

No. 649,498.

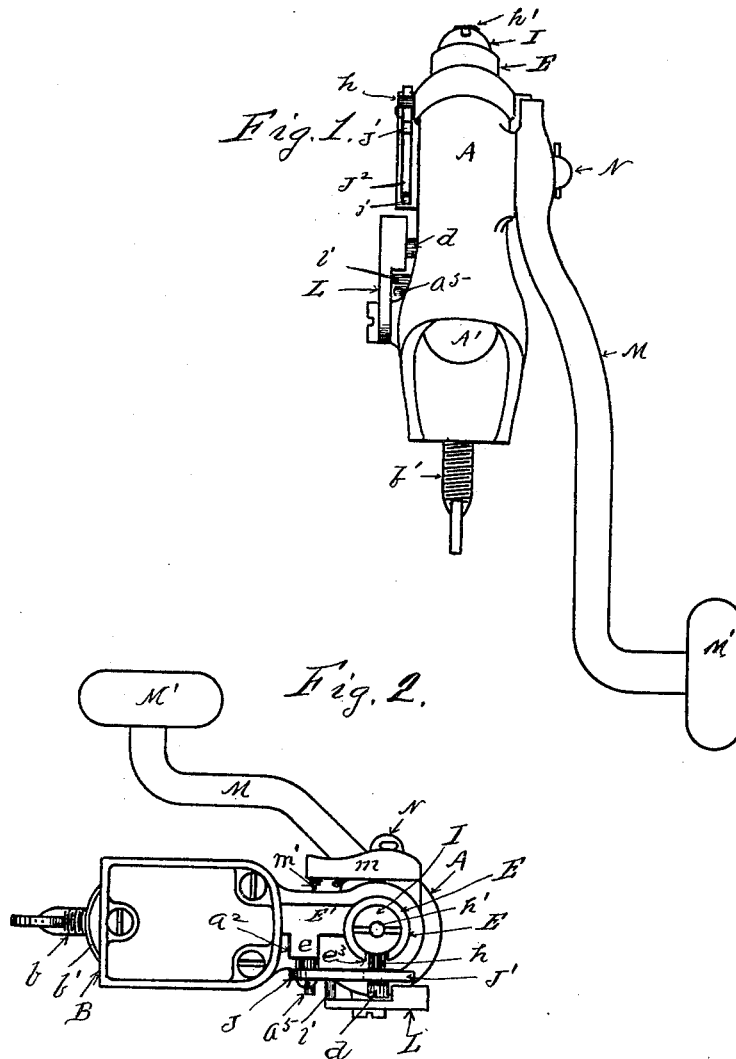
Patented May 15, 1900.

E. WALKER.
CORK PULLER.

(Application filed Aug. 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

Geo. Einfeldt
J. J. Barnes

INVENTOR

Edwin Walker

BY

H. Sturgeon

ATTORNEY

No. 649,498.

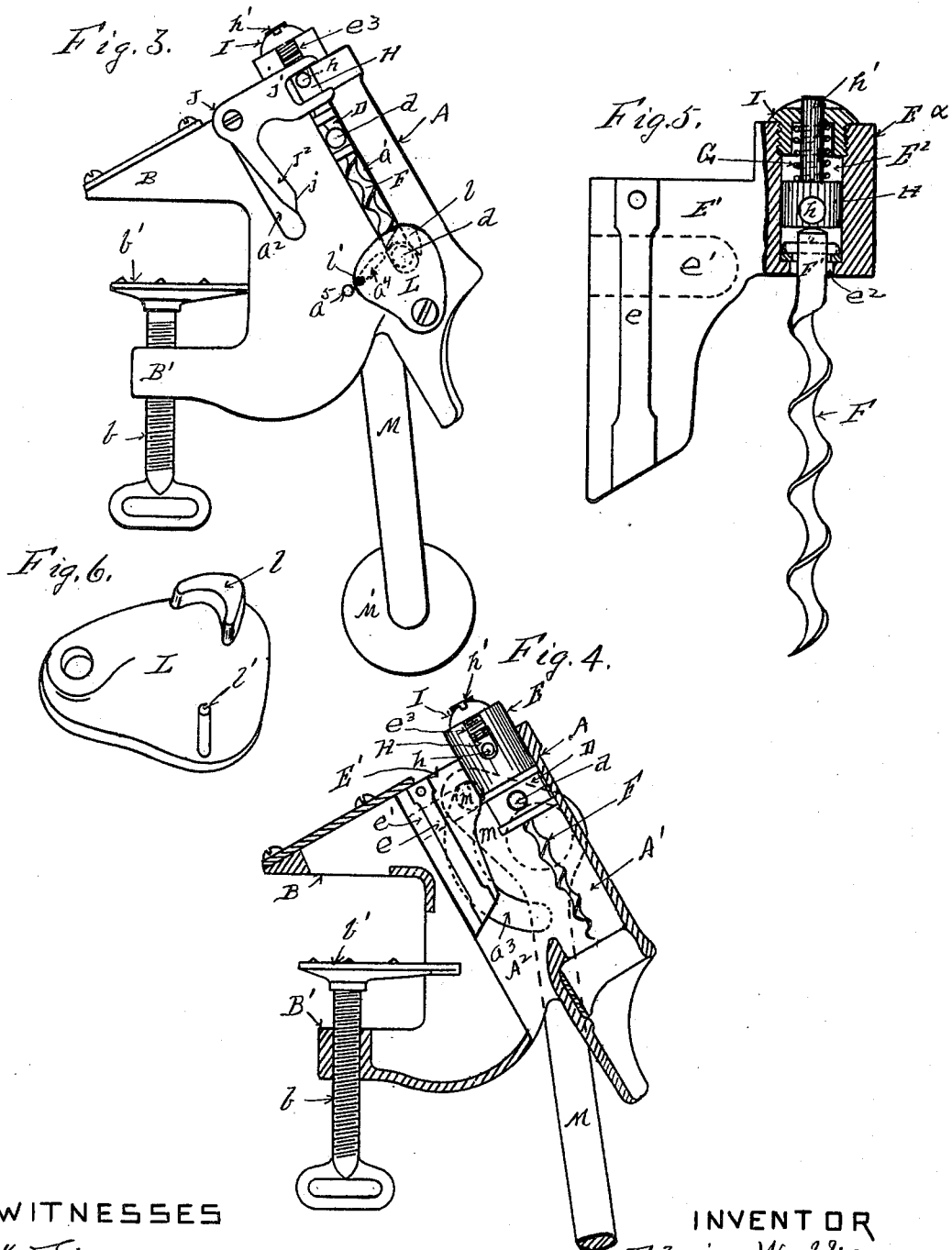
Patented May 15, 1900.

E. WALKER.
CORK PULLER.

(Application filed Aug. 9, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES

J. D. Emfield
F. J. Barrie

INVENTOR

Edwin Walker

BY

H. Sturges

ATTORNEY

UNITED STATES PATENT OFFICE.

EDWIN WALKER, OF ERIE, PENNSYLVANIA.

CORK-PULLER.

SPECIFICATION forming part of Letters Patent No. 649,498, dated May 15, 1900.

Application filed August 9, 1899. Serial No. 726,635. (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 cork-pullers; and it consists, substantially, in the improvements in the mechanism thereof hereinafter fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a front view in elevation of a cork-puller embodying my invention. Fig. 2 is a top or plan view of the same. Fig. 3 is a side view of the same in elevation. Fig. 4 is a vertical section of the same. Fig. 5 is a view of the corkscrew and corkscrew-head partially in elevation and partially in section. Fig. 6 is a perspective view of the inner face of the swinging nut-catch.

In the drawings thus illustrating my invention, A is the frame, in the front of which is a tubular passage A', having a longitudinal slot a' in the side thereof. From the rear of the tubular passage A' the frame A extends back and is provided with jaws B B', adapted to embrace a support for the frame A, and one of the jaws B' is provided with a clamping-screw b, having a clamping-plate b' on the end thereof. In the frame A, back of the tubular passage A' therein, there is a vertical chamber A², which opens into the rear of the passage A', and in one side of the rear portion of this chamber A² there is a vertical slot a², and in the opposite side of this chamber there is a curved slot a³. (Shown partially in full and partially in dotted lines in Fig. 4.)

In the tubular passage A' there is a corkscrew-nut D, having a stud-pin d, which projects out through the slot a', so that the nut D cannot rotate in the passage A', yet it is free to move up and down therein. Above the nut D there is a reciprocating corkscrew-head E.

(See Fig. 5.) This head has a projection E' on the rear thereof, having a guide-rib e on one side thereof and a horizontal slot e', in which the operating-lever engages, this projection E' operating up and down in the chamber A² in the frame. The corkscrew-head E has a cylindrical chamber E² therein extending nearly to the bottom thereof, and in an opening e² therein the shank F' of a corkscrew F is mounted so that it will both rotate and move up and down therein.

In the cylindrical chamber E² and resting upon the upper end of the corkscrew-shank F' there is a plate or disk H, having a stud h thereon which extends out through a vertical slot e³ in the corkscrew-head E and also out through the slot a' in the cork-puller frame, and extending up from the plate or disk H there is a guide-rod h', upon which there is a spiral spring G. The upper end of the chamber E² is closed by a nut I, which is chambered to receive the upper end of the spring G, and the guide-rod h' extends up through a central opening in the nut I, the object of this construction being that when the corkscrew F is being forced down through the nut D into a cork the shank F' thereof moves upward, carrying the disk H therewith and compressing the spring G; and when the screw is not being forced into a cork the spring G moves the disk H and the corkscrew-shank F' back to their normal positions. On the upper part of the guide-rib e, on the extension E' of the corkscrew-head E, there is pivoted a bell-crank lever J, so that the axis thereof will move up and down in the slot a² in the frame A, one arm J of which lever is slotted at the end, so as to embrace the stud h on the plate or disk H, and the other arm J² of said lever extends downward and has a pointed end j thereon. On the side of the frame A, below the lower end of the slot a' therein, there is pivoted a gravity-catch L, on the inner face of which there is a lug l, adapted to pass over the stud d on the nut D, and also a stud-pin l', both of which are clearly shown in Fig. 6. This stud-pin l' projects into a curved slot a⁴ (shown in dotted lines in Fig. 3) in the side of the frame, and thereby limits the movement of the catch L.

In the side of the frame A, just at the rear

of the end of the slot a^4 , there is a stud-pin a^5 , so that when in operation the point j of the arm J^2 of the bell-crank lever J passes down between the stud a^5 on the frame and the stud-pin l' on the catch L . It operates to move the catch over far enough to disengage the lug l thereon from the stud d on the nut D , and when it is withdrawn the catch falls back by gravity to its normal position, ready to again engage the stud d . On the opposite side of the frame A there is an operating-lever M , provided with a knob M' , mounted on a stud N . This lever M has an arm m thereon, provided with an inwardly-projecting stud m' , which extends through the curved slot a^3 in the frame A into the slot e' in the projection E' on the corkscrew-head E , so that the raising and lowering of the operating-lever M operates to reciprocate the corkscrew-head up and down in the frame A .

In operation when the corkscrew is forced down into a bottle-cork the pressure on the screw moves the corkscrew-shank up into the corkscrew-head, so as to raise the arm J' of the bell-crank lever J until the point j of the arm J^2 of said lever will pass down between the stud a^5 on the frame and the stud l' on the catch L , which disengages the catch L from the stud d on the nut and retains it in this position until in the pulling of the cork the stud d has been raised above the catch. Then as the nut moves on up with the cork the catch L falls back by gravity to its normal position, and when the nut and cork are again moved downward, so that the cork can be removed from the screw, the stud d on the nut strikes the incline on the lug l and moves the catch back until it passes the lug, when the catch again engages the nut and holds it down while the screw is being withdrawn from the cork. It will be observed that as the cork and nut are moved downward after the cork has been withdrawn there is little or no pressure on the shank of the screw, and the disk H in the corkscrew-head is moved by the spring G to its lowermost position, which prevents the stud h thereon from moving the arm J^2 of the bell-crank lever J forward far enough to pass down between the studs a^5 and l' , and therefore it passes down behind the stud a^5 without moving the catch L .

Having thus fully described my invention, 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 suitable frame, a corkscrew-actuating head, mechanism for operating the same reciprocally in the frame, a corkscrew having a yielding bearing in said head, and capable of both rotary and longitudinal movement therein, a non-rotatable nut encircling said corkscrew and capable of reciprocal movement in the frame, a catch adapted to engage said

nut and prevent the longitudinal movement thereof, and mechanism on the head operated by the corkscrew-shank for disengaging said catch from the nut, substantially as set forth.

2. The combination in a cork-puller, of a suitable frame, a corkscrew-actuating head having a reciprocal longitudinal movement in the frame, lever mechanism for operating the same, a corkscrew the shank of which is secured in said head, so as to rotate and move longitudinally therein, a non-rotatable nut encircling said corkscrew and adapted to move longitudinally in the frame, a catch pivoted to the frame and adapted to engage said nut and prevent the longitudinal movement thereof, and lever mechanism mounted on the corkscrew-actuating head and operated by the longitudinal movement of the corkscrew-shank therein for disengaging said catch from the nut, substantially as set forth.

3. The combination in a cork-puller, of a suitable frame, a corkscrew-actuating head having a chamber therein, lever mechanism for reciprocally actuating said head in the frame, a corkscrew having its shank journaled in the bottom of the chamber in said head, so as to both rotate and move longitudinally therein, a plate or disk in said chamber resting on the top of the corkscrew-shank, a spring in said chamber operating to press said plate or disk downward upon the end of the corkscrew-shank, a non-rotatable nut encircling the corkscrew and adapted to be moved longitudinally in the frame, a catch adapted to engage said nut and prevent the longitudinal movement thereof, and a lever mechanism on the corkscrew-actuating head engaging the disk or plate therein, and adapted to disengage said catch from the nut, so as to permit it to move longitudinally, substantially as set forth.

4. The combination in a cork-puller, of a suitable frame, a corkscrew-actuating head, mechanism for reciprocally moving said head in the frame, a corkscrew mounted in said head, so as to both rotate and move longitudinally therein, a disk or plate and spring in said head operating on the end of the corkscrew-shank, a stud on said disk or plate projecting out through a slot in said head, a non-rotatable nut encircling the corkscrew, a stud on said nut projecting out through a longitudinal slot in the frame, a gravity-catch pivoted to the frame so as to engage the stud on said nut, and a bell-crank lever pivoted to the corkscrew-operating head, one arm of which engages the stud on the plate or disk therein, and the other the catch, substantially as set forth.

5. The combination in the corkscrew-operating mechanism of a cork-puller, of a reciprocally-movable head, having a chamber therein and having a rearward projection thereon, means for securing a corkscrew-shank in said head, so that it will both rotate

and move longitudinally therein, a disk or
plate in said chamber resting upon the top
of the corkscrew-shank, a stud on said disk
or plate extending out through a longitudinal
5 slot in said head, a spiral spring in said
chamber operating on said plate or disk, and
a bell-crank lever pivoted to the projection
on said head, one arm of which engages the

stud on said disk or plate, and the other ex-
tending downward, substantially as set forth. 10

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

EDWIN WALKER.

Witnesses:

CHARLES A. MERTENS,
JOHN S. RILLING.