

(No Model.)

2 Sheets—Sheet 1.

E. WALKER.
CORK PULLER.

No. 515,412.

Patented Feb. 27, 1894.

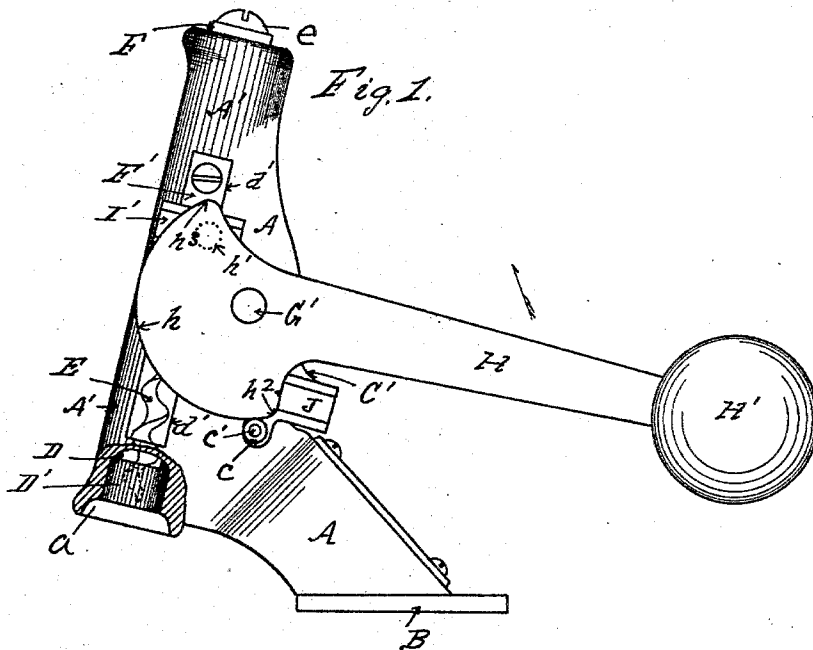
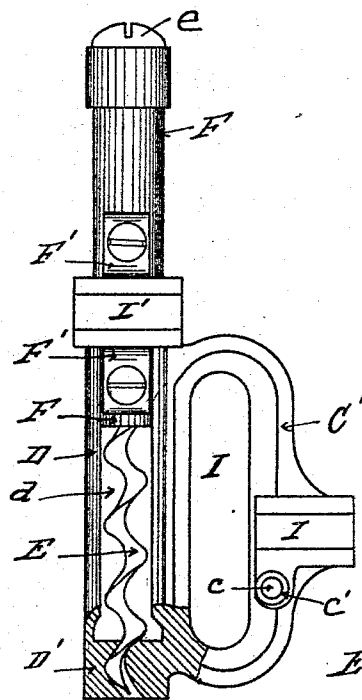


Fig. 6.



WITNESSES.

J. Einfeldt

A. L. Jackson

INVENTOR.

Edwin Walker

By J. H. Sturgeon
Atty

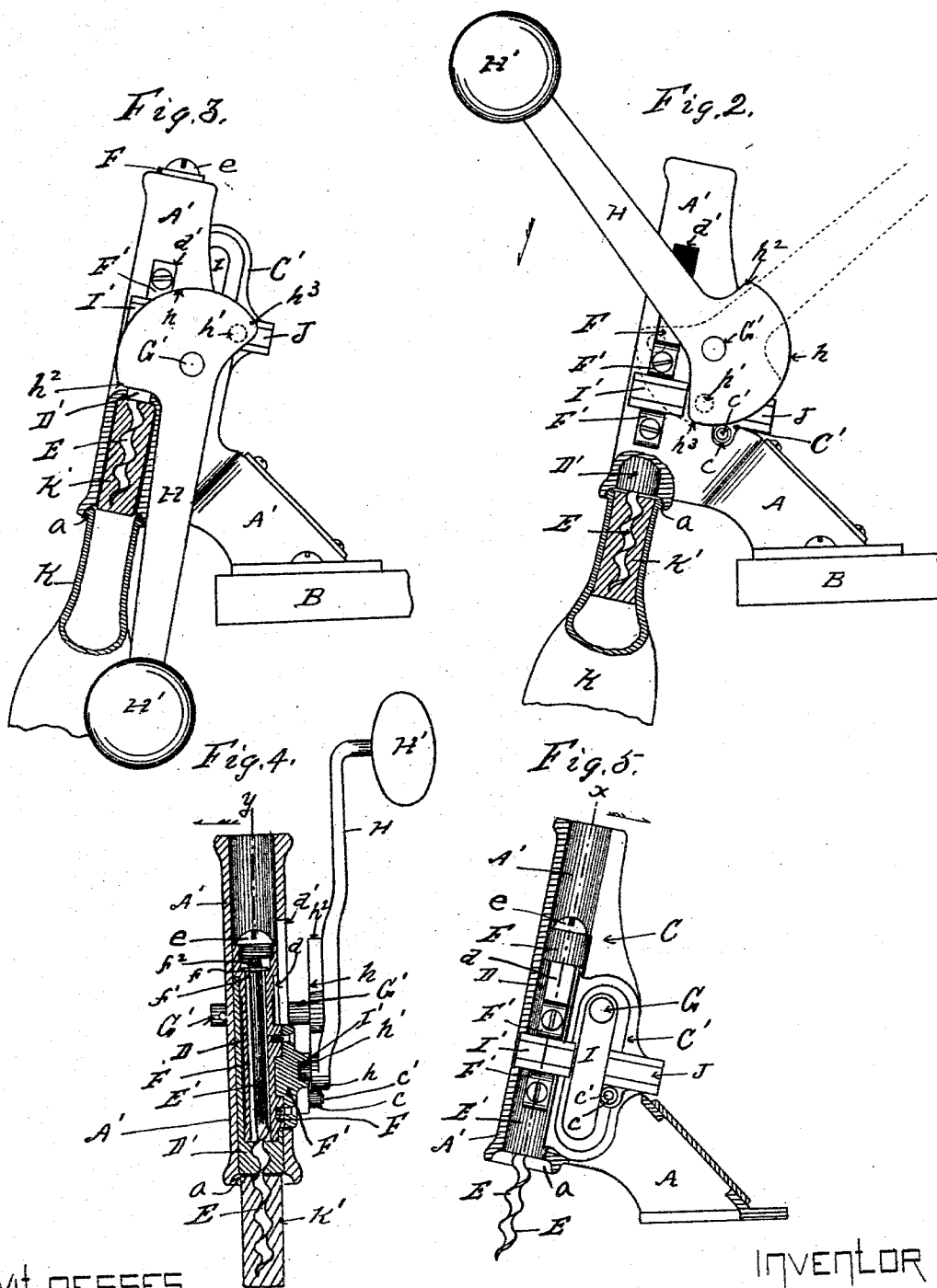
(No Model.)

2 Sheets—Sheet 2.

E. WALKER.
CORK PULLER.

No. 515,412.

Patented Feb. 27, 1894.



WITNESSES
J. Einfeldt
A. L. Jackson

INVENTOR
Edwin Walker
By H. Sturgeon
Att'y.

UNITED STATES PATENT OFFICE.

EDWIN WALKER, OF ERIE, PENNSYLVANIA.

CORK-PULLER.

SPECIFICATION forming part of Letters Patent No. 515,412, dated February 27, 1894.

Application filed October 12, 1893. Serial No. 487,936. (No model.)

To all whom it may concern:

Be it known that I, EDWIN WALKER, a citizen of the United States, residing at the city of 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 consists in the improvements in cork-pullers hereinafter set forth and explained and illustrated in the accompanying drawings, in which—

Figure 1. is a side elevation of my improved cork puller with the operating lever thrown back ready for operation; a portion of the lower part thereof being in section. Fig. 2. is a like view of the cork puller, showing the position of the operating lever after the screw has completed its traverse into a cork in a bottle. Fig. 3. is a like view of the same showing the position of the operating lever at the instant the cork is completely withdrawn from the bottle. Fig. 4. is a vertical section of the same on the line *x*, in Fig. 5, looking in the direction of the arrow. Fig. 5. shows a vertical section of the same, partly in elevation, (with the operating lever removed,) on the line *y*, in Fig. 4, looking in the direction of the arrow. Fig. 6. shows, partly in elevation and partly in section, the vertically moving parts of the cork puller.

In the construction of my improved cork puller shown in the drawings, A is the frame thereof adapted to be secured to a counter or other suitable support B in the usual manner.

The upright portion of the frame A consists of a tube A' having its lower end a flaring to receive the mouth of a bottle, and in the rear side of which is a slot C (shown in Fig. 5), extending from the top thereof nearly to the bottom of said tube; within which slot the projection C' on the tubular nut carrier D (see Figs. 5 and 6) operates, as hereinafter set forth.

The nut carrier D has a cork screw nut D' secured in the lower end thereof, adapted to receive a cork screw E secured to a stem E' adapted to rotate freely within a tubular cork screw carrier F, which is adapted to move vertically in the tubular portion of the nut carrier D.

Secured to the cork screw carrier F is a projection F' which extends out through an open slot *d* in the tubular nut carrier, and also out through a corresponding slot *d'* in one side of the tubular portion A' of the frame, as and for the purpose hereinafter set forth.

In the upper end of the cork screw carrier F it is bored out so as to form a shoulder *f* adapted to be engaged by a washer *f'*, which fits on the upper end of the cork screw stem E' and is secured thereon by a transverse pin *f*² which passes through the upper end of said stem, and the upper end of the cork screw carrier F is closed by a screw *e*, which, when in place, fits down upon the upper end of the cork screw stem E' and together with the washer *f'* fitting upon the shoulder *f* in the cork screw carrier F and the transverse pin *f*², operates to prevent any vertical movement of the cork screw stem E' within the cork screw carrier F, while at the same time it can rotate freely therein. Thus, it will be seen that the vertical movement of the cork screw carrier F, within the tubular portion of the nut carrier D, operates to force the cork screw E through the nut D', and thereby rotate the cork screw E and its stem E' within the cork screw carrier F.

In the upright portion of the frame A, at the rear of the tubular portion A' thereof, in an opening G, (see Fig. 5) therein is pivoted the axis G' of an operating lever H, provided with a handle H', and in the projection C' on the nut carrier D there is an oblong vertical slot I, (see Figs. 5 and 6) through which the axis G' of the operating lever H extends, so as to permit of the vertical movement of the nut carrier D and its projecting portion C' without interference with the axis G' of the operating lever H. On the operating lever H is an inwardly projecting cam surface *h*, adapted to engage with a friction roller *c*, mounted on a stud pin *c'* in the projecting portion C' of the nut carrier D, as and for the

purpose hereinafter set forth, and at the end h^3 of said cam surface h is an inwardly projecting stud pin h' .

On the projection F' of the cork screw carrier F is a transverse guide I' with which the inwardly projecting stud pin h' on the operating lever H is adapted to engage during certain portions of its traverse, as herein-
 5 after set forth, and on the rear part of the projection C' of the nut carrier D , a little
 10 above the friction roller c is a like transverse guide J , also adapted to be engaged by the inwardly projecting stud pin h' on the oper-
 15 ating lever H during certain portions of its traverse, as and for the purpose set forth.

In the operation of my improved cork puller, the operating handle H being thrown back to the position illustrated in Fig. 1, the lower end h^2 of the cam surface h is resting upon the friction roller c , which operates to retain the nut carrier D in its lowermost position, while the inwardly projecting stud pin h' has entered the transverse guide I' on the cork screw carrier F and has thereby raised the cork screw carrier F and the cork screw E to their uppermost position. Now, presenting a bottle K to be uncorked, to the flaring end a of the tubular portion A' of the frame; the operator moves the operating lever H in the direction shown by the arrow in Fig. 1; this causes the stud h' moving in the guide I' to move the cork screw carrier F downward, forcing the cork screw E down through the nut D' into the cork K' ; the cam surface meanwhile traveling over the friction roller c and thereby retaining the nut carrier D and the nut D' supported thereby in their lowermost position, but when the operating lever H has reached the point in its traverse illustrated in Fig. 2,
 40 and the cork screw E has entered the cork K' and completed its full downward traverse, the stud pin h' has also passed out of the guide I' on the cork screw carrier F , and is just about entering the guide J on the nut carrier
 45 D , the lever H being continued on in its movement in the direction of the arrow in Fig. 2, the stud pin h' enters the guide J and simultaneously therewith the upper end h^3 of the cam surface h passes off of the friction roller
 50 c , which operates as the lever H is moved on around to the position illustrated in Fig. 3, to raise the nut carrier D and nut D' together with the cork screw carrier F and the cork screw E , until the cork K' is entirely withdrawn from the bottle K as shown in Fig. 3. The movement of the operating lever H now being reversed, the first result is to return the nut carrier D and nut D' together with the cork screw carrier F and the cork screw E
 60 with the withdrawn cork K' thereon, back to their lowermost position, as illustrated in Fig. 4; this reverse movement of the lever H being then continued, the stud pin h' passes out of the guide J and slightly before it enters
 65 the guide I' on the cork screw carrier F , the upper end h^3 of the cam h passes over the roller c on the projecting portion of the nut

carrier D ; and as the reverse movement of the lever H continues, the stud h' enters the guide I' and operates therein to raise the cork screw carrier F and the cork screw E therein, which draws the cork screw E up through the nut D' , thereby reversing the rotation thereof and unscrewing it out of the cork K' , which operation is completed when the operating lever H is returned to the position thereof shown in Fig. 1, when the machine is again ready for operation.

Having thus fully described my invention and its operation, so as to enable others to construct and operate the same, 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 vertically movable nut carrier, a vertically movable cork screw carrier, moving both independently of and in unison with the nut carrier, and an operating lever adapted to actuate said nut carrier and said cork screw carrier independently of each other and also in unison, substantially as set forth.

2. The combination in a cork puller, of a vertical tubular frame, a cork screw nut supported by a tubular nut carrier vertically movable in said tubular frame, a tubular cork screw carrier, vertically movable in said tubular nut carrier, a cork screw passing through said nut and supported by a stem adapted to rotate within said cork screw carrier, an operating lever, a cam surface on said lever adapted to intermittently engage a projection on said nut carrier, and a stud pin on said lever adapted to alternately engage a guide on said nut carrier and a guide on said cork screw carrier; substantially as and for the purpose set forth.

3. The combination in a cork puller, of a tubular carrier supporting a cork screw nut on the lower end thereof, adapted to be moved vertically in a tubular support, a tubular cork screw carrier, adapted to move vertically within said tubular nut carrier, a cork screw operating through the nut on the vertically moving nut carrier, a stem on said cork screw secured in said tubular cork screw carrier against vertical movement therein, but adapted to rotate freely therein, and lever and cam mechanism for operating said nut and cork screw carriers, substantially as and for the purpose set forth.

4. The combination in a cork puller, of a frame having a base adapted to be secured to a suitable support and an upright tubular portion having an open slot in the rear side thereof, a tubular nut carrier supporting a cork screw nut, and moving vertically within the tubular portion of the frame, a projection on said nut carrier extending out through said slot in the frame, a transverse guide on said projection, and a friction roller below said guide, a tubular cork screw carrier within said tubular nut carrier, supporting a cork screw operating through the nut on the nut carrier, a projection on said cork screw car-

rier extending out through a slot in one side of the nut carrier and also through a slot in the tubular portion of the frame, a transverse guide on said projection, an operating lever pivoted in the upright portion of the frame, a cam on said lever adapted to intermittently engage the friction roller on the projecting portion of the nut carrier, and a stud pin on said operating lever adapted to alternately engage the guide on the nut carrier and the guide on the cork screw carrier; substantially as and for the purpose set forth.

5. The combination in a cork puller, of a tubular nut carrier D supporting a cork screw nut D', a projection C' on said nut carrier, a transverse groove J on said projection C a tubular cork screw carrier F operating vertically within the tubular nut carrier D, a pro-

jection F' on said cork screw carrier extending outward through a slot *d* in the nut carrier, a transverse groove I on said projection F' a cork screw stem E' secured against vertical movement in the carrier F and supporting a cork screw E operating in the nut D', an operating lever H, a cam surface *h* thereon, and a stud pin *h'* therein; adapted to alternately engage the transverse grooves I and J substantially as and for the purpose set forth.

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

EDWIN WALKER.

Witnesses:

F. EINFELDT,
H. J. CURTZE.