

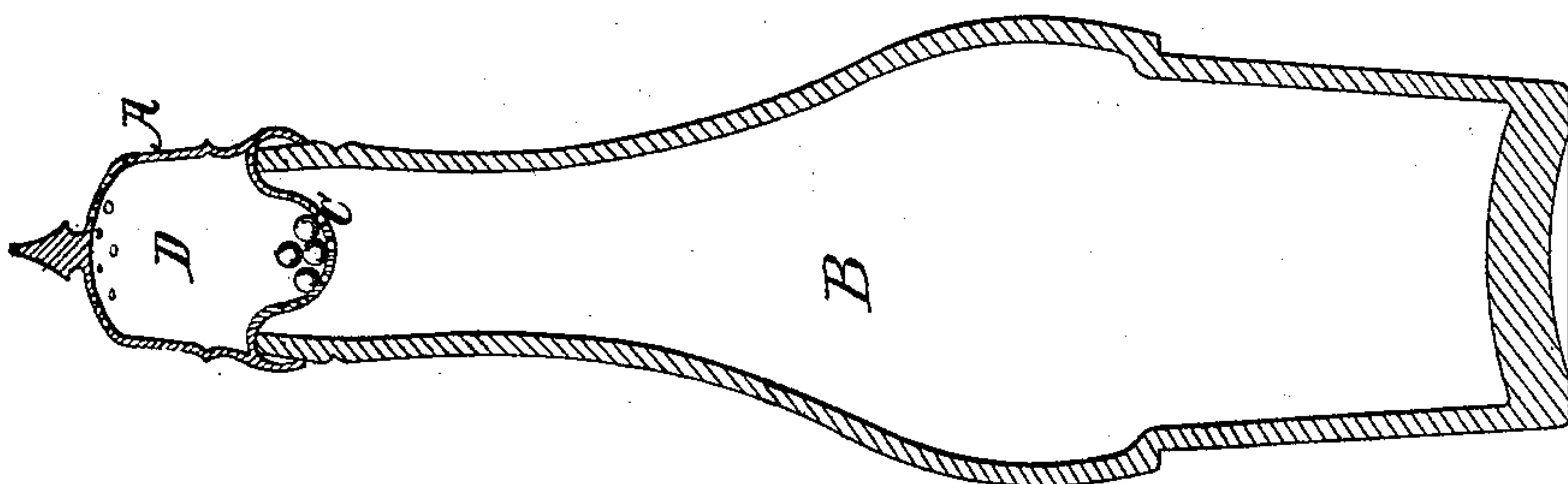
*J. S. Ewbank,*

*Pepper Box,*

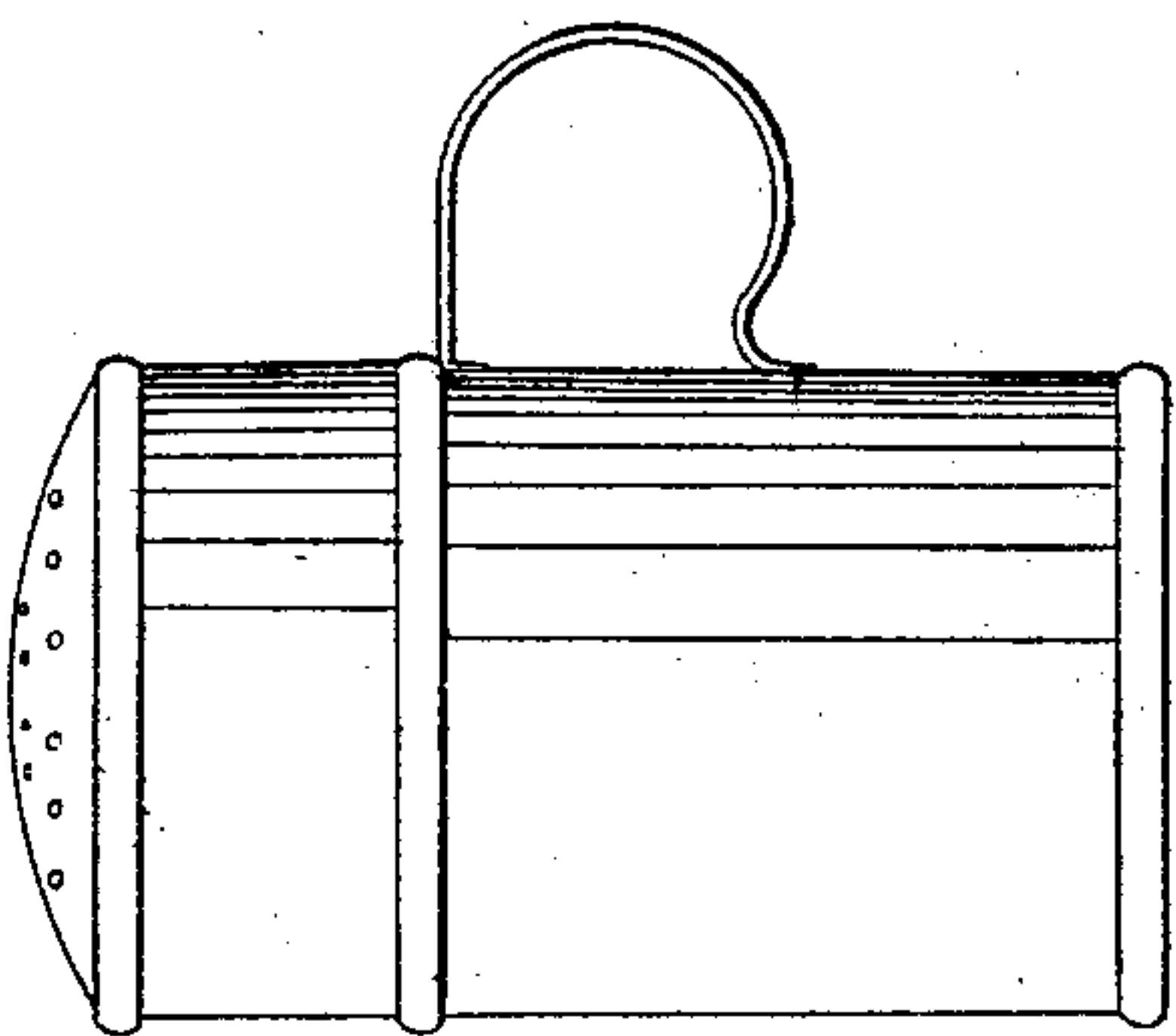
*No. 42,934,*

*Patented May 31, 1864.*

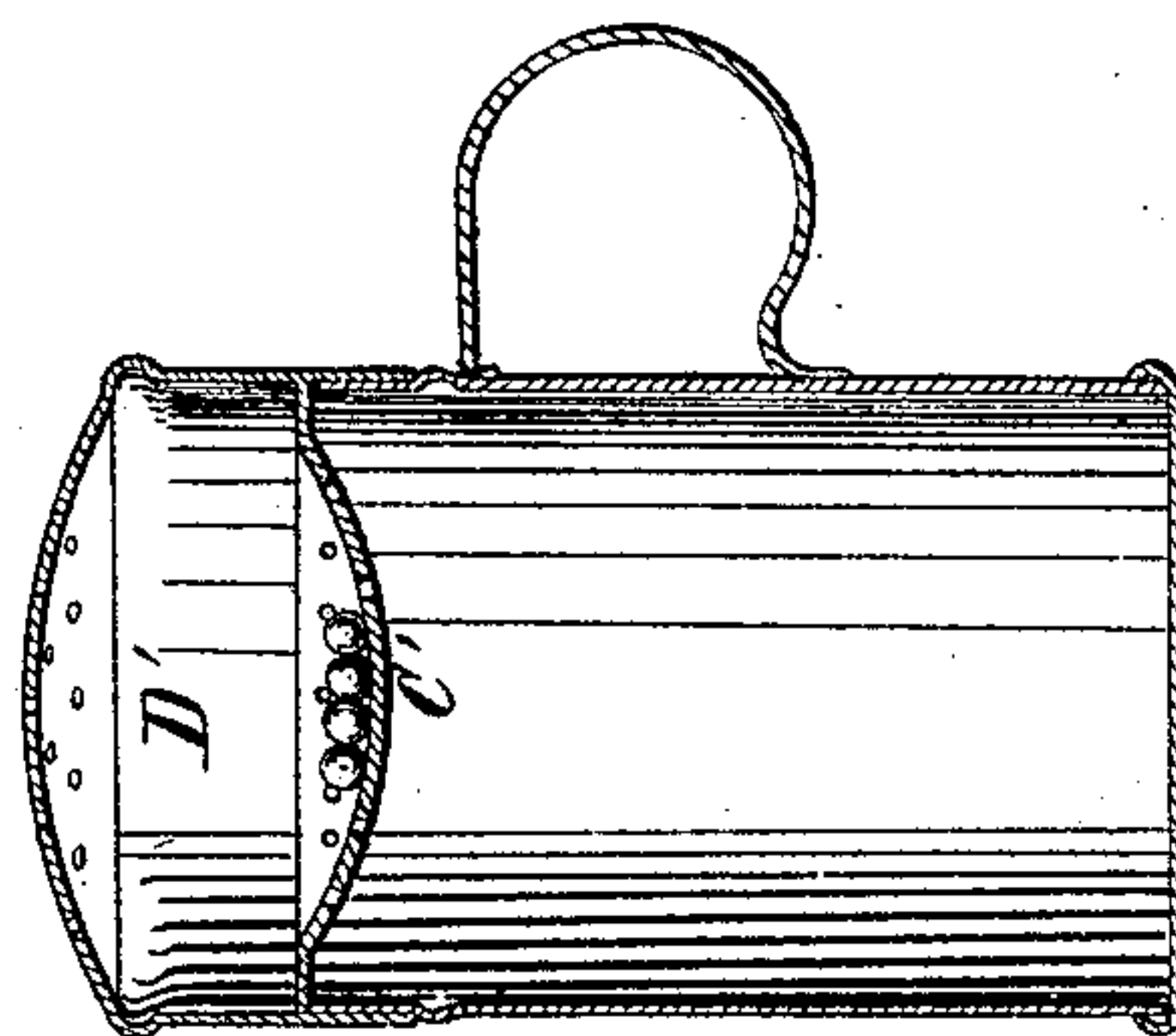
*Fig. 2.*



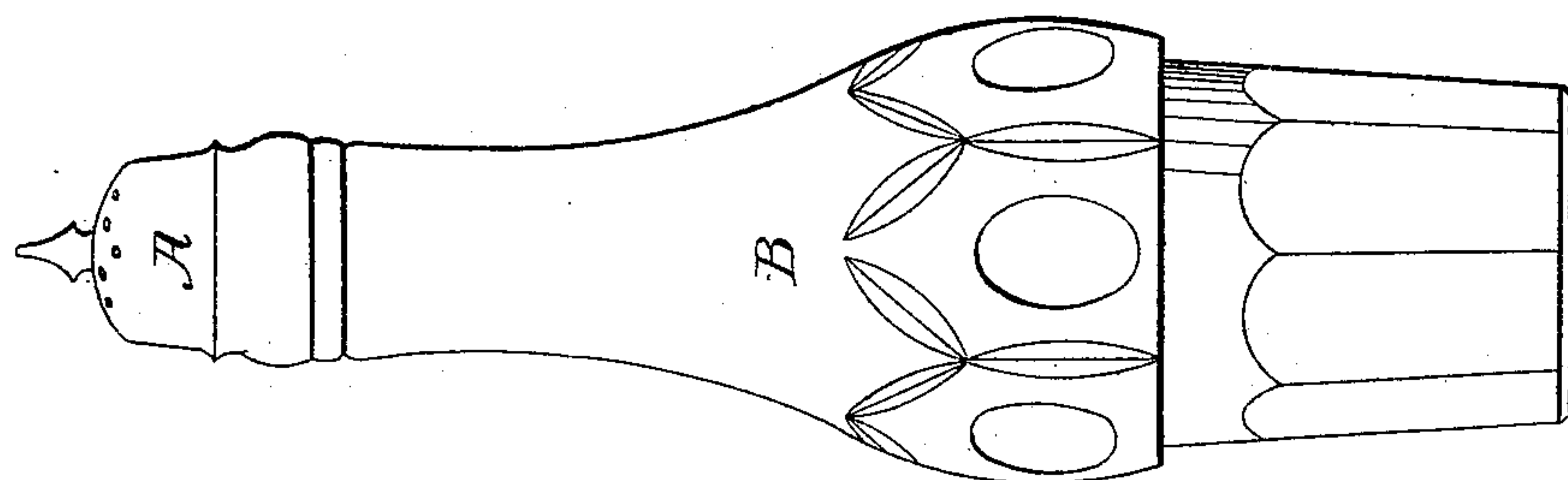
*Fig. 3.*



*Fig. 4.*



*Fig. 1.*



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# UNITED STATES PATENT OFFICE.

JAMES S. EWBANK, OF NEW YORK, N. Y.

## IMPROVED PEPPER-BOX TOP.

Specification forming part of Letters Patent No. 42,934, dated May 31, 1834.

*To all whom it may concern:*

Be it known that I, JAMES S. EWBANK, of the city, county, and State of New York, have invented a new and useful Improvement in Pepper or Spice Box Tops; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a view in elevation of an ornamented glass pepper-box to which my invention is applicable. Fig. 2 is a vertical central section through the same, showing my invention. Fig. 3 is a view in elevation of the common tin pepper-box; and Fig. 4 is a vertical central section through the same, with my invention applied thereto.

It is next to impossible to prevent the clogging of the ground pepper or spices in the boxes now in universal table use, and it is the object of my invention to so construct the top for such boxes that clogging shall be hardly possible; and to this end my invention consists in attaching to the inside of the cap or top of the pepper or spice box a convex perforated diaphragm to form a chamber in the cap, and in placing movable weights within the said chamber, so that when shaken the vibration they create upon the outer cap and inner diaphragm shall effectually prevent the permanent adhesion of any of the ground spices thereto, while at all times a free escape will be permitted to the quantity desired.

In the accompanying drawings I have shown my invention applied to the common cheap tin pepper-box, as well as to one of a more elaborately ornamented form made of glass.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The perforated metal cap A of Figs. 1 and 2 is made to fit tightly on the outside of the neck of the glass box B, and within the cap I secure, by solder or otherwise, a perforated metal diaphragm, C, so that when the cap is in place the lower surface of the diaphragm shall rest on the inner edges of the neck of the box, to prevent any of the spice within the box from passing between the inner edge

of the neck and the diaphragm. The diaphragm C must be more or less convex on its under side, so as to prevent the formation of an arch in the spice, that shall have a side support from the walls of the neck of the box as is the case in the common convex top, the inner side of which is always concave. A chamber, D, is thus formed between the diaphragm and the cap, in which I insert one or more weights, so light as not, when shaken, to injure either of the walls of the chamber, and yet heavy enough to effect a slight vibration both on the cap and diaphragm. These weights may be of any suitable material. Even common shot will answer.

In Figs. 3 and 4 I have shown my invention applied to the cheap tin pepper-box in common use, in which the diaphragm C' has a regular curvature, and is secured in position by being simply soldered to the inside of cap to form the chamber D', which contains the weights. The perforations in the diaphragm should be of the same number and size as those in the cap, although a slight deviation will not materially injure the operation of my invention, which is as follows:

My cap being placed on the box containing ground pepper or spice, reverse and shake the box gently, and the ground pepper or spice will pass freely through the perforations in the diaphragm and cap, these in both being freed by the vibrations produced by the striking of the weights against the walls of the chamber. As the box is reversed to be set down on the table, the mass of ground material falls to the bottom of the box, because the concave surface rendering this mass the thinnest at the center of the diaphragm, it falls from the center at once, and no arch is formed to be supported by the walls of the box, when almost all the mass falls necessarily together, while any small portion that may tend to adhere to either the top or bottom of the chamber will be detached by the vibration produced by the fall of the weights on the diaphragm. Thus the diaphragm and cap are always kept free from accumulation, and clogging is rendered nearly impossible.

The diaphragm may be plane instead of convex; but I prefer the latter form.



What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of a perforated diaphragm with the cap of a pepper or spice box, substantially in the manner and for the purpose set forth.

2. The formation of a chamber in the cap of the pepper or spice box to secure and retain

weights to produce vibrations therein, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

JAMES S. EWBANK.

Witnesses:

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