

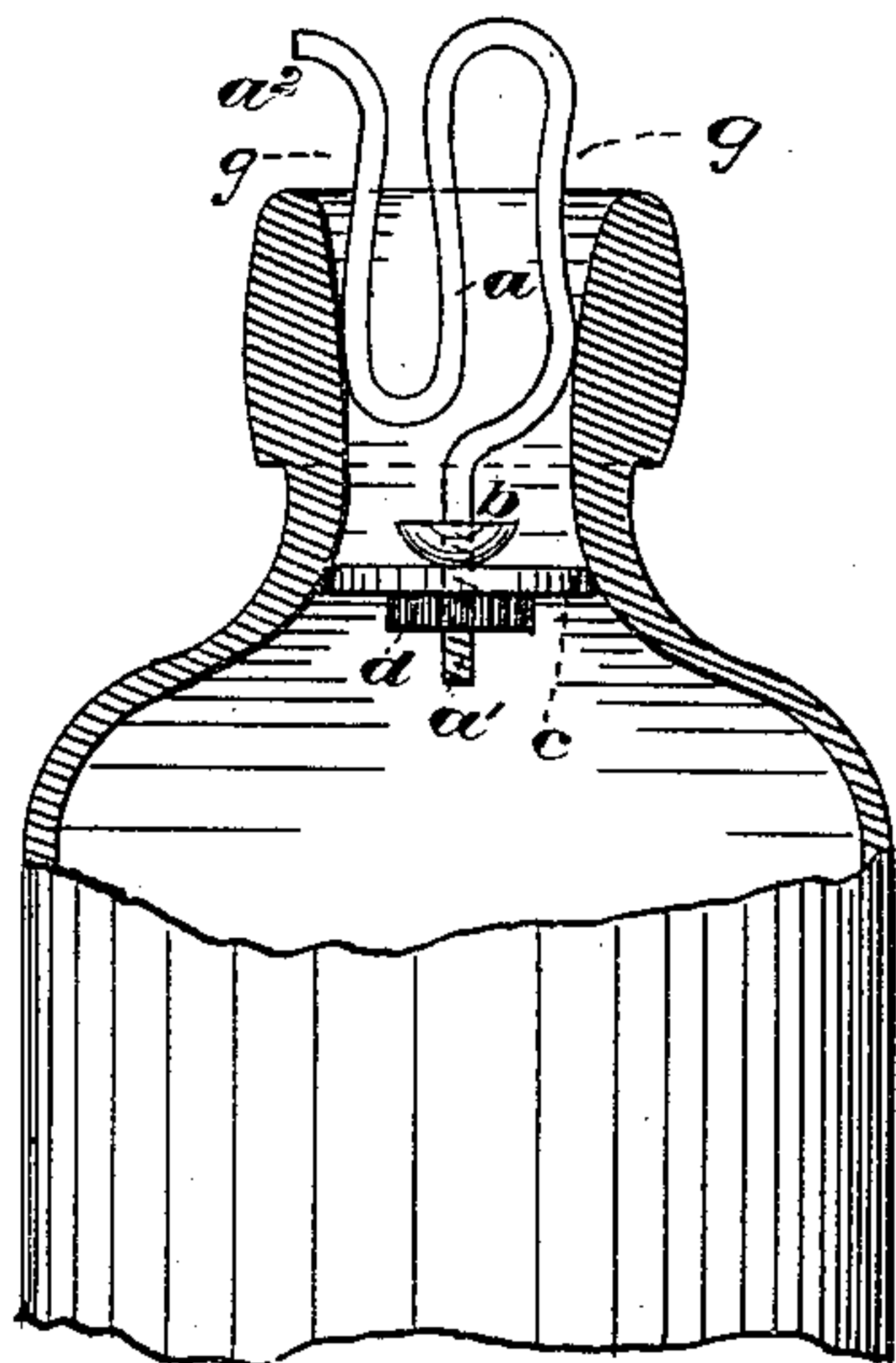
(No Model.)

L. KIRCHNER.

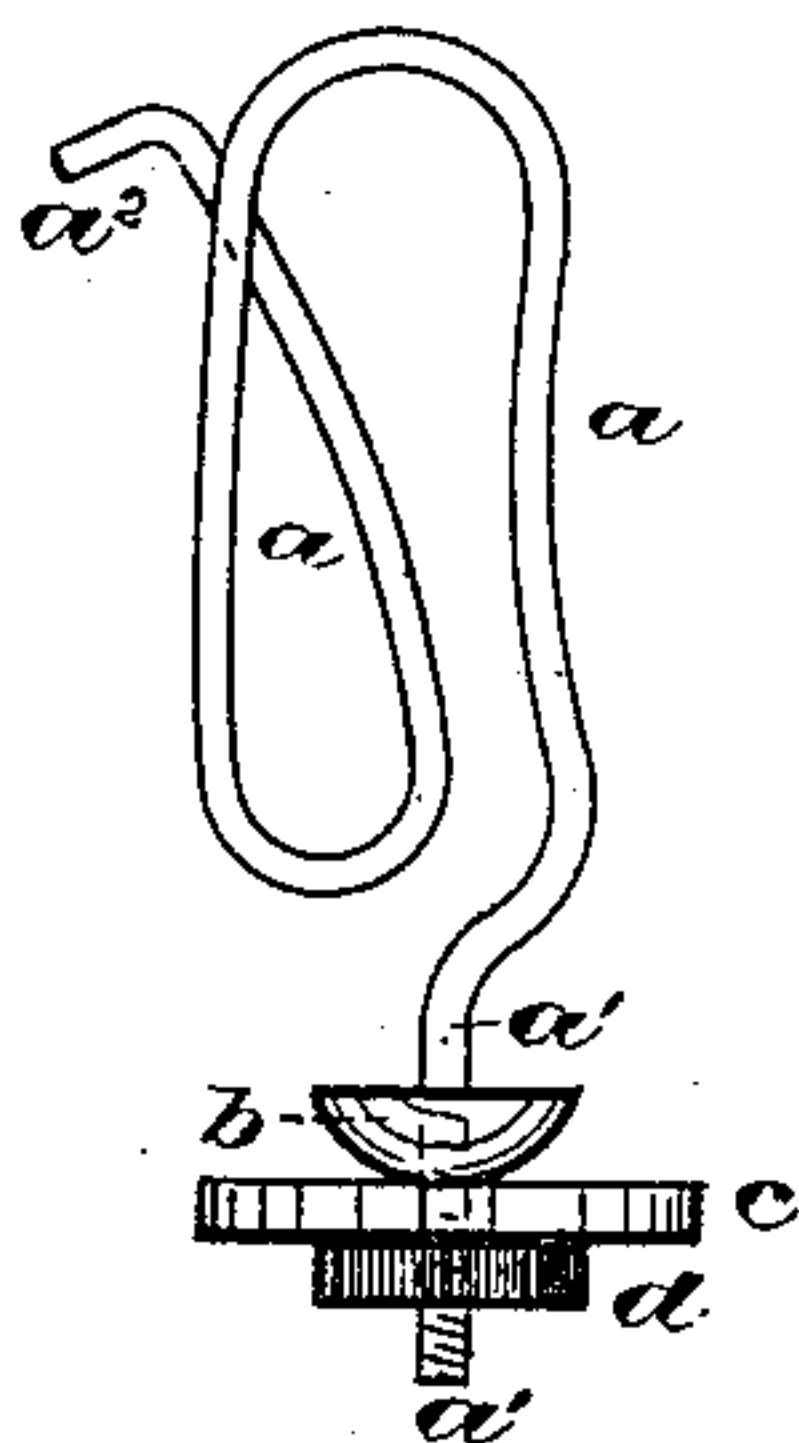
BOTTLE STOPPER.

No. 329,652.

Patented Nov. 3, 1885.



*Fig. 1.*



*Fig. 2.*

*Attest*

*Inventor*

*Wm. F. Campbell.*  
*Atty.*

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*by Drank & Co.*  
*Atty.*

# UNITED STATES PATENT OFFICE.

LOUIS KIRCHNER, OF NEWARK, NEW JERSEY.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 329,652, dated November 3, 1885.

Application filed April 25, 1885. Serial No. 163,405. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS KIRCHNER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to secure an improved stopper for beer, soda-water, and other bottles, which facilitates the act of unstopping said bottles so that their contents can be poured out, and at the same time provides a perfectly air-tight stopper.

The invention consists in an improved bottle-stopper constructed and operating substantially as illustrated in the drawings and described and claimed herein.

In the drawings, Figure 1 is a vertical section of a bottle having a stopper illustrating my invention arranged therein, the stopper being in elevation; and Fig. 2 is a side elevation of another form of stopper.

Similar reference-letters indicate corresponding parts.

The improved stopper consists of a bent-wire portion, *a*, which may be formed in any suitable manner, so as to exert an outward pressure and hold the same within the neck of the bottle, having upon the lower straight end, *a'*, a nut, *b*, next to which is a washer, *c*, which is held against the nut *b* by a milled nut, *d*, screwed upon the end *a'* of the wire portion.

In the drawings two forms of bending the wire are illustrated, that in Fig. 1 being somewhat S-shaped, while in Fig. 2 the last curve is reversed and turned toward the wire, the ends *a*<sup>2</sup> of the wire in both forms being bent at an angle to engage with the top of the bottle and prevent the stopper from falling or being forced into the bottle.

As constructed, the stoppers are capable of assuming two positions, a closed position, as in Fig. 1, and an open position, as when the

stopper is pushed downward until the hook *a*<sup>2</sup> touches the bottle, at which time the contents can be poured out.

To remove the entire stopper when cleaning the bottle, the wire portion need only be turned, and the washer, remaining stationary against the sides of the neck, acts upon the nut *d*, holding the same while said wire is being turned. The wire portion can then be pulled out, and the washer and nut shaken or taken out with a hook.

The washer and the holding-nut may be made of any suitable material which will not affect or be affected by the liquor in the bottle.

By reference to the drawings it will be seen that the washer or abutment *b* is rounded on the side next to the washer *c*, to permit the same to bend as the stopper is forced into the neck of the bottle.

Having thus described my invention, what I claim is—

1. In a bottle-stopper, a wire bent to form a double loop, whereby increased elasticity is attained, one of the ends of said wire being provided with a thread to receive a removable nut, and the opposite end being hook-shaped to engage the top of the bottle, the outer sections of the wire being concaved, as at *g g*, to engage the convexity in the mouth of the bottle, in combination with an abutment, *b*, a removable washer, *c*, and nut *d*, substantially as set forth.

2. In a bottle-stopper, the bent wire *a*, having the hook-shaped outer extremity, *a*<sup>2</sup>, to engage the edge of the bottle and prevent said wire from being forced into said bottle.

3. In a bottle-stopper, the wire bent into the form of a double loop, one end being threaded and the other provided with a hook or stop projection, in combination with a washer and means for holding the same in position.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of February, 1885.

LOUIS KIRCHNER.

Witnesses:

FREDK. F. CAMPBELL,  
B. L. McNULTY.