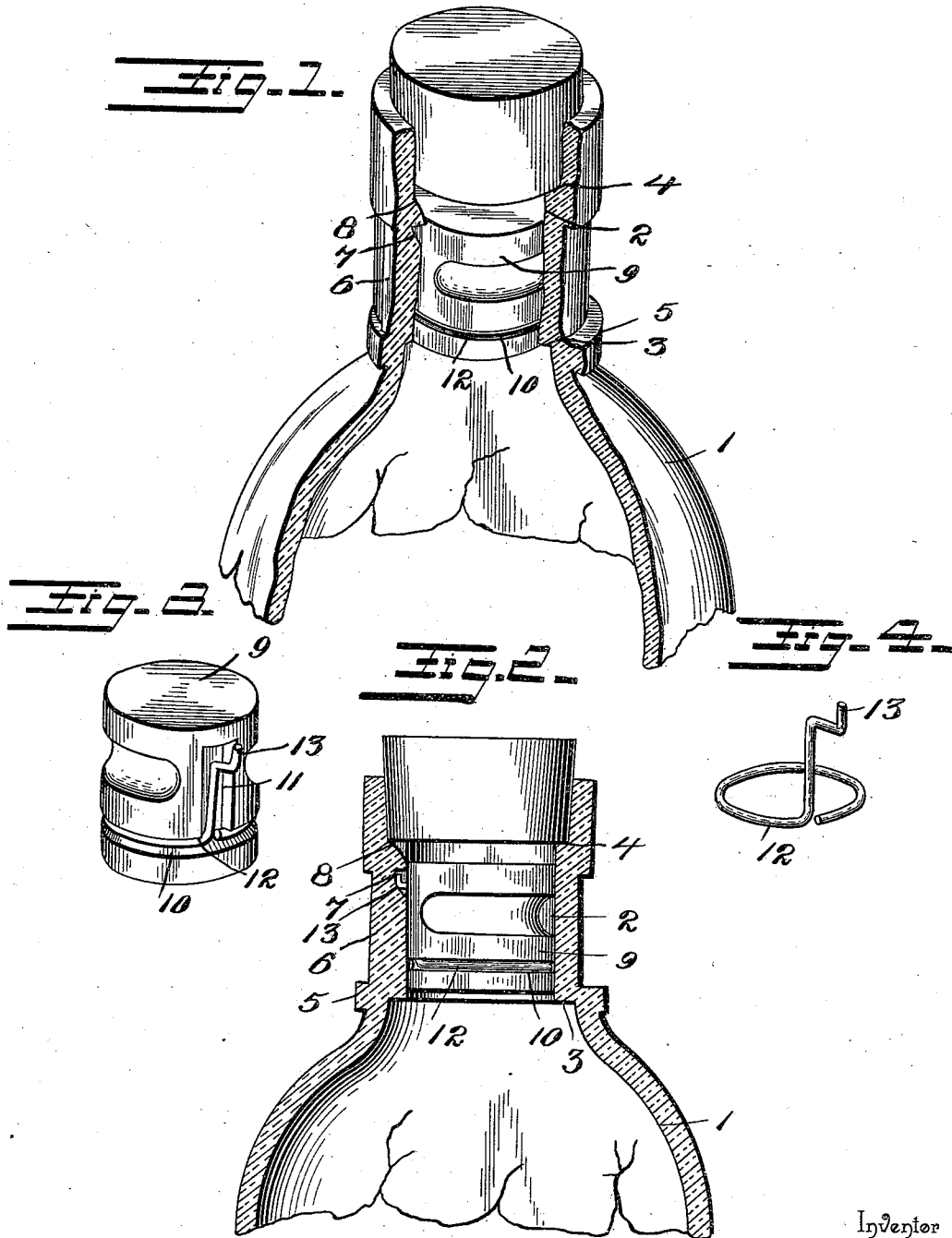


(No Model.)

W. A. PALMER.
BOTTLE STOPPER.

No. 556,205.

Patented Mar. 10, 1896.



Witnesses

W. J. Koeth.
R. M. Smith

By *his* Attorneys,

C. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM A. PALMER, OF MOBILE, ALABAMA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 556,205, dated March 10, 1896.

Application filed July 15, 1895. Serial No. 556,040. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. PALMER, a citizen of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented a new and useful Bottle-Stopper, of which the following is a specification.

This invention relates to an improvement in bottle-stoppers, and has for its object to provide a simple, cheap, and effective stopper of such construction that upon the filling of a bottle and the insertion of such stopper it will be impossible to remove the contents of the bottle and refill the same without visually indicating that such has been done.

The primary object of the invention is to provide in connection with a bottle of any size and shape a glass stopper which will fit snugly within the interior of the neck of the bottle, said stopper being provided with a spring-catch which will engage a recess or socket in the neck of the bottle for retaining said stopper in place, whereby it is necessary, in order to remove the contents of the bottle, to push said stopper inward until it passes into the interior of the body of the bottle, whereupon the contents of such bottle may be extracted; but the stopper itself cannot be removed without breaking the bottle.

To this end the invention consists in certain novel features and details of construction and arrangement, as hereinafter fully described, illustrated in the drawings, and finally incorporated in the claim.

In the accompanying drawings, Figure 1 illustrates in perspective the upper portion or neck of a bottle constructed in accordance with this invention. Fig. 2 is a vertical section through the same. Fig. 3 is a detail perspective view of the glass stopper. Fig. 4 is a similar view of the spring-catch which clasps around the glass stopper and holds the same in place within the neck of the bottle.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates a bottle of any desired size or shape, the same being made preferably of glass for the purpose of visually indicating the presence of the stopper therein after the latter has been

pushed through the neck of the bottle in a manner that will hereinafter appear.

For the purposes of carrying out the present invention the lower portion of the neck of the bottle is reduced in diameter as to its internal bore, as indicated at 2, in such manner as to form an annular shoulder 3 at the base of the neck and a similar shoulder 4 arranged in a higher plane and forming a stop for limiting the extent to which an ordinary cork or rubber stopper may be inserted into the mouth of the bottle, as illustrated in the sectional view.

5 designates a reinforcing-bead which is formed upon the exterior surface of the neck of the bottle and in the same horizontal plane with the internal annular shoulder 3, above referred to, the object of said bead being of course to impart the necessary strength to the bottle at such point and prevent the accidental breaking of the same.

6 designates an offset or knob projection formed in the process of manufacture upon the exterior of the neck of the bottle, its purpose being to admit of the formation within the interior of the neck of the bottle of an inclined notch or recess 7, the upper wall of which is disposed in a substantially horizontal plane for the purpose of engaging the spring-catch of the glass stopper to be presently described, and 8 represents an inclined notch disposed above the catch-notch 7 and leading thereto.

9 designates a substantially cylindrical glass stopper, the outside diameter of which corresponds as nearly as practicable to the internal diameter of the reduced portion of the neck of the bottle, so that said stopper will fit snugly therein and prevent the pouring out of the contents of the bottle when in place. This stopper is formed adjacent to its base with an annular groove 10, and is also provided with a vertically-disposed recess 11.

12 designates a spring-catch, the same comprising a ring or loop portion which is adapted to clasp around the glass stopper and rest snugly within the annular groove therein, so as not to interfere with the insertion of said stopper, and said spring also comprises a vertically-disposed spring-arm portion which rests within the vertical recess 11 in the stop-

per and is formed with an angular or L-shaped catch-lip 13, consisting of a horizontal portion and a vertically-disposed extremity, as shown. When said spring-catch is in place upon the stopper, the angular lip thereof projects normally beyond the peripheral face of the stopper, while, by reason of the depth of the recess in which the catch lies, it is adapted to move inward far enough to allow the stopper to be inserted in the neck of the bottle and pushed entirely through the same when desired. This spring-catch is preferably made from a single piece of wire, and this should be of pure metal—such as, silver, nickel or aluminum—in order to obviate the liability of corrosion when exposed to the action of chemicals or liquids of any kind that may be placed in the bottle, and, if desired, this spring-catch may be made from flat spring metal.

In operation the glass stopper is inserted into the mouth of the bottle and moved downwardly into the reduced portion of the neck thereof until the spring-catch engages in the notch 7, above referred to. In this position the glass stopper effectually prevents the pouring out of the contents of the bottle, and at the same time it will be impossible to move said stopper outwardly. The ordinary cork or rubber stopper is now inserted in the mouth of the bottle and sealed in the usual manner for shipment. When it is desired to gain access to the contents of the bottle, the cork or rubber stopper is removed and pressure applied to the glass stopper and the latter forced inward until it falls into the interior of the body of the bottle. The contents of the bottle may now be poured out; but it will be impossible to remove the glass stopper without destroying the bottle, for the reason

that the catch on said stopper will engage with the annular shoulder 3 at the base of the neck of the bottle and effectually prevent the extraction thereof. The device above described is designed for the protection of the manufacturers of patent medicines, brandies, liquors, &c., and will effectually prevent the refilling of the bottle with a spurious article without plainly indicating that the bottle has been tampered with by reason of the presence of the glass stopper within the body of the bottle.

It will be apparent that various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

The herein-described bottle-stopper, comprising a cylindrical body formed with an annular groove and with a recess offset from said groove, and a spring-catch consisting of a loop or ring portion resting within said annular groove and located within the plane of the peripheral surface of the stopper, and an arm or extension working within such recess and projecting normally beyond the periphery of the stopper and also adapted to recede into said recess, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM A. PALMER.

Witnesses:

JAMES P. KENNY,
CHAS. K. HOLT.