes in the early decades after c. 1610 and the forms are closely of London type. Around 1640 however a wide range of shapes develops (19.4-8), marking perhaps the shift to local production centres. This wide range of forms continues until the type 25 series which tends to obscure subtle differences due to its straighter sided form. In the second half of the seventeenth century the range of forms varies from pipes with constricted mouths and small interiors (4.1, 5.5) right through to very round pipes with internally flared mouths (39.8).

It is possible that some of these early pipes were, like later ones, influenced by West Country types which are found occasionally in Surrey (45.1). It is interesting to note that even if each pipemaker held four or five moulds as is suggested by inventories of (richer) pipemakers there must

have been far more makers active during this period than the records suggest. At Reigate none of the early pipes could be identified as coming from the same mould which although made more difficult by the finishing techniques is not an impossible task.

After c. 1670 the bowls rapidly change shape, becoming much thinner and losing the distinctive seventeenth century barrell form. Many of these forms have a local distribution and are short lived (e.g. 20.7/8) although considerable numbers can appear such as the type 22 variants in the Guildford/Farnham area. The spur pipe too undergoes radical changes culminating in the fine thin examples such as 4.4. The profile does not show these changes so well but the whole pipe becomes much thinner and more streamlined (e.g. 21.10-15).

During this period spur pipes become very popular, probably outnumbering the heel types, whereas before the numbers remain roughly equal. With the start of the type 25 series however they almost disappear. This is probably because the fine spurs which had developed would require careful finishing, and this cannot compete with the 'quick finish' techniques of the type 25 pipes. Indeed some late spur types are very badly finished with little effort to remove the flash lines from this area (4.7).

Although it has been suggested that seventeenth century pipes were intended to stand on the large heel in order to minimise the fire risk from hot ash spilling this seems to contradict the evidence. It is overlooked that about half the pipes are spur pipes which can only be rested upright and not stood. Although many heel pipes can now be stood this is often because they are broken with only a short length of stem surviving. When any length survives it is often distorted enough to tip the bowl or alter the angle of the heel so the pipe falls over. Also uneven trimming such as was noted at Plymouth (Oswald 1975, 74) makes it impossible to stand these pipes. Still life paintings and drawings of the period show pipes resting on their sides so the type of heel or spur does not seem to be functional but purely a matter of personal preference until both types die out c. 1700.

After 1700 the type 25 becomes predominant, although appearing in many forms and with makers producing their own distinctive types. By c. 1750 completely new variant shapes (4.6/8) start to develop which are characterised by thinner bowls and stems (23.14). These features develop steadily into the standard types of the late eighteenth and nineteenth centuries (4.8-10) which clearly originate in the type 25 form. The nineteenth century is characterised by the shorter round-bodied pipes such as 25.8-12 which are usually decorated in some way and continue until the late nineteenth century. At this period a multitude of decorated forms appear which fall into standard types all over the country often based on the type 30 design (Fig. 32).

MARKED PIPES

Section 1 - Stamped Pipes

The makers stamps so far found in Surrey can be divided into four main chronological periods of development. These should not be seen as distinct classes into which pipes must be fitted but rather as marking trends which

reflect the evolution of the pipemaking industry. They are discussed below and where relevant subheadings have been introduced for ease of reference. Unless otherwise stated all the stamps are in relief and occur on the heel of the pipe.

Group 1 - c. 1600-60

Over half this group consists of a symbol only, and the use of circular or heart shaped marks is comparatively rare. The earliest of these marks are the fleur-de-lis and star marks from Oatlands and Nonsuch (e.g. 34.2, 38.6/7). The star marks have been four and eight arms and a total of five marks come from the two sites. The four armed example (35.11) is perhaps a little later in the sequence, circa 1620-1640, and has a much larger heel than the other examples.

An early initialed group of pipes are marked IR and date to c. 1620-50, (35.2/10/12). The former two are incuse, and like the latter type, of which there are two examples, come from Oatlands, and it is perhaps surprising that none occur at Nonsuch. This mark is widespread at this period (Atkinson 1972a, 155) and John Rogers (Ratcliffe 1620) has been suggested as a possible maker (Atkinson 1976, 4). They are quite elaborate stamps especially 35.10 which takes the form of a Tudor Rose. The design of 35.12 is very similar to the WK stamps of c. 1620 which occur at both these palaces, (35.7).

This raises one of the great problems of pipe moulds and stamps—who made them? Are we dealing with one maker copying the idea of a stamp, and its form, from a second maker, or of a third craftsman supplying two pipemakers with his idea of a pipe stamp. Certainly the variety and idiosyncrasy of these marks, such as the decorative IR borders, suggests the pipemakers had a lot to do with their design, although the quality of these elaborate stamps suggests they were made by someone who specialised in this type of detailed craftsmanship. Oswald (1975, 19) says Dutch wooden stamps survive and if wood were also used in Britain stamps could easily be copied or designed to order. In this case such similarities would become much more important. Did the two makers know each other, or was one an apprentice copying the type of mark he knew. Alternatively a similar mark may have been used by a newcomer to imitate an established or quality product as was the case with the gauntlet marks (Atkinson 1962, 184). Unfortunately we are not yet in a position to tell, and there are many factors such as local styles or mark and the influence of these 'prestige' pipes to be considered. This aspect should however always be borne in mind when comparing and dating stamps, and it may be that there is a connection between these two makers.

The gauntlet pipes are a sequence which clearly brings out the problems of such similar marks. In Surrey bowls of c. 1620-80 are found bearing a gauntlet mark, which is too long a period for a single maker. Although often associated with the Gauntlet family of Amesbury who worked throughout the seventeenth century the earliest example at present seems to come from Putney (Atkinson 1972a, 154) dating to c. 1600. At Oatlands two examples of c. 1620-40 have been found (35.8) which have a carefully mailed gauntlet and are finely finished. Atkinson (1976, 4) records an identical example

from Barnes. These early examples are on West Country types and their south-eastern distribution is hard to explain. A little later another group appears with both left and right handed gauntlets dating to c. 1650-70. These are widespread in London with several examples at Nonsuch (38.19) and Cheam (Nelson in litt. 2.10.79). Although they have a West Country form the stamps are not of a West Country type (Atkinson 1976, 4) and are not as well finished as the mark of c. 1660-80 from Staines (45.1) which is probably the only genuine West Country example, (cf. Atkinson 1970, 179). We clearly appear to be dealing with two traditions of marking in the two areas, but why there are such close links and how they relate is unclear. It is possible that the south-eastern series is simply copying the quality West Country products which eventually became a recognised 'type' of pipe. It seems the stamp was extensively pirated (Atkinson 1965b, 94), presumably as it represented a quality product, and local types also appear in Hampshire (Atkinson 1971, 75). This explanation however is only one possibility and a detailed study of the stamps and bowl types from all areas is needed to fully assess this series. All the Surrey examples are single heel marks with relief mail, although in Wiltshire double marks and stem marks have been found (Atkinson 1972a, 154).

A similar widespread group requiring study are the wheel stamps which are found from as far apart as Plymouth (Oswald 1969, 135), and Boston (White 1979, 180), and were even exported to America (Atkinson & Oswald 1969, 205). The Surrey examples (10.3, 19.9, 28.13) date from c. 1630-60, and all are on different bowl types. This type of mark can come in a variety of forms (e.g. Atkinson 1977, 40) but all these are similar. The Croydon example is probably the earliest c. 1630-50 but is a rather poorly struck stamp. It is not clear whether it has seven or eight spokes and the marks between them seem to be stars. The other two examples are very similar with an eight spoked wheel and dots between although it is not possible to be certain if they are from the same stamp. Atkinson (1977, 40 no. 4) lists three very similar examples from Steyning which may have been made nearby.

The London series SV stamps are represented in Surrey by five examples, one each from Guildford, Reigate (23.1), Weybridge (40, 3) Staines (45.2) and Leigh (18.14). This series originates in London c. 1620-60, then appears in Lincolnshire c. 1660-1710 (Oswald 1975, 107). All these stamps are incuse and on the top of the stem behind the bowl. The Staines example is not on a bowl type otherwise found in Surrey and dates to c. 1640. It is also different from the four main types given for this maker by Oswald (1975 88) although clearly it is one of the London series. The Reigate example has some small raised areas on the bottom of the S, probably a flaw in the die. The large number of these stamps, their wide distribution and time span suggest the maker(s) were well known and established, but as yet there are no candidates from the documentary sources. Oswald (1969, 136) notes that the letters are incised separately.

A similar incuse stamp with the unusual surname initial V comes from Guildford (7.1). These very neatly cut letters have been impressed with no sign of a border and so may be individual letter stamps like the SV mark. The bowl is well finished and burnished and represents a quality product of c. 1640-60.

The final stamp from this early group is the ESX stamp from Oatlands (35.3). Examples of this mark are scattered from London to Bristol (Atkinson & Oswald 1969, 189) although not all are identical (cf. Oswald 1975, 85). Atkinson (1976, 3) notes that they may have been made for the Earl of Essex (1591-1646) during the first part of the Civil War, the stamp being dated to c. 1640-50. An example from Hampshire (Atkinson 1971, 75) has a Bristol type bowl and these pipes must certainly have been produced in the West Country.

This early group then is characterised by a very small percentage of marked pipes almost all of which can be paralleled, and probably originate from, outside Surrey. Most were probably made in London and there are often several different stamps used by each maker. If this holds true of the symbols as well it is possible that each different gauntlet, star and wheel motif does not represent a different maker but merely the variants used by individual makers. Presumably if the point of stamping is to identify your pipes this would be the case anyway. The question must be why do so few makers bother to mark their pipes. Several suggestions can be put forward. It may be simply a question of literacy since even the late seventeenth century indentures of pipemakers suggest fifty-five per cent illiteracy as opposed to an average of fifteen per cent from other trades (Atkinson & Oswald 1969, 174).

This suggestion has two flaws in it. If skilled craftsmen were making the stamps they would presumably have been literate and therefore able to make initialled stamps for anyone. The use of symbols, which represents over half the stamps, has been taken as evidence in support of the illiteracy theory, although this fails to explain why so few makers used them since they would have been recognisable to anybody.

A more likely explanation could be that only a few established makers developed a reputation and marked their pipes to enable customers to recognise their products. With a few makers and widespread illiteracy symbols are the most useful form of marking for this purpose. The range of stamps could be explained as being chronological or for other people employed in their workshops. The presence of these stamps over wide areas of south-east England reinforces this theory showing both that they were established and successful with wide trade links and that it is always the same makers that follow this pattern. More stamps are becoming available from provincial areas now, but as the numbers increase the range of makers marks does not increase proportionally. It seems the few early makers who marked their pipes in London were established enough to export pipes considerable distances. It is this competitiveness which would have necessitated individual marking.

An argument against this is that the vast majority of pipes remained unmarked and it is virtually impossible to say who made them and how far they travelled. It could be argued that since even these 'established and competitive' makers marks are rare they only marked a proportion of their pipes. Much work remains to be done but one of the ways in which such theories can be tested is through examination of the context of early deposits. Are there for example a greater number of marked pipes in palace deposits as opposed to other domestic deposits suggesting that these marks were recognised and

selected by a specific clientele. As yet there is not enough factual evidence to compare such sites.

In conclusion however it can be shown that in all early groups stamps are rare. They consist of symbols or initials belonging to a small group of mainly London based makers who exported widely from that centre. The exact nature of their manufacture and trade remains uncertain but to the archaeologist they can give important information on trade contacts and dating and perhaps eventually an indication of a richer or higher class clientele.

Group 2 - c. 1660-1720

After c. 1660 and until c. 1720 stamps become much more widespread and there is a shift to local Surrey types. They become predominantly circular or heart shaped and the use of symbols is almost totally replaced by relief initial marks. The only symbols are the later gauntlet pipes, one of which (Staines) is an 'import', and an unusual 'stamp' from Reigate (see below).

Guildford Marks The group 2 marks are split equally between those produced at local centres and 'imported' marks. This shift to local marking is important since it suggests that these centres had become both established and competitive after the initial spread from London. Guildford is the most important centre because of its substantial pipemaking industry and its central position for supplying the larger part of Surrey.

The earliest stamps attributable to a Guildford maker are the WP marks (6.1-3/5) which range in date from c. 1660-90. The only example from outside Guildford was found in London (Atkinson 1962, 185) on a pipe of c. 1720-40. If this date is correct it makes the already lengthy date range for this stamp too long for a single maker and it seems likely that someone, possibly a son, carried on the business into the eighteenth century. This suggestion is reinforced by the find at Epsom of two W Pemerton stamps in a deposit with a terminus post quem of 1707 (33.3). The similarity between these bowls and marks and Geales (6.14) is striking and suggests a Guildford origin. At Guildford a William Pemerton is recorded between 1678 and 97 and may well be responsible for these early stamps which mark the start of a period of innovation and high quality at Guildford.

One of the most noticeable features is the range of bowl types used. All the WP marks are on different types, none of which is typically Surrey in style. This is particularly noticeable in 6.1 which is a very curved and bulbous bowl both features being atypical of the south-east. This exploration of bowl types typifies the late seventeenth industry in Guildford and is found amongst the Neave and early Geale pipes (see below).

Another adaptation was that of marking, not only in the use of stamps but in the use of one of the earliest moulded initial marks in Surrey (6.4). Experimentation and the early adaption of new ideas typify this period although it did not lead to a drop in quality, as is seen by the final innovation, that of burnishing.

Although burnished pipes are occasionally found in the south-east they are not a standard element of pipemaking in this area. The WP marks however do sometimes occur on burnished pipes and indeed 6.3 is an exceptionally fine

example comparable with the best Dutch pipes of this period. These pipes mark the start of a period when this skilled and time consuming job of burnishing pipes was adopted in Guildford (c. 1670-1700).

Burnishing is a process of compressing and smoothing the clay surface with a polished tool to give a highly glossy finish. This should not be confused with the naturally shiny surface of many pipes which is merely due to the fine type of clay used. On a burnished pipe it should be possible to see many fine facets all over the bowl where each stroke has passed (cf. McCashion 1979 plate 7), although the finer the product the less distinct these will be. They all however have a distinctive surface and shine resembling polished ice and are found occasionally in the south-east during the seventeenth and eighteenth centuries.

Edward Neave also produced burnished pipes and was working by 1677 when he took an apprentice, and died in 1718. Two types of heart shaped stamp can be attributed to Neave which shows the mixing of the two styles since the contemporary WP stamp is circular. The first type, which seems to be the earlier, has been found at Guildford (6.7) and Horsham (12.2). At Horsham it can be dated to as early as c. 1670-80 although it clearly continued in use as the Guildford example is later (c. 1680-1710). These two different bowls demonstrate well the start of the transitional period with its shift to elegant sinuous shapes. The later type of stamp has been found at Guildford (6.6), Oatlands (37.10), Leatherhead and London (Atkinson in litt. 20.10.79). The Guildford example, c. 1680-1710, shows he continued to use transitional types although finally changing to the eighteenth century style since the London example is on an early type 25. The extraordinary thing about these marks is their distribution. All are scattered single examples except the group from Oatlands which consists of twenty-three examples on a distinctive and beautifully burnished bowl type. This type (c. 1680-1710) is a very fine funnel shape similar to contemporary Dutch types (cf. Atkinson 1972) rarely paralleled in other English pipes suggesting Neave may have been influenced by these products which were clearly present in Surrey (see below). This concentration is totally unexplained, especially as during this period the Palace site was simply a garden area. These stamps and indeed the distinctive Neave bowl shape are rare in the County although more common on the north-east border with London. Many deposits of a suitable date have been excavated particularly at Reigate which is no farther than Horsham from Guildford and was clearly receiving many pipes from there in the early eighteenth century (see Appendix 1). The Weybridge Museum, which is near Oatlands, has a good collection of local pipes, yet none are Neave's. This lack of other stamps, or even similar finely burnished but unmarked pipes (the only other examples being at Oatlands) makes this high quality but very discrete group all the more extraordinary, and raises interesting questions about the demand, production and distribution of these pipes which only further examples can clarify.

This tradition of stamping was continued in Guildford by Lawrence Geale, who undoubtedly was influenced by Neave since he was apprenticed to him in 1689. He died in 1731 and during this period his pipes develop from the late transitional type to the full type 25 series. Although he was apprenticed

in 1689 he did not take his freedom until 1700 when we find a whole group of admissions, including that of his master, Edward Neave. It is unlikely that he marked his pipes whilst an apprentice and since a seven year apprenticeship was usual a date around 1696 could be suggested for his earliest marks. Atkinson (1976, 6) suggests that an isolated example of a heel stamp (Atkinson 1965a, 251) which is of the same form and of a similar type of burnished bowl as Neave's can be attributed to Geale. It was found in London and consists of the initials LG arranged in an identical heart shaped stamp as Neave's second type. Unfortunately no example has been found in Surrey to confirm this but it remains a possibility, and as such would be the earliest in his series. The distinctive bowl shape may even be due to the common practice of giving an apprentice tools of the trade on completion of his term, in this case including one of Neave's own distinctive mould types. Certainly it can be dated no later than c. 1718 in type since by this time Neave was using type 25 moulds (see above).

At some point however Geale, like Pemerton, adopted stem stamping behind the bowl which is unusual in the south-east. Although there are several examples of this type of marking from Sussex (Atkinson 1977, 52) most are slightly later in date. It is interesting that one of the earliest makers to do so was William Pain of Horsham, reinforcing the very similar development of marking in Guildford and Horsham at this period.

The stem stamps used by Geale can be divided into four types so far which continue in use into the type 25 period when they occur on pipes with moulded initials as well (22.4). These pipes with both types of mark only form a small proportion, c. 3%, of his pipes. Most of the pipes, c. 83% (excluding the pit from Epsom, see below), are standard type 25 pipes with moulded initials which are typologically later than the pipes with a stamp only, the remaining 14%. This suggests that this small group of stamped pipes should be considerably earlier than his death in 1731 to allow for the larger group of type 25 pipes with moulded marks. These stamps are discussed below, but it is stressed that often there are few examples of each type and so this can only be a preliminary interpretation.

Type 1 (6.10)

This is an incuse mark readily identified by the small star underneath the L of Geale. It has been put first because fourteen of the known examples are on a late heel type (6.14) and the remainder are on a distinctive early eighteenth century type used by Geale (6.9). It is the most common type with fifty-nine recorded examples and is not found on any other bowl type. It has therefore been given the earliest, and longest, period of use from c. 1696-1715.

Type 2 (6.11)

This mark is also incuse but has a fleur de lis in place of the star, and is a little later in date. One example has been found on the early eighteenth century type 6.9 but 10 of the twelve examples are on type 25 pipes and so it has been dated to c. 1705-15.

Type 3 (6.12)

This mark is in relief and has a cross at the bottom. It too occurs mainly on type 25 pipes, but this time tending to be a little later since one (6.8) of the seventeen examples occurs on a pipe with moulded initials as well. It dates to c. 1705-15.

Type 4 (6.13)

The final mark is also in relief but has a different arrangement of letters with four lines instead of three and an E at the bottom, which is often very faint. Although one example has been found on a bowl of type 6.9 this is the only mark which was not found in any quantity in the Epsom pit of c. 1710. Four of the seven examples are on pipes with moulded initials as well (e.g. 22.4). It seems to have been his last stamp with a limited life due to the introduction of moulded marks which made stamping unnecessary, and has been dated c. 1710-20.

These marks are recorded from as far apart as London (Atkinson in litt. 20.10.79) and Charlton (Atkinson 1977, 52) and are widely distributed in Surrey. That Geale used this range of stamps and their wide distribution makes the study of his marks vitally important for the close dating of early eighteenth deposits. Although Guildford was the main centre for Surrey producing stamped pipes at this period there are other centres on the edges of the County which must be remembered. Although as yet few marks are known outside the towns Horsham, Staines and Kingston all produced stamped pipes which are now discussed.

Other Marks At Horsham we find the stem stamps of William Pain (c. 1700-20, Atkinson 1977, 51) as well as heel marks in this period. Two examples of a decorative RW stamp (12.1/3) which probably belong to an unknown Horsham maker of c. 1680 have been found. He may have been working earlier using pipes with a larger base since the heart shaped stamp is clearly too large for these heels. The other stamp (12.4) probably belongs to John Collis 1, working by 1694 and until 1728 (Atkinson 1977, 11). He, like Geale, later changed to moulded initials suggesting this stamp likewise belongs to an earlier period of his career. Typologically the bowl is no later than c. 1710 which again seems to support this. These stamps are important to remember as although none has yet been recorded in Surrey it is highly probable that Horsham as well as Guildford supplied the villages along the border. This is certainly true of later periods and the moulded initials of both Geale and Collis are found at Newdigate.

On the other side of the County several examples of both circular and heart shaped EB stamps have been found at Kingston (43.11/13) on late spur pipes of c. 1690-1710. Both types have been found in London (Atkinson 1965a, 249) although a Kingston maker seems most likely. Again these pipes are to be expected in the north of the County where the Guildford influence dies out.

At Staines are found the earliest place-name stamps reading Stains (sic), a stem mark comparable to the Geale - Pain - EB types. It is unusual both since it is incuse and on a type 25 with the single surname initial M (45.15).

Due to the small bowl type and use of the stamp it probably dates to c. 1700-25. Barker (1979, 5) suggests this single initial refers to the mould maker, a member from the Meddin family of Guildford who were silversmiths, pewterers and brass founders c. 1705-70. Richard Meddin III was son-in-law of Charles Wattleton which reinforces this link and he quotes ties existing between metalworkers and pipemakers from Plymouth, Bristol and Newcastle. The problems of this theory are twofold. Firstly, these pipes, from the same mould, and found at Staines and Egham, although just within the limits of Guildford influence in no way reflect Guildford as a centre. Secondly, pipes are usually marked to identify the maker and it seems odd that a pipe-maker should use only a place-name stamp if his name were not already represented on the pipe. Although the link with the Meddin family is a very valuable one demonstrating a possible source of 18th century moulds in Guildford it would seem more logical that the metalworker would have marked the mould itself as being his work and that this letter represents a pipemaker. Also a town like Staines having its own industry is unlikely to have required mould makers from Guildford.

The last two stamps so far recognised which may belong to these peripheral centres come from Croydon and the Staines area. In the Staines area two stamps have been found one from Staines itself (45.5), and one from Egham (41.6). These stamps are marked RR and Barker (1976, 131) suggests they are of Salisbury origin. The illustrated examples however from Shaftesbury and Salisbury (Atkinson 1970b, 210) are from different dies and their bowl shape is different being of West Country type (cf. 45.1 and 45.5). It therefore seems more likely that these marks, which are on a bowl type common in north Surrey, belong to a maker working in this area. The other type, from Croydon, is referred to by Drewett (1974, 21) as an RC stamp. Typologically this should belong to these Group 2 stamps. He however attributes it to the first Robert Corney who would be working no earlier than c. 1730. Since the pipe is not dated or illustrated and no other examples are known it is impossible to be sure, but this late date seems unlikely. It could be an earlier mark such as have been found in London (Atkinson & Oswald 1969, 182) which is a possible alternative source, but could also be an incorrect description of one of the common RC moulded marks (below).

The remaining stamps in Surrey falling into Group 2 are all single examples many of which can be paralleled outside Surrey. Although some may represent as yet unrecorded local makers most come from the more cosmopolitan north-east border and probably represent the consequences of being remote from Guildford and near the mixed river traffic on the Thames.

From Egham is an FT mark (41.7) of the same period as the RR marks (c. 1660-80). The stamp is rather poorly cut with the letters appearing on raised platforms, and a very faint device between them. The bowl is typical of the north Surrey or London types and until parallels are found it's source remains uncertain.

From Runnymede comes one of the TD stamps (Atkinson 1965a, 251 no. 10) c. 1670-80 which Atkinson and Oswald (1969, 181) consider to originate outside London, although they are fairly common there. At Weybridge an

example of the earlier type of WL stamp (39.13) has been found dating to c. 1680-90 (cf. Atkinson 1962, 181). Although the pipe is an unusual type in the south-east it was probably London made and several makers have been suggested (Atkinson 1965a, 249).

At Mitcham an example of the IC stamp (30.1) has been found which seems to date to c. 1660-80. Parallels are found in London (Atkinson & Oswald 1969, 182) dating to c. 1640-70 which suggests that although the 'tobacco plant' motif is more a northern form these pipes are not to be associated with the similar series produced by John Chapman of Hull (Watkins 1979, 91) which are slightly later in date.

Another pipe which seems to have been incorrectly linked with Hull is the IP stamp from Reigate (19.15). Two similar examples are noted by Atkinson (1965a, 250) from London where a variant of the same type occurs (Atkinson 1962, 183). He compares the mark with an illustration by Sheppard (1912, No. 5) attributed to John Page of Hull. Watkins however (1979, 93) cannot find any examples of this mark in Hull and concludes it to be a mis-reading. It seems more likely however that it is simply an 'import' from London which is quite probable through coastal shipping movements. It would therefore appear that these distinctive scalloped marks belong to a London maker of c. 1660-80 thus explaining both the concentrations of his marks in London and the appearance of a 'Hull' pipe in Surrey.

Also from Reigate is an unusual 'stamp' which consists of three very fine and neat incuse circles on top of the stem behind the bowl (20.13). These were probably impressed separately since they all share a distinctive cross section, and there is no sign of an enclosing border. This cannot really be fitted into either Group 1 or Group 2 as a makers mark and it may even represent some other type of mark such as a production tally.

Another pipe which has been suggested to be an 'import' (Barker 1976, 131), this time from Bristol, is the I?A stamp from Staines (45.6). He suggests it was made possibly by one of the many Bristol makers with these initials. There are however more makers working at this period (c. 1680-1710) in London than Bristol with these initials and neither the stamp nor the bowl type are matched in published pipes from Bristol (Walker 1971, Jackson & Prince 1974). The bowl is closer to London transitional types and more probably originates in the south-east, perhaps in London or Staines itself. Another pipe from Staines (45.7) also on a London bowl type of c. 1660-80 has the top of a heart shaped mark. This is noteworthy since no other stamps are recorded on similar bowls so it either represents another maker or a variant used by one of the makers discussed above.

The final stamp falling into Group 2 is the Thomas Hunt stamp from Egham (42.9); it is one of the unquestionable examples of imported pipes and belongs to the large group of stamps used by this maker (Atkinson 1965b, 93) who was working at Marlborough c. 1667-96 (Oswald 1975, 198). Although it is clear that such West Country pipes were valued for their high quality and finish (often burnished) it is unlikely that this pipe is the result of deliberate trading. Along with several other West Country pipes it was found in the northern part of Surrey on the route into London from Wiltshire, and

as an isolated example can best be seen as a pipe broken en route. This is reinforced by the fact that all the Egham examples of West Country pipes have come from a rubbish deposit at one of the Coaching Inns. The possibility remains however for individual orders of fine pipes and if any concentration of similar imported marks is found this must be borne in mind, as is the case with the Neave pipes at Oatlands.

This Group although containing odd 'imports' consists largely of local types. As the apprenticeships show there were often close links of pipe-makers not only within but between towns at this time. The use of these circular or heart shaped initial stamps can be used to highlight such links through style and motif, as well as being a valuable indicator of the influence and trade areas of towns. Stamps being more easily identifiable are well suited to this purpose until c. 1715 when they die out in favour of moulded marks.

Group 3 - c. 1720-1800

For the next century there are no recorded stamps made in Surrey, and this group consists entirely of examples that have found their way into Surrey from areas where stamping was still in use.

Continuing the West Country influence and evidence for transit through the north of the County is an incuse Thomas Mason stamp from Egham (42.12). This finely burnished pipe is typical of the Salisbury makers and dates to c. 1720-50 (Oswald 1975, 198).

The other pipes come from the fine Midlands decorated stem series and both the Chester and Nottingham styles are represented. In the Nottingham style is a pipe marked Webb from Kingston (44.5). Although some of the decorative motifs are represented in the Nottingham series Walker and Wells (1979) do not list any Webb from this group. One of the closest sets of parallels was made by Wilkinson of Cambridge. In view of this and the occurrence of this as yet unrecorded maker in Surrey it may be that it originates from an outlying centre rather than Nottingham itself. The Chester example from Croydon (28.14) is unnamed but bears the Chester arms, a common motif used in this series. What makes it unusual is that it does not have the usual enclosing oval with the word Chester under the shield. All the examples illustrated by Rutter and Davey (1980, 161) have this and it seems odd that one that was exported so far should not have the name where it is most likely to be needed. The narrow border and straight sides to the shield suggest that it may be early in the series which starts c. 1710. Both these stems have exceptionally fine detail on the stamps and are quite unlike anything known to have been produced in Surrey.

Group 4 - 19th Century

In common with the London makers of the nineteenth century there is a revival of stamping. Now however all the stamps are incuse and mainly found on the back of the bowl. At Guildford the Swinyard family used at least two types of stamp (7.7/9). These are found on a variety of bowl types some of which also have a moulded spur mark. In comparison with moulded marks stamping remains rare and the only other Surrey marks known are those of John Hyde who took over the Swinyard business.

Hyde's marks are all very similar having a simple six armed star in the centre, but clearly he also had several dies. A type which can be placed earlier on typological and stylistic grounds has all serif lettering as opposed to a later more oval type which has GUILDFORD in sans-serif letters (7.8). He also used a small unbordered stem stamp of the same design (16.4) which is a very rare feature. The other stamps found in Surrey come from a variety of sources and represent the widespread nature of pipe trade during this period. At Godalming has been found an example of a Willi(ams) stamp from London with the City arms, while from Guildford, Broseley stamps of both the Southorn and Smitheman Companies have been found, and an example of the former has also been found at Leigh (18.9). Also at Guildford are stamps reading Sants Baths (1856-61, Oswald 1975, 192) and Savell. From Godalming are the initials RN incised on the back of the bowl. The well known French firms of Gambier and Foilet are also represented, the former from Guildford and the latter from Oatlands, Redhill and Dorking. The Dorking example (15.8) is the only example of a glazed pipe from Surrey. The bowl is a light yellow with brown streaks of decoration on. Also from Dorking, with another example from Reigate (16.9, 25.10) are examples of the well known FORD STEPNEY stamp with the city arms in the centre. The final marks are those on bowls of Irish type. Although these often bear Irish marks they were common in the late nineteenth century and were made all over the Country as is shown by the E. Holder--ss mark from Ash (226). John Hyde also produced Irish types and from Brockham are two pipes with Dublin marks which may be actual Irish examples.

This last group well represents the change of pipe production. Although the imported examples remain few compared with Surrey pipes they come from much greater distances as production centres move further apart. Cheap rail transport enabled this to become economically viable. This undermined many local industries and pipemaking, already in decline, withdrew to the larger towns with good transport systems. These late types gradually replace local makers such as Hyde and continue into the early twentieth century. After this date stamps no longer appear as pipes cease to form a significant part either in local industry or the archaeological record.

Section 2 - Moulded Marks and Regional Discussion

Due to the large number of moulded marks these are best dealt with by regions and are discussed below with general notes on the pipes from each place. The change to mould imparted relief initials, usually on the spur, seems to have originated in Scotland (Oswald 1975, 44) and only later (c. 1680) appearing in London. The earliest examples from Surrey of c. 1690 are from Weybridge (39.11/12), and Guildford (6.4) and where the bowl survives still have the standard seventeenth century milling. The only such mark which can be attributed to a Surrey maker is the Guildford example (discussed above). Once this form of making is adopted it replaces stamping being much quicker and easier to use. Almost all the type 25 pipes are marked in this way and it remains the standard method of marking well into the nineteenth century.

Unfortunately due to the lack of documentary research the makers lists for Surrey are still very scanty. As a result of this Surrey pipes are often incorrectly correlated with London makers. London pipes are found in the

north-east but the majority of the County was served by Guildford or other regional centres. Also places such as Reigate or Haslemere almost certainly had makers as yet unrecorded who would have taken their share of the trade. The occasional long distance imports are the exception rather than the rule.

During the nineteenth century moulded names occur either incuse or relief on the pipe stems, to some extent replacing initial marks. There is also a tendency toward the use of symbols on the spur. As local makers die out and designs appear on a national basis marking tends to die out altogether. The short 'cutty' often of type 30 (fig. 32) mean there is seldom a spur to be marked and makers marks are extremely rare after the late nineteenth century.

The regional lists of marks (Appendix 1) are intended to facilitate checking of marks within the County pattern, and ultimately on this basis production centres and makers can be suggested. Although moulded marks are less easy to compare than the artistically individual stamps their widespread use and large numbers make them one of the most important artefacts for the archaeologist. These various forms of mark are discussed within the context of regional groups below.

FARNHAM (Figs. 2 & 3) This town is situated in the west of the County, projecting into Hampshire. It had its own pipemaking industry in the eighteenth century and is an important area for consideration since it lies at the boundaries of the West Country and London traditions. Unfortunately the Museum has a relatively small collection of pipes and much work needs to be done both on local makers and bowl types. The following summary of the pipes is therefore somewhat tentative.

In the late seventeenth century there seems to have been quite a range of type 18 bowls in use (e.g. 2.4) which are not very common in Surrey as a whole. The plain bowls are slightly different from normal Surrey types (2.5) and some eighteenth century types are clearly influenced by West Country styles (2.9). The rather crude late transitional pipe (2.10) with a thin spur and peculiar angle at the top of the bowl is paralleled at Guildford (4.7) and may be a local feature of this period. The ID mark (2.11) of which there are two different examples can be attributed to John Denyer of Farnham.

In the nineteenth century there seems to be a strange change of emphasis in pipe supply. The RAOB pipe by F. Goodall (3.4) comes from Gosport. In addition two unusual marks of R&G (3.2/6) seem most likely to belong to Russell & Gales of Portchester (1855 Oswald 1975, 172). If pipes are being supplied from this area SG (3.3) could be Sophia Goodall, 1847-51, and AC (3.1) Arthur Coster, 1841, both of Fareham (Oswald 1975, 171/2). This produces an unlikely supply source from the Hampshire coast at a time when Guildford was actively producing pipes. In view of this and the fact that the 'Britannia' pipe belongs to a type found in Surrey (see below) it is more likely to be a failing on the part of local records.

There still remains a split between Guildford and Farnham to be explained since there is no overlap of recorded marks between the two areas. It is

possible that the eighteenth century industry was able to supply local demand in Farnham and that as it declined pipes such as the R&G ones were brought from Hampshire along old clay routes (the most direct route for clay being from this area rather than via London). Although this suits the evidence it seems unnecessarily complex and may in reality be due to a lack of material. The pipes undoubtedly from the South Coast can be seen as 'exceptions to the rule' like another F. Goodall RAOB from Weybridge, and future collection will probably provide the missing links between Guildford and Farnham.

GUILDFORD (figs. 3-9) Due to its position with good road and canal links with most parts of the County it is not surprising to find that Guildford remains the main centre of pipe production. There is a good collection of pipes and records at the Museum including material from several of the pipe-kilns which were adjacent to the canal. The placing of kilns near the water enabled clay to be shipped to them which was clearly the cheapest method and has been noted at other centres such as Lincoln (Mann 1977, 3).

It is clear from the number of known makers that not all marked their pipes. The Rosemary Alley kiln for example was producing a late spur type (3.8) and probably type 18 pipes (3.7) which are all unmarked. In the eighteenth century the number of documented makers rises yet in contrast rather than more types there tend to be fewer. The majority of pipes are now marked yet they belong to just a few makers. This suggests that they may have been successful and employing a number of workers, perhaps the recorded makers for whom we have no pipes. The best known are Lawrence Geale (Fig. 22.4-14), Charles Wattleton (7.5) and Philip Street (33.9/10). The products of these few makers form an important element in most areas of Surrey with the notable exception of places north of Weybridge and the extreme eastern areas for which no evidence exists.

In the remainder of Surrey there seem to be areas of influence held by these makers. To the east through Dorking and Brockham to Reigate Geale pipes are commonly found, with comparatively few Wattleton and Street pipes, this being especially true of Reigate. In Ewell however Street pipes rise dramatically in number to equal Geale pipes, while in the Weybridge area both decline in favour of Wattleton's pipes. It is possible that these concentrations reflect established markets which were supplied by these makers through set pack-horse routes.

This theory can be extended by examining the working period of these makers. Geale and Wattleton were contemporaries working in the early eighteenth century and each has a clear area of influence in the east and north respectively. Geale died in 1731 and the pipes of Street, who was his apprentice, continue to appear at Ewell, and it seems plausible that Street took over the market left by Geale while Wattleton continued to supply the northern areas. The absence of Street pipes in Reigate is simply explained by George Thornton I who a few years after Geale's death had started working in Dorking which is a much closer supply centre for Reigate where his pipes are found.

In contrast with these 'large scale' makers many of the marks are rare and confined to Guildford. Richard Price is a good example, his pipes (7.6)

are not uncommon in Guildford but do not seem to be found anywhere else, likewise the distinctive pipes of the Baker family (8.1-4, see Kingsford-Curram 1968, 87-90). It may be that areas for which information is not yet available such as the south or the north east were supplied by these makers.

The Baker pipes mark the start of moulded decoration which became so typical in the Nineteenth century. Such decoration was especially developed by the Swinyard family who made a wide range of decorated pipes, including highly decorative bowls and a variety of decorated stems (Fig. 9). It is interesting that of these designs there are often at least two very similar moulds in use (cf. 9.1 and 11.16) which also occur in the Horsham area (cf. Atkinson 1977, 30, lower plate) and were made by the same family.

The individual decorative motifs used by the Swinyards can be paralleled in other parts of the Country but in Surrey form a marked contrast and change of style in pipe production. The moulded name (Swinyard, 9.2) round the bowl top is a type of marking centred around Lincoln, although there are outliers in London and the south east (Walker & Wells 1979, 26). This is the last period when local industries could develop their own distinctive motifs (e.g. Mann 1977). With the onset of large scale mould making by firms with catalogued bowl designs identical types start to appear all over the country. A good example of this are the several almost identical 'head' pipes which have been found at Dorking and Guildford and were probably produced at the latter centre. These pipes (8.11) are so similar that direct comparison is necessary to distinguish the bowl types, yet examples which seem to be identical have been recorded at Bristol (Jackson & Price 1974, 137).

The exact members of the Swinyard family, their dates and movement are still a little obscure but clearly merit a detailed study. Their pipes are found over much of the areas supplied by Guildford in the eighteenth century and the border area with Horsham which seems to lie in the Newdigate area. After the business was sold to John Hyde only plain pipes were produced until it was rebought by the Swinyard family when it was moved to Aldershot. This ended the industry at Guildford and the late pipes which occur were imported from centres such as London.

GODALMING (fig. 10) Godalming, as would be expected, is dominated by Guildford made pipes which include the only examples made by the Baker family found outside Guildford. There is also an interesting pipe (10.7) made by Charles Wattleton with a fine raised line running round the spur. The most important group is a series of pipes marked WN (10.8/9). All the excavations in Godalming have produced these pipes which come from at least four moulds, two plain and two fluted. They seem to represent an as yet unknown maker working in Godalming during the early nineteenth century. A few of these pipes found their way back to Guildford which can be seen as pipes moving with individuals rather than trade. Also from Godalming is an unusual flared heel pipe (10.4) which occur occasionally in Surrey. Such heels are often described as 'Broseley type' which is misleading since these pipes are not the same as true Broseley pipes (Atkinson 1975b, 25). Some (e.g. 5.12) are extremely crudely made and these pipes must be considered as locally made from c. 1660-1710.

NEWDIGATE (fig. 11) Moving further from Guildford to the Sussex border there is a change in emphasis. Guildford no longer dominates the market and pipes from Horsham (11.22) and Dorking (11.5) are found. In addition important groups of pipes such as the CB (11.3) and FC (11.17/21) pipes are found which cannot be linked with known makers. Often these consist of several moulds such as the three TT pipes (e.g. 11.6) all of which are different. Such concentrations suggest these are not isolated examples but represent makers working fairly close at hand. Many of these pipes have been collected from the grounds of a Public House and it is remarkable how many makers were clearly finding a regular market in such an isolated village. Later pipes with symbols only (11.7/10) formed an important part of the pub group. The IP pipes (11.4) have very faint ridges starting towards the front of the bowl and may have been made by James Pitt of Chichester. Such villages as this which lie on the borders of influence of various centres are critical to an understanding of pipe trade, since they pick up the changing face of trade frontiers which are totally masked in the towns themselves.

HORSHAM (fig. 12) The Horsham pipes have a slightly different shape from the Surrey pipes and are important since areas such as Newdigate were supplied with them. These types are illustrated by Atkinson (1977) and will not be further discussed here. The WS pipes (12.10-12) are probably all Swinyard varieties from Horsham which were exported into Surrey (e.g. 11.12), where they are found alongside their Guildford counterparts (11.13). The fluted bowl (11.9) is probably also made at Horsham and since the head pipe (11.16) is different from the Guildford pipe (9.1) this may also be a Horsham pipe.

DORKING (figs. 13-16) Moving back into Surrey Dorking is largely beyond the range of Horsham pipes although the later nineteenth century pipes of Harrington to come this far. An interesting example of a mould from Greenwich reused by Harrington comes from the crypt at Dorking (15.2). This pipe was sealed in a builder's layer of c. 1872-4 (as was 15.3), suggesting not only the date by which the mould had been altered, but also that it was used at the Horsham branch of the firm rather than at Brighton since pipes from there have not been found at all in Surrey. The Sussex examples of this pipe (Atkinson 1977, 23) come from Steyning which was also supplied from Horsham (Atkinson in litt. 20.10.79) reinforcing the suggestion.

For the first time at Dorking we also find Croydon pipes appearing in competition with the Guildford ones (15.4), and later the Vining pipes from Kingston occur (14.9). It seems probable that makers from several areas came to Dorking to sell their pipes since such marks occur regularly in this area. The Guildford Museum file documents the fact that William Swinyard made trips to Dorking and other towns to sell his pipes and this seems to have been the standard method of distribution.

Pipes from the eighteenth century are scarce but evidence for a local industry is emerging. The George Thorntons have proved hard to identify among the many Thorntons living in Dorking but as suspected from the pipes at least two makers have emerged although their dates are still a little tentative, (Appendix 2). The first produced a range of type 25 bowls with plain (24.10), crowned (24.8), or 'dotted' initials (24.7). The use of crowned

marks is commonly, but clearly not exclusively, used at this period in London although its significance remains unknown. The later Thornton produced a wide range of fluted pipes (e.g. 31.2/3) which are widely distributed around the Dorking area.

The other probable Dorking maker so far identified used a gauntlet and crown mark (14.1). This unusual mark was reported in some numbers during building work under St Martin's Church and has also been found at Brockham, Guildford, Shoreham and London (Atkinson in litt. 20.10.79). Other sites in Dorking have produced examples and more than one mould is represented (cf. 7.3). Since this mark is uncommon elsewhere yet forms a significant part of the few eighteenth century pipes from Dorking it seems most likely that they originate from here.

Two nineteenth century bowls with loop decoration (8.12) have been found in Dorking. Pipes from this mould are also recorded from Brockham and Guildford and so it can be seen as a Surrey pipe although its production place has not yet been established. Dorking like Farnham is an interesting centre where much work remains to be done on the local industry and pipes.

BROCKHAM (figs. 16/17) Brockham lies between Dorking and Reigate and reinforces the picture for this part of the County. A general background of Guildford pipes is overlaid by influence from other areas. Naturally the Dorking types are found but later examples also come from Horsham (17.14), Croydon (17.6) and Kingston. More unusual forms (17.2/3) are found but these come from Betchworth Castle where wider supply sources are to be expected. The latter example is a burnished bowl almost certainly an import and one of the latest examples of this finish recorded in Surrey.

Two types of interest from the village are the Masonic fragments (17.7) and a fluted bowl (17.10). Two examples of this Masonic pipes are recorded from the village but have not yet been matched elsewhere in the County. The fluted bowl likewise is only recorded in this village where many fragments occur, and the concentration of both these types suggests they were made locally. Another type which is probably local are the pipes marked with a heart (see Reigate below) which occur in some numbers.

Several thousand fragments of nineteenth century pipes have been recovered from the site of a brickyard in Brockham, but these have been excluded as they are all London pipes. Apparently pottery was brought from London to be used in the manufacture of bricks, and the pipe fragments being smaller seem to have dropped out. A wide range of makers initials, stem marks and stamps has been recovered often including London addresses.

LEIGH (fig. 18) Leigh falls between the Dorking and Reigate areas, although being close to Newdigate the Horsham pipes, absent at Brockham in the seventeenth and eighteenth centuries are to be expected. As yet few marked pipes have been found apart from imports such as the SV stamp (18.14). The presence of this mark in such a rural area is perhaps surprising but shows the depth of influence of these early London pipes. Links with Dorking are shown through a decorated piece (18.10) which occurs quite frequently there, and with Reigate through four examples of a fluted pipe with recut initials (25.4). The rather elongated spur pipes (e.g. 18.2) are perhaps closer

to Sussex types. In all these pipes show the wide ranging contacts in time and distance that even villages felt.

REIGATE (figs. 19-27) Although Reigate has a noticeable concentration of stamped pipes this is probably due to excavation in the town which has produced a lot of early pipes. In the eighteenth century there are a lot of Guildford and Dorking pipes although other marks appear. WB marks are scattered across Surrey, but several are found here on type 26 pipes which seem a little early for William Burstow of Horsham (Atkinson 1977, 10) who probably produced the Newdigate example (11.23). It is significant that the Horley example (28.10) has a trimmed base to the spur, an unusual feature shared with the WB armorial from Guildford (8.6) suggesting that both pipes were made by the same maker. The date and distribution of these pipes suggests a Surrey maker, perhaps in the Reigate area.

Another pipe possibly attributable to a maker at Reigate are those marked with a relief heart on each side of the spur (24.1-6). These pipes often have very fine thin bowls and many different moulds seem to have been used. One type (24.2) has dots above the heart and both Newdigate and Oatlands (37.15) have produced different pipes where the usually well cut hearts have a double or broken outline. These pipes are widely distributed over Surrey but only occur in quantity around the Reigate area suggesting that this was their production centre c. 1760-80.

The fluted bowl paralleled at Leigh (25.4) has had initials overcut on the spur, and this may originally have been a Thornton pipe. Although later pipes are less well known the Corney pipes (26.14-16, Fig. 27) are found fitting with the distribution extending to the Dorking area. A bowl decorated with vine leaves has also been found at Ewell (31.8). It is probable that Reigate is near the edge of Guildford influence and that centres such as Croydon will play an increasing role in the east of the County where as yet virtually nothing is known of the pipes.

HORLEY (fig. 28) Once again a border area, there is a possible John Collis pipe from Horsham (28.7) with pipes from Dorking and Reigate (?). Guildford influence seems to have reached its limit represented by only one mark, that of Lawrence Geale. The WF pipe (28.9) may well be another local type since it has a parallel at Reigate (23.8).

SOUTH GODSTONE AND COULSDON (fig. 29) In the east of the county there are no major groups of pipes, and it is hard to see where the main influences will lie. From South Godstone is an IC pipe (29.5) which may come from Horsham, while GT pipes are coming from Dorking. Both these centres are some distance and so it is not surprising to find less well known marks such as the WR and RG marks from Coulsdon (29.10/11). Even more surprising perhaps is to find that two LG pipes have travelled all the way from Guildford. In the nineteenth century a lot of Corney pipes appear as well as J and SH pipes which may belong to the Henshaw's of Croydon. There are also quite a number of G or CH pipes. Vining pipes from Kingston go to complete this rather mixed group which again shows the wide supply source for rural villages. One unusual 'pipe' is made of a lead alloy (29.12) and is probably a dolls toy. Despite the small scale the popular head motif is easily recognizable.

MITCHAM & CROYDON (figs. 28 and 30) These areas contain much more typically London types and clearly show the break from Surrey influence as a whole. Only the main types are discussed, as other marks are unassociated with Surrey. We find a similar pattern of pipes with a few makers dominating the market, but now none of the usual Guildford or Dorking types. Instead the Corneys of Croydon (30.9), IC, RG and IG (30.4-6) marks are predominant. All four were probably working in this area and examples are found in Surrey. This brings out the fact that studies must be very much oriented towards the production centres especially in peripheral areas where centres beyond the County have an important influence. The Corney pipes show great variety and are good parallels for the varied Swinyard pipes produced at Guildford. Unfortunately since several members of the family were called Robert it is virtually impossible to ascribe them individually. A few of their pipes have named stems (e.g. 16.2) but most simply have spur marks, invariably R. C. several types of Fox and Grapes pipe were made (17.6, 27.6, 29.8) as well as the usual range of fluted or leaf decorated bowls. Two pipes have a rose and thistle motif (27.4/8), one with the slogan Trade and Agriculture. These two bowls are interesting since although they have the same design and shape the style is very different, suggesting a different designer. Like the later Vining pipes some bowls (e.g. 27.7) are extremely fine and thin and show that quality still existed as an element of production.

EWELL (figs. 30-32) Most of the recorded marks come from excavations at a Public House. This site has produced a remarkable range of marks although only a few predominate at any time. These perhaps represent makers who regularly supplied the publican. In the eighteenth century the Guildford supply gradually gives way to the Thornton and heart marks. In the nineteenth century a number of makers (IC, RC and IF) all appear in considerable numbers although JH, JV and especially WT marks dominate the supply. The JH marks are of two types (31.12/15); the former having a raised line on the 'J' side of the spur and when complete had a stem length of 35.5 cms (14"). They may well have been made by the Henshaws of Croydon.

The Vining marks occur on a variety of pipes (31.13/14/16). The leaf type (31.13) is rather thick and probably earlier than the others which have much finer bowls. The spur type (31.14) has an exceptionally fine bowl and represents one of the technological peaks of pipe production. The largest group however are the WT pipes. Most are a tall pipe with leaf decoration (31.11). All this maker's pipes are characterised by the very small and sometimes rather poorly cut initials. Examples of these pipes have been found at Nonsuch, Dorking and Guildford, but the large concentration suggests he worked in the Ewell area. The sequence continues into the twentieth century and the usual range of bowl designs is found, including a few complete examples illustrated in fig. 32. The list of makers marks shows how local or regular supply sources form distinct groups very quickly, making them easily identifiable while odd examples remain low in number but great in range. This list of marks forms good parallels for pipes from wide areas of Surrey and shows how mobile people were.

EPSOM (fig. 33) The overall picture for Epsom is likely to be very similar to Ewell, but as yet few groups have been recovered from the town. One outstanding group however was recovered from a pit in South Street which is dated by a fresh-cut ring with the date 1707. Since 72 of the 97 Geale pipes were stamped the pit must fall in the earlier part of his career and a date of c. 1710 seems most likely. In all the pit contained some 230 pipes of which 45 have been reassembled (see below). The importance of such a large, well dated group is clear and only a preliminary interpretation is offered here.

The most obvious group of pipes are those made by Geale which account for nearly half of the total. It is possible that this is a pub group in which case he may simply have been the main supplier, but even so it shows substantial trade over this distance. The fact that 25 pipes had his initials moulded suggests that stamped and moulded marks were both being produced at this period, and the fact that only one of his type 4 stamps was found shows that it was a late addition to his collection. Since all his bowl types and stamps occur together we know that old moulds were being used alongside new so that exclusive dating by either mould or stamp type is impossible.

It is also interesting to look at the bowl types. The rapid takeover of the type 25 is clear with 150 examples of this type. Less than one third of these are Geales so this shows a difference in the types produced by him and other makers. In contrast he made 27 of the 29 examples of his early eighteenth century form (6.9), and the other two may be broken so short as to lose the stamp. His other distinctive type (6.14) was more widely copied and he only made 11 of the 37 examples. A careful check has been made of this group to establish the number of moulds in use and the consistency with which they were stamped. Geale was using between three and five moulds of this design, and all of them bear his stamp. Likewise both those with Pemerton's stamp come from a similar, but different mould (33.3). There are between three and six other moulds of this type, but none of them are stamped and there are seventeen examples of one type. This suggests that Geale, and perhaps Pemerton, stamped all of their output of this type of pipe, and not just a proportion as has been suggested.

The only other bowl type which seems to have been in reasonable circulation is the type 19 of which there were 19 examples. Two examples basically of type 22 and from the same mould were milled, the only ones from this group. This once again shows how total and swift the change to the type 25 was at the start of the eighteenth century. The other pipes were rarely marked and three of those (33.7/9/10) came from the disturbed top of the pit and are probably later in date. Once again we find WC marks in the eighteenth century. These marks come from many places as far apart as South Godstone (29.4) and Guildford and must represent a maker somewhere in Surrey. The rest of the plain pipes need to be mould identified to reveal, indirectly, makers for this group. The stem lengths of the complete pipes are discussed below.

OATLANDS AND NONSUCH (figs. 34-38) These pipes are fully discussed in the reports by David Atkinson (1976 & 1974 respectively), and are mainly early in date. Where later pipes were recovered they once again show Guildford

makers taking the early market while marks from Dorking and Reigate? appear later. The more northern centres such as Kingston (38.2/5) and the makers predominant in the Ewell area extend to cover this area in the nineteenth century since it is beyond the general range of Guildford pipes. In addition to these, other marks such as the MP (38.12) and WW (38.3) are found which also occur at other sites in the northern part of the County.

WEYBRIDGE (figs. 39-40) Weybridge like all these northern areas has more of the London types and a greater mixing of marks as more production centres come within range. There are only two marks which stand out, the IF and CW types. The former have already been mentioned at places like Ewell and the fact that several are found here while other types common there die out may suggest a more westerly origin for these marks. The CW marks appear in surprising numbers this far from Guildford and in view of the fact that odd examples are found as far as Staines it may be that Wattleton exported his pipes to Weybridge via the canal and that from here they spread along the Thames.

An interesting Vining pipe (40.14) has the initials WT on the spur and is clearly a reused pipe mould. Unfortunately his full name mark is a considerable way along the stem, and without both parts it cannot be determined whether the pipe was made by Vining or the WT maker. Pipes by Norwood of Eton (40.11) appear in this part of the county paralleling the Hyde pipes of Guildford. Another Victorian design which is represented by many examples at Weybridge is a 'grape' pipe (40.13), and there is also a stem from London (40.6) which shows motifs identical to those used by the Swinyards.

EGHAM (figs. 41-43) The pipes from Egham are similar to the other northern areas discussed, but some unmarked types are distinctive. Thirteen examples of a bowl with simple leaf decoration (43.2) are recorded from the town and along with other types such as 43.3/4 were probably produced in this area. Likewise the interesting bowls marked IB (42.11) of which three examples have been found at Egham, these are decorated and depict figures carrying banners. All come from a deposit sealed c. 1765 (Barker in litt. 14.11.79) and I believe one side reads 'Pitt for ever', a slogan recorded by Atkinson & Oswald in London (1969, 200). It must therefore refer to William Pitt the Elder (1708-78) who was dismissed by George III in 1762, but returned 1766-9. If the deposit was sealed c. 1765 then this pipe must have been produced during the earlier, and more popular, part of his career and can be dated c. 1750-65. The other side has a different slogan, as yet undeciphered, but which is intended to be legible since to complete it the last letter has been carefully cut outside the border of the flag. A very close parallel from London has the makers name in this position. This is a rare use of early decoration being used for popular motifs but leads on to the decoration which was to become so typical of the nineteenth century. This pipe can be compared in style and date with the armorial spur pipes found in this area (see below). The fine crown stamp (42.13) probably belongs to the eighteenth century but as yet is unparalleled.

KINGSTON-on-THAMES (fig. 43-44) The pipes from Kingston contain several examples of the crown, fleur-de-lis and cross motifs so common on eighteenth century London pipes, and as with some of the other marks these may be the result of river traffic. The most common eighteenth century marks are SH

and RC. The latter maker may have been Robert Cook (working 1755) and the marked pipes produce an interesting series covering the period when the type 25 bowls started to develop into the late eighteenth century forms (44.1/3/7-9). These include Prince of Wales and Royal Arms motifs. An example of this Prince of Wales bowl has been found at Weybridge.

Another unusual bowl is the IA pipe with a moulded London Arms on (44.6), which has also been found at Mitcham and in London. This is the only recorded example of the Arms being moulded since all the others known (Atkinson & Oswald 1969, 200) are incuse stamps. The other, as yet unidentified, makers common to the northern part of the County such as IC, IF, IG, JH and IP are also found. The IP mark has the unusual feature of a leaf cut next to the initial, an example of which has also been found at Ewell. There is also an interesting Vining pipe (44.11), one of the many decorative designs which they used, which is a copy of a Dutch pipe (type 31). This type was copied in Europe as well as by at least one other maker in London (Atkinson 1972, 179).

STAINES (figs. 45-46) The nature of Staines pipes is very similar to the Kingston ones since it is likewise a riverside town. Wasters confirm it had its own industry, and the makers marks are noticeably different. Three examples of a crowned star mark (46.10) have been found and this may be a local example of symbol marking. The main group of eighteenth century pipes so far is a series marked (often poorly) RP (46.1-4/9). These are not recorded in surrounding areas and again may be local.

Examples of the WW mark (46.7/8) are found here as at Weybridge and Egham. A more distant link is a pipe with the initials GO, the O being re-cut over a letter H. The only other recorded example comes from Guildford (8.7) demonstrating that individual marks may travel considerable distances and in isolation can be misleading.

It is clear that this area of the County projecting up to the Thames where many supply sources are available needs a much wider survey including the neighbouring Counties. What has emerged however are several makers whose marks recur in this area and probably worked there, as well as the difference in style from Surrey as a whole.

SURREY - UNPROVENANCED (Figs. 47-48) These pipes have been collected from late rubbish deposits around the county and are typical of the standard designs produced at the end of the nineteenth century. There are few makers marks and the designs can be paralleled all over the country. Fig. 47.2 has been found at Reigate, and the pipe made by Webb for the exhibition of industry in 1851 was also probably found there. Fig. 47.11 is an interesting pipe designed specifically for blowing bubbles. The cut in the stem means you cannot suck through it, but when you blow with water in the bowl it produces a pleasant warbling noise, as is suggested by the suitable choice of a bird motif.

Section 3 - Scratched Marks

Two examples of this unusual form of marking have been found in Surrey. They consist of initials scratched onto the bowl after firing and almost certainly represent the owners of the pipe rather than the pipe makers. Naturally

there is no way of telling when this marking took place, and the date of the bowl merely gives a terminus post quem. Both examples are from the north of the County, JS from Weybridge (39.6) and FR from Egham (42.10).

DECORATED PIPES

This section considers the early classes of decorated pipes which are found in Surrey, as well as some of the more common later types. The large body of Victorian pipes are omitted since they become increasingly standardised and unmarked and can be readily identified.

17th & 18th Century Stem Decoration

Decorated pipes of this period are extremely rare but follow the London styles when they occur. Although none of the ornate moulded English decoration (Oswald 1960, fig. 21.19) has yet been found, both moulded and incised forms of decoration occur.

Moulded Decoration Three of the four examples of this type of decoration come from the north of the County, and it seems this type of decoration was not generally used by the provincial makers. It occurs on heel pipes (40.2) which had undecorated bowls and date to c. 1650 (Atkinson 1975a, 98). The northern examples (40.1/2, 45.11) consists of line, cross and dot decoration which clearly (40.1) covered some distance of the stem. The example from Brockham (17.1) seems to be slightly different having panels with dots in although clearly it is only a fragmentary example. Little else is known of the development or makers of these pipes and there is a need for study in this field.

Milled Decoration This is slightly more common in Surrey, although again little is known of the type or length of the decoration, or even the date of many examples. Milling was applied in vertical lines (40.4), diagonal lines (11.1), or both (45.8) but all these examples are sadly incomplete. The last example, from Staines, is useful in that it gives us a date of c. 1660-80, although its use continued into the eighteenth century since milling is found on a type 25 pipe from Guildford (7.2). With other examples from Oatlands (36.5) and Kingston all these examples seem to be purely decorative.

From Staines are two unusual examples where it may serve a different function. Another bowl of c. 1660-80 (45.9) has been very badly distorted and the stem is so buckled that it seems to have been broken and the stem rejoined while still wet. This join seems to have been sealed with a single band of milling. This extraordinary saving of a pipe has produced what most makers would have considered to be a waster and why it was done remains unexplained. A piece of stem (45.10) is distorted just before it is broken where a band of milling occurs and this may be a similar example.

Other Decoration An early eighteenth century pipe from Guildford (7.2) combines milling with other forms of decoration. A roll stamp has been run round the stem leaving a raised band of toothed decoration. Around the centre of this has been run a spiral band of milling, and finally a pattern of incised dots has been added. It is possible that those on the stem are intended to be a symbol or initials, but a similar group on the bowl has been too blurred

to make any pattern out. This combination of decorative elements is most unusual and little can be said of such pipes until more examples have been found.

A slight variation of milling is a groove such as is seen at Epsom (33.1). Here three very neat straight grooves have been put round the stem, which comes from the rubbish pit of c. 1710. It is the only example of this type of decoration from Surrey.

The other main eighteenth century decorative motif is the barley sugar stem (7.10/11). This is formed by pinching the stem in alternate directions while wet giving it an intricate surface. An example from Staines (Barker 1976, fig. 30 No. 2) may be as early as c. 1660-80, while one of the Guildford examples (both came from the same site) is on an early type 25 bowl. An early eighteenth century date for this type of decoration is supported by evidence from Plymouth (Oswald 1969, 134). Other than the imported decorated stems (discussed above) these few pieces are the only examples so far recorded in Surrey.

Decorated Bowls

In Surrey bowl decoration is virtually absent until the eighteenth century when as in London Armorial designs appear. This trend is relatively common in the south east being centred on London. About 1730 Armorial designs start and although they have become degenerate by the end of the century they herald the many classes of nineteenth century decorated pipes.

Mulberry Pipes This type of pipe is centred on the Midlands and East Anglia (Oswald 1975, 107) although an increasing scatter of examples is being recognised in the South. They date to c. 1650-90 and are one of the very few recurring seventeenth century decorative forms. Two examples are recorded for Surrey, one from Godalming (10.2) and one from Staines (45.3). These pipes were almost certainly imported but since no production centre is known it is as yet impossible to say how far and from which direction they have travelled. Of the few initialled Mulberry pipes the mark AF has been found at Portsmouth and Dorchester (Oswald 1975, 90) suggesting they may have been produced at more southerly centres than their Midlands concentration indicates.

Armorial Pipes

From c. 1730 (Atkinson & Oswald 1969, 197) Armorial pipes were produced in London and seem to have spread to the south east (Oswald 1975, 107). None of the examples from Surrey are on type 25 bowls, most being on type 26 pipes, and thus dating to the second half of the eighteenth century. Almost all the arms are Hanoverian, invariably in a slightly corrupt form (cf. Hume 1970). It is surprising that despite nearly twenty pipes or fragments having been recorded for Surrey very few are from the same mould. Although these pipes remain scarce it is clear that the 1969 list (Atkinson & Oswald 197) which records only thirty examples, and none for Surrey, is going to be far short of the total numbers of these pipes actually produced.

From Guildford is a very poorly moulded example marked WB (8.6) in which the arms are unrecognisable. A letter R? appears to the right of the

crown but unfortunately the corresponding half is missing. The WB mark is found in various places in Surrey (see Reigate above) and this may be a locally produced type. Also from Guildford is a Prince of Wales feathers on a pipe marked I?F (8.9) and a pipe marked TG (8.5) which has a very finely cut but largely missing arms on the bowl. Another possible Armorial pipe by this maker comes from Reigate (23.7) although both initials and decoration are very unclear on this bowl. The latter two Guildford examples are late eighteenth to early nineteenth century and a later Royal Arms has also been found but is too water-rolled to be identifiable. Although Godalming is so close to Guildford the two different Hanoverian arms from there (10.5/6) do not match the Guildford examples. Both are very poorly moulded and finished.

A fragment of pipe from Reigate (23.4) is from one of the finest Armorial bowls in Surrey and like the previous examples has not been matched elsewhere. A second example from the same mould has been found at Reigate which suggests that this type was at least available locally if not produced in this area. From Horley is a fragment possibly with some sort of arms also unparalleled. Three pipes that are identical are the R?G Armorial from Mitcham and Croydon. These are late eighteenth century and have very crude moulding. The pipe is easily identifiable from the spur which has the R (or possibly K) cut on a raised platform after which the spur becomes only half the thickness. A different type of RG Armorial comes from Ewell (30.11) which has much better moulding but is in the right area to be the same maker. This suggestion is reinforced by the occurrence at both Mitcham and Ewell of plain pipes marked RG of this period. Both these places have also produced unmatched fragments (30.7/10).

At Nonsuch a Prince of Wales feathers with the n of the motto cut backwards has been found (38.20) which is an error also found at Kingston (44.2), although it has not been possible to find if these pipes are from the same mould. Another Prince of Wales design (44.4) has been found at Kingston and both types are different from the rather crude RC example (44.1) which has also been found at Weybridge. The Hanoverian RC (44.3) is a much better cut mould and is slightly earlier in date.

The most numerous recorded type is the MH Armorial from Staines (46.6) of which four examples are known, with a fifth at Egham, suggesting they were produced at Staines. This example is typical of the slightly blurred moulding found on many of the Surrey Armorial. Also from Egham is a rather crude and late Prince of Wales design marked AC (43.7). Together with common design elements it may be that several of these moulds were produced in the same workshop. This could include other pipes with similar detailed designs such as the IB type from Egham (42.11), but not the moulded London Arms (44.6) which falls more into nineteenth century decorative motifs.

Britannia Pipes The early nineteenth century decorated pipes developed from the Armorial designs and included a series of pipes depicting a naval figure and Britannia. This design has been found at Farnham (3.1), Guildford (8.10), Egham and Horsham. The Horsham examples are fragmentary, but come from kiln waste suggesting that they were made there. Likewise at Guildford, where two types occur, they have been recovered from possible kiln waste in

the canal. These types occur as far north as Weybridge. It had been assumed that these pipes were made shortly after 1805 to commemorate the Battle of Trafalgar, and confirmation of this has recently been produced by a bowl from Egham which actually has the word Trafalgar on it and is marked TC (Barker pers. comm.). This motif therefore seems to form a distinctive series in the Surrey area comparable to the different decorated groups found at Lincoln which include a pipe commemorating the Battle of Waterloo (Mann 1977, 30).

Fox and Grapes This motif, which is fairly widespread in Surrey in the first half of the nineteenth century, varies considerably in quality. They range from a very fine (if late) fragment from Newdigate to a degenerate example from Weybridge (40.7) and have even been described as 'giraffe and tree' (Baxter 1971, 187). The most common examples in Surrey were made by the Robert Corneys (e.g. 17.6) of which several designs occur. One of these is particularly distinctive having the lower half of the R missing (e.g. Hackbridge). Other types are marked WT (11.15 - two varieties) and -N (Croydon) and many other fragments occur which cannot be linked to identified marks. Several examples of an unmarked design (25.11) have been found at Reigate. It is interesting that although Newdigate is on the border with Sussex no examples have been recorded there, where grape designs were preferred (Atkinson in litt. 20.10.79), and it seems that this design, common in London, dies out somewhere around the border.

It has been suggested (Atkinson & Oswald 1969, 201) that these pipes represent Public House signs. In Surrey examples have been found at two pub sites—The King William IV at Ewell, and The Six Bells at Newdigate, neither of which is associated with Foxes or Grapes. They also occur in deposits unrelated to Public Houses and although The Fox and Grapes is a pub sign it seems questionable to automatically link the two. The Armorial pipes would equally fit the Kings Arms, yet even in America where it is suggested they are predominant at pub sites, this does not apply. It seems more likely that like the Swinyard or Britannia the design was purely decorative, although there is no reason why a pub so called should not have utilised this fact.

Fluting Apart from leaf decoration which becomes an almost standard feature of nineteenth century pipes fluting is the most common decorative technique. It is widespread and was used by many makers most of whom remain unidentified. Some of the earliest, dating to the late eighteenth century, were produced by George Thornton II in Dorking. His pipes are characterised by fine lines between thicker flutes, sometimes enclosing the top of them. His early pipes are the finest with tall elegant designs (31.2) which gradually become shorter and more crudely designed (31.3).

Fluting was rarely used by the Swinyards and so later types, common in the north of the County, are more rare in central areas. The use of swags and stars (31.5/6) above the flutes is not often found south of the Weybridge area but is used by many makers such as IP and later Vining types in northern areas. The thickness and quality of fluting can vary a lot, but the finer more even examples (32.2/3) are generally later.

Masonic Pipes These start in London around 1750 (Atkinson & Oswald 1969, 200), but appear later in Surrey. The decoration remains very similar while the bowl shape changes with time. The GB Masonic is one of the earliest (31.10 c. 1780-1820) and has been found at Horley, Brockham, Ewell and Reigate suggesting the maker worked in this area, perhaps at Reigate. Another possible Surrey example is the I?H type which has been found at Brockham and Ewell, and is characterised by an almost invisible christian name initial. Around Ewell the IP and IF makers also produced Masonic. The WT Masonic from here has a much more slender and fine bowl and contrasts well with the more bulky GB type demonstrating the change of bowl shape at the start of the nineteenth century. The only other recorded mark is WB from Ewell. The lack of Masonics in the west of the County is noticeable, but may in part be because the Swinyards do not seem to have produced a Masonic type.

INTERNAL BOWL CROSSES

From the early eighteenth century pipes were produced with a relief cross in the bottom of the bowl. This is caused by an incuse cross on the bottom of the stopper which forms the bowl, the internal base at this period usually being flat. In the nineteenth century when it is usually rounded these marks can take the form of tapering ribs extending up the inside of the bowl. The purpose of these marks remains unexplained, but a study of Surrey pipes has shown that they were not used consistently and by some makers not at all. They usually take the form of a cross aligned on the axis of the pipe.

The earliest examples noted by Atkinson (1977, 5) were produced by William Collis of Horsham before his death in 1728. Such a starting date for this type of mark is confirmed in Surrey by its occurrence in some of Geale's pipes, since he died in 1731. A few examples, including some made by Geale, have just a single bar, aligned on the axis of the pipe. Only 15 of the pipes from the pit at Epsom had crosses, and 11 of these were Geale's. Charles Wattleton used crossed more commonly, perhaps because he worked until later. It certainly seems to have become more common during the eighteenth century and about a third of the George Thornton I and 'hearts' pipes have crosses, although it declines in the fluted bowls of George Thornton II and is much more rare in the nineteenth century after the flat internal base has been lost. Some makers such as Philip Street however never seem to have used crossed at all.

Variations also occur in the arrangement of the cross. Apart from the single bar mentioned above a pipe marked WH (40.10) has been found at Weybridge with a slightly off-centre cross arranged as an 'x' rather than as a vertical cross. An even more unusual arrangement has been noted at Staines where two examples of the same atypical pipe have different grids in the bottom (45.14, the drawings of the grids are arranged with the axis of the pipe running from top to bottom of the page). Although the marks have been slightly damaged by the wire they are clearly very different in size and arrangement.

All of these marks are clearly cut, and are intentional not idle scratching on the base of the stopper. Later pipes with this feature include the WW mark from Staines (46.7) and IC from Newdigate (11.22). These crosses are not confined to marked pipes, but also occur on plain eighteenth century and decorated pipes such as the R?G Armorials from Croydon. The national distribution and varieties of this feature remain unknown and further regional work is needed before a coherent picture can be built up.

STEM LENGTH AND CURVATURE

This paper so far has considered parts of the pipe only. Due to the extreme scarcity of whole pipes it is easy to forget that they were once complete objects. Little is known about the various lengths produced, and a few examples from Surrey are therefore discussed below.

The earliest almost complete pipe comes from Oatlands (34.3). Its stem (measured from the rear of the spur) is nearly 200 mm ($7\frac{3}{4}$ ") long and gives an indication of the length at this period (c. 1610-30). Most of the complete pipes however are type 25' s which vary in length from 275 mm ($10\frac{3}{4}$ ") at Horsham to 325 mm ($12\frac{3}{4}$ "), but still broken, at Egham. A pipe of George Thornton I has been found with a stem of 305 mm (12"), and a complete stem, but no bowl, found with it has a length of 310 mm ($12\frac{1}{4}$ "). These lengths seem slightly shorter than examples from Bristol (Jackson & Price 1974, 143-4) and London (Atkinson & Oswald 1969, 209), although these too vary in length considerably.

By far the most important group however comes from the pit at Epsom where we are able to compare 45 complete pipes of the same date. These have been plotted to the nearest 5 mm on a graph (Fig. 49) comparing them with the lengths mentioned above. Several interesting groupings occur within the Epsom pipes. Three complete type 19' s were found and these are about the shortest pipes found. This suggests that length may be related to form, and that a type 19 would be expected to be a shorter pipe. It doesn't just seem to be that they're an older type since a milled type 22 had a length of 320 mm.

Within the Geale pipes there is a distinct split between stamped and moulded marks. With the exception of one of 367 mm all the moulded marks lie between 300 and 312 mm. Documentary sources often give categories of pipe and these two divisions amongst the moulded marks may represent this. All of the stamped pipes are longer than 340 mm, and all the 6.14 type pipes lie between 340 and 349 mm (and 8 of the 9 between 340 and 344). This very tight group, representing several moulds again suggests a specific length for a recognized type of pipe. Since 50% of the pipes over 340 mm are stamped Geales, with none below this length it may be that stamping was reserved for more prestigious long pipes. The unmarked type 25' s seem to show a more general scatter, perhaps through being less defined by mark or type.

In all this group shows that there does seem to be recognizable groups within the pipes produced, and that the makers probably had some sort of concept as to how long or what mark should be used on a particular pipe.

Later pipes vary from 263 mm ($10\frac{3}{8}$ ") for an RC from Dorking (15.4) to 356 mm (14") for the JH pipes (31.12) from Ewell (one of which has 52 mm of red colouring from the mouthpiece). A plain HH also from Ewell has the tip broken off at 332 mm ($13\frac{1}{8}$ "). At this period shorter pipes also appear with stems ranging from 80 mm ($3\frac{1}{8}$ ") to 120 mm ($4\frac{3}{4}$ ").

The long pipes of this period all have a curved stem which is often distorted in both the vertical and horizontal planes. This is not typical of the earlier pipes, most of which have a very straight and well finished stem. Where a curve does occur on these it is usually upward where the top of the stem is concave not convex as in the later examples. When compared with a straight edge this can clearly be seen in a Geale pipe (6.8) from Guildford, and must have been very noticeable when such pipes were complete. This feature has been noted on many of the more complete pipes from both the seventeenth and eighteenth centuries. The downward curve started in the later eighteenth century and can even be seen on the later cutty pipes. Two examples of such a pipe from Ewell (32.6) have completely different curves on the stems.

DUTCH PIPES

Although Dutch pipes were always rare in England they form a small but important element particularly where there was coastal trade such as at Plymouth (Oswald 1969). In general they are of superior quality to English pipes which made them desirable, and they have been found at both the Oatlands and Nonsuch Palace sites.

From Oatlands two examples have been found, a decorated stem (36.6) and an early eighteenth century bowl with a crowned spectacle mark (37.11) which is probably from Gouda. The decorated stem is distinctly different from English examples (p. 218 above) consisting of a fine decorated roll stamp. Short decorative sections such as this were apparently used after c. 1650 to indicate the point of balance on the stem (Atkinson 1976, 5). The complete bowl shows, as does the earlier bowl (c. 1660-70) from Nonsuch (38.18), the very different shapes employed by Dutch makers. Both of these are characteristically burnished and have symbol marks which were often used by the Dutch (Atkinson 1972, 182).

The other examples all come from Reigate. A very fine decorated stem (23.2) probably of the late seventeenth century (Atkinson 1972, 179), has a complex design of grooves, roll stamps, milling and ordinary stamps all applied by hand. The other pipes are later and consist of a windmill stamp on a burnished bowl (23.6) of c. 1760 (Atkinson 1972, 178) and a decorated bowl of c. 1750 (23.3). The windmill stamp may have been made by Jacob Danens of Gouda (Duco 1978, 122). Stamps had a prolonged life being held by the guild and loaned out to makers, so identification relies on a combination of dating the bowl and having the holders name extant. The other bowl is decorated on one side only and was made at the well known factory of Hendrik van den Oever in Schoonhoven (Duco 1980, 110). It shows a crowned pike with his initials over it.

The final bowl which is Dutch in shape is in the Guildford Museum (7.12). It is not clay but carved out of a hard stone, probably serpentine and if contemporary with similar Dutch types is late eighteenth century in date. These pipes seem to have had surprisingly little influence in England as a whole. Despite their recognised superior quality they were not really copied until the nineteenth century (44.11) although they may have slightly influenced Neave's bowl shapes in the early eighteenth century (see p.201 above).

WIG CURLERS

These objects are made of pipeclay and many were probably made by pipemakers as a sideline. A few manufacturers seem to have specialised and stamped them with marks not otherwise found on pipes, but little is really known of their production and marketing. Few examples have been recorded in Surrey, and these are discussed below. The identification and dating has been taken from Le Cheminant (1978, 187-191).

Two stamped examples have been found, both with a crowned IB mark. This is one of the common types of mark in the London area and dates to c. 1800. Both examples, from Guildford (3.9) and Reigate (20.3), are well made with a good even surface and shape and neat clear stamps. This more regular dumbbell shape is typical of the later products and contrasts with the rather uneven and dumpy shape of the Kingston example of c. 1690 (44.10). This has fine incised lines scored across the ends after firing, and from the uneven shape may well have been hand made.

The remaining two examples both date to c. 1750-60 and fall between these two types being more even than the Kingston example but thicker and more parallel sided than the IB types. One comes from Staines (45.16) and the other from Reigate (23.5). The Reigate example has a trimmed end.

CONCLUSION

This paper has examined and discussed all the available pipes in Surrey which for ease of reference have been divided into various groups. It has emerged that by about c. 1640 a wide range of probably local types were being produced and that distinctive local trends are found in the County until the mid nineteenth century. The market over much of Surrey was dominated by Guildford, where a tradition of fine bowl finish and marking developed in the later seventeenth century. Although there were many makers here few seem to have marked their pipes, and of those that did a minority held much of the market. In peripheral areas other centres become important, particularly London with its influence along the Thames.

The styles and development of marking have been summarised and all the early stamps have been discussed. This is true of the main classes of decorated pipes and the most important makers as well. Local studies have been included, emphasis being placed on making adjoining groups available for comparative work. Also more general notes on the development and morphology and imported pipes are included. Each section of this work therefore forms a conclusion in itself since it brings together the current knowledge of each aspect of Surrey pipes. With the illustrations, which represent both common types as well as unusual and decorated pipes, and lists of makers marks this work is intended to form a comprehensive base for comparative work and future studies, both local and national.

APPENDIX 1

MARKED PIPES

These lists contain details of the makers marks found in, and where relevant, around Surrey. The lists are arranged in the order stamped marks, moulded marks, moulded symbols, and stem marks. Following each mark is the number recovered from each place, details of pipe or decoration to aid identification (see abbreviations) and finally the figure number if an example is illustrated. Often stem marks are broken and to avoid lengthy lists of fragmentary marks if they can be identified as a local type, for example Swinyard or Vining marks, they have been completed. In some cases this has meant marks are somewhat generalised. Some initialised bowls are so damaged that all the bowl decoration is missing and when comparing marks this must be borne in mind. These lists although including all the marks studied cannot claim by any means to be complete, but their value lies in the ability for pipes to be compared quantitatively and objectively with surrounding groups.

ABBREVIATIONS

A	Armorial pipes	M	Masonic
Ac	Acorns	T	Tile decoration
C	"Circular" spur	T27	Atkinson & Oswald type No.
D	Dot	R	RAOB
Dec	Decoration - other	S	Stamped mark
F	Fluted	W	Wood design
Fx&G	Fox & Grapes	18	Date e.g. 18th century
L	Leaf		

ALBURY

J?H?	1	18
WS	1	18
CW	1	18
♡♡	2	18

ALFOLD

CW	1	18
----	---	----

ASH

E. HOLDER--SS WELLINGTON		
ST. ALDERSHOT	1	S

ASH (cont.)

DUBLIN	2	S
C. VINING KINGSTON		
	1	F, L & Swags
EYE. PEE/OHPACA		
	1	R

BOOKHAM

SWINYARD	1	S
IF	1	F
LG	1	18
GT	1	F
G?T?	1	18

BOOKHAM (cont.)

JS	1	L
CW	1	18
C/	1	18
I/	1	18

BANSTEAD

RC	many	19
HENSHAW WOODSIDE		
	several	19
CORK	1	19

BRAMLEY

LG	1	18
PS	4	18
CW	4	18

BROCKHAM

L. GEALE	4	18S
J. HYDE GUILDFORD		
	2	19S
'O' BRIEN'S No 6 DUBLIN		
	1	S
J. OCONNOR FRANCIS DUBLIN		
	1	S
GB	3	M
RC	1	Fx&G 17.6
G?E	1	T27
LG	3	18
L?G?	1	18
HH	1	19
I?H?	1	M
SH	1	19 17.4
/L	1	L
JM	1	19 17.5
WM	1	T27
RS	1	18
WS	1	L
WS	1	C
GT	3	18
GT?	1	18
Ç†	3	18
GT	6	F 16.17, 17.8/9
WT	1	L 16.18
/T	1	F
CW	1	18
C?W?	1	18
W/	1	Fx&G

BROCKHAM (cont.)

♠♠	2	18
♥♥	5	18
♣♣	1	19
☆☆	1	19
McDOUGAL GLASGOW		
	1	19
HARRINGTON HORSHAM		
	3	19 17.14
W. THORNTON/JAMES. ST. HOXTON		
	2	19 16.22
VINING KINGSTON		
	1	19
WILLIA/SURREY		
	1	19
BI CENTENARY PIPE ORIGINAL 1715		
REVIVED 1915		
	1	20

CAPEL

LG	1	18
J?G?	1	18
CW	1	18
J. PHILLIPS ASHFORD		
	1	19
SWINYARD GUILDFORD		
	1	19

CHERTSEY

TD	1	17S
LC	1	18
TE?	1	L
SH	1	L & Dec
JS	1	L
♣♣	2	19
⌘ T78 W. WHIT/COTLAND		
	1	19
~ ♠ S78 W. WHIT/OOTLAND		
	1	19
J. VINING KINGSTON		
	2	19
WOR/TON	1	19

COBHAM

NELDER & CO BROMPTON LONDON		
	1	19S
TG	1	
WS	1	19L

COBHAM (cont.)

AT 1 19L
 ** 1 19L

COULSDON

LG 1 18
 RG 1 18 29.11
 WR 1 18 29.10

CRAWLEY DOWN

≡ ▷ BRITANNIA MOURNS HER LOSS
 1 19 Dec

C. CROP LONDON
 1 19 Dec

DIAMOND JUBILEE
 1 19 Dec

CROYDON

RC 1 S
 CHESTER ARMS
 1 18 S 28.14

/ACH/ONDON
 1 19 S

WHEEL STAMP
 1 17 S 28.13

IC 1 18/19 Dec
 RC 9 Fx&G and Dec
 RC 2 18
 HG 1 F&L 28.15

R?G? 2 A
 GH 1 F
 JH 1 19
 -N 1 Fx&G
 ForE R 1 18
 ☉☉ 1 18 28.16
 . . 1 L
 ☉☉ 1 L

ENSHAW WOODSIDE

1 19
 /RY. CHRISTMAS/& A HAPPY NE/
 1 19

DORKING

L GEALE 1 17 S
 ☉☉J HYDE * GUILDFORD
 1 19 S 16.4
 SWINYARD 1 19 S

DORKING (cont.)

CREME DE FLANDRE Ls FIOLET
 St OMER FRANCE
 1 19 S 15.8

JH GREENWICH (stem mark)
 1 L 15.2

J or TF STEPNEY
 1 19 S 16.9

RC 1 L 15.4
 LG 2 18 14.2/3

LG? 1 18

HH 1 L

CM 1 19

HN 1 L

WS 8 L e.g. 15.5

/S 2 19

/S 1 L

GT 2 18 14.6

WT 2 L

WT 1 T27

JV 1 L 14.9

CW 2 18 14.4/5

G- 1 18

W- 2 19

♡♡ 1 18 14.7

☪☉ 10 18 14.1

☉☉ 1 F 14.8

☉☉ 1 19

☉☉ 6 19 eg 16.11/12

†† 1 19 Dec 16.10

WS SWINYARD

1 19 S

CORK/CORK

1 19 16.15

SWINYARD GUILDFORD

1 19 16.5

HARRINGTON HORSHAM

2 19

R CORNEY CROYDON

1 19 16.2

B. DUD?MAN PLUMSTEAD

1 19 16.1

GROUT/N St SW

1 19 15.1

EGHAM

THO HUNT	1	17 S	42.9
THO MASON			
	1	18 S	42.12
RR	2	17 S	41.6
FT	1	17 S	41.7
☺	1	18 S	42.13
IB	3	Dec	42.11
WB	1	18	
AC	1	A	43.7
TC TRAFALGAR			
	1	Dec	
JF	1	F	43.8
M	1	18	
MN	1	L	43.9
MP	1	F	43.1
JS	1	19	
JS	2	L	43.5
PS	1	18	42.6
RS	2	18	42.7
JW	1	19	43.10
WW	3	18/19	42.8
WW	2	F	
WW	1	L	43.6
☉☉	1	L	
* *	1	19	
U U	1	19	
♠♠	1	19 Dec-	
ETON NORWOOD			
	3	19	
BUR/OLDS 160			
	1	19	
CORK	1	19	
FR scratched		42.10	

EPSOM

L GEALE	72	18 S	
W PEMERTON			
	2	18 S	33.3
RC	1	L	
WC	2	18	33.5/7
LG	25	18	
R?G?	1	18	33.8
JH	3	L & Ac	
PS	2	18	33.9/10
RT	1	18	33.4
☉☉	1	18	33.2
☺☺	1	18	
J	1	18	33.6

EWELL

L GEALE	3	18 S	
TA	1	L	
/B	1	M	
GB	1	M	31.10
WB	2	M	
E?C	1	L	30.14
FC	1	19	
G?C	2	F	31.7
IC	17	F	31.5
IC	9	M	
∩C	1	Fx&G	
RC	30	18, L, Fx&G	
TC	1	19	
WC	1	F	
ID	1	19	
IF	1	18	
IF	7	F	
JF	9	F	
IF	26	F, L, M	
JF	1	19	
IG	7	F, T26	30.13
LG	20	18	
L?G?	2	18	
RG	4	T26	
RG	1	A	30.11
CH	1	L	
FH	1	L	
GH	1	L	
HH	9	L	
I?H	3	M	
JH	76	L	31.12/15
SH	1	19	
WH	1	L	
CI	1	18	
II	1	19	
IM	1	18	
IP	14	F, M	31.6
FR	2	L	
RR	1	L	
TR	1	18	
TR	1	L	
IS	2	F	
PS	27	18	30.12
RS	1	F	
WS	2	L	
GT	2	18	
GT	2	18	31.1
GT	15	18	
GT	17	F	31.2/3

EWELL (cont.)

RT	1	18
WT	140	M, L 31.11
JV	55	L 31.13/14
IW	1	18
TW	1	L
WW	1	F
/T	1	19
I/	1	F 31.4
H?/	1	19
I/	1	19
W?T?	2	19
/T	3	L
B/	1	18
♡♡	20	18
∅∅	7	L
..	8	L
☉☉	1	L
**	13	F, L
☉☉	1	19
☉☉	2	F
★★	3	F, L
☉☉	2	L?
☉☉	2	19
☉☉	2	19
☉☉	2	19
☉☉	1	L
☉☉	2	19
☉☉	2	L
BU/E	1	T30
BURNS CUTTY/BURNS CUTTY		
	1	19
J VINING KINGSTON		
	46	Dec e.g. 31.16
GROUT CLAPHAM		
	2	19
WILLIAMS KENT St LONDON		
	17	19
SWINYARD GUILDFORD		
	1	19
CORK/CORK2	2	19 32.4
H HENSH(ER)/St STEPNEY		
	1	19
ENSHAW WOODSIDE		
	1	19
J PITT RICHMOND		
	2	19
/SMOKE---/E---D CHUM/		
	1	19

EWELL (cont.)

T, AS?/TTY		
	1	19
/M?E?R?/NORT/		
	1	19
W?--/NDON		
	1	19
T COOMER/FULHAM		
	1	19
<u>FARNHAM</u>		
AC	1	Dec 3.1
ID	2	18 2.11
R & G	2	F&L 3.2/6
SG	1	F&L 3.3
☉☉	2	Dec
☉☉ F GOODALL GOSPORT		
	1	19 R 3.4
JONE?-S?/OOL		
	1	T30 F 3.5
C CROP LONDON		
	1	19
<u>GATTON</u>		
RC	1	19
J VINING KINGSTON		
	1	19
HARRINGTON HORSHAM		
	1	19
BURN/NG	1	19
149 C--LEEN/BAW		
	1	19
<u>GODALMING</u>		
WHEEL STAMP		
	1	17 S 10.3
SWINYARD 3		19 S
WILLIAMS LONDON		
	1	19 S
☉☉ HYDE GUILDFORD		
	1	19 S
IH HYDE GUILDFORD		
	2	19 S
L☉ L GEALE		
	1	18 S
RN	1	19 S
HB	1	late 18
☉☉	2	F

GODALMING (cont.)

IF	1	F
LG	22	18
L	2	18
LG?	1	18
WN	4	F 10.9
WN	6	T27 10.8
IP?	1	F
RR	1	19
PS	9	18
WS	3	L(2 stamped Swinyard)
WS	3	C
W?S	1	19
WS?	2	L
CW	20	18 e.g. 10.7
G S or C	1	19
L	2	18
W-	1	19
**	1	L
° °	3	L

J HYDE GUILDFORD

8 various 10.11/12

CS SWINYARD GUILDFORD
1 F&L 10.10

SKINNER STRAND

1 19

P POPE LONDON

1 19

C CROP LONDON

1 19

GUILDFORD

EN	2	17 S 6.6/7
L GEALE	2	18 S 6.9/14
LG L GEALE	1	18 S 6.8
WP	4	17 S 6.1-3/5
GV	1	17 S 7.1
WS SWINYARD	2	19 S 7.7
SWINYARD	3	19 S 7.9
HYDE GUILDFORD	1	19 S 7.8
SANTS BATH	1	19 S
SAVELL	1	19 S
JG GAMBIER A PARIS	1	19 S

GUILDFORD (cont.)R SMITHEMAN & Co BROSELEY 2
1 19 S

SOUTHORN & Co BROSELEY

	1	19 S
H?B	1	18
Σ B	many	F 8.1
θ Σ	many	F&L 8.4
WB	1	A 8.6
IC	1	19
RC	1	19
WC	1	18
IF	2	19
I?F	1	A 8.9
LG	14	18
TG	1	A? 8.5
J?H?	1	18
JH	2	L
CI	1	F&L 8.8
SL	1	L
CM	1	19
WN	2	19

G (O on H) 1 L&F 8.7

RP 14 18 7.6

R?P 1 18

WP 1 17 6.4

-P 1 19

CS 1 F

CS 1 C

JS 2 L

PS 5 18

WS 10 L

WS 6 Dec e.g. 9.8

WS 7 C 9.7

WS 1 F&L

Σ S 1 19

WT 1 19

CW 19 18 7.5

A C or G 2 Dec

I/ 1 18

J J 2 18 7.3

♡♡ 1 18

* * 1 19

° ° 2 19

Σ Σ 2 19

Σ Σ 1 19 F&L

* * 5 L

* * 3 18 7.4

.. .. 1 Dec

GUILDFORD (cont.)

∞ ∞	1	L
⊙ ⊙	1	L & Dec 8.12
* *	4	Dec 8.10
* *	1	Dec
⊙ ⊙	HYDE GUILDFORD	
	1	19 S
SWINYARD GUILDFORD		
	many	19 e.g. Fig.9
HYDE GUILDFORD		
	7	19
* *	WILLIAM S/RD SURRY	
	1	19 9.1
⊙ ⊙	PENINSULAR WATERLOO/ T LIFE GUARDS	
	1	19
⊙ ⊙	BADEN-POWELL C CROP	
	LONDON Rd No 359475	
	SIR G WHITE	
	1	20
NORWOOD ETON		
	1	19
GROUP & WILLIAMS CLIFTON St		
	1	19
GROUP CLAPHAM		
	1	19/20
S LEIGH CHICHESTER		
	1	19
KINGS OWN WIMBLEDON		
	1	19/20
C CROP LONDON		
	1	19
C PRIEST CANTON		
	1	19
BURNS C/CINS. LO/		
	1	19
E. SPAU/WALK SE		
	1	19
CS SWINYARD/GUILDFORD		
	1	F&L 9.2

HACKBRIDGE

∞ C	13	Fx&G
RC	3	Fx&G
RC	1	W
IG	1	T26
I RUTTER & Co MITCHAM/ MITCHAM SHAG		
	1	19/20

HEADLEY

I RUTTER & Co MITCHAM/ MITCHAM SHAG		
	1	19/20

HORLEY

WB	1	T26 28.10
IC	1	18 28.7
WF	1	18 28.9
LG	1	18
C or G S	1	L 28.12
GT	4	18
GT	2	18
GT	1	F 28.11
W-	1	18
♥♥	5	18

HORSHAM

RW	2	17 12.1/3
IC	1	17/18 12.4
EN	1	17/18 12.2
J- HARRINGTON BRIGHTON		
	1	19 S
IC	3	18 12.7
I?H?	1	19
GM	1	L 12.9
WS	4	L 12.10/11
WS	1	F&L 12.12
⊙ ⊙	2	18 12.8
⊙ ⊙	1	19
BI CENTENARY PIPE		
	ORIGINAL 1715	REVIVED 1915
	1	20
C CROP LONDON		
	1	19
HARRINGTON HORSHAM		
	1	19
HARRINGTON BRIGHTON		
	1	19

IVER (BUCKS)

HYDE * GUILDFORD		
	1	19
Vining KINGSTON		
	1	19
I RUTTER & Co MITCHAM MITCHAM SHAG		
	1	20

KENLEY

RC	1	19
⊗⊗	2	19
94/IAMS	1	19

KINGSTON

EB	several	17 S	43.11/13
Webb	1	18 S	44.5
/wster	1	19 S	
IA	1	A	44.6
TA	1	L	
TB	1	L	
IC	1	M	
IC	1	F&swags	
RC	14	18	44.7-9
RC	2	A	44.1/3
-C	1	18	
-C	1	L	
IF	1	F	
IF	1	19	
I?G?	1	18	
JH	1	L	
JH	1	19	
JH	1	Dec	
-H	1	18	
-I	1	18	
RN?	1	18	
IP	1	19	
IP	2	F	
IP	2	T27	
IR	1	18	
HS	1	18	
IS	1	T27	
RS	1	18	
-S	1	18	
GT	1	F	
IT	1	18	
I?T?	1	18	
RT	2	18	
JV	1	T31	44.11
R-	2	18	
⊙⊙	1	L	
⊕⊕	2	18	(different)
⊗⊗	1	19	
* *	1	19	
⊕⊕	1	18	
+ +	1	18	
* *	2	F&L Pitt Richmond	

KINGSTON (cont.)

BURNS CUTTY/BURNS CUTTY	1	19
J VINING KINGSTON	6	various
I. VI/STON	1	19
INCOMPARABL(E)/(IN)COMPARABLE	1	19
I RUTTER & Co/MITCHAM SHAG	1	19/20

LANGLEY (BUCKS)

I RUTTER & Co MITCHAM		
MITCHAM SHAG	1	20

LEATHERHEAD

EN	1	17 S
LG	1	18
GT	1	F
J VINING KINGSTON	1	19

LEIGH

⊕	1	17 S	18.14
W SOUTHORN & Co BROSELEY 9	1	19 S	18.9
SM	1	Dec	18.12
⊕ ⊕	4	F	

LEITH HILL

J HYDE * GUILDFORD	1	19
WS	1	L
* *	1	Dec
SWINYARD GUILDFORD	3	19

MERROW

CW	1	18
SWINYARD GUILDFORD	1	19

MERSTHAM

GT	1	F
----	---	---

MICKLEHAM

GT	1	F
<u>MITCHAM</u>		
IC	1	17 S 30.1
IA	1	A
-B	1	18
IC	5	Dec
I?C	1	F
IC?	1	F
IC?	1	19
RC	1	Fx&G
RC	4	F&D 30.9
RC	1	L
WC	1	T26
WC	1	F 30.8
IF	1	F
IG	9	T25/26 30.4-6
RG	3	18
R?G	1	A
RG?	1	19
S?G	1	T26
TG	2	18/19
-G	1	18
SH	1	T26
-H	1	F&L
WR	4	18
PW	1	Dec
RW	1	18
◆◆ P./ON	1	19
◆◆	1	19

NEWDIGATE

CB	7	L 11.3
GB	1	M
WB	1	T27 11.23
FC	5	F&L 11.17/21
IC	3	18 11.22
RC	2	L
WC	1	T26 11.20
WC	1	F 11.11
JF	1	T27
LG	2	18
JH	2	T 11.18
WH?	1	L
WI?	1	18
IP	3	'F' 11.4
CS	1	C 11.8

NEWDIGATE (Cont.)

WS	1	L
WS?	1	L
-S	1	Dec
-S	1	L & Dec
-S	1	L
TT	3	L 11.6
T?T	1	19
WT	1	Fx&G 11.15
WT?	1	Fx&G
-T	2	F 11.5
CW	2	18
C?W	1	18
CW?	1	18
C?-	1	18
W-	1	L
W3	1	T27 11.19
* -	1	Dec 11.16
◆◆	6	19 11.10
◆◆	2	19
○	3	19
◎◎	5	19 11.7
∩∩	1	L
∩∩	2	19
∩∩	1	L & Ac
♡♡	1	18
♡♡	2	18
DERRY/DERRY		
	1	19
HOW?/ETH		
	1	19 11.14
BURNS CUTTY/BURNS CUTTY		
	2	19
WILLIAM SWINYARD HORSHAM		
	5	19
WILLIA/STREET		
	1	F 11.9
CORK CORK		
	2	19
HARRINGTON HORSHAM		
	4	19
SWINYARD GUILDFORD		
	2	19 11.13
?/USSEX	1	19 11.12
<u>NONSUCH</u>		
STAR STAMP		
	2	17 S 38.15/16

NONSUCH (cont.)

GAUNTLET STAMP

3 17 S 38.19

CROSSBOW STAMP

1 17 S 38.18

WK 1 17 S 38.17

RC 1 19

JF 1 19

GT 1 F

RT 1 18

WT 1 L

☞☞ 1 18

♥♥ 1 18

OATLANDS

FLEUR DE LIS STAMP

1 17 S 34.9

STAR STAMP

2 17 S 34.2

IR 4 17 S 35.2/10/12

ESX 1 17 S 35.3

CROSS 1 17 S 35.11

GAUNTLET 2 17 S 35.8

EN 23 17 S 37.10

L GEALE 1 18 S

DUTCH STAMP

1 18 S 37.11

WK 1 17 S 35.7

FOILET 1 19 S

TB 1 19 38.7

IC several F & Dec 38.8/9

PC 1 19

IF 1 19

SH 1 18 37.9

TL 1 L 38.6

MP 1 F 38.12

RP 1 18 37.6

CS 1 18 37.4

IS 1 18 37.12

BT 1 18 37.16

CW several 18 37.7/8

IW 2 18 37.13/14

WW 1 L 38.3

♥♥ 17 18

☞☞ 1 18 37.15

☞☞ 1 19 38.4

☞☞ 1 L 38.13

☞☞ 1 19 38.1

J VINING KINGSTON

2 19 38.2/5

OXTED

W SANDY/ARTFORD

1 19

PEASLAKE

C. CROP/LONDON

1 19

REDHILL

LF 1 19 S

GS 1 L?

REIGATE

WINDMILL STAMP

1 17 S 23.6

☞ 1 17 S 23.1

IP 1 17 S 19.15

WHEEL STAMP

1 17 S 19.9

% 1 17 S 20.13

L GEALE 4 17/18 S eg. 22.4

FORD/STEPNEY

1 19 S 25.10

GB 1 M

WB 3 T26 23.11

RC 25 many 26.14-16 & Fig. 27

WC 2 18 23.15/16

ID 1 19 26.2

WF or P 1 18 23.8

LG 2 18 22.5

LG 22 18 22.6-10/12/13

75 1 18

G 1 18 22.14

WG 1 18 23.13

WG? 2 18 23.12

G?B/H? 1 L 25.8

JH 1 -

T or IJ 2 19 26.7/8

I 1 18

T?G or O 1 Dec 23.7

CS 1 L & Ac 26.6

P?S 1 18

W?S? 1 18 23.17

☞☞ 8 18 24.8

☞☞ 1 18 24.7

GT 4 18 24.10

GT 6 F 24.9/11, 25.1

-t 1 F?

REIGATE (cont.)

RW	1	18	23.14
I?-	3	18	22.11
BL	1	18	23.9
☞☞	1	F	25.4
♥♥	30	18	24.1/3-6
☉☉	1	19	25.12
♥♥	1	18	24.2
††	1	19	
☞☞	1	L	25.7
☉☉	10	F or L	e.g. 25.2
◦◦	1	19	
★★	1	F & L	
☉☉	2	L	26.4

J. VINING/KINGSTON

	2	19	
--	---	----	--

A. MERRY, CHRISTMAS. /&. A.HAPPY, NEW, YEAR

	1	W	26.1
--	---	---	------

/ICTORIA CUTTY

	1	19	
--	---	----	--

MITRE, TAVERN/TEMPLE

	1	19	
--	---	----	--

SHACKLEFORD

CS	1	C	
	1	C	

SHAMLEY GREEN

CW	1	18	
----	---	----	--

SHERE

WC	1	18	
----	---	----	--

CW	1	18	
----	---	----	--

KINGS OWN/WIMBLEDON

	1	R	
--	---	---	--

SWINYARD	1	19	
----------	---	----	--

SOUTH GODSTONE

/N_TER/	1	19 S	
---------	---	------	--

IB	1	L	
----	---	---	--

IC	1	18	29.5
----	---	----	------

RC	6	L	
----	---	---	--

RC	3	Fx&G	29.8
----	---	------	------

RC	1	F	
----	---	---	--

WC	2	18	29.4
----	---	----	------

/C	1	18	
----	---	----	--

SOUTH GODSTONE (cont.)

LG	2	18	
----	---	----	--

G or CH	7	L	
---------	---	---	--

JH	4	L	
----	---	---	--

JH	1	T	
----	---	---	--

SH	1	19	
----	---	----	--

WH	1	L	
----	---	---	--

T?P?	1	19	
------	---	----	--

GT	1	18	
----	---	----	--

G/	1	F	
----	---	---	--

☉☉	1	19	
----	---	----	--

◦◦	1	19	
----	---	----	--

***	3	19	
-----	---	----	--

☉☉	1	19	
----	---	----	--

***	8	L	
-----	---	---	--

◦◦	1	L	
----	---	---	--

☞☞	1	L	
----	---	---	--

☞☞	1	L	
----	---	---	--

CORNEY/CROYDON

	1	19	
--	---	----	--

G. BRI/RNES

	1	19	
--	---	----	--

J VINING/KINGSTON

	2	19	
--	---	----	--

CORK/CORK

	3	19	
--	---	----	--

W./	1	19	
-----	---	----	--

BURNS CUTTY/BURNS CUTTY

	1	19	
--	---	----	--

H./ORD	1	19	
--------	---	----	--

IBITIO/BITION

	1	19	
--	---	----	--

BU/PE	1	19	
-------	---	----	--

STAINES

IA	1	17 S	45.6
----	---	------	------

RR	1	17 S	45.5
----	---	------	------

☞	1	17 S	45.2
---	---	------	------

GAUNTLET	1	17 S	45.1
----------	---	------	------

STAINES	1	18 S	
---------	---	------	--

M STAINES	1	18 S	45.15
-----------	---	------	-------

WB	1	18	
----	---	----	--

-B	1	18	
----	---	----	--

IC	1	19	
----	---	----	--

IC	1	L	
----	---	---	--

M?C	1	F	
-----	---	---	--

IE	1	18	
----	---	----	--

IF	1	F	
----	---	---	--

STAINES (cont.)

JF	1	F
MG?	1	18/19
MH	4	A 46.6
-L	1	18/19
M	1	18
IN	1	F
IN	3	F&L
NN	1	L
RN	1	L
WN	2	F
WN	1	F&L
GH	1	F&L (O cut over H)WN?
RP	4	18 46.1-4
R?P?	1	18
RP	2	F&D
RR or P	1	F&D 46.9
TR	2	late 18 46.5
RS	4	18
R?S	1	18
RS	1	L
RS	1	F 46.12
-S?	1	late 18
-S	1	Dec
CW	1	18
IW?	1	18
WW	2	19 46.7
WW	1	F&D 46.8
⊗ ⊗	1	L
⊗ ⊗	3	18 46.10
⊗ ⊗	1	L
⊗ ⊗	1	18

WS WILLIAM SWINYARD QUARRY
STREET

	1	L
NORWOOD ETON		
	3 different	46.13
BURNS CUTTY BURNS CUTTY		
	1	19

WEYBRIDGE

WL	1	17 S 39.13
⊗	1	17 S 40.3
GAMBIER	1	19 S
IB	1	17/18 39.11
HB	1	Fx&G 40.7
M?B	1	late 18
WB	1	19

WEYBRIDGE (cont.)

GC or G	1	F
IC	3	F
RC	1	A
TC	1	F&L
IF	2	19
IF	2	F
IF	1	F, L & stars
C?G?	1	19
L?G?	2	18
IH	1	17/18 39.12
WH	1	18 40.10
HWN?	1	19
MP	1	T27
WR	1	18
IS	1	F
RS	1	18
RS	1	F & swags
BT	1	18
WT	1	19
JV	1	L
CW	11	18 40.8
F?W	1	18
WW	2	19
-W	3	18
C-	2	18
W-	1	18
W-	1	19

WF J VINING KINGSTON

	1	19 40.14
--	---	----------

TT F or J TAYLOR 45 HOL/
E SHOREDITCH

	1	19 40.6
--	---	---------

⊗/CORK 2 19

BURNS CUTTY BURNS CUTTY

	2	19
--	---	----

C VINING KINGSTON

	2	T30
--	---	-----

⊗ J VINING KINGSTON

	2	19
--	---	----

J VINING KINGSTON

	6	19
--	---	----

HEA/UTTY1 19

⊗ J SMITH/⊗

	1	19
--	---	----

F GOODALL GOSPORT

	1	R
--	---	---

NORWOOD ETON

	1	19 40.11
--	---	----------

WEYBRIDGE (cont.)

* *	3	L
♡ ♡	1	18 40.5
♠ ♠	1	F&L
♣ ♣	1	19
⊙ ⊙	1	19
* *	3	19
* *	1	Dec
JS scratched		39.6

APPENDIX 2

PROVISIONAL LIST OF SURREY PIPE-MAKERS

This is a list of Surrey Pipe-makers from the present County only. It is far from complete but remedies the sad state of affairs when in 1975 the National List (Oswald p. 130-207) split Surrey between London, Hampshire and Sussex. This list is largely based on the work of Miss E. Dance done when she was Curator of the Guildford Museum which has for so long proved invaluable to those interested in the study of Surrey pipes. Additional references have been added from the National List and private individuals amongst whom I must especially thank Mr. D. Barker, Mr. R. Kingsford-Curram and for research on the Thorntons Miss E. D. Mercer.

Other important lists relevant to Surrey are given by Drewett (1974, p. 11) for the Croydon makers and Atkinson (1977, p. 9-17) for Sussex makers. The abbreviations used here are as follows:

B - Born	F - Took his freedom
D - Died	fl - working
App - Apprentice	* - Possible pipemaker

WA	ARROW William	Married 1726, fl 1753, D 1784	GUILDFORD
HB	BAKER Henry I	B 1723?, App 1735, F 1747, fl 1782	GUILDFORD
HB	BAKER Henry II	F 1795	GUILDFORD*
MB	BAKER Moses	App 1751, F 1762, D 1794	GUILDFORD
FC	COATES Francis	App 1768	GUILDFORD
JC	CROWDER John	App 1790, fl 1835	GUILDFORD
JD	DENYER John	App 1717, fl 1745	FARNHAM
TD	DURRANT Thomas	App 1712	GUILDFORD
WF	FORD William	c. 1715-20	GUILDFORD
AG	GEORGE Anthony	fl 1717, D 1734	FARNHAM
JG	GOODYEAR John	fl 1717, Mayor 1718, 1728	GUILDFORD
TG	GARRARD Thomas	App 1712, F 1727	GUILDFORD
TG	GLAZIER Thomas	fl 1827	GUILDFORD
LG	GEALE Lawrence	B 1671 App 1689 F 1700 fl 1730 D 1731	GUILDFORD
JH	HAINES John	D of Son 1704/5, D 1740	GUILDFORD
JH	HYDE John	fl 1859-93	GUILDFORD
TH	HYDE Thomas	fl 1862	GUILDFORD
JK	KEEN John	App 1731, F 1738, fl 1749	GUILDFORD
TL	LAMBERT Thomas	fl 1668	CHIDDINGFOLD*
WL	LOVELAND William	fl 1704, D 1731	GUILDFORD
HM	MILLS Henry	F 1716, D 1726	GUILDFORD
JM	MUSGRAVE John	App 1770	GUILDFORD
EN	NEAVE Edward	fl 1676, F 1700, D 1718	GUILDFORD
EP	PRICE Edward	App 1717	GUILDFORD

RP	PRICE Richard	F 1700, fl 1740, D 1716	GUILDFORD
WP	PEMERTON William	D of son 1678, D 1697	GUILDFORD*
WP	PEMERTON W	<u>c.</u> 1710 (pipes)	GUILDFORD?
TR	ROBERTS Thomas	F 1700	GUILDFORD
RR	RUTLAND Richard	F 1706	GUILDFORD
CS	SWINYARD C	<u>c.</u> 1810-20 (pipe)	GUILDFORD
JS	STONER John	App 1677, F 1688	GUILDFORD
JS	SWINYARD James	fl 1839, fl 1851	GUILDFORD
PS	STREET Philip	B 1693, fl 1721, D 1749	GUILDFORD
RS	SANDS Richard	App 1721 (in London)	?
WS	SWINYARD William	B 1790, fl 1815-58, D 1864	GUILDFORD
WS	SURNAY William	<u>c.</u> 1850	GUILDFORD
GT	THORNTON George I	App 1731, D 1768	DORKING
GT	THORNTON George II	fl 1762-1823	DORKING
HT	TYLER Henry	fl 1856	GUILDFORD
JT	THETCHER John	App 1759	GUILDFORD
WT	TURNER William	App 1749	GUILDFORD
CW	WATTLETON Charles	fl 1699, D 1755	GUILDFORD

APPENDIX 3

ILLUSTRATIONS

Fig. 1 is a location map of the places mentioned in the text most of which have also produced pipes. It gives an impression of the large areas which remain unexplored. The rest of the illustrations are drawings of pipes taken from every place where a sizeable collection has been made. They are arranged in a roughly anti-clockwise rotation of Surrey starting at Farnham as this keeps adjacent groups together. The drawings show any pipe which is particularly common in that area, the predominant makers' marks and all the interesting decorated or stamped pipes. Each group is discussed briefly in the text but all are intended to be used for regional studies and research. The list of makers' marks (Appendix 1) gives the figure number for all the marked pipes drawn. With the exception of the 34.9 detail all the pipes are drawn at 1:1.

Fig. 49 shows the stem lengths of various Surrey pipes measured in mm (from the back of the spur). The Epsom pit group of c. 1710 is shown in the first column and other pipes of various dates in the second (see p. 223). Although few are comparable it is worth noting the similar length of the eighteenth century pipes with moulded marks (i. e. the GT, LG and crowned sun pipes). The symbols used in the diagram are as follows:-

- 19 - Atkinson & Oswald type number.
- 18c - Date by century.
- Blank square - Unmarked type 25.
- LG - Moulded mark.
- 1-3 - Geale stamp types (p. 202).
- Diagonal bar - 6.14 Bowl types.
- + - Crowned sun mark.

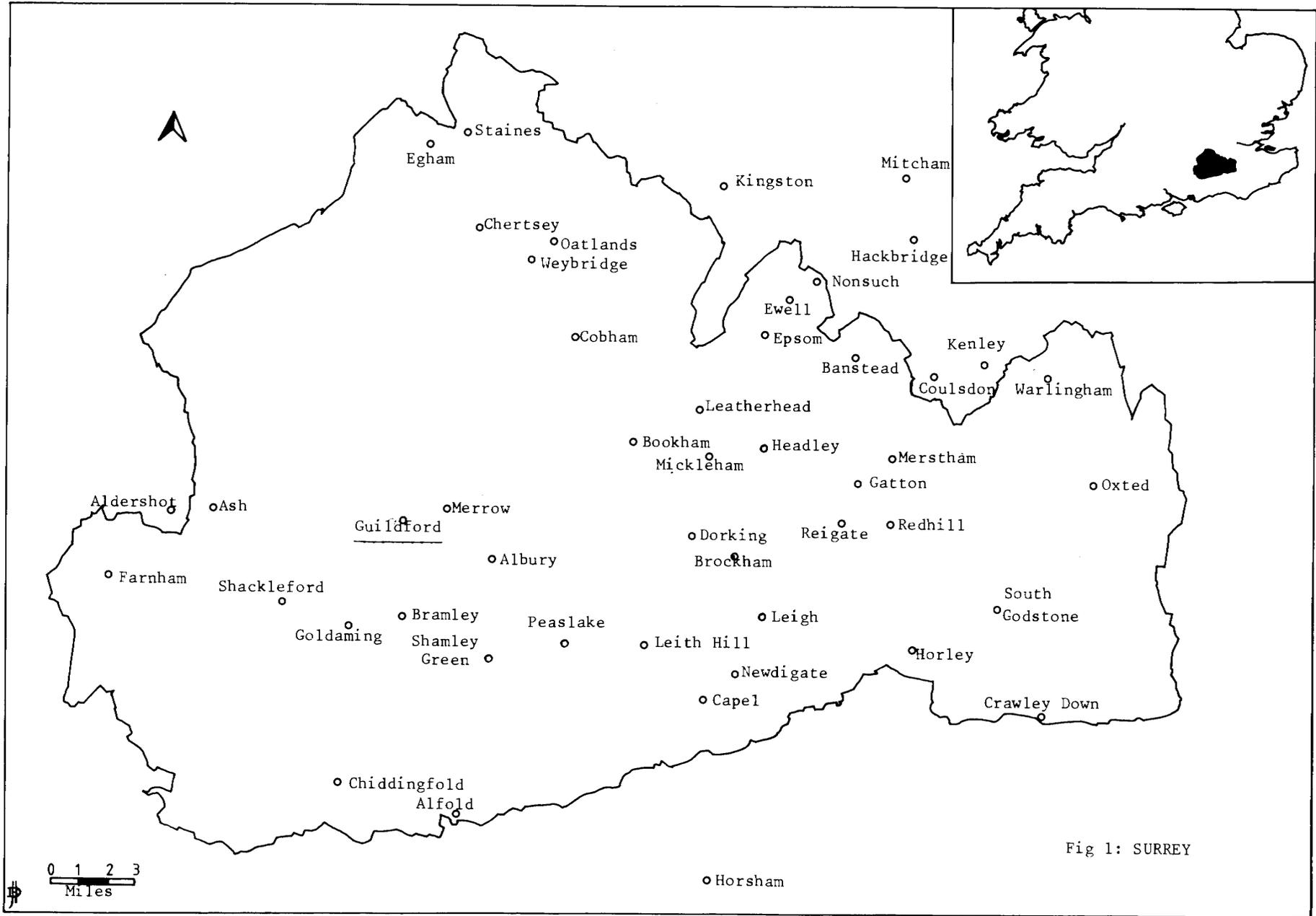


Fig 1: SURREY

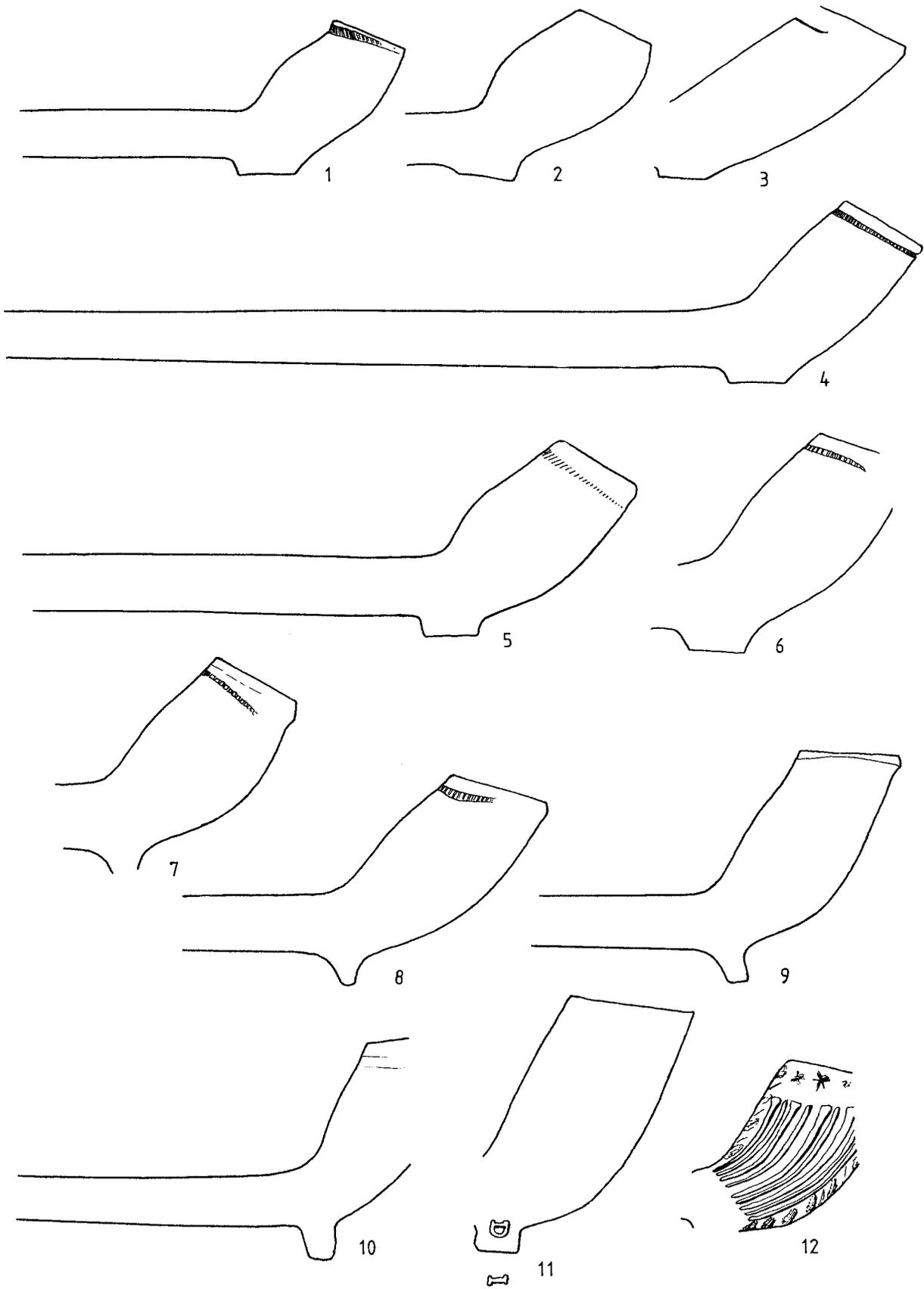


Fig. 2 FARNHAM

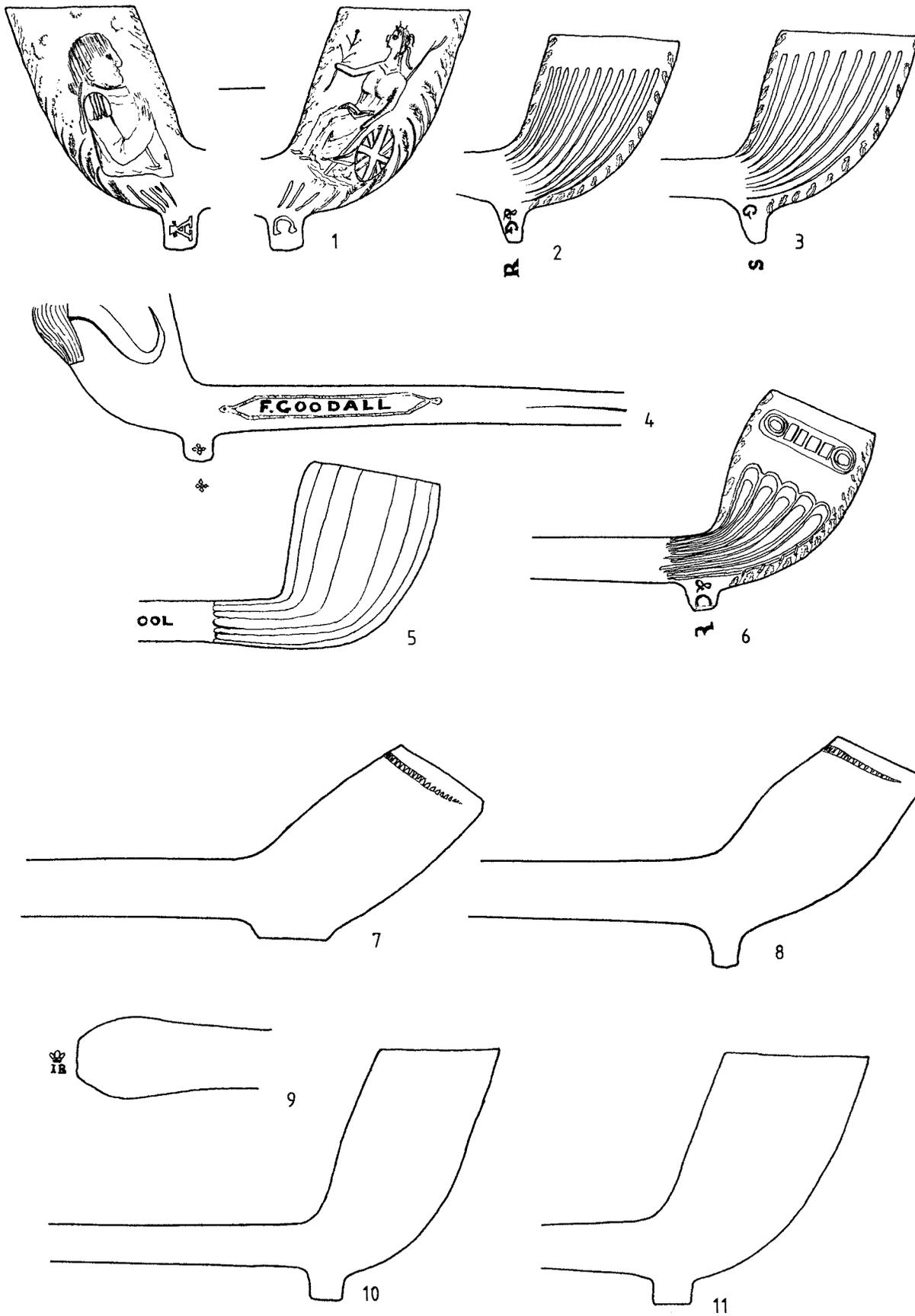


Fig. 3 FARNHAM 1 - 6 GUILDFORD 7 - 11

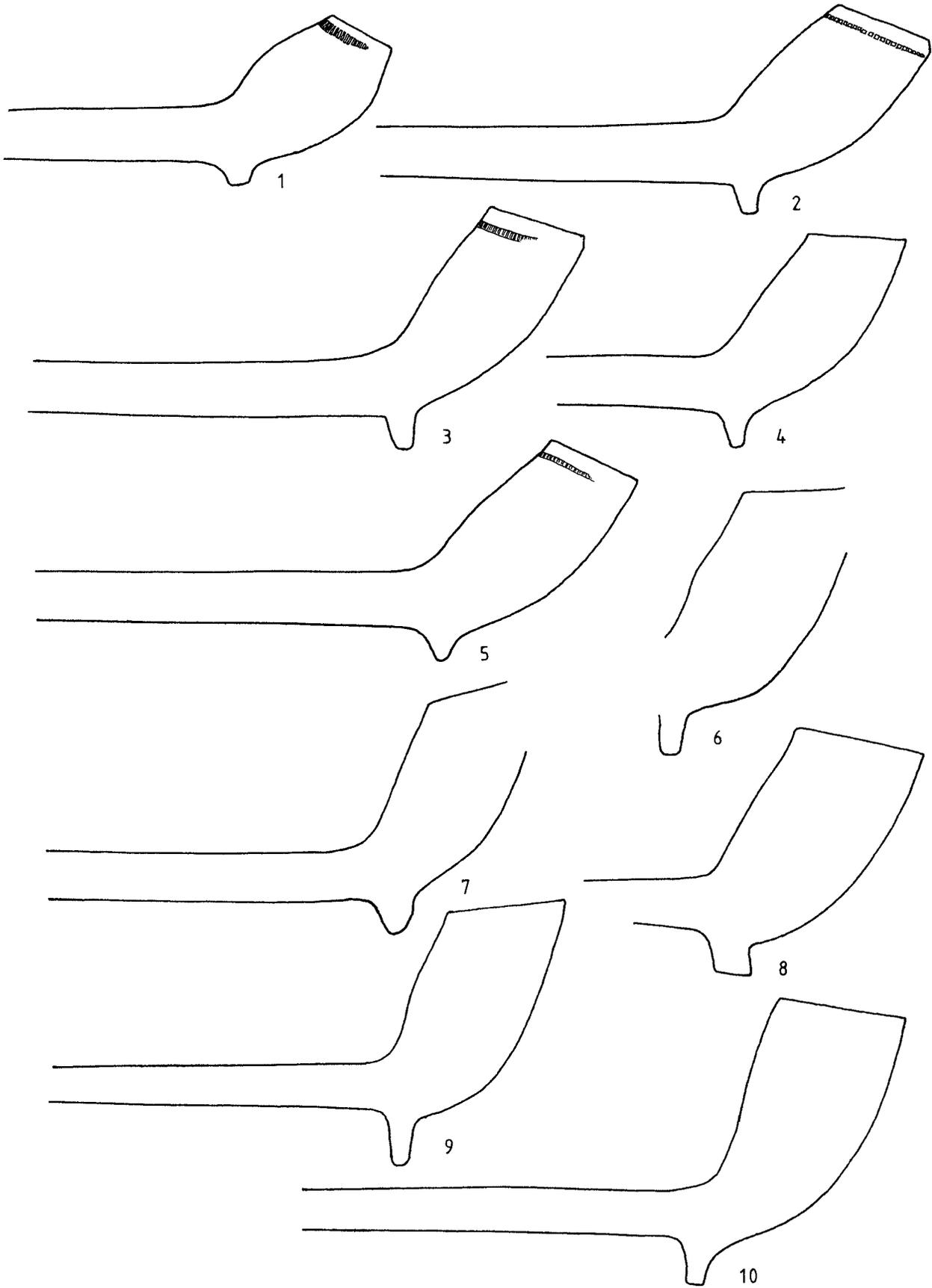


Fig. 4 GUILDFORD

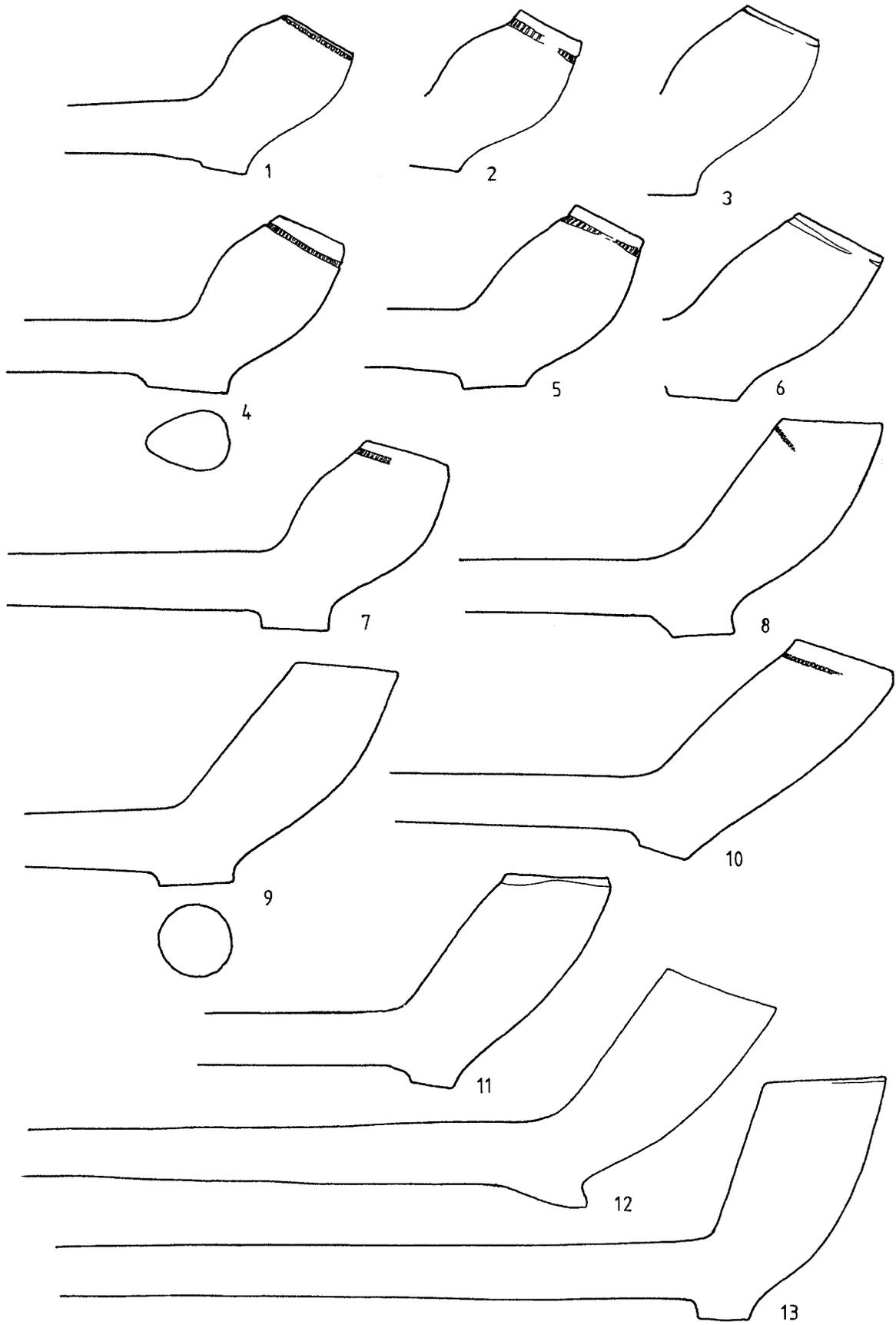


Fig. 5 GUILDFORD

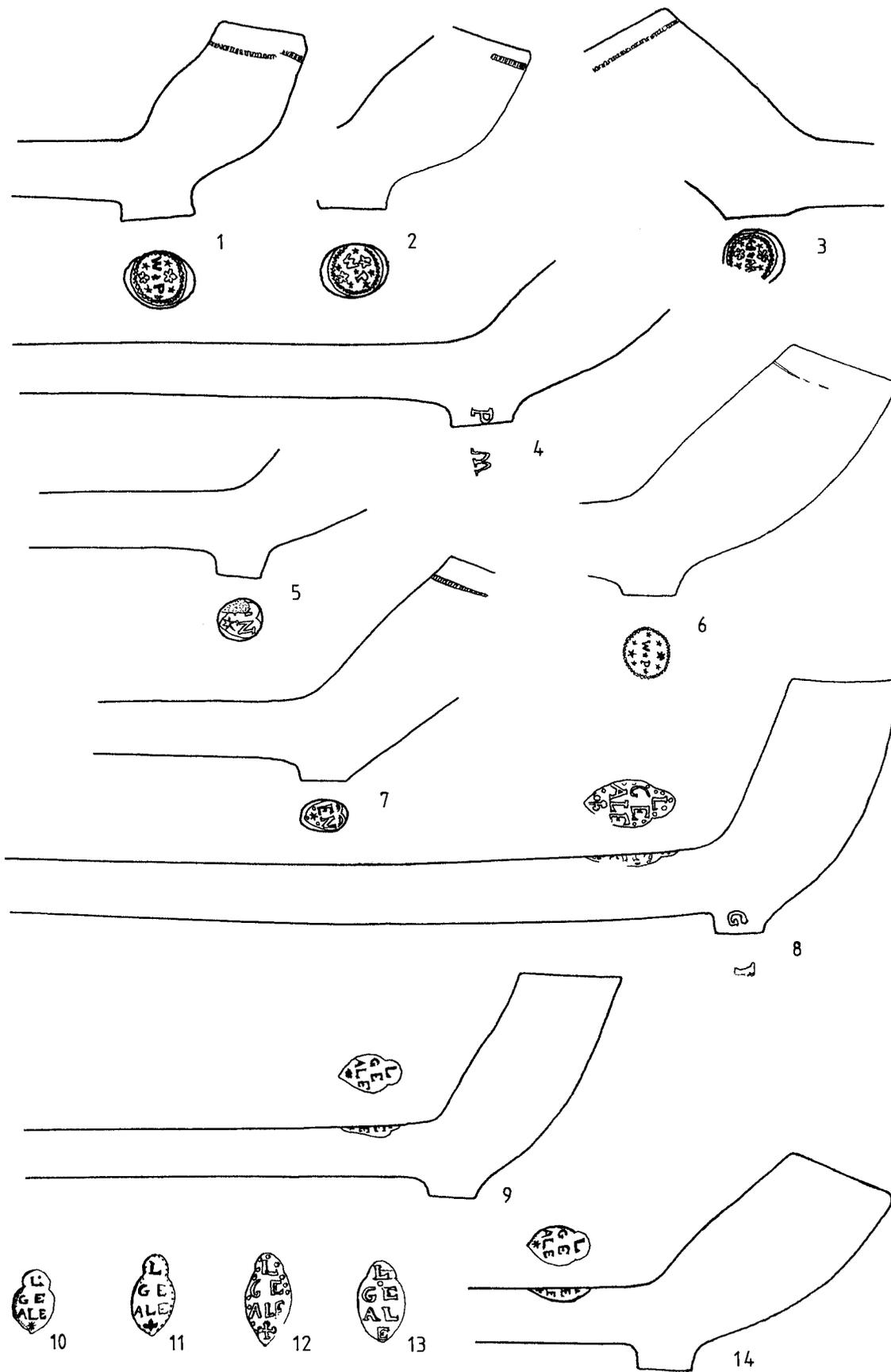


Fig. 6 GUILDFORD

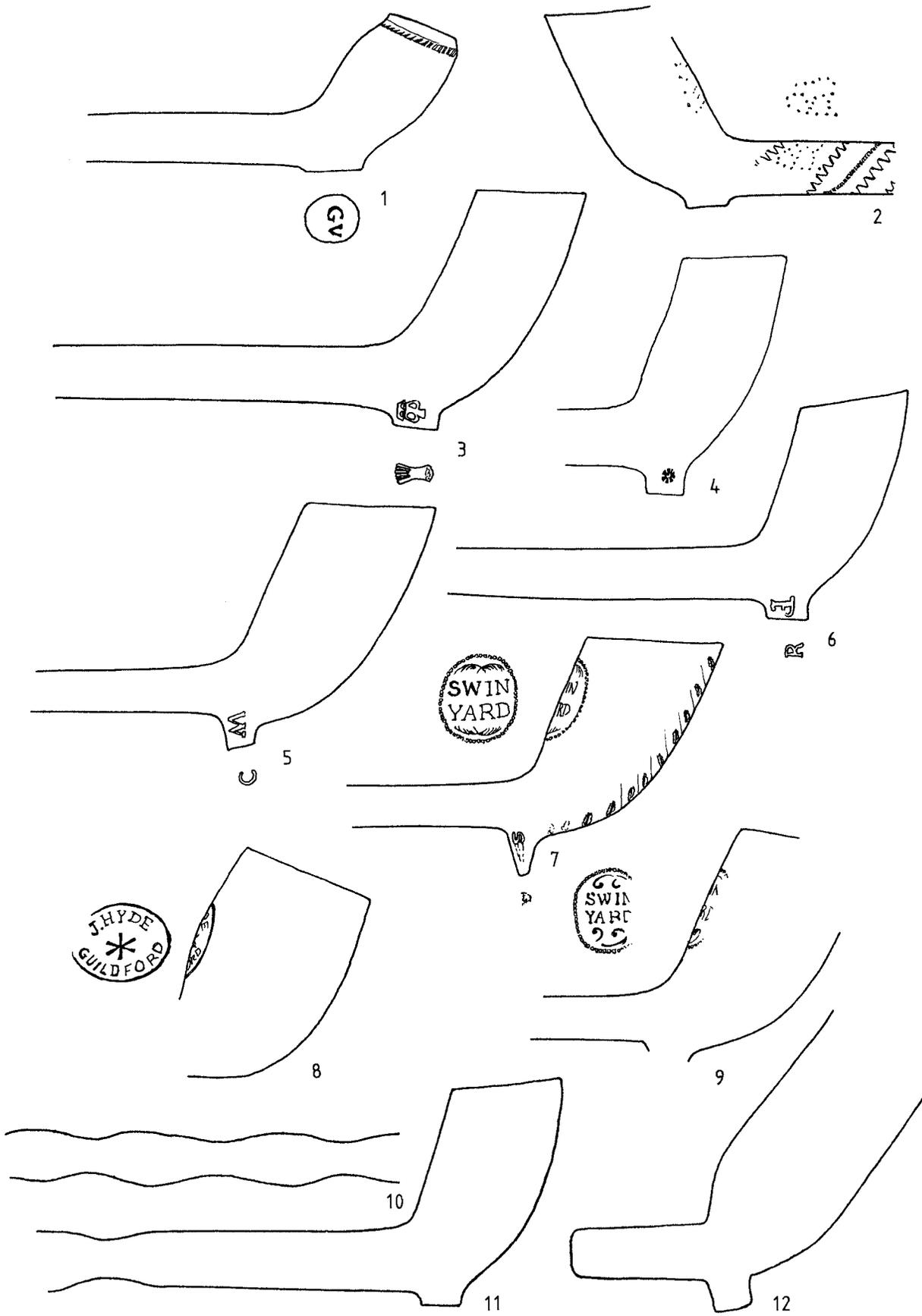


Fig. 7 GUILDFORD

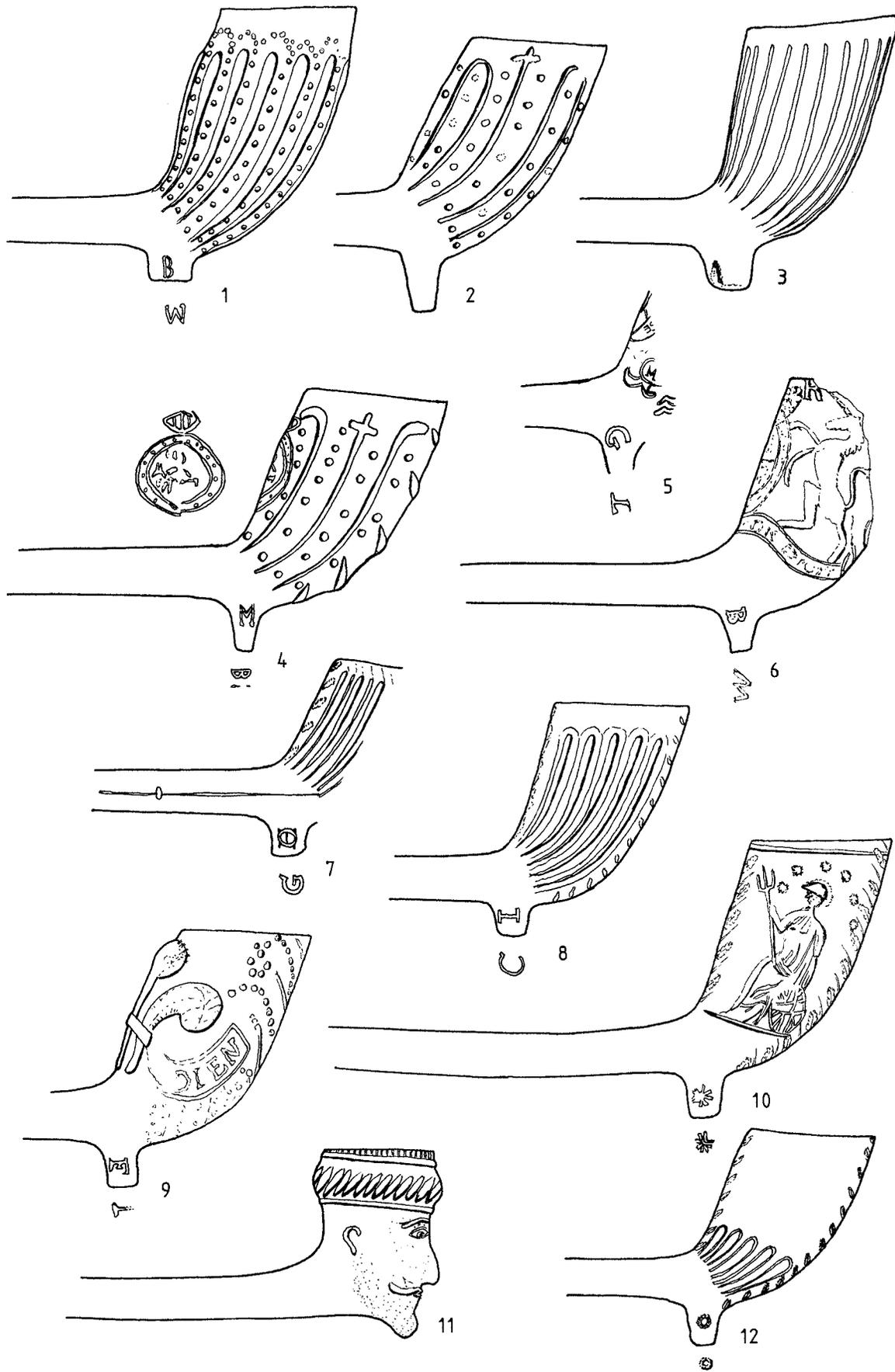


Fig. 8 GUILDFORD

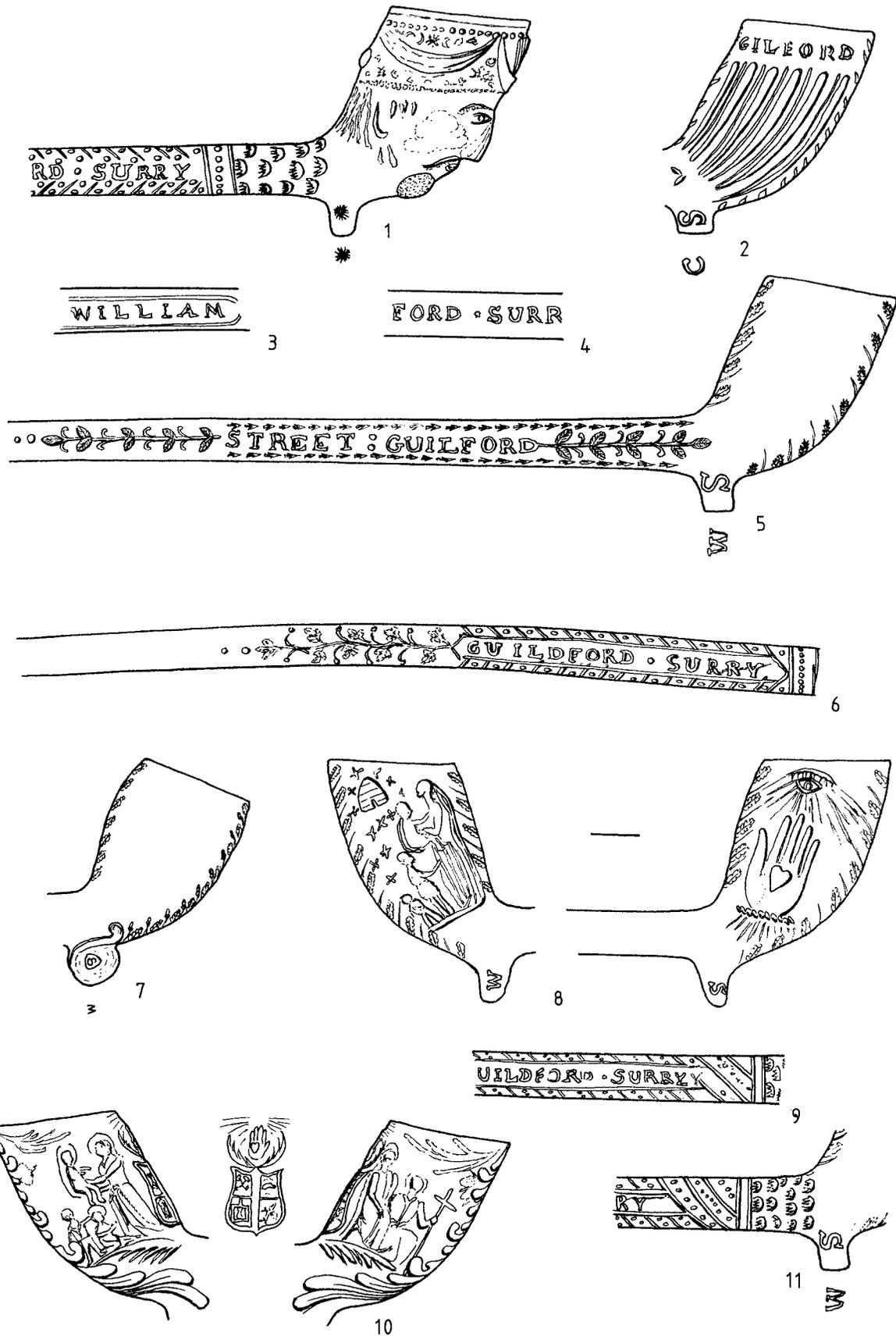


Fig. 9 GUILDFORD

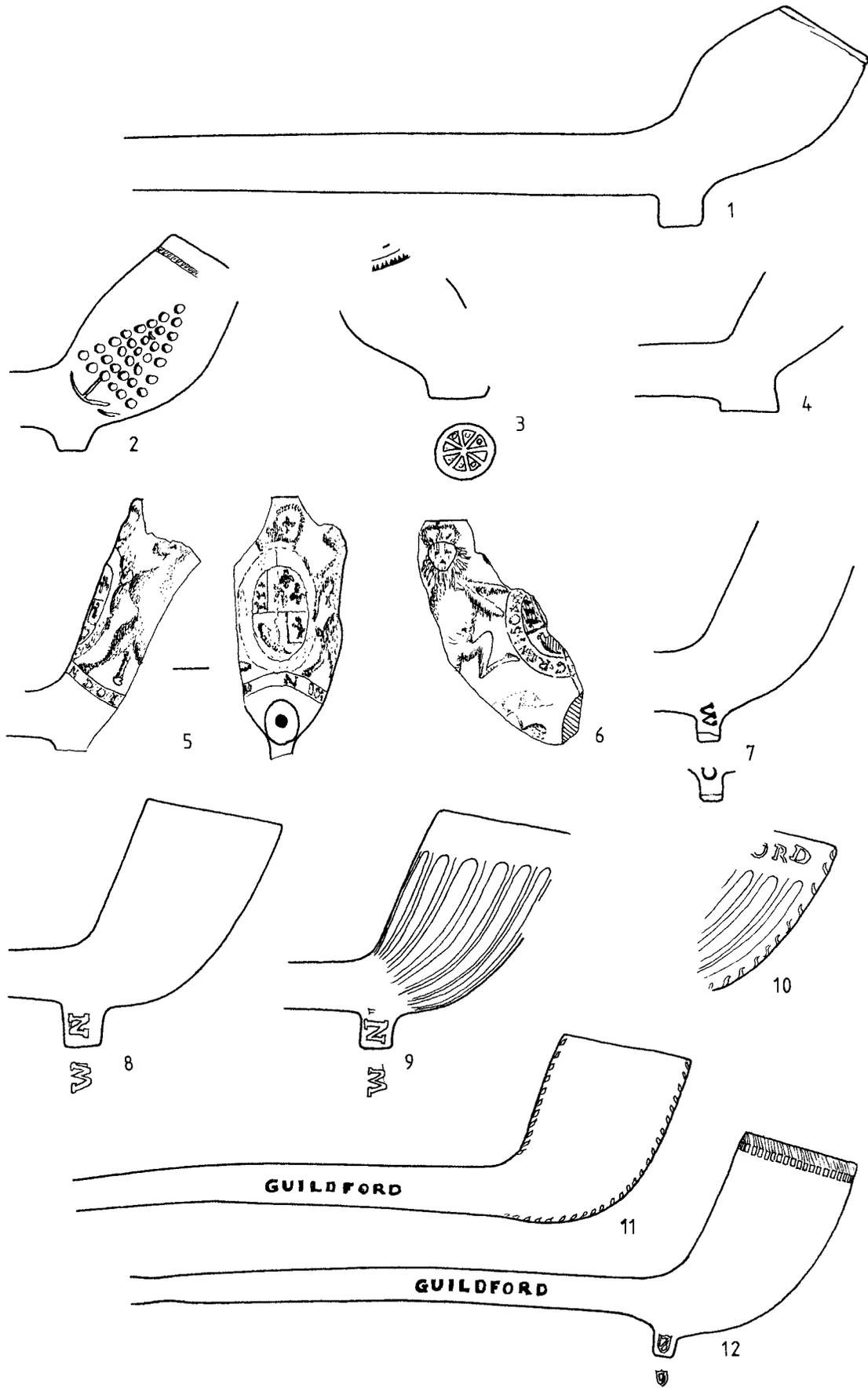


Fig. 10 GODALMING

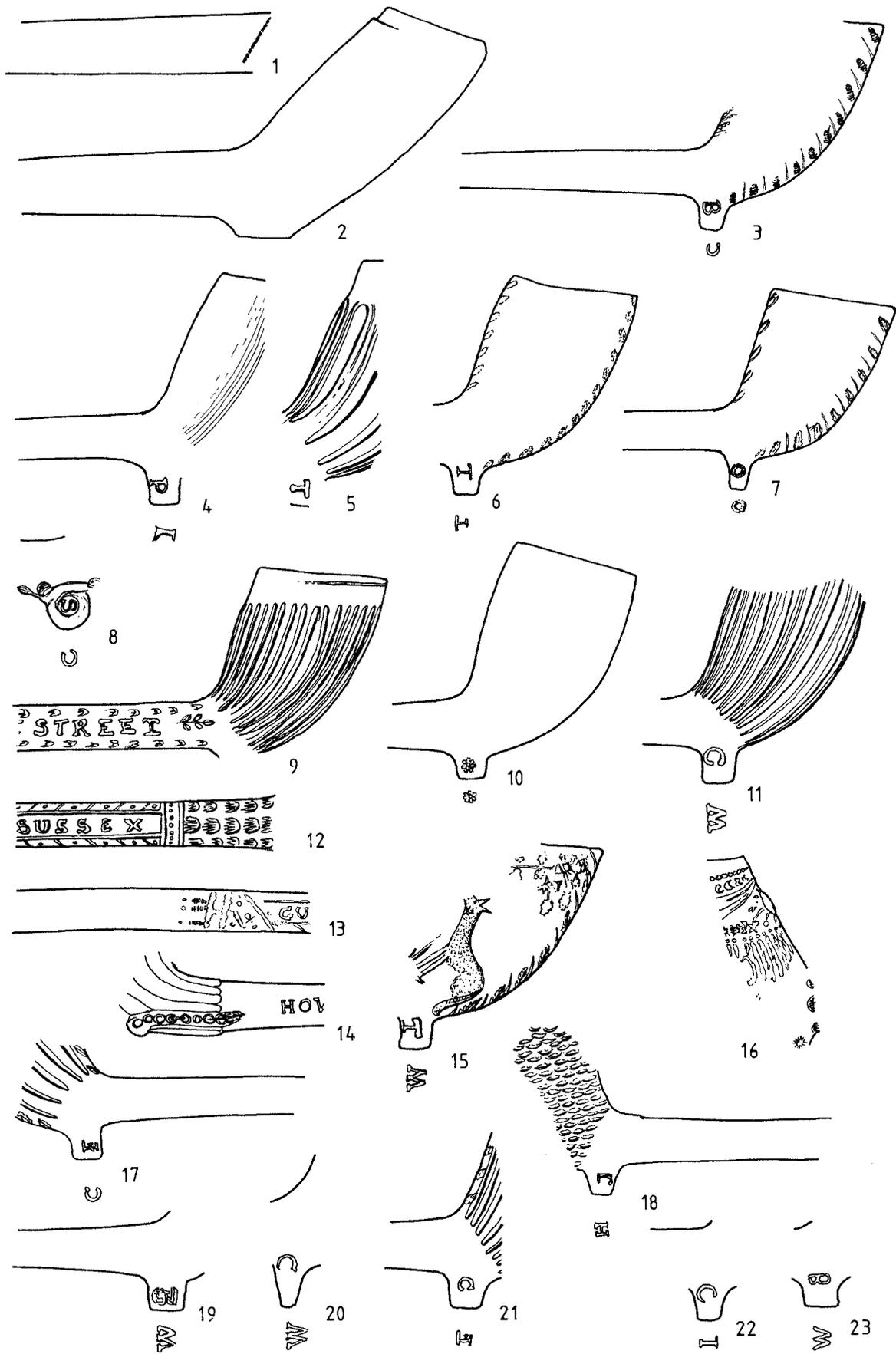


Fig. 11 NEWDIGATE

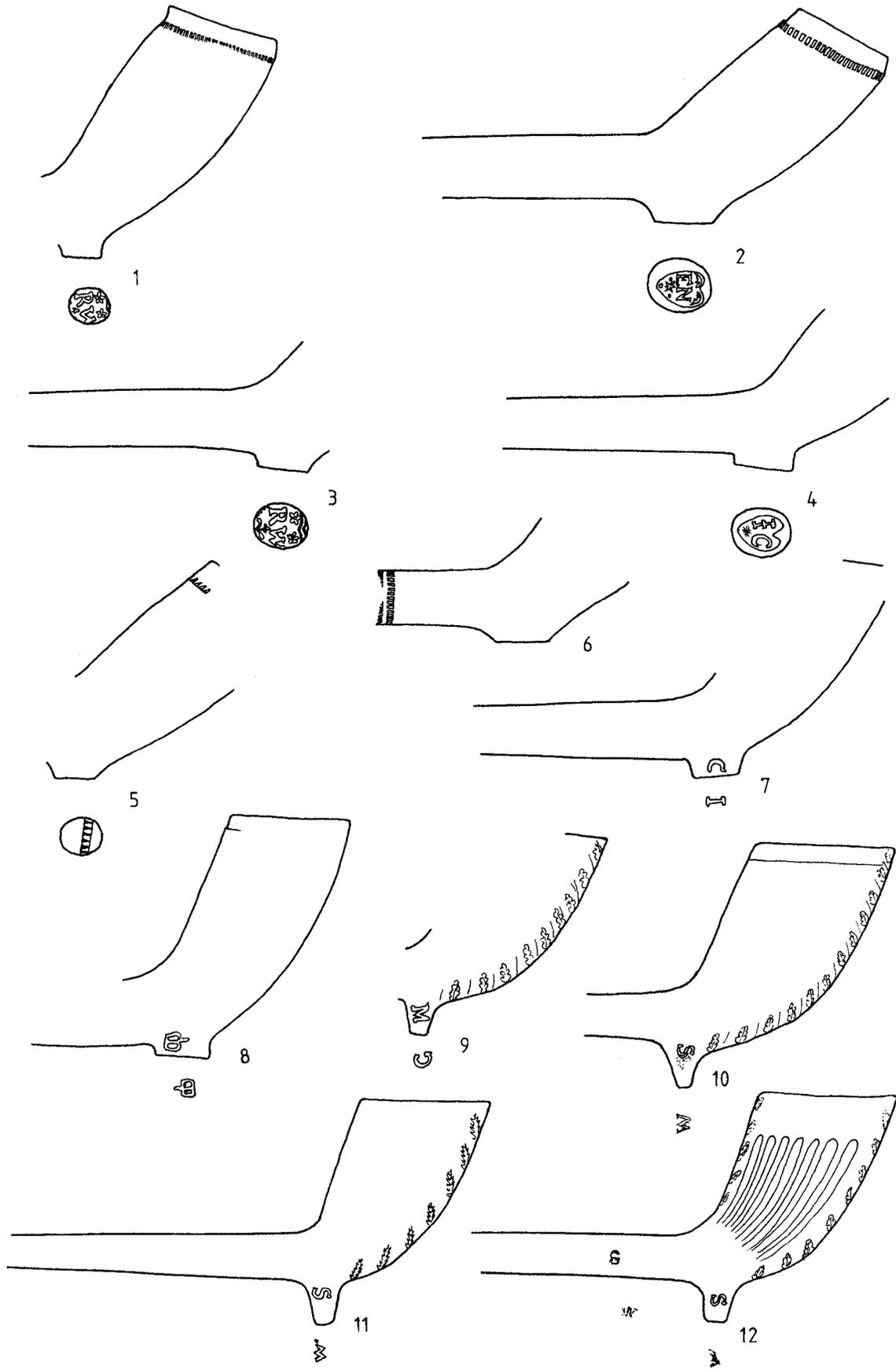


Fig. 12 HORSHAM

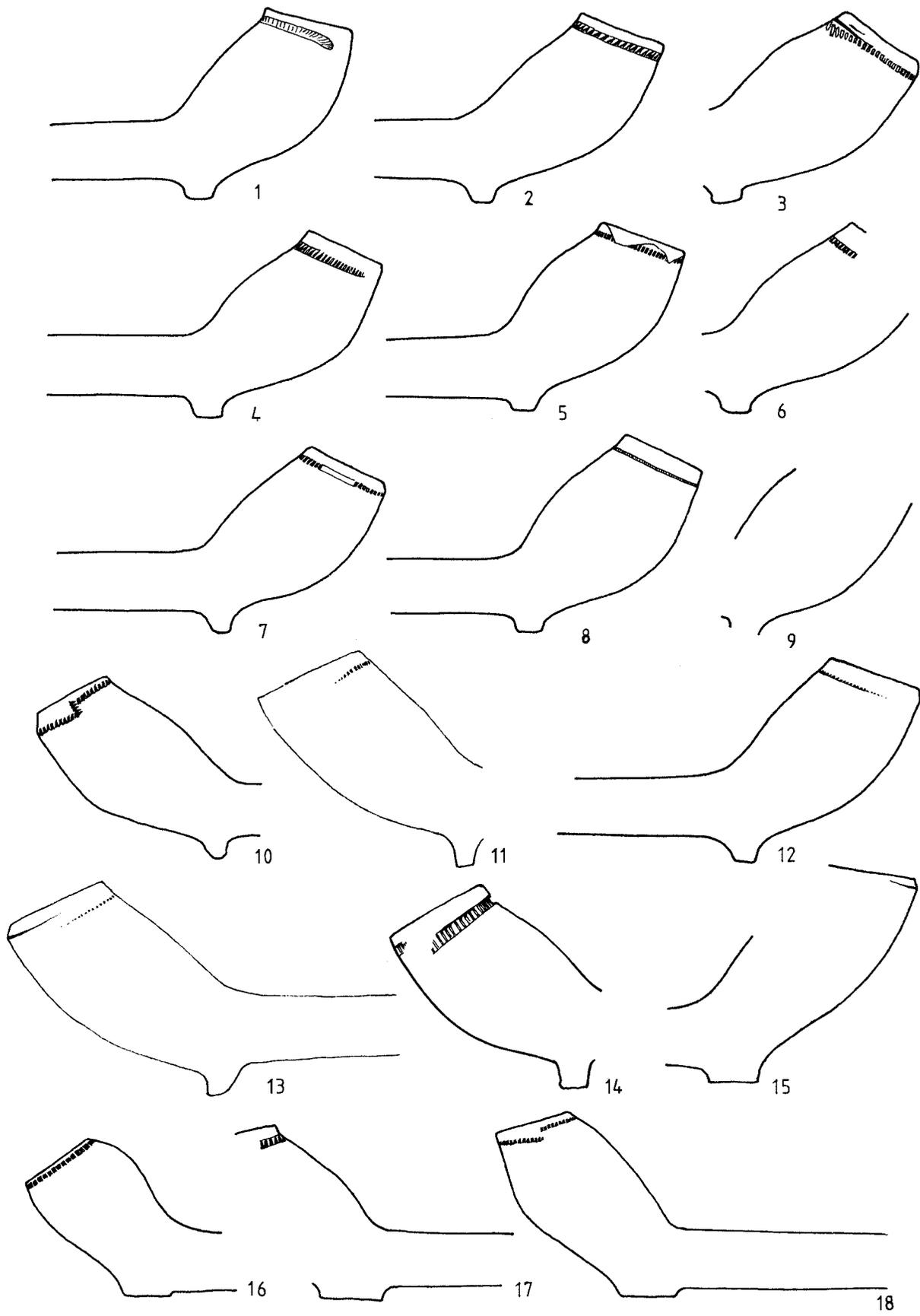


Fig. 13 DORKING

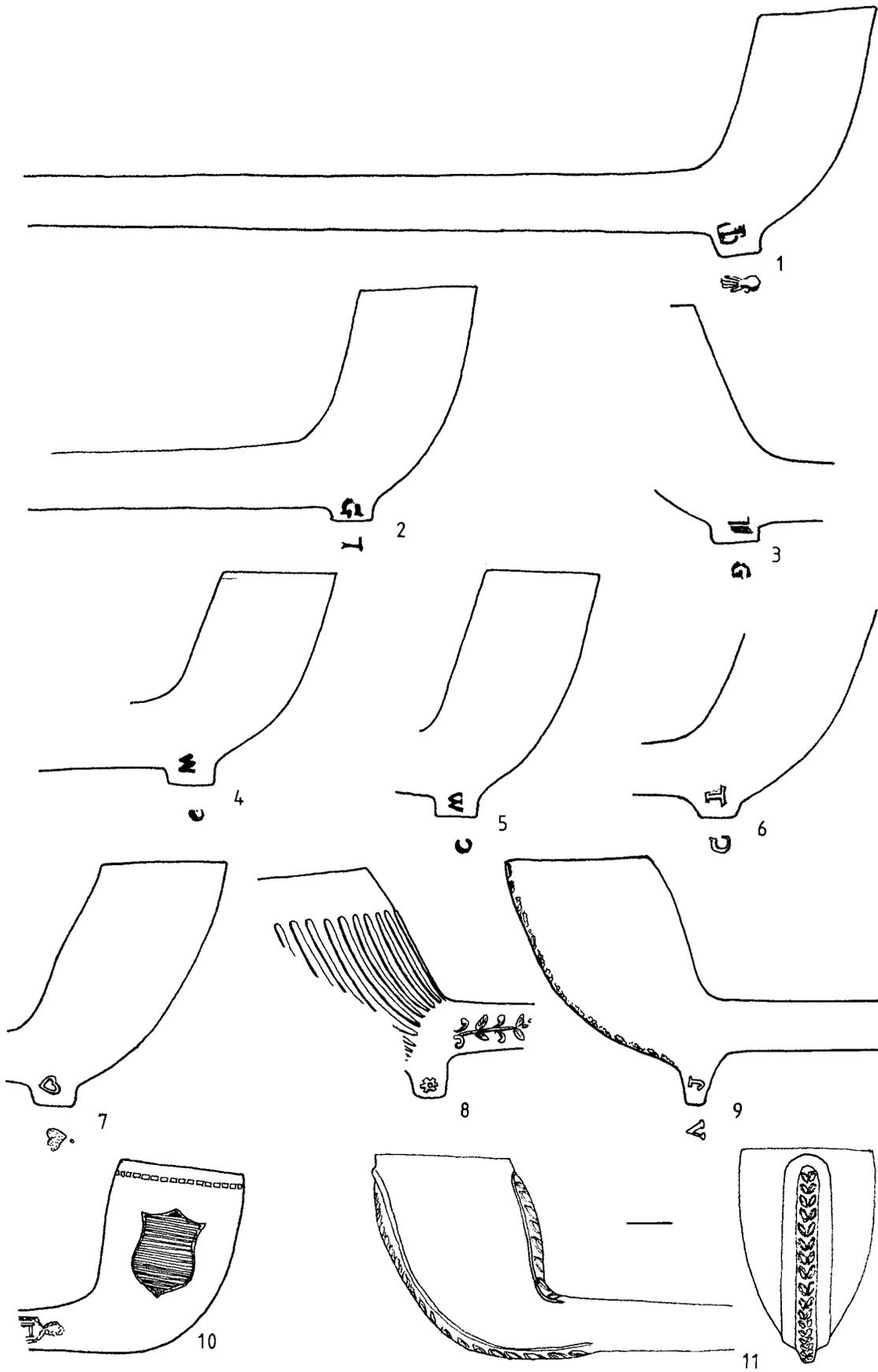


Fig. 14 DORKING

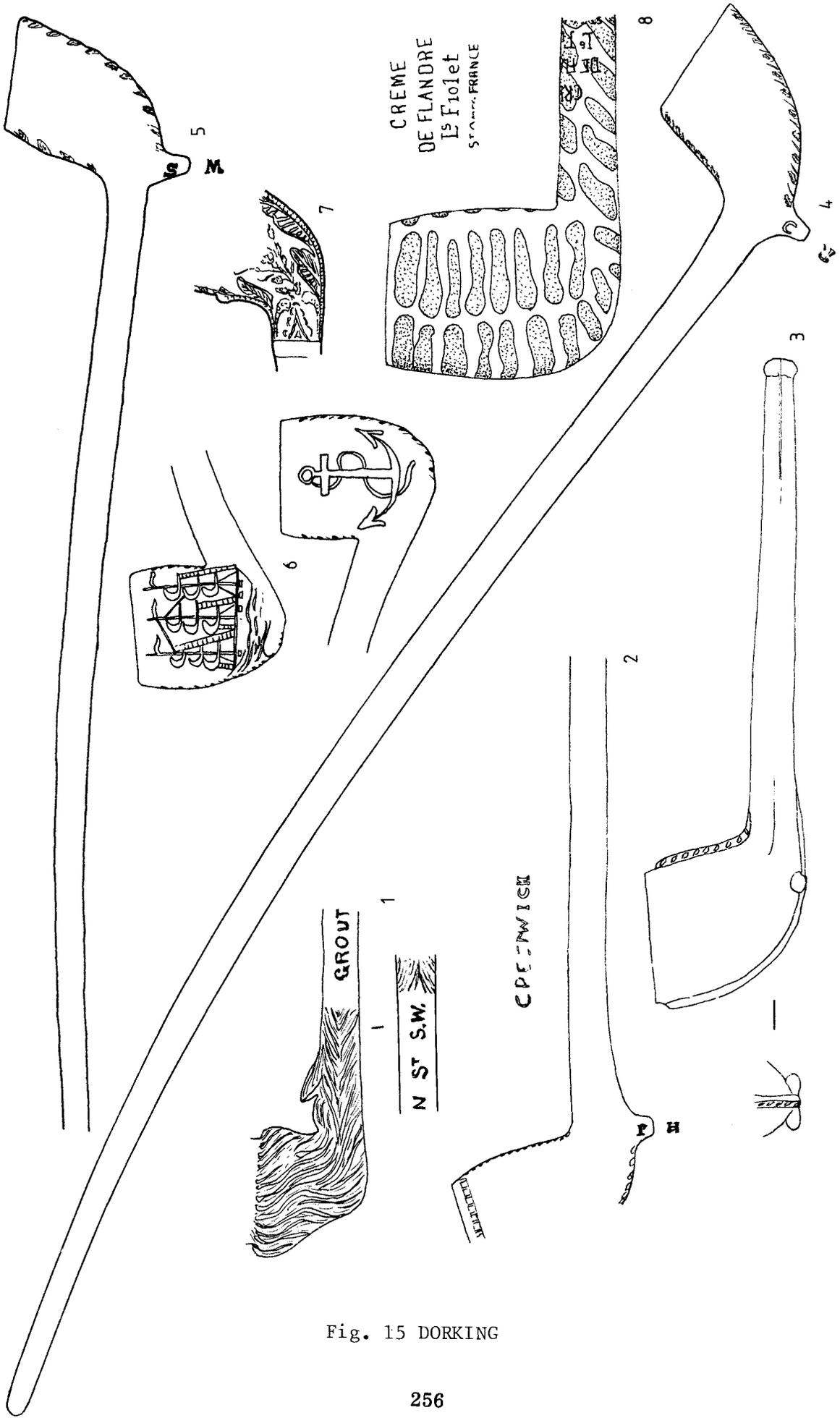


Fig. 15 DORKING

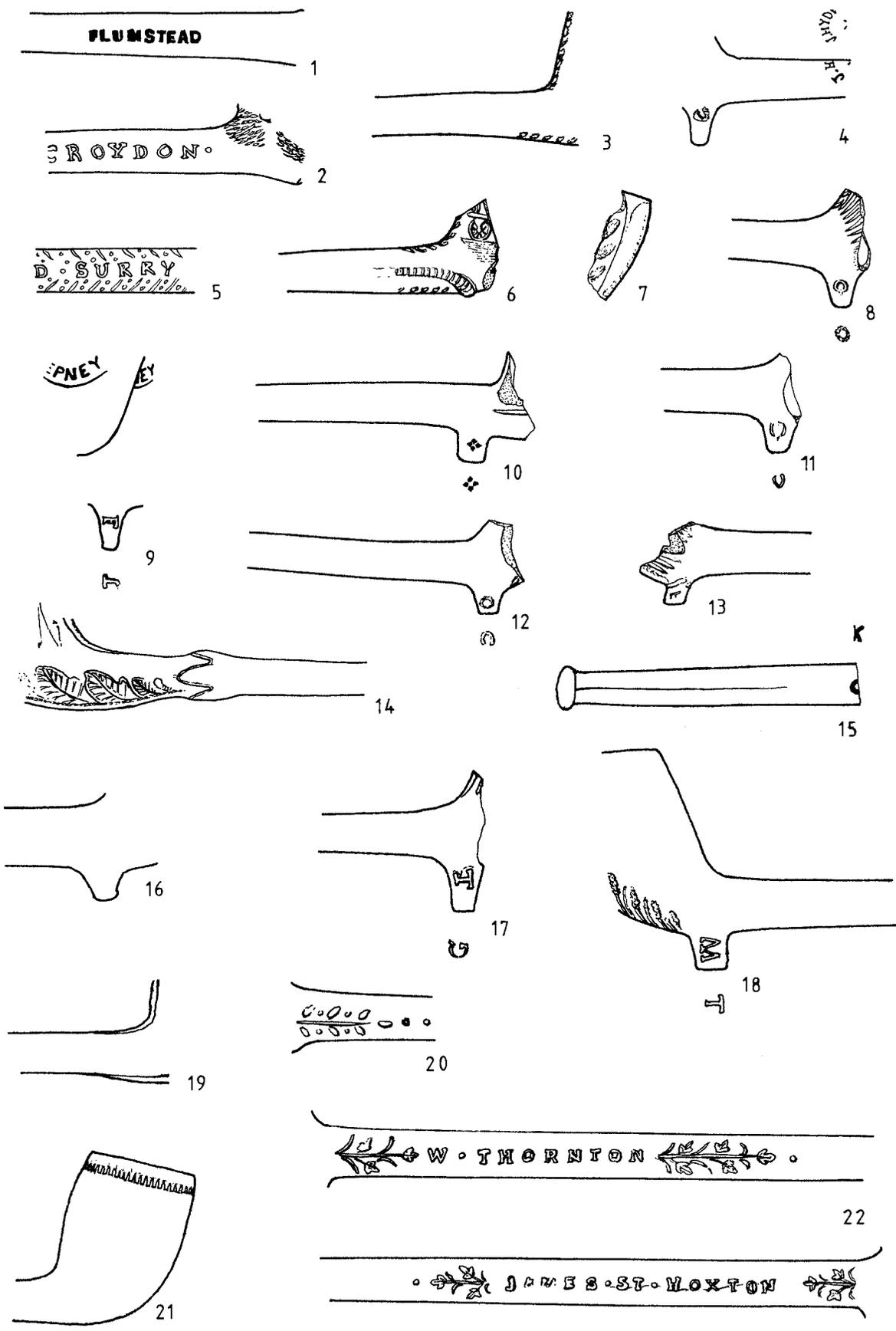


Fig. 16 DORKING 1 - 15 BROCKHAM 16 - 22

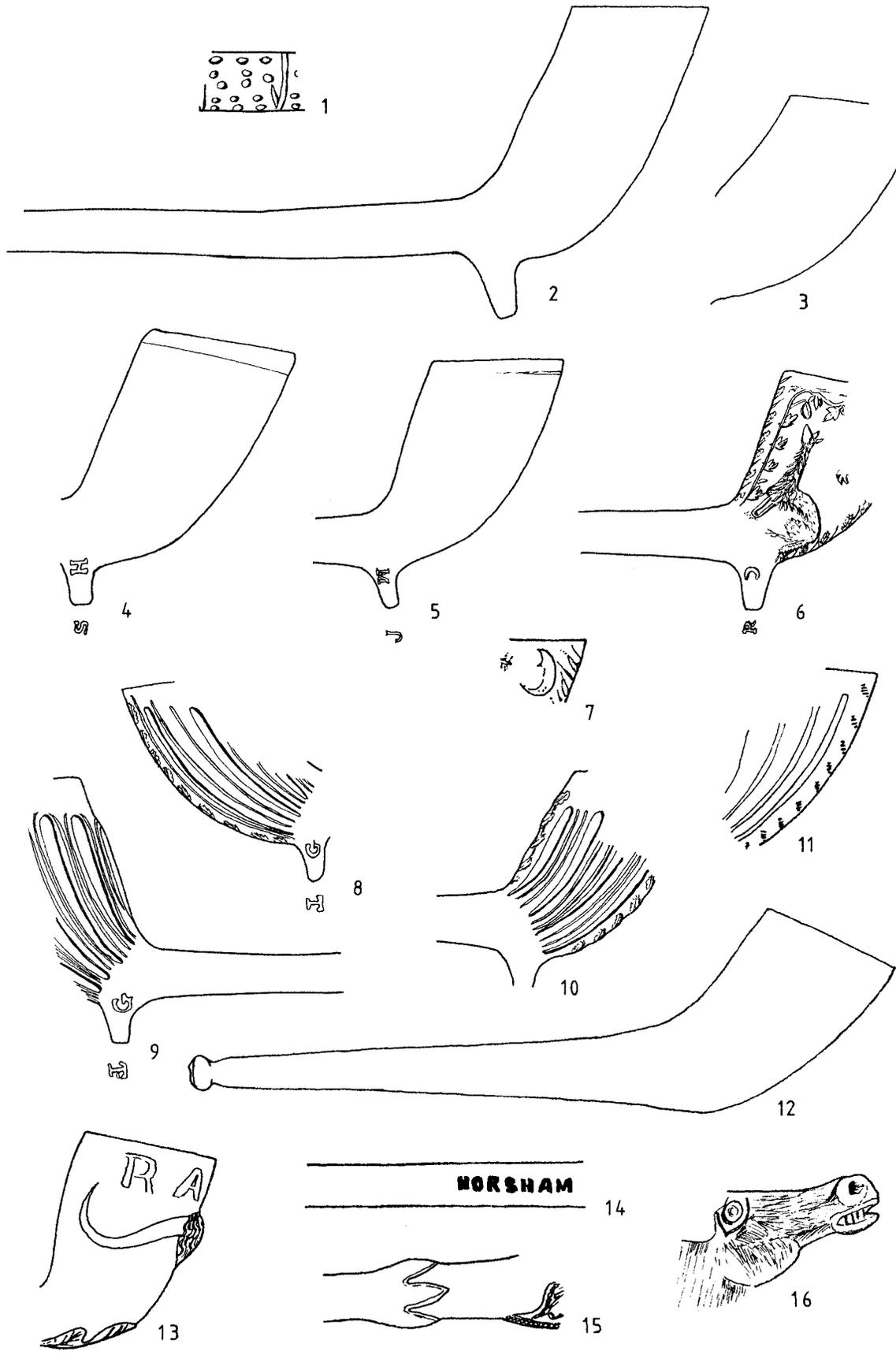


Fig. 17 BROCKHAM

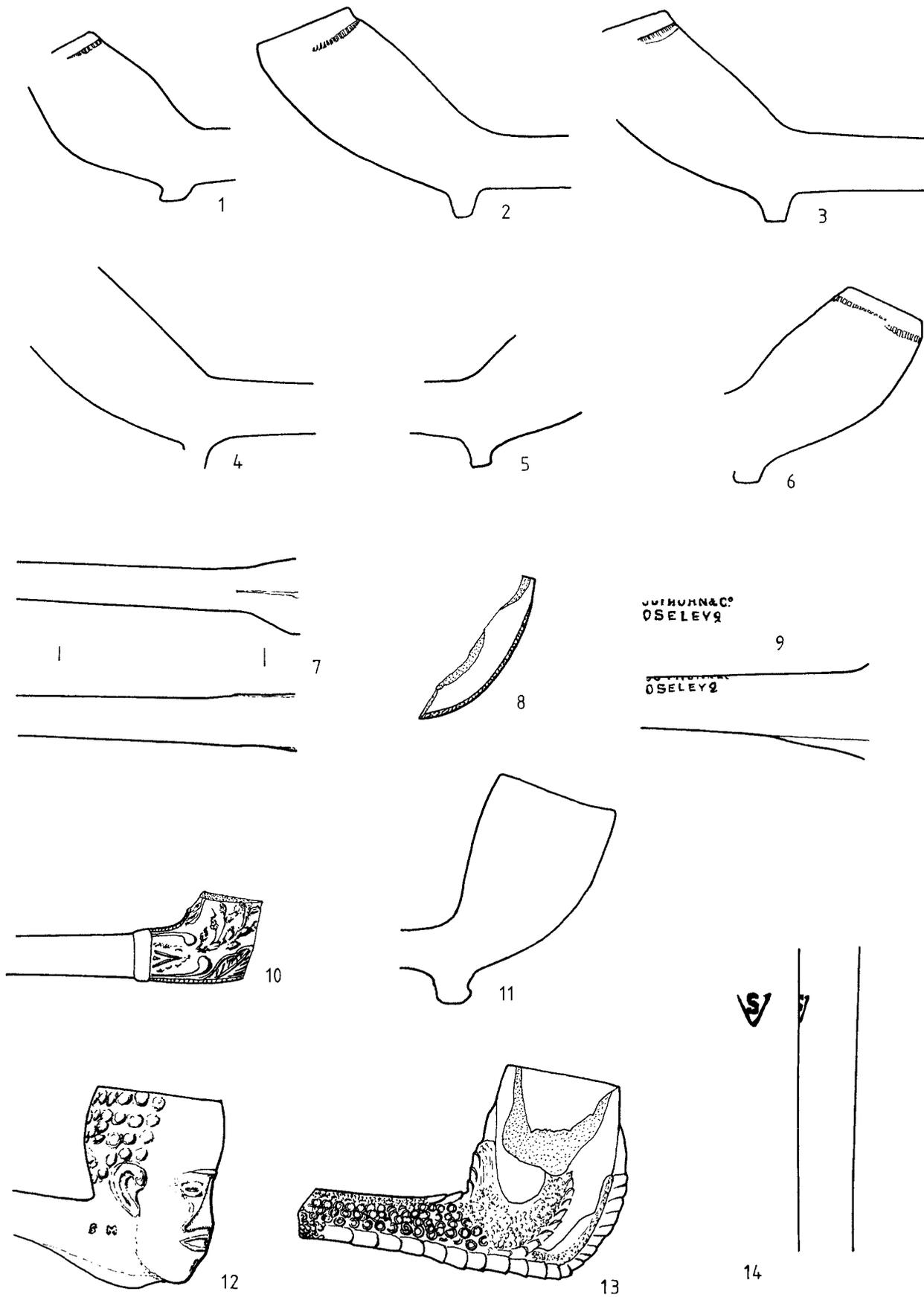


Fig. 18 LEIGH

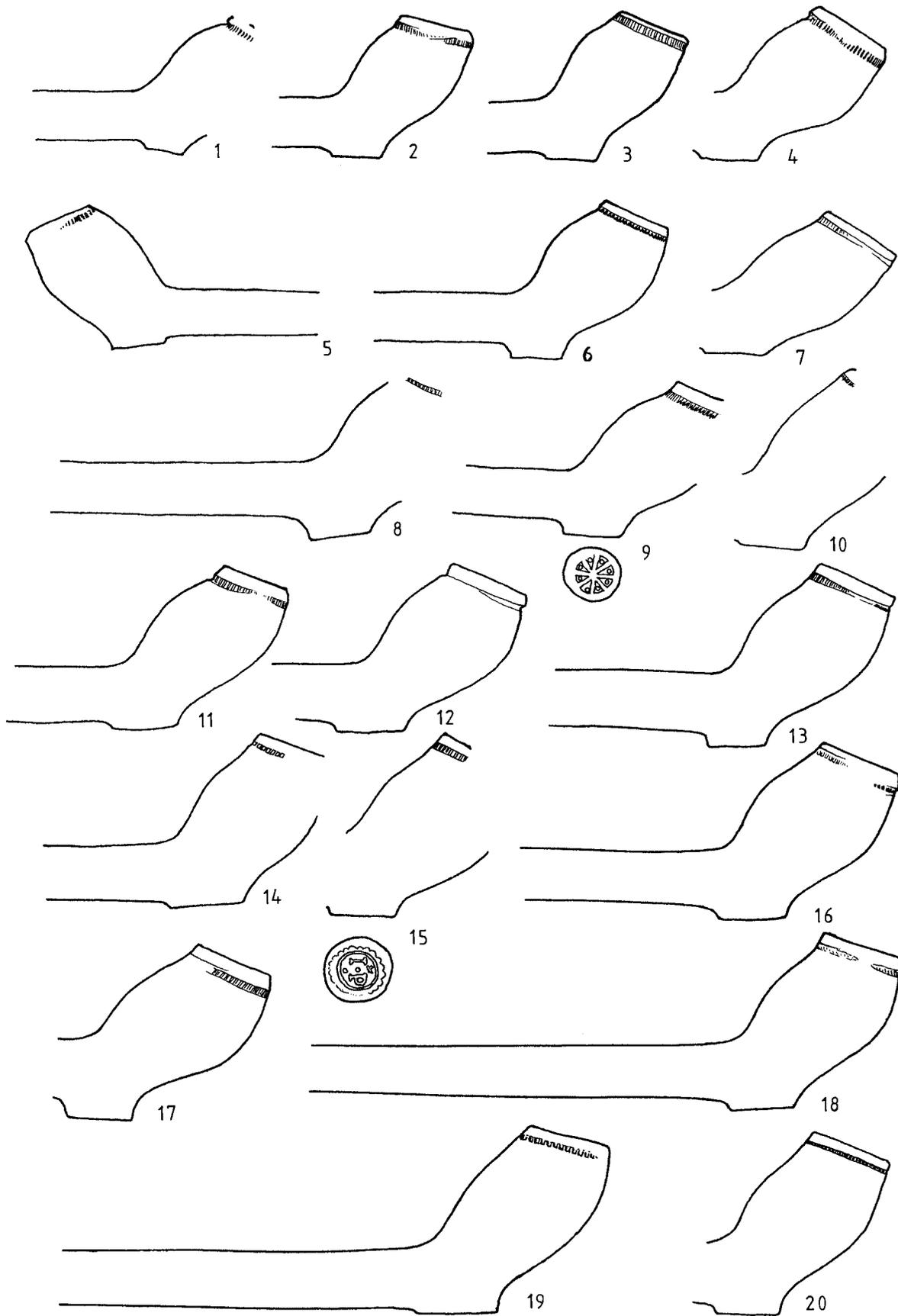


Fig. 19 REIGATE

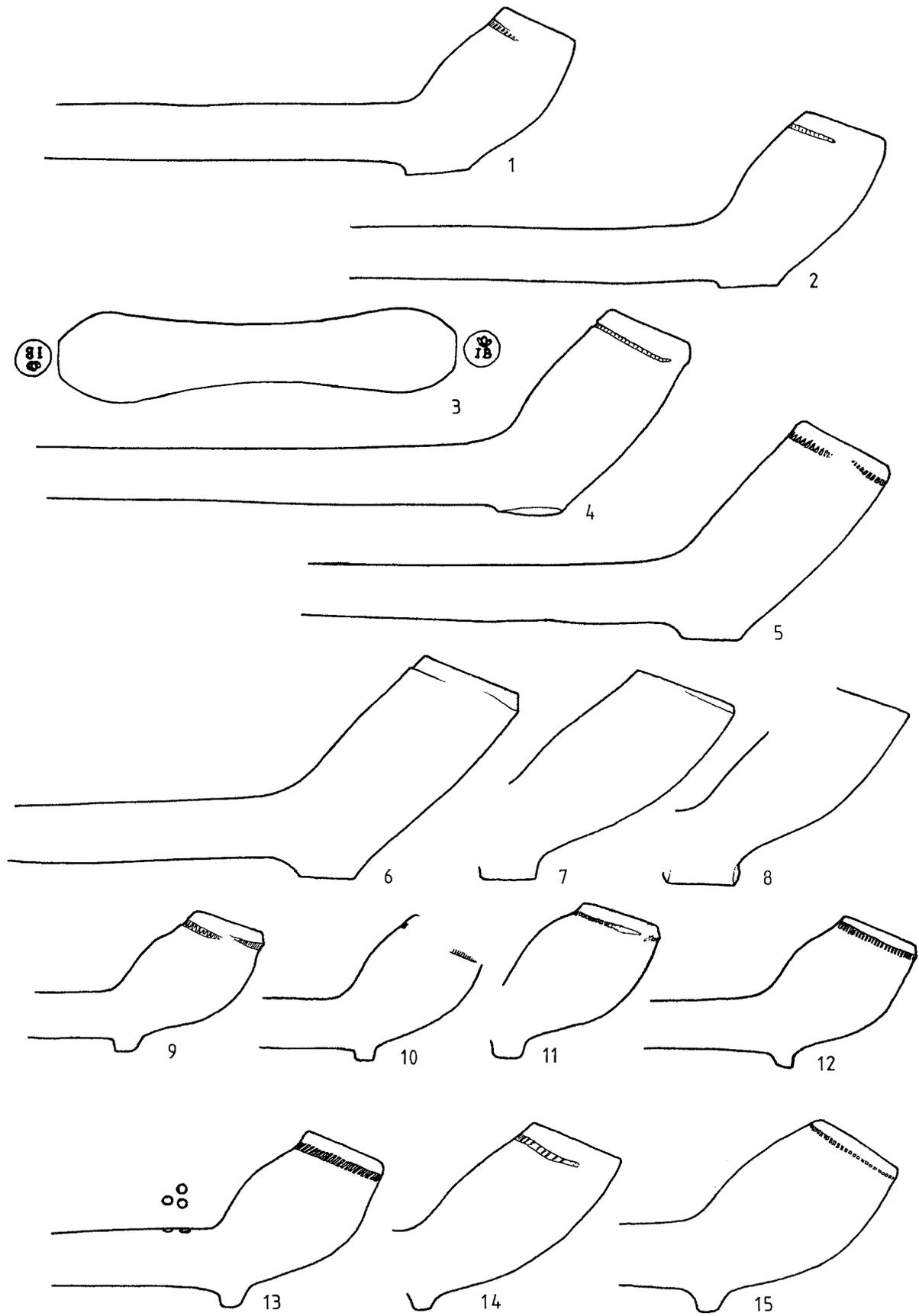


Fig. 20 REIGATE

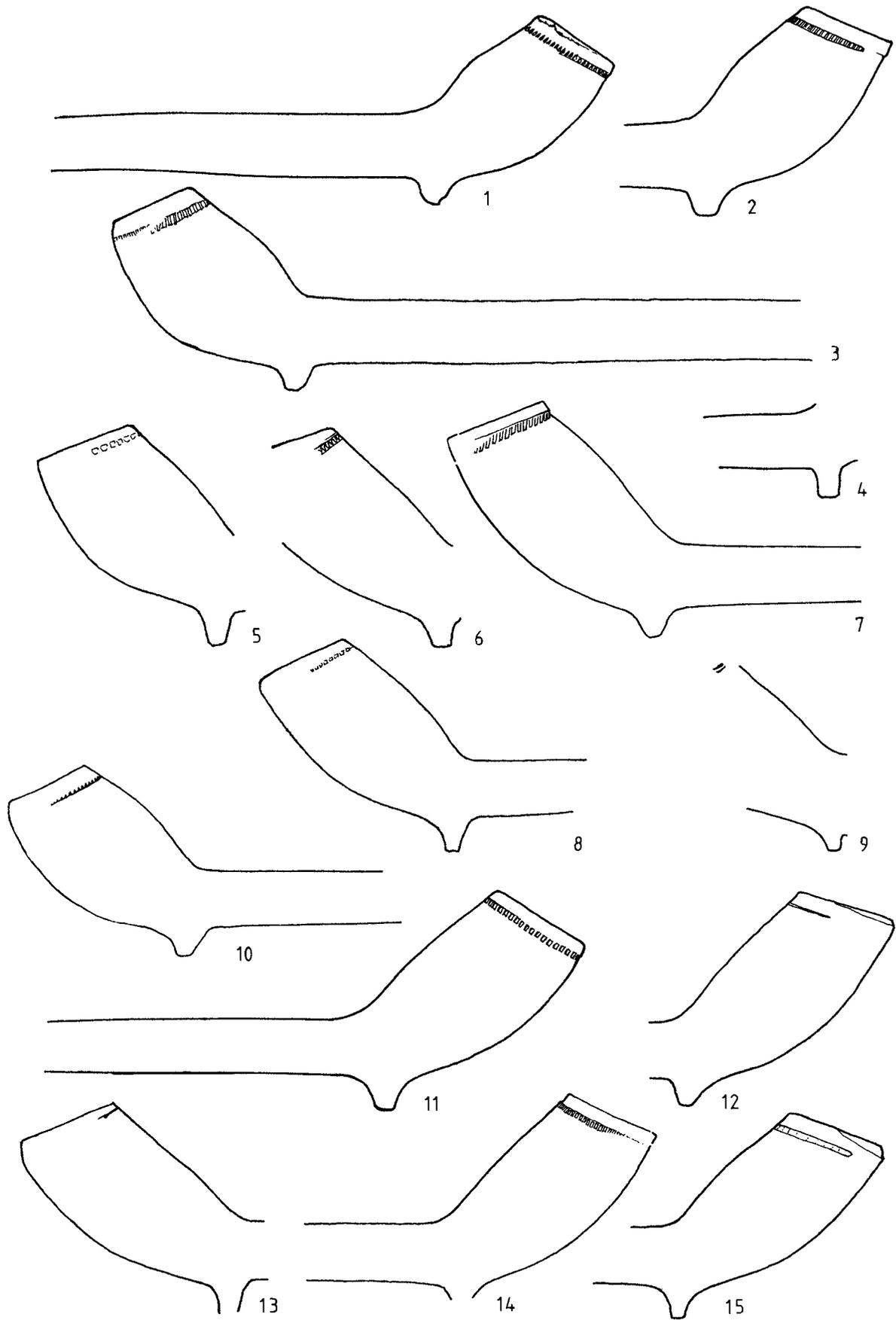


Fig. 21 REIGATE

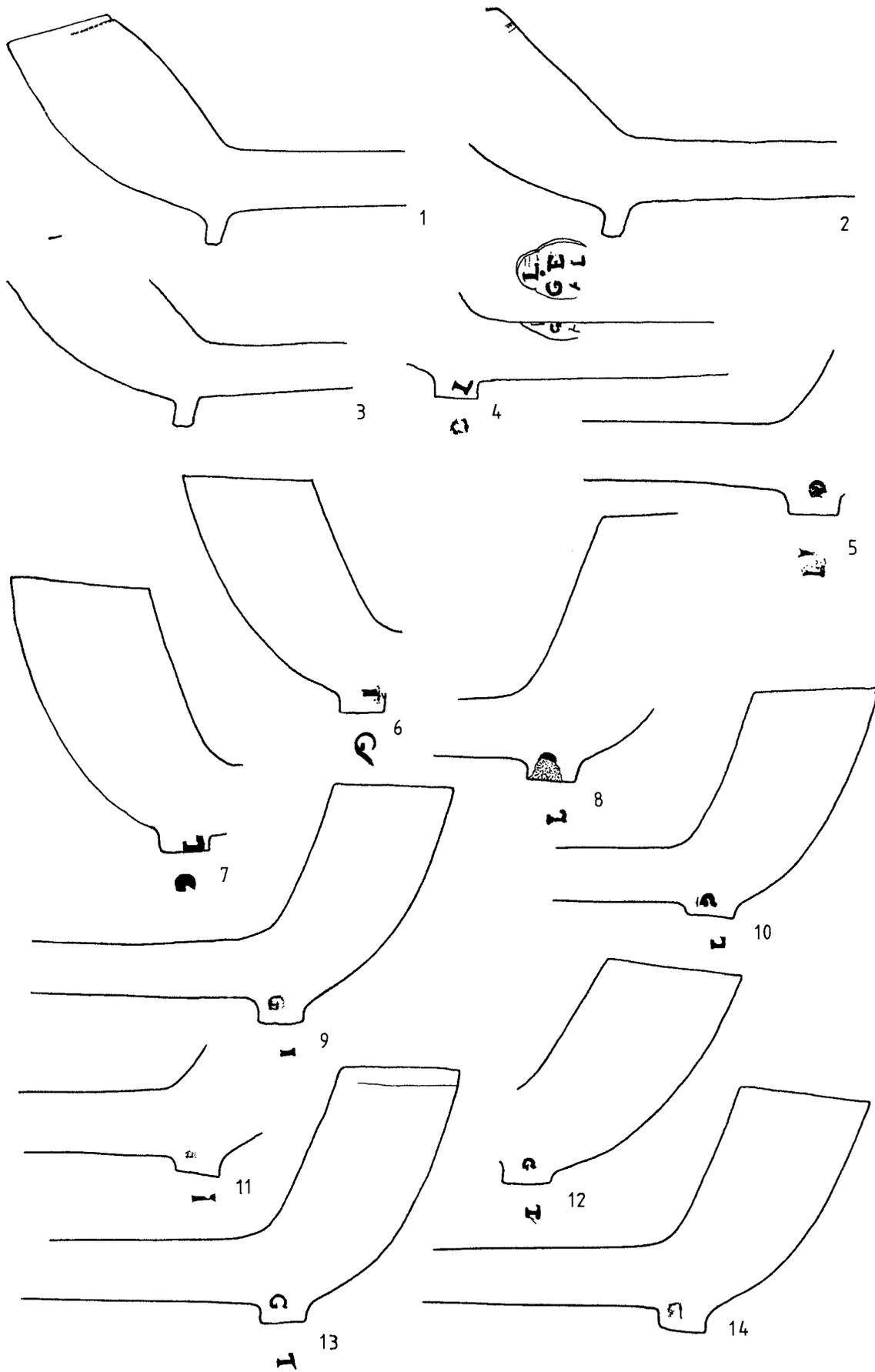


Fig. 22 REIGATE

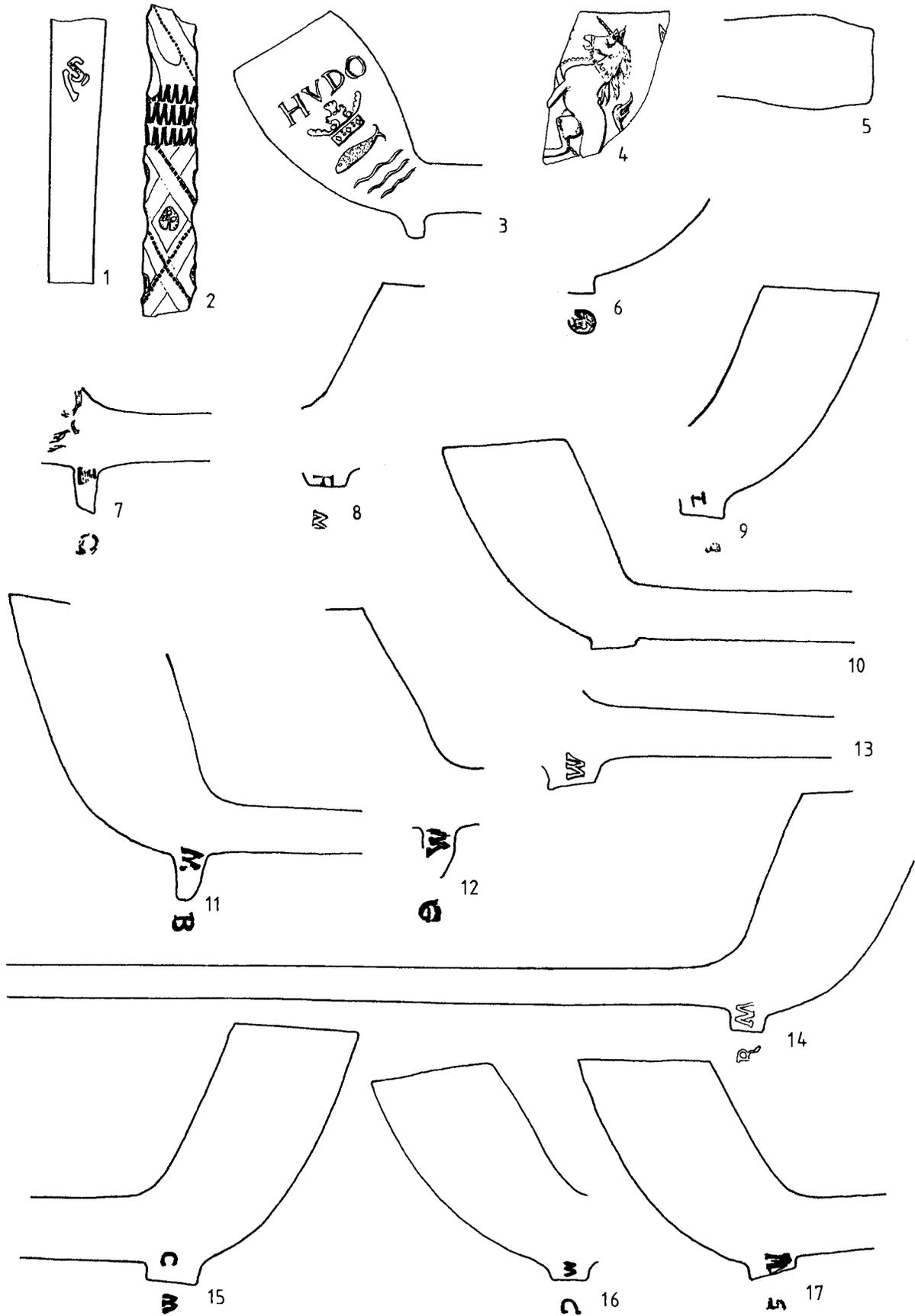


Fig. 23 REIGATE

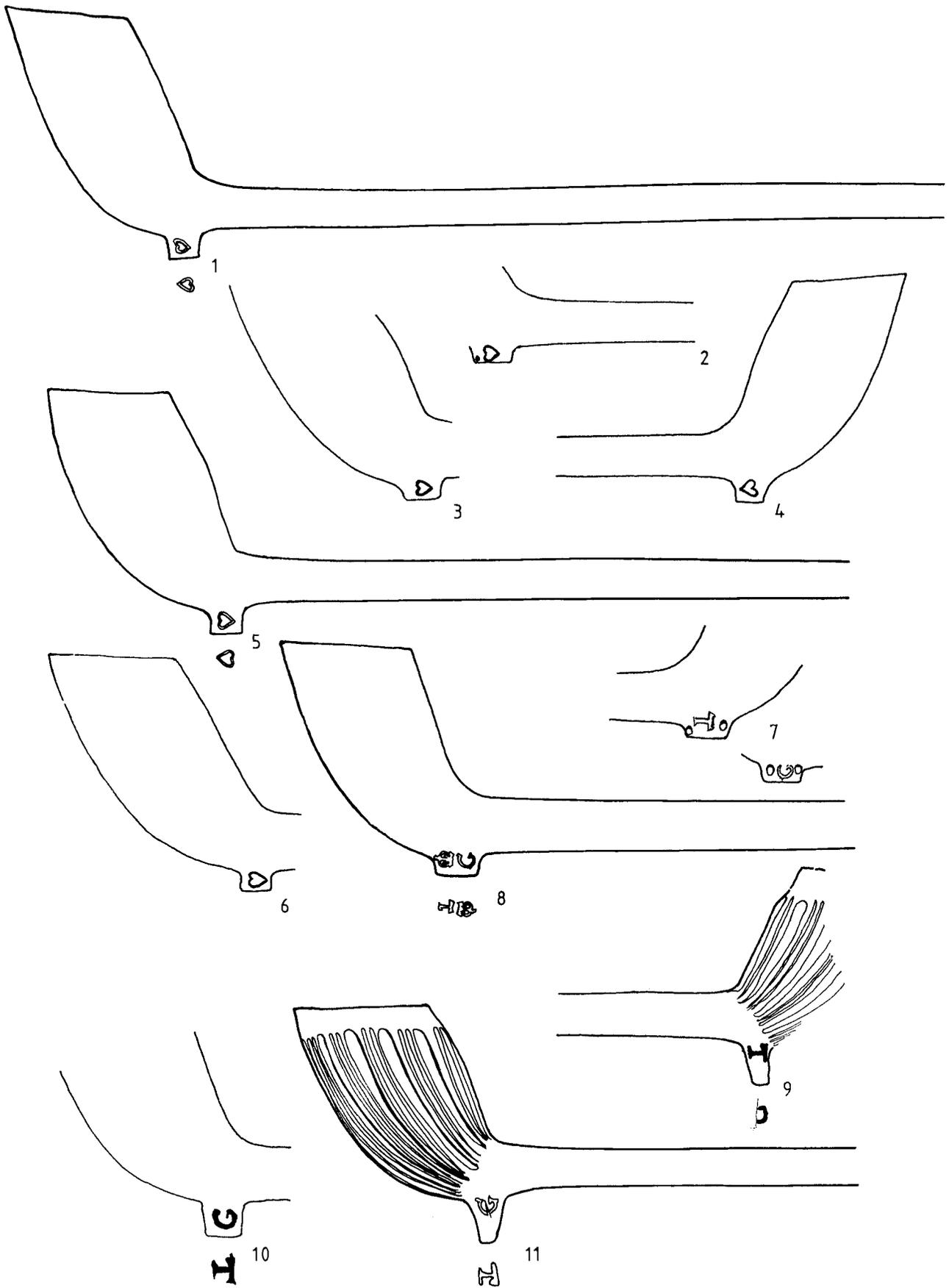


Fig. 24 REIGATE

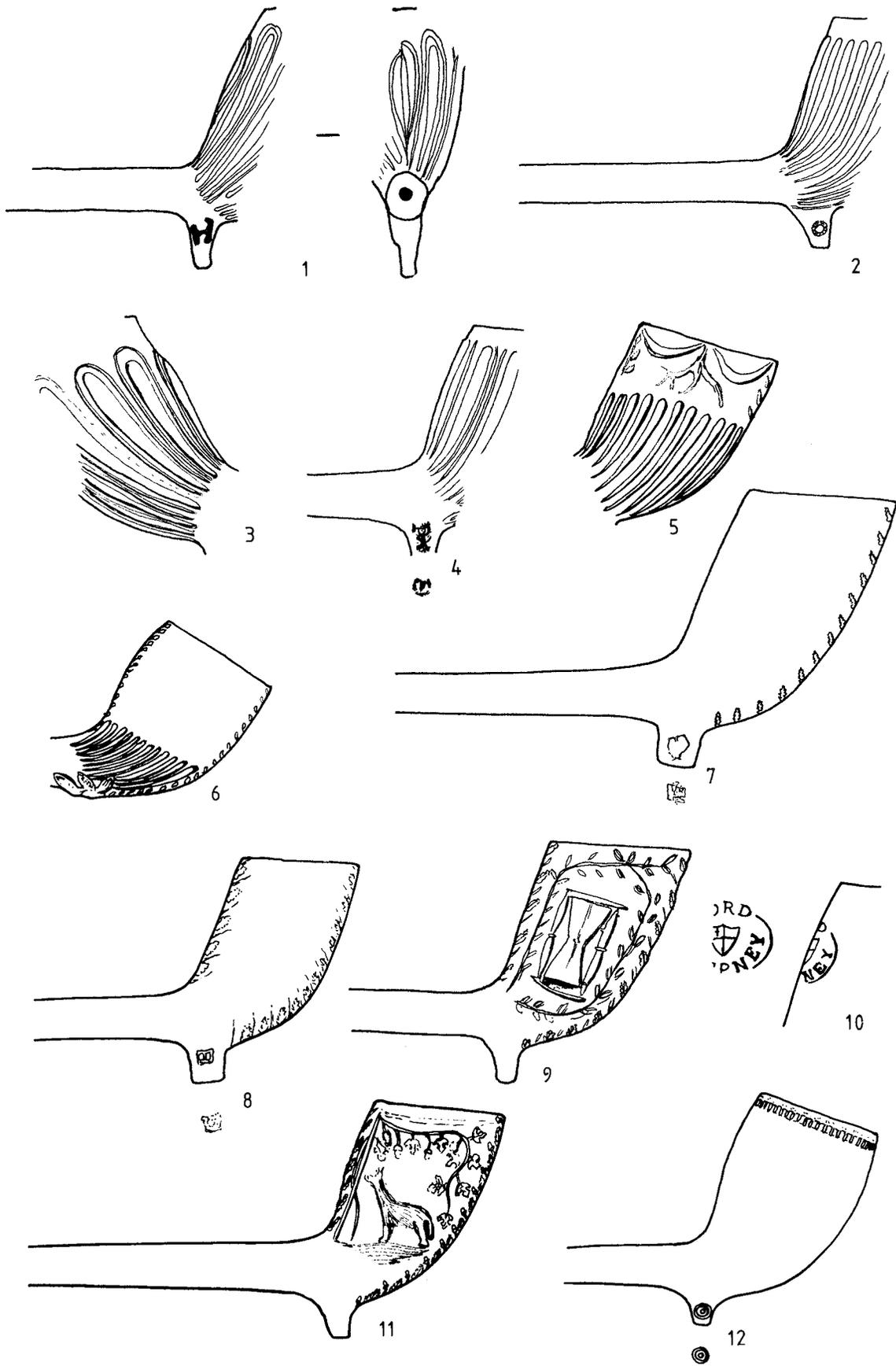


Fig. 25 REIGATE

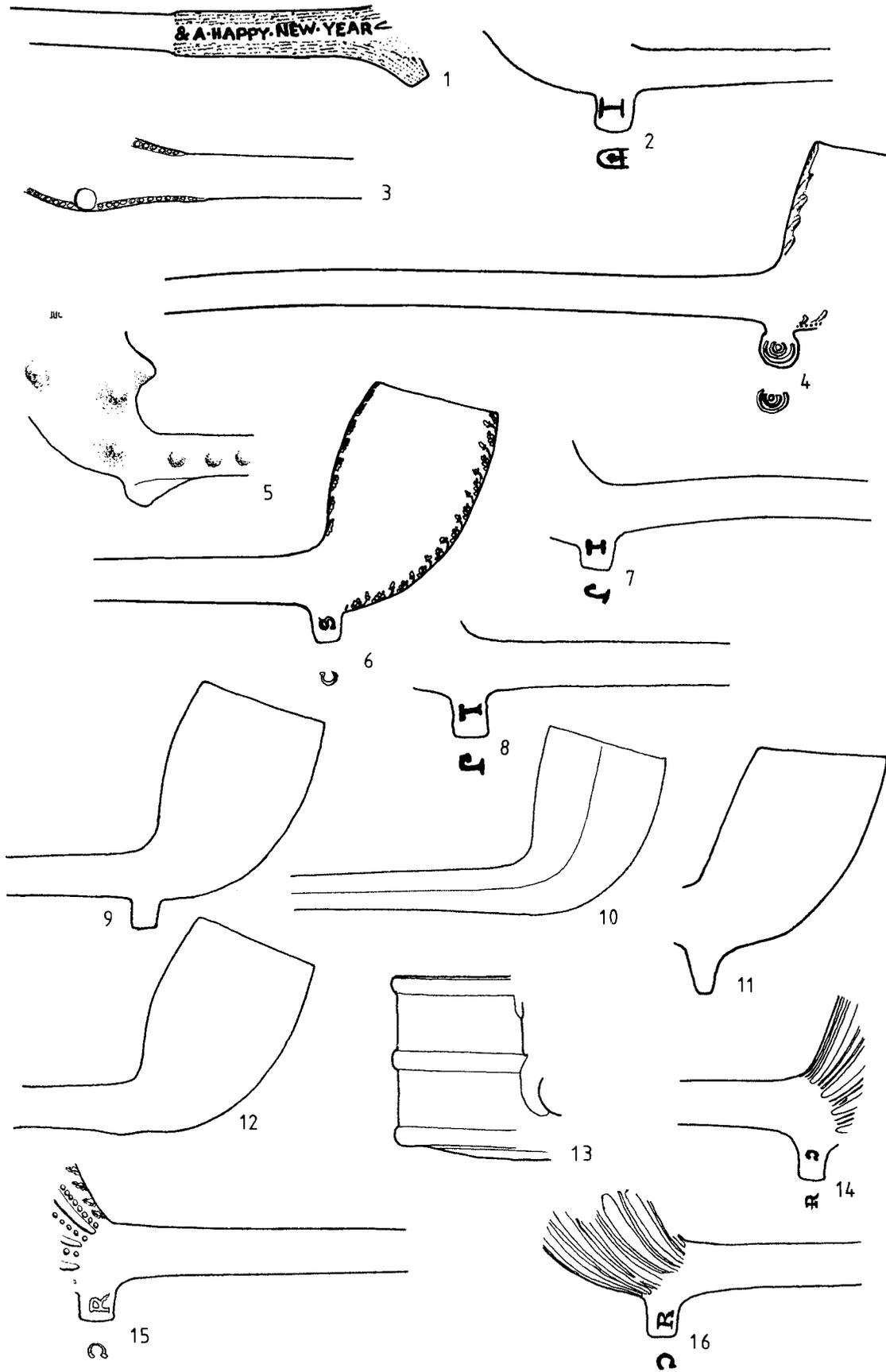


Fig. 26 REIGATE

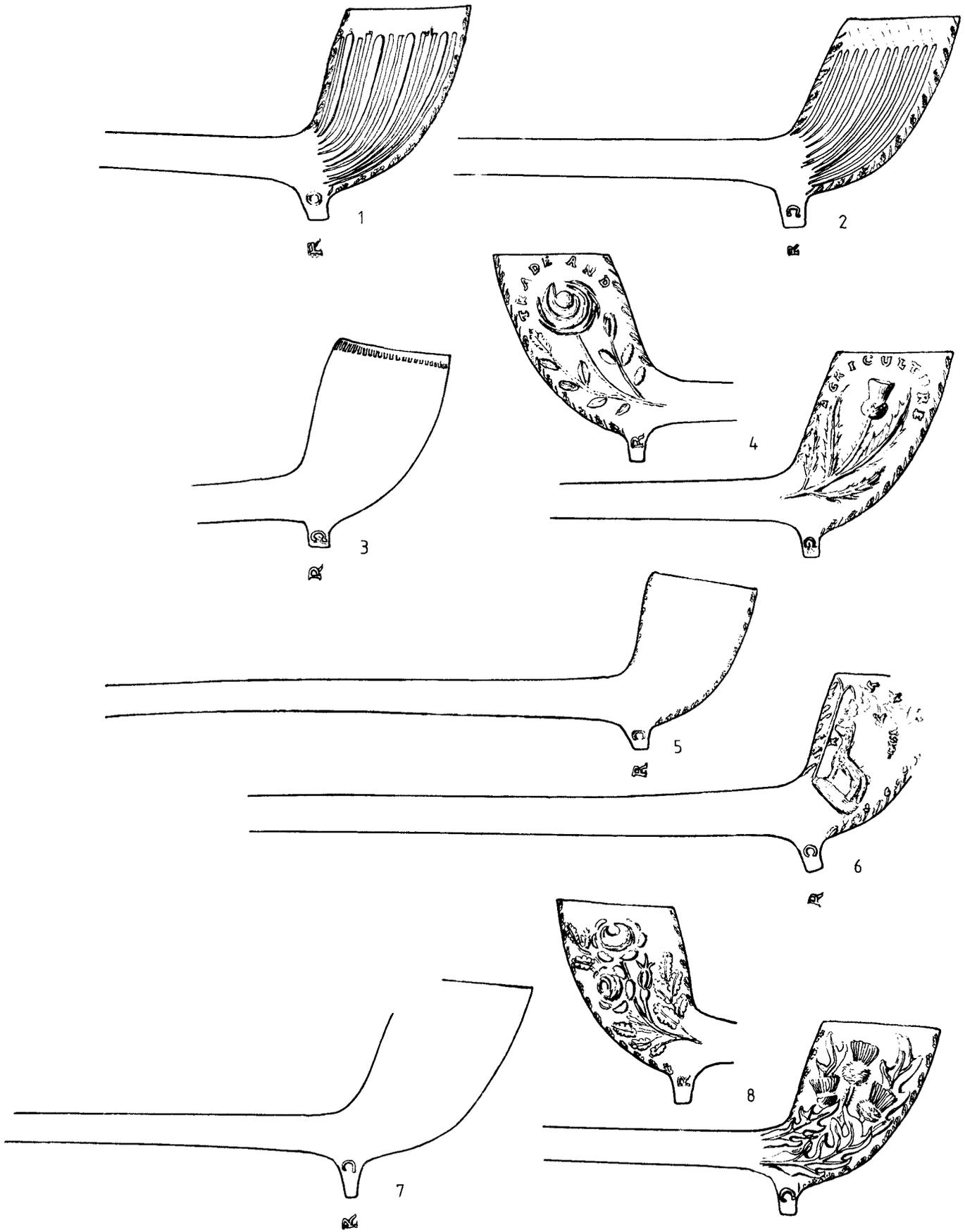


Fig. 27 REIGATE

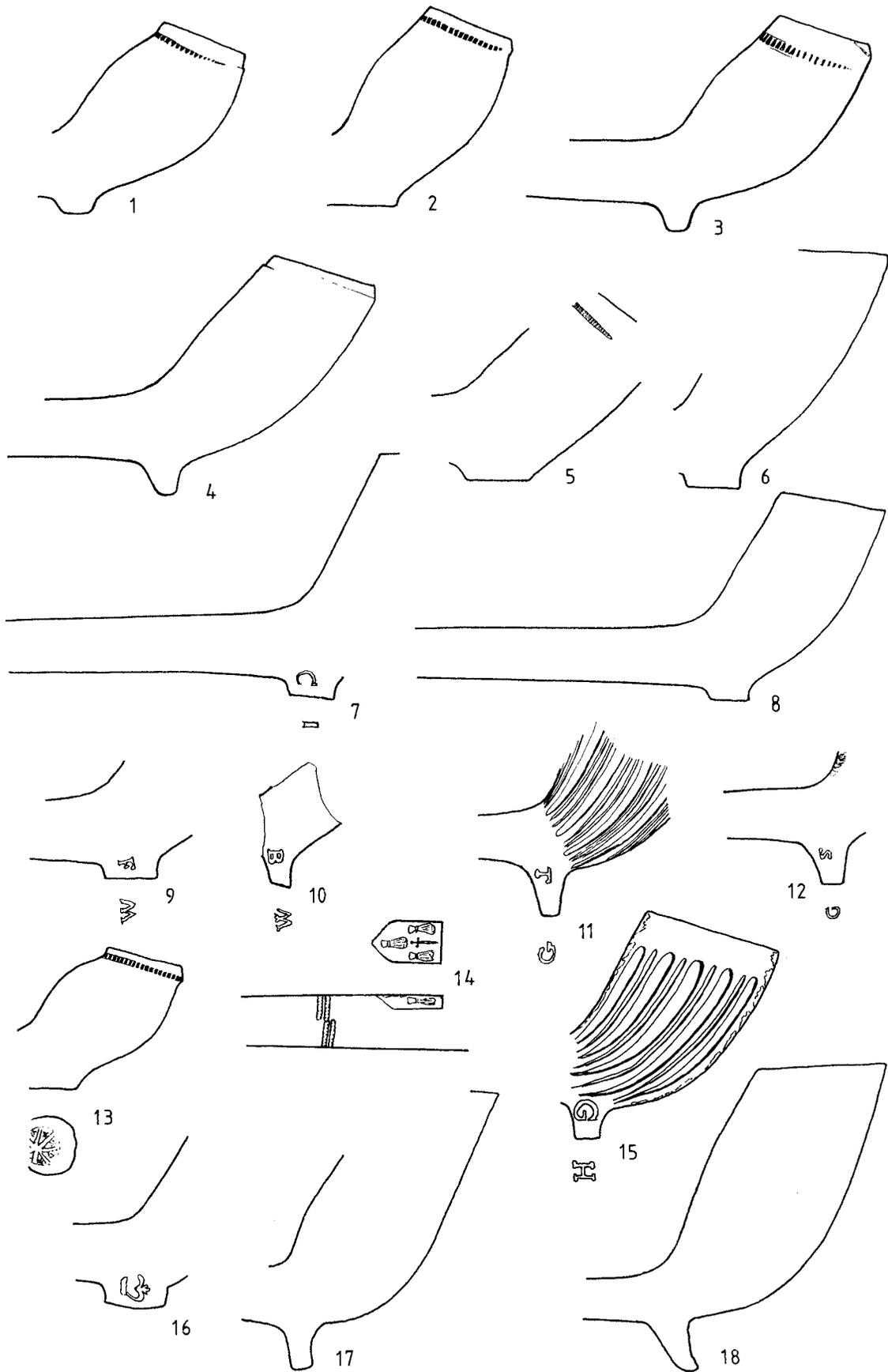


Fig. 28 HORLEY 1 - 12 CROYDON 13 - 18

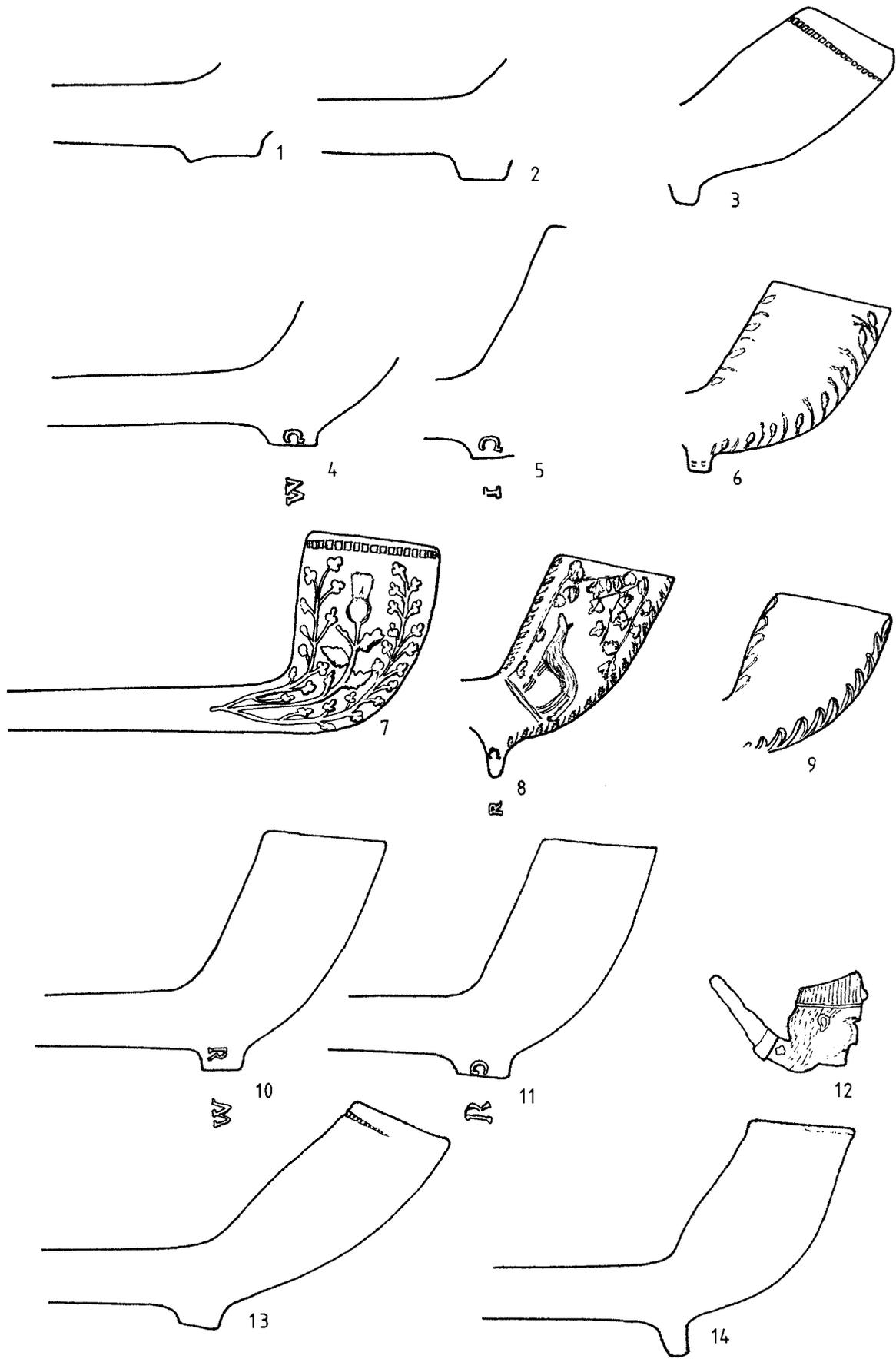


Fig. 29 SOUTH GODSTONE 1 - 9 COULSDON 10 - 14

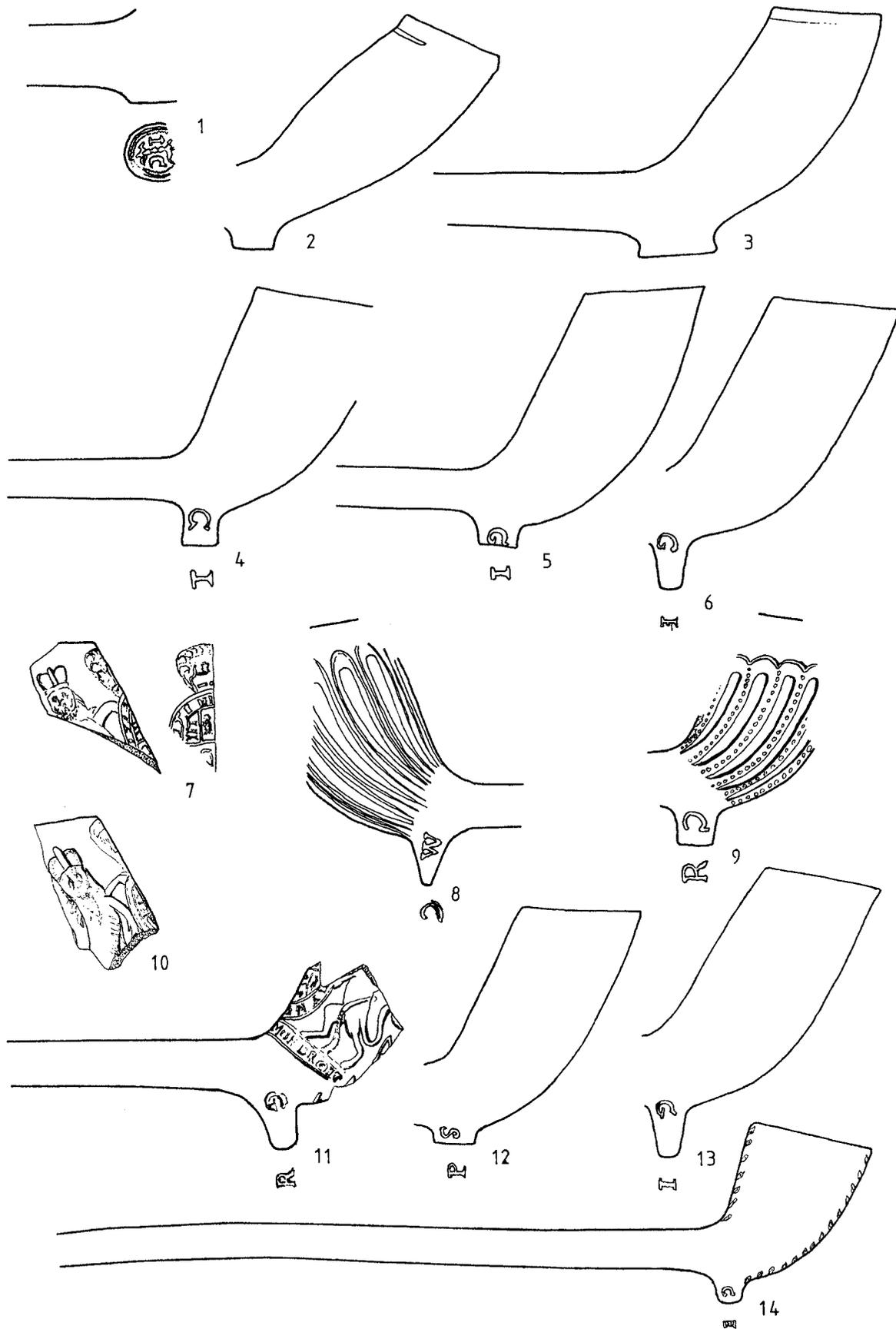


Fig. 30 MITCHAM 1 - 9 EWELL 10 - 14

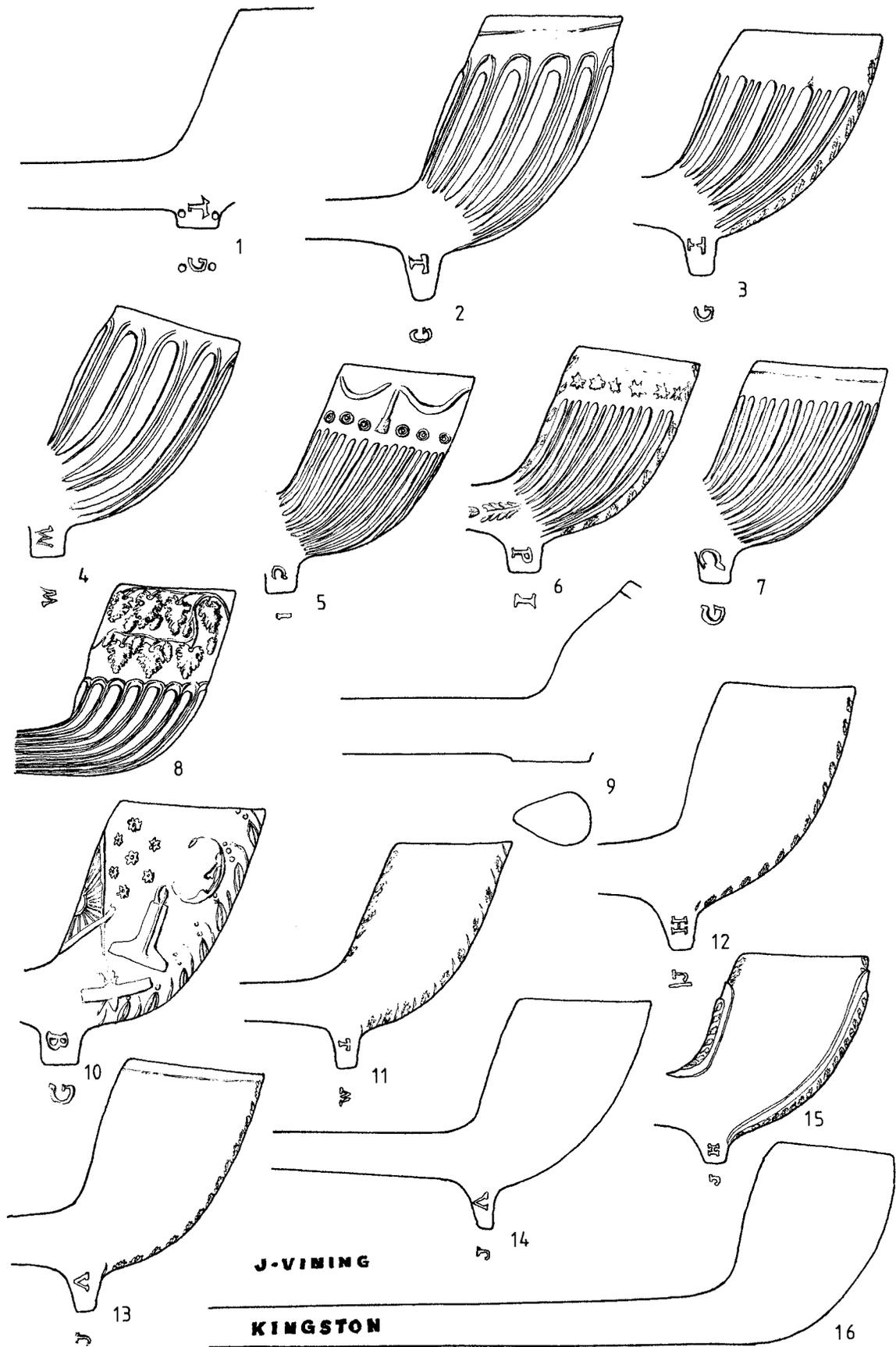


Fig. 31 EWELL

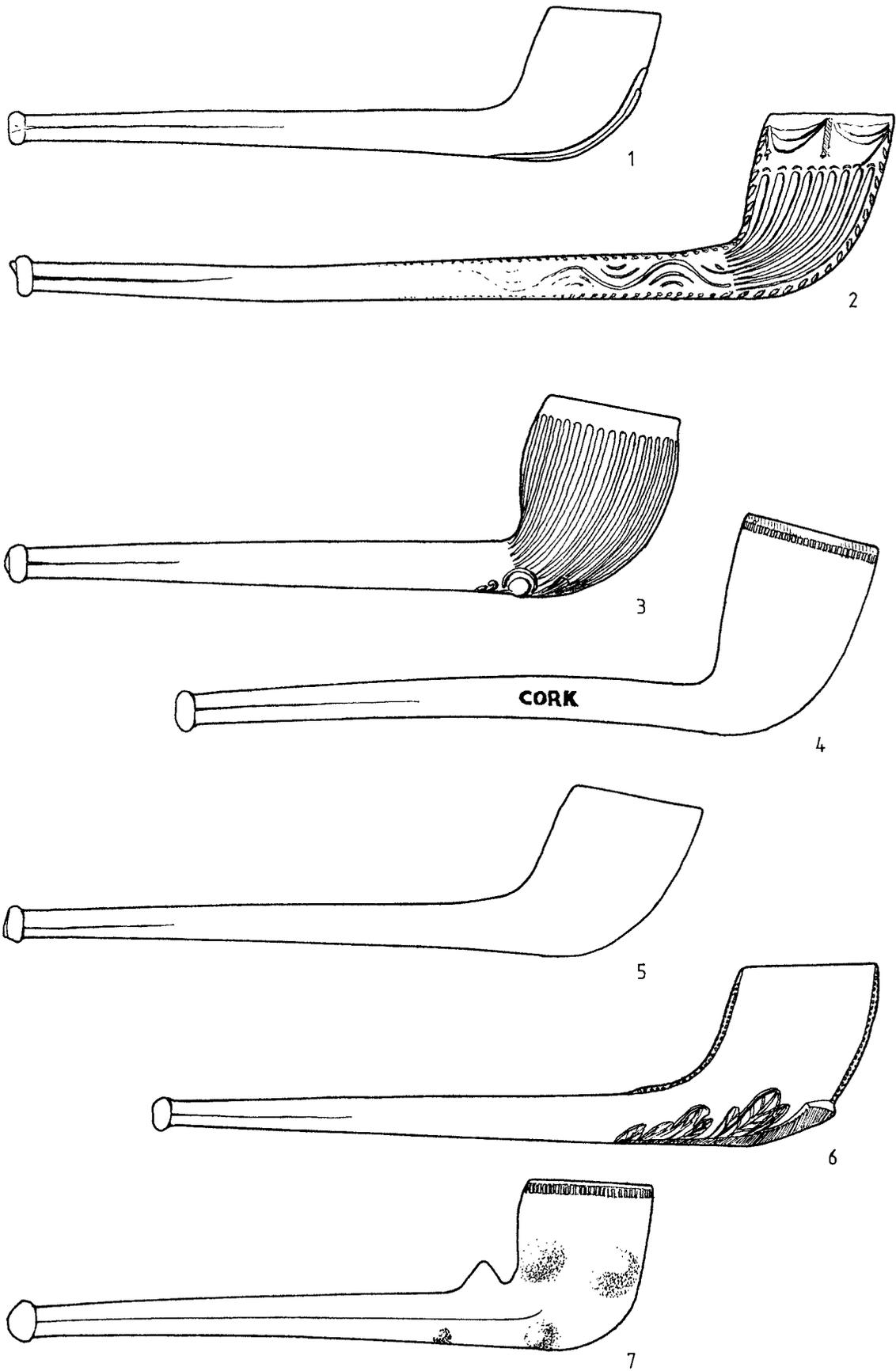


Fig. 32 EWELL

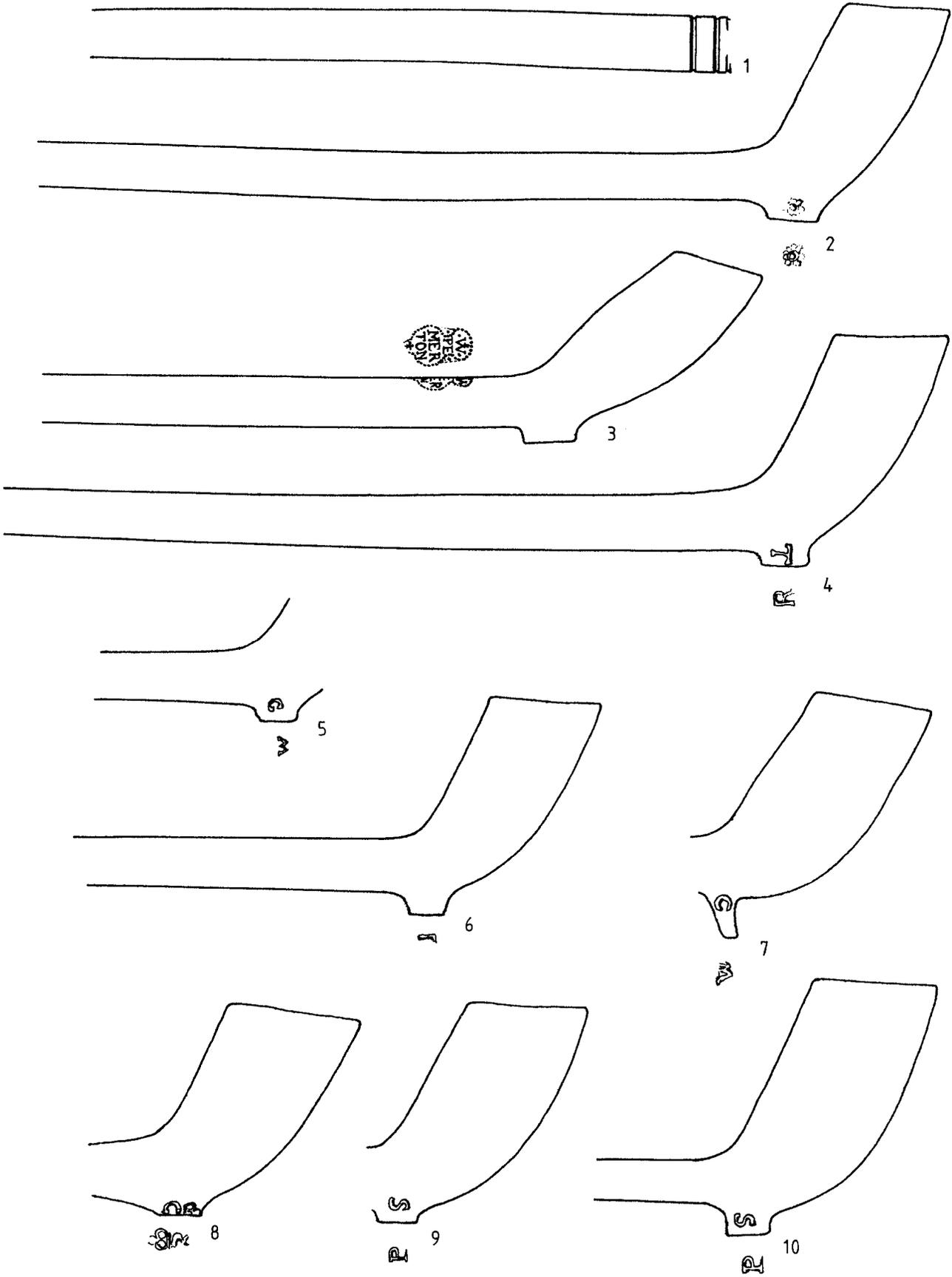


Fig. 33 EPSOM

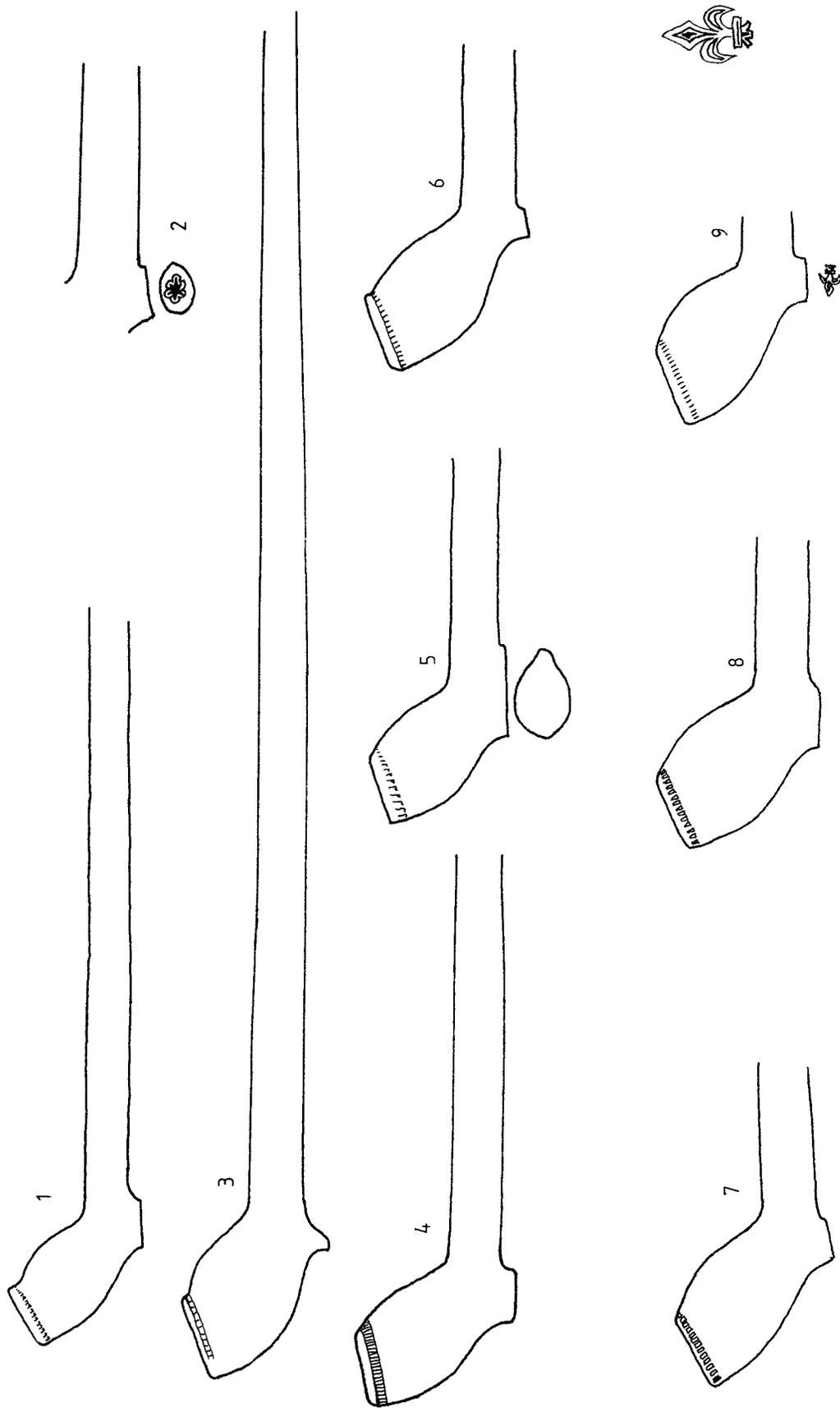


Fig. 34 OATLANDS

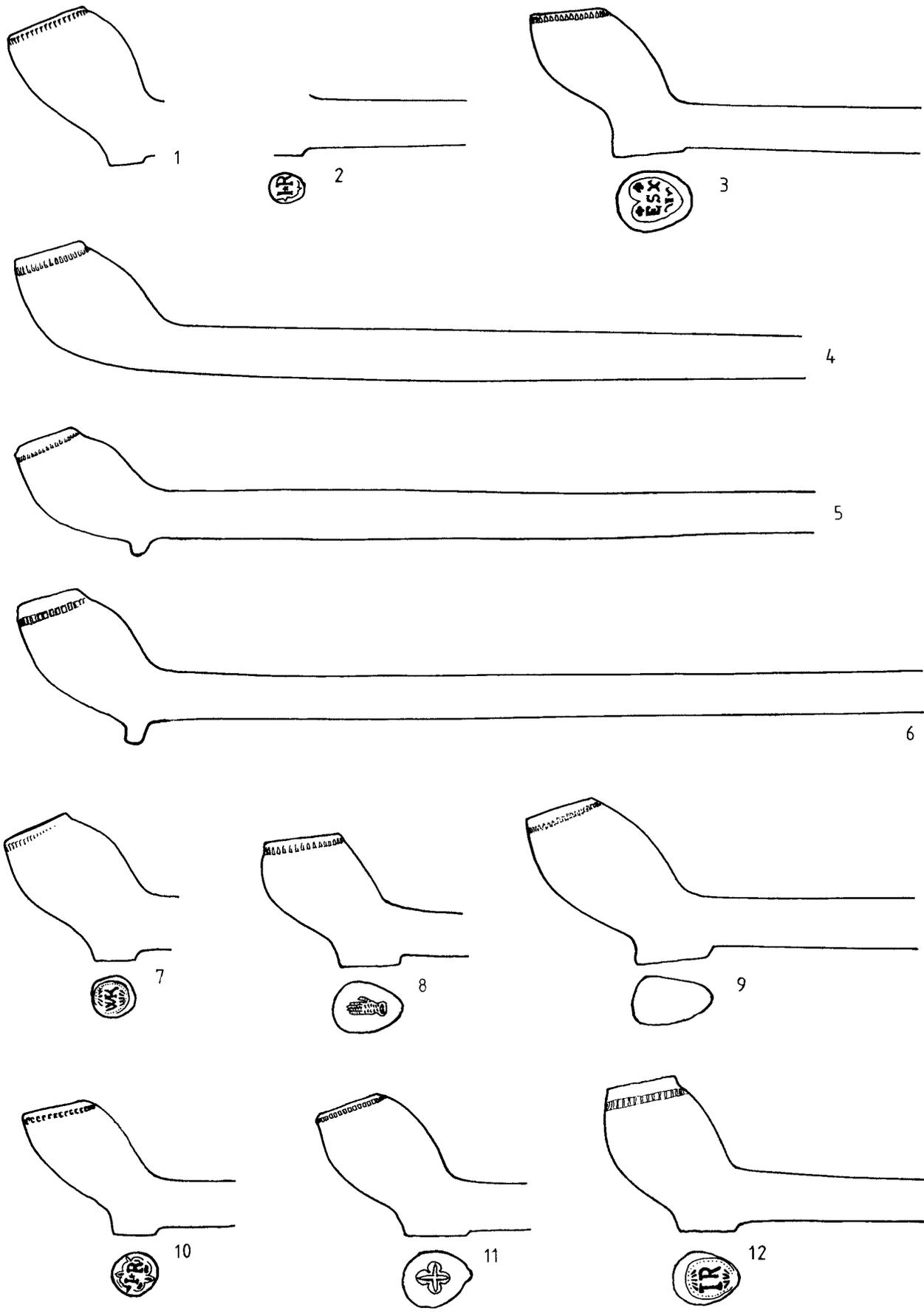


Fig. 35 OATLANDS

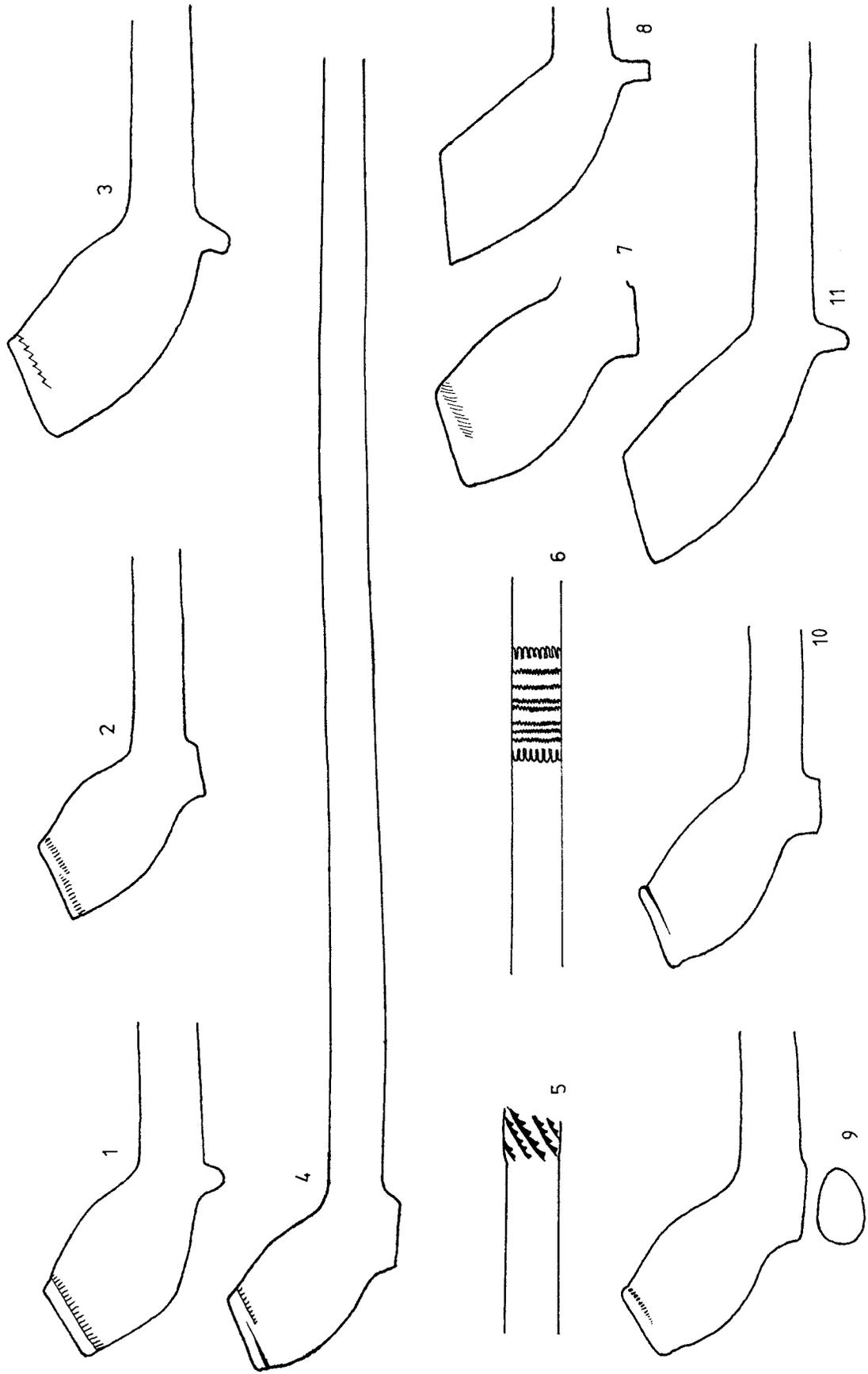


Fig. 36 OATLANDS

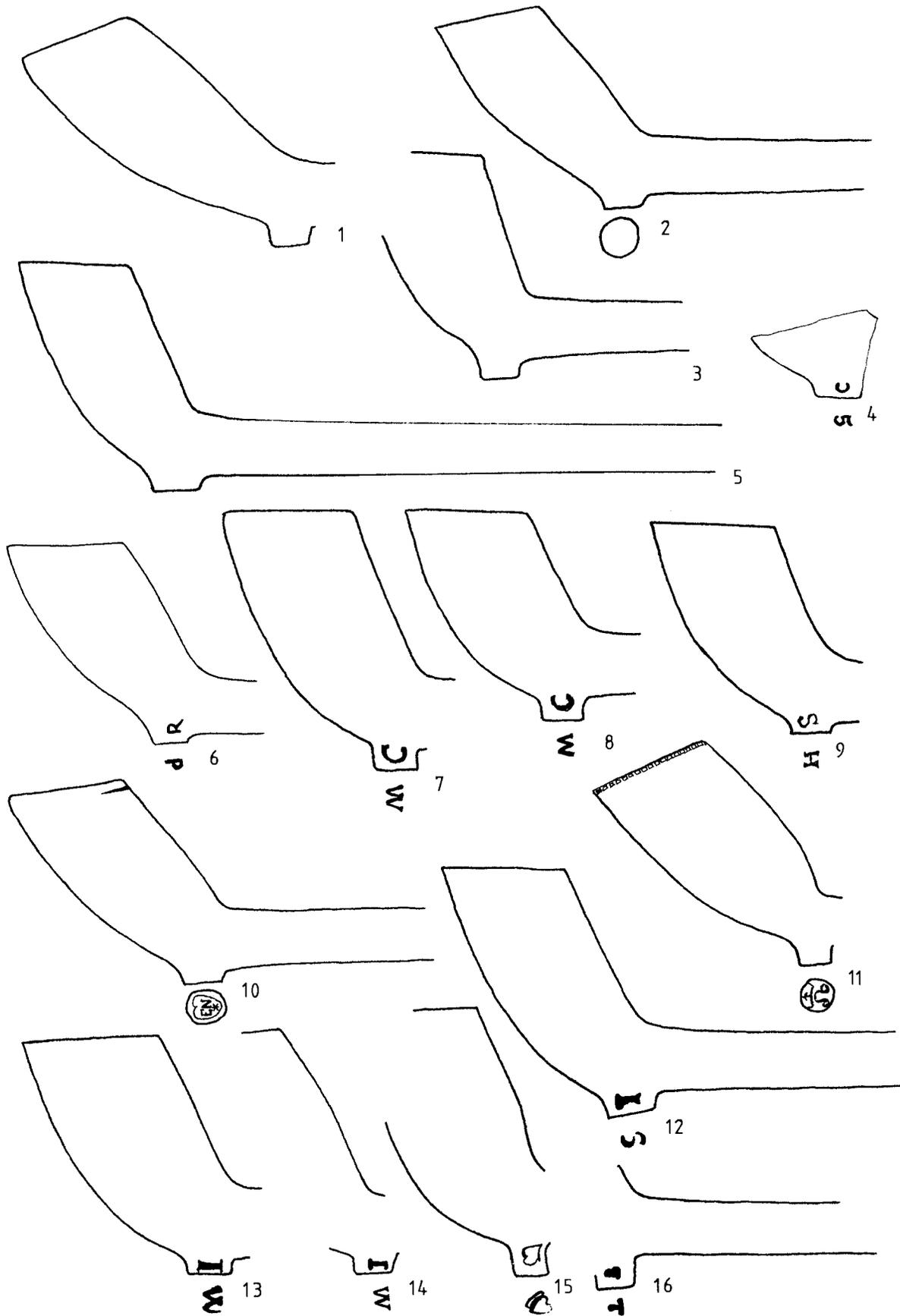


Fig. 37 OATLANDS

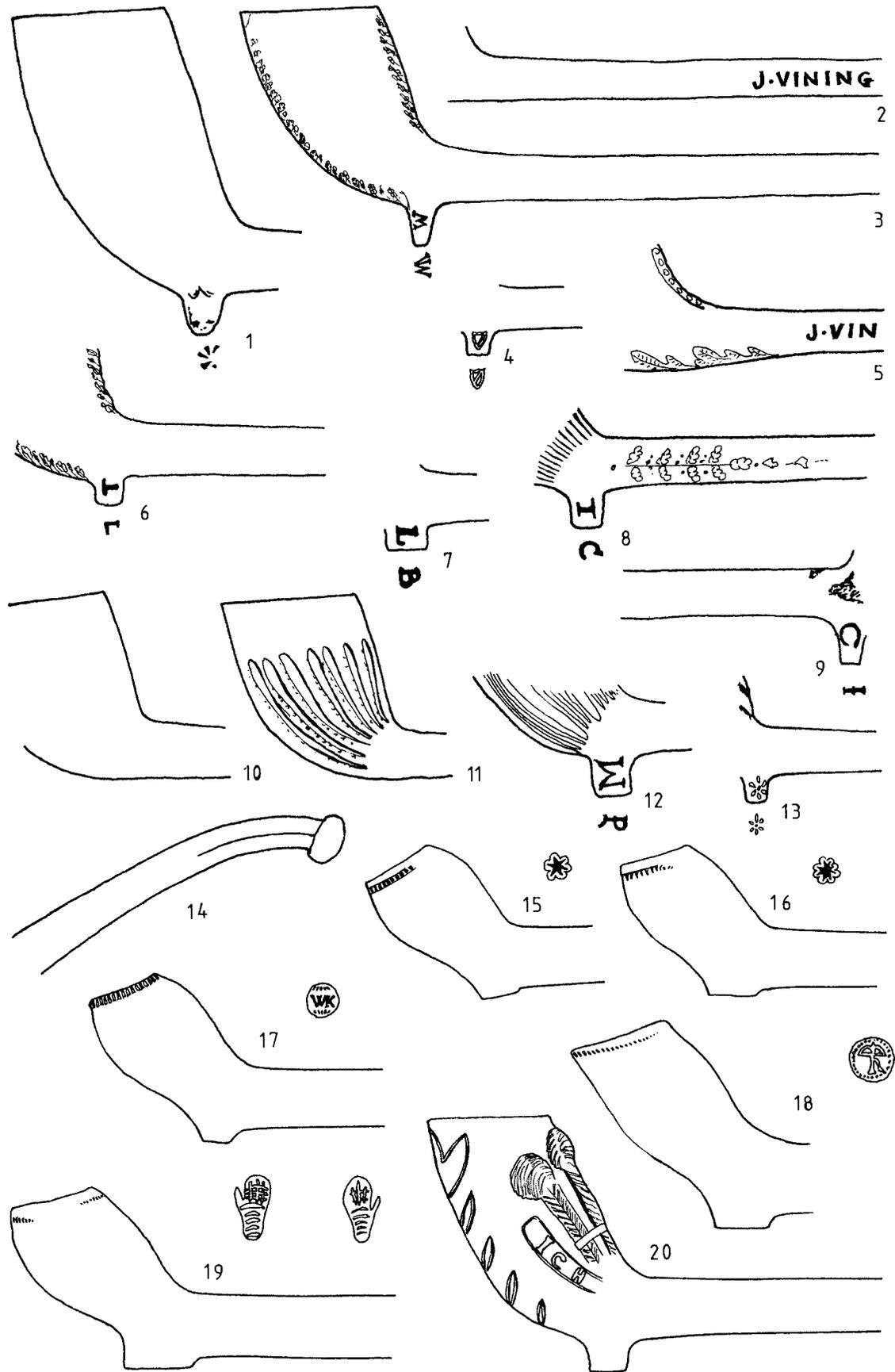


Fig. 38 OATLANDS 1 - 14 NONSUCH 15 - 20

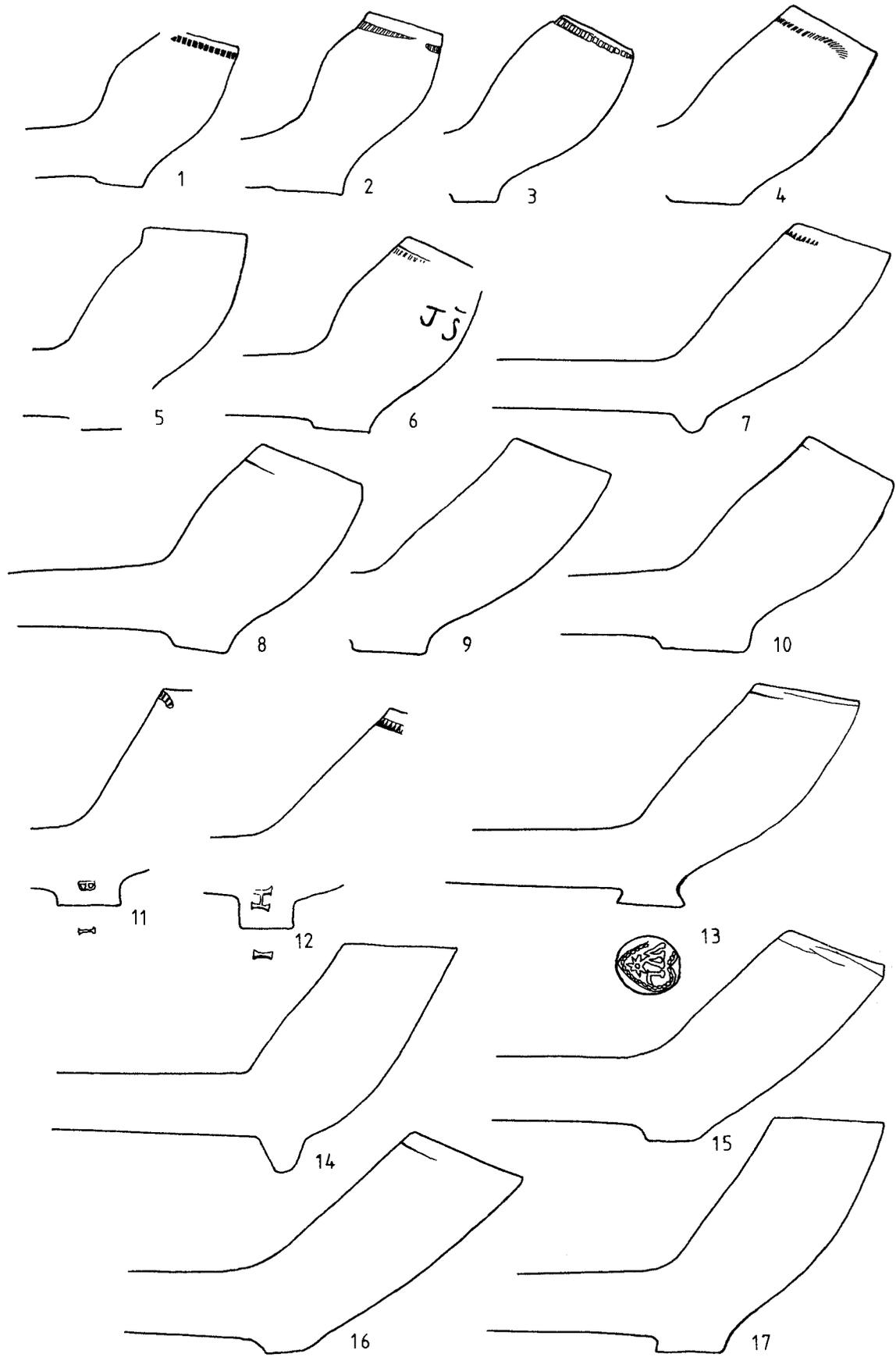


Fig. 39 WEYBRIDGE

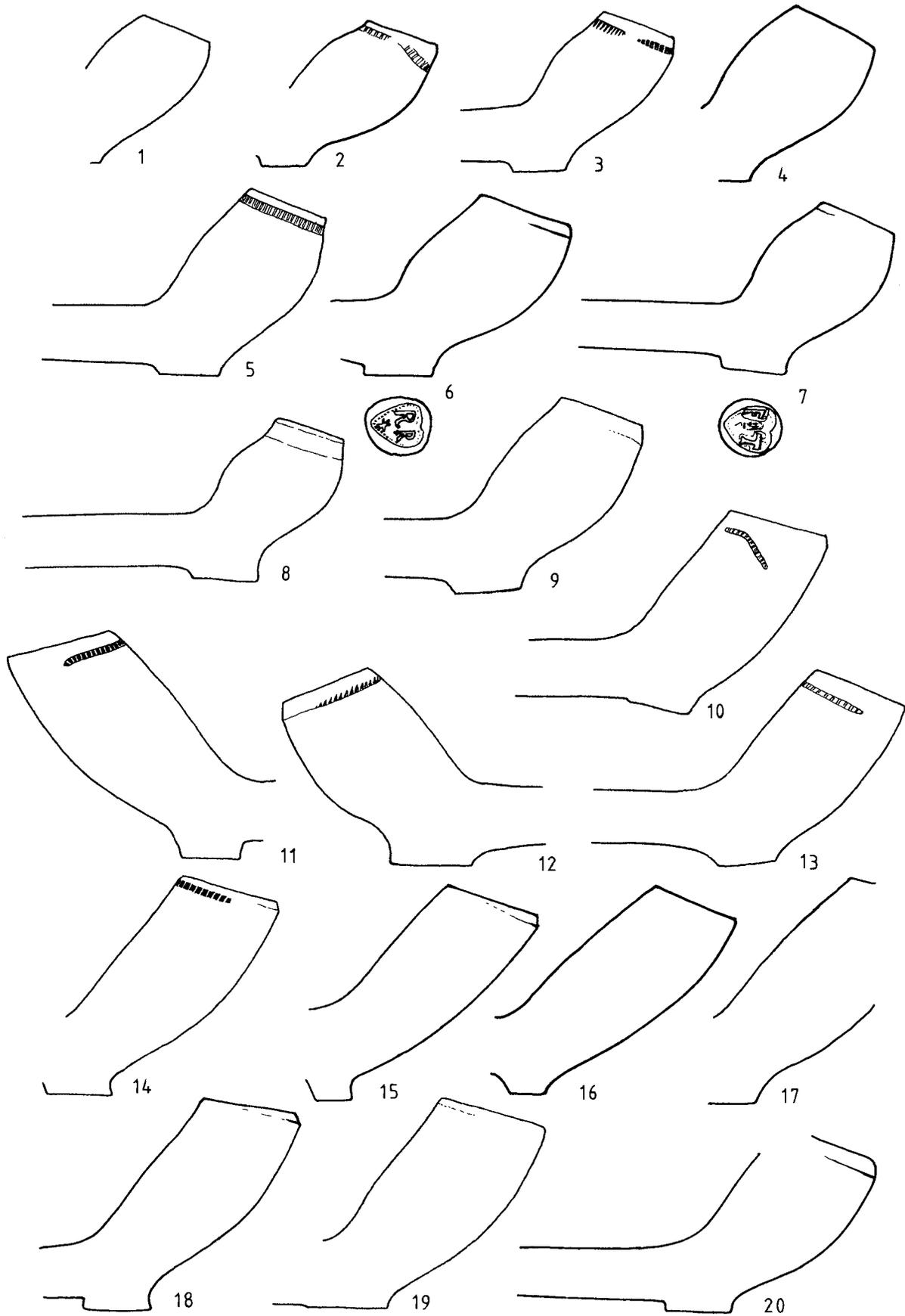


Fig. 41 EGHAM

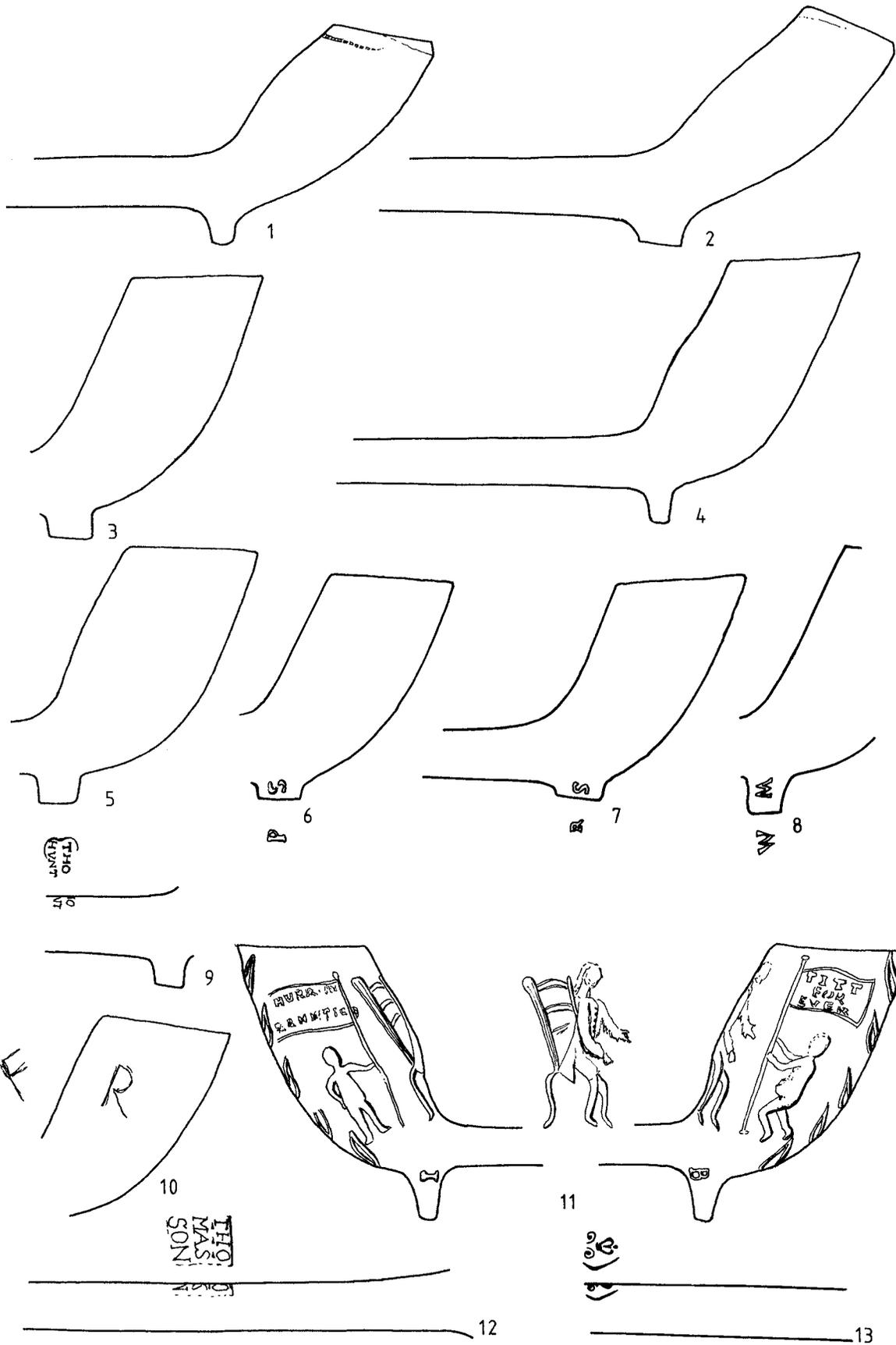


Fig. 42 EGHAM

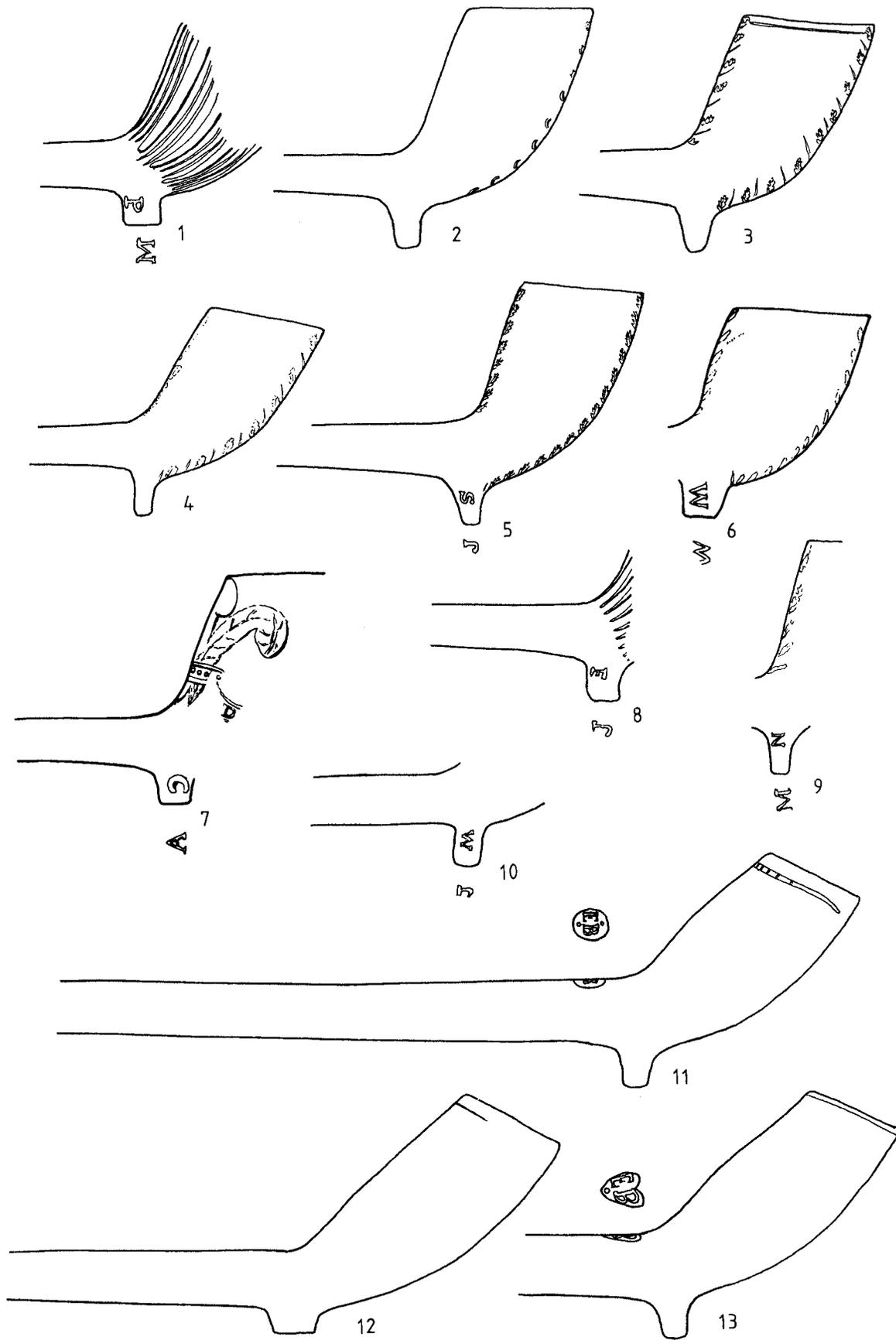


Fig. 43 EGHAM 1 - 10 KINGSTON 11 - 13

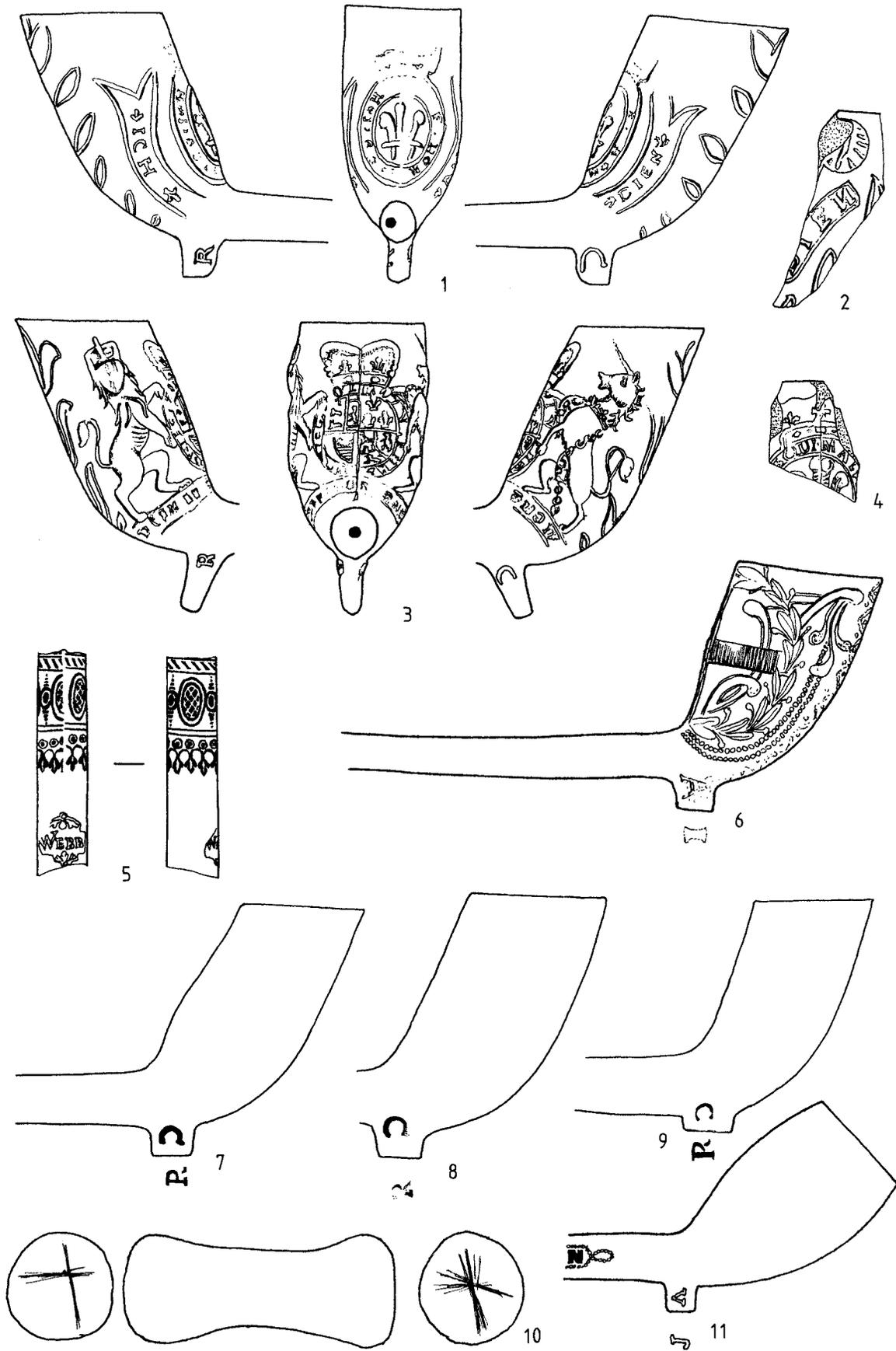


Fig. 44 KINGSTON

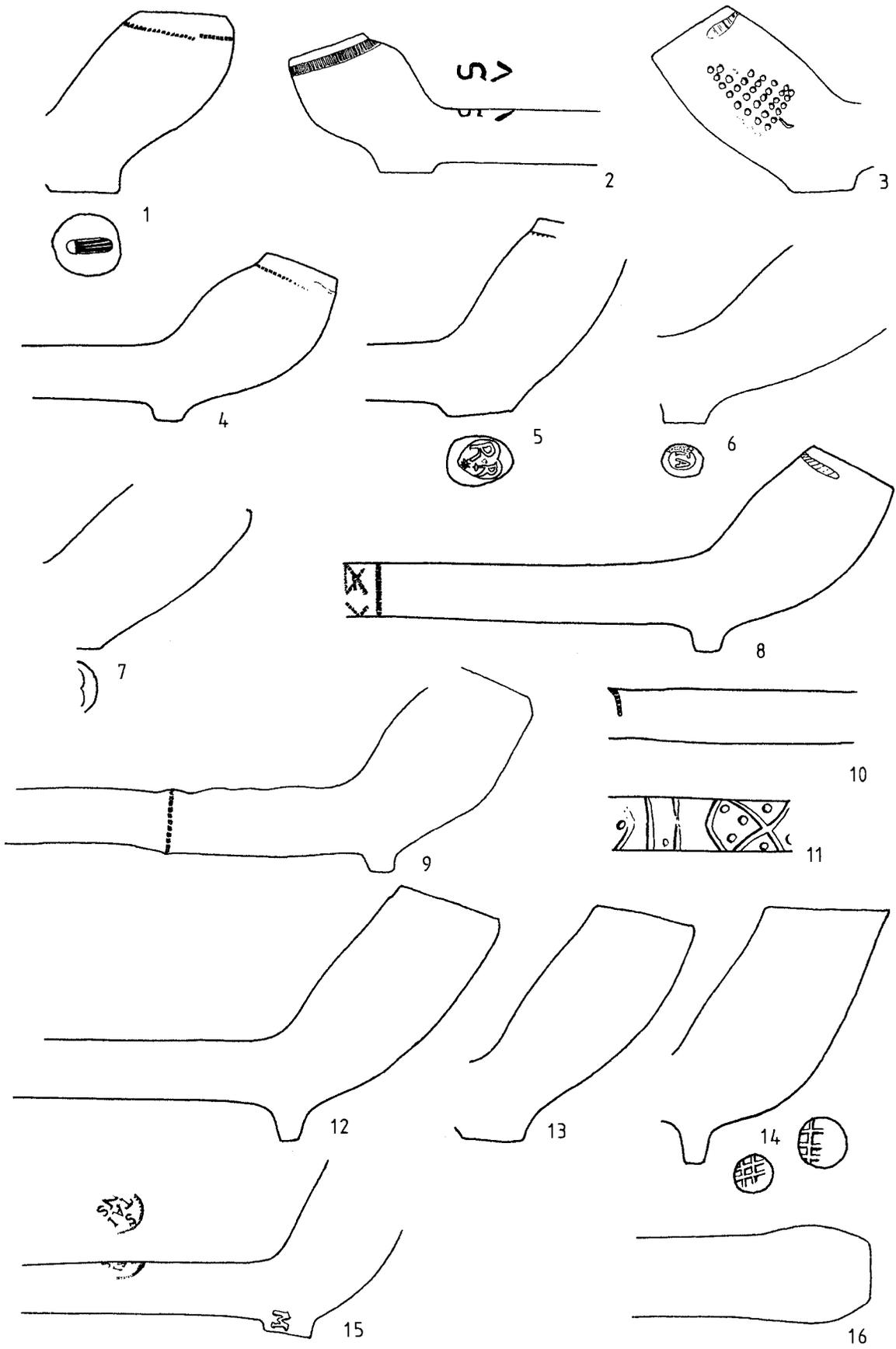


Fig. 45 STAINES

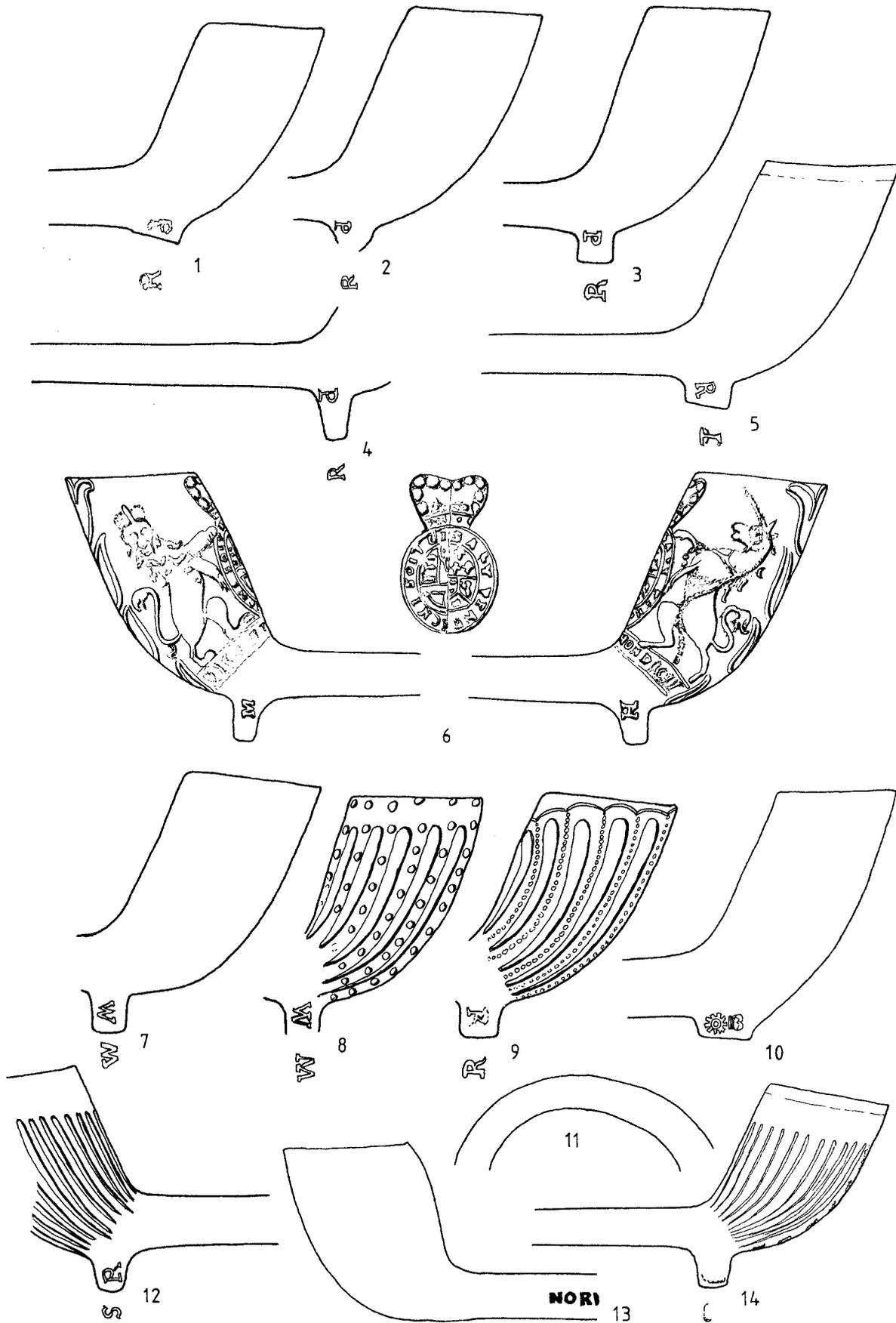


Fig. 46 STAINES

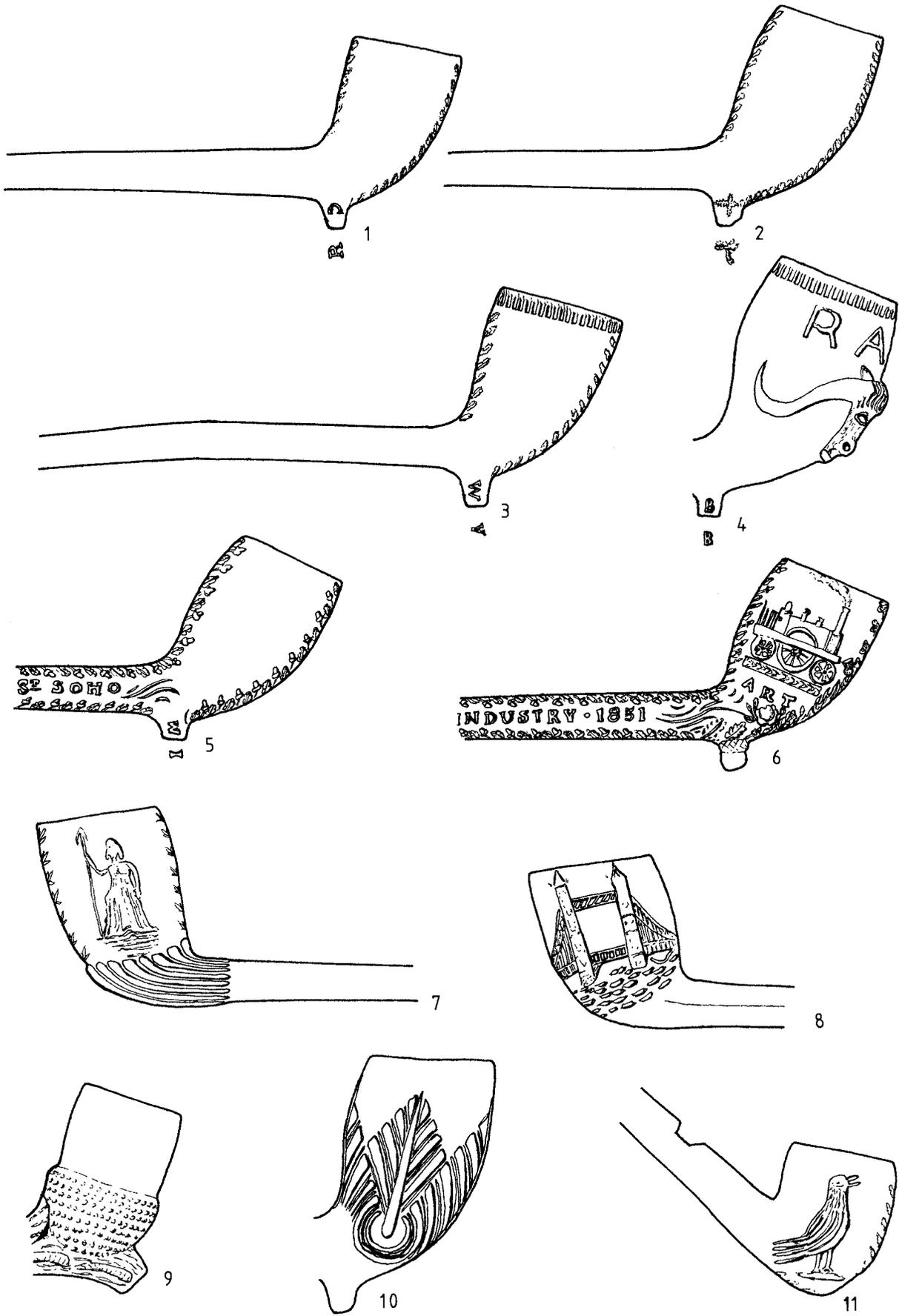


Fig. 47 SURREY

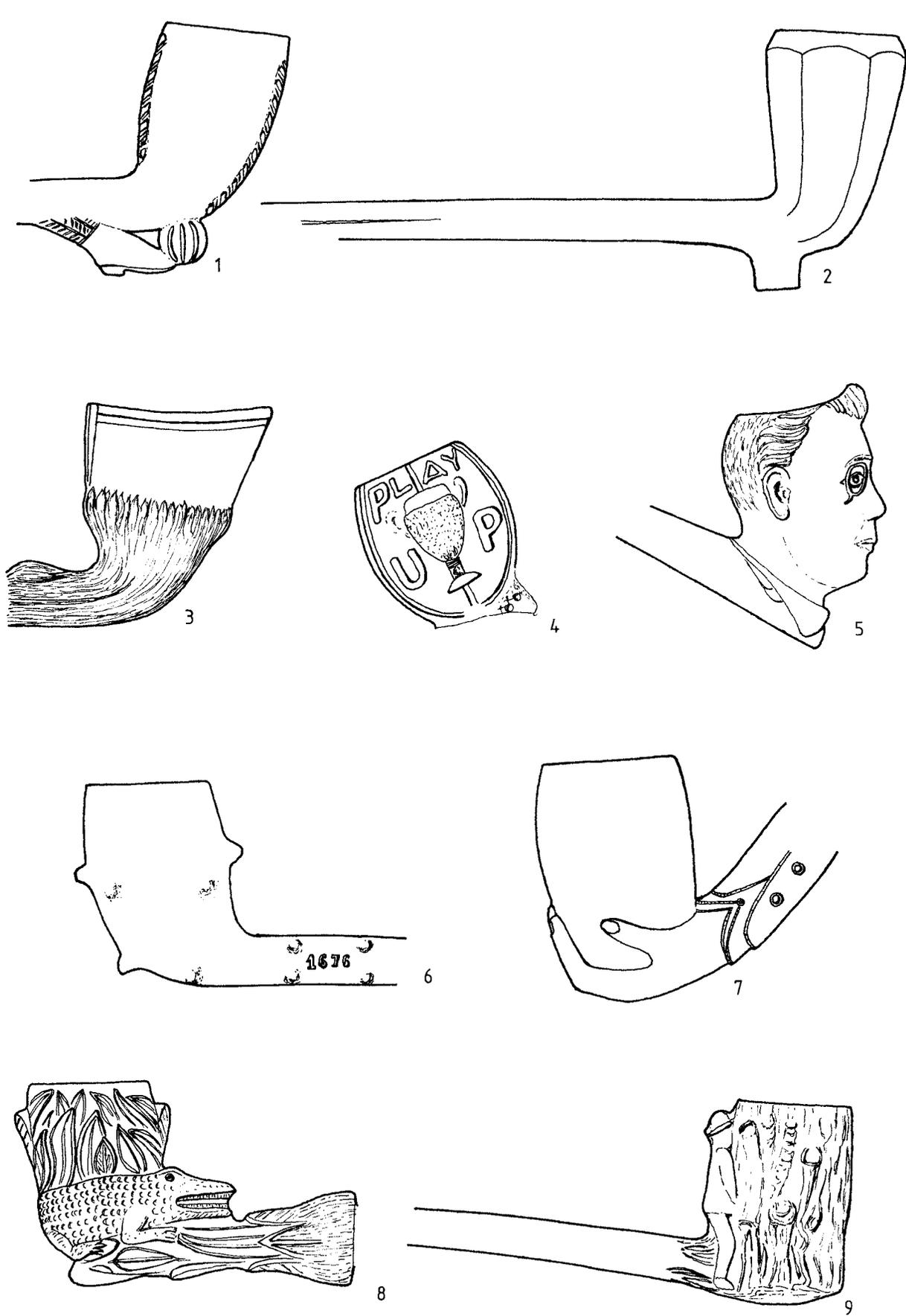


Fig. 48 SURREY

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