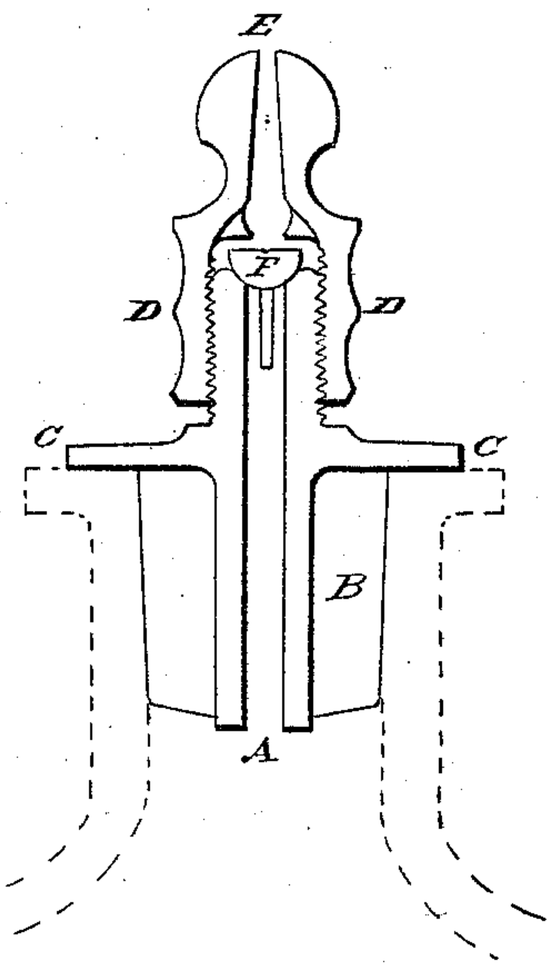
E. B. REQUA.

VALVED-NOZZLE FOR BOTTLE-STOPPERS.

No. 182,082. Patented Sept. 12, 1876.



Witnesses
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UNITED STATES PATENT OFFICE.

ELIAS B. REQUA, OF JERSEY CITY HEIGHTS, NEW JERSEY.

IMPROVEMENT IN VALVED NOZZLES FOR BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **182,082**, dated September 12, 1876; application filed August 17, 1876.

To all whom it may concern:

Be it known that I, ELIAS B. REQUA, of Jersey City Heights, Hudson county, State of New Jersey, have invented an Improved Valved Nozzle for Bottle-Stoppers, whereof the following is a specification:

My improvement relates to a bottle-stopper having a tube passing through it, and surmounted with a screw-top; and the invention consists in the combination, with the tube and screw-top, of a valve and a nozzle, the former resting on the end of the tube, as a seat, and the latter forming part of the screw-top, and constructed for holding the valve securely to its seat when screwed down, but when partly unscrewed will allow jets of the fluid contents to be thrown out by shaking the bottle, the valve finding its seat of itself when the bottle is set upright.

Referring to the drawing hereto annexed, which is a vertical section of a stopper illustrating my invention, A represents the usual tube, running through the part B, commonly of cork. The tube has a flange, C, and above the flange is threaded to receive a screw-top, D, which terminates in a nozzle, E. The lower part is threaded within to fit the tube. The orifice at the top of the tube is formed and adapted for a seat to a valve, F, which may be of any suitable form, and made of any material that will answer the purpose. In this instance it is in the shape of a sphere, (or half-sphere,) the under side resting on and in the said orifice, and preferably made with a stem, as shown.

Within the screw-top are a number of small projections, arranged with respect to the valve, so that when the said top is screwed down they will come in contact with the valve and hold it tightly against the end of the tube, closing it completely. When, however, it is desired, the cap may be slightly unscrewed without being taken off; and the valve then having a little room for play, jets of the liquid contents of the bottle with which it is used may be thrown from the nozzle by motion of the bottle as it is held inverted in the hand, the liquid passing between the projections aforesaid to the nozzle. Then, on placing the bottle upright at rest, the valve immediately closes the end of the tube of itself, but not permanently, however, until the top is again screwed down.

From the foregoing description it will be seen that my invention combines in one article a valved nozzle, having a self-seating valve, and a hermetically-sealed valve-stopper, both at the command at all times of the user, according to circumstances or choice.

Instead of having a screw-thread, the cap D may have oblique slots, working over pins in the tube; and it may have a partly or wholly sliding, instead of a turning, movement for loosening the valve.

I claim as my invention—

The combination, with the tube and the valve, of the cap D, provided with a nozzle, E, and having projections within, so arranged as to rest on and hold the valve against its seat when said cap is screwed down, and when unscrewed slightly will allow the liquid or other contents to escape by the nozzle, substantially as specified.

E. B. REQUA.

Witnesses:

EARLE H. SMITH,

WM. EHRET.