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C. W. SCOTT, C. E. SHIPLEY & H. HUGHES.

BOTTLE CLOSURE.

APPLICATION FILED AUG. 9, 1902.

NO MODEL.

Fig. 1.

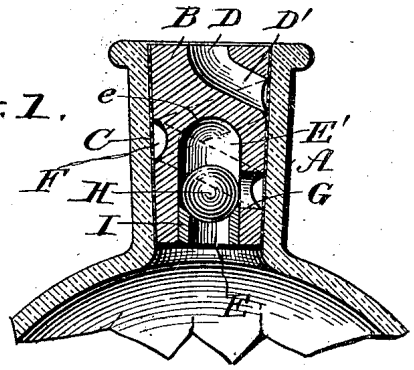


Fig. 2.

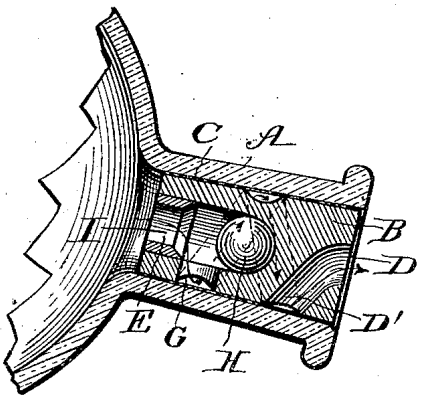


Fig. 3

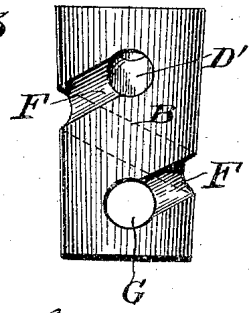
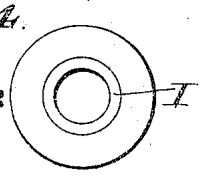


Fig. 4.



WITNESSES:

Jos. A. Ryan

Percy B. Turpin

INVENTORS

Charles W. Scott.

Charles E. Shipley.

Hiram Hughes.

By. Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES W. SCOTT, OF SARATOGA, WYOMING; CHARLES E. SHIPLEY, OF DENVER, COLORADO, AND HIRAM HUGHES, OF SARATOGA, WYOMING.

BOTTLE-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 725,153, dated April 14, 1903.

Application filed August 9, 1902. Serial No. 119,096. (No model.)

To all whom it may concern:

Be it known that we, CHARLES W. SCOTT, residing at Saratoga, in the county of Carbon and State of Wyoming, CHARLES E. SHIPLEY, residing at Denver, in the county of Arapahoe and State of Colorado, and HIRAM HUGHES, residing at Saratoga, in the county of Carbon and State of Wyoming, citizens of the United States, have made certain new and useful Improvements in Bottle-Closures, of which the following is a specification.

This invention is an improvement in closures for bottles, jars, and the like; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a longitudinal section of our invention as in use with the valve seated. Fig. 2 is a similar view with the bottle partially inverted to permit the contents to be dispensed, the course of the liquid being indicated in dotted lines. Fig. 3 is a side view of the stopper, and Fig. 4 is a view of the inner end thereof.

The bottle, whether it be an ordinary bottle, jug, jar, or other vessel, is provided with a neck A, which may be of ordinary construction, and the lug or stopper B is fitted in said neck and is in practice secured therein, usually by cementing it within the neck, as indicated at C in Figs. 1 and 2. The stopper may be tapered toward its inner end, as shown, is provided in its outer end with a discharge-orifice D, and at its inner end with a discharge-orifice E, which is prolonged at E′ toward the outer end of the stopper, as shown in Figs. 1 and 2, to form a chamber in which the ball-valve may be held when the bottle is inverted, as indicated in Fig. 2. A lateral channel D′ leads from the orifice D to the side of the stopper B and communicates at its outer end with the outer end of a groove F, formed spirally in the outer side of the stopper B and communicating at its end F′ with a lateral opening G, which leads into the chamber E′ between the inner end *e* of said chamber and the outer end of such chamber or the orifice E, as best shown in Figs. 1 and 2. The ball-valve H operates in the chamber E′ and seats in the position shown in Fig. 1 against the inner end of a ring I, which is fitted in the outer end of the chamber E′ after the ball H has been inserted. This ring I, it will be understood, may be held in the stopper B by cement or other suitable means and forms a valve-seat for the ball H in the position of parts shown in Fig. 1.

When the parts are in the position shown in Fig. 1, the valve H will be seated against the ring I. If the bottle be now turned to dispense its contents, the ball H will pass to the inner end of the chamber E′, as shown in Fig. 2, and the liquid can pass through the ring I, thence through the lateral port G, thence through the groove F and a lateral port D′, and discharge at D at the outer end of the bottle. It will be noticed the valve F is formed in the outer side of the plug or stopper, and the liquid will flow entirely around the plug or stopper in discharging from the bottle.

The plug or stopper may be made of wood, porcelain, or other suitable material and being similar in shape to the ordinary cork stopper will fit in ordinary bottles and can be applied for use wherever desired. It will be noticed from Figs. 1, 2, and 3 that the lateral openings D′ and G are arranged on the same side of the plug or in line with each other, so the liquid in dispensing the same passes entirely around the plug between the inner opening G and the outer opening D′.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination substantially as herein described, of the plug provided in its outer end with a discharge-orifice and with an orifice in its inner end, and a valve-chamber extending therefrom toward the outer end of the plug, and with a lateral orifice communicating with said valve-chamber between the inner and outer ends thereof, a lateral passage communicating with the outer or discharge orifice of the plug, and a spiral groove or channel formed in the outer side of the plug and communicating at its inner end with the lateral orifice leading to the valve-chamber, and at its outer end with the lateral channel leading to the discharge-orifice, the ball in the valve-chamber and the ring fitting within said chamber at the end thereof, where-

by to retain the valve and form a seat therefor, substantially as set forth.

2. A stopper provided in its outer side with a spiral groove or channel and having at its inner end a valve-chamber and a lateral opening connecting the chamber with the spiral groove and communicating with the valve-chamber between its inner and outer ends, the ring fitted in said chamber between the lateral opening and the inner end of the stopper and the valve operating between said ring and the inner end of the valve-chamber and movable in the inverted position of the stopper beyond the lateral opening into the valve-chamber substantially as set forth.

3. A plug or stopper provided in one side with lateral openings arranged approximately in line with each other and in its outer side with a spiral groove connecting said openings, a valve-chamber with which the inner end of said groove communicates, a valve operating in said chamber and having in the outer end of the plug a discharge-orifice communicating with the outer lateral opening, substantially as set forth.

4. A plug or stopper provided at its inner end with a valve-chamber, and having a lateral opening communicating with said chamber, between its inner and outer ends, and having a valve-seat between said lateral opening and the inner end of the plug, the valve operating in said chamber, and moving in the inverted position of the plug beyond the lateral opening into the valve-chamber, the plug being provided in its outer side with a spiral groove or channel communicating at its inner end with the said lateral opening and at its outer end with a discharge-opening, substantially as and for the purposes set forth.

CHARLES W. SCOTT.
CHARLES E. SHIPLEY.
HIRAM HUGHES.

Witnesses:
HENRY T. SALE,
JO. A. FOWLER,
WILLIAM E. ANDREWS,
JAMES B. DELANEY.