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(54) **CORKSCREW**

(57) The present invention relates to a corkscrew having a spiral (1) which has: a free end (11) for being introduced in a cork (7) to be removed and a connecting end (12) opposite the free end (11). The corkscrew also has a guide (2) for the spiral (1) which has: a first seating (21) for housing the connecting end (12) in a start of removal position and a second seating (22) for housing the connecting end (12) in an end of removal position.

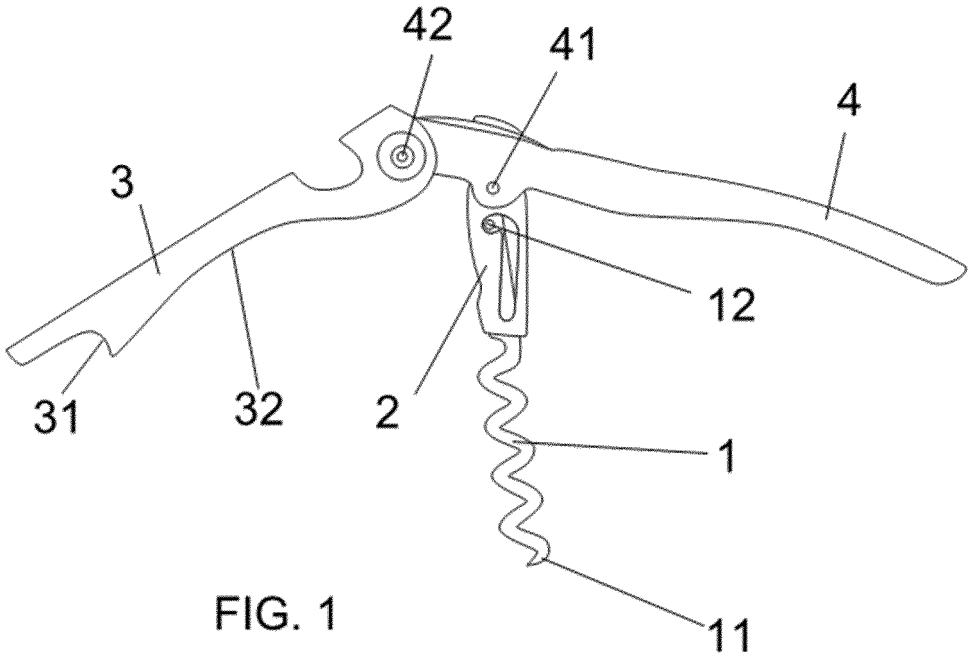


FIG. 1

EP 3 287 414 A1

Description

TECHNICAL FIELD

[0001] The invention relates to a corkscrew.

PRIOR ART

[0002] Corkscrews used for removing the cork from bottles and other vessels are known. However, the known corkscrews have a series of problems when trying to remove the cork from a vessel that remain unsolved:

i) the corks break sometimes, therefore damaging the content of the vessel to be opened;
ii) the force required for levering hinders and complicates the attempt to remove the cork;
iii) the positioning of the corkscrew is unstable during the cork removal operation, slowing down said operation because the user is obliged to readjust the position of the corkscrew to continue with the opening operation;
iv)removal of the cork is hindered due to the interference or the rubbing of the cork with elements of the corkscrew that encumber the removal, therefore increasing the force required to remove the cork.

[0003] Not only do these problems hinder the cork removal operation, but rather they can thwart the attempt due to the cork breaking and even due to the vessel breaking as a result of the user's struggle to try to remove the cork, which can end with the bottle falling.

DISCLOSURE OF THE INVENTION

[0004] The invention relates to a corkscrew such as the one defined in the independent claim. The dependent claims define preferred embodiments of the invention.

DESCRIPTION OF THE DRAWINGS

[0005]

Figure 1 is a view of the corkscrew of the invention in the open position.

Figure 2 is a view of the corkscrew of the invention in the start of removal position.

Figure 3 is a view of the corkscrew of the invention in the end of removal position.

Figure 4 is a view of the corkscrew of the invention in the closed position.

[0006] The reference numbers of the elements of the invention are indicated below:

Spiral (1)
Free end (11)
Connecting end (12)
Guide (2)
First seating (21)
Second seating (22)
Support (3)
Seating end (31)
Cavity (32)
Handle (4)
First articulation (41)
Second articulation (42)
Blade (5)
Projection (6)
Cork (7)

DETAILED DISCLOSURE OF THE INVENTION

[0007] As described, a basic embodiment of the invention relates to a corkscrew comprising:

1a) a spiral (1) comprising:

1a1) a free end (11) configured for being introduced in a cork (7) to be removed;
1a2) a connecting end (12) opposite the free end (11);

1b) a guide (2) for the spiral (1) comprising:

1b1) a first seating (21) configured for housing the connecting end (12) in a start of removal position;
1b2) a second seating (22) configured for housing the connecting end (12) in an end of removal position.

[0008] The system of the spiral (1) and guide (2) for the spiral (1) of the invention allows removing a cork with less effort when levering than known corkscrews do.

[0009] According to other features of the invention:

2a) The corkscrew can comprise a support (3) comprising a seating end (31) configured for being supported on the opening of a vessel covered by the cork (7) and a cavity (32) configured for preventing interference with a cork (7) to be removed. The support (3) does not rub against the cork (7) during removal, since in addition to having only one recess for contact in a single position with the opening of the vessel, instead of the two usual recesses, it also has the shape defined by the cavity (32). The combination of the spiral (1) with the guide (2) for the spiral (1) and the support (3) of the invention makes the removal operation for removing the cork (7) easier compared with known corkscrews, not only due to the less force required for levering, but rather because since the support (3) is one-piece and has a

single recess for contacting with the vessel, the corkscrew of the invention has a more stable behavior during the removal process than known corkscrews do, thereby making the operation easier for the user who is opening the vessel, not just because said user has to exert less force but rather because the action of opening is more comfortable.

3a) The corkscrew may also comprise a handle (4) comprising a first articulation (41) configured for being connected to the guide (2).

4a) The handle (4) may comprise a second articulation (42) configured for being connected to the support (3).

5. The spiral (1), the guide (2), the support (3), the handle (4), the first articulation (41) and the second articulation (42) can be connected in order to define:

5a) an open position of the corkscrew configured for allowing introduction of the spiral (1) in the cork (7) to be removed;
5b) a lever position in which the support (3) is supported on the opening of a vessel covered by the cork (7);
5c) a start of removal position in which the connecting end (12) is in the first seating (21);
5d) an end of removal position in which the connecting end (12) is in the second seating (22);
5e) a closed position in which:

5e1) the support (3) and the handle (4) are closed about the second articulation (42);
5e2) the spiral (1) and the guide (2) are contained between the support (3) and the handle (4).
The closed position is the usual position when the corkscrew is not in use. In the closed position, the support (3) and the handle (4) define a cavity where the spiral (1) and the guide (2) are housed.

6. The corkscrew may also comprise a blade (5). The blade (5) can be connected in the second articulation (42). The blade (5) may comprise a built-in projection (6). The projection (6) allows more easily removing the capsule from a bottle.
The projection can be a bend made from the same material as the steel of the blade, i.e., the blade (5) and the projection (6) form a single piece.

9. The spiral (1) may comprise four turns.

[0010] Therefore, since the spiral (1) has four turns instead of the five usual turns, it is shorter and does not completely go through the cork (7), preventing part of the cork from falling into the content of the vessel, damaging said content, which could be wine, for example.

Claims

1. A corkscrew comprising:

1a) a spiral (1) comprising:

1a1) a free end (11) configured for being introduced in a cork (7) to be removed;
1a2) a connecting end (12) opposite the free end (11);

characterized in that:

it comprises:

1b) a guide (2) for the spiral (1) comprising:

1b1) a first seating (21) configured for housing the connecting end (12) in a start of removal position;
1b2) a second seating (22) configured for housing the connecting end (12) in an end of removal position.

2. The corkscrew according to claim 1, comprising:

2a) a support (3) comprising a seating end (31) configured for being supported on the opening of a vessel covered by the cork (7);

characterized in that:

2b) the support (3) comprises a cavity (32) configured for preventing interference with a cork (7) to be removed.

3. The corkscrew according to any of claims 1 to 2, **characterized in that** it comprises:

3a) a handle (4) comprising a first articulation (41) configured for being connected to the guide (2).

4. The corkscrew according to claim 3, **characterized in that:**

4a) the handle (4) comprises a second articulation (42) configured for being connected to the support (3).

5. The corkscrew according to any of claims 1 to 4, **characterized in that** the spiral (1), the guide (2), the support (3), the handle (4), the first articulation (41) and the second articulation (42) are connected in order to define:

5a) an open position of the corkscrew configured for allowing introduction of the spiral (1) in the cork (7) to be removed;
5b) a lever position in which the support (3) is supported on the opening of a vessel covered by the cork (7);
5c) a start of removal position in which the connecting end (12) is in the first seating (21);
5d) an end of removal position in which the connecting end (12) is in the second seating (22);
5e) a closed position in which:

5e1) the support (3) and the handle (4) are closed about the second articulation (42);
5e2) the spiral (1) and the guide (2) are contained between the support (3) and the handle (4).

6. The corkscrew according to any of claims 1 to 5, **characterized in that** it comprises a blade (5).

7. The corkscrew according to claim 6, **characterized in that** the blade (5) is connected in the second articulation (42).

8. The corkscrew according to any of claims 6 to 7, **characterized in that** the blade (5) comprises a built-in projection (6).

9. The corkscrew according to any of claims 1 to 8, **characterized in that** the spiral (1) comprises four turns.

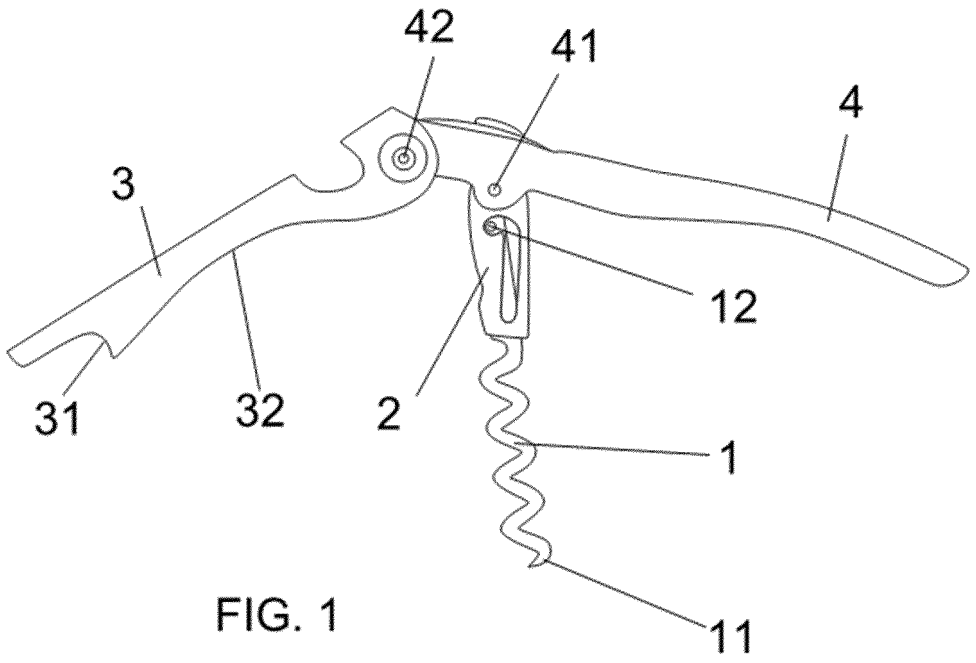


FIG. 1

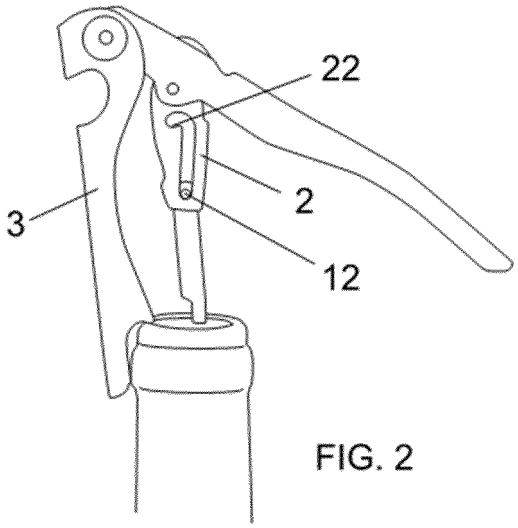


FIG. 2

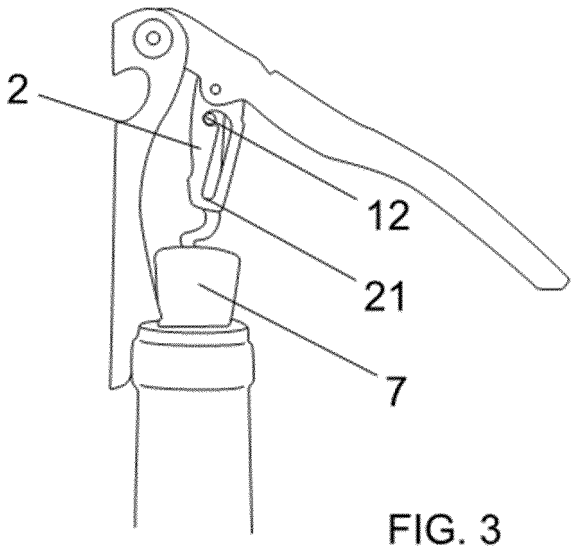


FIG. 3

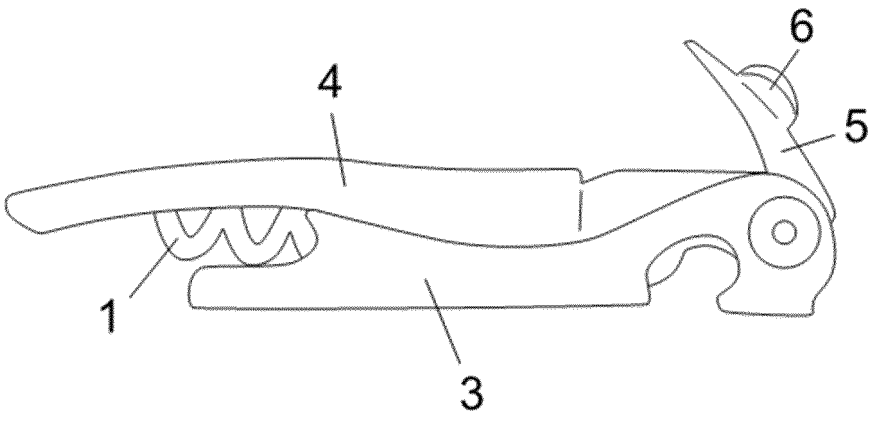


FIG. 4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2016/070258

A. CLASSIFICATION OF SUBJECT MATTER

B67B7/44 (2006.01)
B67B7/04 (2006.01)
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)
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)

EPODOC, INVENES, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 202009004858U U1 (NUESSE OCTAVIO K) 06/08/2009, the whole document.	1-9
X	EP 0143475 A2 (CELLINI FERDINANDO FARM SAS) 05/06/1985, the whole document.	1-9
X	ES 2153283 A1 (DEL CAMPO DIEZ MIGUEL ANGEL ET AL.) 16/02/2001, the whole document.	1-9
A	GB 2216884 A (CHU MICHAEL) 18/10/1989, The whole the document.	1-9
A	FR 2829480 A1 (GASMAN CHARLES) 14/03/2003, the whole document.	1-9

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

* Special categories of cited documents:
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"O" document referring to an oral disclosure use, exhibition, or other means.
"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 documents , such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
02/06/2016	**(02/06/2016)**
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04	Authorized officer P. Alonso Gaston Telephone No. 91 3495323

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/ES2016/070258

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
DE202009004858U U1	06.08.2009	NONE	
EP0143475 A2	05.06.1985	US4584911 A AT38207T T	29.04.1986 15.11.1988
ES2153283 A1	16.02.2001	NONE	
GB2216884 A	18.10.1989	NONE	
FR2829480 A1	14.03.2003	FR2829479 A1	14.03.2003

Form PCT/ISA/210 (patent family annex) (January 2015)