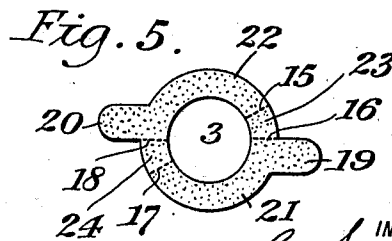
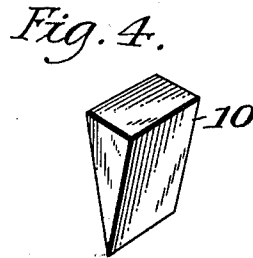
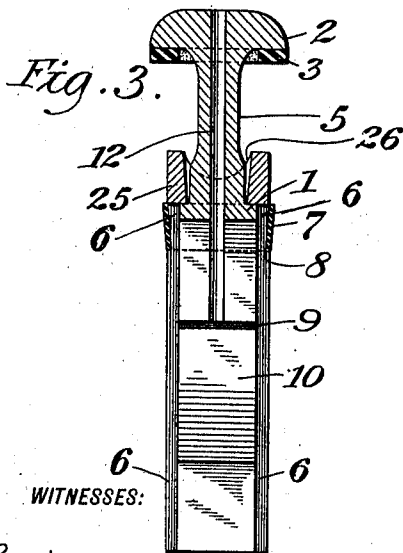
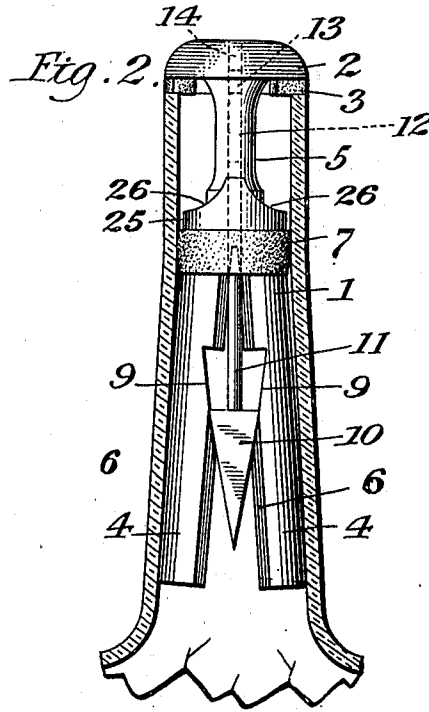
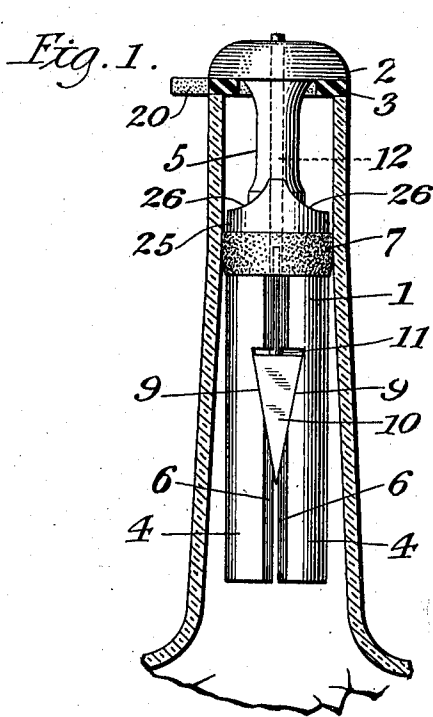


J. C. SCHLEICHER.
 STOPPER FOR BOTTLES.
 APPLICATION FILED APR. 2, 1910.

982,692.

Patented Jan. 24, 1911.



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JOHN C. SCHLEICHER, OF MOUNT VERNON, NEW YORK.

STOPPER FOR BOTTLES.

982,692.

Specification of Letters Patent.

Patented Jan. 24, 1911.

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To all whom it may concern:

Be it known that I, JOHN C. SCHLEICHER, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Stoppers for Bottles, of which the following is a specification.

My invention relates to stoppers for bottles.

It has for its object to provide a stopper adapted to be inserted and secured in the neck of a bottle in such a manner as to prevent its removal without destroying it and adapted, when in place in the neck of a bottle, to allow the liquid contents, with which the bottle has been filled previous to the insertion of the stopper, to run out, when the bottle is tilted or inverted, but prevent the bottle being refilled.

It has for its further object to provide a stopper of the character above set forth embodying advantages in point of simplicity and inexpensiveness of construction and perfect operation.

In the drawings: Figure 1 is a fragmentary vertical sectional view of the neck of a bottle having my stopper inserted therein, and its parts being in the position they occupy before the stopper is secured in the neck of the bottle. Fig. 2, a fragmentary vertical sectional view of the neck of a bottle having my stopper inserted therein and its parts being in the position they occupy after the stopper is secured in the neck of the bottle and parts of the washer removed to allow the contents of the bottle to run out. Fig. 3, a vertical sectional view of the stopper removed from the neck of the bottle and its parts being in the same position as in Fig. 1. Fig. 4, a perspective view of the wedge for expanding the legs of the stopper to secure it in the neck of a bottle. Fig. 5, a plan view of the washer for gaging the degree to which the stopper is to be inserted and for stopping the outlet from the neck during transportation.

Referring to the drawings illustrating my invention and in which like reference characters designate corresponding parts, 1 designates my bottle stopper which is adapted to be inserted in a bottle neck, preferably a bottle neck which is tapered, and secured therein.

The parts of the stopper may be made of

any suitable material or materials, preferably of wood and it is provided at one end with a head 2 adapted, when the stopper is inserted in the bottle neck, to bear on top of a washer 3 which bears on top of 60 of the bottle neck and thereby the bottle is tightly sealed, at the other end the stopper is provided with legs 4, formed by slitting the plug longitudinally from one end, the legs thus formed having a spring action 65 which holds them normally in closed condition and intermediate said head and legs the stopper is provided with a reduced portion or neck 5. The edges of the stopper along the slit are beveled at 6 to form 70 grooves therein which, when the stopper is in a bottle neck, provide means for the liquid to run out and also at the same time allow air to enter the bottle, but prevent it being refilled. A gasket 7 is seated in a 75 groove 8 at the upper end of the legs, and when the stopper is in the bottle, serves to make a close fit, at that point, between the stopper and the interior of the bottle neck. A wedge shaped recess 9 extends trans- 80 versely through the legs of the stopper and is formed in the inner adjacent faces of the legs and receives a complementary shaped wedge 10 which, when seated in the recess, 85 allows the legs by their spring action, to bring their inner faces together but, when forced downward between said legs, expands and closely clamps them against the interior of the bottle neck thus securing the stopper. The wedge is operated by means 90 of a bar 11, preferably of wood, which is inserted through a bore 12, extending longitudinally through the head, neck and upper part of the legs, into contact with the upper end of the wedge and then forced down- 95 ward until the wedge has been moved downward sufficiently to expand the legs, a metal bar 13 is then driven into the bore 12 forcing the bar 11 farther in, said bar 13 being driven in until it is below the upper 100 surface of the head and the upper part of the bore is finally sealed with cement 14.

The washer 3, which is made in the form of a ring, has lines of perforations 15, 16, 17 and 18 and tabs 19 and 20 to grasp and 105 tear the parts 21 and 22 of the washer away to form outlets from the bottle and leave the parts 23 and 24 to prevent the stopper from being moved farther in.

A ring 25, made preferably of metal so 110

that it will have the maximum weight for its size, is slidably mounted on the neck of the stopper and serves, when seated on top of the legs and gasket, to cover the upper ends of the grooves 6 in the legs and serves as an additional means for preventing the admission of liquid into the body of the bottle, and when resting against the head of the stopper and parts of the washer 3 have been removed, to allow the contents of the bottle to pass through openings 26 therein and run out of the bottle through the open space between the head of the stopper and the top of the bottle.

It will be understood from the foregoing description considered in connection with the accompanying drawings, that my stopper is applied in a bottle by inserting it therein until the washer 3 rests firmly on the top of the neck, inserting the wooden bar 11 in the bore 12 and forcing it downward until its upper end comes even with the top of the head 2 of the stopper, inserting the metal bar 13 into the bore 12 and forcing it downward until its upper end comes below the top of the head of the stopper and then filling the upper end of the bore 12 with cement, and it will also be understood that to pour out the contents of the bottle, the parts 21 and 22 of the washer 3 are removed by pulling on the tabs 19 and 20 and the bottle is then turned over causing the ring 25 to slide on the neck of the stopper until it comes against the stopper head, whereupon the contents will run from the body of the bottle through the grooves in the legs of stopper and out between the head of the stopper and the top of the bottle.

I claim:

1. A stopper for bottles having normally spring closed legs adapted to be expanded and secure it in the neck of a bottle and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

2. A stopper for bottles having normally spring closed legs adapted to be expanded and secure it in the neck of a bottle, means adapted to be moved between said legs and positively expand them and hold them rigidly and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

3. A stopper for bottles having legs adapted to be expanded and secure it in the neck of a bottle, means adapted to be moved between said legs and positively expand them and hold them rigidly and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

4. A stopper for bottles having legs adapted to be expanded and secure it in the

neck of a bottle, a block adapted to be moved between said legs, means adapted to allow the block to be engaged and operated to positively expand said legs and hold them rigidly and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

5. A stopper for bottles having legs adapted to be expanded and secure it in the neck of a bottle, a wedge adapted to be moved between said legs, means adapted to allow the wedge to be engaged and operated to positively expand said legs and hold them rigidly and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

6. A stopper for bottles having integral normally spring closed legs adapted to be expanded and secure it in the neck of a bottle, means adapted to be moved between said legs and positively expand them and hold them rigidly and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

7. A stopper for bottles having a head, a neck and legs adapted to be expanded and secure the stopper in the neck of a bottle, a ring slidable on the neck of the stopper and grooves in said stopper to allow the contents of the bottle to run out, substantially as described.

8. A stopper for bottles having a head, a neck and legs adapted to be expanded and secure the stopper in the neck of the bottle, a ring slidable on the neck of the stopper, means adapted to be operated to expand said legs and grooves in said stopper to allow the contents of the bottle to run out, substantially as described.

9. A stopper for bottles having a head, a neck and legs adapted to be expanded and secure the stopper in the neck of a bottle, a ring slidable on the neck of the stopper, a block adapted to be operated to expand said legs and grooves in said stopper to allow the contents of the bottle to run out, substantially as described.

10. A stopper for bottles having a head, a neck and legs adapted to be expanded and secure the stopper in the neck of a bottle, a ring slidable on the neck of the stopper, a wedge adapted to be operated to expand said legs and grooves in said stopper to allow the contents of the bottle to run out, substantially as described.

11. A stopper for bottles having integral normally spring closed legs adapted to be expanded and secure it in the neck of a bottle and means formed in said stopper adapted to allow the contents of the bottle to run out but prevent it being refilled, substantially as described.

12. A stopper for bottles having legs adapted to be expanded and secure it in the neck of a bottle, a wedge shaped recess in said legs, a wedge in said recess adapted to be moved between said legs, means adapted to allow the wedge to be engaged and operated to positively expand said legs and hold them rigidly and means formed in said stopper adapted to allow the contents of the

bottle to run out but prevent it being re- 10 filled, substantially as described.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

JOHN C. SCHLEICHER.

Witnesses:

EMILY A. LE JEUNE,
PHINEAS V. STEPHENS.