(No Model.)

J. H. SPRINGFIELD.

BOTTLE AND STOPPER THEREFOR.

No. 588,499. Patented Aug. 17, 1897.

Fig. 1.

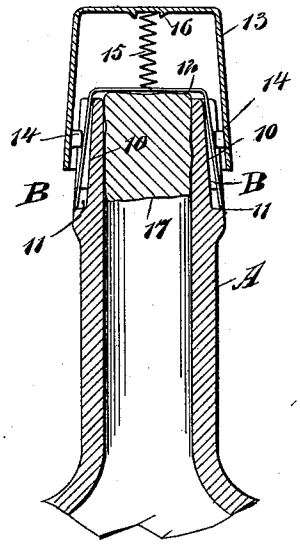


Fig. 2.

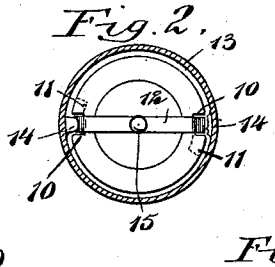


Fig. 3.

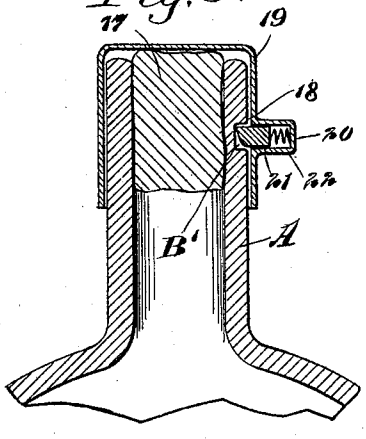
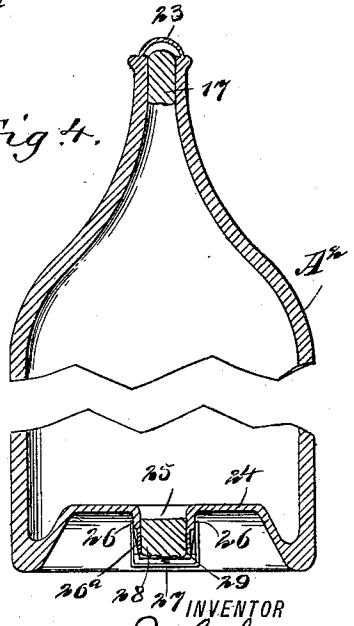


Fig. 4.



WITNESSES:

L. N. Legendre

Wm. Acker

INVENTOR

J. H. Springfield

BY Munn & Co

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES HENRY SPRINGFIELD, OF PLATTEVILLE, COLORADO.

BOTTLE AND STOPPER THEREFOR.

SPECIFICATION forming part of Letters Patent No. 588,499, dated August 17, 1897.

Application filed July 16, 1896. Serial No. 599,359. (No model.)

To all whom it may concern:

Be it known that I, JAMES HENRY SPRINGFIELD, of Platteville, in the county of Weld and State of Colorado, have invented a new and useful Improvement in Bottles and Stoppers Therefor, of which the following is a full, clear, and exact description.

The object of the invention is to provide a construction for a bottle and a stopper for the same which will be simple, durable, and economical, and whereby when the stopper is applied to the bottle the latter will be entirely sealed and cannot be refilled and again presented as an original package without the deception being rendered perfectly apparent to any person familiar with the arrangement of the original package.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through the neck of a bottle and the stopper for the same, illustrating the stopper as partially applied. Fig. 2 is a transverse section through the bottle-neck and the stopper shown in Fig. 1. Fig. 3 is a vertical section through the neck of a bottle and a modified form of the stopper applied to the same; and Fig. 4 is a vertical section through the bottle, illustrating a further modification in the manner of sealing the bottle, entering fluid into the same, and gaining access to the said fluid.

The bottle-neck A is provided at diametrically opposite sides upon its outer face at the mouth with substantially L-shaped slots B, the said slots comprising each a vertical member 10, extending from the upper edge of the mouth a predetermined distance down the neck, and a short horizontal member 11 in direct communication with the vertical member of the slot.

A yoke 12, having its terminal members normally outwardly flared in opposite directions, is used in connection with the bottle-neck, and the bow member of the said yoke extends across the top or mouth of the bottle-neck, while its terminal members extend downward in the vertical members 10 of the L-shaped slots B. A cap 13 is employed in connection with the neck of the bottle, and this cap is preferably made of glass or other frangible or fragile material, and the cap is provided at diametrically opposite sides with exterior lugs 14, and it may be here remarked that the horizontal members 11 of the L-slots B extend in opposite directions.

A spring 15 has bearing upon the top of the yoke 12 and against the upper face of the cap 13, the upper portion of the spring being contained within a suitable socket 16 or the equivalent thereof. When the cap is placed properly on the neck of the bottle, its lugs 14 will engage with the pendent or terminal members of the yoke 12, as shown in Fig. 1. The cap is so formed that when it is forced downward over the neck of the bottle it will fit substantially tight thereto, and therefore the shape of the cap is made to correspond to the exterior shape of the neck of the bottle. Therefore as the cap is forced downward the pendent or terminal members of the yoke 12 will be pressed inward, permitting the lugs of the cap to enter the horizontal members 11 of the L-slots B, and by turning the cap a slight distance the cap-lugs 14 will enter the said horizontal members 11, traveling to their outer ends, and the pendent members 12 of the yoke, which are of a spring material, when released, will fly outward, forming locks, preventing the cap from being turned back so as to effect a release between it and the neck of the bottle. Therefore the cap must be broken or otherwise destroyed before the contents of the bottle can be emptied, which is effected by drawing the yoke 12 and a cork 17, which is beneath the yoke and in the mouth of the bottle.

In Fig. 3 I have shown a modified form of the device, in which the spring 15 is dispensed with and likewise the L-slots B, a recess B′ being simply formed in the exterior of the bottle-neck. The cap 19 in this instance is also preferably of glass and has a tubular offset 20 formed upon one of its sides containing a pawl 21, and a spring 22 normally forcing the pawl outward. The inner end of the pawl is usually beveled in a downwardly di-

rection, so that when the cap is placed over the mouth of the bottle and pressed downward, when the pawl 21 is opposite the recess B, the spring will force the pawl into the said recess and effectually prevent the withdrawal of the cap. It will be understood that more than one recess may be produced in the bottle and that more than one spring-controlled pawl may be used in connection with the cap, and that the pawl, if desired, may be of the gravity type.

In Fig. 4 a slight further modification is shown, in which the top of the bottle is provided with the usual cork 17, but the mouth is entirely closed by a frangible covering 23, preferably given an upward curvature, and which is to be broken when the contents of the bottle are to be poured out. The liquid, however, in this instance is not poured in at the mouth of the bottle, but through an opening 25 made in its bottom 24, the said opening being surrounded by a downwardly-extending collar 26, having an L-slot 26^a produced therein corresponding to the slots B in the construction shown in Fig. 1. In fact the collar and its closing device are the same as the neck of the bottle and the closing device shown in Fig. 1, embracing a yoke 28, and a spring-controlled stopper 27, having lugs to enter the slots 26^a, and a cork stopper 29 is placed in the collar 26, against which the yoke has a bearing. The recesses and slots in the bottle-neck which receive the lugs or latches from the cap are virtually keepers.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a bottle having an exterior recess or groove formed in its neck, constituting a keeper, of a frangible cap fitting over the neck of the bottle and provided with an inwardly-extending tongue adapted to engage the said keeper, and an internal spring engaging the said tongue and retaining it in position in the said groove or recess, substantially as described.

2. The combination with a bottle provided with external L-shaped grooves in its neck, of a fragile cap fitting upon the bottle-neck and provided with lugs on its inner face engaging said grooves, and a spring engaging the lugs of the cap to hold them in the horizontal portions of the grooves, substantially as described.

3. The combination with a bottle provided with external L-shaped grooves in its neck, the horizontal portions of said grooves extending in opposite directions, of a cap fitting upon the bottle-neck and provided with lugs on its inner surface engaging said grooves, and a spring-yoke carried by the bottle-neck and having its terminal members extending downward in the vertical members of the said grooves and adapted to engage the lugs of the cap to hold them in the horizontal portions of the said grooves, substantially as described.

4. The combination with a bottle having its neck provided with exterior slots, the said slots forming keepers, of a cap made of frangible material and provided with inwardly-extending lugs adapted to engage the said slots, a spring-yoke extending across the top of the bottle-neck and having its terminal members extending into the said slots and adapted to engage the lugs of the cap to hold them in the said slots, and a spring arranged between the top of the yoke and the said cap, substantially as described.

5. A bottle-mouth provided with exterior slots therein, the said slots forming keepers, a spring-yoke entering the said slots, and a cap fitted over the mouth and the yoke and carrying latches operating to hold the yoke in place, as and for the purpose set forth.

6. The combination, with the mouth of a bottle, or an opening into which the fluid is to be introduced, the said mouth having diametrically opposing L-shaped slots, of a spring-yoke crossing the mouth or opening, the members whereof enter the vertical members of the aforesaid slots, and a cap having projections arranged for engagement with the free members of the yoke as the cap is being placed over the mouth, the said projections of the cap being adapted to enter the horizontal portions of the said slots in the mouth of the bottle, said yoke thereby preventing the removal of the cap, as and for the purpose specified.

JAMES HENRY SPRINGFIELD.

Witnesses:
EDWIN CAMP,
W. R. RANEY.