

THE FROME COPSE GLASS-HOUSE,
CHIDDINGFOLD:

DISCOVERED SEPTEMBER, 1921.

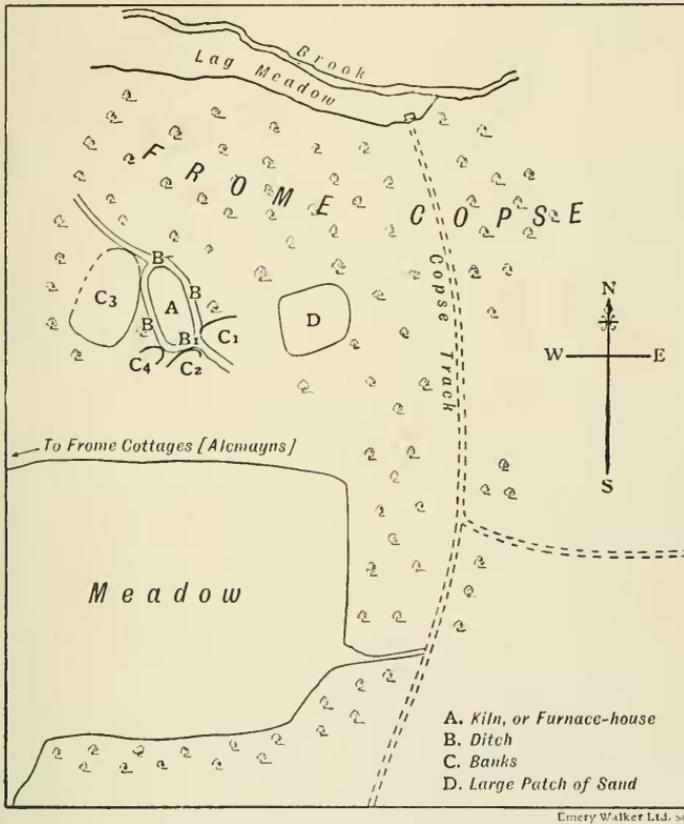
BY

BRENDA C. HALAHAN.

THIS glass-house, which is a very good and characteristic example of Chiddingfold glass-houses, appears to have been less interfered with in replanting the copse in which it is situated than has been the case with the other glass-houses, so it has been possible to make notes and to form some conjectures about it. From the 13th to the early 17th century, Chiddingfold was the centre of glass making in England, and glass in large quantities and of magnificent quality was evidently made there.

The Frome Copse glass-house was probably worked successively by the Alemayn family and the Shurterre's. There is no record of the actual holder of the wood in which it is situate, but the nearest dwelling-house—which, with the garden and holdings, abuts on to Frome Copse, and which was known originally as Alemayns, and later, as Alexander's (the present block of four cottages is probably on the site of the older building)—was, as its name implies, owned originally by the glass-making family of Alemayn, and sold by them, in 1368, to the glass-making family of Shurterre. The Alemayn family, first mentioned in Chiddingfold in 1330, may have been Flemish glass-makers, but it is equally possible that they were of Frankish or Rhenish origin.

The Rev. T. S. Cooper believed that the name Shurterre was a corruption of Chartres, proving them, in common with most of the Chiddingfold glass-makers, to be of French origin.



The glass-house lies fairly deep in Frome Copse, near the brow of the hill, and the fall of the land is from S.S.-E. to N.W., a brook running at the foot of the northern slope from W. to E. The dwelling-house—Alemayns—lies about a quarter of a mile due west of the kiln, at the top of the hill, and it is probable that a track ran from the house to the kiln.

The outlines of the kiln can be traced very plainly. In the centre is a very low, oblong mound, the soil of which is composed entirely of brick or tile rubble, the

remains of the walls of the furnace. This is the actual position of the kiln, or furnace-house, and it lies S.E. to N.W., with a slight downward trend to N.W., following the contour of the copse. All around this mound can be traced a shallow ditch, and outside that again, low mounds or banks, partly natural and partly caused by the evident fact that, when the ditch got too full of rubbish from the sweepings of the kiln floor, it was cleared out on to the neighbouring banks. This can be proved by the fact that in these banks, at a very shallow depth, are large pockets of glass, on the faces of the banks nearest the ditch. A rough map here given will show the general plan of the kiln and the places in which glass has been found up to the present.

The first place to be excavated was the bank, C. 1. Glass was found here at a depth of 2—6 inches below the surface, chiefly white window glass, but also a few good pieces of coloured window glass. There were also rough lumps of glass and drippings, one perfect glass handle, and what is apparently a chemist's pestle, about $3\frac{1}{2}$ inches long. Most of the glass found here is but little decayed, probably owing to the fact that the soil is sandy and well-drained by the steep fall of the ground.

The position indicated at C. 2 was next explored, but the glass there was fragmentary and in small quantities, entirely vessel glass, rather opaque-looking; this is probably from the quality of the glass itself and not owing to decay. It is possible that this is a later glass, in which a whiter sand or a different percentage of silica has been used.

The third place to be explored—C. 3—proved much more interesting. This place is a shallow mound, practically artificial, and falling away down hill to the N.W. The glass found here covered a larger area than at C. 1 or C. 2, and was more varied in character, as in age. It was found at any depth up to 2 feet, but the deeper levels are where it has been pushed down by the roots of the copse growth. There were many varieties of vessel glass here, including the "kicks" or bases of

bottles, necks of bottles, fragments of ribbed or fluted vessel glass, some pieces of glass tubing, and one or two fragments of handles. In one part there were several pieces of crucible—the large stone-ware jars in which the glass was boiled—of good quality.

Before going into a description of the window glass it would be as well to explain the terms which will be used.

Bull's-eye glass is window glass of a tremendous thickness, *i.e.*, about $\frac{1}{4}$ -inch at the edge to 1 inch in the middle, very dark in colour, though technically "white" glass. As in the case of all Chiddingfold glass, the "white" glass is very green in tone, owing to the high percentage of iron in the sand. The "bull's-eye" itself is made by the mouth of the blowpipe in the centre of the sheet of glass, which caused a rough round lump where the glass was cut away from it.

Grozed glass is where the edge has been cut with a grozing-iron, which was in use for glass-cutting before the introduction of the diamond. The flint was also used here for glass-cutting, for a flint cut on the glass is very distinct from a grozing-iron cut, showing a curious "feathering" on each side of a thin cut.

Pot-metal glass is glass of one colour throughout.

Flashed glass is a very thin coating of colour on white glass.

Composite or *layer* glass was made in layers of two colours to form a third colour.

The white window glass at this position, C. 3, was very varied in thickness and in quality, much of it having grozed edges. The coloured window glass included the following:—

All shades of pot-metal blue, from sapphire to the palest sky blue.

Flashed green, some of it, as will be shown in the schedule below, with a surface flash, and some with the green flash protected by the thinnest covering of white glass. Pot-metal green is very rare in this kiln.

Flashed ruby, as the green, with either internal or external flash.

Pot-metal olive brown, which is characterised by very long oval bubbles right through the glass.

Rose, rose brown, and brown red pot-metal, and the two first colours also in flashed glass. Any shade of pot-metal red is very rare—the ruby is invariably flashed—and this is probably from the density of the colour. It is impossible to see that it is red glass at all until it is damped and held in a very strong light.

Composite glass, in purple colours, from strong deep blue purple through grey to the palest amethystine mauve.

This purple glass, which has now been found on the sites of four kilns in Chiddingfold, is extraordinarily interesting. It is made in layers of rose, brown rose or ruby, on grey blue or sapphire, sometimes with one layer of each colour, *i.e.*, pot-metal blue with a thinner layer of rose, sometimes with blue and rose and blue, or with rose and blue and rose; and it has been found, though not at this kiln, with as many as five layers of the two colours alternately, and this in glass of barely $\frac{1}{16}$ th of an inch thick. This composite glass has been supposed, hitherto, to have been all imported; the fact that it is found in large and varied quantities on the site of the kilns would seem to disprove that theory. And also, considering the natural materials at their disposal, the extreme roughness of their surroundings, and the difficulties entailed in making glass at all under these circumstances, compared with the wonderful results in colour and quality obtained, the Chiddingfold glass-makers are proved to have been no rough bunglers but master-craftsmen.

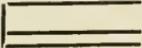
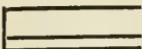
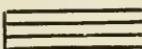
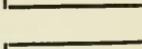
Only four small fragments of painted glass have been found at present at this particular site. At site C. 4 more crucible was found, and lumps of rough glass. But the thing of chief interest at this spot was a mediæval shallow earthenware unglazed vessel, broken into small fragments, of which the greater part of the base and part of the sides, including a spout, have been found. Its diameter at the top is 9 ins., and across the bottom 7 ins., and the height about 4 to $4\frac{1}{2}$ ins.

At the present time the ditch is being explored at the point B. 1, at the base of the bank C. 1. Here the glass is somewhat further below the present surface, and about 6 ins. of top soil has to be removed before arriving at the glass. The upper glass then laid bare is chiefly vessel glass of a very interesting nature, with a sprinkling of window glass, including many fragments of coloured. Below this is white window glass, with a few pieces of coloured; and below this again are slabs of "bull's-eye" glass, apparently of great age, lying among wood ashes on slabs of charcoal, which would have been used for fuel for the furnace. The wood ash would seem to have some property that caused great decay in the glass near it, making it very brittle, and staining it a deep dirty brown. This decaying and weathering of the glass makes it very difficult to arrive at any sort of date: for, to give only one example, two pieces of what is evidently the same vessel have been found at opposite sides of the kiln; one, not more than an inch below the surface, is as fresh and undecayed as though it had fallen there yesterday; the other, from near the bottom of the ditch, is so pitted with decay it might be a thousand years old. The vessel glass from the ditch includes the "kicks," sides and necks of bottles, of various shapes and sizes. The largest and the most usual type has a flat lip rather more than an inch wide, which turns down into a funnel-shaped neck about an inch across. The diameter from side to side of the lip is $3\frac{1}{2}$ ins. There are many fragments of unlippped bottle necks, both in plain and fluted glass; also the remains of some curious little tumblers, with thick rounded bases, and standing about $3\frac{1}{2}$ ins. high. A few very nicely-shaped handles have been found here. The coloured glass here is again extraordinarily varied, both in the range of colours and in thickness, and a list of the most interesting specimens, both from position B. 1 and from C. 3, is appended.

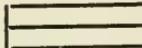
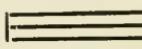
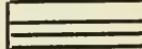
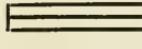
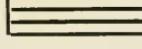
It is easier to work on this glass-house than on the others that have been excavated in Chiddingfold, as it is possible to trace the outlines and to get a good general idea of the whole.

SECTIONS OF COLOURED GLASS, FROM SITE C. 3.

COMPOSITE.

<i>Green, bright,</i>	$\frac{1}{16}$ in. thick		Green 3 White 1
„ lightish,	$\frac{2}{16}$ „ „		Green 3 White 1
„ „	$\frac{3}{32}$ „ „		White 4 Green 1 White 1
„ emerald,	$\frac{2}{16}$ „ „		White 1 Rich emerald 1 White 1 Green pot-metal 3
„ light olive,	$\frac{2}{16}$ „ „		Lemon yellow 1 Emerald 1 Lemon yellow 1

Purple Shades.

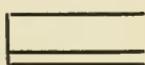
Grey violet,	$\frac{1}{16}$ in. thick		Sapphire 2 Rose 2 Sapphire 1
Grey,	$\frac{1}{16}$ „ „		Sapphire 1 Dull rose 1
Grey violet,	$\frac{2}{16}$ „ „		Sapphire 2 Rose 1 Sapphire 1
Grey mauve,	$\frac{1}{16}$ „ „		Sapphire 1 Bright rose 1
Rosy mauve,	$\frac{2}{16}$ „ „		Light blue 1 Rose 1 Light blue 1

COLOURED GLASS FROM SITE B. 1.

POT-METAL.

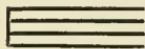
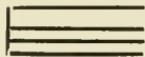
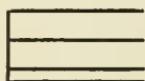
Red (port wine colour),	$\frac{2}{16}$ in. thick.	
Rose,	$\frac{1}{16}$ „ „	
Rose pink,	$\frac{1}{16}$ „ „	
Rose brown,	$\frac{1}{16}$ in. thick.	
Bright green,	$\frac{1}{16}$ „ very much decayed, app. pot-metal.	
Sapphire blue,	$\frac{2}{16}$ „ thick, no decay, very early.	
Grey blue,	$\frac{1}{16}$ „	
„	$\frac{3}{32}$ „	
„	$\frac{2}{16}$ „ very transparent, no decay.	
„	$\frac{1}{32}$ „ very pale.	

FLASHED.

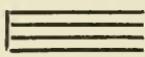
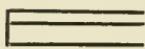
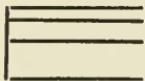
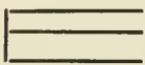
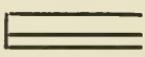
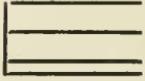
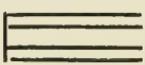
"Chiddingfold" green,	$\frac{2}{16}$ in.	} 	Very white	4
"	" $\frac{3}{32}$ "		Green	1
Orange vermillion,	$\frac{3}{32}$ "		very thin, ruby flash on yellow white.	
Ruby,	$\frac{1}{16}$ "	} exterior flash on greenish white.		
"	$\frac{2}{16}$ "			
"	$\frac{3}{32}$ "			

COMPOSITE.

Various Colours.

Ruby,	$\frac{3}{32}$ in.		White	
			Ruby	
			White	
"Chiddingfold" green,	$\frac{2}{16}$ "		White	2
			Green	1
			White	1
Pale yellow green,	$\frac{3}{32}$ "		Yellow	3
			Green	3
			Yellow	1

Purple.

Grey violet,	$\frac{1}{16}$ in.		Grey blue	1
			Bright rose	1
			Grey blue	1
Pinkish purple,	$\frac{2}{16}$ "		Blue	1
			Dull rose	2
Brilliant violet,	$\frac{2}{16}$ "		Rose	1
			Pale sapphire	2
			Rose	4
Imperial purple,	$\frac{3}{32}$ "		Sapphire	2
			Rose	3
Blue purple,	$\frac{3}{32}$ "		Pale bright rose	2
			Sapphire	1
Grey blue,	$\frac{1}{16}$ "		Sapphire	3
			Rose	3
			Sapphire	1
Cold violet,	$\frac{3}{32}$ "		Rose	1
			Grey blue	2
			Rose	1