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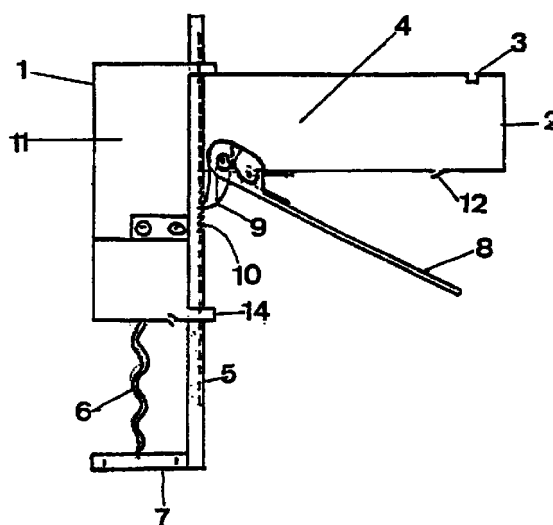
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(54) **IMPROVED AUTOMATIC CORKSCREW**

(57) The object of the invention is an improved automatic corkscrew configured as a main L-shaped body of - which the longer arm (2) actuates as a handle, while the shorter arm (1) is integral at its extremity with a longitudinal spiral part (6); it incorporates a motor (11) which is activated when pressing on the button - (12), a battery (4) and a tap point for recharging - (3) said battery. The shorter arm (1) incorporates - in its internal face a ring (14) through which a toothed (10) longitudinal part (5) can slide, said part being extended by a preferably circular and transverse segment (7) which bears directly against the cork to be extracted and through which the spiral (6) can pass. The last part is a longitudinal actuation bar (8) terminated by a toothed stop (9) which is directly incident with respect to the teeth (10) cut in the support bar (5).

FIGURE 1



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Description

[0001] The present Model of Utility refers to an IMPROVED AUTOMATIC CORKSCREW remarkably improving the state of the art over what is known and used up to date.

[0002] The present specification and accompanying drawing refer to an improved automatic corkscrew for a quick and simple extraction of cork stoppers of every type of bottles, specially those containing sparkling wines, the configuration and operation of which constitute an evident novelty in the field of this type of article, obviously improving that already existing, and increasing its usage efficiency and safety.

[0003] At present, the most part of the existing corkscrews in the market are manual, fitted with a spiral longitudinal part inserted into the upper part of the stopper under the pressure exerted by the user hand. Once the stopper has been crossed by the spiral, it is necessary to carry out its extraction. In this point, the already existing corkscrews use several systems to exert a force enough to overcome the pressure retaining the stopper in the bottle neck, and obtain the full extraction thereof. Nevertheless, all these operations require a manual or semiautomatic participation.

[0004] The novelty we are referring to performs the cork extraction in an automatic way, being configured by a body which is similar to an L, from the shorter arm - of which a spiral longitudinal part protrudes, this - part being the part acting on the cork stopper, while the longer arm acts as a handle. This main body has a motor to activate it, and it is connected with a second L-shaped part or toothed bar being used as an external support, this part being slid in an ascending/descending motion in relation to the shorter arm of the main body. The third part forming this improved corkscrew presents a shape also longitudinal, the upper extremity of which connects with the angle formed by the L of the main body, and acts as an actuation bar. Its upper extremity acts like a stop, presenting an extension or peak sliding on the teeth of the above referred part.

[0005] The use of this corkscrew is very simple. The user holds the longer arm, like a handle, of the body. At the same time and motion, he bears the extremity of the spiral against the cork to be extracted. To operate the corkscrew, it is necessary to push down the contact button and press on the longitudinal part or actuation bar toward the handle, so that the extension or peak breaks the contact with the toothed portion. The motor force pushes gradually the spiral in a descending sense, penetrating more and more into the cork, until the end extremity of the shorter arm of the main body bears also against the cork. At this moment, the whole spiral has penetrated into the cork. To extract the cork, it is only necessary to press the actuation bar towards the handle, so that the stop or peak incides progressively on the toothed portion, dragging in its path the spiral in an ascending sense, which will drag, in turn, the cork - until

this being extracted from the bottle.

[0006] It is very important to point out that the starting incorporates a switch allowing the spiral turning to be changed in order to facilitate the extraction of the - cork attached to the spiral once said cork has been - extrated from the bottle.

[0007] For a better understanding of the invention envisaged in the present specification, the appending drawings will show, by way of example and in no case with a restrictive or limitative character, the following:

Figure 1 is a front view of the improved corkscrewing device.

Figure 2 is a detail of the initial position of the corkscrew.

Figure 3 is a detail of the corkscrew acting on a cork stopper.

Figure 4 is a detail of the corkscrew once the cork - has been extracted.

[0008] As detailed in FIGURE 1, the main body adopts a L-shaped configuration, the longer arm (2) of which acts like a handle, while the shorter arm (1) is integral at its extremity with a spiral longitudinal part (6). In said arm, there is also a motor (11) which is activated when pressing on the button (12), the corkscrew incorporating also a battery (4) for maintenance and recharging point thereof (3). The shorter arm (1) of the corkscrew incorporates in its internal face a ring or pin (14) through which an also longitudinal part (5), toothed (10), slides on its external face, the final extremity of which is extended by a segment (7), preferably circular and transverse, which bears directly against the cork to be extracted, and through which the spiral (6) passes. The last part intervening in this improved corkscrew is an also longitudinal actuation bar (8), terminated at its upper side by a toothed stop (9) which is directly incident to the teeth (10) cut in the support bar (5). The unit is also fitted with springs or similar means allowing the different parts to be moved.

[0009] Figures 2, 3 and 4 show the cork extraction process, that is to say, the operation of the claimed corkscrew.

[0010] In Fig. 2, the spiral (6) bears against the cork - (13), like the transverse section (7) of the support part (5). When pressing on the button (12) and the actuation bar (8) towards the handle (2), the toothed - stop (9) frees the teeth (10) of the support bar (5), at the same time as the motor pushes, in descending - sense, the corkscrew, so that the spiral (6) penetrates into the cork (13), such is shown in Fig.3, at the same time as the whole corkscrew descends while the - support bar (5) remains in a more raised position.

[0011] In Fig. 4, the position of the unit is detailed, - once the cork has been extracted, for which it is only

necessary to press on the actuation bar (8) towards the handle by short and successive pressures, so that the toothed stop (9) slides progressively on the teeth (10) of the support bar (5), which facilitated the ascending motion of the corkscrew, the spiral (6) moving back and dragging with it the cork (13) until said - cork is fully out of the bottle.

[0012] The Model of Utility contemplated here, in its own sense, can be performed in other embodiment ways, materials and sizes, which will be also protected by the present specification and will not modify in any case the essence of the claims.

Claims

1. An IMPROVED AUTOMATIC CORKSCREW, essentially characterized in that it is configured starting from an L-shaped main body, the longer arm of which (2) actuates as a handle, while the shorter arm (1) is integral at its extremity with a longitudinal spiral part (6), said body incorporating also a motor (11), which is activated when pressing on the button (12), a battery (4) with a tap point for recharging and maintaining (3) said battery.

2. An IMPROVED AUTOMATIC CORKSCREW, according to claim 1, essentially characterized in that the shorter arm (1) of the corkscrew incorporates in its inner face a ring or pin (14), through which a support and/or guide part slides (5) also longitudinal (5), toothed (10) at its external face, and at the final extremity of which a segment (7) is fitted, preferably circular and transverse, which bears directly against the cork to be extracted.

3. An IMPROVED AUTOMATIC CORKSCREW, according to claims 1 and 2, characterized essentially in that it incorporates also an actuation bar (8), also longitudinal, terminated at its upper side by a toothed stop (9), which is directly incident with respect to the teeth (10) cut in the support bar (5), the whole unit being fitted also with springs or similar means allowing the different parts to be moved freely.

3. An IMPROVED AUTOMATIC CORKSCREW, according to claims 1, 2 and 3, essentially characterized in that the spiral (6) performs rotary motions, both right and left.

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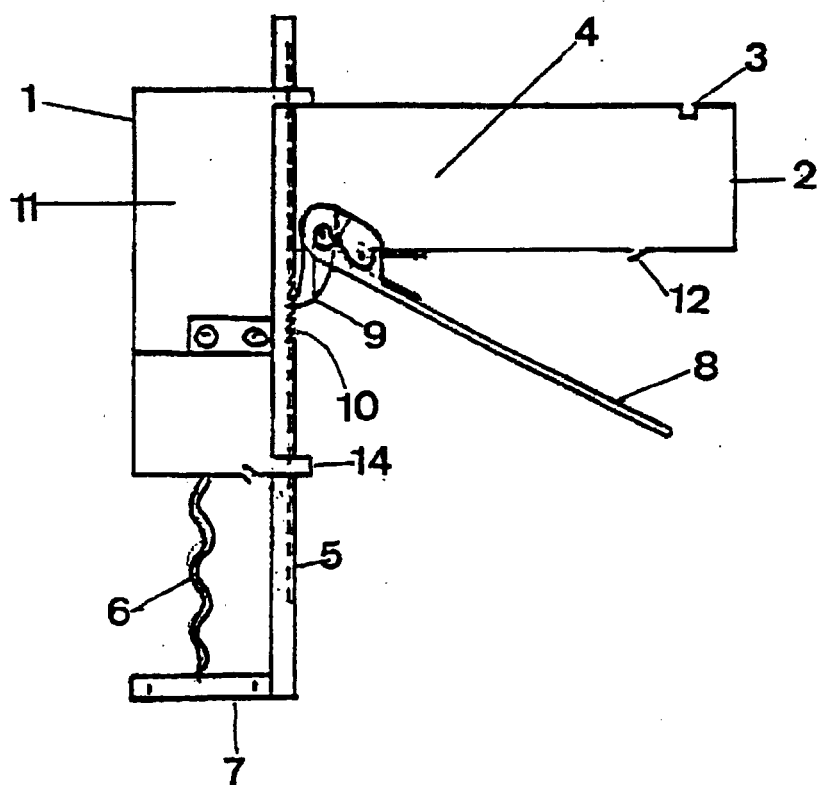
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FIGURE 1



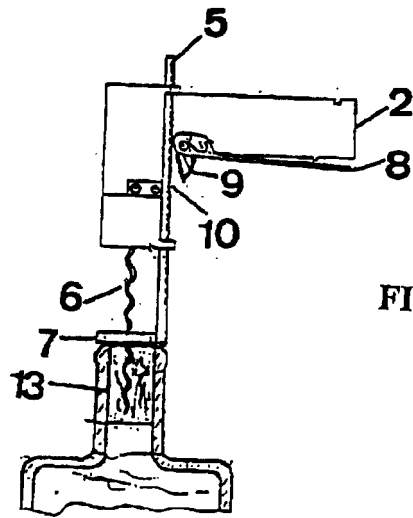


FIGURE 2

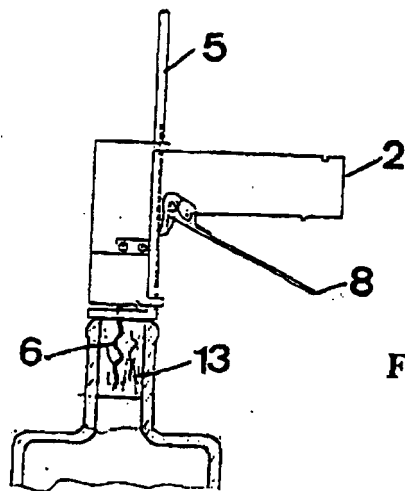


FIGURE 3

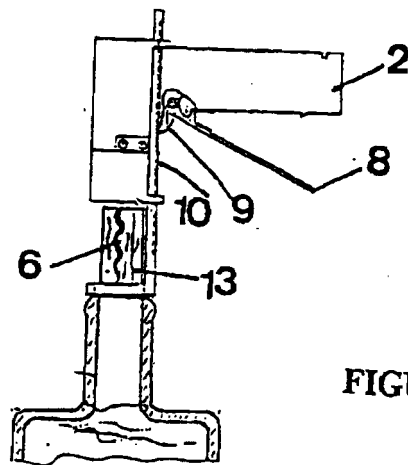


FIGURE 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ ES 98/00215

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 B67b 7/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 B67B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CIBEPAT, EPODOC, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9615062 A (MAR CHIGNOLI) 23 May 1996 (23.05.96) page 3, line 20 page 9 line 3; figures 1-3	1-4
A	EP 370938 A (PUIG BONICH) 30 May 1990 (30.05.90) the whole document	1-4
A	FR 2660299 A (BERNARDI) 04 October 1991 (04.10.91) page 5, line 20-page6, line 12; figure2.	1,2,4
A	US 4955621 A (YUNG-TUNG CHIANG) 11 September 1990 (11.09.90)	
A	DE 3037785 A (ROBERT BOSCH) 13 May 1982 (13.05.82)	

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

09 December 1998 (09.12.98)

Date of mailing of the international search report

21 December 1998 (21.12.98)

Name and mailing address of the ISA/

S.P.T.O

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INTERNATIONAL SEARCH REPORT
 Information on patent family members

International Application No

PCT/ ES 98/00215

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