

E. J. BROOKS.  
SNAP SEAL.

APPLICATION FILED MAR. 31, 1905.

Fig. 1. Fig. 2. Fig. 5.

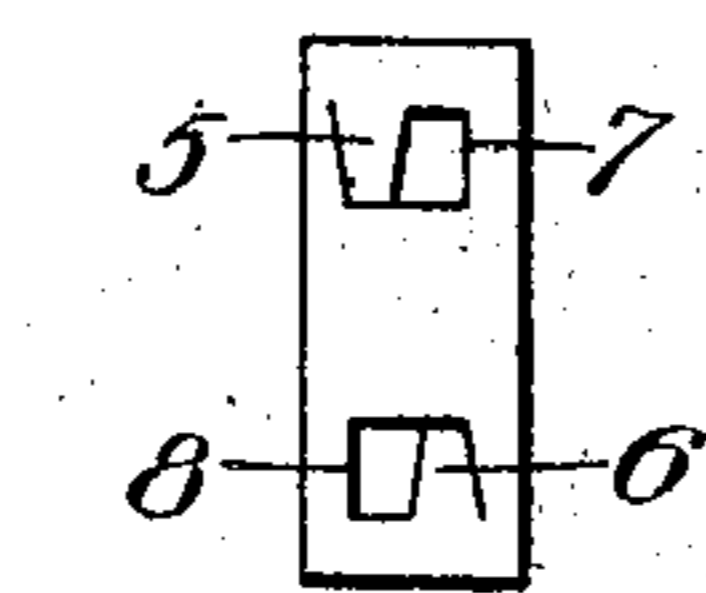
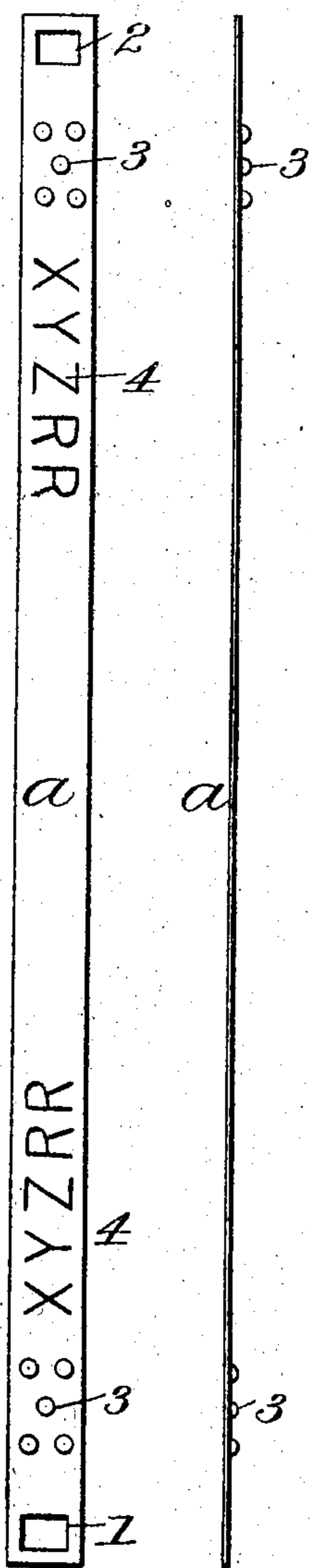


Fig. 6.

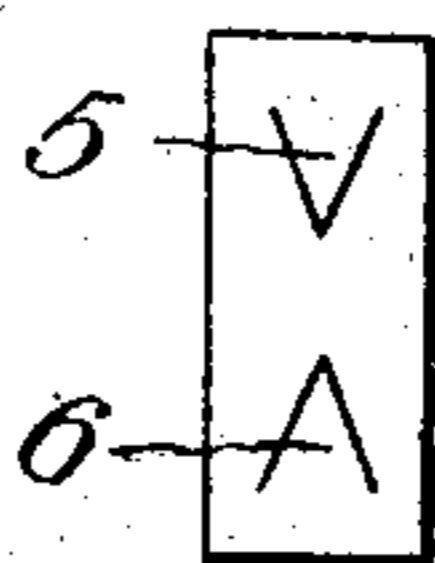


Fig. 7.

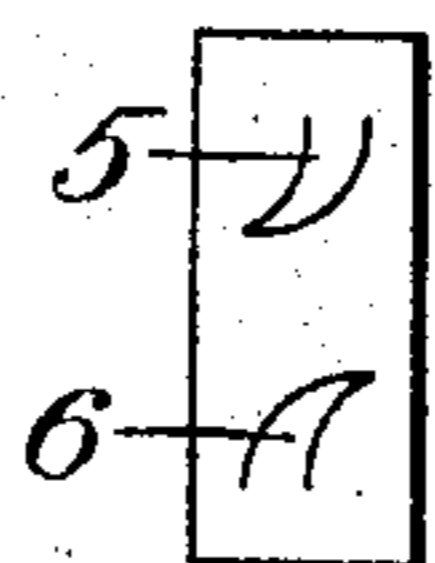


Fig. 8.

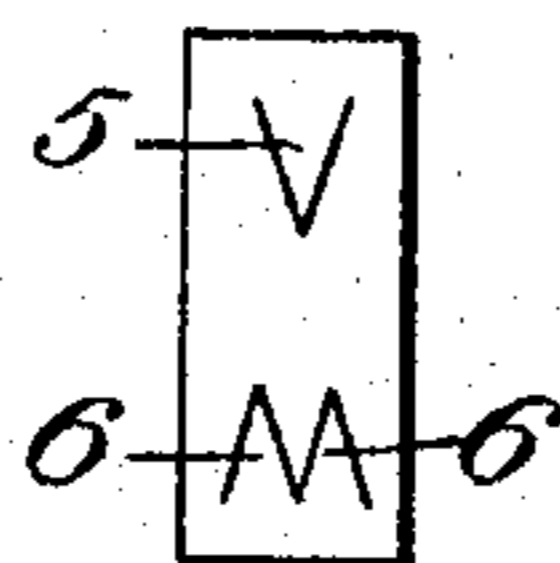


Fig. 9.

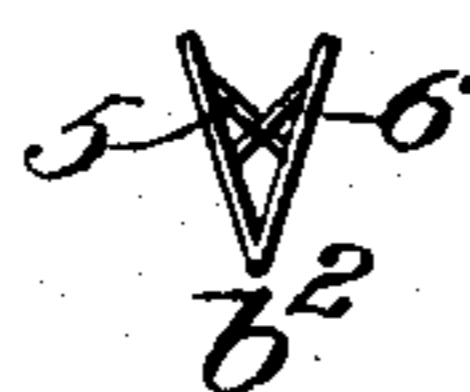


Fig. 3. Fig. 4. Fig. 10.



WITNESSES:

C. M. Walker.  
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Fig. 11. Fig. 15.

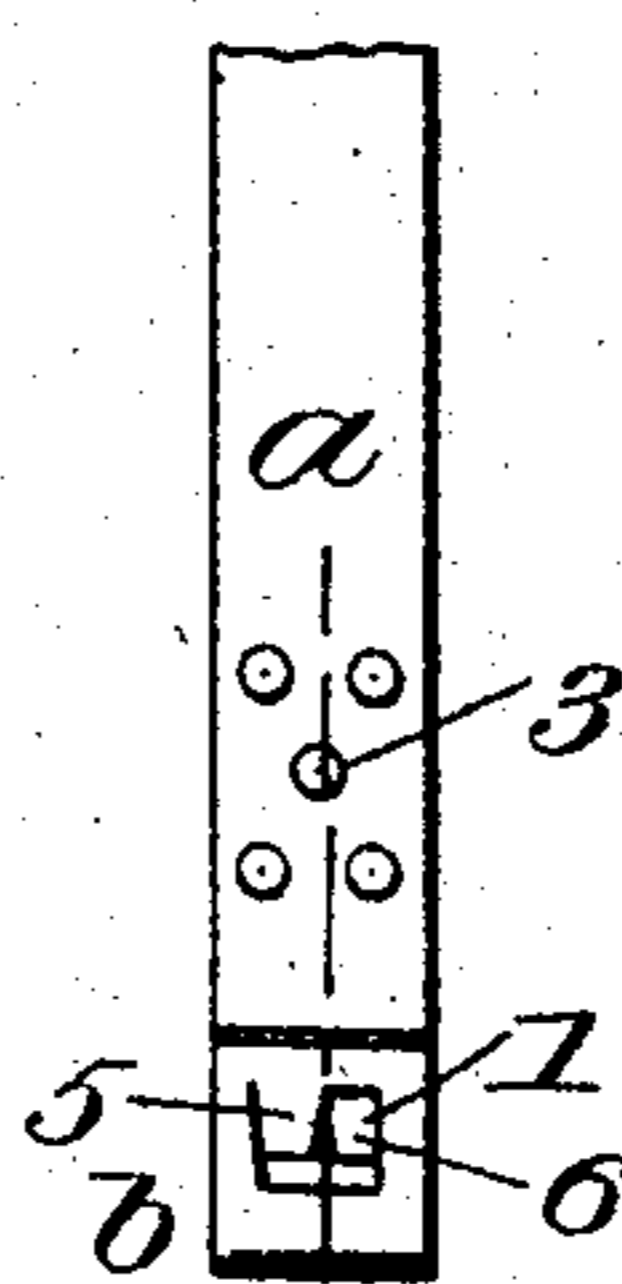


Fig. 12.

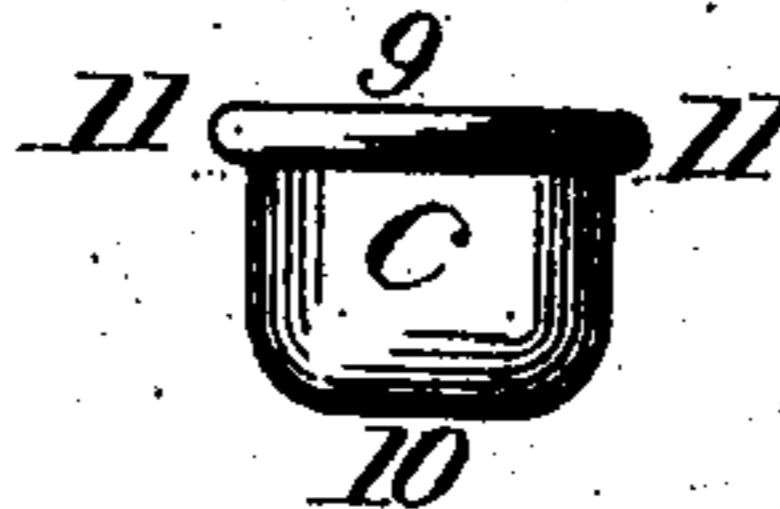


Fig. 13.

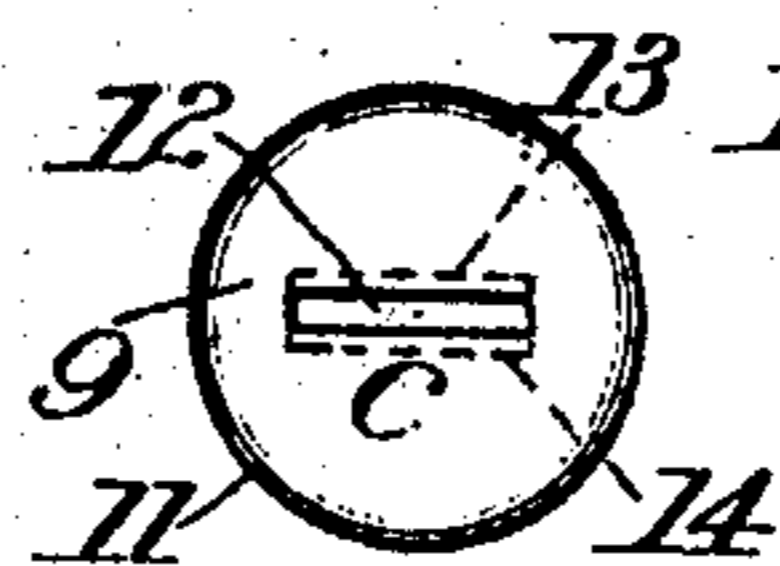


Fig. 14.

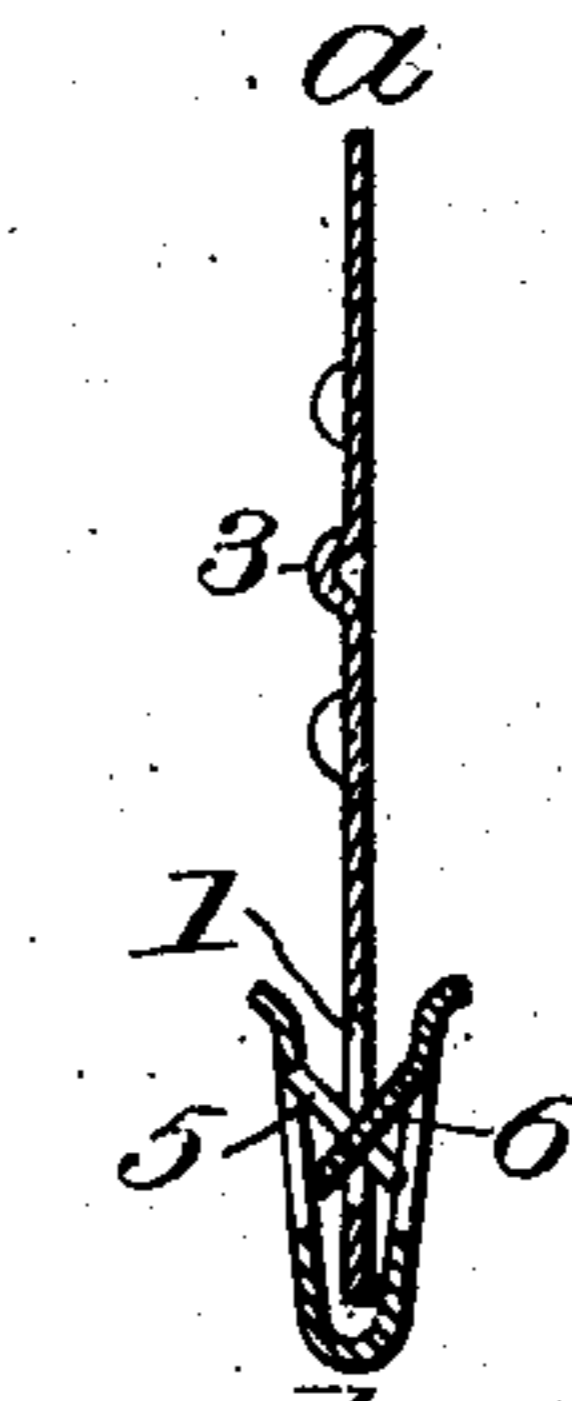
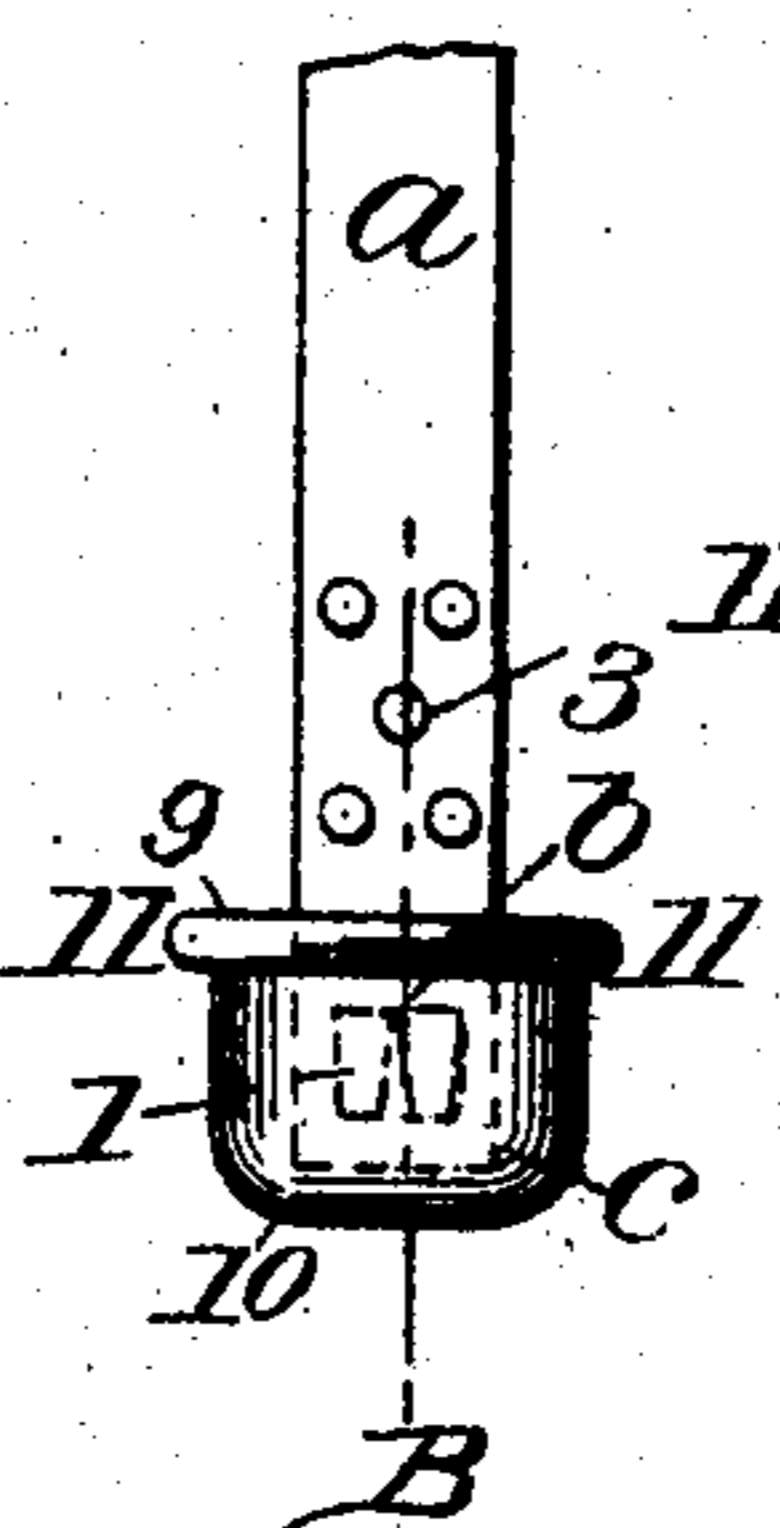


Fig. 16.

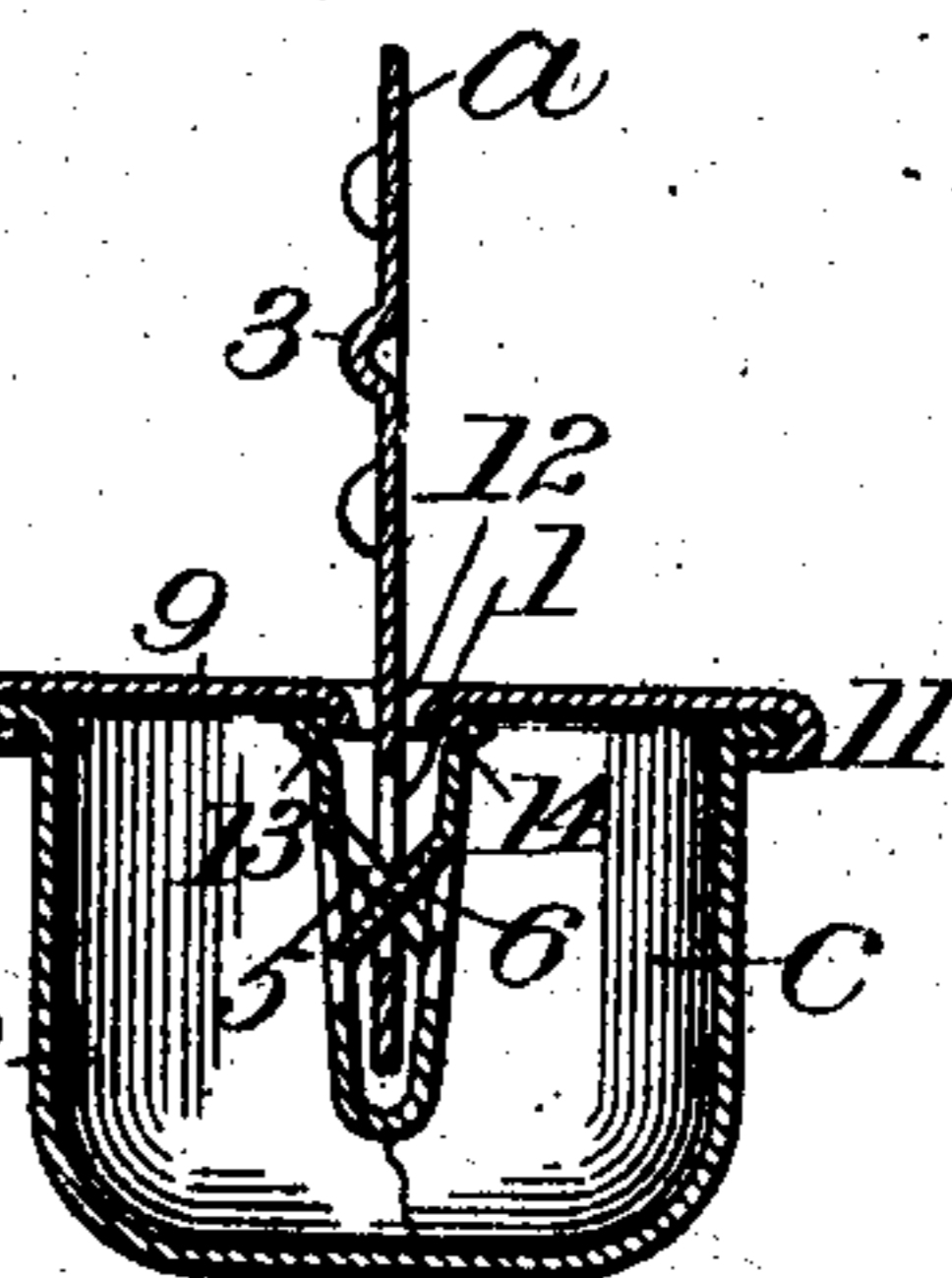
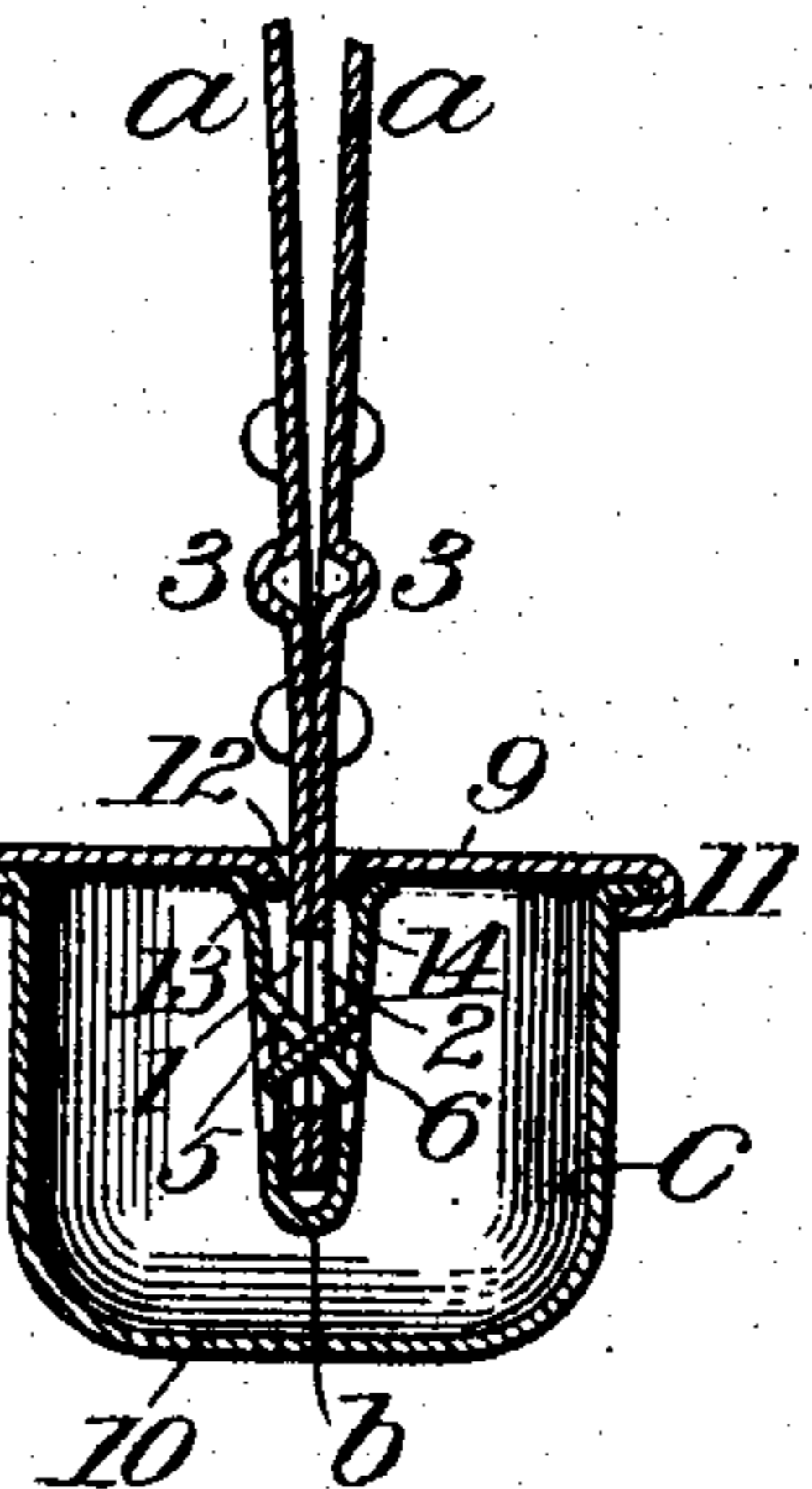


Fig. 17.



INVENTOR

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# UNITED STATES PATENT OFFICE.

EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY.

## SNAP-SEAL.

No. 796,109.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed March 31, 1905. Serial No. 253,115.

*To all whom it may concern:*

Be it known that I, EDWARD J. BROOKS, a citizen of the United States of America, and a resident of East Orange, in the State of New Jersey, have invented a new and useful Improvement in Snap-Seals, of which the following is a specification.

This invention relates to self-fastening seals or "snap-seals," as they are commonly termed, adapted for use as substitutes for lead and wire seals and other press-fastened sealing devices to secure the doors of railway freight-cars and for other like purposes. Previous forms of such snap-seals are set forth in my specification forming part of United States Letters Patent No. 679,104, dated July 23, 1901, and previous specifications therein referred to and in my specifications forming part of United States Letters Patent No. 696,002, dated March 25, 1902; No. 696,003, dated March 25, 1902; No. 697,375, dated April 8, 1902; No. 712,250, dated October 28, 1902; No. 719,642, dated February 3, 1903; No. 719,643, dated February 3, 1903; No. 736,682, dated August 18, 1903; and No. 768,510, dated August 23, 1904.

The present invention is more particularly an improvement on the sheet-metal snap-seal set forth in said specification forming part of Letters Patent No. 696,002, in which the snap-catches are carried by a "middle piece" within a bulb-shaped seal part.

The leading object of this invention is to provide for uniting the two main pieces of the seal part independently of the middle piece and therefore much more quickly and economically than heretofore and to insert the middle piece or "snap part," as it is hereinafter termed, in an effective manner by adapting the same to attach itself preliminarily to one end of the shackle and to be inserted therewith into the seal part at the factory to complete the seal for the market, and at the sealing operation or final fastening operation to be supported by the shackle end, to which it is already attached, and to receive and interlock with the other shackle end in customary manner and so as to render the fastened seal secure against being tampered with without detection.

The invention consists in the improved snap-seal and in certain novel combinations of parts therein, as hereinafter set forth and claimed.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 are face and edge views of the shackle of the improved seal. Figs. 3 and 4 are corresponding views of its snap part detached. Figs. 5 to 8, inclusive, represent the blank of said snap part and modifications thereof. Figs. 9 and 10 represent, in comparison with Fig. 4, modifications of said snap part as to the shape in which it is bent preliminary to insertion. Fig. 11 is a face view of one end of the shackle with the snap part attached thereto. Figs. 12 and 13 are side and top views of the seal part detached. Fig. 14 is an elevation showing the three parts of the improved snap-seal as united at the factory. Fig. 15 represents an enlarged section on the line A, Fig. 11. Fig. 16 represents an enlarged section on the line B, Fig. 14, and Fig. 17 represents a section corresponding with Fig. 16, illustrating the completion of the snap-seal by the final fastening operation.

Like reference characters refer to like parts in all the figures.

The improved seal is composed of three parts  $a$   $b$  or  $b^2$  or  $b^3$  and  $c$ , all of them of suitable sheet metal, the part  $a$  being a flexible shackle, which is preferably and conveniently in the form of a narrow rectangular strip of tin (tin-plate) provided with catch-holes 1 and 2 in its respective ends and with embossed end guards 3 and suitable distinguishing marks 4 at both ends. The second part  $b$  or  $b^2$  or  $b^3$ , corresponding generally in both form and function with the middle piece described and claimed in said Patent No. 696,002, with reference to Sheet 1 of its drawings, is adapted to be made of thinner and lighter metal, and to be bent up from a smaller blank in a seal of a given size as compared with said patented middle piece. A suitable and preferred form of this snap part is shown at  $b$  in Figs. 3, 4, 11, 14, 15, 16, and 17 in connection with Fig. 5, which represents the blank from which the same is bent up. In this form the snap-catches 5 and 6 are cut and bent from opposite sides of substantially rectangular holes 7 and 8, as shown in Fig. 5, and are thus especially well adapted to interlock with square catch-holes, such as are shown at 1 and 2 in Fig. 1. The catches 5 and 6 may instead be of any of the forms and arrangements represented by Figs. 6, 7, and 8, and the snap part instead of being bent to the U shape represented by Fig. 4 and in Figs. 15, 16, and 17, may be bent into such V shapes as are represented at  $b^2$  and  $b^3$ , Figs.

9 and 10, or any other modifications of the U shape shown at *b*, in which the snap-catches 5 and 6 are adapted to interlock with both ends of the shackle *a* or with the respective shackle ends. The third or seal part *c* is composed of two cup-shaped pieces 9 and 10 permanently interlocked with each other at the factory by a circumferential joint 11, the cap part 9 being further constructed with an inlet-hole 12 and with rigid inwardly-projecting lips 13 and 14 at the sides of said inlet-hole formed by the metal cut from the latter.

In the improved snap-seal the snap part *b* or *b*<sup>2</sup> or *b*<sup>3</sup> is first applied to one end of the shackle *a*, so as to interlock with its catch-hole 1—for example, as illustrated by Figs. 11 and 15. The shackle end to which the snap part is thus preliminarily attached is then inserted, together with the snap part, through the inlet-hole 12 of the seal part *c*, the snap part closing against the sides of the shackle end, so as to pass through the inlet-hole and then springing apart so as to interlock with the inwardly-projecting lips 13 and 14 at the sides of said inlet-hole, as in Fig. 16. All three parts of the seal are thus inseparably united with each other at the factory, and the improved seal may be externally of ordinary appearance. After passing the shackle *a* through a pair of car-door staples or the like and bending it upon itself in the customary manner, so that its distinguishing marks 4 are outermost, the end of the shackle that is passed through the car-door staples or the like is finally inserted at the adjacent side of the other shackle end through the inlet-hole 12 of the seal part *c*, and its snap-hole 2 interlocks with the snap-catches 5 and 6 of the snap part *b* or *b*<sup>2</sup> or *b*<sup>3</sup> within the seal part *c* in customary manner.

In addition to the modifications already suggested the embossed inlet-guards 3 of the shackle *a* may project, if preferred, from opposite sides at the respective ends of the shackle, so as to interlock with each other, or they may be of other known or improved forms. The external shape of the seal part *c* admits obviously of being modified quite widely to suit the taste of different manufacturers and purchasers, and other like modifications will suggest themselves to those skilled in the art.

Having thus described said improvement, I claim as my invention, and desire to patent under this specification—

1. An improved snap-seal composed of

three parts all of them adapted to be made of suitable sheet metal and completed independently of each other, said parts being a flexible shackle having a catch-hole in each end, an elastic snap part substantially U-shaped in edge view and provided with inwardly-projecting snap-catches, and a hollow seal part having an inlet-hole adapted to admit said snap parts and therewith one of the shackle ends to which said snap part is preliminarily attached and to admit the other shackle end so as to interlock the same with said snap part within the seal part at the final fastening operation.

2. The combination, in a snap-seal, of a flexible sheet-metal shackle having catch-holes in both ends, an elastic snap part of sheet metal, substantially U-shaped in edge view, provided with inwardly-projecting snap-catches adapted to interlock with said catch-holes and to be preliminarily attached to one shackle end, and a hollow sheet-metal seal part composed of two pieces permanently interlocked with each other by a circumferential joint, one of said pieces having an inlet-hole adapted to admit such preliminarily-attached snap part and therewith the shackle end to which it is preliminarily attached and to admit the other shackle end at the final fastening operation so that the same will interlock with said snap part within the seal part.

3. The combination, in a snap-seal, of a flexible sheet-metal shackle having catch-holes in both ends, an elastic seal part of sheet metal, substantially U-shaped in edge view, provided with inwardly-projecting snap-catches adapted to interlock with said catch-holes and to be preliminarily attached to one shackle end, and a hollow sheet-metal seal part having an inlet-hole adapted to admit such preliminarily-attached snap part and therewith the shackle end to which it is preliminarily attached, and to admit the other shackle end at the final fastening operation so that the same will interlock with said snap part within the seal part, and further constructed with inwardly-projecting lips at the sides of said inlet-hole to interlock with the ends of said snap part with reference to preventing the withdrawal of said snap part, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:

ELINOR BROOKS,  
ELLEN J. BROOKS.