

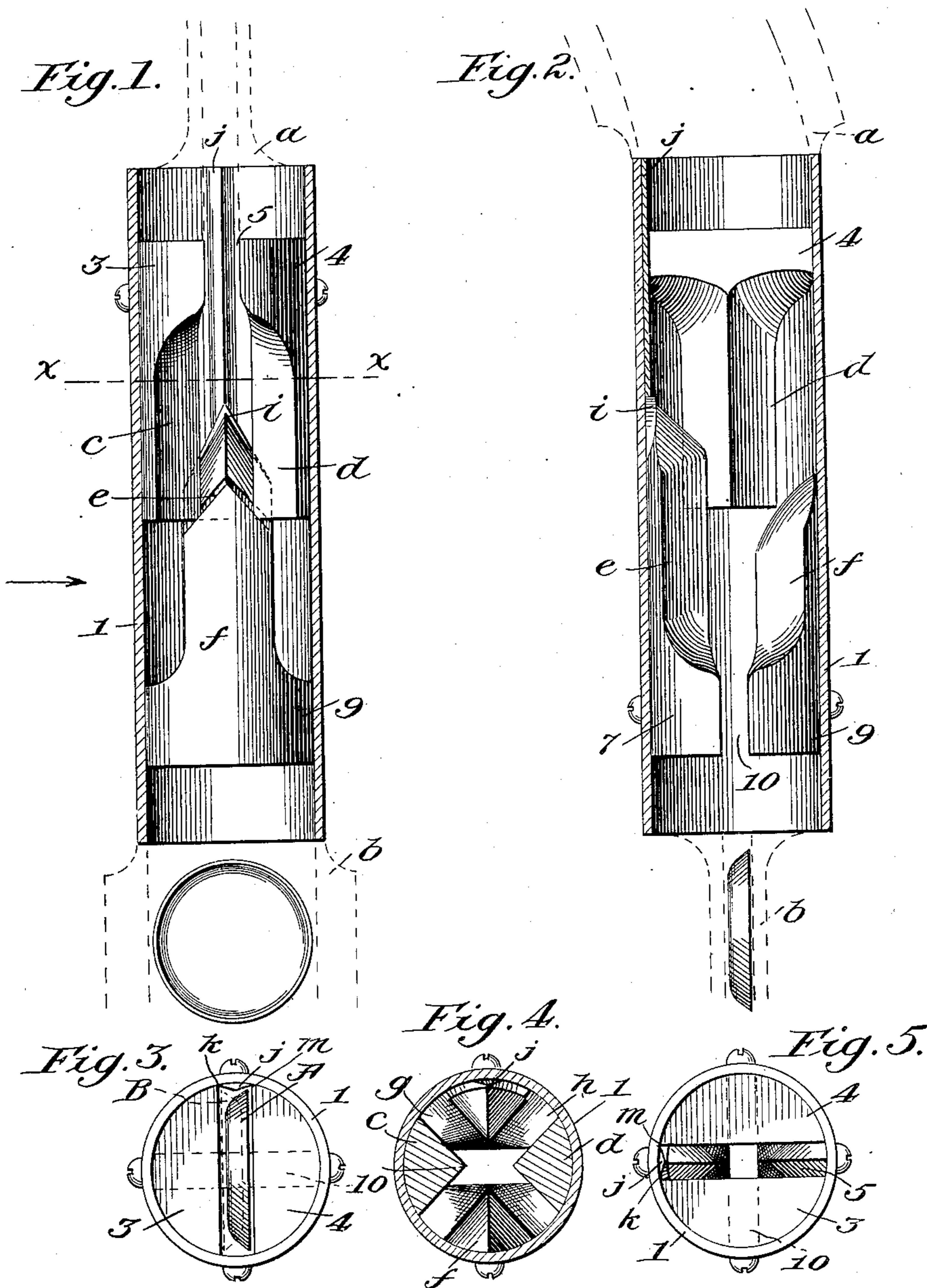
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A. JONES.

CAP FEEDING MECHANISM FOR BOTTLE CAPPING MACHINES.

APPLICATION FILED JAN. 14, 1907.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALBERT JONES, OF BALTIMORE, MARYLAND.

CAP-FEEDING MECHANISM FOR BOTTLE-CAPPING MACHINES.

No. 898,113.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT JONES, of the city of Baltimore and State of Maryland, have invented certain Improvements in Cap-Feeding Mechanism for Bottle-Capping Machines, of which the following is a specification.

This invention relates to an improved cap-assorting apparatus to be incorporated in a chute leading from a hopper in which bottle caps are indiscriminately placed, to the capping head of a bottle-capping machine, through which the caps pass and are brought to a common or capping position, as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to the accompanying drawing forming a part hereof, and in which,—

Figure 1 is a partly sectional elevation of the improved cap-assorting apparatus, and Fig. 2 is a similar view looking in the direction indicated by the arrow in Fig. 1, except that one element of the apparatus is removed. Fig. 3 is a top view of Fig. 1, and Fig. 4 a section of Fig. 1 taken on the dotted line $x-x$. Fig. 5 is a top view of Fig. 2.

Referring now to the drawing, 1 is a cylindrical shell into the upper and lower ends of which are inserted the parts a and b respectively, of the chute which leads from the hopper to the capping head, neither of which are shown.

In the upper end of the shell 1 are fastened in any suitable manner, the semi-cylindrical blocks 3 and 4 having the downward extensions c and d of V shaped cross section.

The blocks 3 and 4 are separated a distance which is slightly greater than the depth of the bottle caps to be assorted, thereby forming a channel 5 which leads to the interior of the part a of the chute.

7 and 9 are blocks similar to those designated by 3 and 4 before referred to, having V shaped upward extensions e and f , secured in the lower end of the shell 1.

The extensions e and f of the blocks 7 and 9 extend between and past the lower ends of the extensions c and d of the blocks 3 and 4, and should the portion of the apparatus above the dotted line $x-x$ be removed and the remainder viewed from the top there would be seen two straight passages g and h , see Fig. 4, which are at a right angle one with the other, and both of these passages are

at an angle of about 45 degrees with respect to the channel 5 and the corresponding channel 10 between the blocks 7 and 9, as shown in Figs. 3 and 4.

In Fig. 3 there are shown, (one in dotted lines) two sealing caps A and B in reversed positions in the receiving channel 5, and it will be seen that should either of these be discharged into the delivery channel 10 they would have to turn 90 degrees; and in order that they may be brought to a common or capping position represented in Figs. 1 and 2 it is necessary for the cap A to traverse the passage h and the cap B to traverse the passage g , as indicated in Fig. 4, before reaching the delivery channel 10.

In order that the caps will take the directions described, the end i of the extension e of the block 7 is made wedge shaped and the edge inclined as shown in Figs. 1 and 2, which causes the caps to glance to one passage or the other; and to prevent the caps from striking the edge of the wedge the flange of the caps must be deflected from a central line. This is accomplished by means of the projection j which has a triangular cross section as shown in Figs. 3, 4 and 5. The projection j extends from the top of the apparatus to the upward extension e of the block 7 and in connection with the blocks 3 and 4 provides two grooves k and m (see Figs. 3 and 5) in which the edge of the cap flanges slide.

From the foregoing description it will be understood that among the essential features of the apparatus, are the crossed passages g and h formed substantially as described, together with the wedge shaped point i and the deflecting projection j , whereby the caps in either of the positions shown in Fig. 3 ultimately assume the position indicated in Figs. 1 and 2.

I claim as my invention:—

1. In a bottle-cap assorting apparatus, a shell which at its upper end is provided with two blocks with an entrance channel between them, the said blocks having downward extensions of triangular cross-section; and at its lower end provided with similar blocks separated to form a discharge channel which is practically at a right angle with the entrance channel, the lower blocks being inverted and so placed that the ends of their extensions will pass beyond the ends of the extensions of the upper blocks, and thereby produce between the channels two crossed passages both of which lead to the discharge

channel, combined with devices to deflect caps leaving the entrance channel, to one or other of the said passages, according to the position which the caps occupy on entering
5 the apparatus, which conducts them in capping position, to the discharge channel, substantially as specified.

2. In a bottle-cap assorting apparatus, a shell having at its upper end two blocks with
10 an entrance channel between them, the said blocks having downward extensions of V-shaped cross section; and having at its lower end two blocks with a discharge channel between them which is practically at a right
15 angle with the entrance channel, the said blocks having upward extensions of V-

shaped cross section, the upper and lower extensions forming two intersecting passages which are at about a right angle one with the other, and the upward extension of one of the
20 lower blocks having a wedge-shaped end, combined with a device situated within the entrance channel to deflect caps to one or the other of the intersecting passages according to their position on entering the apparatus, 25 and thereby conduct them in capping position to the delivery channel, substantially as specified.

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Witnesses:

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