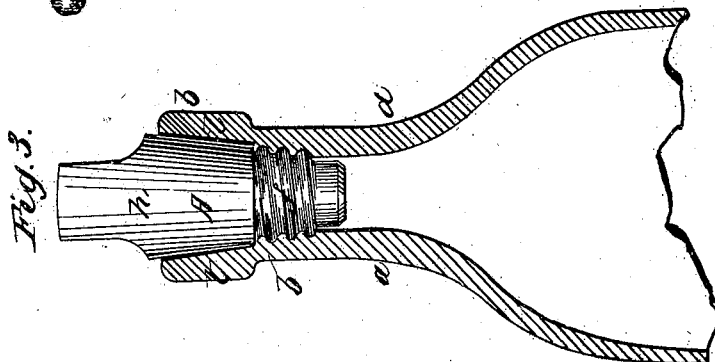
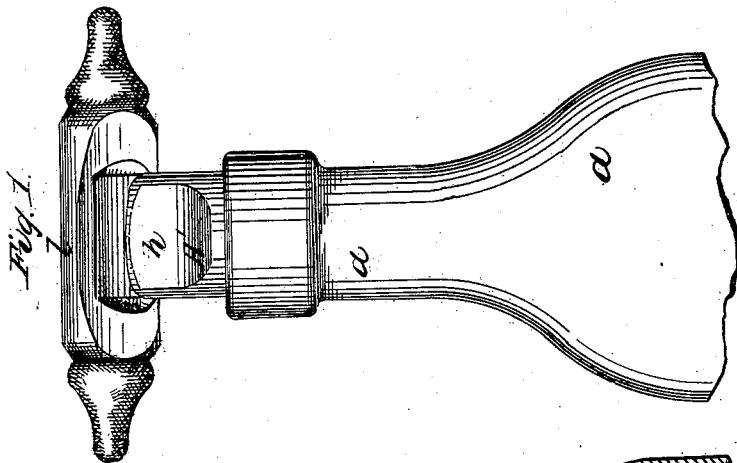
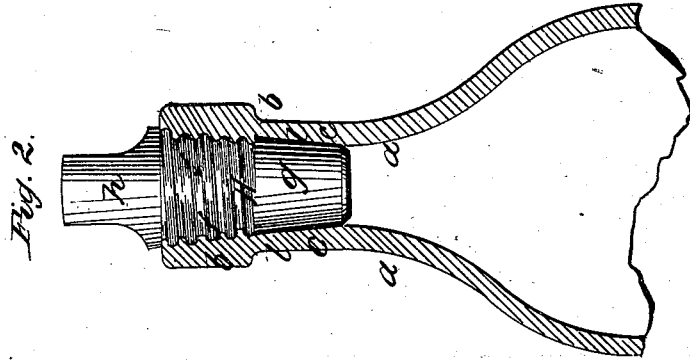


R. S. Connelly

Bottle Stopper.

No 52,269.

Patented Jan. 30, 1866.



Witnesses
C. L. Tapp
Theo. Tusch

Inventor.
R. S. Connelly
By J. H. Munn
Att'y

UNITED STATES PATENT OFFICE.

RICHARD S. CONNELLY, OF JOHNSONVILLE, NEW YORK.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. 52,269, dated January 30, 1866.

To all whom it may concern:

Be it known that I, RICHARD S. CONNELLY, of Johnsonville, in the county of Rensselaer and State of New York, have invented an Improved Stopper for Bottles, Jars, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to stoppers used for bottles, jars, &c., in which liquids or other materials are kept, from which it is necessary that the air should be entirely excluded; and it consists in the use of a screw-stopper made of wood or other suitable material, one portion of which stopper is made of a conical or tapering shape, in combination with a screw-socket neck having a corresponding portion of the same to that of the stopper made of a tapering or conical shape, so that when the stopper is screwed into the same it can come to a perfectly tight and close bearing and joint therewith.

In accompanying plate of drawings my improvements are illustrated, Figure 1 being an exterior view of the neck portion of a bottle having my improved stopper inserted therein; Fig. 2, a central vertical section of the same; and Fig. 3, a similar sectional view, showing a modification of my improvements, but involving the same principle.

a a in the drawings represent the neck portion of a bottle made of glass, earthenware, or any other of the materials ordinarily used therefor, having a screw-socket opening, *b*, for communicating with its interior, for inserting liquids or any other substances therein or removing them therefrom, as may be desired, the lower portion, *c*, of such opening being made of a gradual tapering or conical shape from the outside to the inside, as plainly represented in Fig. 2.; *A* my improved stopper, made of corresponding size to that of the neck-opening and of similar shape, with a screw-thread, *f*, conical or tapering inner end, *g*, and projecting square-shaped outer end, *h*, by which it is turned in and out of the neck with the hands alone, or by the use of the handle-lever *l*, made of proper shape to fit upon the same.

When the stopper is screwed into the neck of the bottle its conical end must necessarily

come to a tight and close joint with the similar-shaped portion of the neck socket or opening, thus perfectly sealing the bottle to the entrance of air thereto or the escape of any of its liquid, &c., therefrom by evaporation, the advantages of which are manifest, while at the same time the stopper can be unscrewed with facility and ease when desired to remove any portion or all of the material in the bottle or to add more thereto.

In lieu of making the upper portion of the stopper with a screw-thread and the lower of a conical shape, it may be reversed—that is, the screw *b* on the lower or inner end and the conical shape on the upper, as plainly represented in Fig. 3—in which case the shape of the neck socket or opening is correspondingly formed, and yet produce the same result as that described for the stopper illustrated in Fig. 2, as is obvious without further explanation; but I deem it best to make it with a conical-shaped end, as the screw-thread upon the interior of the neck-opening can be then more easily formed for the same.

The handle, in lieu of being made separate from the stopper, may be formed in one and the same piece therewith, and the stopper may be as well applied to a jar, can, or other article of a similar nature, whatever may be the material of which it is made.

l is an india-rubber, tin-foil, or other elastic and flexible cap or covering, applied in any proper manner to the conical or tapering portion of the stopper, which covering, when the stopper is screwed into the bottle, can, jar, or other similar article suitably formed to receive it, causes a close and perfect joint to be made, and by passing over the end of the stopper prevents contact of the liquid therewith, and also prevents any evaporation through the stopper by the stopper with the same. The covering, in lieu of being applied to the stopper, may be secured to a corresponding portion of the screw socket or opening in the bottle, &c., and the same object obtained, as is obvious.

The stopper, if made of any yielding material, may, in lieu of having the screw-thread formed upon it before being inserted into the bottle, &c., be made of such a size and shape as to receive from the screw-thread of the socket a corresponding shape thereto by simply inserting and turning it around within the

bottle, &c., and still accomplish the principal object of the invention, which is to so construct or form a stopper and the neck of the bottle, &c., in which it is placed that when the stopper is once inserted therein it cannot be removed except by turning it around within the neck-socket.

The stopper may, if desired, be impregnated with any suitable material for rendering it water-proof or air-tight; but I do not deem it necessary.

I claim as new and desire to secure by Letters Patent—

1. Forming within the neck of a bottle, can, jar, jug, or other similar articles a screw socket or opening, having a portion of the same, either above or below the screw-thread, made of a smooth conical shape, substantially as herein described, and for the purpose specified.

2. A stopper made of wood or any other suitable material, having a corresponding shape to the screw-socket formed in the bottle, jar,

can, jug, or other similar article, substantially as and for the purpose specified.

3. Capping or covering the conical portion of the stopper or covering the corresponding part of the screw-socket with india-rubber, tin-foil, or other suitable elastic or flexible material, substantially as and for the purpose described.

4. The combination of a screw-stopper having the general shape and form, and either with or without a yielding cap-piece or covering, with a correspondingly-shaped screw-socket in the neck of the bottle, can, jar, or other similar article, substantially as and for the purpose hereinabove set forth.

The above specification of my invention signed by me this 2d day of August, A.D. 1865.

RICHARD S. CONNELLY.

Witnesses:

ALBERT W. BROWN,
C. L. TOPLIFF.