

(No Model.)

E. L. LLOYD.
BOTTLE FILLING MACHINE.

No. 279,776

Patented June 19, 1883.

FIG. 2

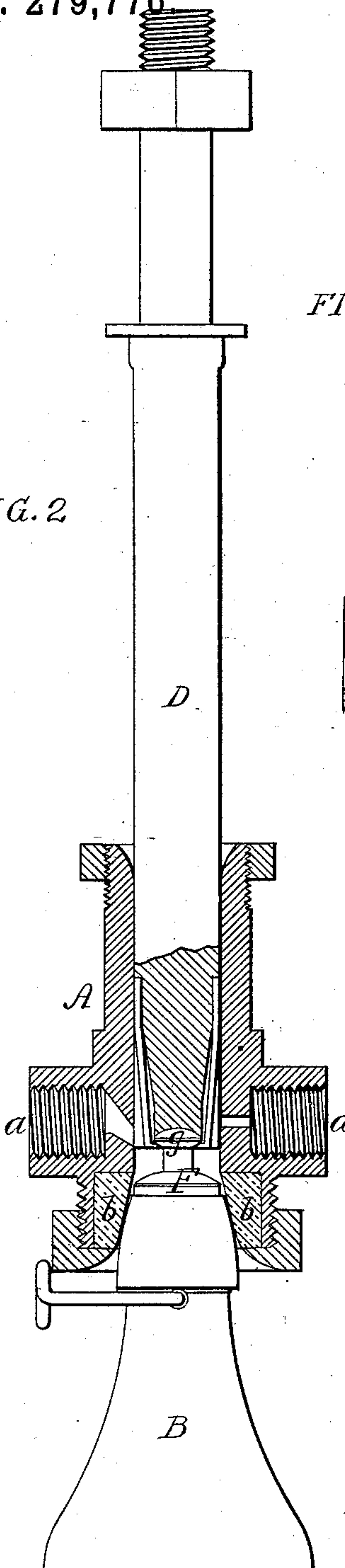


FIG. 1

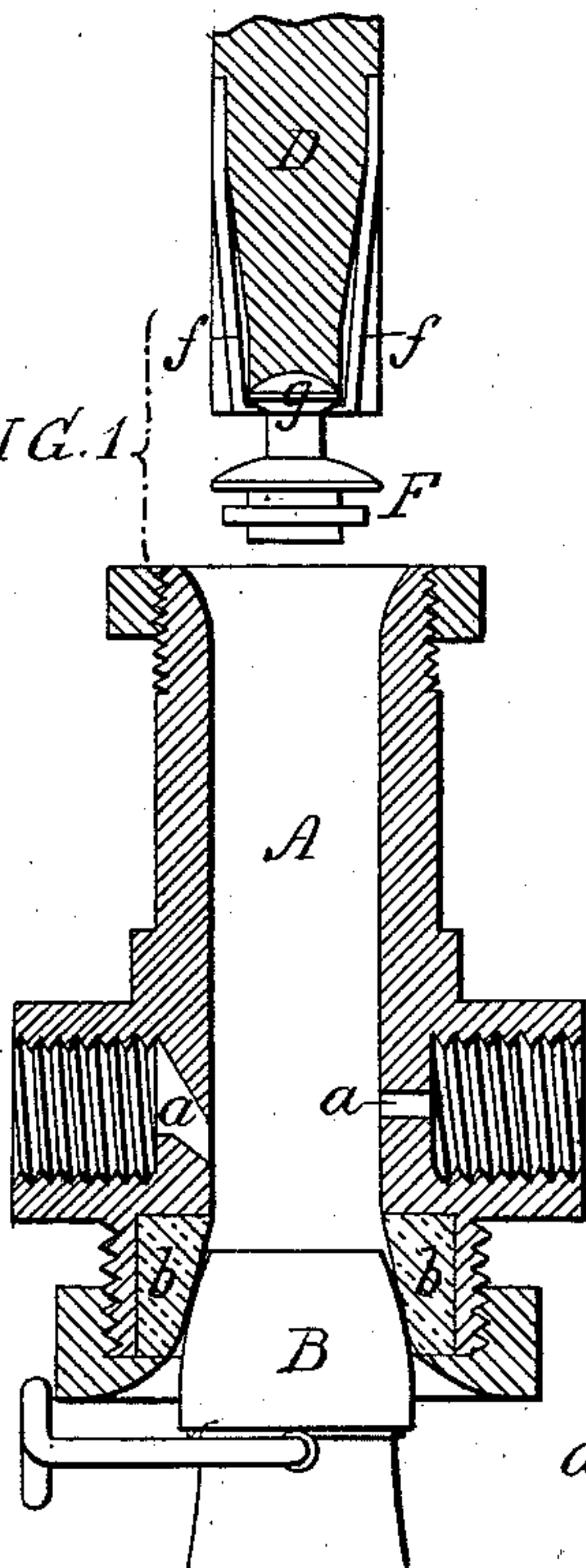


FIG. 3

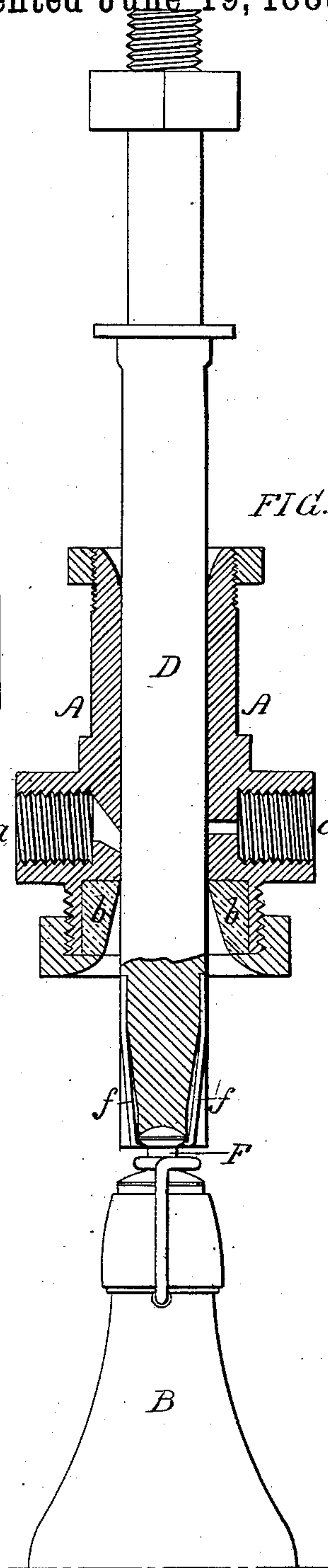
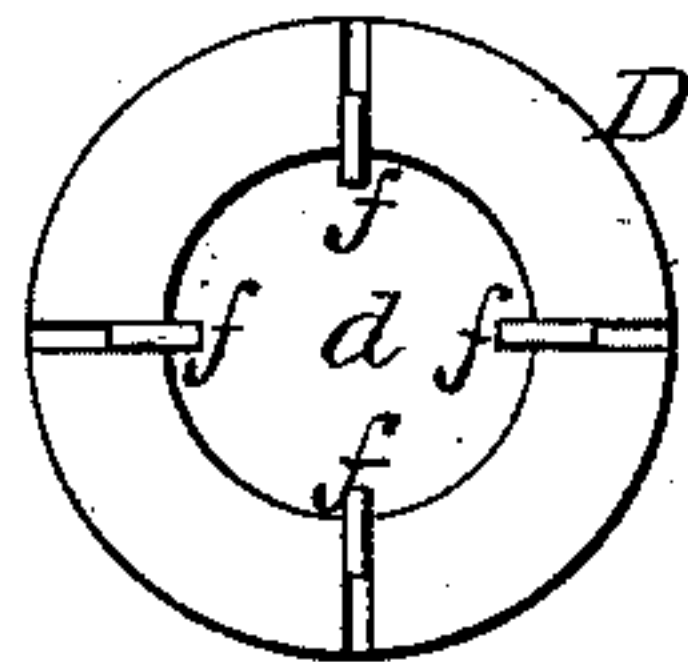


FIG. 4



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWIN L. LLOYD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE
HALF TO CHARLES C. JOLY, OF SAME PLACE.

BOTTLE-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 279,776, dated June 19, 1883.

Application filed January 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWIN L. LLOYD, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain
5 Improvements in Bottle-Filling Machines, of which the following is a specification.

The object of my invention is to so construct the plunger of a bottle-filling apparatus that the cork or plug of the bottle may be securely
10 held in proper position for external application to the mouth of said bottle; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

15 Figure 1 is a sectional view of sufficient of a bottle-filling apparatus to illustrate my invention; Fig. 2 and 3, the same with the parts in different positions, and Fig. 4 an end view of the plunger.

20 A represents the filling-tube of a bottle-filling machine, this tube having passages *a a*, whereby provision is afforded for the escape of the air from the bottle and for the introduction of the liquid under pressure, the lower
25 end of the tube having a packing-ring, *b*, for forming a tight joint with the mouth of a bottle, B, applied thereto, as shown in Fig. 1.

D is the plunger, in the lower end of which is a recess, *d*, having four spring-jaws, *f*, adapted to catch and hold the head *g* of the cork F, which is to be applied to the mouth of the bottle B. The cork is adjusted to the lower end of the plunger when the latter is above the upper end of the tube A, as shown in Fig. 1,
35 and when the bottle has been filled and the flow of liquid cut off, the plunger is caused to descend through the tube, so as to apply the cork to the mouth of the bottle, as shown in Fig. 2, the jaws *f* insuring the maintenance of
40 the cork in position for proper application to said mouth. The tube A is then elevated, and while the cork is held firmly in place by the plunger D the retainer *h* is applied to the cork, as shown in Fig. 3, and the plunger is then re-
45 tracted prior to a repetition of the operation.

Instead of providing the lower end of the plunger with spring-jaws *f*, such as shown, the recess *d* may be lined with rubber, cork, leather, or like material, which, when the head of

the cork is thrust into the recess, will exert 50 sufficient friction upon the edges of said head to insure the holding of the cork in proper position.

I am aware that plungers have been constructed so as to push the stoppers into bottles, 55 the stoppers having been first deposited in the filling-tube; but in my case the stopper or cork is applied to the plunger while the lower end of the latter is above the filling-tube, so that the attendant can be fully assured that 60 the cork is properly centered before the plunger descends.

I am also aware that plungers have been constructed with fingers to grasp internal stoppers within the neck of the bottle; but in such 65 cases the stopper is closed by the internal pressure, the fingers serving simply to hold the stopper within the bottle away from its seat, whereas when an external stopper is used the plunger must be relied upon to force the stop- 70 per through the filling tube, and so seat the stopper as to permit the application of the retainer and insure a close joint.

I claim as my invention—

1. The combination of the filling-tube of a 75 bottle-filling machine, a cork or stopper to be applied externally to the bottle mouth, and a plunger, D, adapted to force the cork through the filling-tube, and provided at the lower end with cork receiving and retaining devices, 80 whereby the cork may be applied to the plunger while the latter is above the mouth of the filling-tube, as specified.

2. The combination of the filling-tube, the external cork or stopper, and the plunger D, 85 adapted to force the cork through the filling-tube, and provided at the lower end with cork receiving and retaining devices adapted to yield and release the cork on the ascent of the plunger, as set forth. 90

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN L. LLOYD.

Witnesses:

THOMAS DUGAN,
HARRY SMITH.