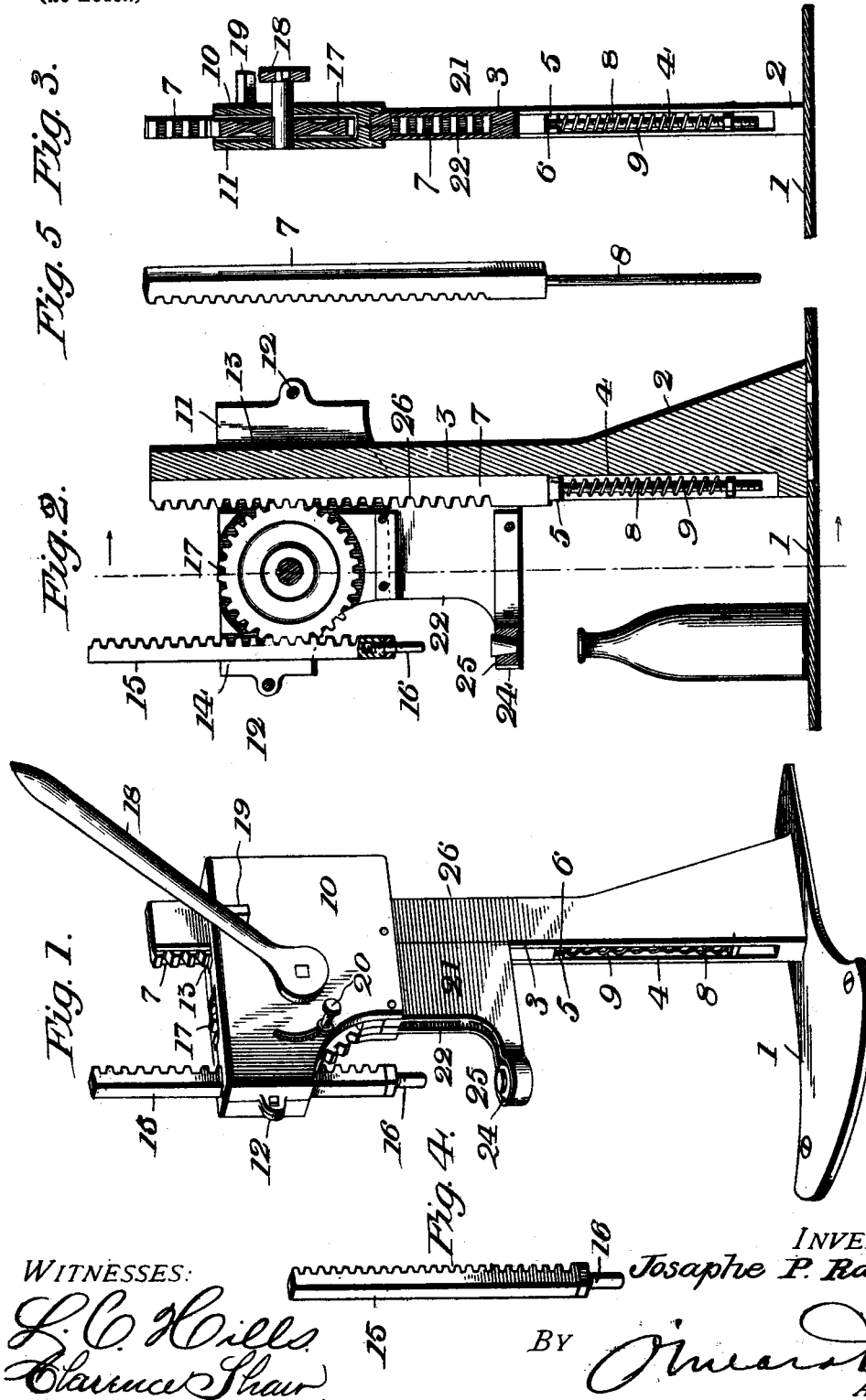


No. 675,906.

Patented June 11, 1901.

J. P. RAICHE.  
BOTTLE CORKING DEVICE.  
(Application filed Aug. 18, 1900.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## BOTTLE-CORKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 675,903, dated June 11, 1901.

Application filed August 18, 1900. Serial No. 27,285. (No model.)

*To all whom it may concern:*

Be it known that I, JOSAPHE P. RAICHE, a citizen of the United States, residing at Telluride, in the county of San Miguel and State of Colorado, have invented a new and useful Bottle-Corking Device, of which the following is a specification.

My invention relates to bottle-corking devices, and more particularly to that class of devices which are adapted to be used in inserting corks in wine and other bottles by hand-power; and it has for its object to produce a device of this kind which will be simple, cheap, and efficient and in which the plunger will have a positive motion except when the cork is being inserted, when the movement will be yielding or spring-actuated.

With these objects in view my invention consists in the improved construction and novel arrangement of parts of a bottle-corking device, as will be hereinafter more fully set forth.

In the accompanying drawings, in which the same reference-numerals indicate corresponding parts in each of the views in which they occur, Figure 1 is a perspective view of my improved bottle-corking device. Fig. 2 is a vertical sectional view of the same, the parts being shown in a different position. Fig. 3 is a transverse sectional view taken through the upper portion of the device, and Figs. 4 and 5 are detail views.

Referring more particularly to the drawings, 1 indicates the base of my improved corking device, which may be of any suitable size and dimensions, it being shown substantially fan-shaped in the drawings, and provided with a standard 2, which rises from the small portion of the fan. The side of the standard overhanging the main portion of the base is grooved or recessed longitudinally, as shown at 3 and 4, and provided with a transverse shoulder 5, the front face of which is notched, as shown at 6. A rack 7 is fitted within the groove 3 and has its lower end reduced to form a neck 8, which extends down into the lower groove 4 through the notch 6.

A spring 9 surrounds the neck 8 and fits within the groove 4, with its upper end resting against the shoulder 5 and its lower end secured to the neck in any suitable manner, as

by means of a nut upon the neck against which the lower end of the spring will engage and normally hold the rack down, with its shoulder at the upper end of the neck against the shoulder 5.

Two plates 10 and 11 are provided at their opposite ends with lugs 12, by means of which they may be secured together upon opposite sides of the standard 2. The ends of the plates are provided with facing grooves 13 and 14, within which the standard 2 projects at the rear end and a plunger 15 projects at the front end. The inner face of the plunger is provided with rack-teeth to correspond with the rack 7, and a tip or point 16 is adjustably secured thereto to engage with the cork and force it into the neck of the bottle. The tip is preferably screw-threaded and screws into the end of the plunger and is held in its adjusted position by means of a jam-nut.

A toothed wheel 17 is journaled within the plates 10 and 11 in position to engage with the teeth of the rack 7 and of the plunger 15 and force the plunger downward as the wheel is rotated. A handle 18 is secured to one end of the axle of the wheel, which extends beyond one of the plates and is limited in its movement by means of two stops 19 and 20, the stop 20 being preferably formed from a set-screw, so that it may be adjusted.

Two plates 21 and 22 are secured to the plates 10 and 11 in any suitable manner—as, for instance, by means of a bolt 23 through the lower edges of the plates 10 and 11 and the upper edges of the plates 21 and 22. The lower ends of the plates 21 and 22 are extended forward and each of them provided with a semicylindrical clamp or arm 24. A collar 25 fits within the clamp 24 and is in axial alinement with the plunger 15, so that as the plunger is moved downward its reduced portion 16 will pass through the collar 25 and force the cork which has been placed therein down into the neck of the bottle directly below said collar. The ends of the collar are preferably made flaring for the reception of the cork at the upper end and for engaging with the mouth of the bottle with the lower end. The rear edges of the plates 21 and 22 are each preferably cut away, as shown at 26, to fit over the teeth of the rack

7, and thereby permit of the edges engaging with the forward face of the standard upon each side of the groove 3.

In using my improved corking device the handle upon the toothed wheel is thrown back as far as it will go, which will raise the plunger-operating mechanism to its extreme height. A bottle is placed upon the base in front of the standard and a cork inserted into the collar. The handle is then drawn forward, which will cause the engagement of the toothed wheel with the rack in the standard to move the entire upper portion or head of the apparatus downward and at the same time will force the plunger down through its bearings until its lower end engages with the cork. As soon as the corking mechanism reaches the top of the bottle the further descent of the head will be stopped by the engagement of the collar with the upper end of the bottle and the further rotation of the wheel will cause the rack in the standard to be moved upward against the action of the spring to the same amount that the plunger is forced down through the collar to insert the cork into the neck of the bottle. As soon as the cork has been inserted the toothed wheel is rotated by its handle in the reverse direction, which will permit of the expansion of the spring and the downward movement of the rack until the shoulder at its lower end engages with the shoulder in the standard. The further rotation of the wheel by the handle will cause the wheel to move upward upon the rack and at the same time will cause the plunger to be moved back into its normal position, after which another cork may be inserted in the collar ready for insertion into another bottle that will be placed upon the base.

With a corking device as above described it will be seen that the corks may be quickly inserted into any desired sized bottles without danger of breaking the bottle or the machine, as the action of the spring upon the rack in the standard will cause the downward movement of the plunger to be only half as rapid during the insertion of the cork as it was before and will enable the operator to determine whether the pressure upon the bottle is becoming too great or not. By providing a series of collars the device may be readily adapted for bottles requiring different-sized corks, as all that is necessary to change it from one size to another would be to open the arms or jaws of the device for holding the collar and inserting a collar of the proper size. By adjusting one of the stops the forward movement of the lever can be so adjusted as to prevent the plunger being forced down too far.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a corking device, the combination,

with a plunger, of a toothed wheel provided with a handle, a spring-actuated rack for engaging with the toothed wheel, whereby the movement of the plunger relatively to the movement of the handle can be changed, substantially as described.

2. In a corking device, the combination, with a base, of a standard projecting therefrom, a vertically-moving head upon the standard provided with means for inserting the cork, a spring-actuated longitudinally-movable member upon the standard for varying the movement of the cork-inserting mechanism, substantially as described.

3. In a corking device, the combination, with a base, of a longitudinally-grooved standard provided with a shoulder, a rack in the groove above the shoulder and having a reduced portion which extends into the groove below the shoulder, a spring upon the reduced portion in position to engage with the shoulder and normally hold the rack downward, a head upon the standard provided with a plunger, and a toothed wheel in engagement with the plunger, and the rack, and a cork-holder below and in alinement with the plunger, substantially as described.

4. In a corking device, the combination, with a base provided with a standard, of a spring-actuated rack on the standard, a head upon the standard provided with a plunger and a cork-holding collar in alinement therewith, a toothed wheel in engagement with the rack and the plunger, a handle for operating the wheel, and stops for limiting the movement of the handle, one of which is adjustable, substantially as described.

5. In a corking device, the combination, with a base provided with a longitudinally-grooved standard, of a spring-actuated rack in the standard, plates at the upper end of the standard, the ends of which are provided with facing grooves, the grooves at one end fitting upon opposite sides of the standard, a toothed plunger in the other grooves, a toothed wheel journaled in the plates between the rack and the plunger, a handle for rotating the wheel, and a cork-holder below the plunger and in alinement therewith, substantially as described.

6. In a bottle-corking device, the combination, with a base provided with a longitudinally-grooved standard, of a spring-actuated rack within said groove, plates mounted upon the upper end of the standard provided with a plunger and a toothed wheel, two plates secured to the first-mentioned plates, and formed with curved clamp members, and a collar positioned between said clamp members, substantially as described.

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Witnesses:

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