

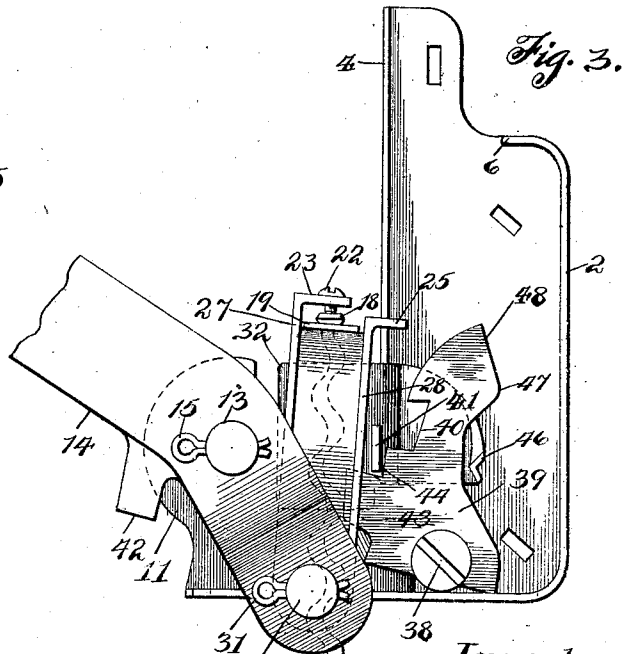
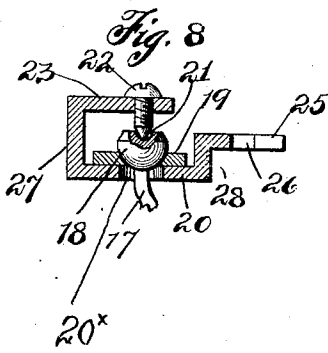
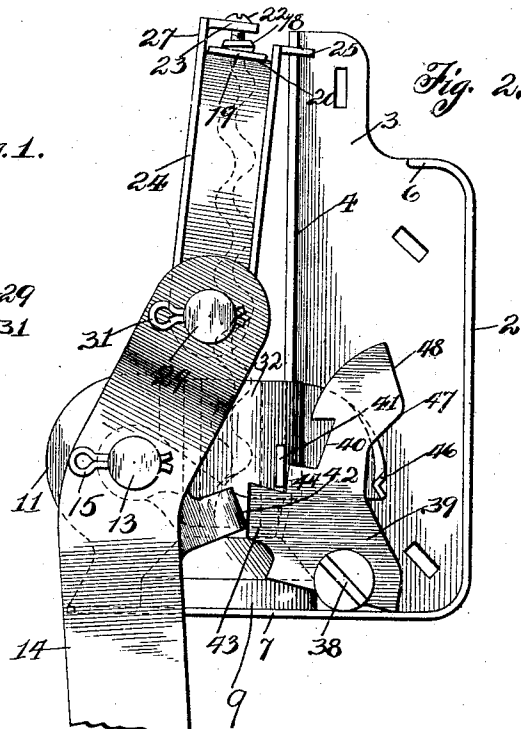
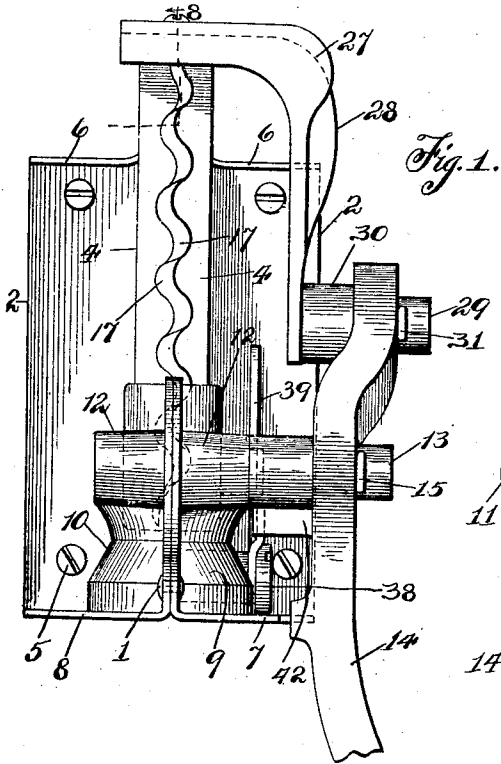
No. 857,992.

PATENTED JUNE 25, 1907.

R. B. GILCHRIST.
CORK EXTRACTOR.

APPLICATION FILED OCT. 16, 1901.

3 SHEETS—SHEET 1.



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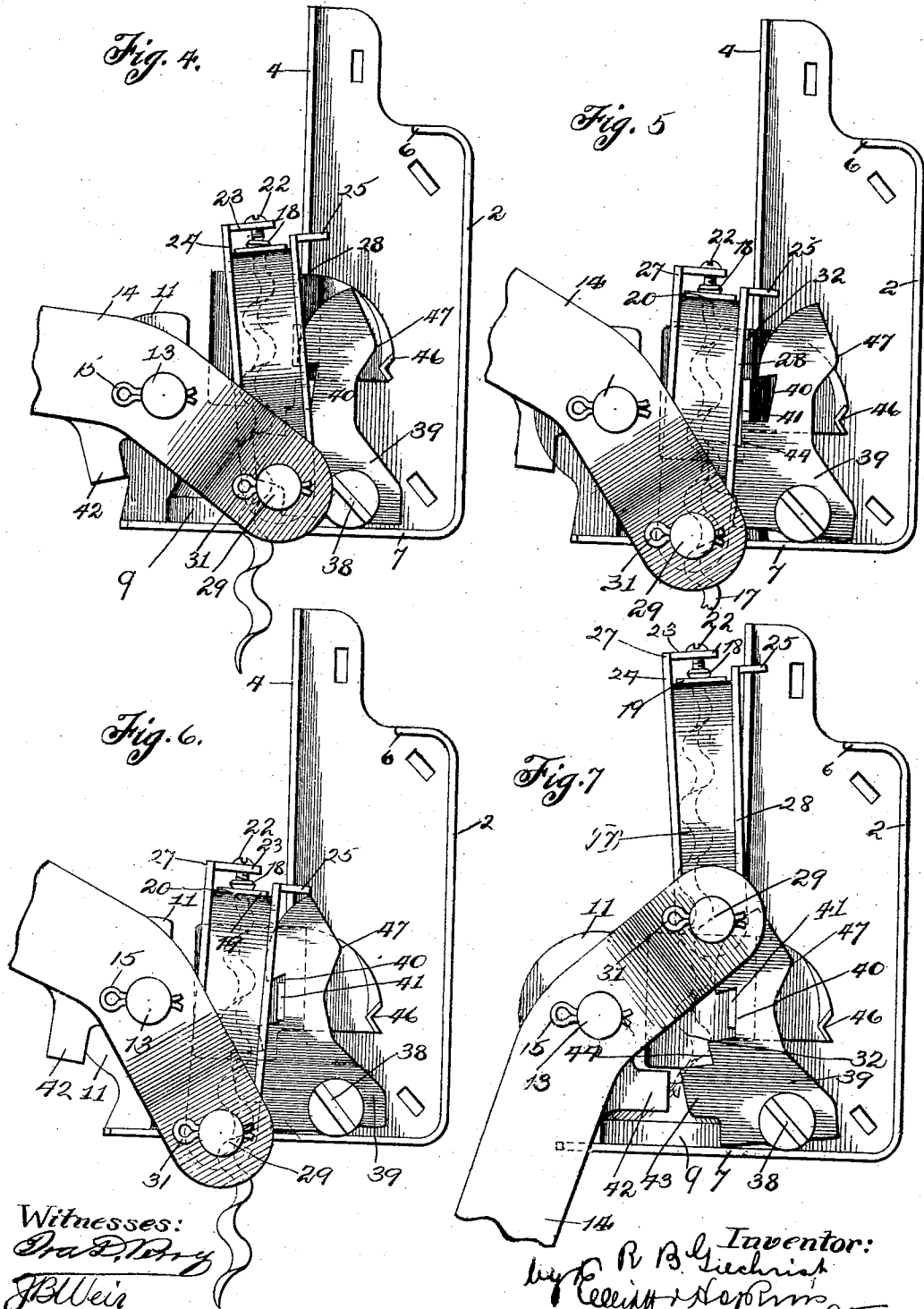
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 9.

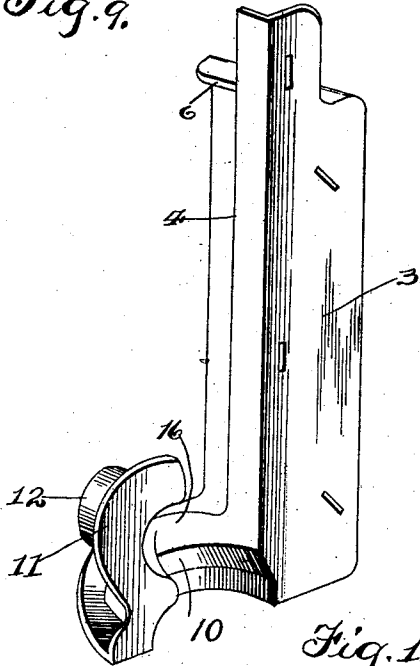


Fig. 10.

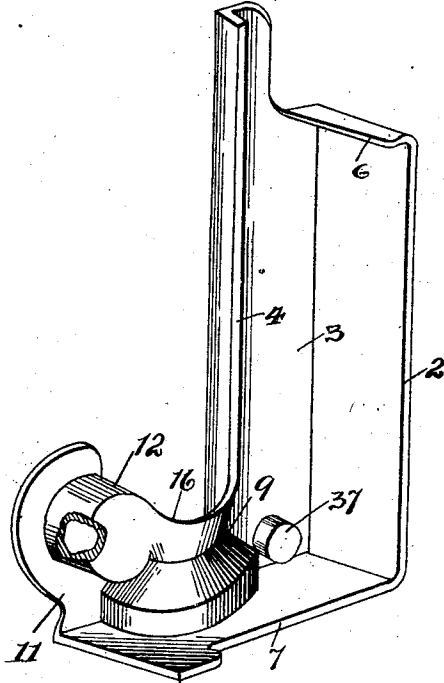


Fig. 11.

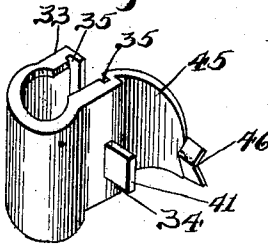


Fig. 13.

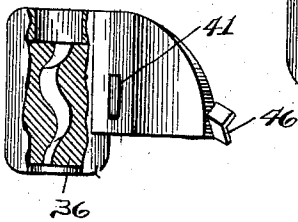


Fig. 12.

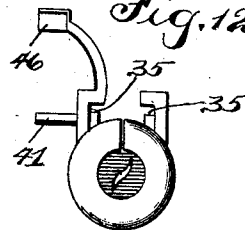
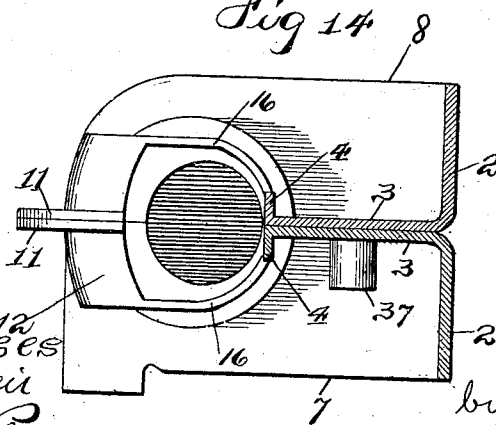


Fig. 14.



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UNITED STATES PATENT OFFICE.

RAYMOND B. GILCHRIST, OF CHICAGO, ILLINOIS.

CORK-EXTRACTOR.

No. 857,992.

Specification of Letters Patent.

Patented June 25, 1907.

Application filed October 16, 1901. Serial No. 78,773.

To all whom it may concern:

Be it known that I, RAYMOND B. GILCHRIST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cork-Extractors, of which the following is a full, clear, and exact specification.

My invention relates to that class of cork extractors in which the cork-screw is reciprocated by a hand lever, handle or other actuating means through a nut which serves the two-fold purpose of revolving the screw when entering or descending into the cork and for stripping the cork from the screw after the cork has been drawn entirely or partially from the bottle as may be desired, the nut being automatically locked in its lower position to prevent it from rising with the cork-screw during the stripping operation; and my improvements have more especially reference to the means for locking the nut and to the means for actuating such locking means.

My improvements also have reference to the bearing of the screw, to the frame and to the manner of constructing it, and to minor details of improvements as will hereinafter appear.

The primary object of my invention is to provide a device of this character in which the locking means will be out of engagement with the nut or the nut unlocked during every downward movement of the cork screw, and shall be in engagement with the nut or the nut locked and held in its lower position during every alternate upward movement of the screw; and such locking means shall at the same time be of such a character and so combined with or related to the screw reciprocating means as to be automatically actuated by the movement thereof.

Another and subsidiary object of the invention is to provide a loose or unrestrained locking member, so constructed and arranged as to lock the nut when the latter descends, but to be incapable of being forced into a locking position while the nut is ascending.

A further object of the invention is to provide a locking member so constructed and related to the nut or to means movable with the nut that it will be automatically shifted by such means into its locking position, ready to lock the nut when the nut reaches its lower position and shall be held out of locking position by means moving with the nut

after it has been unlocked by the screw reciprocating means and until the nut has risen with the cork and again descended, and all this without relying on the action of a spring or gravity.

With these ends in view, my invention consists in certain features of novelty in the construction, combination and arrangement of parts by which the said objects and certain other objects hereinafter appearing, are attained, all as fully described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings—Figure 1 is a front elevation of my improved cork extractor showing the parts in their initial position in readiness for the reception of a bottle, the end of the operating handle or lever being broken away; Fig. 2 is a side elevation thereof; Fig. 3 is a view similar to Fig. 2 showing the parts in the position which they assume after the operating handle has forced the screw downwardly for penetrating the cork; Fig. 4 is a similar view illustrating the parts in the position which they assume when the cork is partially extracted and also when the cork has been fully extracted but again lowered with the nut preparatory to locking the nut in its lower position; Fig. 5 is a similar view showing the lug on the nut in the act of shifting the pivoted locking member into locking engagement with said lug; Fig. 6 is a similar view showing the nut at the limit of its downward movement with the locking member in full engagement with the lug on the nut for holding the nut in its lower position and stripping the cork from the screw when the screw is next elevated; Fig. 7 is a similar view showing the elevation of the screw after the nut has been locked for the purpose of stripping the cork therefrom; Fig. 8 is a detail vertical sectional view taken on the line 8—8 Fig. 1, showing the screw bearing; Fig. 9 is a perspective view of one-half of the two-part frame; Fig. 10 is a similar view of the other half; Fig. 11 is a perspective view of the nut and connected parts; Fig. 12 is a plan view; Fig. 13 is a side view thereof, having the side broken away and Fig. 14 is a plan section of the frame members assembled, taken just above flanges 11.

In the example of my invention shown in the drawings, the frame is designed more especially for support against a wall or other upright surface, but the changes necessary to convert it into a form suitable for support

upon a counter or bar will be obvious without further explanation or illustration.

In constructing the frame of my improved cork extractor I employ the two frame members shown in perspective in Figs. 9 and 10, each constituting one-half of the frame divided down the center thereof and each having one-half of the bottle socket, the two frame members being subsequently secured together in any suitable way, as by means of rivets 1. These frame members are preferably constructed by stamping from blanks of suitable forms and each is provided with a face plate 2 extending upwardly on the rear edge of a forwardly projecting plate 3 which is formed at an angle to the plate 2 and which is provided at its outer edge with a laterally vertically extending flange 4. When the two plates 3 are brought together back to back in the relative position illustrated in Figs. 9 and 10, these flanges 4 by projecting in opposite directions from each other will constitute a track or vertical guide for the nut and the screw carrier, as will be hereinafter described, and the two face plates 2 will constitute means for the attachment of the device to a vertical support, not shown, which may be accomplished by screws 5 or any other suitable devices. The upper edge of each of the plates 2 is bent forwardly in the form of a flange 6 so as to stiffen it and lend rigidity to the upper end of the angle 3, and the lower end of each of the plates 2 is carried forwardly in the form of a horizontal flange or base, the one on the plate 2 of the right-hand member being shown at 7 and the one on the left-hand member being shown at 8. These flanges 7 and 8 when brought together in the manner shown in Fig. 1, constitute the base of the device and serve as the support for the bottle socket which is formed up in two halves 9—10, the forward side of each half being formed on an upwardly extending flange 11, which also constitute parts of the base flanges 7—8, and when brought together as in Fig. 1 the flanges 11 fit back to back and are secured by one or more of the rivets 1 and each of the flanges 11 is formed with a laterally extending or horizontal boss 12, which when the flanges are brought together project in opposite directions and constitute a support or socket for a pin or pintle 13 upon which operating handle or lever 14 is journaled and held in place by a cotter pin 15, or other suitable device, the bosses 12 at their lower sides being each merged into a flange or web 16 which is a lateral outwardly curved continuation of the lower end of the flange 4, this being done for the sake of strength and symmetry, and also for guiding the cork when descending.

17 is the cork-screw whose upper end is equipped with a ball or more accurately speaking a hemisphere 18, which is seated in

a socket or bearing-plate 19 supported on and secured to screw carrier 20 over an aperture 20^x therein, larger than the shank of the screw. The upper side of this hemisphere is provided with a socket 21 in which engages the lower end of a conical bearing screw 22 threaded in an overhanging flange 23 formed on or secured to screw carrier 20, the point of the screw extending down to about the center of the arc of the hemisphere. By these means it will be seen that the screw is provided with a universal joint or bearing at its upper end and may be accurately held parallel with the track or guide-way 4, notwithstanding any lateral oscillation of the carrier 20, and in fact, the carrier is designed to oscillate laterally so that it may be formed integrally with a rigid arm 24 whose lower end is pivoted to the short arm of the operating lever or handle 14, and which arm 24 has heretofore been in the form of a separate link flexibly connected to the carrier. In my present invention, however, the arm or connection 24 vibrates or oscillates laterally in addition to its rising and falling motions as the operating handle or lever 14 is moved up and down, and to the end that the screw may be strictly parallel with the guide 4, notwithstanding this lateral oscillation of the arm 24 and carrier 20, the carrier is made to slide up and down on the guide 4 and held thereto by a horizontal projection 25 formed on the back of the carrier opposite bearing member 18 and provided with a T-shaped slot 26 which embraces the guide 4, the latter taken with flanges 3 being also T-shaped in cross-section as will be understood and the slot 26 being of sufficient size to permit of the slight oscillation of flange or projection 25 relative to guide 4, necessary to enable the carrier to move laterally with the rigid arm or connection 24. The arm or connection 24 may be formed in one piece with the carrier or if desired formed separately and secured thereto in any suitable way, but the carrier and this rigid arm are preferably formed of a stamping from a suitable blank, and as a consequence the edges of the arm and the carrier have stiffening flanges 27—28, on the former of which is formed the flange 23, while on the latter is formed the flange 25, and the lower end of the arm is pivoted to the short end or arm of operating lever 14, as before described, by means of a pin 29 secured to the arm 24 and projecting through a suitable boss 30 formed on the inner face or side of lever 14, so as to meet the arm 24 and constitute a sufficient bearing for the pin, the lever being also held against accidental displacement on pin 29 by cotter 31 or other suitable device.

32 is the nut through which the screw 17 passes and which, as aforesaid, serves the two-fold purpose of rotating the screw as the latter is forced downwardly by the carrier 20

into the cork, and of stripping the cork from the screw when the latter is elevated, as will be presently described. This nut 32 instead of being located within and guided by a housing or tube as heretofore, it is preferably arranged on the exterior of the frame and guided simply by the guide flanges 4, the back of the nut being formed with two vertical laterally extending flanges 33—34, each of which has a groove 35, said grooves 35 being opposed, so as to be capable of being slipped down over the guide flanges 4 before the carrier 20 has been put in place. This nut is also preferably formed from a stamping, it being given the hollow form illustrated in Fig. 13, with the bottom contracted to a narrow aperture, as shown at 36, for the passage of the screw and the interior of the hollow form being filled with babbitt, as usual with the screw passage constituted therein. When the nut is unrestrained it will fall by gravity and settle between the outwardly curved flanges 16 on the upper side of the bottle socket 9—10, and is in this position normally or when the parts are in their initial position, illustrated in Figs. 1 and 2, this being the lower position of the nut.

The lower end and outer side of the flange 3 of one of the frame members is formed or provided with a laterally projecting boss 37, and to this is pivoted by means of screw or other suitable device 38, a pivoted locking member or pawl 39. This pawl stands in an upright position and is provided in one side adjacent to the nut with a notch or recess 40, adapted to grasp the lug 41 projecting laterally from the side of the nut 32, and thus lock the nut in its lower position, so that the nut may be utilized for stripping the cork from the screw during the upward movement of the latter. This recess or notch 40 is of peculiar shape and relation to the lug 41. The lower edge of the notch or recess 40 is extended laterally toward the lug 41, or toward the line of movement of said lug a further distance than the upper edge of said recess so that when the lug 41 is descending in the manner shown in Fig. 5, after the cork has been extracted or partially extracted, the lug will strike the lower edge of the recess 40 and thereby tip the pawl 39 forwardly in such a manner as to close the recess over the lug, as shown in Fig. 6, and consequently when the movement of the operating handle 14 is reversed for elevating the screw, the pawl 39 will retain the nut in its lower position and cause it to strip the cork from the screw and will hold it in this lower position until the screw is about to arrive at the limit of its upward movement, whereupon some suitable means operatively related to the pawl 39 and the screw actuated mechanism tips the pawl 39 back into its former position, throwing the notch or recess 40 away

from the lug 41. The means preferred for accomplishing this consists of a boss 42 formed on or secured to the inner edge of the operating lever 14, in such a position as to strike against a heel piece 43 of the pawl 39 shortly before the screw reaches the limit of its upward stroke, thus leaving the parts in their initial position and in readiness for the reception of another bottle, as shown in Fig. 2, with the lug 41 of the nut standing opposite a shoulder 44 on the front of the pawl 39, and thus holding the pawl against forward motion liable to lock the nut, should it be accidentally struck after the boss 42 leaves the shoulder 43 while the screw is penetrating or entering the cork.

It will also be seen that the mouth or outer end of the recess or notch 40 is contracted and the upper edge of said notch or recess instead of being parallel with the lower edge is inclined upwardly at an angle thereto. The purpose of this upward inclination is to insure against the pawl, 39, slipping off the lug 41, and the purpose of contracting the mouth to a width substantially the same as the vertical thickness of the lug is to guard against the accidental locking of the nut by the recess while the lug 41 is either going up or stationary at a position opposite the mouth of the recess, for it is evident that inasmuch as the vertical thickness of the lug is substantially equal to the vertical depth of the mouth of the notch or recess, and the outer end of the upper edge of the recess describes an arc which coincides with the lug when the lug is opposite the notch, it is impossible for the notch to close over the lug when the lug is either going up or stationary, and hence, the lug can only be grasped by the notch at such time as the lug is descending and the notch moving toward it.

It is quite evident that should the locking pawl 39 remain in the position shown in Fig. 2, the lug 41 could not actuate it, as described, for locking the nut and in order that the pawl may be automatically set in a receptive or locking position with the lower edge of the recess crossing the line of movement of the lug, I provide some suitable means movable automatically, preferably in unison with the nut, for shifting the pawl into said receptive position as the nut ascends. To this end one of the flanges 34 of the nut is formed with a rearwardly and outwardly curved wing 45 on which is formed a double bevel cam 46 adapted to engage under an incline 47 formed on the back of the pawl 39 when the lug ascends, thus deflecting the pawl forwardly into the position shown in Fig. 5; and in order to shift the pawl into the same position when the lug descends, the upper end of the pawl is provided with another incline 48, against which the cam 46 engages and shifts the pawl into the position shown in Fig. 5 immediately prior to the en-

gement of the lower edge of the recess by the lug.

By the means described it will be seen that the nut will be locked in its lower position every time it descends, and this, too, whether the cork has been extracted entirely or only partially, and consequently the device is adapted for starting corks, leaving them partly in the bottles, as well as for totally extracting them; and it will also be seen that the nut remains unlocked during every downward stroke of the screw and is locked in its lower position during every alternate upward movement of the screw, and this locking and unlocking of the nut is accomplished by strictly automatic means related operatively to the mechanism for reciprocating the screw. It will also be seen that with my invention in which the nut shall be unlocked throughout a substantial part of each downward movement of the screw the cork may be withdrawn without causing the screw to penetrate the cork its full length, a feature very desirable where the apparatus is employed for drawing corks of various lengths or where for any reason it is not desired to perforate the cork through and through, so that the cork may be subsequently used for keeping the bottle tight.

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

1. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating said screw through the nut, a lock for said nut and means independent of the bottle operatively related to said screw reciprocating means whereby the nut shall be unlocked throughout a substantial part of each downward movement of the screw and locked during every alternate upward movement of the screw, substantially as set forth.

2. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating said screw through said nut, a lock for said nut and means independent of the bottle operatively related to said screw reciprocating means whereby the said lock shall be out of engagement with the nut throughout a substantial part of each downward movement of the screw and in engagement with the nut during every alternate upward movement of the screw, substantially as set forth.

3. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating said screw through said nut, a lock for the nut and means independent of the bottle operatively related to said screw reciprocating means whereby the said lock shall be out of engagement with the nut throughout a substantial part of each downward movement of the screw and alternately out of and in engagement with the nut during the upward movements of the screw, substantially as set forth.

4. In a cork extractor the combination with a suitable frame, a cork-screw reciprocating longitudinally therein and a reciprocable non-rotating nut, embracing the cork-screw, of an oscillating lever adapted at each oscillation in one direction to force the cork-screw downward and at each oscillation in the opposite direction to raise the cork-screw, a pawl adapted to engage the nut and when in such engagement to secure it in its lowest position and means independent of the bottle adapted to be actuated by the oscillating lever for actuating said pawl, whereby the pawl may be out of engagement with the nut throughout a substantial part of every movement of the handle in one direction and out of and in engagement with the nut alternately during the movements of the oscillating lever in the opposite direction, substantially as set forth.

5. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating the screw through the nut, a lock for said nut comprising a pivoted member having a recess or notch and a lug movable with the nut and adapted to be embraced by said notch, the lower edge of said notch being projected farther toward the line of movement of said lug than the upper edge thereof, substantially as set forth.

6. In a cork-extractor the combination of a nut, a cork-screw, and means for reciprocating said cork-screw through the nut, a lock for the nut comprising a pivoted member having two suitably spaced jaws or projections constituting a notch, and a lug movable with the nut and adapted to be embraced by the said notch when locked, the outer end of the upper edge of said notch being movable on an arc which falls substantially within the upper edge of the lug when the lower edge of the lug is at or opposite the lower edge of the notch, to prevent locking of the parts excepting when the lug is moving downwardly, substantially as set forth.

7. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating said screw through said nut, a lock for the nut comprising a pivoted member having a recess or notch and a lug movable with the nut and adapted to be embraced by said notch, the outer end of the operating edge of said notch being movable in an arc coinciding with the upper edge of the lug when the lower edge of the lug is at or opposite the lower edge of the notch and the lower edge of the notch being extended farther toward the line of movement of the lug than the upper edge of the notch, substantially as set forth.

8. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating the screw through the nut, a lock for the nut comprising a pivoted member having a recess or notch and a lug movable with the nut and adapted to be embraced by said notch, the

lower edge of said notch being projected farther toward the line of movement of the lug than the upper edge and the outer side or mouth of the notch being contracted, substantially as set forth.

9. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating said screw through said nut, a lock for the nut comprising a lug on the nut and a pivoted member having a recessed side for receiving said lug, the lower edge of said recess being projected across the line of movement of the lug and adapted to be struck thereby as the nut descends, and to thereby pull the upper edge over the lug, substantially as set forth.

10. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating the screw through the nut, a lock for the nut comprising a lug on the nut and a pivoted member having a recessed side for receiving said lug, the lower edge of said recess being projected across the line of movement of the lug and adapted to be struck thereby as the nut descends and to thereby pull the upper edge of the recess over the lug and means operated by the screw actuating means for forcing said lower edge of the recess out of the line of movement of the lug when the screw approaches the limit of its upward movement, substantially as set forth.

11. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating the screw through the nut, a lock for said nut comprising a lug movable therewith and a pivoted member having a recessed side for receiving said lug, the lower edge of said recess being projected across the line of movement of the lug and adapted to be struck thereby as the nut descends and to thereby pull the upper edge of the recess over the lug, means operated by the screw actuating means for forcing said lower edge of the recess out of the line of movement of the lug when the screw approaches the limit of its upward movement, and means movable with the nut for re-setting said pivoted member with the edge of its recess across the line of movement of the lug, substantially as set forth.

12. In a cork extractor the combination of a nut, a cork-screw, means for reciprocating the screw through the nut, a lock for the nut comprising a lug movable therewith and a pivoted member having a recessed side for receiving the lug, the edge of the recess being projected across the line of movement of the lug and adapted to be struck thereby as the nut descends for causing the recess to engage with the lug, and a cam movable with said lug and adapted to engage and deflect said pivoted member to a position with the edge of the recess across the line of movement of the lug, substantially as set forth.

13. In a cork-extractor the combination of a nut, a cork-screw, an operating lever for reciprocating the screw through the nut, a lock

for the nut comprising a lug movable with the nut and a pivoted member adapted to engage and hold the lug and means on said lever for engaging said pivoted member and setting it in its unlocked or releasing position when the lever is in its initial position, and means operatively related to said screw reciprocating means for engaging and resetting said pivoted member in position to engage and hold the lug, substantially as set forth.

14. In a cork-extractor the combination of a nut, a cork-screw, an operating lever for reciprocating said screw through the nut, a lock for the nut comprising a lug movable with the nut and a pivoted member adapted to engage and hold the lug, and means on said lever for engaging said pivoted member and setting it in its unlocked or releasing position at the completion of every movement of the lever in one direction, and means operatively related to said screw reciprocating means for engaging and resetting said pivoted member in position to engage and hold the lug, substantially as set forth.

15. In a cork extractor the combination of a nut, a cork-screw, an operating lever for reciprocating said screw through the nut, a lug and a cam carried by said nut, a pivoted locking member having means for engaging said lug, said member being so positioned that the cam passes on one side and the lug on the other side thereof when the nut descends and said pivoted member having means for engaging and holding the lug, substantially as set forth.

16. In a cork extractor the combination of a nut, a cork-screw, a carrier for said screw, means for guiding said carrier and permitting of lateral oscillation thereof, an operating handle having a pivot member and a rigid connection between said pivot member and carrier, substantially as set forth.

17. In a cork extractor the combination of a nut, a cork-screw passing therethrough, a carrier for said screw movable with the screw and being oscillatory with reference to the screw and means for reciprocating and oscillating said carrier, substantially as set forth.

18. In a cork extractor the combination of a nut, a cork-screw, a carrier for said screw having flexible connection therewith, a guide for said carrier and with reference to which said carrier has transverse as well as longitudinal movement and means for reciprocating said carrier along said guide and limiting its said transverse movement, substantially as set forth.

19. In a cork extractor the combination of a nut, a cork-screw, an oscillatory and reciprocatory cork-screw carrier with which said screw has flexible connection, a guide for said carrier, an arm rigid with said carrier and an operating lever to which said arm is pivoted, substantially as set forth.

20. In a cork extractor the combination of

a nut, a cork-screw, a cork-screw carrier, a recessed ball secured to said cork-screw and supported on said carrier, a bearing fixed with relation to said ball and engaging in the
5 recess thereof, and means for reciprocating said carrier lengthwise of said screw, substantially as set forth.

21. In a cork extractor the combination of
10 two frame members each formed with a part of the bottle socket, secured together so that said parts of the socket will constitute a whole socket, each of said members also having a straight flange and said flanges being
15 projected in opposite directions from each other and constituting a track or guide-way when the frame members are secured together, a nut and a cork-screw carrier slidable
20 on said guide-way and means for reciprocating said cork-screw carrier, substantially as set forth.

22. A cork-extractor comprising the combination of a base or frame provided with a cork-passage of considerably less length than
25 the range of travel of the extracted-cork and having its upper end provided with a downwardly converging mouth, a cork-screw and a nut through which the same passes and means for reciprocating one upon the other
30 to rotate the cork-screw, a guide for said nut, the extracted-cork being carried up through said cork-passage practically above the same and thence down again to be stripped from
35 the cork-screw, said converging surface engaging the lower end of the extracted cork on its downward movement, substantially as and for the purpose set forth.

23. In a cork extractor the combination of a nut, a lock for said nut, a cork-screw,
40 means for reciprocating said screw through said nut and means independent of the bottle, operatively related to said screw reciprocating means and also dependent for its operation upon the movement of the nut,
45 whereby the nut shall be unlocked during all downward movements of the screw and locked during every alternate upward movement of the screw, substantially as set forth.

24. A cork-extractor comprising the combination of a base or frame provided with a
50 cork-passage of considerably less length than the range of travel of the extracted-cork and having its upper end provided with a downwardly converging mouth, an exposed nut, an upwardly extending guide above said
55 cork passage and upon which the said nut is slidably mounted, a reciprocating cork-screw carrier provided with a cork-screw passing through said nut and means for reciprocating said carrier, the extracted-cork
60 being carried up through said cork-passage practically above the same and thence down again to be stripped from the cork-screw, substantially as and for the purpose set forth.

5 25. A cork-extractor comprising the com-

bination of a comparatively shallow frame provided with an upwardly extending exposed guide and having a cork-passage located wholly below the lower end of said
70 guide, an exposed nut located above said frame and slidably mounted on said guide and a cork-screw passing through said nut for rotating said cork-screw, an exposed
75 cork-screw carrier slidably mounted on said guide above the nut, and an operating lever pivoted to the base of said frame and operatively connected with said cork-screw carrier above said frame, substantially as set forth.

26. A cork-extractor comprising the combination of a frame provided at its lower portion
80 with an opening for the bottle head, an upwardly extending guide, an exposed nut slidably mounted on said guide, a lever pivoted between its ends to the base of the frame, an exposed cork-screw carrier slidably
85 mounted at the upper end on said guide above the nut and pivoted at its lower end to the short arm of said lever, and a cork-screw swiveled at its upper end to the carrier and passing down through the nut, substantially
90 as set forth.

27. A cork-extractor comprising the combination of a comparatively shallow frame provided with a cork-passage, an exposed
95 guide mounted upon said frame and extending upwardly substantially parallel with the axis of the cork-passage and located to one side thereof and wholly above the same, an exposed nut located above said frame and a
100 cork-screw passing through said nut, an exposed cork-screw carrier, the said nut and cork screw having a relatively reciprocating movement to rotate the cork-screw and the said reciprocating member being slidably
105 mounted upon said guide, and means for reciprocating it, substantially as set forth.

28. A cork-extractor comprising the combination of a comparatively shallow frame provided with a cork-passage, an exposed
110 guide mounted upon said frame and extending upwardly substantially parallel with the axis of the cork-passage and located to one side thereof and wholly above the same, an exposed nut slidably mounted on said guide above said frame and reciprocating on the
115 axial line of said cork-passage, a cork-screw passing through said nut and rotated thereby, an exposed cork-screw carrier slidably mounted on said guide above the nut, and an operating-lever pivoted to the said frame and
120 operatively connected with said cork-screw carrier, substantially as set forth.

29. A cork extractor comprising the combination of a nut, a cork-screw, a cork-screw carrier, said cork-screw having a bearing on
125 said carrier and adapted to rotate and oscillate thereon, a guide for said carrier on which it has a reciprocating and oscillating movement, the said bearing between the carrier and guide being substantially in line with the
130

bearing between the said cork-screw and carrier, and means for reciprocating said carrier, substantially as set forth.

30. A cork extractor comprising the combination of a comparatively shallow frame provided with a cork passage, a guide member having its guiding surface exposed and secured at one side of the cork passage and located wholly above the same and extending substantially parallel with the axis thereof, an exposed nut slidingly mounted at one side upon said guide member above said frame and reciprocating in line with the axis of the cork-passage, a cork-screw reciprocating through said nut, an exposed cork-screw carrier slidingly mounted upon said guide member above the nut, and means for reciprocating said cork-screw carrier, substantially as set forth.

31. A skeleton cork-extractor comprising the combination of a comparatively shallow frame provided with a cork-passage and having an attaching part or bracket secured thereto, a guide member having its guiding surface exposed and secured at one side of the cork-passage and located wholly above the same and extending substantially parallel with the axis thereof, an exposed nut slidingly mounted at one side upon said guide member above said frame and reciprocating in line with the axis of the cork-passage, a cork-screw reciprocating through said nut, an exposed cork-screw carrier slidingly mounted upon said guide member above the nut, and means for reciprocating said cork-screw carrier, substantially as set forth.

32. A skeleton cork-extractor comprising the combination of a comparatively shallow frame provided with a cork-passage, a bearing on said frame for the operating lever, a guide member having its guiding surface exposed and secured at one side of the cork-passage and located wholly above the same and extending substantially parallel with the axis thereof, an exposed nut slidingly mounted at one side upon said guide member above said frame and reciprocating in line with the axis of the cork-passage, a cork-screw reciprocating through said nut, an exposed cork-screw carrier slidingly mounted upon said guide member above the nut, an operating lever mounted on said bearing on the frame, and operatively connected with said cork-screw carrier, substantially as set forth.

33. A skeleton cork-extractor comprising

the combination of a comparatively shallow frame provided with an attaching member for securing the frame to a fixed point and having a cork-passage, a suitable bearing on said frame for the operating lever, a guide member 4 secured to said frame to one side of the cork-passage and located wholly above the same and exposed upon all sides thereof and extending substantially parallel with the axis of the cork-passage, an exposed nut slidingly mounted upon said guide member above said frame and a cork-screw carrier also slidingly mounted upon said guide member, a cork-screw mounted on said carrier and reciprocating through said nut, and an operating lever mounted on said bearing on the frame and operatively connected with the said cork-screw carrier, substantially as set forth.

34. A cork-extractor comprising the combination of a comparatively shallow frame having an attaching bracket or plate 2 formed therewith, the said frame being provided with a cork-passage and a bearing 12 for the operating lever, a guide member 4 exposed upon all sides and secured to said frame and located wholly above said cork-passage, a cork-screw carrier 20 having a sliding and rocking bearing on said guide 4, and a cork-screw mounted on said carrier and adapted to be reciprocated through said cork-passage, a traveling nut slidingly mounted on said guide 4 above said frame and through which said cork-screw is reciprocated to rotate it, an operating lever 14 mounted on said bearing 12 of the frame and pivoted to said carrier, substantially as set forth.

35. A cork-extractor comprising the combination of a reciprocating carrier and means for reciprocating it, a cork-screw mounted on and reciprocated by said carrier, a nut through which said cork-screw reciprocates, a base or frame having a guide suitably secured thereto and having a cork-passage located below said guide, a suitable member provided with a slot through which said guide extends and the said member being a separate piece securely attached or riveted to said carrier and providing a sliding and rocking bearing between the carrier and said guide, substantially as set forth.

RAYMOND B. GILCHRIST.

Witnesses:

F. A. HOPKINS,
W. D. CROSS.