

## A STUDY OF CLAY OBJECTS FOUND AT CHARING

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During restoration work on an early fifteenth-century hall-house in 1985, the owner, Mr A. Hogben was taking down a plaster ceiling when a large number of clay objects (Plate I) fell to the floor. At least

PLATE I



Examples of the Clay Objects.

PLATE II



The Hall Ceiling after the Removal of the Plaster.

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50 per cent were shattered, but forty-seven objects were saved. They had been clustered in the angle formed by the main ceiling joist and the original intermediate tie-beam, between that and the first side joist of the early seventeenth-century infloored hall. No evidence of a bag or container was found. The objects could only have arrived in the find position after the plaster ceiling was put up as it effectively sealed the divisions of the chamfered and stopped side joists. The ceiling being of lime/hair plaster and cleft oak lathes was put up some time between the later seventeenth and mid-nineteenth centuries. All the objects were on the right-hand side of the main joist as seen when facing the tie-beam (Plate II). It seems most likely that the objects came to the find position by being pushed through a hole at floor level in the plaster wall of the upper room over the parlour end. In theory, it would have been possible to lift the fourteen-inch floor-boards, thought to be contemporary with the seventeenth-century inflooring but, as these had been laid parallel with the side joists, it would not have been easy to lift them, and there is no sign that the boards had been cut through.

The following description of these unfired clay objects does not include individual weights as there has been a slow and irregular moisture loss in the last six months – not every one losing moisture at the same rate although those not under particular investigation have been kept under the same conditions. When received from the owner the objects were found to weigh from 42.5 gm. to 113.4 gm.

KEY. x – smooth sides and rounded top  
 s – smooth top (not incised)  
 i – incised top  
 a – angled top  
 l – level top  
 g – grooved top  
 b – black contamination  
 All measurements are in cm.

<i>Height</i>	<i>Description</i>	<i>Base diam.</i>	<i>Top diam.</i>
<b>Conserved</b>			
1 2.5	i l b	3.0	2.5
2 4.0/3.0	i a	3.5	2.5
3 3.5/2.0	i a b	3.0	2.5
4 4.1/2.5	Fig. 1 i a b	3.5	3.0
5 3.0/1.2	i a	3.5	3.0
6 3.0/2.0	i a	3.6/3.2	3.0
7 4.0	Fig. 2 x	4.5	3.5
8 2.4/1.0	i a b	3.8	3.5
9 3.5/2.4	i a	4.0/3.5	3.0
10 3.2/1.0	i a b	3.5/3.0	2.5

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<i>Height</i>	<i>Description</i>	<i>Base diam.</i>	<i>Top diam.</i>
Not conserved			
11 3.2	x l	4.7	3.5
12 3.5	x l b	4.0	3.0
13 3.5	s l b	3.0	2.5
14 3.7	s l	3.3	2.5
15 3.8	s l	4.0	3.0
16 3.0	s l	3.0	3.0
17 3.2	s l	3.0	2.5
18 3.0	s l	3.0	2.5
19 5.0	s l b	4.0/3.0	2.5
20 3.7/2.0	i a	4.0	3.0
21 3.3/1.5	i a	2.7	2.5
22 3.6/2.3	i a b	2.5	2.5
23 3.2/1.8	i a b	3.0	2.5
24 3.5/2.0	i a b	4.0	3.5
25 3.8/2.5	i a	3.3	3.1
26 2.5/1.2	i a b	3.6	3.3
27 3.0/2.3	i a	3.2	3.0
28* 4.0/2.5	i a b	4.0	3.5
29 3.0/1.5	i a	4.1	4.0
30 3.2/2.0	i a b	3.0	3.0
31 3.0/2.2	i a b	4.4	3.5
32 3.5/3.0	g	4.0	4.0
33 3.0+2.5/2.2+2.0	g b	4.0	3.5
34 4.0	i l	3.5/3.0	2.5
35 2.0	i l	3.5	2.5
36 3.2	i l	4.0	4.0
37 3.0	i l b	3.0	2.5
38* 3.0	i l b	4.5	3.5
39 2.2	i l	3.0	2.5
40 2.7	i l	4.0	4.0
41 3.0	i l	3.5	3.0
42 3.0	i l	3.5/3.0	2.0
43†	x	-	-

\* - Hole right through with some incising on base.

† - Retained by owner - comparable with others of x type.

Nos. 44, 45, 46 used for analytical experiments.

No. 47. Firing test by the Canterbury Pottery.

Although the bases of all the objects have been roughly smoothed to stand level, ten examples have an impressed mark similar to that shown in Fig. 1. The holes in the top have a reasonably consistent diameter of 13 mm. and with two exceptions (nos. 28 and 38) reach to between 4 mm. and 12 mm. of the base. Finger-prints visible on eleven objects made whilst the clay was wet appear to be those of an adult but no forensic tests have been made.

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Several possibilities for the original use were considered.

(a) Thin candle/taper holders. Grocers sold candles and the property was known to be a grocer's shop in both the seventeenth and nineteenth centuries, if not at other times. As many of the holes in these objects are at an angle of  $45^\circ$ , they would not have been practical for this purpose.

(b) Weights. It was not thought possible to judge if their present weights are comparable to the original. There is no trace of a foreign substance in any hole that might have been used for adjustment but, without firing, they could not have been used as weights.

(c) Containers. Again there is no apparent trace of any substance in the holes. Any liquid or greasy substance in an unfired clay container would have meant seepage into the clay, without a liner. It is possible that they were made to be fired at a later date.

(d) Children's games. Throwing from the end of a stick was suggested but, as the clay is so fragile, the turnover in objects would have been quite considerable.

(e) Architectural use. The possibility of two of the objects being used with a connecting rod for use as wall spacers was discussed with building experts. They bear no relationship to the Romano-British spacers found by the Canterbury Archaeological Trust. The examples illustrated in *Antiq. Journ.*, liv (1974), 279–80 resemble large cotton reels with a hole each end used with an iron holdfast. An example was shown to Richard Harris of the Weald and Downland Open Air Museum at Singleton. Although the experts there are as experienced in taking down buildings as in re-erecting them, he did not think parallels had been found and could offer no suggestions for an architectural use.

It was decided to investigate the owners of the property. It was sold by two brothers named Butcher to Ralphe Double and his son Richard in 1609. The room, once the parlour, was used as a grocer's shop by Richard Double. His inventory of 1615 confirms this and also that the open hall had been infloored. His father Ralphe obtained a licence to practise as a surgeon in 1612. In common with many seventeenth-century grocers the main stock in the shop was bolts of cloth and dry goods groceries. In addition, candles were made in a workhouse outside the main building. Amongst an assortment of odd items in the shop were quicksilver and brimstone. Brimstone or sulphur is to be found occasionally in seventeenth-century grocers' shops but no other example of quicksilver has yet been noted. As both these items were used for pharmaceutical purposes, it was thought there might be a connection between those substances and Ralphe Double, the surgeon. It is appreciated that use for ointments or unguents would not have been possible unless the clay had been

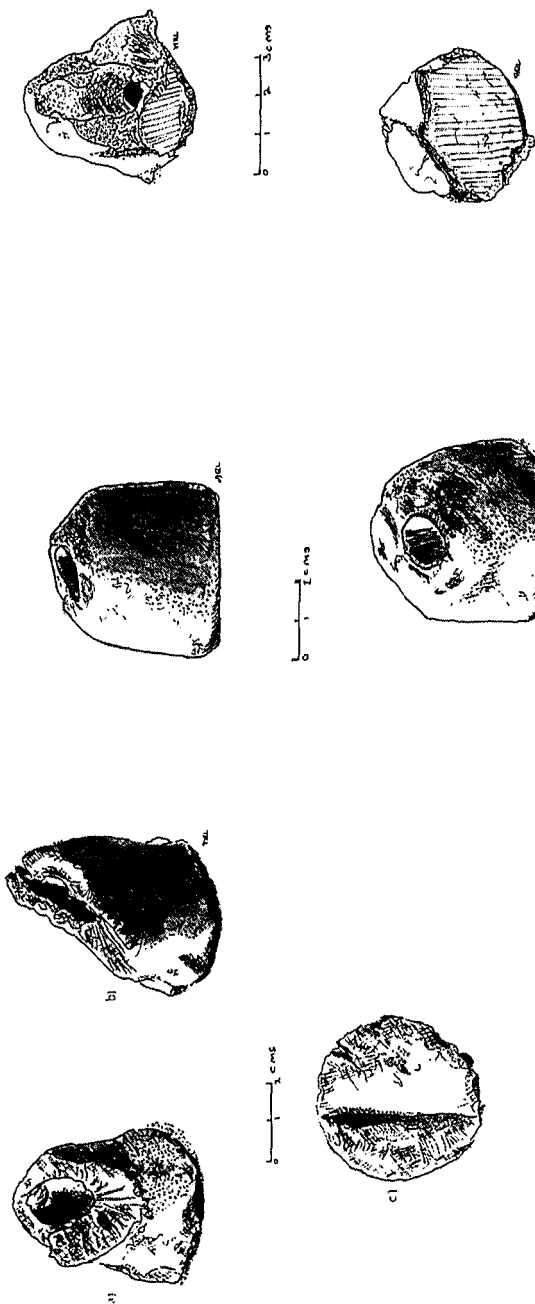


Fig. 1. (a) Incised Marks; (b) Angled Top; (c) Impressed Base.

Fig. 2. Smooth-sided, rounded Top.

Fig. 3. Showing Disc in Base.

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fired, but it was not known at this stage of the investigation whether the objects found were intended for later firing.

In an attempt to date the objects and hopefully to find parallels, photographs or examples were shown to the London Museum, the Pharmaceutical Society of Great Britain and the Wellcome Museum at the Science Museum in South Kensington and others. No similar objects were recognised of any of those approached.

It was felt that a more detailed study of the actual objects was necessary and, with the permission of the owner, thirteen specimens were taken to the Conservation Laboratory of the Institute of Archaeology at London University. Ten were reserved for conservation treatment and three for investigation and analysis that might indicate their use. The ten objects for conservation were photographed for record purposes and additionally photographed under ultra-violet light and filtered ultra-violet light. Some reflection and fluorescence was noted when the objects were viewed under ultra-violet light. The main body glowed yellow while the discoloured areas became purple.

Although the objects were considered to be unfired, all were very hard and many were burnished. One of the specimens for analytical use was placed in a beaker of distilled water (distilled to prevent contamination of the fabric). The specimen disintegrated in less than five minutes into a layer of fine silt, confirming that the objects were unfired. The silt was examined and a rough disc of a hard substance was found in it – approximately 6 sq. cm. and 2 mm. thick – coloured yellow, black and predominantly red (Fig. 3). When examined under a microscope the red appeared as a layer of crystals. Since the manufacturing techniques and use of the objects were unknown, the material and position of the 'disc' within the clay was of interest. Two small sections were broken off and examined using X-ray fluorescence. The analytical charts indicated the presence of iron and copper with the possibility of some mercury. To ascertain if the objects had ever been used to hold anything within the central hole, a thin section was taken from the wall in the hole. The object chosen for this was the one having the greatest contamination in and around the hole. A section weighing .06 gm. was taken from the surface – top and bottom – within the hole to a depth of 1 mm. within the fabric. The sample was taken for analysis by atomic absorption the results of which are still pending.

To see if discs might be present in other objects, the ten specimens to be conserved were photographed by x-radiograph. At least two of the specimens appear to have something similar just below the base of the hole.

To find out if the objects were ever likely to have been intended for

firing, one was submitted to the Canterbury Pottery for trial firing. The sample was broken in two, one half fired at 1000°C, the other at 1300°C. At 1000°C, the fabric turned red and became harder but still absorbed moisture. At 1300°C, the clay melted. It was thought that it was likely to be a local Gault clay such as is found in the Charing area, full of impurities and in the form presented not intended for firing.

Since the objects are very vulnerable to water, the ten samples taken for conservation have been consolidated with a 7% solution of Paraloid B-72 (ethyl methacrylate copolymer) in toluene. Application was by total immersion in the solution while in a vacuum chamber at 600 millibars. Consolidation appears to have been successful with only a very slight discolouration.

*This study has been written in the hope that comparables will come to light.*

#### ACKNOWLEDGEMENTS

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