

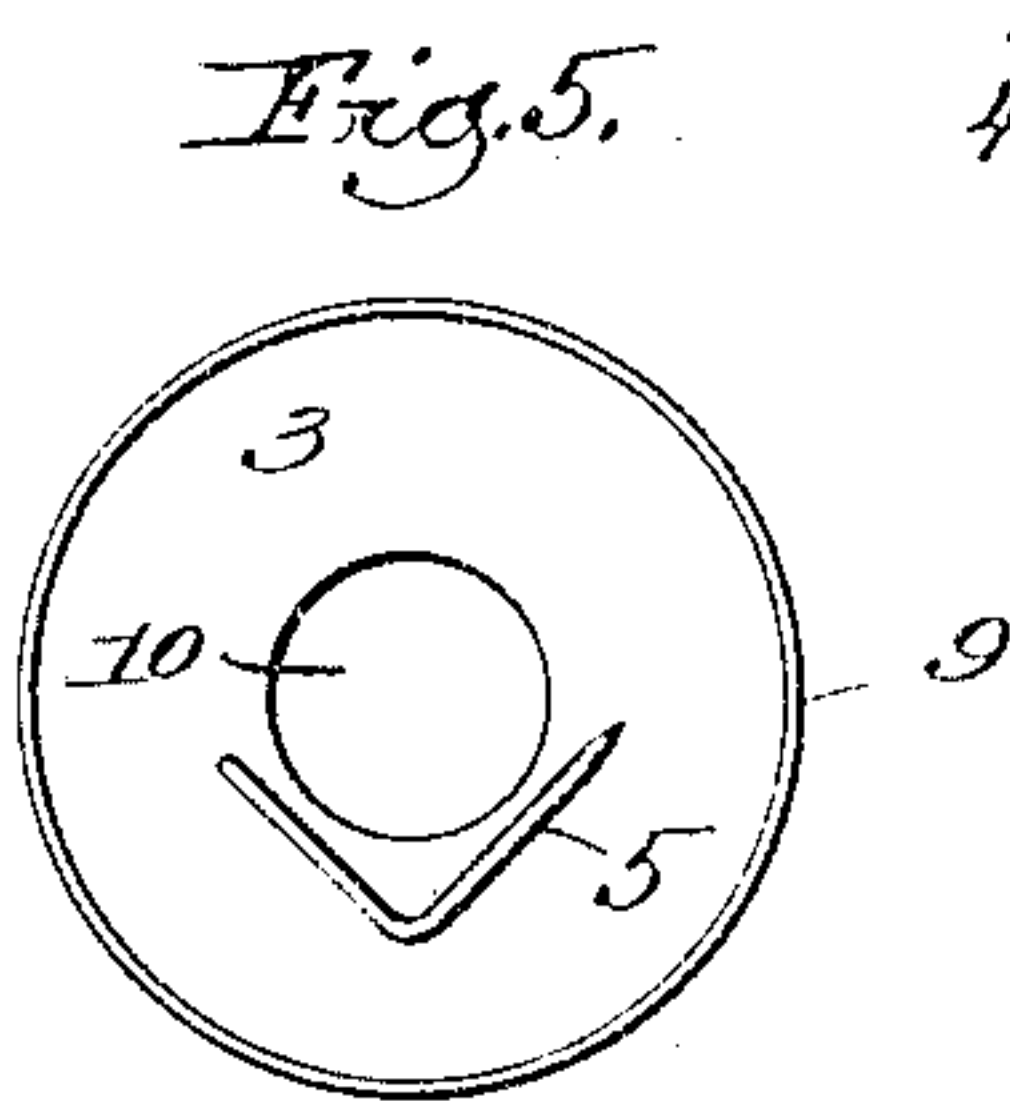
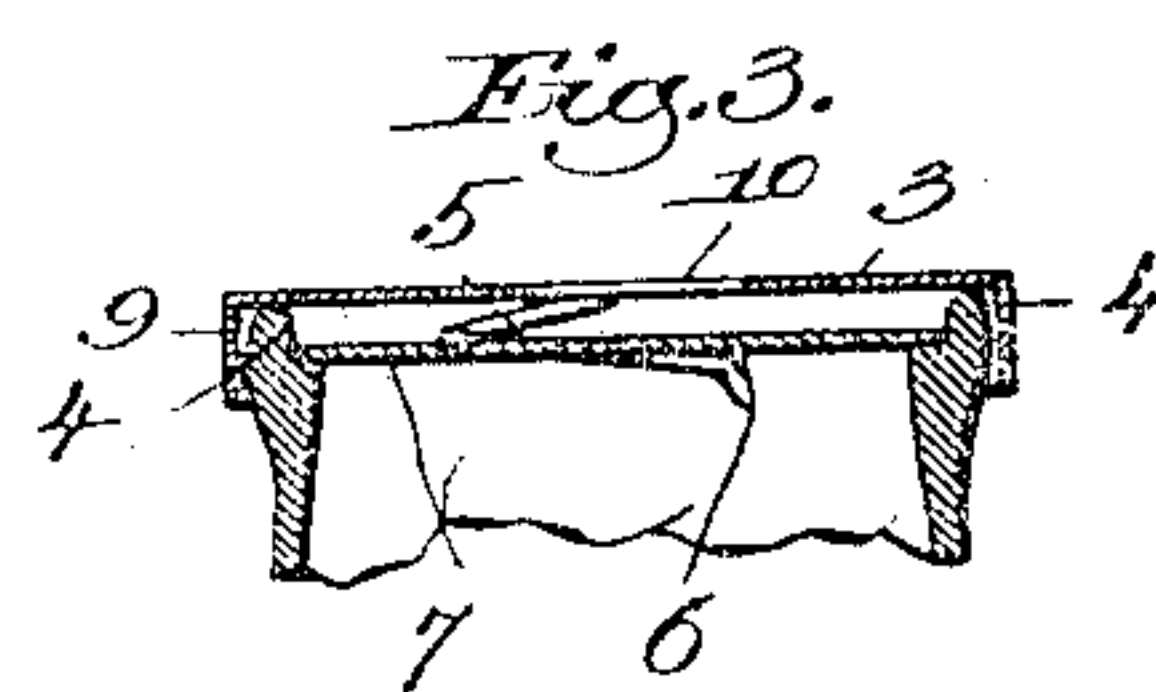
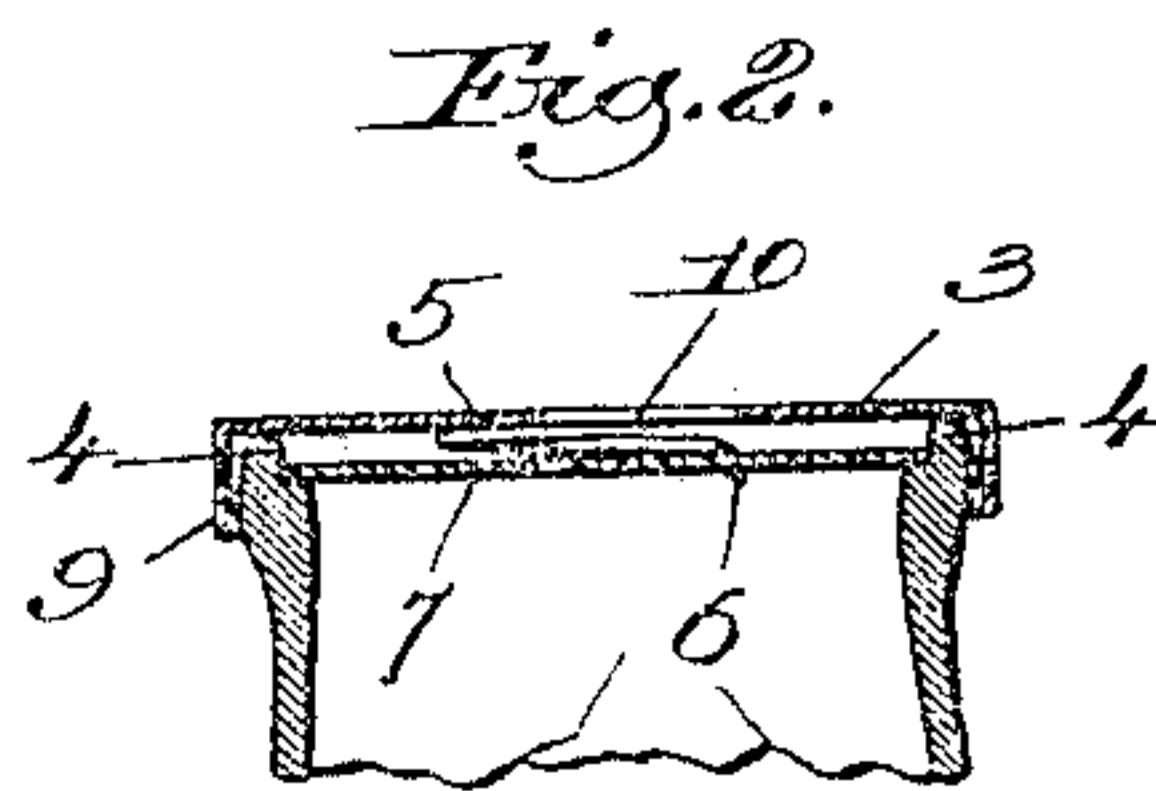
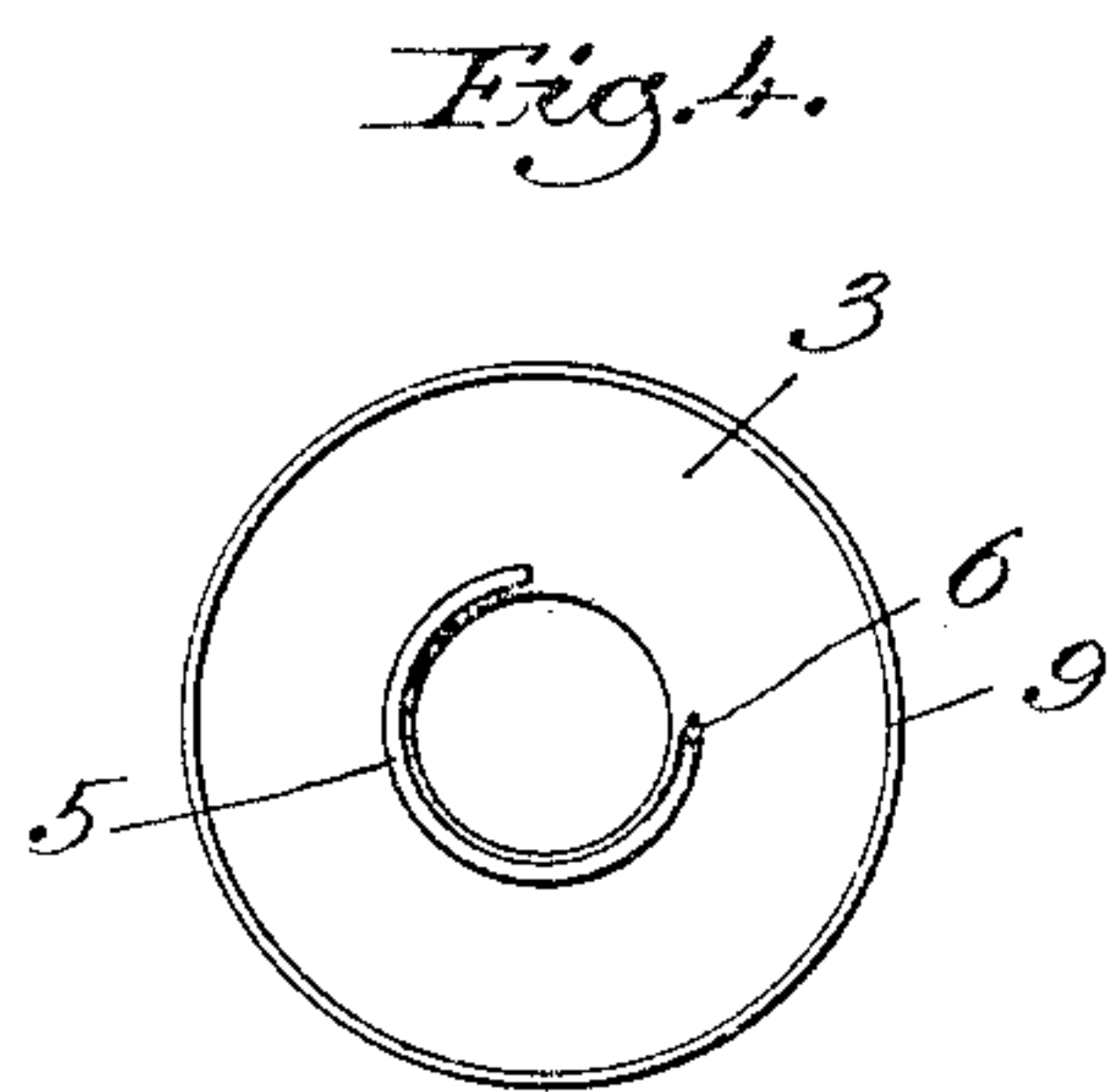
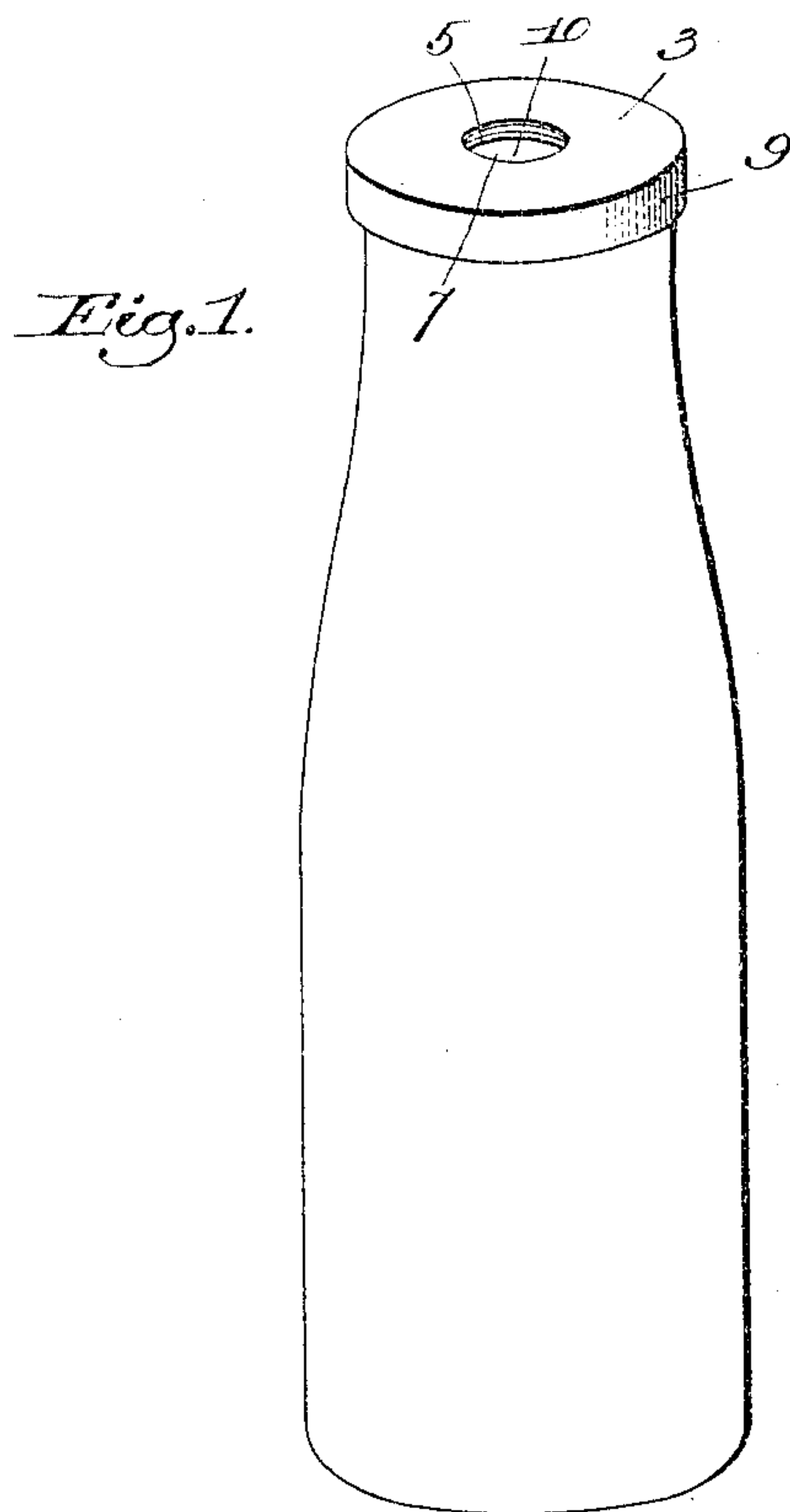
No. 793,198.

PATENTED JUNE 27, 1905.

J. H. HUMPHREY.

DEVICE FOR REMOVING CAPS FROM MILK BOTTLES OR SIMILAR RECEPTACLES.

APPLICATION FILED JUNE 18, 1903.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES H. HUMPHREY, OF BOSTON, MASSACHUSETTS.

DEVICE FOR REMOVING CAPS FROM MILK-BOTTLES OR SIMILAR RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 793,198, dated June 27, 1905.

Application filed June 18, 1903. Serial No. 161,973.

To all whom it may concern:

Be it known that I, JAMES H. HUMPHREY, a citizen of the United States, residing at Boston, county of Suffolk, State of Massachusetts, have
5 invented an Improvement in Devices for Removing Caps from Milk-Bottles or Similar Receptacles, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the
10 drawings representing like parts.

This invention relates to a novel device by means of which the paper cap commonly used in milk-bottles and similar receptacles may be readily removed, and it comprises a body
15 portion adapted to rest upon and span the throat of the bottle and having a puncturing-point fixed thereto and depending from its under side, which puncturing-point is so constructed that as the body is turned the point
20 is forced through the paper cap. When the cap has thus been run through or punctured by the point, the removal of the device from the bottle carries with it the paper cap.

In the drawings, Figure 1 is a perspective
25 view of a milk bottle or jar having my improved device applied thereto for the purpose of removing the paper cap. Fig. 2 is a vertical section through the neck of the bottle, showing the position of the cap-removing device before it is given its turning movement
30 to puncture the cap. Fig. 3 is a similar view showing the position of the parts after the cap is punctured. Fig. 4 is a bottom plan view of the cap-removing device, and Fig. 5
35 is a modification.

The device consists of a body portion 3 of any suitable construction, which is adapted to span the throat or neck of the bottle or jar and rest upon the upper edges 4 of said neck.
40 Depending from the body and fixed thereto is a puncturing-point 5, which may be conveniently made of a piece of pointed wire soldered or otherwise secured to the body. This puncturing-point stands at an inclination
45 to the body and is so shaped and placed that the distance between the pointed end 6 thereof and the body 3 is slightly greater than the distance that the paper cap 7 is below the top edge 4 of the jar or receptacle. When, there-

fore, the device is placed on the top of a jar, 50 the pointed end 6 comes in contact with the cap before the body rests against the edge of the jar. I make the puncturing-point 5 of some resilient material, such as spring-wire, so that when pressure is applied to the body 55 to bring it hard against the jar the puncturing-point yields and assumes the position shown in Fig. 2. When the puncturing-point is in this position, the resiliency thereof brings the pointed end 6 against the cap 7 with suf- 60 ficient force so that when the body is turned the point pierces the cap, as shown in Fig. 3. I may, if desired, bend the pointed end 6 of the puncturing-point down slightly, as shown in the drawings, so as to facilitate the punc- 65 turing of the paper cap by the turning movement of the body. When the cap has thus been run through by the point, the removal of the device from the body will carry with it the cap, as will be obvious. The operation 70 of removing the cap therefore simply consists in placing the device on top of the jar and giving it a slight turn sufficient to puncture or run through the cap and then removing the device. 75

The body 3 of the device may assume various shapes without departing from my invention. I prefer, however, the shape herein shown, which is circular and provided with the annular flange 9, which sets over the top 80 of the jar. This construction is preferable because the flange serves to properly position the device for operation. The shape of the point 5 may also be varied in many ways without departing from the invention. In 85 Figs. 3 and 5 I have shown a point having a spiral or corkscrew shape, so that the act of puncturing the cap is similar to the operation of forcing a corkscrew into a cork. In Fig. 6 I have illustrated a different form of point, 90 but one which operates in the same way—that is, is forced through the cap by the turning motion of the device. It will be understood, of course, that the point may assume various other shapes than these two. 95

I have herein illustrated the body 3 as having a central aperture 10, through which a person may insert one finger and gently press

the cap 7 against its retaining-shoulders while the body is being turned in case the cap is so loosely seated that when the body is turned the point 6 tends to turn the cap instead of puncturing it.

It will be obvious that various changes in the shape and arrangement of parts may be made without in any way departing from the spirit of the invention as expressed in the appended claims.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class described, a body portion adapted to rest on and span the top of a bottle, and a resilient inclined puncturing-point depending from said body, the distance between the pointed end of said point and the body portion normally being slightly greater than the distance between the paper cap and the top of the bottle, whereby when said device is placed on top of the bottle and given

a turning movement the resiliency of the puncturing-point forces it through the cap.

2. In a device for removing paper caps from bottles, a body portion adapted to span the top of the bottle, and a resilient inclined puncturing-point depending from said body portion, the latter having a central aperture through which a person's finger may be inserted to hold the cap from turning, said puncturing-point being of sufficient length to engage and press against the paper cap when the body portion rests on the top of the bottle, whereby the resiliency of the puncturing-point forces it through the cap when the body portion is turned.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES H. HUMPHREY.

Witnesses:

LOUIS C. SMITH,
NATHAN HEARD.