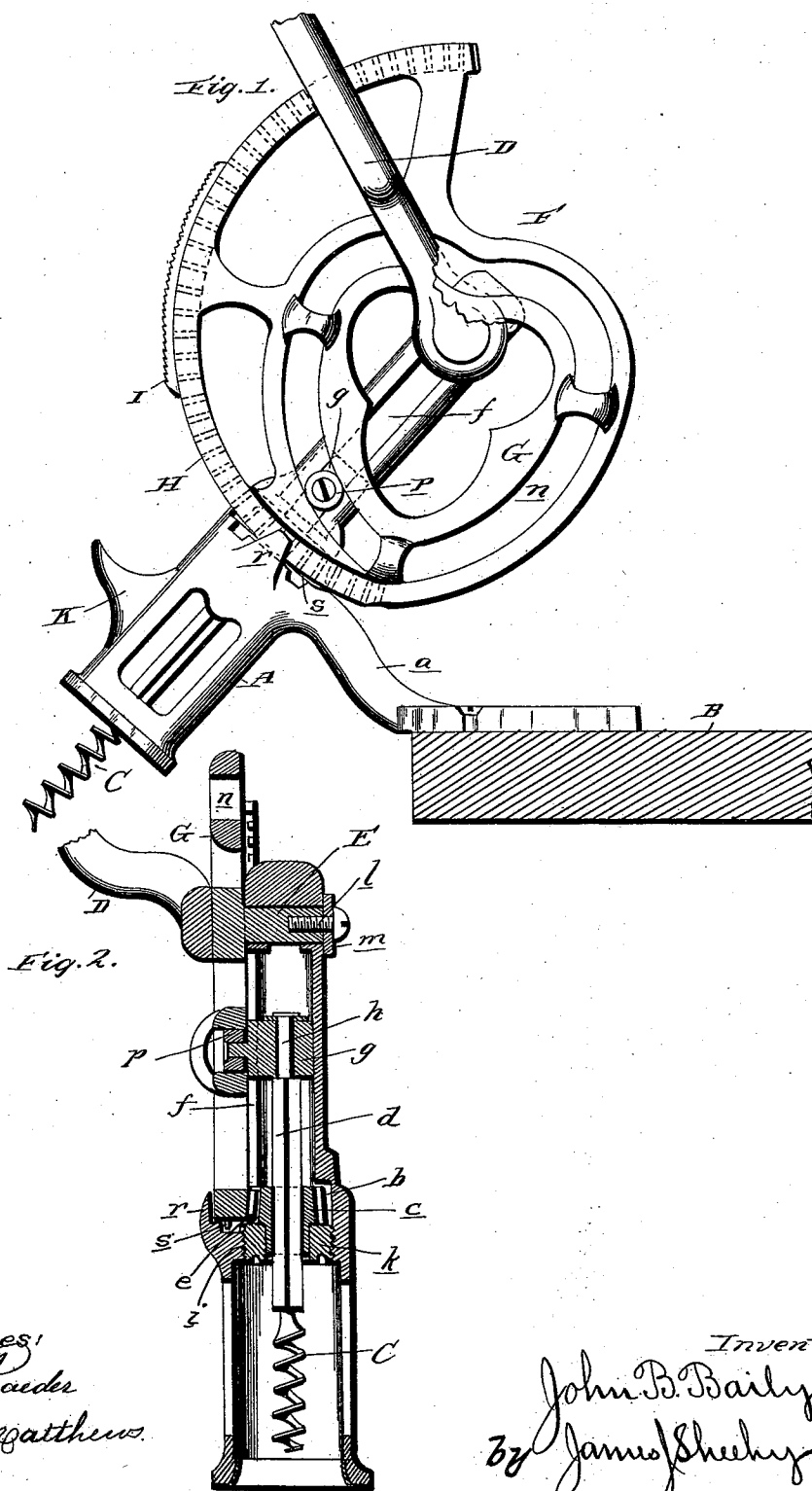


(No Model.)

J. B. BAILY.
AUTOMATIC CORK PULLER.

No. 466,451.

Patented Jan. 5, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN BLACKER BAILY, OF LAKE GENEVA, WISCONSIN.

AUTOMATIC CORK-PULLER.

SPECIFICATION forming part of Letters Patent No. 466,451, dated January 5, 1892.

Application filed March 26, 1891. Serial No. 386,437. (No model.)

To all whom it may concern:

Be it known that I, JOHN BLACKER BAILY, a citizen of Great Britain, residing at Lake Geneva, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Automatic Cork-Pullers; and I do 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.

This invention has relation to an automatic cork-puller, and the novelty will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is a side view of my improved machine, showing the same attached to the top of a bar or other support and in a position ready to draw a cork from a bottle; and Fig. 2 is a vertical sectional view of the barrel or cylinder of the device, with the parts in their proper relative position when a cork has been drawn.

Referring by letter to said drawings, A indicates the barrel or cylindrical portion of my device, which normally assumes an oblique position and has formed integral with it at a suitable point a leg or bracket *a*, which is suitably provided with screw-holes or the like, whereby the whole may be firmly secured to the top of the bar B or other suitable support. This cylinder or barrel portion A is provided with an internal seat *b*, designed to receive and support a toothed pinion *c*, which pinion has a central angular hole or aperture and receives through it the square or flat-sided shank *d* of the screw C. The barrel at this point where the pinion is seated has a lateral slot or opening *e*, so that the pinion may project out of the barrel or the lateral slot therein and receive a reversible rotative movement when engaged by a rack, as will be presently explained. This barrel is also provided in one of its sides with a longitudinal slot *f* for the play of a lateral projection *g*, which has swiveled to it the upper end of the screw shaft or shank, as shown at *h*. By this construction it will be seen that while the screw is working into the cork it has both a vertical and rotative movement imparted to it, the rotary motion being given

to it through the medium of the pinion *c*, while the vertical movement is received by the plunger.

The pinion *c* may be of the ordinary construction and seated in the barrel in any suitable manner, although I prefer to screw-tap the barrel, as shown at *i*, and employ a threaded nut *k* as a bearing for the pinion and means for keeping it in position.

D indicates the operating handle or lever. This handle is pivoted at one end to the upper end of the barrel by a stud or bolt E and a screw *l* and a plate *m*, although it is obvious that the lever may be pivoted or fulcrumed in any suitable manner so as to be allowed a rotative movement. This lever has fixed to it a plate F, which carries a heart-shaped wheel or cam and also a segmental or semi-circular rack and a wire or cord cutter. The lever is fixed to the upper perpendicular center of the cam G, and the rack H, which is laterally disposed to engage and rotate the pinion *c*, describes an arc of a circle, the center of which is taken from the pivoted or fulcrum point of the lever, and the groove or way *n*, which surrounds the cam G, receives a friction-roller or lug *p*, secured to that portion of the plunger which is disposed through the slot in the barrel.

On the outer curved face or peripheral portion of the rack H is a cutter I, which is designed to sever the wire which is usually employed in securing corks in bottles.

The barrel is provided with a lug or support K, suitably shaped, as shown, to rest upon it the neck of a bottle, and this bearing is arranged at a point so that when the mouth of a bottle has been placed upon it the wire may be severed by the cutter I from an upward thrust of the lever.

From the construction described it will be observed that the friction-roller or stud on the projection *g* bears at different times upon opposite sides of the cam groove or way, and as said roller or stud leaves the rack it moves toward the center or pivotal point of the cam-plate, and in this latter motion the screw has a straight lifting movement without rotating. I prefer to provide the cutter with a file-edge, although it is obvious that other forms of cutters may be employed.

In operation after the bracket *a* has been

suitably secured to a bar or other support and it is desirable to extract a cork from a bottle having a wire fastening the neck of the bottle should first be placed across the
 5 lug or bearing K so as to bring the securing-wire in the path of the cutter, when the lever is moved so as to bring the cutter against the wire, when the latter will be severed or broken. The mouth of the bottle is then
 10 placed with its cork in the lower end of the barrel or cylinder, when by an upward thrust of the lever the screw will be forced down and simultaneously rotated into the cork until the end of the rack has been reached, after which,
 15 by continuing the throw of the lever, the screw and cork thereon will be given a straight lift out of the bottle. Now by reversing the motion of the lever the first movement of the plunger and screw will be downward until
 20 the rack strikes engagement with the pinion, when both the bottle and cork will be pushed away from the mouth of the barrel, and by continuing the downward movement of the lever the screw will be rotated and moved up-
 25 wardly, so as to free itself from the cork. The barrel may have a flange or lug *r* to serve in preventing any lateral displacement of the rack, and it may also have a groove *s* to receive the file or cutter I.
 30 Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cork-puller, the combination, with a barrel or cylinder, of a rotative reciprocating
 35 screw arranged therein, having its shank provided with a stud or friction-roller, a pinion on the shank, the hand-lever pivoted to said barrel, and a plate having a heart-shaped cam adapted to reciprocate the screw and also
 40 having a rack adapted to rotate the screw, substantially as specified.

2. In a cork-puller, the combination, with a reversibly rotative and reciprocating screw provided with a lateral projection, of a plate
 45 having a heart-shaped cam acting on the projection of the screw so as to reciprocate the

same and also having a rack to impart the rotative movements to said screw, substantially as specified.

3. In a cork-puller, the combination, with a
 50 barrel or cylinder having a support above its mouth to receive a bottle-neck, of a reciprocating plate pivoted to said barrel and having a file or cutter on its edge to sever the securing-wire of the cork, substantially as 55 specified.

4. In a cork-puller, the combination, with a barrel or cylinder having the longitudinal slot therein and the lateral slot at the base of said longitudinal slot, of the pinion having
 60 an angular aperture seated in the barrel so as to be disposed through the lateral slot, the screw having the angular or flat-sided shank and passing through the pinion, the plunger movable in the longitudinal slot of the barrel 65 and carrying a laterally-disposed stud or friction-roller, a hand-lever pivoted to the upper end of the barrel, a plate fixed to the lever and having a heart-shaped camway receiving the roller of the plunger and also having a 70 curvilinear rack to engage the pinion, and a file or cutter to sever the securing-wire of the cork, substantially as specified.

5. The combination, with a barrel or cylinder, of the lug K thereon, the pivoted plate 75 F, and the file I on said plate, substantially as specified.

6. In a cork-puller, the combination, with a supporting-frame, of a shaft arranged therein and carrying a screw, and a pivoted plate 80 having a heart-shaped cam and adapted to impart alternately to said shaft a rotary and a longitudinally-reciprocating motion and a non-rotary and longitudinally-reciprocating motion, substantially as specified. 85

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

JOHN BLACKER BAILY.

Witnesses:

WM. KAUMHEIMER,
 ANTON BLOOMFIELD.