

No. 777,725.

PATENTED DEC. 20, 1904.

J. C. FOX.

CUPEL.

APPLICATION FILED MAR. 12, 1904.

NO MODEL.

Fig. 1.

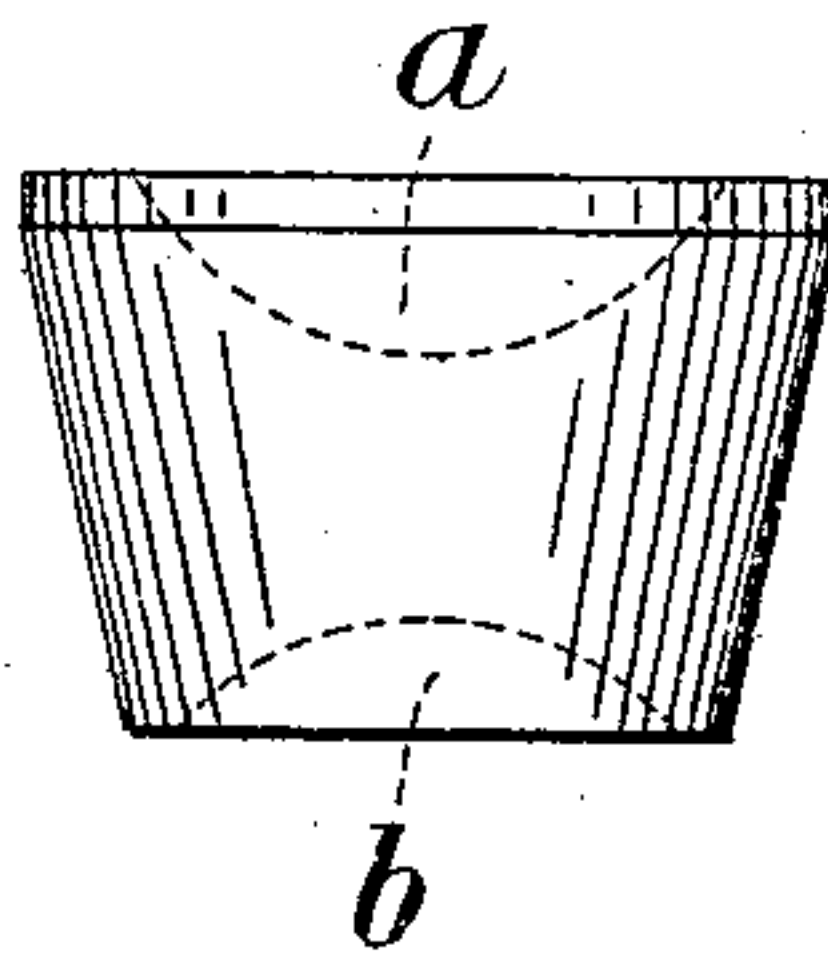


Fig. 2.

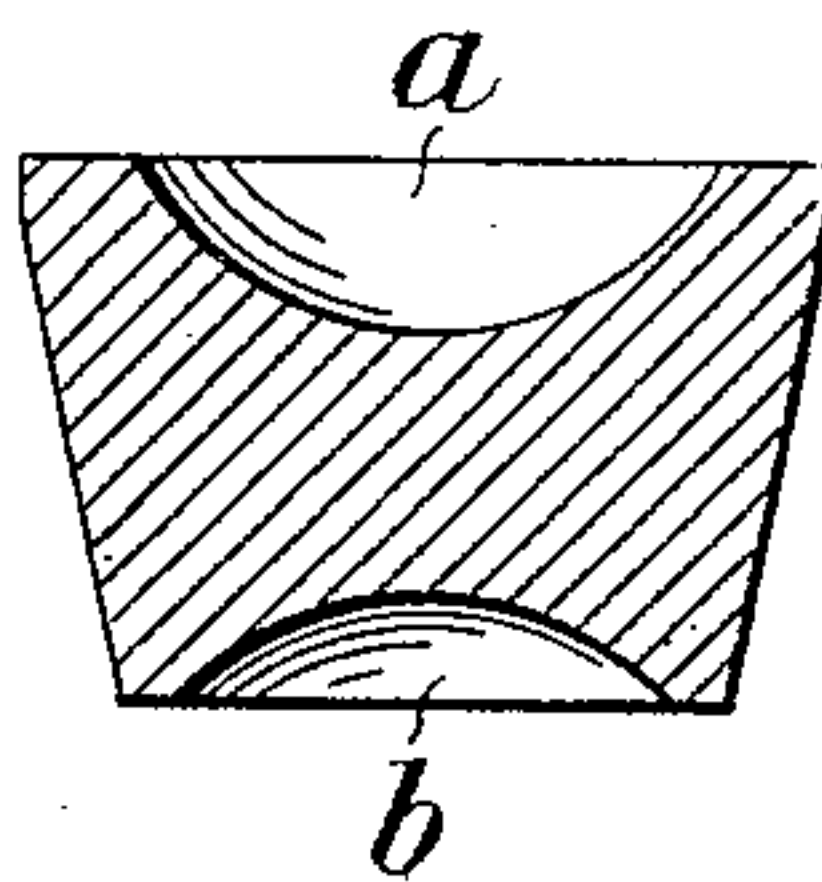
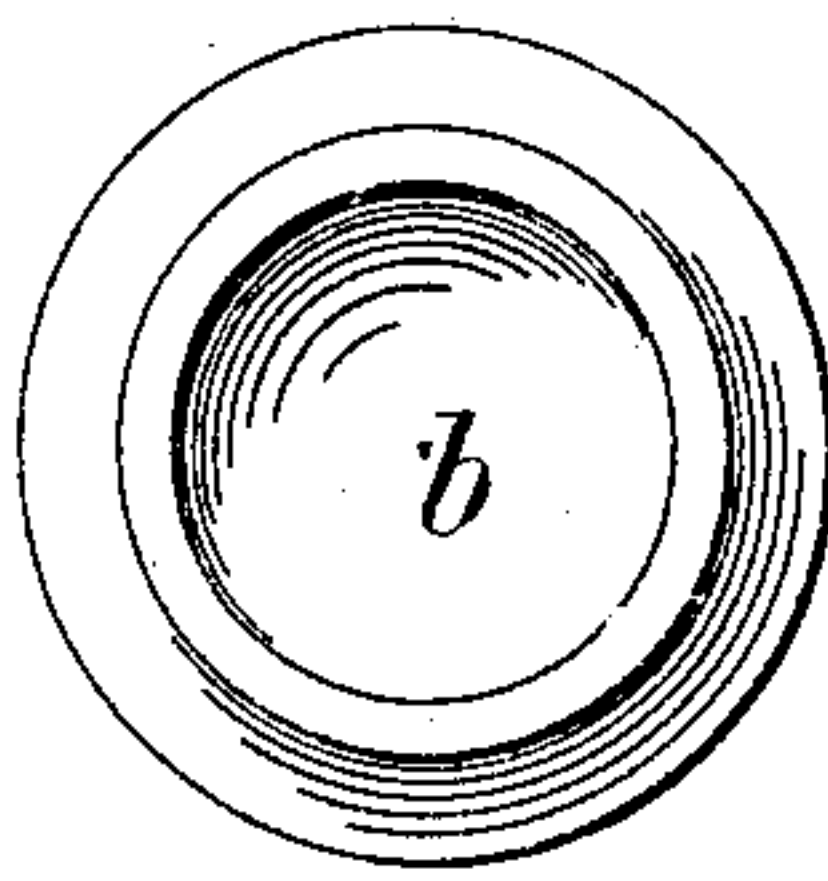


Fig. 3.



Witnesses

J. K. Moore
P. H. Hubbard

Inventor

James Charles Fox
By Whitaker & Trowest Atty.

UNITED STATES PATENT OFFICE.

JAMES CHARLES FOX, OF BATTERSEA, LONDON, ENGLAND, ASSIGNOR TO
THE MORGAN CRUCIBLE COMPANY, LIMITED, OF LONDON, ENGLAND.

CUPEL.

SPECIFICATION forming part of Letters Patent No. 777,725, dated December 20, 1904.

Application filed March 12, 1904. Serial No. 197,842.

To all whom it may concern:

Be it known that I, JAMES CHARLES FOX, a subject of the King of Great Britain, residing at Battersea Works, Battersea, London, Eng-

land, have invented new and useful Improvements in the Manufacture of Cupels, of which the following is a specification.

This invention relates to the manufacture of cupels of bone-ash and other material used by assayers. It is found in using such cupels that the litharge employed in the assaying operation as it is absorbed passes through the cupel in a practically vertical direction, owing to its great specific gravity, without spreading through the entire mass thereof, so that the full absorptive capacity of the cupel is not fully utilized, and, furthermore, the litharge frequently penetrates into the floor of the muffle, and so causes the rapid deterioration of the latter. In view of these objections it has hitherto been the custom to use cupels having a larger capacity of absorption than is actually necessary for the particular samples being assayed.

The object of this invention is to provide means whereby the full absorptive capacity of the cupel is utilized, thereby obviating the necessity for using an unnecessarily large cupel.

According to this invention the base of the cupel instead of being made flat, as heretofore, is hollowed out or recessed slightly on the under side, so as to form a space between the bottom of the cupel and the floor of the muffle, the effect of this space being that the litharge when it reaches the bottom of the cupel cannot pass into the floor of the muffle, but will be caused to spread laterally until the full absorption of the cupel is reached.

This improved construction will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is an elevation of the improved cupel. Fig. 2 is a vertical section of the same, and Fig. 3 is an under side view.

a indicates the recess into which the sample to be assayed is placed, and *b* the recess made in the base of the cupel in accordance with the invention. With this construction it will be understood that when the litharge has penetrated through the cupel it comes into contact with the surface of the recess *b* and is thereby prevented from moving farther in a vertical direction, but compelled to move in a lateral direction, and so penetrate into that part of the cupel which would not otherwise be utilized.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A cupel consisting of a homogeneous body, with parallel top and bottom faces, the upper face being provided with a recess to receive the sample to be assayed, and the lower face being hollowed out so that only a small area will be in contact with the surface on which the cupel stands, said homogeneous body having no obstructions within the same to percolation from the top to the bottom thereof, substantially as described.

2. A cupel consisting of a body diminishing in diameter from top to bottom and having no obstructions to percolation within the same, the bottom face being hollowed out or recessed so that only a small area will be in contact with the surface on which the cupel stands, substantially as described.

JAMES CHARLES FOX.

Witnesses:

JOHN E. BOUSFIELD,
C. G. REDFERN.