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CLOSURE FOR BOTTLES OR LIKE VESSELS.
APPLICATION FILED NOV. 10, 1908.

954,115.

Patented Apr. 5, 1910.

Fig.1.

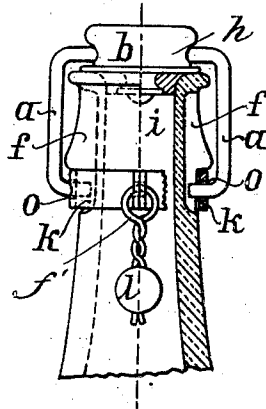


Fig.2.

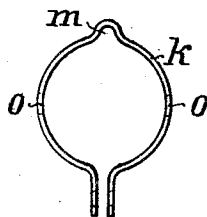
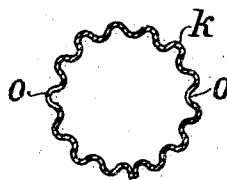


Fig.3.



Witnesses:

Henry Thine
J. George Barry

Inventor:-

Paul Leinbrock
by his attorneys
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UNITED STATES PATENT OFFICE.

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CLOSURE FOR BOTTLES OR LIKE VESSELS.

954,115.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed November 10, 1908. Serial No. 461,854.

To all whom it may concern:

Be it known that I, PAUL LEINBROCK, merchant, a subject of the King of Saxony, and resident of Copitz, near Dresden, Kingdom of Saxony, German Empire, have invented a new and useful Improvement in Closures for Bottles or Like Vessels, of which the following is a specification.

The present invention has reference to closures for bottles or like vessels of the kind comprising a wire loop or bail carrying the stopper or cover and having its ends preferably guided in grooves in the neck of the bottle as well as a neck ring or collar for adjusting the hooked ends of the wire loop or bail.

The present invention contemplates a bottle head which is conically enlarged toward its bottom and a neck ring or collar consisting of a yielding or elastic ring or band capable of being moved along over the conical bottle head and pressed down when the bottle is to be closed until it grips the bottle neck underneath the bottom rim of said bottle head. Thus an airtight and firm closure of the bottle is insured. Within this ring or band there are provided two holes arranged diametrically opposite each other through which pass the free bent or hooked ends of the wire loop or bail connected to the stopper. At the same time these hooked wire ends are preferably inserted into grooves arranged in the conical bottle head within which they are guided when moved upward and downward at the same time taking along with them the neck ring or collar. The yielding neck ring or collar is preferably made of spring-steel or the like and is arranged to be open on the one side whereas on the other side opposite to the open space there may be arranged a bend or loop within the ring for increasing its elasticity. In case the neck ring or collar consists of a closed ring the same may, for the purpose of making it elastic and yielding, be undulated.

The bottle closing device according to the present invention is illustrated by way of example in the annexed drawing in which—

Figure 1 is a side elevation of the same in connection with a conical bottle head, partly in section, Fig. 2 is a view of the neck ring in detail open on the one side and having its open ends bent outward along the open space and having on the opposite side

an additional bend, and Fig. 3 shows a closed neck ring undulated for rendering it elastic or yielding.

The bottom hooked ends of the wire loop or bail *a* carrying the stopper *b* which for the purpose of insuring an airtight closure of the bottle mouth is provided with an interposed india rubber or cork washer, are guided within the grooves *f* in the bottle head *i*. Instead of giving the latter the usual cylindrical shape the same is according to the present invention conically enlarged toward its bottom and the neck ring or collar *k* is for enabling it to pass over the conical bottle head formed in the shape of an open ring (Fig. 2) and provided on the side opposite to the open space with a bend or loop *m* for increasing its elasticity. Instead of using an open smooth or flat ring the same may be closed and undulated as shown in Fig. 3. In both cases the neck ring or collar is elastic or yielding and thus capable of being pushed down over the whole of the bottle head until underneath its thick bottom rim, where by means of its elasticity it will tightly grip around the bottle neck. When using an open ring the open ends of the same may be as shown in Fig. 2 bent outward along the open space and provided with holes for inserting a wire to be closed by a lead seal *l*. After removing the lead seal *l* and the inserted wire from the open neck ring or after opening the closed neck ring by cutting it the latter can be moved over the thick bottom rim of the bottle head *i* and upward along the conical bottle head taking with it the bent bottom ends of the wire loop which will slide along in and be guided by the grooves *f f*. By means of this upward movement the bottle mouth will be released from the stopper connected to the wire loop and the mouth of the bottle or vessel may be entirely uncovered by swinging the loop aside.

When closing the device according to the invention the stopper *b* connected to the wire loop or bail *a* and preferably provided with a broad head *h* for insuring a tight and intense closure is pressed down taking along with it the wire loop or bail whereby both bent bottom ends of the latter, passing through holes *o o* in the neck ring, are moved downward, and,—if grooves *f f* are provided in the bottle head,—guided within the latter. Simultaneously of course the open neck ring is moved downward and will cor-

respondingly to the increase of the conical bottle head *i* gradually widen against its spring action and finally tightly grip the bottle neck after arriving underneath the
5 bottom rim of the bottle head, whereby the stopper provided in any known manner with an india rubber or cork washer is firmly and tightly pulled down on the top rim of the bottle mouth.

10 To open the device it is simply necessary to bend or cut open the neck ring or collar and push it upward over the bottom rim of the conical bottle head and along said head.

In case a neck ring or collar is used which
15 is open on one side its open ends may be for the purpose of easily catching hold of the same bent outward along the open space and at the same time provided with holes for inserting if necessary a wire *f'* the ends of
20 which may be turned around each other and closed by means of a lead seal *l*.

The bottle closing device comprising an elastic neck ring or collar according to the invention shows besides being very simple to
25 handle and insuring an absolute airtight closure the great advantage of rendering it any time and easily possible to again attach

the same to the bottle and close it absolutely airtight even if the contents of the bottle have only partially been used. 30

What I claim is:

In a closure for bottles or like vessels, the combination with a tapered bottle head provided with a shoulder below the tapered portion and with vertical guide grooves leading
35 from above down to the contracted portion below the shoulder, of a stopper provided with a non-extensible bail having its lower ends turned inwardly and adapted to slide
40 downwardly along the grooves in the head and an expansible and contractible neck ring provided with holes for receiving the ends of the bail, said ring being arranged to slide
45 down over the tapered portion of the head and spring under the shoulder of the head to lock the stopper bail to the bottle.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 27th day of October, 1908.

PAUL LEINBROCK.

Witnesses:

PAUL ARRAS,
CLARE SIMON.