

APPLICATION FILED JUNE 15, 1903.

2 SHEETS—SHEET 1.



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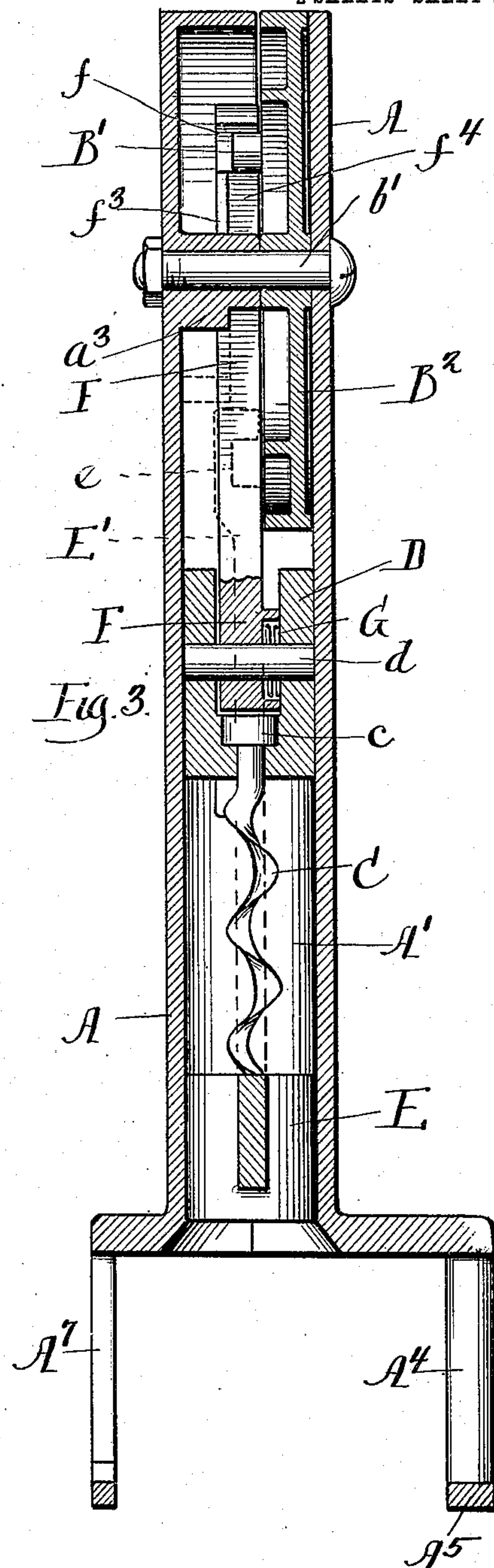
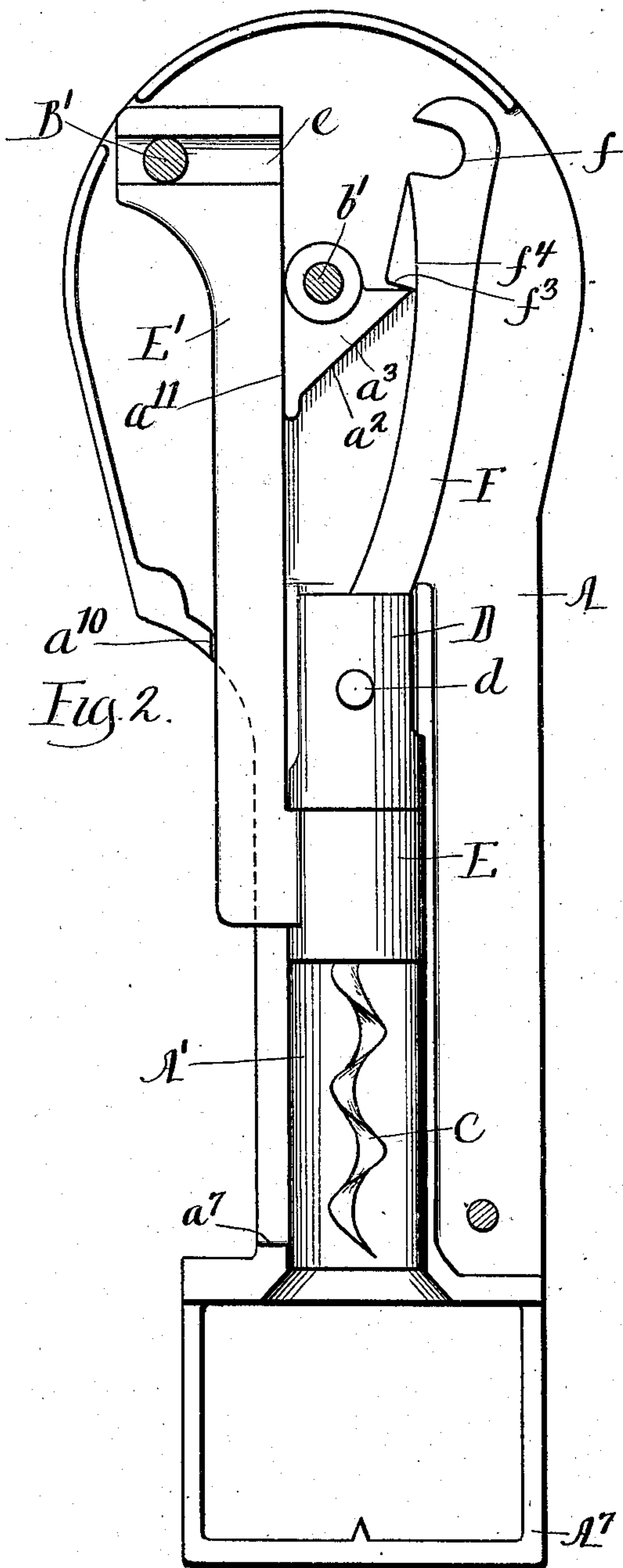
CORK PULLER.

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Patented Apr. 27, 1909.

2 SHEETS—SHEET 2.

920,008.



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UNITED STATES PATENT OFFICE.

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CORK-PULLER.

No. 920,008.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, ALBERT BAUMGARTEN, a resident of Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Cork-Pullers, of which the following is a specification.

The present invention relates to devices for drawing corks, stoppers and the like, from bottles, and more particularly to the class known as "lever-operated" pullers.

The invention designs to improve the construction and operation of cork-pullers and to provide a device simple in construction, and positive in its operation.

The invention consists in the several novel features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings: Figure 1 is a view in side elevation of a cork-puller embodying the preferred form of the invention, one section of the supporting-frame or casing being omitted. Fig. 2 is a similar view, looking in the opposite direction and showing the parts in position assumed when a cork has been drawn. Fig. 3 is transverse section on line 3—3 of Fig. 1.

A denotes a suitable supporting-frame or casing usually provided with a clamp a whereby the cork-puller can be secured to a table, counter or shelf, and formed of sections fitting together, and forming a casing wherein the cork-screw and longitudinally movable parts are guided and held. An operating lever B having a handle b is pivotally sustained by a fulcrum or pin b' held in the frame. A cork-screw C is journaled in a carrier D mounted in manner free to slide in a socket E' in the frame. A pitman or operating-bar F has its lower end connected to carrier D by pin d , and has its upper end detachably connected with the operating-lever, by a hook f which is movable into and out of engagement with an integral stud B' of the lever. A spring G presses bar F toward stud B' to hold hook f and stud B' in engagement with each other. Stud B' travels in a curvilinear path and on both sides of a vertical line passing through the lever-fulcrum b' and a lug a^3 is positioned to detain hook f , at one side of said line, when the pin reaches its lowermost position, and travels to the opposite side of the lever-fulcrum.

A nut E is slidably and non-revolubly held

in the frame and is formed with a spiral groove or opening through which the cork-screw passes, and rotates the screw when longitudinal movement is imparted to one of said parts with respect to the other. Nut E is formed with a vertical-extension E' which is formed with a way or guide e arranged in position to be entered by stud B' after it has passed out of engagement with operating-bar F, and said stud imparts positive longitudinal movement in both directions to the nut. A stop such as an abutment a^7 limits the downward movement of the nut. During upward shift of the nut, the carrier will be immediately above the nut and will be positively shifted upwardly by the nut. An inclined surface a^2 of lug a^3 which is integrally formed with the frame, deflects spring-pressed bar F during the upward shift of the carrier, and a tooth or projection f^3 is pressed into position above abutment a^3 by spring G when the operating-bar reaches its uppermost position, so the bar, carrier and cork-screw will be locked and secured against downward longitudinal travel with the nut. Reverse shift of lever B first positively shifts the nut downward to strip the drawn cork from the cork-screw. After the nut has stripped the cork from the screw the nut is in its lowermost position, stud B' will travel upwardly and during such upward movement will engage an inclined surface f^4 on bar F, press the bar away from abutment a^3 and pass into position so hook f will be pressed into engagement with said stud. Lever B is formed with a head B^2 , having a rim which closes the opening between the side walls of the casing, and wherein the lever travels. Stops a^8 and a^9 on the frame limit the pivotal swing of the operating-lever. Tooth f^3 of the operating bar is arranged out of the path of travel of stud B' so that during retraction of lever B the stud B' will not encounter said hook but will ride along edge f^4 of the bar and disengage the bar from lug a^3 . Nut E in addition to being guided in socket A' , is confined during the longitudinal shift by the frame as at a^{10} and by a straight edge a^{11} of lug a^2 .

The operation of the mechanism for drawing a cork will be as follows: Assuming the parts to be in normal position shown in Fig. 1, and a bottle with a cork therein, to be held beneath the frame, the operator will move lever B in the direction of the arrow and un-

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til B' reaches the position shown in Fig. 2
 and indicated by dotted lines in Fig. 1.
 During the initial portion of its travel stud
 B' will move downwardly, and operating-bar
 5 F being then operatively connected with said
 stud by hook f , will move carrier D and cork-
 screw C downwardly. During such down-
 ward travel the cork-screw will be rotated by
 nut E and the resultant gyratory movement
 10 of the screw will drive it into the cork. As
 stud reaches its lowermost position, it will
 pass out of hook f , and into way e of nut E.
 Lever B and nut E will then be directly and
 positively connected, and during the upward
 15 travel of stud B' on the opposite side of the
 lever-fulcrum the nut will be moved upwardly.
 Such movement of the nut will impart unison
 longitudinal movement to the superposed
 carrier and the cork-screw with the cork
 20 thereon will be drawn from the cork from the
 bottle. During the cork-drawing operation,
 operating-bar F will be forced backwardly by
 inclined surface a^2 and tooth f^3 will be
 pressed into position above abutment a^3 and
 25 will then secure the carrier against down-
 ward movement. The operator will next
 shift the lever in reverse direction and during
 the initial reverse shift thereof stud B' will
 positively shift the nut downwardly inde-
 30 pendently of the cork-screw and carrier, and
 strip the cork from the cork-screw. When
 stud B' reaches its lowermost position in its
 reverse travel the nut will have been re-
 stored to its normal position and the stud
 35 will pass out of way e and out of engagement
 with the nut. During the succeeding up-
 ward movement of the stud it will impinge
 against inclined surface f^4 of bar F, which
 will be shifted backwardly thereby, and thus
 40 disengaged from abutment a^3 , so bar F will
 be again operatively connected to the lever
 and so the bar will clear said abutment dur-
 ing the succeeding downward movement,
 and will be again operatively connected with
 45 the carrier. The parts will then be in readi-
 ness for another operation.

The operation and construction of the de-
 vice are simple and the use of interlocking
 mechanism for insuring unison movement
 50 of the carrier and nut is entirely avoided.
 By stripping the cork from the cork-screw
 by shift of the nut, an additional operation
 of the lever, heretofore necessary in cork-
 pullers in which the travel of the cork-screw
 55 was sufficient only to draw the cork, and the
 extended travel necessary in cork-pullers in
 which the cork-screw has a continuous move-
 ment in one direction, sufficient to draw the
 cork, and strip the cork from the screw, are
 60 also avoided.

Having thus described the invention, what
 I claim as new and desire to secure by Let-
 ters Patent is:

1. In a cork-puller, the combination of a
 65 frame, a rotatable cork-screw longitudinally

movable in said frame, means for rotating
 the cork-screw longitudinally movable in the
 frame, an operating-lever supported by the
 frame for shifting the cork-screw, and means
 for holding the cork-screw against longi- 70
 tudinal movement during a part of the opera-
 tion of said lever so that the cork can be
 stripped from the cork-screw by longitudinal
 movement of said rotating means.

2. In a cork-puller, the combination of a 75
 frame, a rotatable cork-screw longitudinally
 movable in said frame, a nut for rotating the
 cork-screw longitudinally movable in the
 frame, an operating-lever supported by the
 frame for shifting the cork-screw longi- 80
 tudinally to drive the screw into a cork and to
 draw the cork, means for shifting said nut
 independently of the cork-screw to strip the
 cork from the cork-screw, and means for
 holding the cork-screw against longitudinal 85
 movement during the stripping operation.

3. In a cork-puller, the combination of a
 frame, a rotatable cork-screw longitudinally
 movable in said frame, a part for rotating
 said cork-screw longitudinally movable in 90
 the frame, an operating-lever supported by
 the frame, means whereby the cork-screw
 will be shifted in one direction to enter a
 cork, means whereby said part will be shifted
 in reverse direction to effect unison longi- 95
 tudinal movement of the cork-screw and said
 part and whereby said part will also be
 shifted independently of the cork-screw to
 strip the cork from the screw, and means
 for holding the cork-screw against longi- 100
 tudinal movement so that the cork will be
 stripped by movement of said part while
 the cork-screw is held stationary.

4. In a cork-puller, the combination of a
 frame, a rotatable cork-screw longitudinally 105
 movable in said frame, a nut for rotating the
 cork-screw longitudinally movable in the
 frame, an operating-lever supported by the
 frame, means whereby the cork-screw will be
 shifted in one direction to enter a cork, 110
 means whereby said nut will be shifted in
 reverse direction to effect unison longi-
 tudinal movement of the cork-screw and nut and
 whereby said nut will also be shifted inde- 115
 pendently of the cork-screw to strip the cork
 from the screw, and means for holding the
 cork-screw against longitudinal movement
 so that the cork will be stripped by move-
 ment of the nut while the cork-screw is held
 stationary. 120

5. In a cork-puller, the combination with
 a supporting-frame, a carrier longitudinally
 movable therein, a cork-screw journaled in
 said carrier, and a nut for rotating said
 screw and longitudinally movable in said 125
 frame, of an operating-lever, for imparting
 longitudinal movement to the nut and car-
 rier; means whereby said lever will impart
 longitudinal movement to one of said lon-
 gitudinally movable parts, and an operating 130

bar forming an operative connection between the lever and the other of the longitudinally movable parts, and having a pivotal connection with one, and a detachable connection with the other of the parts connected thereby, and means for disengaging the operating-bar from the part to which it is detachably connected.

6. In a cork-puller, the combination with a supporting-frame, a carrier longitudinally movable therein, a cork-screw journaled in said carrier, and a longitudinally movable nut for imparting rotation to said screw, of operating-means for imparting longitudinal movement to the nut and carrier, a detachable operative-connection between the carrier and the operating-means, means whereby independent movement will be imparted to the nut, and means locking the carrier against longitudinal movement during a part of its travel when the carrier is detached from the operating-means and the nut is being independently shifted and whereby a cork can be stripped from the cork-screw by shift of the nut while the carrier is held stationary.

7. In a cork-puller, the combination with a supporting-frame, a carrier, longitudinally movable therein, a cork-screw revolubly held in the carrier and a longitudinally movable nut, of an operating lever, pivotally sustained by said frame, an operating-bar pivotally connected with the carrier, and means shifted by said lever and shifting the operating-bar, in one direction, and then passing out of engagement with said bar and shifting the nut in reverse direction, a fixed abutment or stop said bar swinging into engagement with said stop during the reverse shift of the carrier, so the nut will move independently of the carrier during shift of the nut in opposite direction.

8. In a cork-puller, the combination with a supporting-frame, a carrier, longitudinally movable therein, a cork-screw rotatably held in the carrier and a longitudinally movable nut, of an operating lever, pivotally sustained by said frame, an operating-bar pivotally connected with the carrier, a stop or abutment means shifted by said lever for

shifting the operating-bar in one direction and said bar being shifted into engagement with said stop or abutment during the reverse shift of the carrier, so the nut will move independently of the carrier during shift of the nut in opposite direction, and means disengaging the bar from the fixed part after such independent shift has been imparted to the nut.

9. In a cork-puller, the combination with a supporting-frame, a carrier longitudinally movable therein, a cork-screw revolubly held in the carrier, and a longitudinally movable nut, of an operating lever, pivotally sustained by said frame, and provided with a stud, an operating-bar pivotally connected with the carrier, and a fixed abutment whereby said bar will be held against longitudinal movement, a detachable connection between said stud and said operating bar said stud being shifted into engagement with said bar and shifting said carrier independently in one direction, and then passing out of engagement with said bar and into engagement with said nut, and shifting the nut and carrier in reverse direction, during which shift said bar passes into engagement with the fixed part, so the stud will during its next movement in opposite direction move the nut independently of the carrier, said bar being disengaged from the fixed part by the operating lever after said independent shift of the nut.

10. In a cork-puller, the combination with a supporting-frame, a carrier longitudinally movable in said frame, a cork-screw revolubly mounted in said carrier, and a nut longitudinally movable in the frame, a pivoted operating-lever supported by the frame, a bar forming an operative connection between said lever and one of the longitudinally movable parts and pivoted to one of the parts connected thereby and detachably connected to the other of the connected parts, and a spring pressing the bar into position to connect with said latter part.

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