

(No Model.)

J. BAVIER.

CRUCIBLE.

No. 259,282.

Patented June 13, 1882.

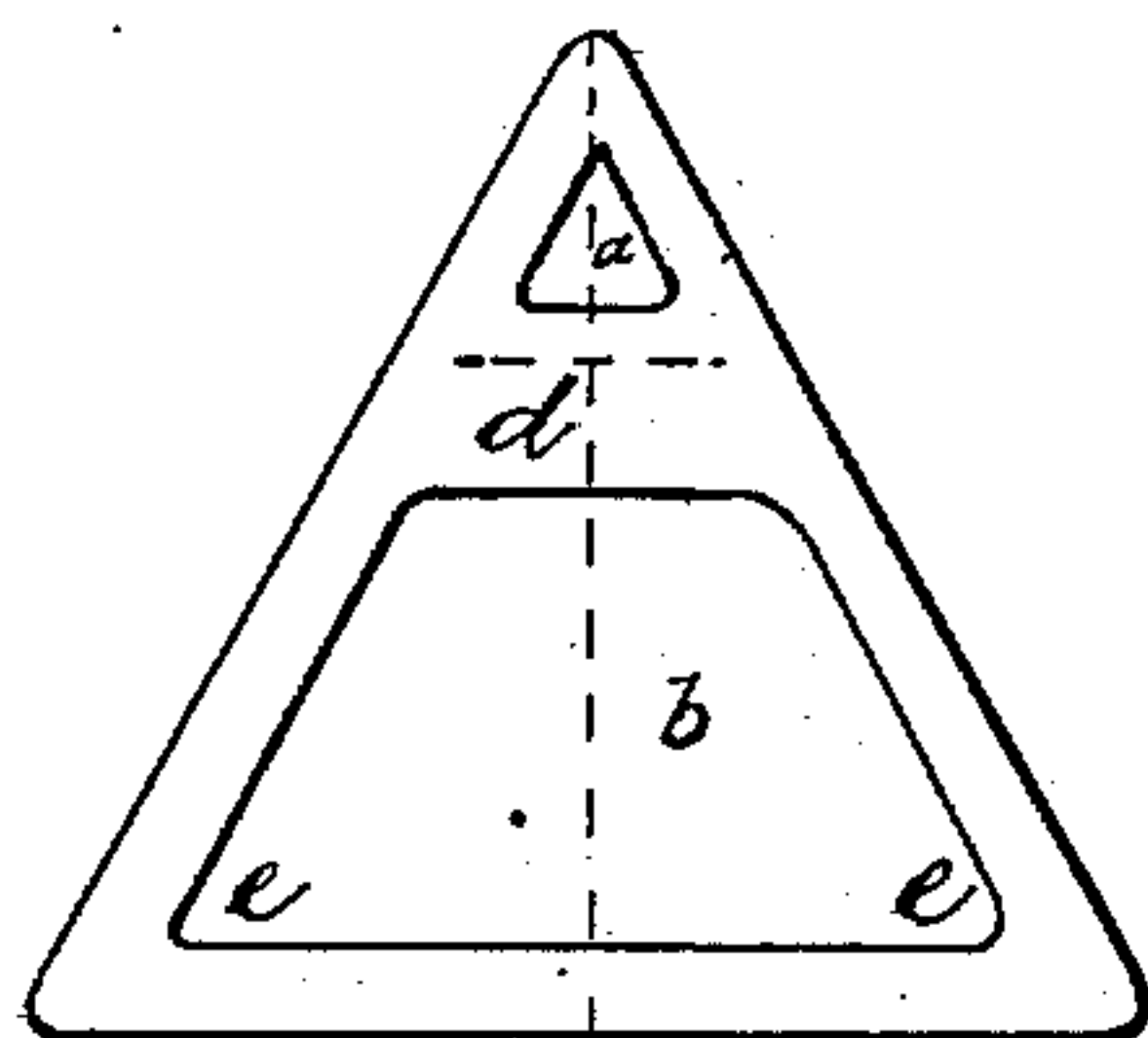


Fig. 4.

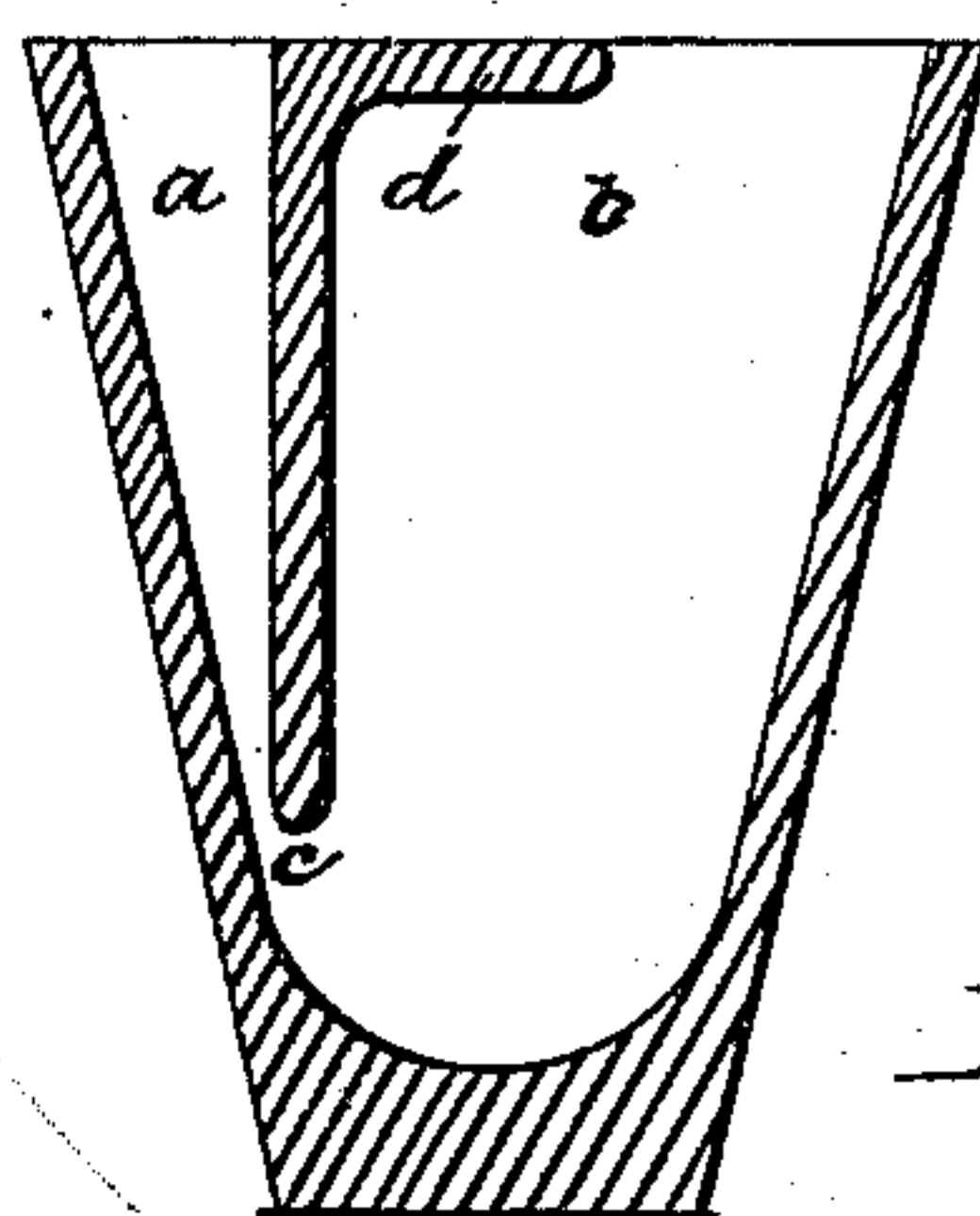


Fig. 5.

Fig. 1.

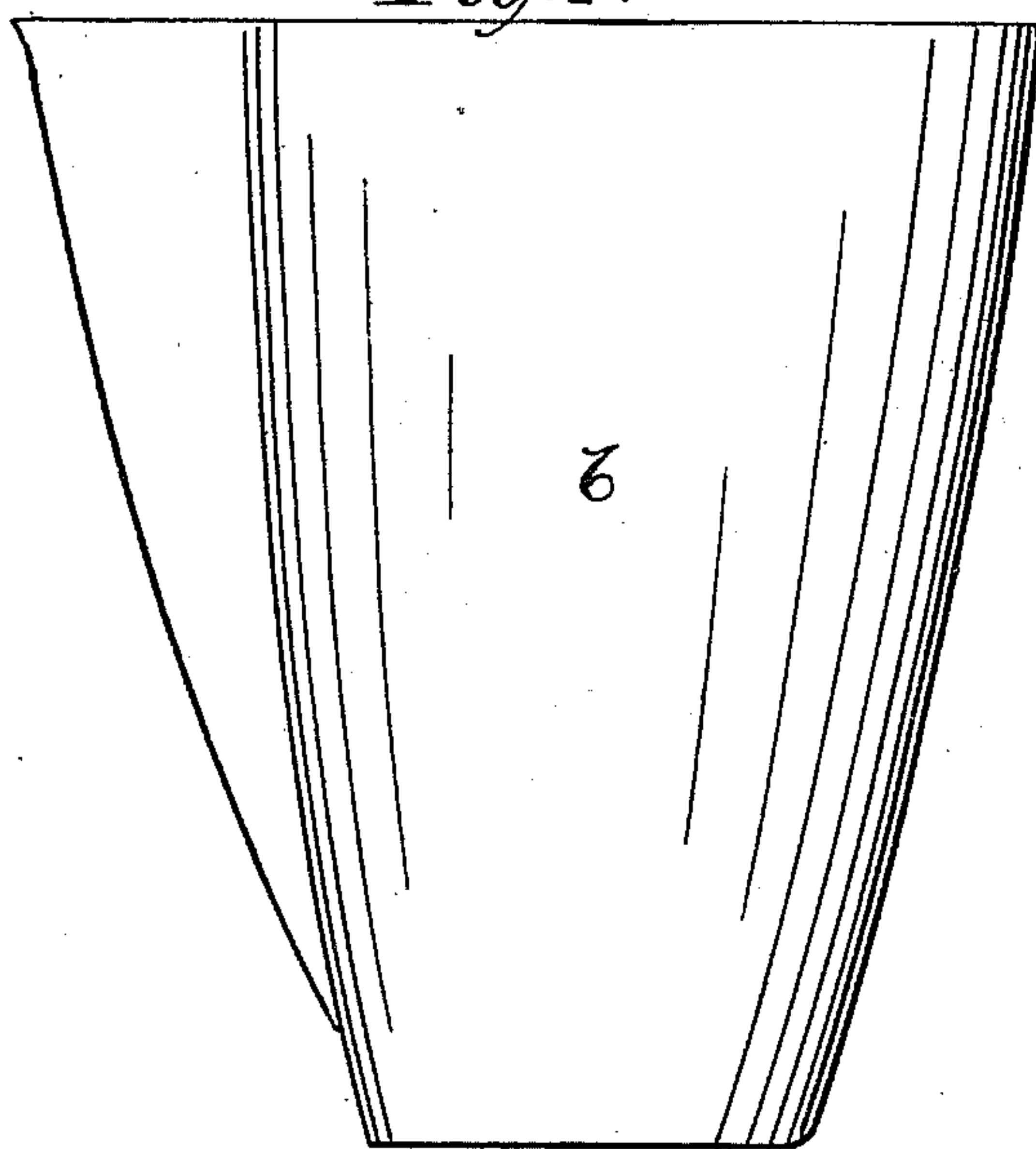


Fig. 2.

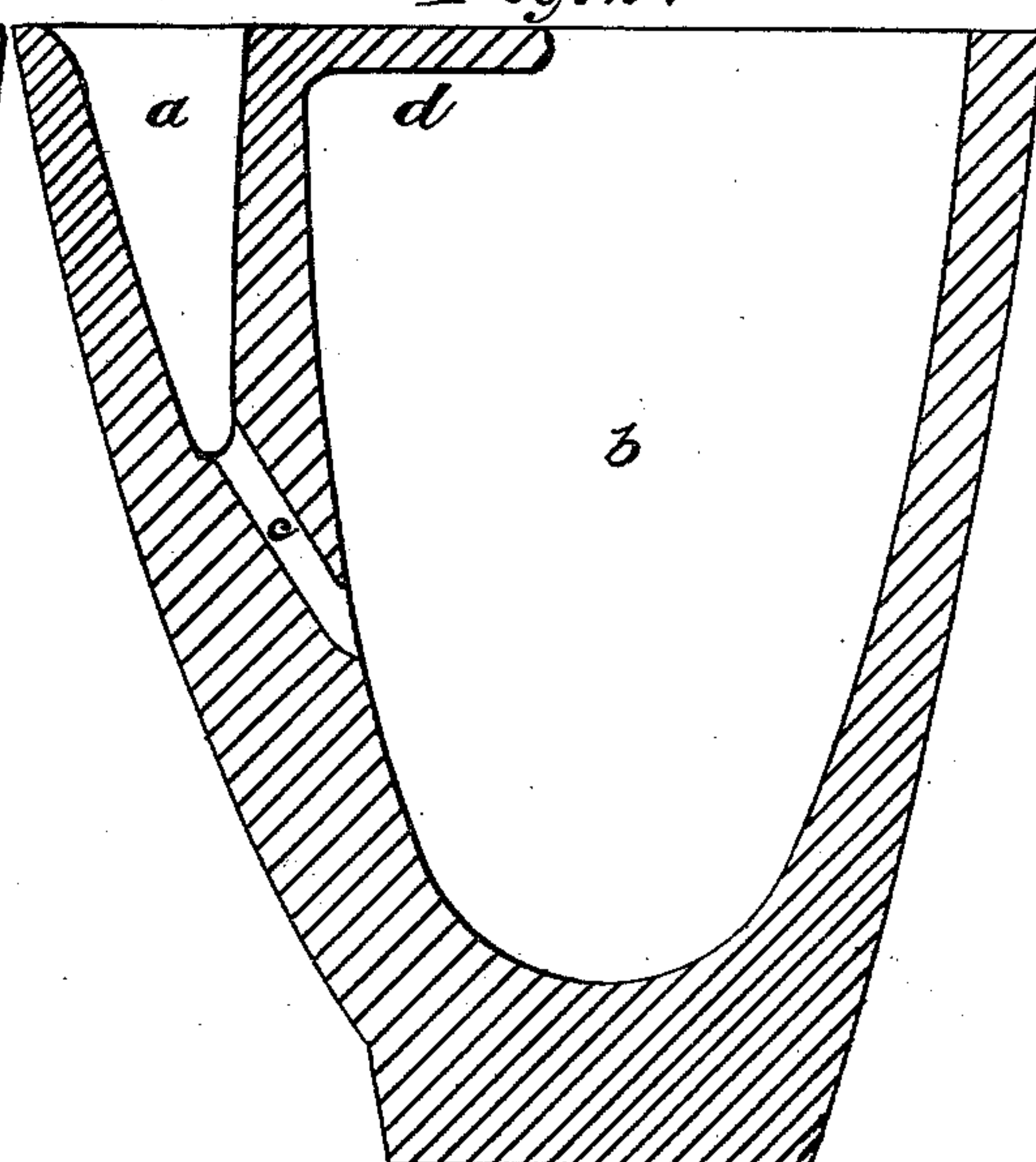
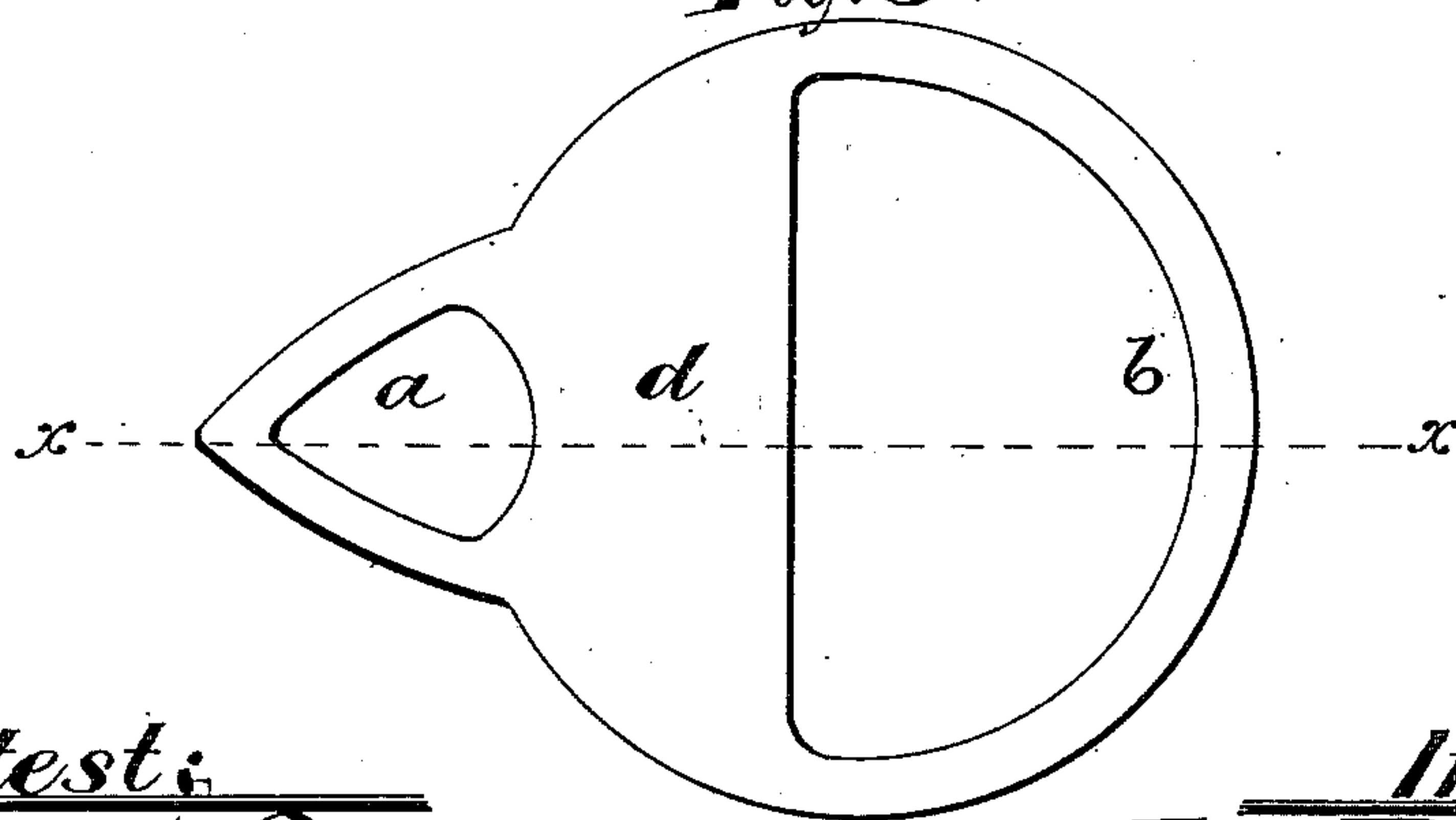


Fig. 3.



Attest:

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Inventor:

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by  
O. Drake, Atty.



# UNITED STATES PATENT OFFICE.

JOHN BAVIER, OF NEWARK, NEW JERSEY.

## CRUCIBLE.

SPECIFICATION forming part of Letters Patent No. 259,282, dated June 13, 1882.

Application filed March 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BAVIER, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Crucibles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to more effectually prevent the fluxes or impurities which gather upon the top of the molten metals from flowing out of the crucible with the metals into the molds or other receptacles into which the same are poured, thereby greatly facilitating the process of separating the dross or impurities from the metals, thus preventing waste and saving time.

It has been the practice heretofore, as a rule, to pour the molten materials directly over the top or edge of the crucible or through the open lips or spout thereof, and in some cases to prevent the fluxes from passing out with the molten materials by means of a sort of spoon or blade held and manipulated by the hand, which process is very tedious and imperfect in its results. Besides, in removing the fluxes back, and so exposing the surface of the molten materials, the latter are rapidly cooled, and an additional skin or scum immediately forms every time the operation with the said spoon is performed; hence a waste of both time and material. These difficulties are overcome by my invention, which consists in providing the crucible with a permanent semi-cover or guard at the top to automatically prevent the overflow of the fluxes at the top, and also in the otherwise peculiar construction, combination, and arrangement of the several parts, as will be hereinafter more particularly described, and finally pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side elevation of a crucible embodying my improvement. Figs. 2 and 3 are respectively a vertical transverse section and a top or plan view of the same. Fig. 4 is a top or plan view, illustrating the improvement in a modified form; and Fig. 5 is a vertical transverse sec-

tion of the same, taken through line *y*, similar letters of reference indicating like parts in each of the several figures.

In carrying out my invention I construct the crucible with an outer channel or spout, *a*, and connect the same with the interior thereof by means of one or more perforations, *c*, through its wall, terminating near the bottom of the crucible, said wall constituting a partition or dividing-wall between the spout *a* and body *b*, as plainly indicated in Figs. 2 and 5. The wall of the crucible, back of the spout, is returned and extended midway across and partly covering the top, as indicated at *d* in Figs. 2, 3, 4, and 5, to automatically prevent the fluxes or impurities gathered upon the top of the melted materials from passing off when the crucible is tilted to pour out its contents, and as the latter enter the spout through the perforation *c* at a point near the bottom it is manifest that said contents cannot mingle with the dross or impurities collected upon the top, but must be perfectly pure and clean.

In the construction of the crucible it will be found advantageous for some purposes to have it made in an angular form, as indicated in Figs. 4 and 5, so that the contents may be poured off either through the spout *a*, and strained thereby, or, when straining is not required or desired, from either of the open spouts *e* formed by the intersecting walls, as indicated in Fig. 4.

The crucible may be angular at the top and round, or approximately so, at the bottom, if desired, and is made from any of the well-known materials adapted to withstand the action of intense heat of which crucibles, retorts, and the like are generally constructed.

I am aware that previous to my invention crucibles have been constructed with the sides extending above the outlet or mouth, but without any spout or a dividing-wall between the body and spout of the crucible, and without a cover to automatically prevent the contents from flowing over the top, as in the present case, so that great care and watchfulness are required in consequence of constant danger of the fluxes either flowing through the spout or over the top, as will be apparent. I am also aware that for the manufacture of glass crucibles have been made with a spout connected by a channel at the bottom with the inside or

body of said crucibles, and also with a cover to protect the contents from the flames; but in all such cases the tops or outlets of the spouts are of necessity below the tops of the crucibles, so that their contents will flow from the spouts without the crucibles being tilted, the latter remaining stationary, and the covers have holes through which the materials are introduced into the crucibles. I do not therefore claim either of these features, broadly; but,

Having thus described my invention, what I claim, and wish to secure by Letters Patent of the United States, is—

1. As an improved article of manufacture, a crucible composed of the body *b*, spout *a*, channel *c*, and semi-cover or top wall, *d*, extending

horizontally part way across the top of the crucible, all the parts being homogeneous and integrant, and operating as herein described, for the purposes set forth.

2. In a crucible, the combination of the spout *a*, body *b*, channel *c*, semi-cover *d*, and open spout or spouts *e*, arranged and operating substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of February, 1882.

JOHN BAVIER.

Witnesses:

OLIVER DRAKE,  
M. C. CRANE.