

E. S. SAVAGE.
BOX OPENER.
APPLICATION FILED FEB. 20, 1908.

915,701.

Patented Mar. 16, 1909.

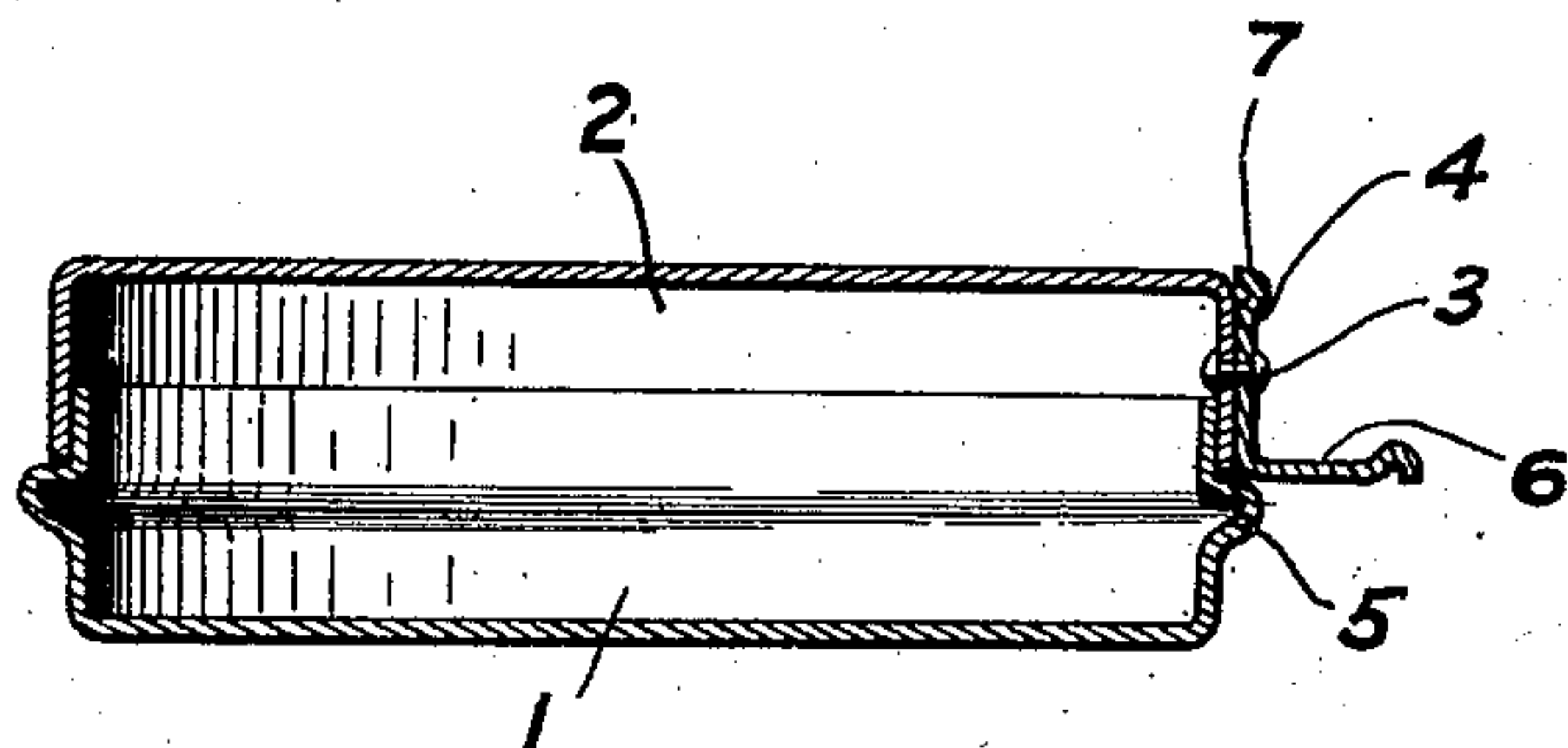


FIG. 1.

FIG. 2.

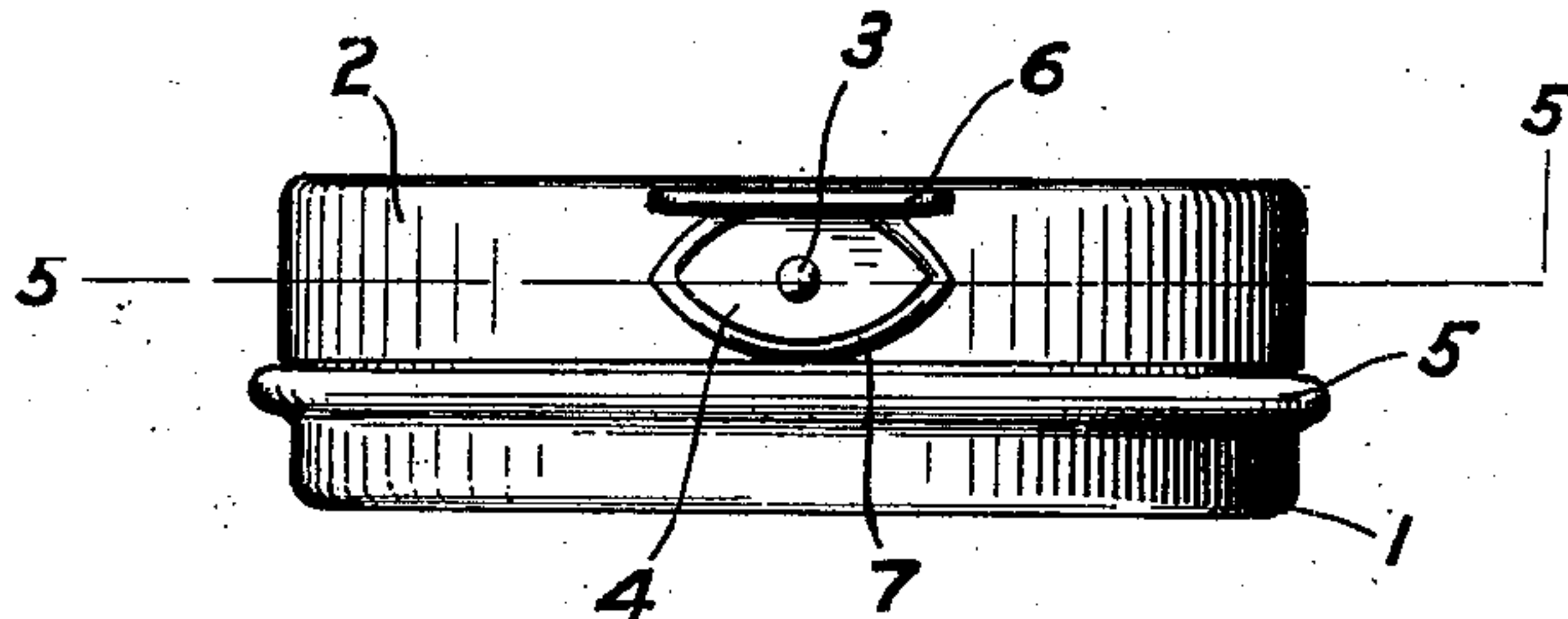
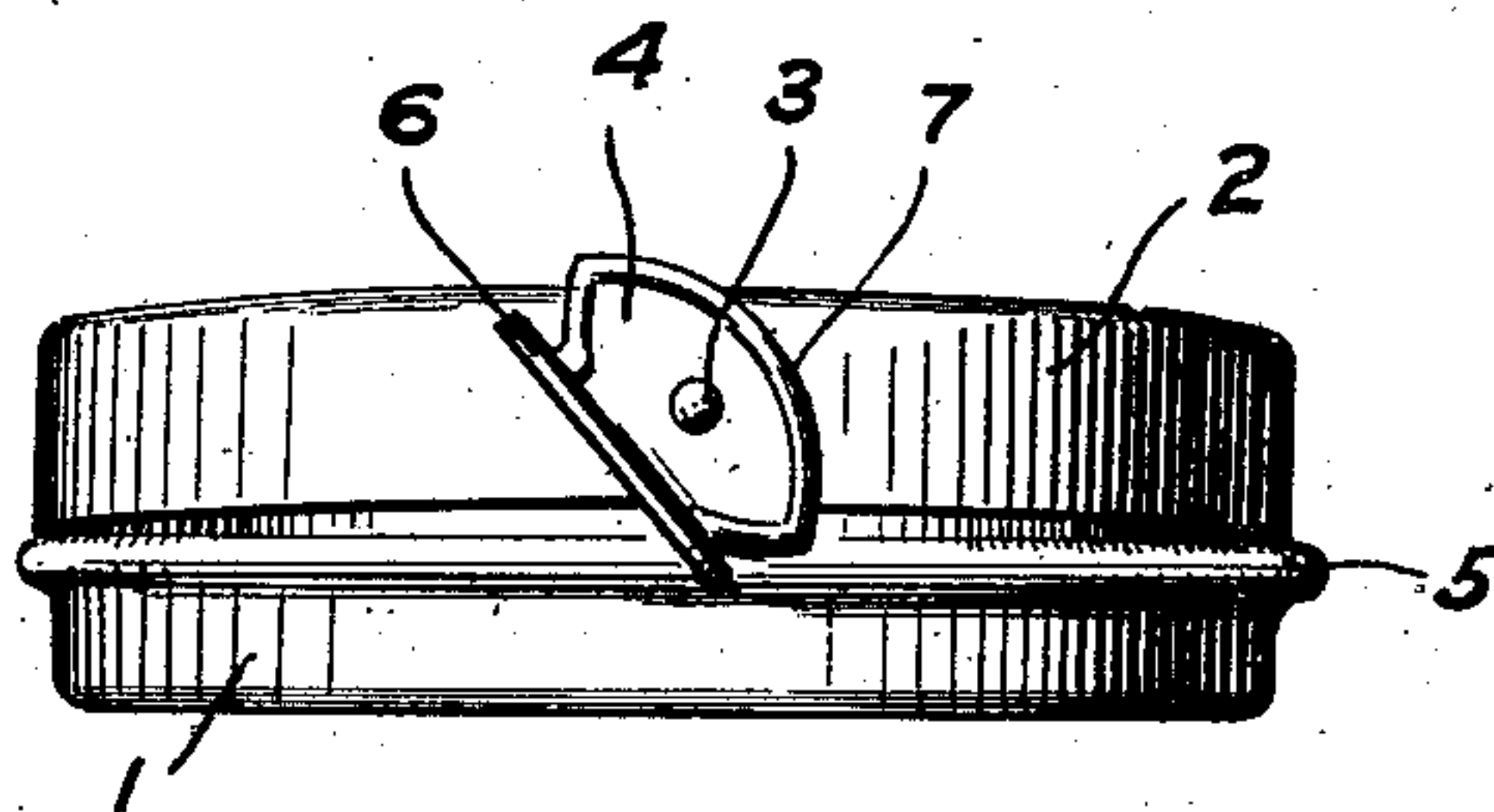


FIG. 3.

FIG. 4.

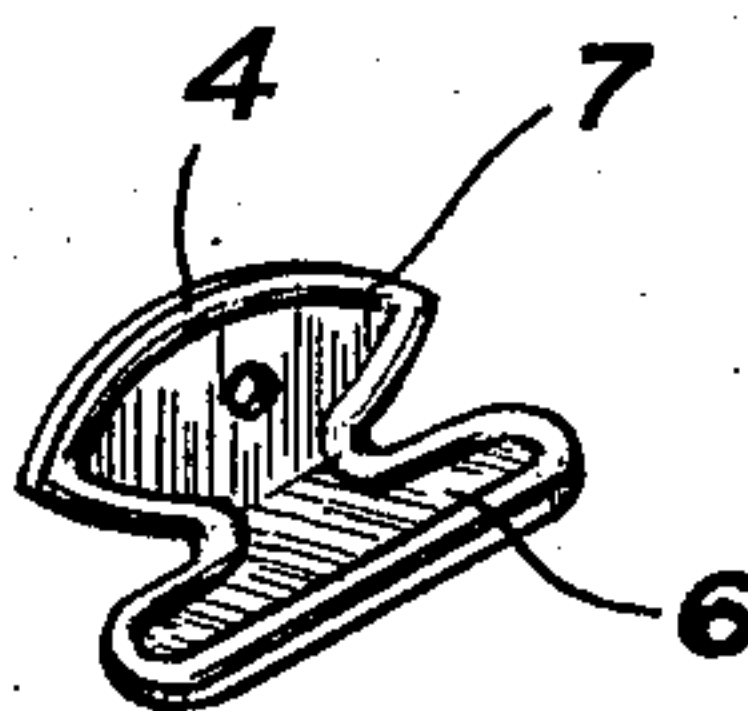
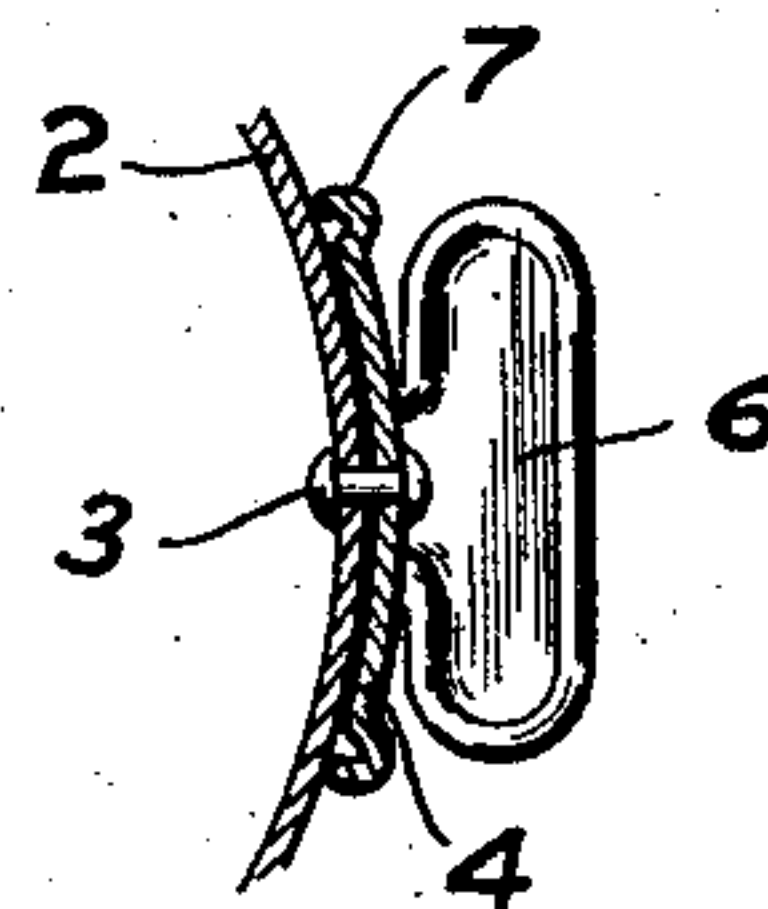


FIG. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD S. SAVAGE, OF ROCHESTER, NEW YORK, ASSIGNOR TO AMERICAN CHEMICAL MANUFACTURING & MINING COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

BOX-OPENER.

No. 915,701.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed February 20, 1908. Serial No. 416,912.

To all whom it may concern:

Be it known that I, EDWARD S. SAVAGE, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Box-Openers, of which the following is a specification.

This invention relates to box openers, and has for its object a device that is readily reset when the cover is replaced, that is dependable in operation, and that can be made cheaply.

In the drawings:—Figure 1 is a central vertical section of a blacking box equipped with the improved opener; Fig. 2 is a front view of the box, showing one position of the opener; Fig. 3 is the same view, showing another position of the opener; Fig. 4 shows the opening device detached from the box; and Fig. 5 is a section on the line 5—5 of Fig. 3.

The opening device 4 is shown upon a box 1 for shoe blacking or polish, because especially designed for that, but it is apparent that the device has a more general use. It is pivotally attached to the cover 2 at 3, and, when rotated by means of the handle 6, engages the bead 5 upon the box, in order to raise the lid.

Broadly speaking, the opener is a lever on each side of the point of pivotal attachment to the cover, the arms being of equal length, and long enough to engage the bead on the box. The obvious advantage is that the lever engages operatively when rotated in either direction, and, furthermore, this is true whichever side of the lever is uppermost. Again, whatever position the lever may have been turned to, when the lid is removed, the operation of replacing the lid upon the box will of itself turn back the opener to the initial position, except only when the longitudinal axis of the opener lies in the vertical plane, because one end of the opener comes into contact with the bead 5 on the box and the opener is free to turn on the pivot.

The specific form shown in the drawings is an ellipse, modified at its ends so that an angle is formed at the ends of the major axis. The advantage of the elliptic form is that it gives four similar cam surfaces, one of which

is always in position to open the box, whichever side of the opener is uppermost, and whichever way it is rotated. 55

The angular ends give a longer reach to the device, and a sharper elevation of the lid at the end of the movement.

The handle 6 may be of any convenient shape. The drawings show the handle made in one piece with the opener proper, by stamping and bending, and this is a cheap and satisfactory construction. 60

In order to secure a comparatively long bearing surface for the lever or cam, it is, when used with a cylindrical box, curved to conform to the contour of the box, as shown in Fig. 5. 65

The boss 7 around the edges of the opener and its handle so strengthens and stiffens these parts that they can be made of light, cheap material, and, furthermore, it thickens the edge of the opener (see Fig. 5), and adapts it better to engage the opposing surface on the other member of the box (the bead in the example shown in the drawings). 70 75

In order to insure engagement between the opener and the bead on the box, the top of the latter may be flattened, as shown in Fig. 2.

What I claim is:— 80

1. A box opener consisting of an ellipse, pivoted centrally to one member of the box, and adapted on each side of its pivot to engage the other member of the box to raise the lid, and a handle for operating it, substantially as shown and described. 85

2. A box opener consisting of an ellipse, having angular ends, pivoted centrally to one member of the box, and adapted on each side of its pivot to engage the other member of the box to raise the lid, and a handle for operating said ellipse, substantially as shown and described. 90

3. A box opener consisting of an ellipse conforming to the contour of the box, and a handle at right angles for operating it, stamped in one piece with a boss around their edges, from a single piece of sheet metal, substantially as shown and described. 95

EDWARD S. SAVAGE.

Witnesses:

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