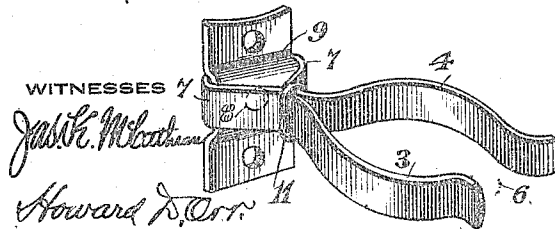
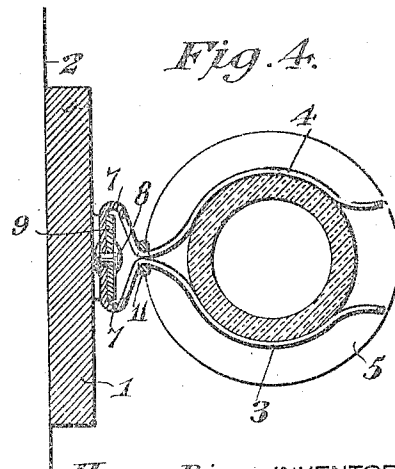
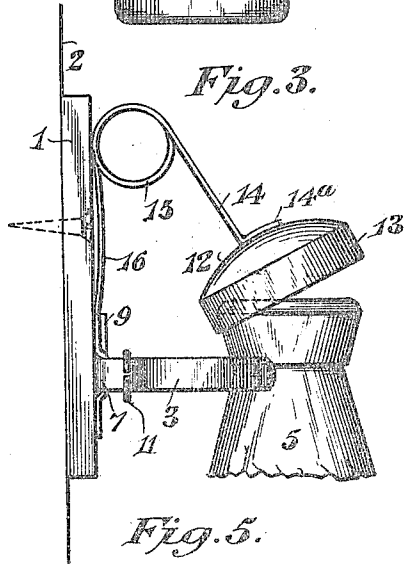
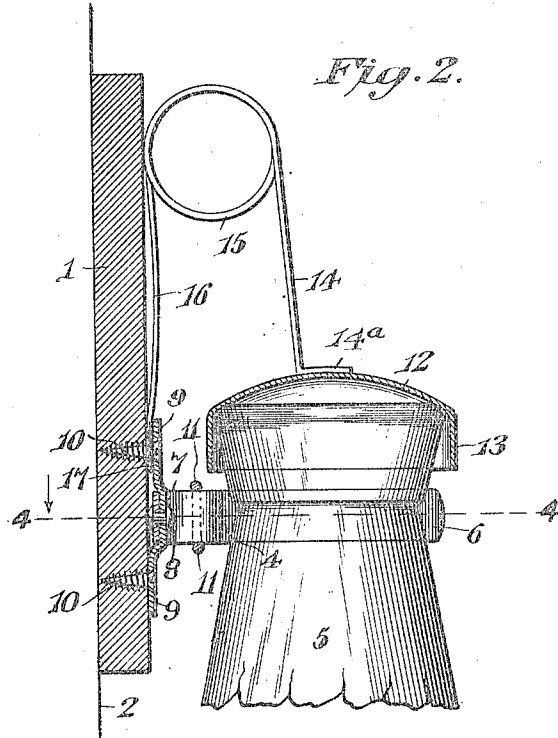
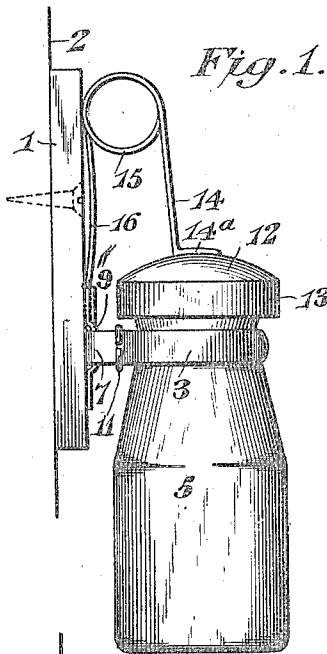


H. DIXON & A. THIELE.
MILK BOTTLE CAP PROTECTOR.
APPLICATION FILED JAN. 5, 1918.

1,294,883.

Patented Feb. 18, 1919.



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UNITED STATES PATENT OFFICE.

HENRY DIXON AND ADOLPH THIELE, OF DAYTON, OHIO.

MILK-BOTTLE-CAP PROTECTOR.

1,294,383.

Specification of Letters Patent.

Patented Feb. 18, 1919.

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To all whom it may concern:

Be it known that we, HENRY DIXON and ADOLPH THIELE, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Milk-Bottle-Cap Protector, of which the following is a specification.

This invention relates to milk bottle cap protectors, and the object is to provide a device for the protection of the capped mouth ends of milk bottles, which is designed to be used in conjunction with any holding means for the bottle having members for yieldingly surrounding and clasp-
15 ing the neck thereof, in order to support the same.

Another object is to provide a device of this character which may be located in some convenient place for the introduction of the bottle of milk, as delivered by the dealer, and having means for automatically closing and protecting the mouth of the bottle from insects or animals, as well as readily releasing the same when the
25 bottle is disengaged from the holding means.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawing forming a part of this specification; it being understood that while the drawing shows a practical form of the invention, the latter is not confined to strict conformity therewith, but may be changed or modified, so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the claims appended hereto.

In the drawing, in which like reference characters designate corresponding parts in each of the several figures:—

Figure 1 is a side elevation of the improved device showing its application to the mouth of a milk bottle.

Fig. 2 is an enlarged vertical sectional view thereof, the upper end of the bottle being shown in elevation;

Fig. 3 is a view similar to Fig. 1, but showing the method of introducing the bottle into the holding and protecting means;

Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 2;

Fig. 5 is a detached perspective view of

the holding or supporting means for the bottle.

As illustrated in the drawings, the device comprises separate holding and protecting means adapted to be carried by a base member 1 which may be screwed, nailed, or otherwise secured to any upright supporting means shown at 2, which is indicative of a post, wall, or any other convenient upright
65 surface.

While specific means are shown in the drawings for supporting the bottle, no claim is herein made to the same.

The holding means or clip comprises a spring clamp having spaced resilient arms 3 and 4 curved to fit the neck of a bottle 5, when distended, the forwardly extending terminals of the arms 3 and 4 being slightly curved outward to form a lateral entrance
75 opening 6, as clearly illustrated in Fig. 5 of the drawing. The outwardly curved terminals of the arms 3 and 4 are for the purpose of readily introducing the neck of the bottle 5, to permit the said arms to clasp it and support the said bottle.

The arms 3 and 4 are preferably formed of a single piece of spring metal, properly bent to form an intermediate loop 7, which is riveted or otherwise secured as at 8, to a metallic strap 9, and is perforated for the reception of fastening screws 10, which firmly secure the holding means to the base member 1. A wire loop 11 is preferably passed around the arms 3 and 4, where they are brought together adjacent to the said intermediate loop 7, for the purpose of securing a more rigid engagement of the said arms with the neck of the bottle.

The protecting means comprises a cup-like cap member or cover 12, having a concaved top, and a depending marginal flange 13, of an internal diameter somewhat greater than the external diameter of the mouth of the milk bottle. The cap member 12 is supported by the downwardly extending hanger arm 14 of a coil spring 15 which is formed of suitable spring metal, and is adapted to have sufficient resiliency to permit of the movements of the cap member 12 in a manner to be described. The arm 14 is preferably provided with a terminal foot 14^a, which may be soldered or otherwise secured adjacent to the center of the cap member 12, and the coil spring 15 has its other arm 16 extending substantially parallel to the arm 14, and provided with a terminal eye 17,
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which is adapted to surround the upper fastening screw 10, and between the metal strap, 9 and the base member 1, in order to readily secure the arm 16 in an upright position.

When the parts are in position as herein described, the normal tendency of the coil spring 15 and its terminal arms 14 and 16 respectively is to support the cap member 12 in an inclined position, as illustrated in Fig. 3 of the drawing. When it is desired to place a bottle in position in the device, it is only necessary to place the neck of the bottle, while in an upright position, against the terminals of the arms 3 and 4, when the upper edge of the said milk bottle will be in a proper plane to strike the inner, inclined wall of the flange 13 carried by the cap member 12. By exerting a slight pressure upon the bottle, the arms 3 and 4 are distended sufficiently to allow the neck of the bottle 5 to pass through the entrance opening 6 of the holding means, and the top edge of the bottle will carry the cap member 12 into covering position, by bearing against the said flange 13 until the cap member assumes the position over the mouth of the bottle, as indicated in Figs. 1 and 2 of the drawing.

The arm 14 holds the cap member from movement directly upward, and allows movement of said member in the arc of a circle from the position shown in Fig. 3 to the position illustrated in Fig. 1.

From the foregoing, it will be seen that an extremely simple device has been provided, which, when used in conjunction with any holding means similar to that described, will automatically cover and protect the capped mouth of a milk bottle or other receptacle, and will readily become disengaged from and release the same, by simply disengaging the bottle from the said holding means.

It will further be seen that the device may be made to fit various sizes of bottles.

What is claimed is:—

1. In combination with holding means for

a bottle, a cap protector comprising a cover having a depending marginal flange, and a resilient hanger arm connected to the cover and having its upper end coiled to form a spring, the said cover being adapted, through the action of the coiled spring and resilient arm, to normally occupy an inclined position, with its elevated side over the outer portion of the said holding means.

2. In combination with bottle holding means comprising resilient arms having an entrance opening therebetween, a cover, and resilient means for supporting the cover in an inclined position, with its lowermost side adjacent to the said support and in spaced relation to the said arms, said cover being provided on its underside with a depending marginal flange adapted to be engaged by the mouth of the bottle, and to be forced back and into a horizontal position in covering relation thereto when the neck of the bottle is forced between the said arms.

3. In combination with bottle holding means having spaced, resilient arms for clasp ing the neck of a bottle, and an entrance opening between their free ends for the introduction of said bottle, means for securing the holding means to a support, a cap protector comprising a cover having a depending marginal flange and adapted to normally lie in spaced relation to and over the said entrance opening, the outer side of the cover being elevated, and supporting means for holding the cover in such position, comprising a pair of resilient divergent arms joined by a spring coil, one of said arms being secured to said cover and the other arm being secured to the support by the said securing means of the holding means.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

HENRY DIXON.
ADOLPH THIELE.

Witnesses:

ARTHUR R. KREHBIEL,
ANDREW J. KREHBIEL.