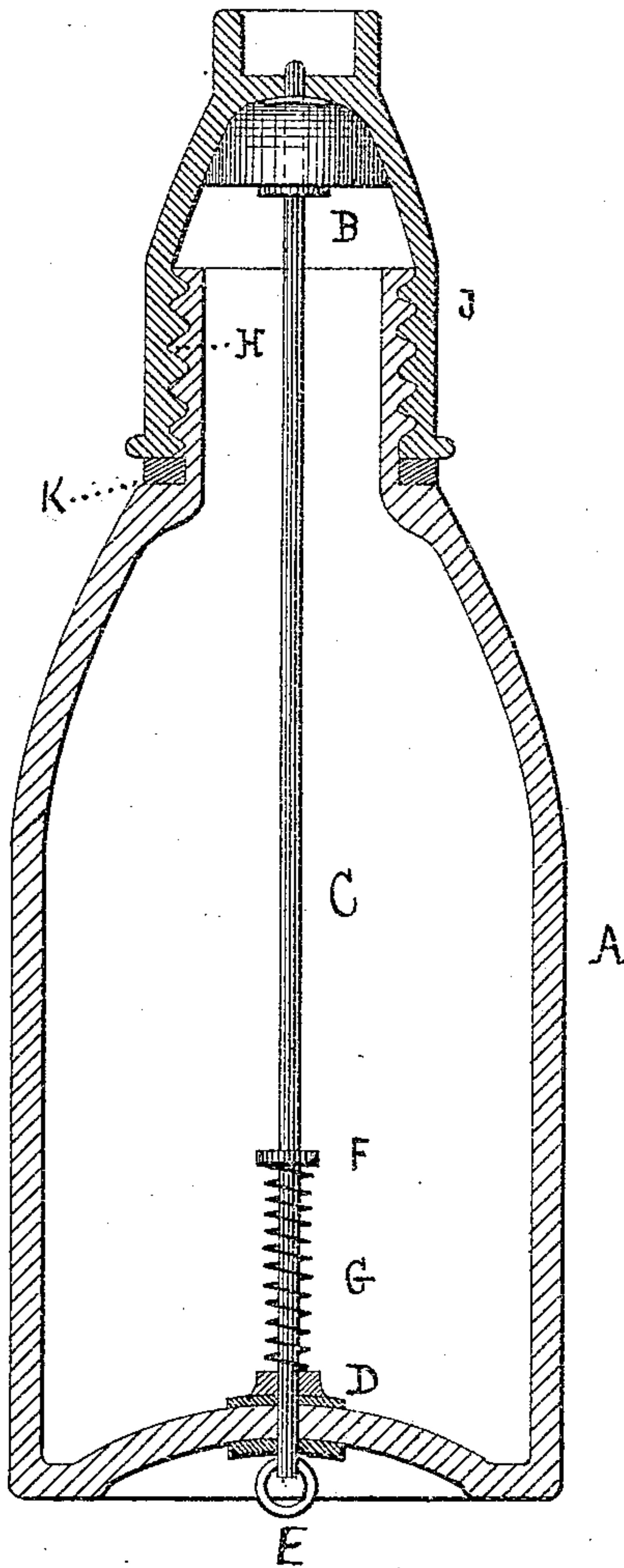


E. B. REQUA.

Vessels for Holding Liquids.

No. 153,611.

Patented July 28, 1874.



WITNESSES
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Residing in

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UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN VESSELS FOR HOLDING LIQUIDS.

Specification forming part of Letters Patent No. **153,611**, dated July 28, 1874; application filed July 15, 1874.

To all whom it may concern:

Be it known that I, ELIAS B. REQUA, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Vessel for Holding Liquids, of which the following is a specification:

My invention relates to certain new and useful improvements in that class of bottles which are stopped or sealed from the inside, and its object is to so construct a bottle that it will automatically close and seal itself when properly filled, and which may be readily unclosed for the purpose of emptying it of its contents, and by which the contents may be drawn off in any desired or measured quantities, as will be fully hereinafter set forth.

Although my improved bottle is intended for all kinds of liquids, still as well as effervescent, it is particularly designed for effervescent beverages, such as soda, mineral waters, &c., where there is considerable pressure from the inside, which will assist in keeping the stopper in place.

In this class of bottles, as heretofore constructed, the stopper has been made in the form of a valve, which may be inserted through the mouth of the bottle, and which will be forced into the neck, or against a shoulder in the inside of the neck of the bottle, when the same is filled with effervescent fluid, by the pressure of the gas, and thus close the same; the said valve being provided with a stem, which projects through the neck and out of the mouth of the bottle, by means of which it can be removed from its seat for the purpose of unsealing or opening the bottle and removing the contents. This device has been objectionable, owing to the fact that when the valve is forced inward there is no means of holding the valve or cork away from the neck of the bottle, and for this reason it is liable to be forced back again into position during the operation of emptying the bottle, closing the same, and rendering a further operation necessary before the contents can be removed.

Again, as heretofore constructed, the operation of opening such bottles has been exceedingly clumsy, resulting, in most instances, in a great loss of the contents, as the stopper has to be suddenly forced inward, and the bottle

then elevated into position over the glass or other vessel for receiving the contents, much of the liquid escaping in the interval unless the operator happens to be skillful and dexterous in his manipulation.

My invention is designed to overcome these objections, and consists of a bottle provided with a valve opening inward, which will automatically close said bottle when filled, and which may be removed from its seat so as to unseal said bottle, by means of a valve-rod passing through a stuffing-box in the bottom of the bottle, substantially as will be hereinafter set forth.

The drawing represents a sectional view of my invention.

A represents the bottle, and B the valve, which may be made of rubber, cork, or other suitable material, and which is secured to the end of a valve-rod, C, passing downward through a stuffing-box, D, properly packed, in the bottom of the bottle, which terminates in a ring or handle, E, by means of which said valve may be operated. The valve-rod C is provided with a shoulder, F, near its lower end, below which is secured a spiral spring, G, bearing against the bottom of the bottle, and which forces the valve-rod upward, keeping the valve against its seat at the lower end of the neck of the bottle. The valve may be so constructed that it can be forced through the neck of an ordinary bottle, having an opening through its bottom, and will afterward open and spread so as to close said neck, as in the ordinary bottles of this class, although I prefer to employ it in connection with a peculiarly-constructed bottle, as shown, in which the neck is provided with a screw-cap, open at the upper end, which forms a seat for the valve, by means of which the bottle is closed. In this case the neck of the bottle is made larger than the valve, and is provided with a screw-thread, H, on the outside, over which the screw-cap J is secured. At the top of said screw-cap is a central opening or aperture which forms the seat of the valve, and through which the contents of the bottle are emptied. Between the bottom and said screw-cap may be interposed an annular packing-ring, K, of rubber or other material, for the purpose of forming a tight joint, as shown.

The operation of my apparatus will be readily understood.

The bottle is filled by pulling the valve-rod so as to remove the valve from its seat, and, after filling, the spiral spring forces the valve into position in the neck of the bottle, effectually closing and sealing the same. In case the bottle is filled with effervescing fluid, the gas gives additional pressure to the stopper and more effectually secures the same. When the contents are to be emptied it is only necessary to place the mouth of the bottle in the glass, tumbler, or other receptacle, and open the valve by means of the valve-rod, allowing the liquid to escape.

It will be seen that any portion of the contents of the bottle may be removed, and the remaining portion held therein and securely stopped, if the bottle is not to be emptied at once.

I am aware that a stopper or valve has been arranged upon the end of a spring-rod so as to close the mouth of the bottle, the end of the spring resting upon the bottom of the bot-

tle; but such is not my invention, and neither do I desire to claim it, inasmuch as a separate tool is required to push the valve down in order to draw off the contents of the bottle. By my invention the rod projects through the bottom, and the projecting end can be operated to draw off the contents.

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

The combination, with a bottle, of the spring-impelled rod C, provided with a valve, B, at its upper end, and extending down and projecting through the bottom of the bottle, whereby the projecting end can be operated to draw off the contents in graduated or measured quantities, substantially as described.

In testimony that I claim the foregoing, I have hereunto set my hand.

ELIAS B. REQUA.

Witnesses:

J. TYLER POWELL,
A. H. NORRIS.