No. 676,013. Patented June 11, 1901.

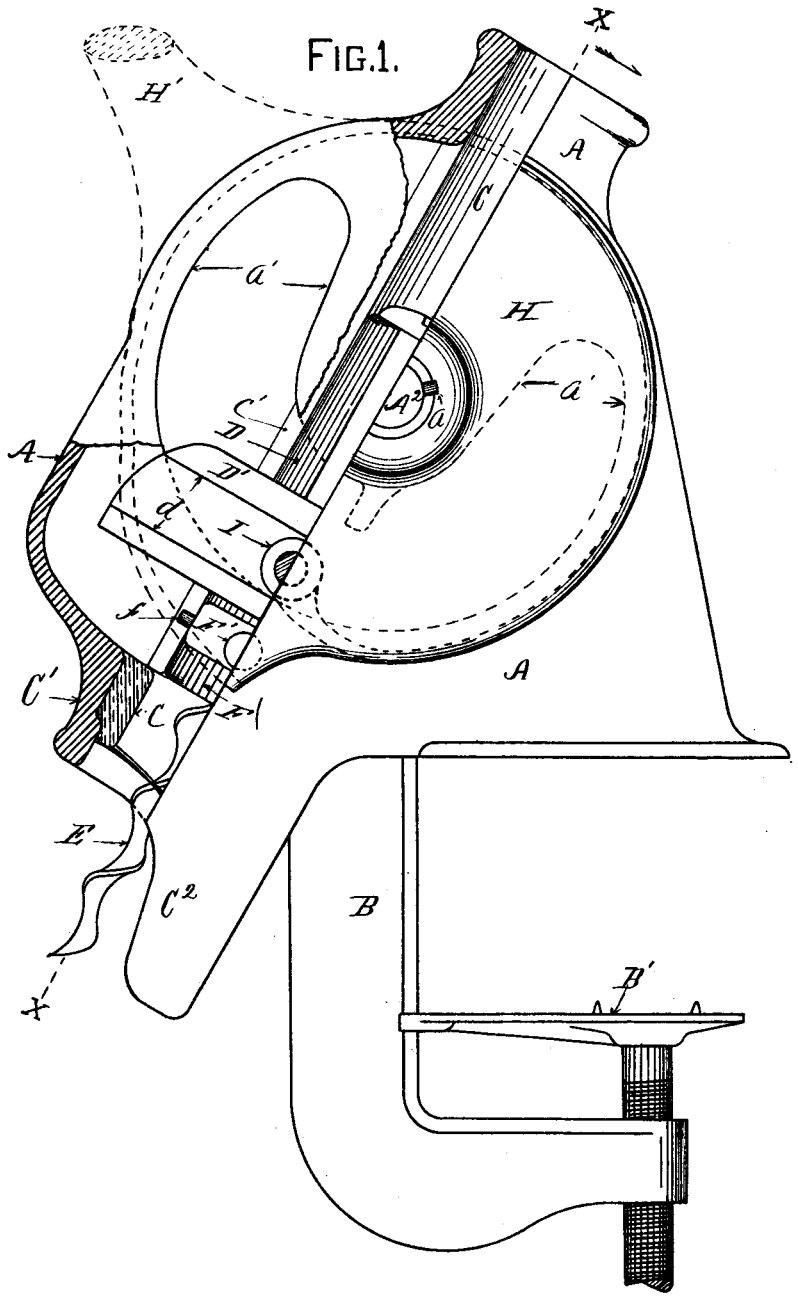
E. WALKER.

CORK PULLER.

(Application filed Apr. 18, 1900.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.



WITNESSES

Fred Einfeldt

Ralph A. Sturgeon

INVENTOR

Edwin Walker

By R. A. Sturgeon

Atty

No. 676,013. Patented June 11, 1901.

E. WALKER.

CORK PULLER.

(Application filed Apr. 18, 1900.)

(No Model.) 2 Sheets—Sheet 2.

FIG. 3.

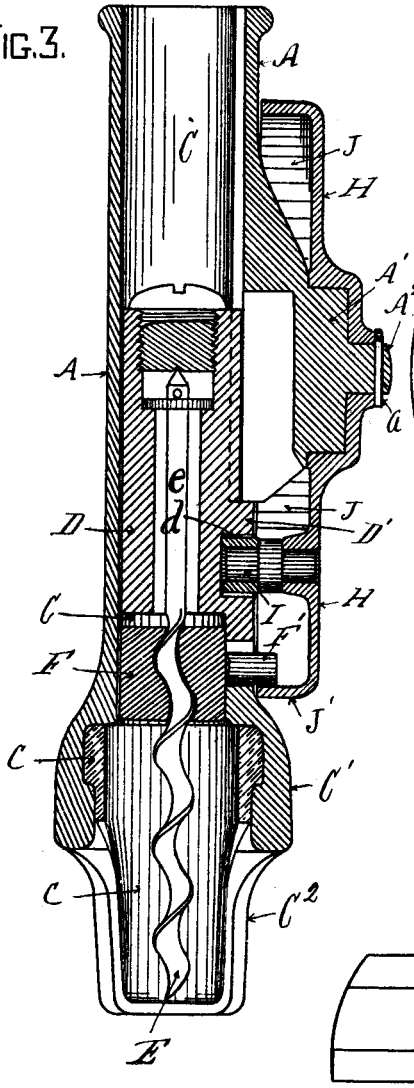


FIG. 2.

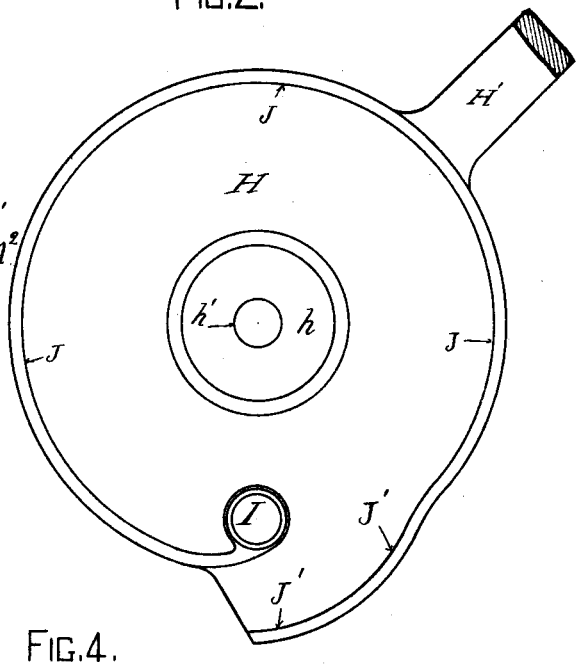
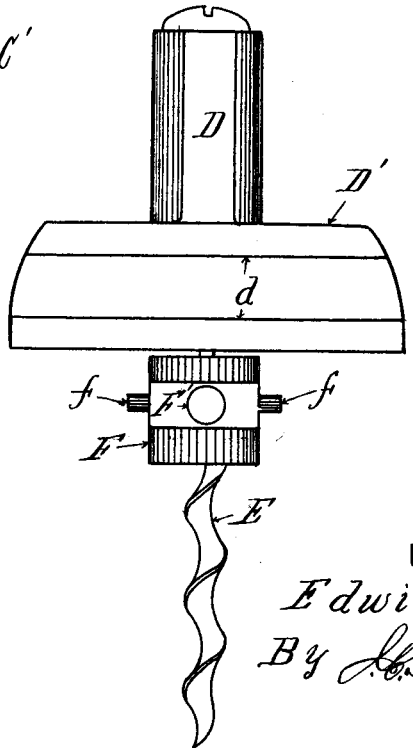


FIG. 4.



WITNESSES

Fred Einfeldt

Philip L. Sturgeon

INVENTOR

Edwin Walker

By L. L. Sturgeon

Atty.

UNITED STATES PATENT OFFICE.

EDWIN WALKER, OF ERIE, PENNSYLVANIA.

CORK-PULLER.

SPECIFICATION forming part of Letters Patent No. 676,013, dated June 11, 1901.

Application filed April 18, 1900. Serial No. 13,297. (No model.)

To all whom it may concern:

Be it known that I, EDWIN WALKER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Cork-Pullers; 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 the letters of reference marked thereon, forming part of this specification.

My invention relates to improvements in cork-pullers; and it consists, substantially, in pivoting a corkscrew in a reciprocating corkscrew-carrier mounted in the cork-puller frame and actuated by an operating-lever by means of a stud thereon continuously engaging a transverse slot on the screw-carrier and also a reciprocating non-rotatable nut through which the corkscrew travels, which nut is actuated by a cam-shaped surface on the operating-lever, so that it is retained thereby in its lowermost position while the screw is being forced into a bottle-cork and then by continuing the movement of the operating-lever is released and carried upward thereby with the corkscrew-carrier during the drawing of the cork, after which by reversing the movement of the operating-lever and moving it back toward its normal position it operates to move the screw-carrier, nut, and drawn cork down to their lowermost point of traverse, when the cam-shaped flange on the operating-lever again engages the nut, and the movement of the operating-lever being continued the screw is thereby reversed in its movement and unscrewed from the drawn cork, and at the same time the reverse movement of the operating-lever is completed and the mechanism is ready for drawing another cork. These and other features of my invention are hereinafter set forth and described, and illustrated in the accompanying drawings, in which—

Figure 1 is a view of my improved cork-puller, partially in elevation and partially in section. Fig. 2 is a view in elevation of the inside surface of the operating-lever of the same, with a portion of the handle broken away. Fig. 3 is a vertical section of the cork-puller on the line $x\,x$ in Fig. 1. Fig. 4 is a view in elevation of the corkscrew-carrier, the nut, and corkscrew.

In the drawings thus illustrating my invention, A is the frame of the machine, having clamp mechanism B B′ of the usual type thereon. The frame A is provided with an inclined tubular passage C, the lower end C′ of which is enlarged and terminates in a semicircular extension C^2 at the lower end thereof, which enlargement and extension are preferably provided with a lining c of rubber or other resilient substance and operate as a guide and support for a bottle-neck.

In the inclined tubular passage C there is a corkscrew-carrier D, (see Fig. 4,) in which the shank e of a corkscrew E is pivoted, so that it will rotate freely therein, and upon the screw-carrier D there is a transverse extension D′, having a longitudinal slot d therein. Below the screw-carrier D in the tubular passage C, I place a corkscrew-nut F. This nut F is provided with laterally-extending lugs f f, which operate upon longitudinal bearing-surfaces c' between the halves of the frame A, so as to prevent the nut F from rotating in the passage C, yet permit it to travel freely longitudinally therein, so that when the screw-carrier D moves up or down at any time when the nut F is stationary the screw E is forced to revolve therein. From one side of the nut F there also projects a stud F′, adapted to be engaged by an operating-lever, as hereinafter set forth.

On the central part of the side of the frame A there is a projection A′, terminating in a stud A^2, which forms a bearing for an operating-lever, consisting, substantially, of a circular hub-section H and a handle H′. (See Fig. 2.) In the central portion of the inside of the hub-section H there is a depression h, adapted to fit over the projection A′ on the frame, and a central hole h', through which the stud A^2 thereon projects and is secured thereon by a transverse pin a, the operating-lever rotating approximately two-thirds of a complete revolution thereon. On the section H of the operating-lever there is a stud I, which projects inwardly through a curved opening a' in the side of the frame A (see Fig. 1) and enters the slot d in the transverse portion D′ of the screw-carrier D and con-

tinuously travels to the right or left therein, according to the direction the operating-lever is rotated, whereby the screw-carrier D is moved up and down in the tubular passage C. On the periphery of the section H of the operating-lever there is an inwardly-projecting peripheral flange, the portion J thereof being circular and the remainder J′ thereof cam-shaped. (See Fig. 2.) When the operating-lever is first moved forward to draw a cork, the outside surface of the part J of the flange is in engagement with the stud F′ on the nut F during approximately one-half of the forward traverse of the operating-lever, and the nut F is thereby retained in its lowermost position until the screw E is forced through the nut F into the bottle-cork to be drawn, after which the inside surface of the cam-shaped part J′ of the flange engages the stud F′ on the nut F and raises the nut F in unison with the screw-carrier D during the forward traverse of the operating-lever, and when the operating-lever is moved in the reverse direction during approximately the first half of its traverse the screw-carrier and nut are moved downward in unison to their lowermost position, when the outside of the part J of the flange again engages with the stud F′ on the nut F and retains the nut F in its lowermost position while the screw-carrier is being raised to its uppermost point of traverse, whereby the rotation of the screw E in the nut F is reversed, and thereby unscrewed out of the drawn bottle-cork, after which the mechanism is again ready to draw another bottle-cork.

I have thus shown and described convenient mechanism for utilizing my invention; but I do not desire to confine myself to the exact construction shown and described, as I am aware that parts thereof may be considerably modified in their construction without departing from the spirit of my invention.

Therefore what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a cork-puller of a frame provided with a passage in which a corkscrew-carrier travels, a corkscrew-carrier traveling in said passage, a transverse arm on the corkscrew-carrier having a longitudinal slot therein, a corkscrew pivoted in said carrier, a non-rotatable nut encircling the corkscrew, a stud on said nut, an operating-lever, a stud on the operating-lever continuously engaging the slot in the transverse arm on the screw-carrier, and a spiral flange on the operating-lever adapted to engage the stud on the nut, substantially as and for the purpose set forth.

2. The combination in a cork-puller of a frame provided with a passage in which a corkscrew travels, a corkscrew-carrier traveling in said passage, a transverse arm on the corkscrew-carrier having a longitudinal slot therein, a corkscrew pivoted in said carrier, a non-rotatable nut encircling the corkscrew, a stud on said nut, an operating-lever pivoted to the frame, an inwardly-projecting stud on said lever continuously engaging the slot in the transverse arm on the screw-carrier, and an inwardly-projecting spiral flange, the outer surface of which engages the stud on the nut at one portion of the movement of the operating-lever, and the inner surface of which engages the stud on the nut during another portion of the movement of the operating-lever, substantially as and for the purpose set forth.

3. In a cork-puller, the combination of a frame having a corkscrew-carrier passage therein, a corkscrew-carrier traveling in said passage and having a transverse slotted arm thereon, a corkscrew pivoted in said carrier, a non-rotatable nut encircling the corkscrew in said passage below the corkscrew-carrier, a laterally-projecting stud on said nut, an operating-lever having an inwardly-projecting stud which continuously engages the transverse slot on the corkscrew-carrier, and an inwardly-projecting spiral-shaped flange on the operating-lever adapted to engage the stud on the nut with its outer surface during one portion of the traverse of the operating-lever, and with its inner surface at another portion of the traverse of the operating-lever, substantially as and for the purpose set forth.

4. In a cork-puller, an operating-lever comprising substantially a circular portion H, a handle portion H′, a hub portion *h h*′, an inwardly-projecting stud I, and an inwardly-projecting spiral-shaped flange J J′, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN WALKER.

Witnesses:
FRED EINFELDT,
RALPH A. STURGEON.