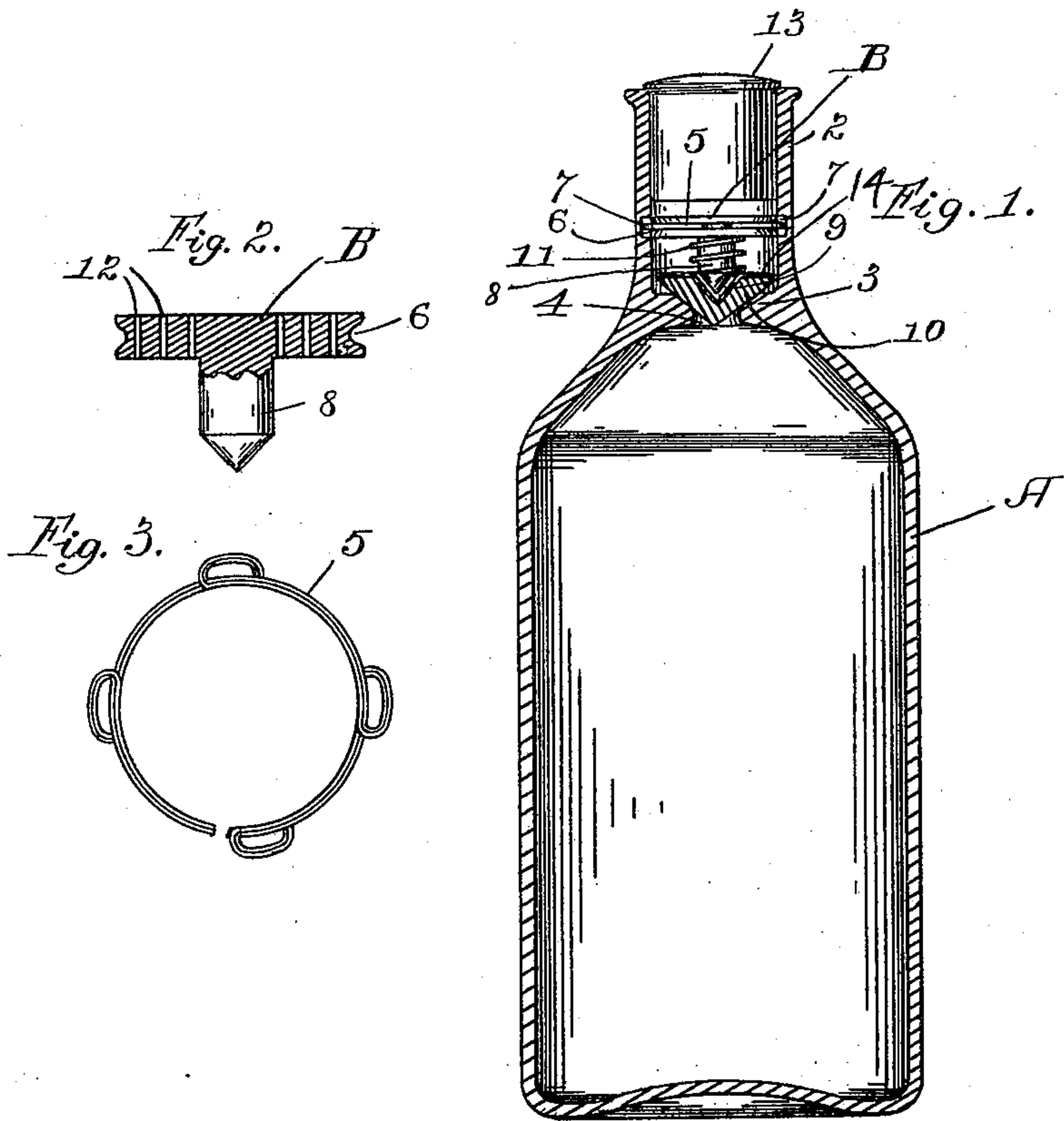


(No Model.)

R. HEARNS.
SEALING ATTACHMENT FOR BOTTLES.

No. 598,929.

Patented Feb. 15, 1898.



Witnesses:

J. S. Grafton,
A. B. Johnson.

Inventor:

Robert Hearn.

per: *T. D. Merwin*
Attorney.

UNITED STATES PATENT OFFICE.

ROBERT HEARNS, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-HALF TO
SAM BLACK, OF SAME PLACE.

SEALING ATTACHMENT FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 598,929, dated February 15, 1898.

Application filed February 15, 1897. Serial No. 623,361. (No model.)

To all whom it may concern:

Be it known that I, ROBERT HEARNS, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Sealing Attachments for Bottles, of which the following is a specification.

My invention relates to improvements in bottles, its object being to provide an improved sealing attachment for the bottle, preventing refilling of the same after it has been emptied of its contents.

To this end my invention consists in arranging in the neck of the bottle a sealing attachment normally closing the same. This sealing attachment consists of a guard-disk secured in the bottle-neck by a spring arranged in a circumferential groove in the disk and neck. The guard-disk is formed with a downwardly-projecting stem, limiting the movement of a valve fitted in the throat of the bottle. The valve is normally held to its seat by a light spring interposed between it and the guard-disk and is adapted to be opened by the weight of the liquid in the bottle when the same is inverted, the liquid passing around the valve and out through ports or openings in the guard-disk. When the bottle is emptied of its contents, the valve will be held to its seat by the above-mentioned spring, so as to prevent refilling.

My invention further consists in the specific features of construction and combination of parts hereinafter more particularly described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a vertical central section of a bottle fitted with my improvements. Fig. 2 is a detail of the guard-disk, partly in section; and Fig. 3 is a detail of the spring by which said disk is secured in the bottle-neck.

In the drawings, A represents the bottle, having the neck 2. The bottom of the neck is formed with an inwardly-projecting annular flange 3, constituting a central throat 4.

B represents the guard-disk, held in place in the bottle-neck by the spring-ring 5, fitting in a circumferential groove 6 in the disk and a similar groove 7 in the neck. The guard-disk is formed with a central downwardly-

projecting stem 8, tapered at its bottom and projecting into a socket 9 in the valve 10. The valve 10 is held to its seat by a coil-spring 11, surrounding the stem 8 and abutting against the guard-disk and valve. A space is left between the end of the stem 8 and the bottom of the socket 9 in the valve, so as to permit movement of the valve in emptying the bottle.

The guard-disk B is formed with a series of openings 12 to permit the outflow of the liquid.

In use the bottle is first filled with liquid and the valve 10 then placed in the throat 4, as shown in Fig. 1. The guard-disk B is then placed in the bottle-neck, the spring 5 expanding into the groove 7 in the neck and holding the disk locked from removal, the neck being then closed by a cork 13 in the ordinary manner. The spring 11, interposed between the guard-disk and the valve, is of sufficient strength to hold the valve in the throat 4, but is adapted to be compressed by the weight of the liquid in the bottle to allow the valve to be opened when the bottle is held in inverted position, the liquid passing around the valve and out from the openings 12 in the disk. After the bottle has been emptied of its contents it cannot be refilled, as the spring 11 will hold the valve in the throat 4 and prevent the passage of the liquid around it, so that in order to fill the bottle it will be necessary to remove the above-described parts, which cannot be done without destroying the bottle.

The valve is provided with a metallic sheathing 14, which will prevent tampering by means of a wire passed through the openings in the guard-disk, the valve 10 being ordinarily made of a non-metal.

I claim—

The combination with a bottle-neck, formed with an inwardly-projecting flange at its bottom constituting a constricted throat, the valve seated in said throat, the guard-disk arranged above the same in the bottle-neck and secured in place by a spring arranged in the circumferential groove in the disk and neck, said disk being provided with vertical openings, the downwardly-projecting stem

upon said disk projecting into an opening in
said valve, the spring surrounding said stem
and bearing against the disk and valve, and
the protecting device for said valve prevent-
5 ing tampering by means of a wire or other in-
strument inserted through the openings in
the guard-disk.

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

ROBERT HEARNS.

Witnesses:

H. S. JOHNSON,

MINNIE L. THAUWALD.