

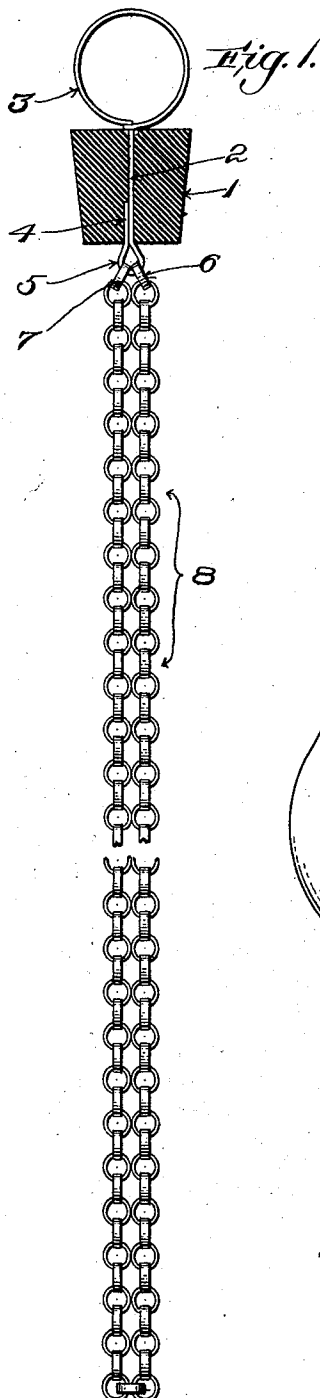
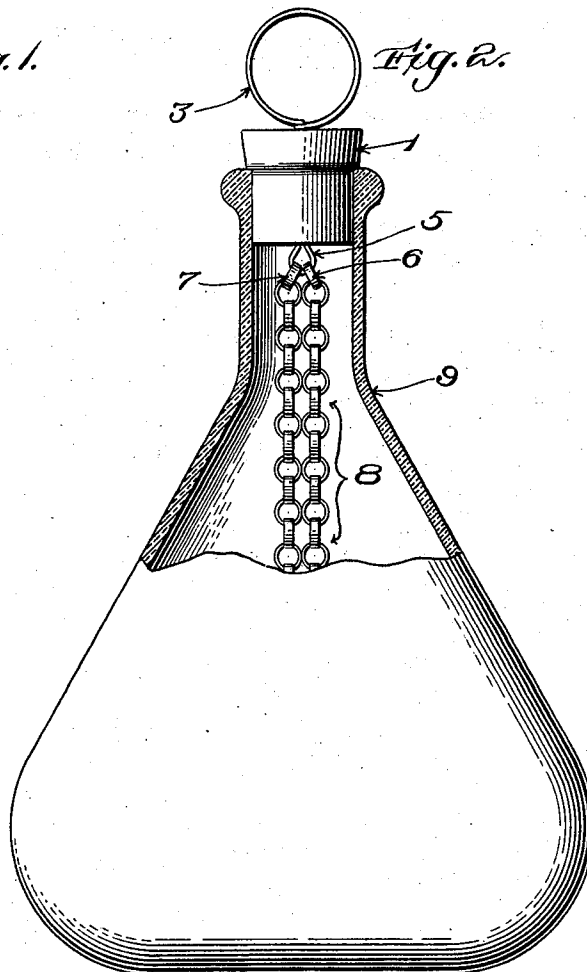
No. 700,499.

Patented May 20, 1902.

D. H. IRVING.
BOTTLE CLEANER.

(Application filed Aug. 2, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

DAVID H. IRVING, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO JONATHAN CHASE, OF BOSTON, MASSACHUSETTS.

BOTTLE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 700,499, dated May 20, 1902.

Application filed August 2, 1901. Serial No. 70,841. (No model.)

To all whom it may concern:

Be it known that I, DAVID H. IRVING, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Bottle-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

It is the object of my invention to produce a convenient and efficient device for cleaning the interiors of bottles.

The device is applicable to bottles of all shapes and sizes; but it is especially adapted to small bottles and bottles having small mouths, into which a large or complicated device could not be readily introduced.

Herein the improved cleaner is shown as applied to a nursing-bottle, to which it is well adapted in view of the frequency with which such a bottle requires cleaning and the thoroughness in the process of cleaning which is essential. The device, however, is equally applicable to bottles of other varieties, and the same cleaner may be used for bottles of different size, shape, and character.

Other advantages of the improvement will be mentioned during the course of the following specification.

The invention will first be described in connection with the accompanying drawings, which illustrate the best form thereof yet devised by me, after which the essential features of the improvement will be particularly pointed out and distinctly defined in the claims at the close of this specification.

In the drawings, Figure 1 shows the bottle-cleaner detached with the stopper in section. Fig. 2 shows the cleaner applied to a bottle, the latter being partly in section.

In the drawings the numeral 1 designates a stopper, and 2 a wire passing centrally through the same. The upper end of the wire is formed into a ring 3 for handling the cleaner, and said ring also furnishes a convenient means of suspending the device when it is not in use. The lower end 4 of the wire is bent to form a loop 5, which before being closed is passed through the two end links 6 7 of a chain 8. A convenient means of assembling the parts is first to pass the wire 2 through the stopper 1, then to form the loop

5, engaging the links 6 and 7, then to press the wire upward until the end 4 passes into the stopper and secures the loop from opening, and finally to form the ring 3, thereby preventing any downward movement of the wire and consequent possible release of the chain.

The essential feature of the device is a chain which is looped or doubled. The looping or doubling of the portion of chain that is pendent from the stopper secures entire freedom from tendency to become permanently tangled up while being shaken in the interior of the bottle—that is being cleaned. A single length of chain is found frequently to form a ball or mass which cannot be withdrawn through the neck of the bottle. With a looped or doubled chain, however, it is found in practice that any temporary balling of the chain within the bottle can be immediately cleared by drawing on one or other of the parts of the chain from the outside after the stopper has been removed from the mouth of the bottle.

The mode of applying the cleaner to a bottle is obvious, as shown in Fig. 2 of the drawings, the bottle therein being designated 9. The stopper preferably is tapered, which will permit of its insertion into bottles of quite a range of sizes of mouth.

The parts of the cleaner being permanently attached together, the device always is in condition for immediate use, and its manipulation is simple. After having been used the device very conveniently can be rinsed and hung to dry.

What I claim is—

1. A bottle-washer comprising a stopper and a looped or doubled chain attached to the said stopper.

2. A bottle-washer comprising a stopper, a wire passing therethrough, and a looped or doubled chain attached to the said wire, the wire being secured from retraction by having the upper portion thereof bent to form a handhold.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID H. IRVING.

Witnesses:

ROBERT WALLACE,
LEPINE HALL RICE.