

(No Model.)

C. A. WARFIELD.

BOTTLE STOPPER.

No. 253,566.

Patented Feb. 14, 1882.

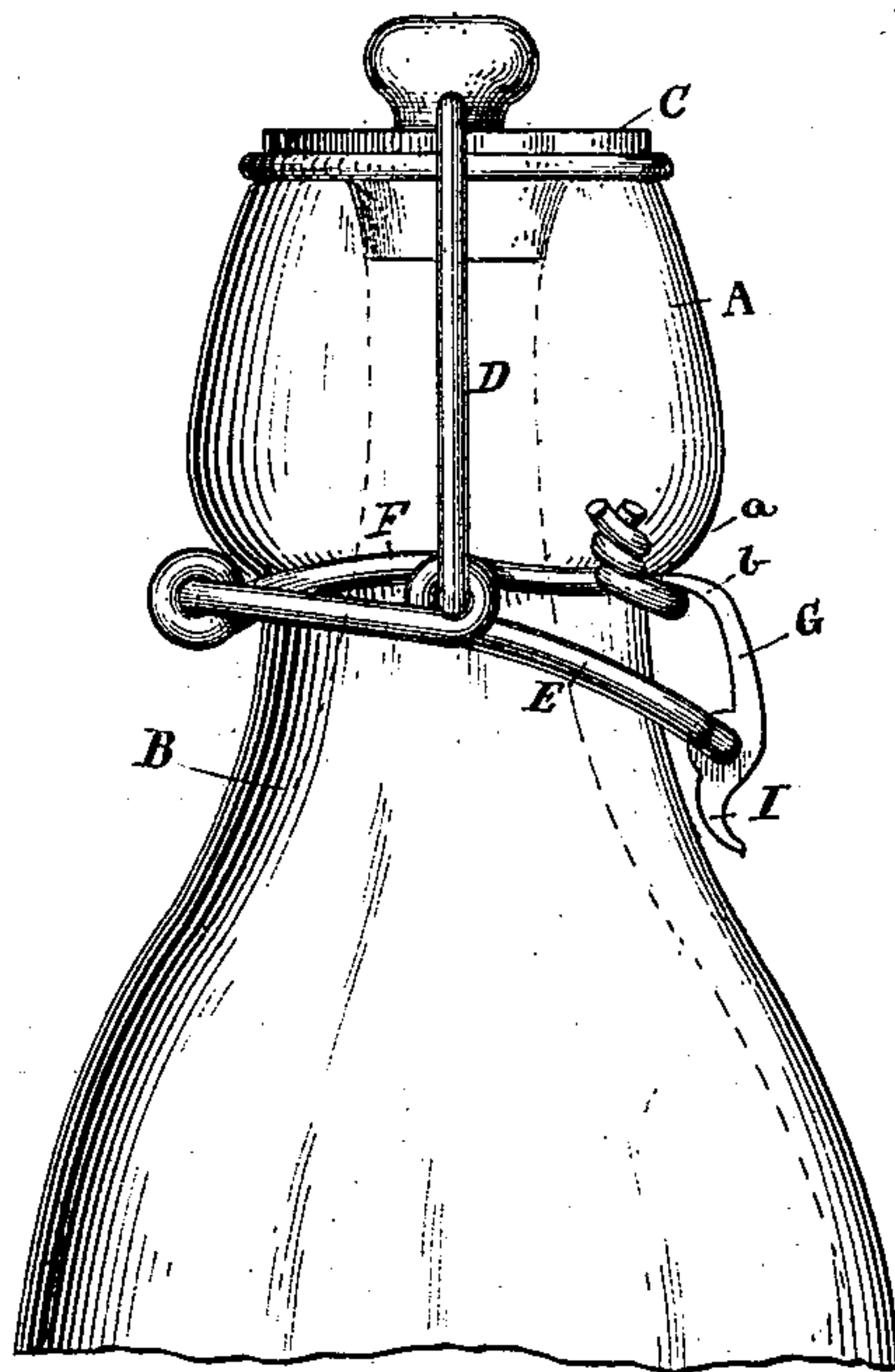


Fig. 1

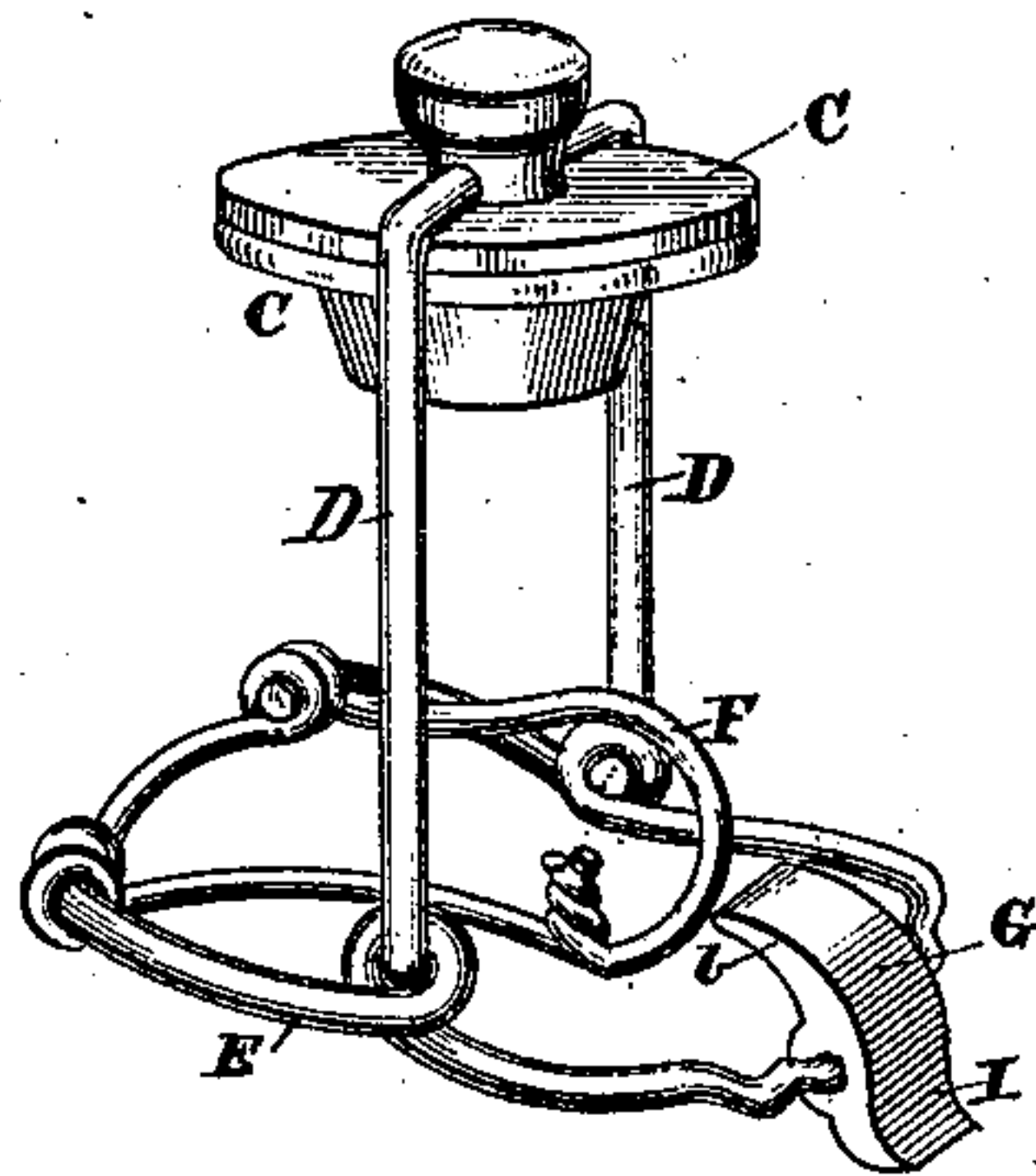


Fig. 2

Attests
Court Clerk.
John D. Lleyson

Inventor
Charles A. Warfield
By his Attorneys,
Wm C. Strawbridge
J. Bonsall Taylor.

UNITED STATES PATENT OFFICE.

CHARLES A. WARFIELD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
OF ONE-HALF TO CONRAD SEMPER, OF SAME PLACE.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 253,566, dated February 14, 1882.

Application filed October 26, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ALEXANDER WARFIELD of Philadelphia, Pennsylvania have invented an Improvement in Bottle Stop-
5 pers, of which the following is a specification.

My invention relates in general to the class of devices for closing the mouths of bottles by means of stoppers held by bails in place against the pressure of the bottle's contents, and relates
10 specifically to the class of stoppers which are hinged to the bails and are adapted to be swung over with the bail when the bail-locking devices have been operated to release the stopper.

In the accompanying drawing, Figure 1 represents in side elevation the mouth and neck
15 of a bottle provided with an automatic stopper embodying my invention in the position which the parts occupy when the stopper is locked in place. Fig. 2 represents in perspective the
20 stopper, bail, and stopper-locking devices.

Similar letters of reference indicate corresponding parts.

In the drawings: A represents the mouth
25 portion of the bottle, B the neck, and *a* the usual bead on the neck

C is a stopper preferably formed of rubber, and of any usual construction.

D is the bail to which the stopper is pivoted. This bail is straight as to both of its sides.

30 E is a bail lever, well made when of the form shown, and preferably formed from wire of suitable diameter. The bail lever is hinged to a neck-ring F also of wire and tightly bound about and secured to the neck of the bottle below the bead.

35 G is a trigger in the construction of which and in its combination with and application to the other members of the device my invention resides. This trigger is a lever of the first order, being fulcrumed at or near its center by a
40 pivotal connection with the front of the bail-lever.

The mechanical construction represented in the drawing is a cheap and practical one involving simply the employment of bent wires
45 and a casting or a wrought form for the trigger.

Other and more elaborate constructions embodying the principle of the invention may, if desired, be resorted to, but that shown is proba-
50 bly not only the cheapest but the best.

The operation of locking the stopper is carried into effect by seating the stopper in the mouth and pressing with the thumb or hand upon the upper arm of the trigger so as to depress the bail lever and finally engage the upper extremity *b* of said upper arm of the trigger beneath the bead on the bottle. When the parts have assumed the above position the leverage exerted by the bail lever is such that the tension of the bail upon the stopper retains the latter tightly seated in the mouth and hermetically closes the bottle. To open the bottle the pressure of the thumb or finger is brought to bear upon the lower arm I of the trigger (which arm is properly formed for such purpose) in such manner as to tilt the trigger about its fulcrum and thereby deflect its upper arm *b* from beneath the bead and thereby relieve the bail lever and the bail from the holding down tension exerted upon them by the trigger in its locked position and permit the lift of the lever and bail so as to enable the unseating of the stopper and the deflection of the bail and stopper to the side of the bottle opposite to that upon which the lever is pivoted.

75 While I have specified a bead on the neck of the bottle as a convenient device beneath or against which to lock the trigger, yet the trigger may be arranged to lock beneath the neck ring or against any projection or within any recess or seat formed upon or applied to the bottle at the desired position of locking contact. In practice however the usual formation or bead at the mouth of the bottle represented in the drawing forms the best seat against which to engage the extremity of the trigger, as that curved portion of the bead which is indicated in the drawing by the letter "*a*" affords a convenient inclined plane which facilitates the movement of depression of the trigger in the operation of locking it beneath the bead.

I am aware that a bail lever has been connected with a bail in the manner which I have described, and that a spring latch or brace has been applied to register beneath a neck ring and hold the bail lever down, and to such construction broadly I lay no claim; but my improvement consists in substituting for the spring latch heretofore employed, which required to be unset from beneath the neck ring
95 100

by prying or pulling up with the finger nails, the trigger represented and described, being a lever of the first order which can be locked by pressure on its upper arm and unlocked by
5 pressure upon its lower arm.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States:

10 In a bottle stopper device in which a bail lever hinged about and encircling the neck of the bottle is connected with the stopper by means of a bail pivoted to said lever at points in advance of its fulcrum, a trigger or lever of

the first order pivoted at or near its center to the front of the bail lever and adapted to lock 15 the stopper by pressure exerted upon its upper arm and to unlock said stopper by pressure exerted upon its lower arm, substantially in the manner set forth.

In testimony whereof I have hereunto signed 20 my name this 24th day of October, A. D., 1881.

CHARLES ALEXANDER WARFIELD.

In the presence of
J. BONSALE TAYLOR,
CONRAD SEMPER.