

No. 856,840.

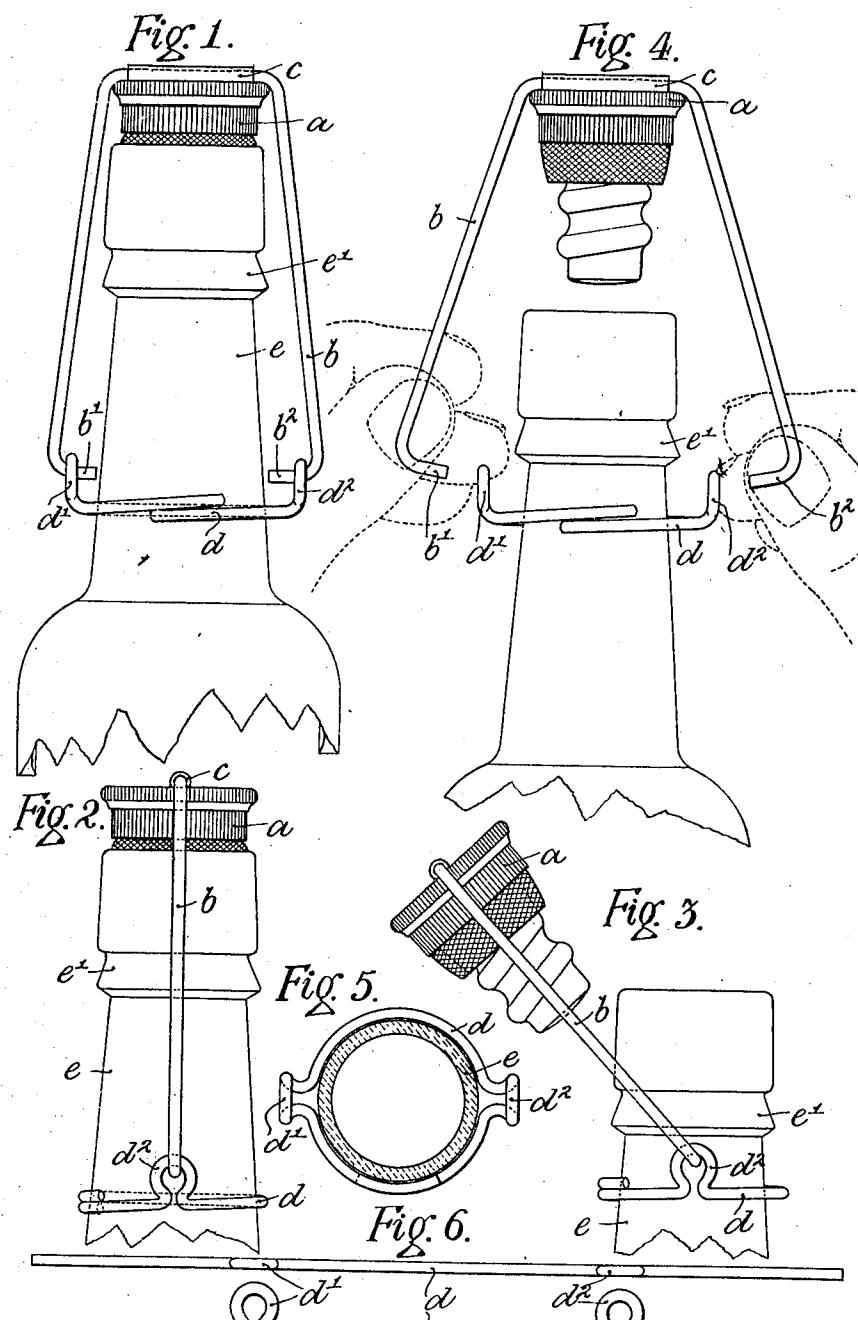
PATENTED JUNE 11, 1907.

F. A. BIRD.

STOPPER OR CLOSURE FOR BOTTLES AND JARS.

APPLICATION FILED OCT. 4, 1906.

2 SHEETS—SHEET 1.



WITNESSES

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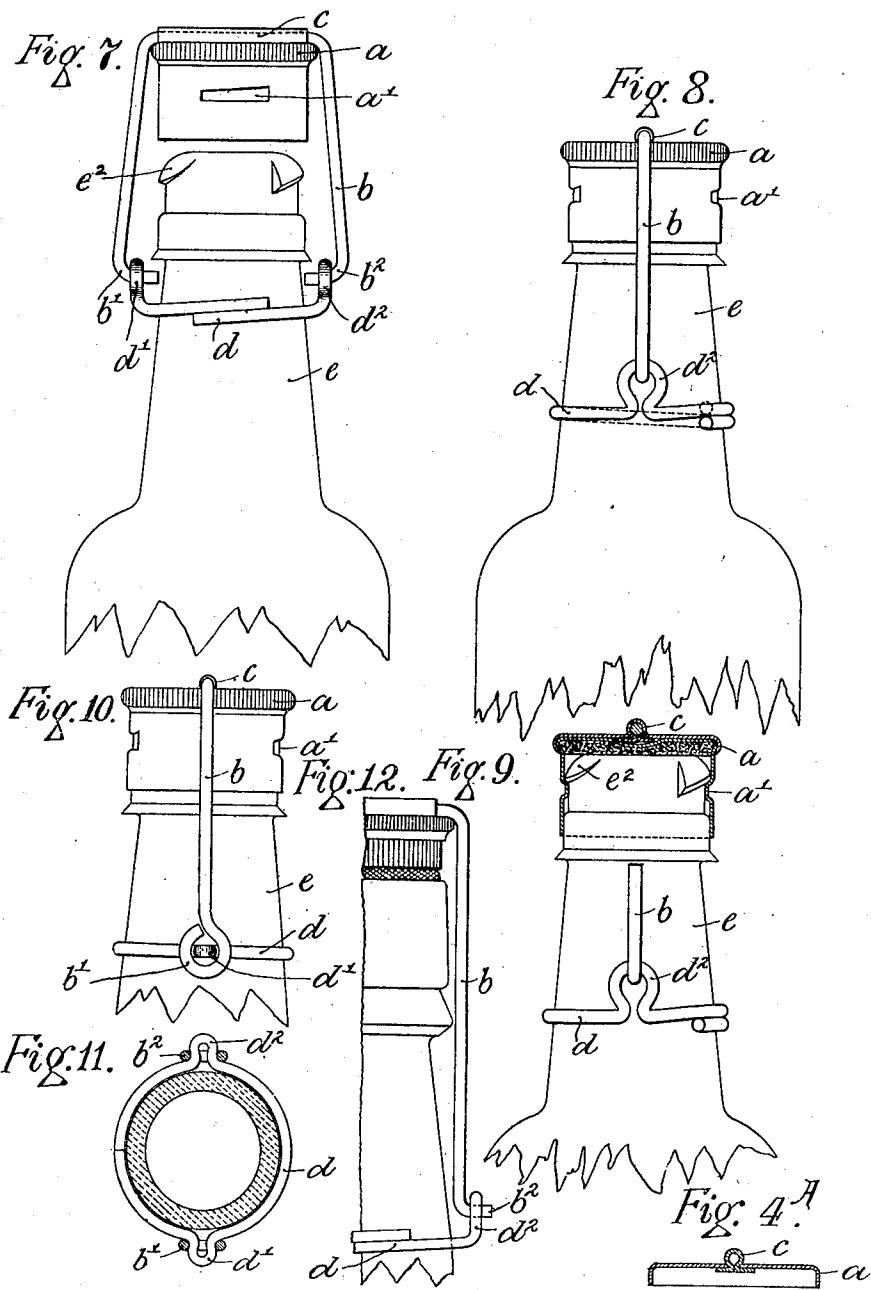
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2 SHEETS—SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

FREDERICK AUGUSTUS BIRD, OF ERDINGTON, NEAR BIRMINGHAM, ENGLAND.

STOPPER OR CLOSURE FOR BOTTLES AND JARS.

No. 856,840.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed October 4, 1906. Serial No. 337,446.

To all whom it may concern:

Be it known that I, FREDERICK AUGUSTUS BIRD, a subject of the King of Great Britain, residing at "The Poplars," Sutton Road, 5 Erdington, near Birmingham, England, have invented certain new and useful Improvements Relating to Stoppers or Closures for Bottles and Jars, of which the following is a specification.

This invention has relation to means for preventing stoppers or closures of bottles and jars from being entirely removed from the latter, and thus getting lost or mislaid, and is particularly applicable to stoppers for that 15 type of bottle or jar in which the upper part of the neck is provided with a collar on the outside, or is of greater diameter than the remaining part of the neck, and is applicable to stoppers which are operated by a rotatory 20 movement, and which are either internal, such as those externally screwed and taking into the internally wormed mouth of the bottle, or are external, such as those provided with internal inclined lugs adapted to take 25 under corresponding inclined lugs on the outside of the mouth of the bottle.

The object of the invention is to provide an improved keeper or bail for preventing the stopper being entirely removed from the bottle or jar, which is readily removable or detachable for cleaning or other purposes, and is moreover simple in construction and can thus be cheaply manufactured.

The invention consists essentially in providing a loop or ring fitting loosely on the bottle neck below the collar or enlarged part, and detachably connected to the stopper, by a spring sided bail or yoke, so that it permits the stopper being rotated and raised to 40 a limited extent, but prevents it from being entirely removed owing to the aforesaid loop or ring coming against the collar on the mouth of the neck.

Figure 1 of the accompanying drawings 45 represents a front elevation of the improved keeper or bail applied to an externally screwed stopper taking into the wormed interior of the bottle mouth. Fig. 2 shows a side elevation of the same. Fig. 3 is a side 50 elevation of the keeper showing the stopper removed from the bottle, and also showing how the loose ring on the bottle neck admits

of the upward movement of the keeper for the removal of the stopper. Fig. 4 shows a front elevation with the sides of the bail 55 drawn outward for the detachment of the same from the loose ring. Fig. 4^a, is a section of the stopper showing the means of securing the sleeve in which the bail turns. Fig. 5 represents a cross section of the bottle 60 neck and showing the loose ring in plan. Fig. 6 shows in plan and elevation the loose ring before being bent or fashioned into a circular form around the bottle neck. Fig. 7 shows a front elevation of the invention applied to an external stopper having inside 65 inclined lugs adapted to take under correspondingly inclined lugs on the bottle mouth. In this view the stopper is shown removed from the bottle mouth. Fig. 8 shows a side 70 elevation with the stopper applied to the mouth. Fig. 9 is a similar view to the above, but with the stopper shown in section. Figs. 10, 11 and 12 show in side elevation and section slightly modified means of attaching 75 the bail to the ring on the bottle neck.

The same letters of reference indicate corresponding parts in each of the above figures.

In carrying out this invention, the stopper *a* is provided with a bail or **U**-shaped member 80 *b* of stout wire, hinged to the top of the stopper by a sleeve *c* separate from the cap formed of a folded piece of sheet metal with the ends passed through the cap and these secured. The said bail *b* has depending spring sides, 85 the free or lower ends *b*¹, *b*² of which are turned inward approximately at right angles and are by the contractile force of the sides engaged with and hinged to vertically disposed eyes or loops *d*¹, *d*² at the opposite sides of a 90 ring *d* surrounding the bottle neck *e*. This ring *d* which is made of stout wire is sprung on the bottle neck *e* and fits loosely on the latter below the collar or enlarged mouth *e*¹ and is of less diameter than the latter so that 95 it can only be removed by exerting sufficient pressure to open or extend the spring to allow it to pass over the enlarged mouth *e*¹, but is nevertheless capable of a limited upward and downward as well as a rotary movement. 100 It will be noticed that the bottle neck is of varying diameter and that consequently the resistance is greatly minimized when the ring is removed from its normal position.

The ring is formed from a length of stout wire having eyes or loops formed as shown in Fig. 6, and adapted to be fashioned into a circular form surrounding the bottle neck, and 5 having the ends overlapping.

The ends b^1, b^2 of the bail b are kept in engagement with the eyes or loops of the ring d by the contractile pressure exerted by the spring sides, but the bail with the attached 10 stopper a may be completely detached from the ring d by exerting an outward pressure on the said spring sides, when the ends of the same will be disengaged from the eyes d^1, d^2 and the bail and stopper removed. By thus 15 making the bail and stopper detachable cleaning or washing of the latter is greatly facilitated.

In Fig. 9 the stopper a is shown provided on its inside with inclined lugs a^1 , which, 20 when the stopper is placed over the bottle mouth e are adapted by rotation to engage with or take under correspondingly inclined lugs e^2 on the said bottle mouth. The bail b is as before hinged to the top of the stopper 25 at c , and the lower turned-in ends b^1, b^2 engage with the eyes d^1, d^2 of a ring d fitted loosely surrounding the bottle neck.

In the forms disclosed by Figs. 10, 11 and 12 the bail b which is hinged at c to the stopper 30 a , has the lower ends of its spring sides formed into loops or eyes b^1, b^2 , while the opposite sides of the ring d are formed with outstanding parts or studs d^1, d^2 which take into and detachably engage with the aforesaid loops 35 of the bail. It is also obvious that the ends b^1, b^2 of the bail b may be turned outward as in Fig. 12, and engaged with the loops or eyes

d^1, d^2 of the ring d by the expansion of the same.

In removing a stopper from a bottle fitted 40 with this invention, as the stopper is rotated, the bail and loop around the bottle neck rotate with it and when raised it is prevented from being entirely removed by the loop with which the bail is engaged coming against the 45 collar on the neck, but the stopper and arch piece can be turned over off the mouth against the outside of the bottle, and thus the contents of the latter freely poured out or removed. 50

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

1. In a bottle stopper, the combination of a spring bail, a rotatable and slideable spring 55 ring surrounding the bottle neck and having its ends overlapping, the said bail being attached with its central portion to the stopper and detachably engaged with its ends to opposite points of the ring.

2. In a bottle stopper, the combination of a spring bail, a rotatable and slideable spring ring being bent at opposite points to form eyes and having its ends overlapping, the 60 said bail being attached with its central portion to the stopper and detachably engaged with its ends to the eyes of the ring. 65

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK AUGUSTUS BIRD.

Witnesses:

HY. SKERRETT,

HENRY NORTON SKERRETT.