

(No Model.)

2 Sheets—Sheet 1.

H. J. WILLIAMS.

DEVICE FOR REMOVING CORKS FROM BOTTLES.

No. 450,957.

Patented Apr. 21, 1891.

Fig. 1.

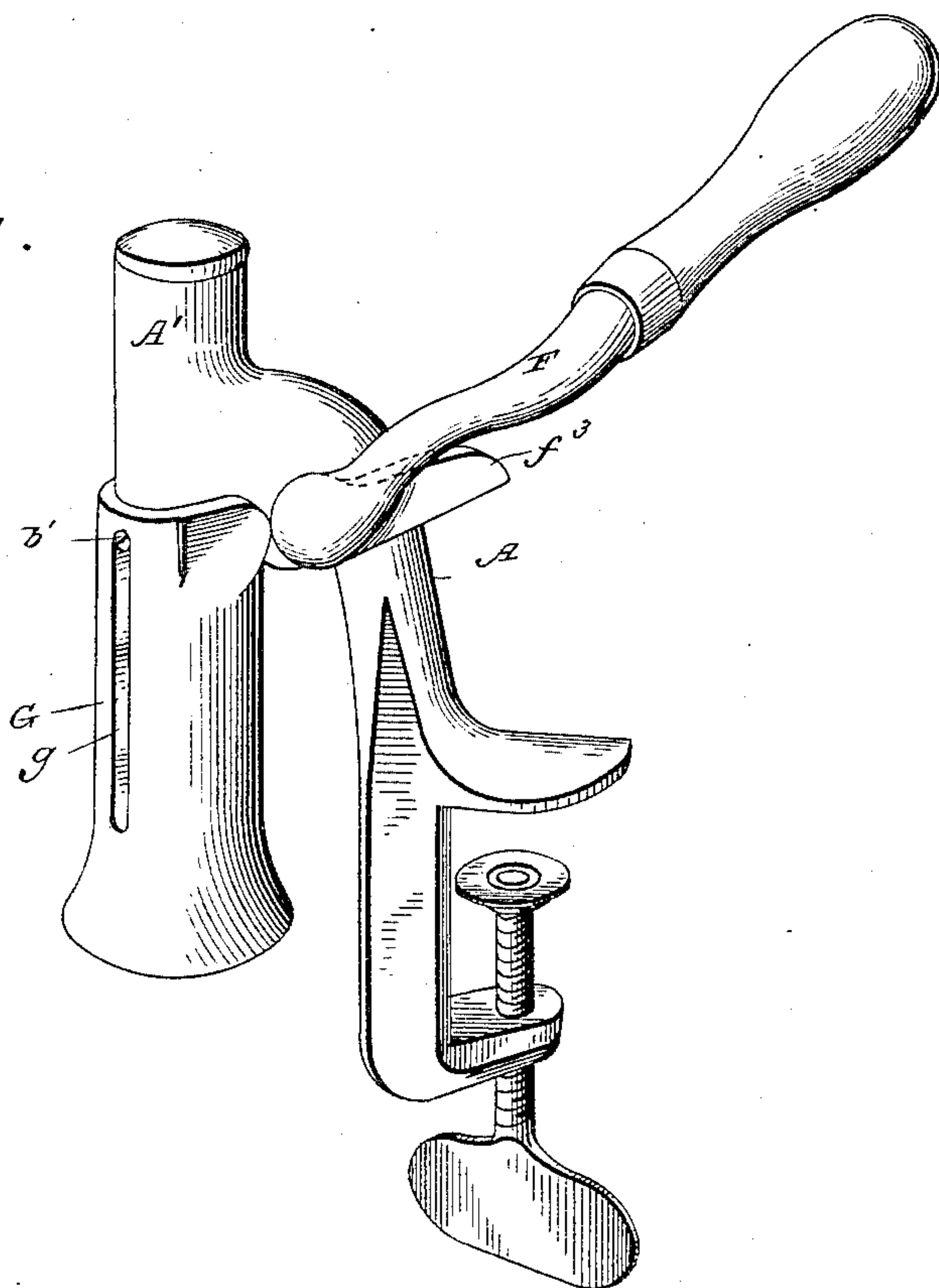


Fig. 7.

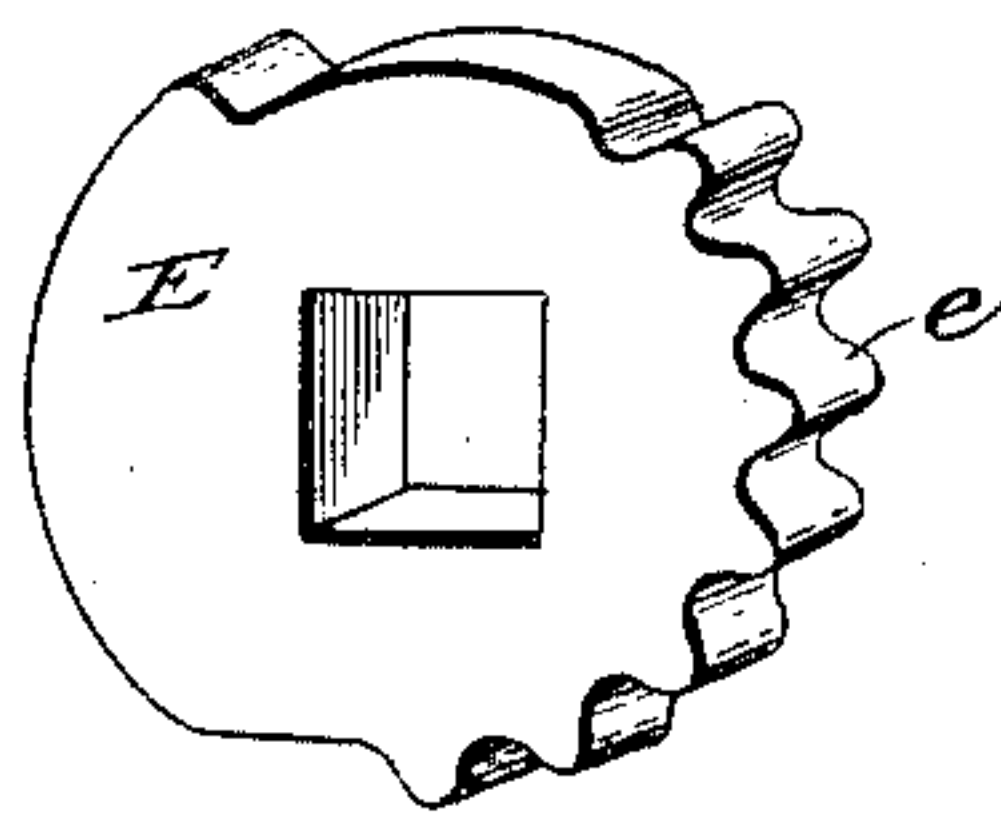
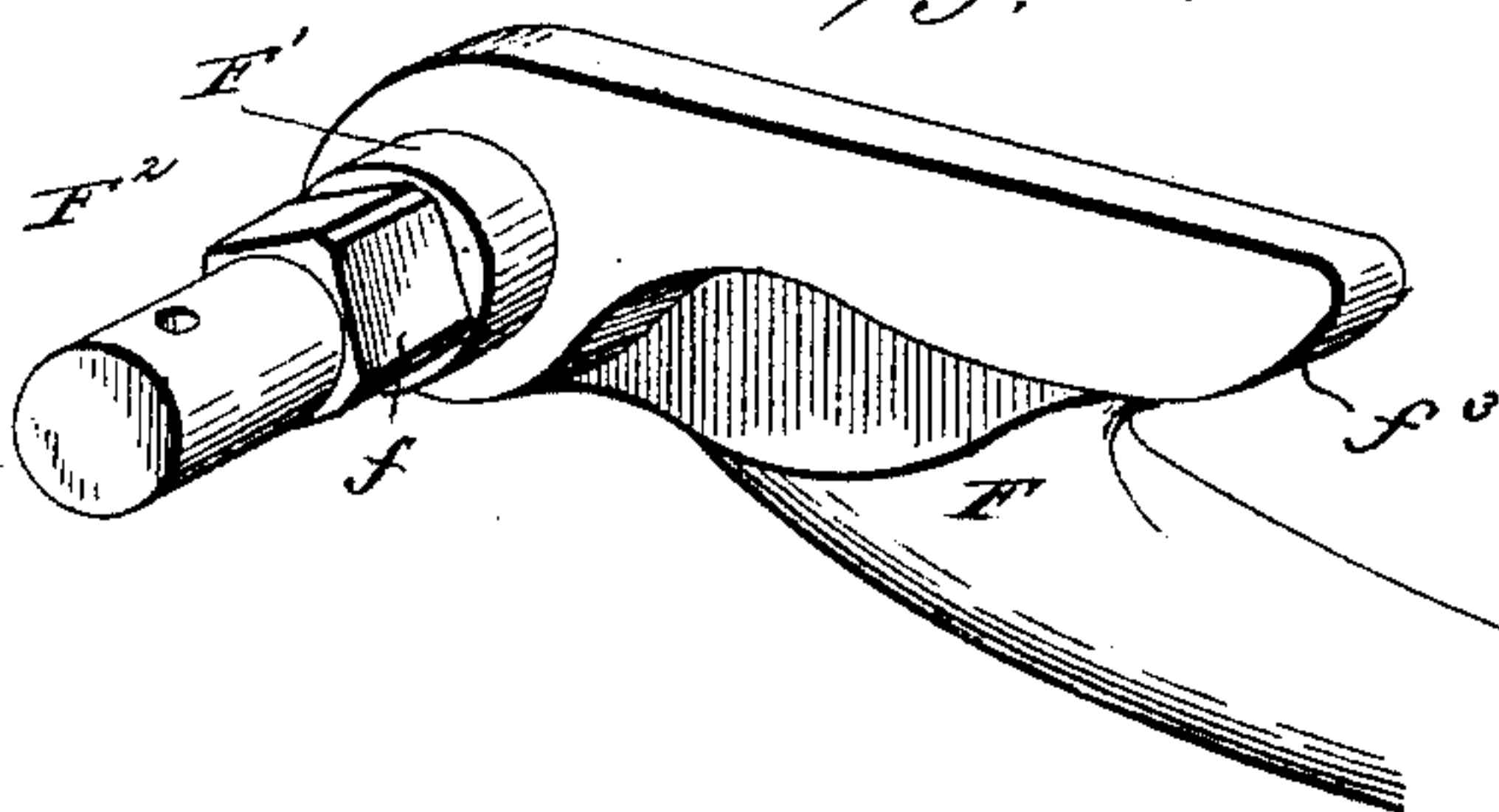


Fig. 6.



Witnesses

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(No Model.)

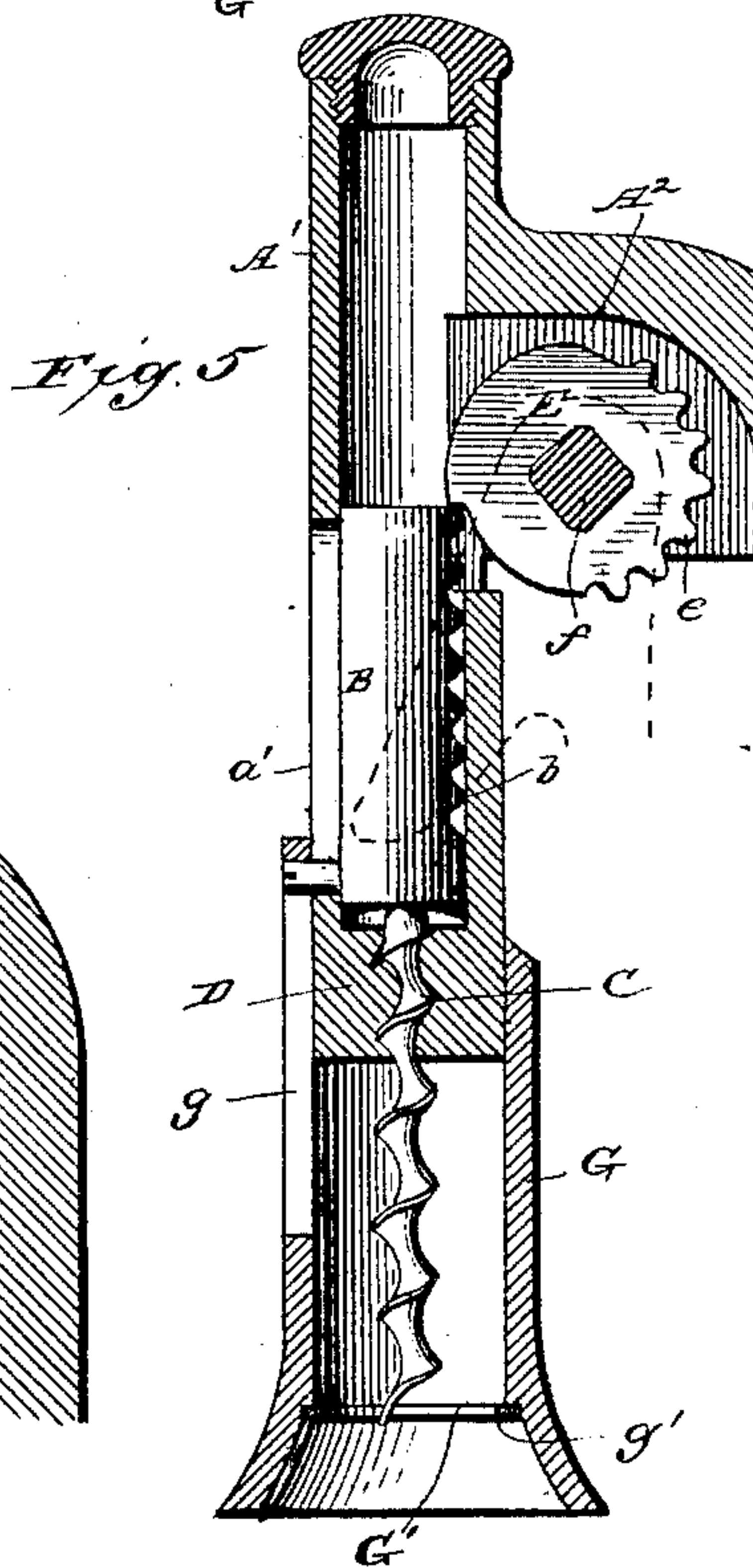
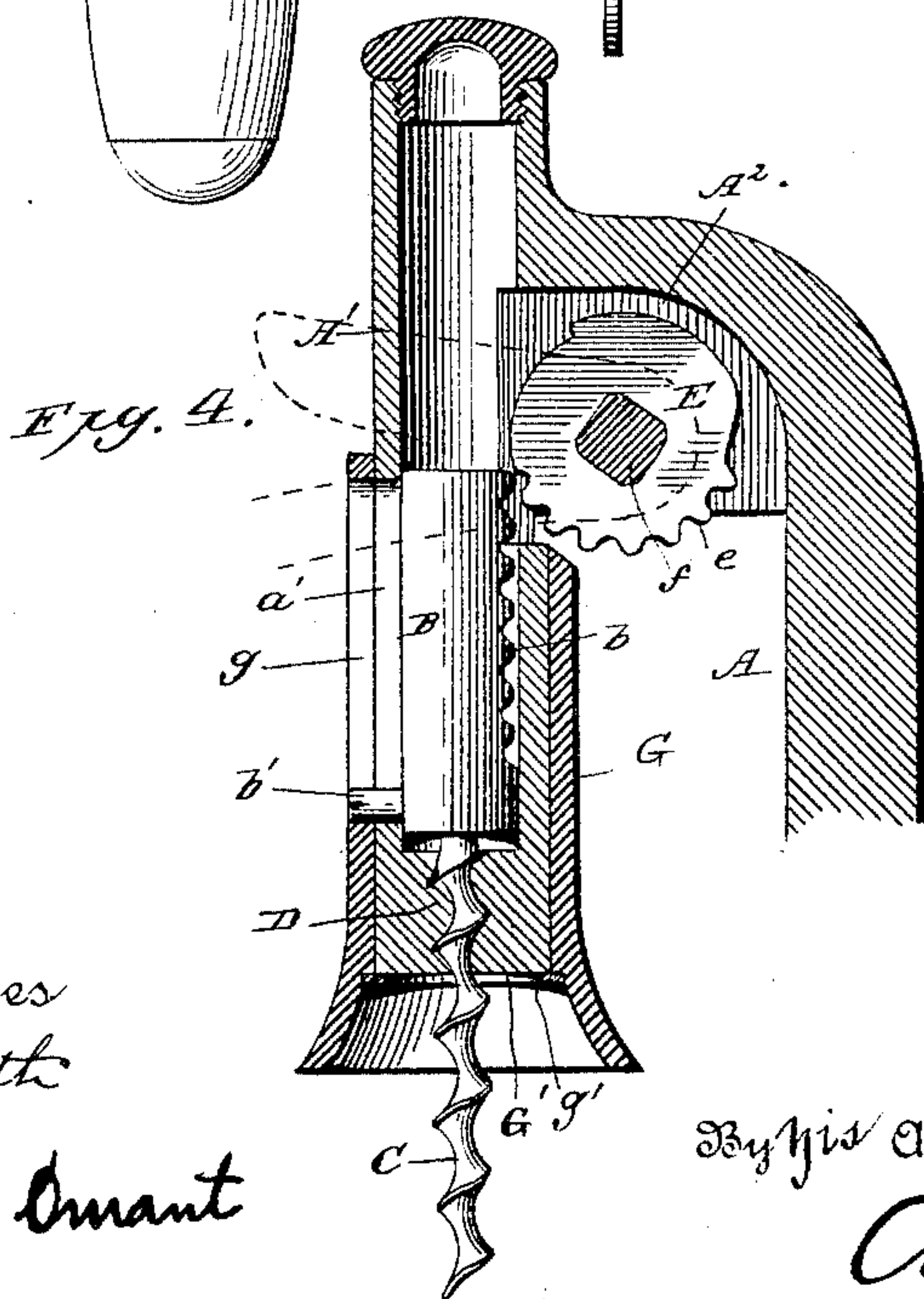
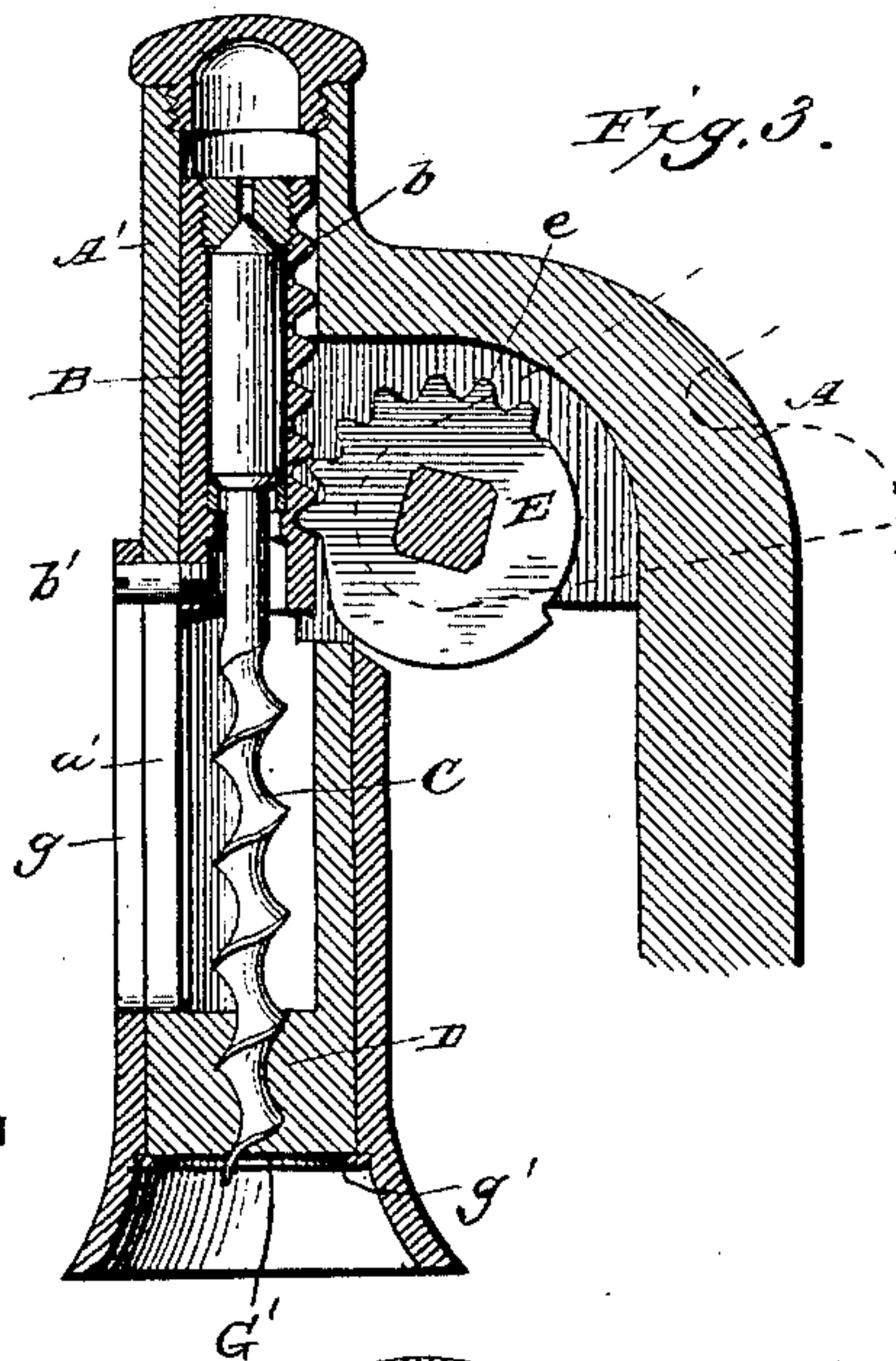
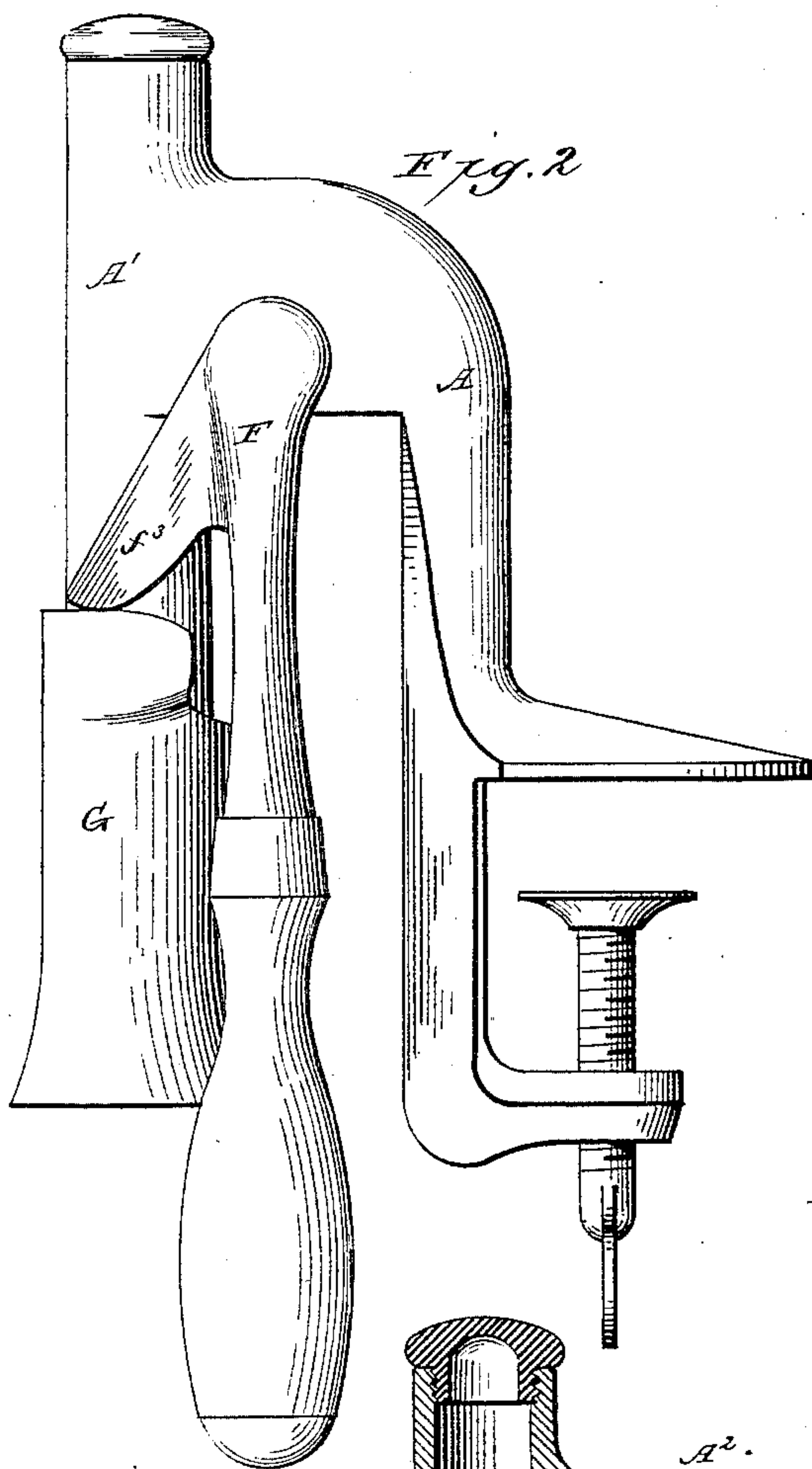
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

HARRY J. WILLIAMS, OF MERIDEN, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO CHARLES L. LYON, OF SAME PLACE.

DEVICE FOR REMOVING CORKS FROM BOTTLES.

SPECIFICATION forming part of Letters Patent No. 450,957, dated April 21, 1891.

Application filed March 31, 1890. Serial No. 346,049. (No model.)

To all whom it may concern:

Be it known that I, HARRY J. WILLIAMS, of Meriden, in the county of New Haven and State of Connecticut, have invented certain
5 new and useful Improvements in Devices for Removing Corks from Bottles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference
10 being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

The object of my invention is to provide improved means for removing corks from bottles; and it consists in a novel construction
15 and combination of parts, such as will be hereinafter described, and pointed out particularly in the claims at the close of this specification.

In the drawings, Figure 1 represents a perspective view of my improved appliance with the parts in the position which they occupy when ready for use. Fig. 2 is a side elevation of the same, showing in full lines the parts in the position which they occupy after the cork
25 has been removed from the bottle and in dotted lines their position after the corkscrew has been inserted in the cork and before the sliding sleeve has been operated to effect the withdrawal of the cork, or, more properly speaking, to effect the forcing of the bottle off the
30 cork. Figs. 3, 4, and 5 are longitudinal sectional views showing the internal construction of the device and further illustrating the position of the parts at different stages of the movement of the hand-lever. Fig. 6 is a detached view of the operating-handle, and Fig.
35 7 a detached view of the gear-segment with which the handle co-operates to reciprocate the toothed plunger that carries the corkscrew proper.

Similar letters of reference in the several figures indicate the same parts.

A represents a bracket or frame in which the several operative parts of the appliance
45 are arranged, said bracket being provided with a suitable clamping or other device by which to attach it securely to a counter, table, or other support. Within the vertical cylindrical portion A' of this bracket is arranged
50 a plunger B, which is provided on one side with a series of rack-teeth b, and which car-

ries at its lower end a corkscrew C, so connected with it as to be free to turn or rotate on its longitudinal axis.

At the lower end of the cylindrical portion 55 A' is a fixed guide D, having a spiral aperture corresponding to the pitch of the corkscrew and through which the corkscrew passes.

From this construction it will be apparent that when the plunger B is moved up and
60 down the corkscrew will, by co-operation with the fixed spiral guide, be rotated as well as moved longitudinally.

Arranged within a recess A² of the bracket is a toothed sector E, having teeth e, which
65 are adapted to engage with the rack-teeth of the plunger, as shown. This toothed sector has a squared central opening which receives a correspondingly-shaped portion f of a stud
70 projecting laterally from the head of an operating handle or lever F. On opposite sides of the squared portion f of the handle-stud the stud is provided with cylindrical portions
75 F' F², which co-operate with corresponding bearings in the walls of the bracket to enable the handle to be freely swung up and down. By swinging the handle downward the gear-segment is caused to depress the plunger and project and rotate the corkscrew, and by
80 swinging upward the handle a reverse motion of said parts is effected.

Surrounding the cylindrical portion of the bracket is a sleeve G, whose lower end is preferably made conical or bell-shaped to receive and form a bearing for the neck of the
85 bottle.

A pin or screw-stud b', secured to the plunger B, projects through a vertical slot a' in the cylindrical portion of the bracket and into a vertical slot g, formed in the said sleeve G.
90 This pin serves to prevent the rotation of the plunger B and it operates against the upper wall of the slot in the sliding sleeve G to raise said sleeve when the plunger is raised.

The head of the handle or lever is provided
95 with a cam or projection f², which, when the handle is swung downward, engages the sleeve G and forces the latter downward to the limit of its movement.

The operation of the appliance will now be
100 readily understood.

When the cork is to be removed from a bot-

tle, the handle is thrown backward, so as to cause the parts to occupy the position shown in Figs. 1 and 3, after which the neck of the bottle is inserted within the lower end of the sleeve G with the cork against or in close proximity to the point of the corkscrew. While the bottle is thus held firmly in position the handle is swung forward and downward and the corkscrew is fully projected into the cork, as shown in Fig. 4, after which the cam or projection f^3 of the handle strikes the sleeve G and causes it to descend and carry with it the bottle, leaving the cork impaled upon the corkscrew, as shown in Fig. 5. The return of the handle to original position causes the corkscrew to be withdrawn from the cork and the latter to be ejected, and also causes the pin b' on the plunger to raise the sleeve G to original position.

For the purpose of effecting the severance of any wire or cord fastening that may bind the cork to the neck of the bottle, I provide a sharp cutting-edge g' upon the inside of the sleeve G at its lower end, as shown, and when in the operation of the appliance this sharp edge is forced down upon the said wire or cord, the latter, rendered unduly tense by the holding of the cork and the pushing away of the bottle, is quickly severed, thus liberating the cork and causing the continued movement of the sleeve to remove it from the bottle.

A shoulder on the inside of the sleeve may constitute the cutting-edge; but I prefer to employ a sharp-edged ring G' , inserted and secured within the end of the sleeve, as shown.

It will thus be seen that by my appliance the cutting of the wire or cord, the withdrawal of the cork from the bottle, and the ejection of the cork from the appliance are accomplished easily, expeditiously, and automatically by the movements of the hand-lever.

Having thus described my invention, what I claim as new, is—

1. In an appliance for drawing corks, the combination, with the reciprocating plunger and the corkscrew carried thereby, of the fixed spiral guide for rotating the corkscrew when the latter is projected or retracted, the sliding sleeve for bearing on the neck of the bottle, and means, substantially such as described, for moving said sleeve, for the purpose specified.

2. In an appliance for drawing corks, the combination of the reciprocating plunger, the corkscrew carried thereby, the fixed spiral guide for rotating the corkscrew as the plunger is reciprocated, as described, the sliding slotted sleeve, and the stud on the plunger co-operating with said sleeve, substantially as described.

3. In an appliance for drawing corks, the combination of the reciprocating plunger, the corkscrew carried thereby, the fixed spiral

guide for rotating the corkscrew as the plunger is reciprocated, the sliding sleeve for receiving the neck of the bottle, and the handle for reciprocating the plunger and depressing the sliding sleeve, substantially as described.

4. In an appliance for drawing corks, the combination of the plunger having the rack-teeth, the corkscrew carried by said plunger, the fixed spiral guide, the sliding sleeve for receiving the neck of the bottle, the toothed segment, and the operating-handle provided with the cam or projection for depressing the sliding sleeve, substantially as described.

5. In an appliance for drawing corks, the combination of the plunger having the rack-teeth, the corkscrew carried by said plunger, the fixed spiral guide, the slotted sliding sleeve, the pin or stud on the plunger entering the slot of the sleeve, and the operating-handle geared, as described, to the plunger, for the purpose specified.

6. In an appliance for drawing corks, the combination of the plunger, the corkscrew carried thereby, the fixed spiral guide for rotating the corkscrew, the sliding sleeve provided with a wire or cord severing edge, the operating-handle, and the intermediate connections, substantially such as described, whereby upon the movement of the handle the corkscrew is entered, the wire or cord holding the cork is cut, and the cork is removed from the bottle, substantially as set forth.

7. In an appliance for drawing corks, the combination of the plunger having the rack-teeth, the corkscrew carried by said plunger, the fixed spiral guide, the slotted sliding sleeve for receiving the neck of the bottle, the pin or screw-stud projecting from the plunger into the slot of the sleeve, the toothed sector, and the operating-handle having the cam or projection for operating upon the sliding sleeve, substantially as described.

8. In an appliance for drawing corks, the combination of the reciprocating plunger, the corkscrew carried thereby, the fixed spiral guide for rotating the corkscrew, the sliding sleeve provided with a wire or cord severing edge, and a handle for operating the plunger, provided with a cam or projection for depressing said sleeve.

9. In an appliance for drawing corks, the combination of the reciprocating plunger, the corkscrew carried thereby, the fixed spiral guide for rotating the corkscrew, the sliding sleeve for bearing on the neck of a bottle, and means for moving said plunger and sleeve.

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Witnesses:

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