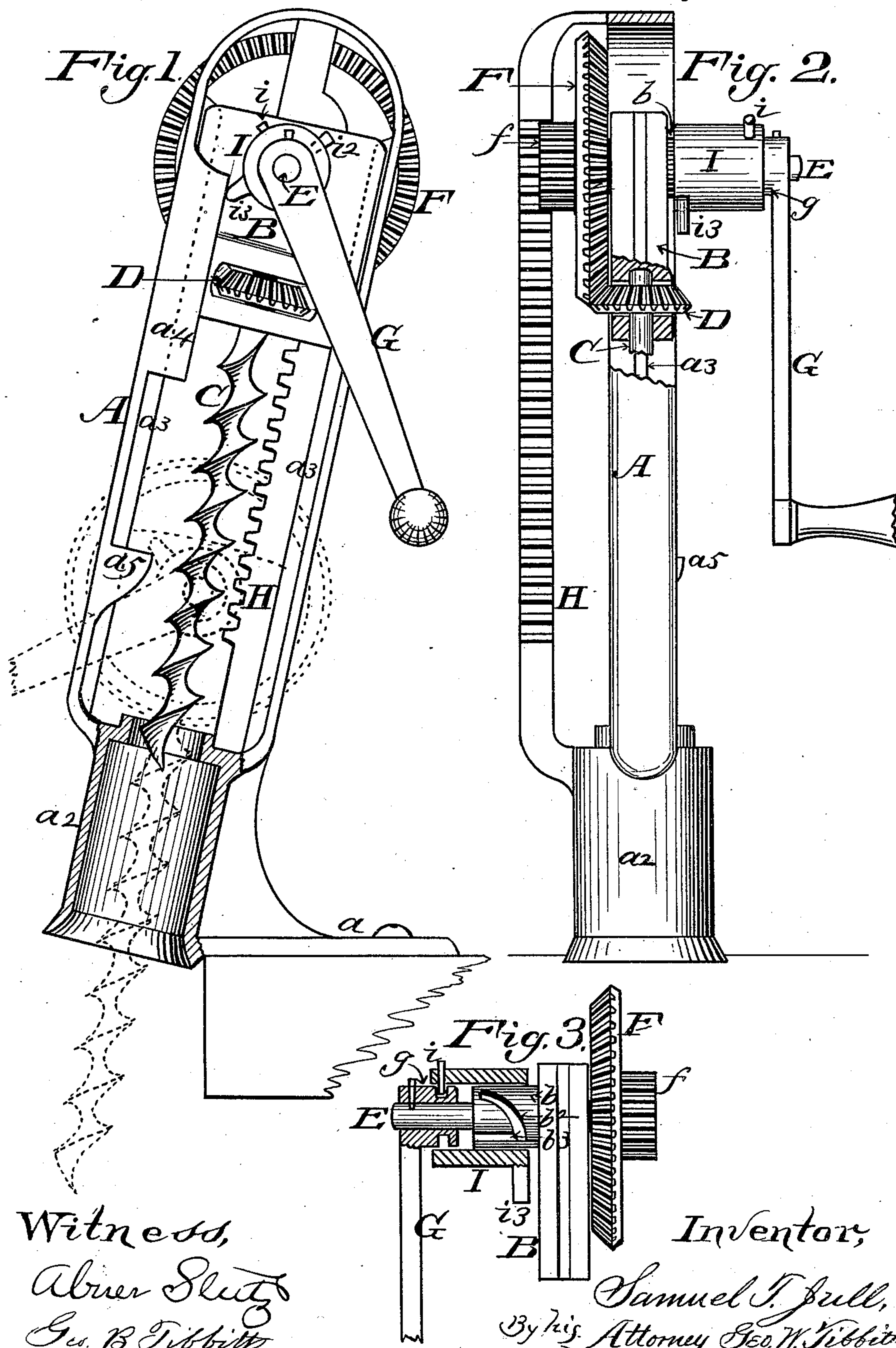


(No Model.)

S. T. JULL.  
CORK PULLER.

No. 428,000.

Patented May 13, 1890.



Witness,  
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# UNITED STATES PATENT OFFICE.

SAMUEL T. JULL, OF MEADVILLE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF  
TO FARNUM T. FISH, OF SAME PLACE.

## CORK-PULLER.

SPECIFICATION forming part of Letters Patent No. 428,000, dated May 13, 1890.

Application filed August 9, 1889. Serial No. 320,324. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL T. JULL, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Cork-Pullers, of which the following is a specification.

This invention relates to a device for extracting corks from bottles; and it consists in the peculiar construction and combination of parts comprising the same, the object being to quickly and easily extract a cork from the bottle and to remove the cork from the corkscrew by a few rotations of a hand-crank, substantially as hereinafter described, pointed out in the claim, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of the cork-puller as seen mounted in position for use. Fig. 2 is an edge elevation, partly in section, showing rack-and-gear mechanism. Fig. 3 is a detail view of the gear-wheel-shifting mechanism, whereby the gear-wheel is thrown into and out of gear with the corkscrew-pinion.

A represents a frame or open standard having a suitable foot  $a$  for securing it to a table, shelf, or counter, and provided with a socket  $a^2$ , into which the cork from a bottle is drawn. In the sides of the frame are provided guide-ribs  $a^3$ .

B is a sliding cross-head having grooves in its sides for sliding on the said guide-ribs  $a^3$ . In the lower part of the cross-head is made a recess, in which is placed a bevel-pinion D, having a corkscrew C attached, the shank of which passes through a hole in the under side of the cross-head and forms a journal for the said pinion D. To the front side of the cross-head above the said pinion is provided a round boss  $b$ , through which and the cross-head is made a hole in which is placed a shaft E, having a bevel gear-wheel F secured to one end, and upon the other end is attached a crank-handle G. The gear-wheel F also has a pinion  $f$  on its outer face, which meshes with a rack-bar H, attached to rear side of frame A. The crank-handle G also has a boss  $g$  of the same diameter as the boss  $b$  on the cross-head, and the crank is keyed fast to the shaft E, as

seen in Fig. 3. Over these two bosses  $b$  and  $g$  is placed a sleeve I, through the forward end of which is put a pin  $i$ , playing in an annular groove in the surface of the boss  $g$ . In the side of the boss  $b$  is made a diagonal groove  $b^2$  and a straight groove  $b^3$ , and in the sleeve I is put a pin  $i^2$ , which reaches into the diagonal groove. The use and purpose of this sleeve are for moving the shaft E and gear F into and out of mesh with the corkscrew-pinion, as hereinafter described in the operations of the device.

Upon the inner end of the sleeve I is provided an arm  $i^3$ , by which the sleeve is turned, as will be seen later on.

Upon the side of the frame A is made a flange  $a^4$ , projecting inwardly and extending down about one-third the length of the frame or the same length of the socket  $a^2$ . Farther down on the frame A is also made a projection  $a^5$ .

The working of this device is as follows: The cross-head being at the top of the frame, as seen in Figs. 1 and 2, the operator with his left hand holds a bottle with its neck up against the open mouth of the socket  $a^2$  and with the right hand turns the crank over to the left. This causes the pinion  $f$  to travel downward on the rack-bar H, carrying the cross-head B downward on the guides  $a^3$ . At the same time the rotations of the gear F turn the pinion D, and the corkscrew C is thereby forced into the cork in the bottle. When the cross-head has got nearly down to the lower end of the frame, the arm  $i^3$  on the sleeve I strikes against projection  $a^5$  and the said sleeve is turned on the boss  $b$ . In so turning the pin  $i^2$ , moving in the diagonal groove  $b^2$ , pushes the shaft E and gear F through the boss  $b$  and cross-head B enough to disengage the gear F from the pinion D. Now, by rotating the crank back again in the opposite direction the cross-head travels upward and withdraws the cork from the bottle, for the gears F and D being disengaged, the corkscrew does not rotate; but when the cross-head has gone two-thirds the way up the cork has been drawn up into the socket  $a^2$ , and then the arm  $i^3$  strikes against the lower end of projection  $a^4$ , and the sleeve is thereby turned back and the gears F and

D again thrown into mesh, so that in the remainder of the upward movement of the cross-head the corkscrew is rotated backward and withdrawn from the cork, which, being released from the corkscrew, will drop out of the socket. The device is again in position for repeated operations.

Having described my invention, I claim—

The combination, with shaft E, having gear F and pinion *f* attached, and the cross-head B, having boss *b* and diagonal groove *b*<sup>2</sup>, of the

crank G, having boss *g* and keyed to said shaft E, the sleeve I, provided with arm *i*<sup>2</sup> and having pin *i* playing in annular groove in boss *g*, and the pin *i*<sup>2</sup> playing in diagonal groove *b*<sup>2</sup> 15 in boss *b*, pinion D, corkscrew C, rack H, and frame A, all constructed and arranged to operate substantially as described.

SAMUEL T. JULL.

Witnesses:

ISAAC MONDERAU,

F. T. FISH.