

No. 728,907.

PATENTED MAY 26, 1903.

O. GRÖZINGER.
BOTTLE STOPPER.

APPLICATION FILED AUG. 20, 1902.

NO MODEL.

Fig. 1.

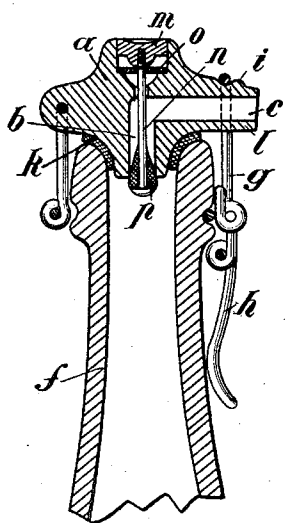


Fig. 4.

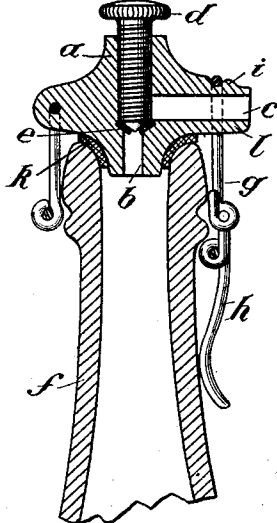


Fig. 5.

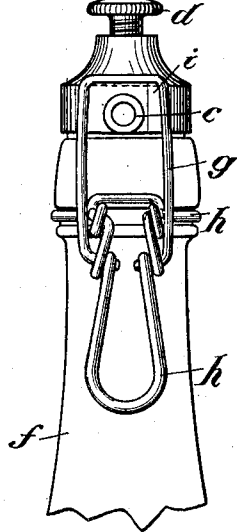


Fig. 2.

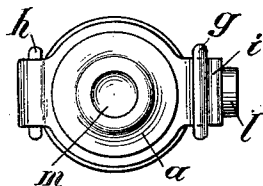


Fig. 3.

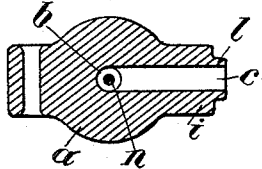
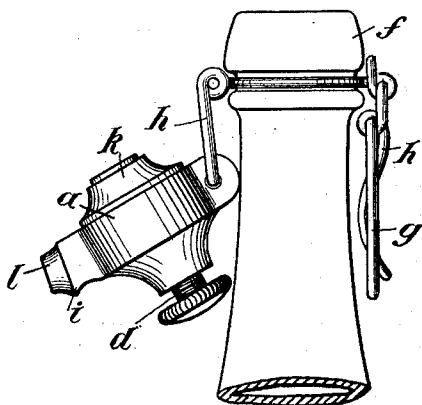


Fig. 6.



Witnesses:

Anton Grotzinger
Alice Short

Inventor:

Otto Grotzinger,
by Max J. Meier
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UNITED STATES PATENT OFFICE.

OTTO GRÖZINGER, OF LUDWIGSBURG, GERMANY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 728,907, dated May 26, 1903.

Application filed August 20, 1902. Serial No. 120,424. (No model.)

To all whom it may concern:

Be it known that I, OTTO GRÖZINGER, a citizen of the German Empire, residing at Ludwigsburg, Kingdom of Wurtemberg, Germany, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to bottle-stoppers for effervescing beverages and similar liquids; and it consists in forming perforations, preferably at right angles, in the head of such a stopper which is held in the bottle by means of any of the usual securing means—as, for instance, by wire fastenings or the like—one of said perforations being adapted to be closed or opened by means of a spring-actuated valve or a screw-plug fitted in the head. To discharge the contents of the bottle, it is thus not necessary to release the wire or other fastening, but merely to press upon the button of the valve, thereby opening the same, or to release the screw-plug mounted in the stopper-head, whereupon the contents of the bottle are expelled through the channels in the bottle-head in a direction approximately at right angles to the axis of the bottle, whereby the pouring out of the liquid is considerably facilitated. In a similar manner the charging of the bottle may be effected without the stopper being removed.

An embodiment of my invention is shown in the accompanying drawings, in which—

Figure 1 is a vertical section of the neck of a bottle fitted with this improved stopper. Fig. 2 is a top view of same; Fig. 3, a cross-section through same; Fig. 4, a sectional view of the bottle-neck with a screw-plug instead of a spring-valve; Fig. 5, an end view of the bottle-neck, and Fig. 6 a perspective view of the bottle when the stoppering device is removed.

The stopper *a* is attached to the bottle *f*, Fig. 4, by means of any suitable fastening device in such a way as to be capable of being brought into and out of engagement with the opening in the bottle, the gasket *k* effecting a tight joint. In the accompanying drawings a lever-fastener *h* is shown, the fastening-loop *g* of which engages a projection *i* on

the stopper *a*. Perforations *b c* are formed at right angles in the stopper *a*, the perforation *b* (which opens toward the bottle) being adapted to be closed by means of a screw-plug *d*, mounted in the stopper *a*, and the closing being rendered tight by means of a washer-ring *e*, Fig. 4, or by means of a valve consisting of the valve-rod *n*, the lower end of which is surrounded by a caoutchouc buffer *p*, thereby closing the perforation *b*. The upper end of the valve-rod *n* carries a button *m*, underneath which is arranged a small tightening-disk *o*, preferably of leather, effecting a slight spring action upon the button *m* when it is pressed down and then released. When the screw-plug *d* is relaxed or the spring-valve is opened, the contents of the bottle are discharged through the channels *b c*, and for facilitating this object a small nozzle *l* is provided on the projection *i* of the stopper *a*. By this means the bottle can be discharged in the simplest manner without releasing the fastening *h*, and it may also be filled in a similar manner, which is of particular advantage in charging or discharging bottles containing effervescent beverages or sparkling wines.

When it is desired to clean the bottle, the fastening *h* is released, as shown in Fig. 4, after which the bottle may be closed in the usual manner.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A bottle-stopper adapted to effect the closure of a bottle and having formed therein a channel communicating with the interior of the bottle and with the outer air, and a screw-threaded valve mounted in the stopper and so disposed as to control said channel.

2. A bottle-stopper adapted to effect the closure of a bottle and having formed therein a bent channel communicating with the interior of the bottle and with the outer air, and a valve mounted in the stopper and so disposed as to control said channel at the angle therein.

3. A bottle-stopper having formed therein intersecting channels, one communicating with the interior of the bottle and the other with the outer air, and a valve mounted in the

stopper at the point of intersection and controlling the passage through said channels.

4. A bottle-stopper having formed therein intersecting channels at substantially right angles to each other, one communicating with the interior of the bottle and the other with the outer air, and an adjustable valve mounted in the stopper and controlling the passage through said channels.

5. A bottle-stopper having an axial channel formed therein and adapted to communicate with the interior of the bottle and with the outer air, a lateral channel communicating with the axial channel and with the outer air, and a valve capable of being set and retained at any degree of adjustment and so disposed within the axial channel as to control the passage through said channels.

6. A bottle-stopper provided with an elongation adapted to engage the opening in the bottle-neck and with a lateral projection, the elongation and projection having formed therein channels communicating in the body of the stopper, a valve mounted in the stopper and controlling the passage through said channels, and means for securing said stopper in the bottle-neck consisting of a hinge and of a loop adapted to engage the lateral projection.

7. A bottle-stopper provided with an elongation adapted to engage the opening in the bottle-neck and with a lateral projection at right angles to the elongation, the elongation and projection having formed therein axial

channels communicating in the body of the stopper, a valve mounted in the stopper and controlling the passage through said channels, and means for securing said stopper in the bottle-neck consisting of a hinge and of a loop adapted to engage the lateral projection.

8. A bottle-stopper provided with an elongation adapted to engage the opening in the bottle-neck and with a lateral projection, the elongation and projection having formed therein channels meeting at substantially right angles in the body of the stopper, a valve mounted in the stopper at the intersection of the channels and controlling the passage through said channels, and means for removably securing said stopper in the bottle-neck.

9. A bottle-stopper provided with an elongation adapted to engage the opening in the bottle-neck and with a lateral projection, the elongation and projection having formed therein axial channels communicating in the body of the stopper, and an exteriorly-operable valve mounted in the stopper and capable of being set and maintained at any degree of adjustment to control the passage through said channels, and means for securing said stopper in the bottle-neck.

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

OTTO GRÖZINGER.

Witnesses:

WALTER SCHWAEBSCH,
JEAN NICS.