(No Model.)

M. L. BALLARD.

BOTTLE STOPPER.

No. 283,692. Patented Aug. 21, 1883.

Fig. 1.

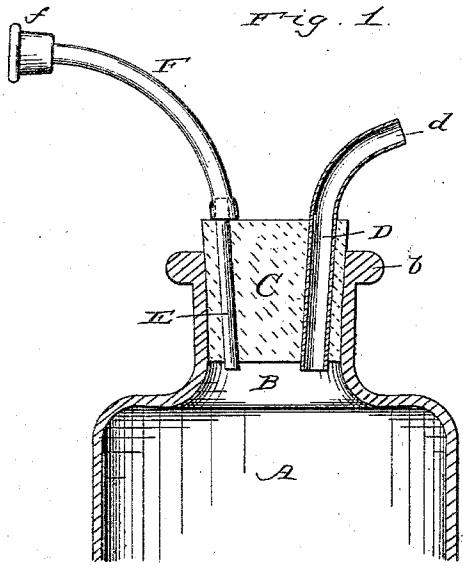
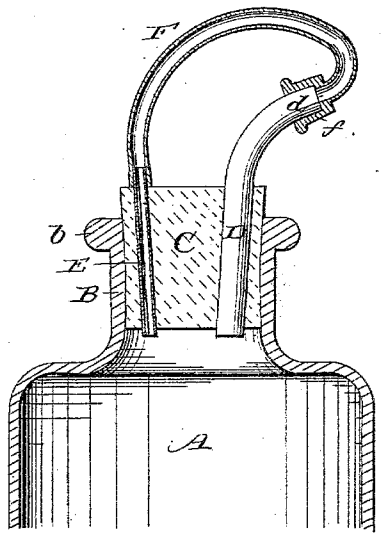


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MARTIN L. BALLARD, OF GEORGETOWN, KENTUCKY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 283,692, dated August 21, 1883.

Application filed May 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, MARTIN L. BALLARD, a citizen of the United States, residing at Georgetown, in the county of Scott and State of Kentucky, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a vertical section of my improved bottle-stopper, the discharge-pipe and air-vent being both open. Fig. 2 is a side elevation of the same with the discharge pipe or tube and air-vent both closed.

In the drawings, A is the body of the bottle, and B the neck, which, when preferred, may have the usual bead, *b*, at its upper end.

C is a cork, fitting closely within the neck of the bottle, and provided with vertical apertures for the insertion and support of the tubes, to be described.

D *d* is the discharge-tube, its upper end being curved outwardly and of substantially uniform diameter throughout, or, when preferred, I may contract its tip *d* to facilitate the delivery of the liquid in drops when the bottle is to be used for medicines or other liquids which require to be discharged with great accuracy.

E is the air-vent tube, extending a short distance above the cork C, and to such distance below as may be best adapted for the supplying of air to the bottle.

F *f* is an elastic tube, made preferably from vulcanized rubber, and attached by its lower end to the upper end of the vent-tube E, which may, when desired, have an external bead or rim upon its outer surface, near the upper end of which the elastic tube may be secured by wire, cord, or other suitable means. The upper end of the flexible pipe F is expanded and formed into a hood or bell-shaped cap, *f*, adapted to be placed over the open end of the discharging-tube D *d*, as indicated in Fig. 2. By preference I make this hood *f* of such internal diameter that it shall require to be stretched a little in order that it may be placed over the end *d* of the discharging-tube, when the elasticity of the hood will insure its retention in proper position. In practice, I prefer to form this tube in the arc of a circle, as indicated in Fig. 1, and secure it to the vent-tube E in such manner that it shall, when released from the end of the tube, assume the position shown in Fig. 1, such position being best adapted, in my judgment, for this tube to occupy in order to admit air freely when the bottle is turned into convenient position for discharging its contents by drops through the tube D *d;* but I do not wish to be limited to this precise construction or arrangement, as many modifications might be employed without departing from the spirit of my invention, it being apparent that some of its advantages might be derived even though the construction and relation of parts be such that they will remain in the position shown in Fig. 2 without being under tension, except the grip of the hood *f* upon the end of the discharge-tube; or the vent-tube E may be extended at its upper end nearly over to the end of the discharging-tube D *d*, in which case the flexible or elastic tube F might be made very much shorter than is shown in the drawings; or, with a construction similar to that last described, the tube E might be made to rotate in the cork to facilitate turning the flexible or elastic tube and the hood *f* away from the upper end of the discharge-tube into substantially the position shown in Fig. 1.

What I claim is—

1. In a bottle-stopper, a discharge-tube, in combination with the vent-tube, a flexible tube attached to the upper end of the vent-tube by one end, and provided at its opposite end with an expanded hood adapted to receive the upper end of the discharge-tube, substantially as set forth.

2. In a bottle-stopper, a discharging-tube, in combination with a vent-tube, a rubber tube permanently attached to the upper end of the vent-tube by one end, and adapted at its opposite end to inclasp and grip the upper end of the discharging-tube, substantially as set forth.

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

MARTIN L. BALLARD.

Witnesses:

RAYNOLDS WALLACE,

R. D. TINGLE.