

Description

Cross reference

This application and co-pending European Patent Application EP—A—0129300 have been divided from European Patent Application EP—A—0056011.

Background of the invention

1. Field of the invention

The present invention pertains to apparatus for extracting corks from bottles. A number of features are desirable in such an apparatus. One of the most important of these is that the corkscrew portion of the apparatus be well centred in the cork during operation, so as to ensure the removal of the entire cork, and minimize the possibility of breaking the cork and permitting the resulting fragments to fall into the wine in the bottle. Another important consideration is that the corkscrew must be pulled in a substantially straight line along its own axis when the cork is being removed, and this axis should ordinarily be substantially aligned with that of the bottle, so as to facilitate removal. Another desirable feature in cork-extracting apparatus is the provision of means to reduce the manual force required to drive the corkscrew into the cork and/or to extract the cork from the bottle. There is also a need for preventing small cork fragments from breaking off even when the corkscrew is driven completely through the cork.

2. Description of the prior art

UK Patent Application No. 2027681, and counterpart applications, disclose cork extractors, as defined in the first part of Claim 1 which meet the above needs. These applications describe a simple, inexpensive apparatus for extracting a cork from a bottle as well as an improved corkscrew proper which may be used to advantage in said apparatus as well as in virtually any other type of corkscrew or cork extractor. The apparatus includes a holder and a cork-engaging member. The cork-engaging member includes the corkscrew per se and abutment means, such as a handle, carried on the corkscrew and engageable with the holder to limit downward movement of the cork-engaging member with respect to the holder in use. The holder includes guide means having a guide passageway extending generally longitudinally therethrough. The guide passageway has guide surface means facing generally radially inwardly and is sized to lie closely adjacent the outer diameter of the corkscrew helix, the corkscrew being rotatably and longitudinally movable in the guide passage. The holder further includes stop means engageable with the bottle to limit downward movement of the holder with respect to the bottle as well as grip means spaced downwardly from the guide means and engageable with the bottle to radially align the guide means with the bottle. Thus, the grip means in conjunction with the stop means of the holder serve to generally radially

center and coaxially align the guide means, and thus the corkscrew received therein, with the bottle and its cork.

By rotating the cork-engaging member and, at least initially, simultaneously exerting a downward force thereon, the corkscrew may be driven into the cork while still properly centered and aligned therewith by the holder. When the abutment means of the cork-engaging member comes into abutment with the holder, thereby preventing further downward movement of the cork-engaging member, continued rotation of that member in the same direction will cause the cork to rise on the helical corkscrew, the guide means being spaced above the top of the bottle by a sufficient distance to permit such movement.

The corkscrew itself is improved by the provision of a central body, e.g. of high tensile metal, covered by an outer layer of friction-reducing material, such as polytetrafluoroethylene, on at least one portion of the downwardly facing surfaces of the central body. This greatly enhances the ease with which the corkscrew may be driven into the cork. This friction-reducing expedient not only virtually eliminates any problem in easily penetrating a tight cork, but also permits the use of design features in the central body which could not be used without the friction-reducing layer and which themselves enhance the ease of insertion and otherwise improve the corkscrew. Accordingly, the friction-reducing layer on the corkscrew is largely instrumental in making the relatively simple apparatus described above effective in easily penetrating and properly removing even extremely hard and/or tight corks.

The corkscrew also has an improved lower pointed tip portion which is formed in such a way that it eliminates the tendency for small cork fragments to be broken away, even when the corkscrew is driven completely through the cork. This effect is further enhanced by the friction-reducing layer mentioned above so that the possibility of contamination of wine by cork fragments is virtually eliminated.

Summary of the invention

The present invention according to Claim 1 provides further improvements in the general type of cork-extracting apparatus disclosed in the aforementioned prior applications. Like said prior apparatus, that of the present invention comprises a cork-engaging member including a corkscrew and preferably also a handle secured to the upper end of the corkscrew. The apparatus further includes guide means, bottle-engaging means, and spacer means. The guide means receive the corkscrew and permit longitudinal and rotative movement thereof. The bottle-engaging means is connected to the guide means for positioning the guide means and corkscrew in generally coaxial alignment with the neck of the bottle. The bottle-engaging means includes stop means for limiting downward movement of the guide means with respect to the bottle. The spacer means interconnect the guide means and

the bottle-engaging means and serve to space the guide means upwardly from the bottle-engaging means to allow for upward movement of the cork. The spacer means also define an opening for receipt of the cork as it emerges from the bottle. As in the prior apparatus, the handle or some other suitable abutment carried by the corkscrew is engageable with the holder for limiting downward movement of the corkscrew with respect to the guide means.

In the improvement according to the invention, connection means join the corkscrew and the holder, so that these two parts are not separable. The connection means is mounted for longitudinal but generally non-rotative movement on the holder, the corkscrew in turn being mounted in the connection means for rotative but generally non-longitudinal movement. In particular embodiments, the connection means may include rails having longitudinal slots for receiving pins on the holder. In use, as the guide means move downwardly with the corkscrew as it is being driven into the cork, the rails move into the cork-receiving opening, and their side edges are positioned to serve as catch surfaces which are engageable with the cork as it emerges from the bottle to prevent rotation of the cork. The edges of the slots in the rails may also serve this function.

Thus, like the apparatus of the related prior applications, the apparatus according to the preferred embodiments of the present invention is operated by engaging the bottle neck with the bottle-engaging means and exerting a downward force on the corkscrew with simultaneous rotation to begin driving the corkscrew into the cork. Continued rotation of the corkscrew will drive it through the cork, and when the abutment means prevents further downward movement of the corkscrew, the cork will begin to climb upwardly out of the bottle on the corkscrew. The climbing action of the cork is dependent upon the presence of greater frictional forces between the exterior of the cork and the bottle neck than between the corkscrew and the surfaces of the helical passage which it has formed through the cork. Because of the relatively small size of the corkscrew, this relationship is usually maintained at least until the cork has been raised a substantial distance out of the bottle neck, particularly where the corkscrew has the aforementioned friction-reducing coating. However, as the ratio decreases, the cork will begin to turn slightly, albeit at a much slower rate than the corkscrew, as it rises. This subjects the cork to combined shear and tension forces which, on an extremely old or fragile cork, might cause damage. Furthermore, if, after the cork has been raised a substantial distance, the frictional forces between the cork and the bottle neck decrease to less than or equal to those between the cork and the corkscrew, the cork will begin to rotate with the corkscrew and cease moving longitudinally. Should this occur with the basic apparatus as disclosed in said prior applications, removal of the cork is completed by simply pulling upwardly on the holder to draw the lower

portion of the cork from the bottle. Ordinarily, this does not require a great amount of force. However, it can be somewhat undesirable in that a novice operator of the apparatus may simply not realize that the last-mentioned action is necessary, but may instead continue to rotate the handle and corkscrew to no avail.

With the improved apparatus of the present invention, by the time the cork has emerged from the bottle neck a sufficient distance to substantially reduce the frictional forces therebetween, the catch surfaces will have engaged the cork to prevent rotation thereof and thus permit the cork to continue moving upwardly on the corkscrew until it is completely removed from the bottle neck. Indeed, the catch surfaces are so effective in preventing rotation of the cork that complete removal can be achieved in the manner described above even if the cork is slightly longer than the opening in the holder into which the cork moves as it emerges from the bottle. In such an instance, when the top of the cork reaches the top of said opening, the cork will compress longitudinally to allow its lower end of continue moving upwardly and out of the bottle.

Brief description of the drawings

Figure 1 is a longitudinal cross-sectional view of an embodiment of cork-extracting apparatus in operating position on a bottle neck and with some parts being shown in elevation.

Figure 2 is a transverse cross-sectional view taken along the line II—II in Fig. 1.

Figure 3 is a view similar to that of Figure 1 showing the apparatus in a subsequent stage of the cork extracting process.

Figure 4 is a transverse cross-sectional view taken along the line IV—IV in Fig. 3.

Description of the preferred embodiment

It is noted that, as used herein, terms such as "upper", "lower", "upwardly", and "downwardly" refer to the cork extracting apparatus as shown in the drawings and as it would be positioned for use on an upright bottle. Such terms are used for convenience, and should not be construed in a limiting sense. Also, terms such as "radial", "longitudinal", "circumferential", etc. are used with reference to the corkscrew when in place in the holder unless otherwise noted.

In the embodiment of the invention illustrated in the drawings, the cork extracting apparatus generally comprises two main portions, namely a holder and a cork-engaging member. Connection means are provided interconnecting the cork-engaging member and the holder, whereby these two portions of the apparatus are not separable.

More specifically, the cork-engaging member includes a helical corkscrew 72 and a carrier 74 rigidly affixed to the upper end of corkscrew 72. Carrier 74 is generally cylindrical but has a radially outwardly extending annular flange 74a at its lower end. The cork-engaging member further includes a handle 76 having arms 76a and 76b and a central hub portion 76c. Handle 76 has a

central aperture in which the upper portion of carrier 74 is rigidly affixed, as by a suitable adhesive, with flange 74a spaced downwardly from the lower end of hub 76c.

The connection means, generally indicated at 78, includes an uppermost annular portion 78a. The opening through annular portion 78a is sized to rotatably receive carrier 74. The upper cylindrical portion of carrier 74 is placed through the aperture of annulus 78a prior to fixing of carrier 74 to handle 76. The space between hub 76c and flange 74a is only slightly greater than the thickness of annulus 78a. Thus, the cork-engaging member 72, 74, 76 is mounted in connection means 78 for rotative but generally non-longitudinal movement.

Connection means 78 further includes a pair of diametrically opposed rails 78b extending downwardly from annular portion 78a. As shown in Fig. 2 and 4, rails 78b are arcuate, concave inwardly, in transverse cross section. These rails are spaced apart by a distance slightly less than the diameter of a standard cork.

The apparatus further comprises a holder 80 including a tubular upper portion 82 and a pair of diametrically opposed legs 84 extending downwardly therefrom. The legs 84 have upper portions 84a and lower portions 84b with inwardly extending flanges 84c being formed at the juncture between upper and lower portions 84a and 84b respectively. Flanges 84c define downwardly facing shoulders 84d serving as stop means to abut the upper end of the bottle 86. Thus, the upper leg portions 84a may serve as spacer elements for spacing tubular portion 82 to holder 80 upwardly from the top of bottle 86, while lower leg portions 84b serve as gripping elements extending downwardly along the sides of the bottle neck.

Legs 84 are formed of a suitable lightweight material such as plastic, aluminum, or the like and have sufficient inherent flexibility and resiliency to permit gripping elements 84b to be flexed either inwardly or outwardly from the radially unflexed position shown in Fig. 1. Thus, the gripping elements 84b may be grasped and squeezed inwardly by the user with one hand to grip the neck of bottle 86 and firmly position the holder thereon. The apparatus as shown in Figs. 1 and 3 is sized to engage bottle 86 without substantial flexing of legs 84. However, the flexibility of holder legs 84 also permits the holder to accommodate bottles of larger or smaller neck diameters. Gripping elements 84b, along with shoulders 84d from the bottle-engaging means of the apparatus.

Because holder legs 84 are formed of the same material, are substantially identical in size and configuration, and are symmetrically positioned with respect to annulus 92, they are substantially equally biased to the normal unflexed radial position shown in Fig. 1. Accordingly, when they are urged radially inwardly by the user, they tend to maintain the guide means 92 in a position which is substantially centered with respect to the

bottle 86 and its cork 90, even if the diameter of the drip ring 104 of the bottle neck differs from the distance between the adjacent portions of the gripping elements 84b. Furthermore, such equal resilient biasing further helps to prevent canting of the holder on the bottle and thereby maintain the axis of the guide means 92 substantially coaxially aligned with that of the bottle 86.

When the gripping elements are thus employed, they will engage and grip the bottle neck at least at the drip ring 104. It is primarily the flexibility of the upper portions or spacer means 84a of the holder legs which permits radial flexing of gripping elements 84b to accommodate drip rings of differing sizes. However, gripping elements 84b are additionally flexible and resilient within themselves. Thus, depending upon the diameter of the bottle to be gripped and the length and degree of flexibility of gripping elements 84b, the lower ends of the gripping elements 84b may be flexed inwardly to further engage and grip the bottle neck at a second location spaced downwardly from drip ring 104. It has been observed that the tapered necks of most wine bottles reach an outer diameter approximately equal to that of their drip rings at a location around 2 to 2.5 inches (about 5.08 to 6.35 cm.) below the top of the bottle. The inner surfaces of gripping elements 84b have portions 84f which, when legs 84 are in their unflexed position as shown, lie straight with respect to the longitudinal axis of the apparatus. Accordingly, if surfaces 84f of the gripping elements 84b are about 2 to 2.5 inches (5.08 to 6.35 cm.) long, the aforementioned double gripping action may be more readily achieved with a minimum of distortion of the gripping elements. Such gripping action in turn provides a high degree of stability to prevent wobbling of the holder on the bottle. In any event, it is desirable to make the gripping elements 84b at least long enough to enable the user to firmly grip the holder in an area primarily surrounding and aligned with the bottle neck, as opposed to an area located generally thereabove.

Even where the aforementioned double gripping is not possible, due to the size of the bottle and/or the length of gripping elements 84b, proper alignment of the guide means 92, with the cork 24 can still be maintained by the combined action of engaging the upper edge of bottle 86 with shoulders 84d and gripping drip ring 104 with gripping elements 84b.

Upper leg portions or spacer elements 84a define a cork-receiving opening 88 therebetween. This opening is sufficiently wide as to permit rails 78b to move downwardly into the opening 88 in use while still allowing sufficient space for upward movement of cork 90. Flanges 84c are also spaced apart by a distance sufficient to allow cork 90 to pass therebetween.

A generally tubular guide member 92 is rigidly fixed within tubular portion 82 of holder 80 as by a suitable adhesive. By comparison of Figs. 1 and 2, it can be seen that guide member 92 has a pair of longitudinally extending, diametrically opposed,

external recesses 94. When guide member 92 is affixed to tubular portion 92, recesses 94 cooperate with the inner diameter of tubular portion 92 to define longitudinal passageways for receipt of rails 78b. Thus, the connection means 78 is mounted for longitudinal but generally non-rotative movement on holder 80. To further guide and stabilize connection means 78 in such movement, each rail 78b has a longitudinal slot 96. Guide member 92 carries a pair of pins 98 extending radially outwardly in recesses 94 for sliding receipt in respective slots 96.

In use, the handle 76 is pulled upwardly to raise the interconnected cork-engaging members 72, 74, 76 and connection means 78 to their uppermost position with respect to holder 80, and the holder is emplaced on bottle 86 with shoulders 84d abutting the top of the bottle as shown in Fig. 1. The user then squeezes inwardly on gripping elements 84b to grip the bottle neck while rotating handle 76 and exerting a slight downward force thereon. Once the point of corkscrew 72 has begun to penetrate cork 90, the downward force may be discontinued and handle 76 is simply rotated. This will drive the corkscrew 72 into and through cork 90. As the corkscrew moves downwardly, the attached connection means 78 will also move downwardly, rails 78b moving into opening 88 until their lower ends abut the upwardly facing shoulders 84e defined by flanges 84c. The rotative mounting of the cork-engaging member in the connection means 78, with the latter in turn being mounted for longitudinal movement on the holder, could suffice to guide and center the corkscrew 72 with respect to cork 90. However, further guidance and stability is provided by the cylindrical passageway 93 in guide member 92 which slidably receives corkscrew 72 for longitudinal and rotative movement.

After the cork-engaging member and connection means have reached their lowermost position on holder 80, continued rotation of handle 76 will cause cork 90 to climb upwardly on corkscrew 72 as shown in Fig. 3. As previously mentioned, the distance between rails 78b of the connection means, which by this time are disposed well within opening 88, is slightly less than the outer diameter of the cork 90. Thus, as shown Fig. 4, the longitudinally extending lateral edges 100 of rails 78b, along with the longitudinally extending edges 102 of slots 96, serve as catch means which embed themselves into cork 90 to prevent rotation thereof. Accordingly, even when the cork has been raised a distance such that the bottle neck 86 no longer offers sufficient frictional resistance to rotation of the cork, such rotation will be prevented by the edges 100 and 102 so that the cork can be completely removed from bottle 86.

Because rails 78b and their edges 100 and 102 prevent rotation of cork 90 in both clockwise and counterclockwise directions, the apparatus shown in the drawings can be used to eject cork 90 from such apparatus after the cork has been removed from the bottle. This is accomplished by

rotating handle 76 in the opposite direction from that which was used to extract the cork while urging handle 76 downwardly with respect to holder 80. Since longitudinal movement of corkscrew 72 will be prevented by pushing downwardly on handle 76, and rotation of cork 90 will be prevented by catch means 100 and 102, the cork 90 will then be caused to move downwardly on corkscrew 72 with a threading action. Once the cork has moved downwardly to area between gripping elements 84b, it can readily be grasped by the user and removal completed either by rotating the cork itself or rotating the handle 76 while pulling upwardly thereon.

Numerous modifications of the preferred embodiment of the invention shown and described herein can be made without departing from the spirit of the invention.

Claims

1. Apparatus for extracting a cork (90) from a bottle (86) comprising:

a corkscrew (72);

guide means (92) receiving said corkscrew (72) and permitting longitudinal and rotative movement of said corkscrew;

a holder (80) including:—

bottle-engaging means (84b, 84d) connected to said guide means (92) for positioning said guide means and said corkscrew in generally coaxial alignment with the neck of said bottle, said bottle-engaging means including stop means (84d) for limiting downward movement of said guide means (92) with respect to said bottle; and

spacer means (84a) interconnecting said guide means (92) and said bottle-engaging means (84b, 84d) and spacing said guide means upwardly from said bottle-engaging means, said spacer means (84a) defining an opening for receipt of said cork (90) as it emerges from said bottle; and abutment means carried by said corkscrew (72) for limiting downward movement of said corkscrew with respect to said guide means (92); characterized by

connection means (78) interconnecting said corkscrew (72) and said holder (80), said connection means (78) being mounted for longitudinal but generally non-rotative movement on said holder (80) and said corkscrew (72) being mounted for rotative but generally non-longitudinal movement in said connection means.

2. The apparatus of Claim 1 wherein said connection means (78) includes a generally tubular portion having said corkscrew (72) rotatably mounted therein and rail means (78b) extending downwardly from said tubular portion, said rail means (78b) and said holder (80) of said apparatus having interengaging formations (78b, 94; 96, 98) connecting said rail means (78b) and said holder (80) for relative longitudinal movement, said rail means (78b) being so longitudinally movable into said opening (88) and having longitudinally extending edges (100), said edges at least partially comprising catch means

external recesses 94. When guide member 92 is affixed to tubular portion 92, recesses 94 cooperate with the inner diameter of tubular portion 92 to define longitudinal passageways for receipt of rails 78b. Thus, the connection means 78 is mounted for longitudinal but generally non-rotative movement on holder 80. To further guide and stabilize connection means 78 in such movement, each rail 78b has a longitudinal slot 96. Guide member 92 carries a pair of pins 98 extending radially outwardly in recesses 94 for sliding receipt in respective slots 96.

In use, the handle 76 is pulled upwardly to raise the interconnected cork-engaging members 72, 74, 76 and connection means 78 to their uppermost position with respect to holder 80, and the holder is emplaced on bottle 86 with shoulders 84d abutting the top of the bottle as shown in Fig. 1. The user then squeezes inwardly on gripping elements 84b to grip the bottle neck while rotating handle 76 and exerting a slight downward force thereon. Once the point of corkscrew 72 has begun to penetrate cork 90, the downward force may be discontinued and handle 76 is simply rotated. This will drive the corkscrew 72 into and through cork 90. As the corkscrew moves downwardly, the attached connection means 78 will also move downwardly, rails 78b moving into opening 88 until their lower ends abut the upwardly facing shoulders 84a defined by flanges 84c. The rotative mounting of the cork-engaging member in the connection means 78, with the latter in turn being mounted for longitudinal movement on the holder, could suffice to guide and center the corkscrew 72 with respect to cork 90. However, further guidance and stability is provided by the cylindrical passageway 93 in guide member 92 which slidably receives corkscrew 72 for longitudinal and rotative movement.

After the cork-engaging member and connection means have reached their lowermost position on holder 80, continued rotation of handle 76 will cause cork 90 to climb upwardly on corkscrew 72 as shown in Fig. 3. As previously mentioned, the distance between rails 78b of the connection means, which by this time are disposed well within opening 88, is slightly less than the outer diameter of the cork 90. Thus, as shown Fig. 4, the longitudinally extending lateral edges 100 of rails 78b, along with the longitudinally extending edges 102 of slots 96, serve as catch means which embed themselves into cork 90 to prevent rotation thereof. Accordingly, even when the cork has been raised a distance such that the bottle neck 86 no longer offers sufficient frictional resistance to rotation of the cork, such rotation will be prevented by the edges 100 and 102 so that the cork can be completely removed from bottle 86.

Because rails 78b and their edges 100 and 102 prevent rotation of cork 90 in both clockwise and counterclockwise directions, the apparatus shown in the drawings can be used to eject cork 90 from such apparatus after the cork has been removed from the bottle. This is accomplished by

rotating handle 76 in the opposite direction from that which was used to extract the cork while urging handle 76 downwardly with respect to holder 80. Since longitudinal movement of corkscrew 72 will be prevented by pushing downwardly on handle 76, and rotation of cork 90 will be prevented by catch means 100 and 102, the cork 90 will then be caused to move downwardly on corkscrew 72 with a threading action. Once the cork has moved downwardly to area between gripping elements 84b, it can readily be grasped by the user and removal completed either by rotating the cork itself or rotating the handle 76 while pulling upwardly thereon.

Numerous modifications of the preferred embodiment of the invention shown and described herein can be made without departing from the spirit of the invention.

Claims

1. Apparatus for extracting a cork (90) from a bottle (86) comprising:

a corkscrew (72);

guide means (92) receiving said corkscrew (72) and permitting longitudinal and rotative movement of said corkscrew;

a holder (80) including:—

bottle-engaging means (84b, 84d) connected to said guide means (92) for positioning said guide means and said corkscrew in generally coaxial alignment with the neck of said bottle, said bottle-engaging means including stop means (84d) for limiting downward movement of said guide means (92) with respect to said bottle; and

spacer means (84a) interconnecting said guide means (92) and said bottle-engaging means (84b, 84d) and spacing said guide means upwardly from said bottle-engaging means, said spacer means (84a) defining an opening for receipt of said cork (90) as it emerges from said bottle; and abutment means carried by said corkscrew (72) for limiting downward movement of said corkscrew with respect to said guide means (92); characterized by

connection means (78) interconnecting said corkscrew (72) and said holder (80), said connection means (78) being mounted for longitudinal but generally non-rotative movement on said holder (80) and said corkscrew (72) being mounted for rotative but generally non-longitudinal movement in said connection means.

2. The apparatus of Claim 1 wherein said connection means (78) includes a generally tubular portion having said corkscrew (72) rotatably mounted therein and rail means (78b) extending downwardly from said tubular portion, said rail means (78b) and said holder (80) of said apparatus having interengaging formations (78b, 94; 96, 98) connecting said rail means (78b) and said holder (80) for relative longitudinal movement, said rail means (78b) being so longitudinally movable into said opening (88) and having longitudinally extending edges (100), said edges at least partially comprising catch means



engageable with said cork as it emerges from said bottle to prevent rotation of said cork.

3. The apparatus of Claim 2 wherein said interengaging formations comprise longitudinal slots (96) in said rail means (78b) and pins (98) fixedly mounted on said holder (80) and extending into said slots (96), said catch means further comprising longitudinally extending edges (102) of said slots (96).

Patentansprüche

1. Vorrichtung zum Herausziehen eines Korkens (90) aus einer Flasche (86) mit einer Wendel (72);

einer Führung (92), die die Wendel (72) aufnimmt und deren Längs- und Drehbewegung erlaubt;

einem Halter (80) mit einer Flaschenangriffseinrichtung (84b, 84d), die mit der Führung (92) verbunden ist, um die Führung und die Wendel allgemein koaxial mit dem Flaschenhals ausgerichtet zu halten, wobei die Flaschenangriffseinrichtung eine Anschlageinrichtung (84d) aufweist, um die Abwärtsbewegung der Führung (92) bezüglich der Flasche zu begrenzen; und

einer Abstandshalteinrichtung (84a), die die Führung (92) mit der Flaschenangriffseinrichtung (84b, 84d) verbindet und die Führung über der Flaschenangriffseinrichtung beabstandet hält, wobei die Abstandshalteinrichtung (84a) eine Öffnung zur Aufnahme des aus der Flasche heraustretenden Korkens (90) umfaßt; und mit

einer von der Wendel (72) getragenen Anschlageinrichtung, die die Abwärtsbewegung der Wendel bezüglich der Führung (92) begrenzt;

gekennzeichnet durch eine Verbindungseinrichtung (78), die die Wendel (72) mit dem Halter (80) verbindet und längs-, aber allgemein nicht drehbeweglich auf dem Halter (80) angebracht ist, während die Wendel (72) dreh-, aber allgemein nicht längsbewegbar in der Verbindungseinrichtung angeordnet ist.

2. Vorrichtung nach Anspruch 1, bei der die Verbindungseinrichtung (78) einen allgemeinen rohrförmigen Teil, in dem die Wendel (72) drehbar gelagert ist, und eine Schieneneinrichtung (78b) aufweist, die vom rohrförmigen Teil abwärts vorsteht, wobei die Schieneneinrichtung (78b) und der Halter (80) der Vorrichtung miteinander in Eingriff stehende Ausgestaltungen (78b, 94; 96, 98) aufweisen, die die Schieneneinrichtung (78b) mit dem Halter (80) längsbewegbar verbinden, wobei die Schieneneinrichtung (78b) in die Öffnung (88) hinein längsbewegbar ist und längsverlaufenden Kanten (100) aufweist, die mindestens zum Teil eine Fangeinrichtung aufweisen, die in den Korken eingreifen kann, während dieser aus der Flasche aufsteigt, um eine Drehung des Korkens zu verhindern.

3. Vorrichtung nach Anspruch 2, bei der die miteinander in Eingriff stehenden Ausgestaltungen Längsschlitze (96) in den Schieneneinrichtungen (78b) sowie Stifte (98) aufweisen, die fest am Halter (80) angebracht sind und in die Schlitze (96)

hinein vorstehen, wobei die Fangeinrichtung weiterhin längsverlaufende Kanten (102) der Schlitze (96) aufweist.

Revendications

1. Appareil pour extraire un bouchon (90) d'une bouteille (86), comprenant:

une vis (72);

des moyens de guidage (92) recevant ladite vis (72) et permettant un mouvement longitudinal et de rotation de ladite vis;

une monture (80) comprenant:—

des moyens (84b, 84d) de prise d'une bouteille reliés auxdits moyens de guidage (92) afin de positionner lesdits moyens de guidage et ladite vis dans un alignement globalement coaxial avec le col de ladite bouteille, lesdits moyens de prise d'une bouteille comprenant des moyens d'arrêt (84d) destinés à limiter un mouvement vers le bas desdits moyens de guidage (92) par rapport à ladite bouteille;

des moyens d'entretoisement (84a) reliant entre eux lesdits moyens de guidage (92) et lesdits moyens (84b, 84d) de prise d'une bouteille et espaçant lesdits moyens de guidage vers le haut desdits moyens de prise d'une bouteille, lesdits moyens d'entretoisement (84a) définissant une ouverture destinée à recevoir ledit bouchon (90) à sa sortie de ladite bouteille; et

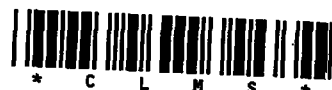
des moyens de butée portés par ladite vis (72) afin de limiter le mouvement de descente de ladite vis par rapport auxdits moyens de guidage (92);

caractérisé par

des moyens de liaison (78) reliant entre eux ladite vis (72) et ladite monture (80), lesdits moyens de liaison (78) étant montés de façon à se déplacer longitudinalement, mais globalement sans tourner, sur ladite monture (80) et ladite vis (72) étant montée de façon à pouvoir tourner, mais globalement sans se déplacer longitudinalement, dans lesdits moyens de liaison.

2. Appareil selon la revendication 1, dans lequel lesdits moyens de liaison (78) comprennent une partie globalement tubulaire dans laquelle ladite vis (73) est montée de façon à pouvoir tourner et des moyens à rail (78b) partant vers le bas de ladite partie tubulaire, lesdits moyens à rail (78b) et ladite monture (80) dudit appareil possédant des conformations d'enclenchement mutuel (78b, 94; 96, 98) reliant lesdits moyens à rail (78b) et ladite monture (80) afin de permettre un mouvement longitudinal relatif, lesdits moyens à rail (78b) pouvant ainsi pénétrer longitudinalement dans ladite ouverture (88) et possédant des bords longitudinaux (100), lesdits bords comprenant au moins partiellement des moyens d'accrochage pouvant s'enclencher avec ledit bouchon à sa sortie de ladite bouteille afin d'empêcher la rotation dudit bouchon.

3. Appareil selon la revendication 2, dans lequel lesdites conformations d'enclenchement mutuel comprennent des rainures longitudinales (96) situées dans lesdits moyens à rail (78b) et des



ergots (98) montés fixement sur ladite monture (80) et pénétrant dans lesdites rainures (96), lesdits moyens d'accrochage comprenant en

outre des bords longitudinaux (102) desdites rainures (96).



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