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(54) **Pocket cork-screw**

Taschenkorkenzieher

Tire-bouchon de poche

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(73) Proprietor: **Patrick s.r.l.**
33085 Maniago (PN) (IT)

(72) Inventors:
- **Patrizio, Cesare**
  33085 Maniago (PN) (IT)
- **Patrizio, Alessandra**
  33085 Maniago (PN) (IT)

(74) Representative: **Gustorf, Gerhard, Dipl.-Ing.**
Patentanwalt,
Bachstrasse 6 A
84036 Landshut (DE)

(56) References cited:
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US-A- 4 584 911

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Description

[0001] The present invention relates to a pocket cork-screw as set forth in the preamble of the claim. Such a cork-screw is known from US-A 4 437 359.

[0002] In the recent times, pocket cork-screws often replaced the traditional cork-screws due both to cost reasons and to overall dimensions, as it could be inserted into a pocket and easily taken out from it whenever it should be operated.

[0003] The main problem of such a type of cork-screw is given by that two distinct operations are necessary for a total extraction especially whenever a long (up to 5 cm.) cork should be extracted from bottle neck. At first cork is screwed with extraction means, then bottle neck is propped with propping means, a first extraction operation is made and then a second operation is repeated in order to obtain a complete cork extraction.

[0004] Recently important efforts were developped towards the direction of a mechanical-functional solution, which could obtain a complete extraction of a cork up to 5 cm.long thanks just to one operation of screwing extraction means and after putting propping means on bottle neck: slots provided with some notches were conceived, so that fulcrum could be moved relating to propping means whereby arm of second order lever as well as cork extraction run could be increased.

[0005] The main drawback of such a solution is given by that it's really necessary a double operation, a first one for obtain the first extraction run and a second one after manually moving propping means pin.

[0006] Indeed some solutions were suggested so that an increase of second order arm could be automatically reached. Particularly two distint pins were proposed, which could slide inside a U-shaped slot and which propping means are adapted to pivot around in order to complete cork extraction.

[0007] Further solutions are present on the market but they could be assimilated to either manual or automatic increase of second order lever arm. The automatic already described device presents also an important disadvantage: not always just one operation is sufficient for obtaining a complete extraction of a cork. Consequently the expedient, which obtains an automatic increase of arm, could appear unuseful.

[0008] It could appear a logic solution for a complete extraction of a cork thanks to just one operation, to think of an increase of the dimensions of lever, which belongs to propping means. But it should be noted that beyond a certain lenght of lever, extraction operation could become complicate. Indeed the excessive inclination of the cork central body could cause the breakage of the cork due to that the end of propping means leans on bottle neck and cork-screw central body runs the risk to be almost aligned to the longitudinal bottle axis.

[0009] A proper question could arise: «Why two distint steps couldn't be provided on the propping means lever, so that an extraction operation could be more gradually made and an excessive cork-screw central body inclination could be avoided?»

[0010] Such a solution was immediately rejected because after obtaining first extraction run thanks to the first propping means step, this step could knock against cork just as soon as the second step could operate the cork extraction completion. Therefore the second and definitive extraction run could be quite difficult.

[0011] Different solutions are provided as far as the presence of two steps of propping means are concerned: in a first solution propping means are made of an arm, which is pivoted in correspondence of the end in the central body; on said central body two levers are pivoted, each one provided with a step, which are arranged at different height with respect to bottle neck (see e.g. US-A 4 437 359).

[0012] Indeed, the main problem of the solution, which provides propping means with two different steps, involves the rule that each one of the steps on the two levers, shouldn't interfere with second lever step, both during the first and during the second extraction run. Cork should be always arranged in the conditions to never interfere in the same time with two steps, but just with step (first or second one), which is operative in that moment.

[0013] As far as the described solution is concerned, the thumb, which presses cork-screw, should control the rotating levers, which represent propping means.

[0014] In the case of described solution, it should be always possible to activate just one lever at a time of two levers, deactivating other one. In conclusion said solution appears immediately quite difficult to control.

[0015] A further solution, which is available on the market, concerns the presence of a double propping means, i.e. means provided with two distinct arms, which are both pivoted on the same pin. A first arm is provided with a first step, whereas the second arm is provided with a second step, which is just a bit more distant from pin with respect to first step. Distance between first and second step is substantially small, i.e. first step isn't situated at a significant distance from the second one, otherwise an interference between two steps should occur, which could knock against cork. Consequence of such a solution: presence of second step doesn't appear resolutive as far as a complete extraction of a cork from bottle neck is concerned, especially when cork is 5-6 cm. long.

[0016] The problem, which cork-screw according to the invention intends to solve concerns the possibility that a pocket cork-screw is provided with means, which guarantee a complete cork extraction from bottle neck also in the case of long (5-6 cm.) corks, avoiding a further screwing of extraction means and utilizing sophisticated propping means, which could be provided with at least two levers, each one with one step, doing away with requirement that operator applies a manual control against a possible interference of cork to be extracted with non operative step.

[0017] Said problem is solved by the pocket cork-screw according to the invention, as defined by the claim.

[0018] These and further characteristics will be apparent from the following description and from alleged drawings, where:

Fig. represents the cork-screw according to the invention in rest position;
Fig.2 represents a side view of the same cork-screw in correspondence of starting position, where propping means approachs bottle neck;
Fig.3 represents a side view of cork-screw, after first lever accomplished its first extraction run;
Fig.4 represents a side view of cork-screw, where second lever is leaning bottle neck;
Figs.5a,5b represent respectively a side view of cork-screw and an enlargement of a detail, where second lever is starting its extraction run and first lever automatically leaves bottle neck;
Fig.6 represents complete cork extraction and first lever definitevely removed away from bottle neck.

[0019] The cork-screw according to the invention comprises a central body (Figs. 1,2), where, in correspondence of its substantial center line, rotating extraction means are pivoted. They are made of a screwing spiral 2, whereas propping means are present for cork 3 extraction, which are comprising two levers, a first one 4, shorter than a second one 5, which are both pivoted on a pin 6. Lever 4, pricked in Fig.2, contains lever 5, and it is therefore external to lever 5, which is adapted to rotate around pin 6 inside slot 7. Lever 5 is provided with a shoulder 8 (se also Figs.3,5), which is adapted to act against a shoulder 9 (Fig.5) of lever 4, so that it could make lever 4 rotate clockwise as soon as lever 5 becomes operative. Therefore pin 6, slot 7 and shoulders 8,9 represent rotating means of lever 4 with respect to lever 5, so that interference of lever 4 with cork during operation of definitive extraction controlled by second lever 5, should be avoided.

[0020] Lever 4 is provided with a step 10, which is adapted to lean a neck of a bottle 11, whereas lever 5 is provided with a step 12, which is adapted to lean neck of bottle 11, as it will be apparent later on.

[0021] As already stated, several embodiments provided with two steps were developped up to now, which allow a simple extraction of a cork 3 also 5 cm. longer, thanks to two easy leaning operations of two steps on bottle neck. The main drawback is represented by a possible sliding of first step on bottle neck, especially when the steps are made from propping means. A further drawback is represented by interference of firts step with cork, as soon as second step becomes operative.

[0022] A first solution, which could solve the problem, is given by a possible independence if two steps, based on that they are two independent levers. But also such a solution doesn't appear sufficient, because step of first lever could be always adapted to interfere with cork during second and definitive extraction run of cork from bottle.

[0023] The cork-screw according to the invention provides the presence on two levers 4,5 of shoulders respectively 9,8, which should eliminate interference of first lever 4 with cork or bottle neck, as soon as step 12 of second lever 5 becomes operative.

[0024] Indeed the already described drawback is eliminated according to the following way, After step 12 of lever 5 is leaning bottle neck (Fig.4), a light effort, which acts on lever 5 (Fig.5), is sufficient for making pin 6 in slot 7 lower from position in Fig.4 to position in Fig. 5, whereby shoulder 8 of lever 5 acts against shoulder 9 of lever 4. Said lever 4 is obliged to rotate clockwise around pin 6 and consequently step 10 is removed from bottle neck, as Fig.5 shows.

[0025] Therefore first lever 4 is removed from second lever 5, as a consequence of mutual action of shoulder 9,8 of levers 4,5. Such a mutual action is due to the cork extraction operation, which is exerted by operator just when central body 1 is manually raised.

[0026] Also if the operator catches with one hand bottle neck together with two levers 4,5, the action of shoulder 9 against shoulder 8 is such that clockwise rotation of lever 4 is operated any way.

Claims

1. Pocket cork-screw comprising a central body (1) bearing pivotable cork extraction means (2) and pivotable propping means acting on the neck of a bottle, wherein said propping means comprise two levers (4, 5) which are pivoted on same pin (6), and wherein rotation means of first lever (4) with respect to second lever (5) are provided,
characterized in that said rotation means is comprised of said pin (6) around which an external lever (4) and an internal and longer lever (5) are adapted to rotate, of a slot (7) provided in the internal lever (5), said slot (7) being adapted to lower said pin (6) together with the external lever (4) with respect to the internal lever (5) and to cause an action of a shoulder (8) of the internal lever (5) against a shoulder (9) of the external lever (4), said action making the external lever (4) rotate away from the internal lever (5) and consequently avoid interference of the external lever (4) during the final step of cork extraction.

Patentansprüche

1. Taschenkorkenzieher mit einem Hauptkörper (1), der ein schwenkbares Element (2) zum Herausziehen eines Korkens sowie schwenkbare, am Hals einer Flasche angreifende Abstützmittel trägt, wobei

die Abstützmittel aus zwei Hebeln (4, 5) bestehen, die sich um ein und denselben Stift (6) drehen, und wobei Mittel zum Verdrehen des ersten Hebels (4) relativ zum zweiten Hebel (5) vorgesehen sind,
dadurch gekennzeichnet, daß die Mittel zum Verdrehen bestehen aus dem Stift (6), um den sich ein äußerer Hebel (4) und ein innerer, längerer Hebel (5) drehen können, und aus einem in dem inneren Hebel (5) ausgebildeten Schlitz (7), der dazu bestimmt ist, den Stift (6) gemeinsam mit dem äußeren Hebel (4) relativ zu dem inneren Hebel (5) abzusenken und eine Kraftwirkung einer Schulter (8) des inneren Hebels (5) gegen eine Schulter (9) des äußeren Hebels (4) auszuüben, durch die der äußere Hebel (4) von dem inneren Hebel (5) weggeschwenkt wird, so daß während der letzten Phase beim Herausziehen des Korkens eine Störung des äußeren Hebels (5) vermieden wird.

Revendications

1. Tire-bouchon de poche comprenant un corps central (1) supportant un élément pivotant (2) d'extraction du bouchon et des moyens pivotants d'appui sur le col d'une bouteille, lesdits moyens d'appui étant constitués de deux léviers (4, 5) montés sur la même cheville (6), étant prévu des moyens de rotation du premier lévier (4) relatif au second lévier (5),
caractérisé par le fait que lesdits moyens de rotation sont constitués de ladite cheville (6) autour de laquelle sont apts à tourner un lévier externe (4) et un lévier interne (5) plus long, et d'une fente (7) formée dans le lévier interne (5) et apte à faire descendre ladite cheville (6) conjointement avec le lévier externe (4) relatif au lévier interne (5) et à effectuer une application de force d'une épaule (8) du lévier interne (5) contre une épaule (9) du lévier externe (6), ladite force faisant enlever le lévier externe (6) du lévier interne (5) pour éviter de cette manière une interférence du lévier externe (4) pendant l'étape finale d'extraction du bouchon.

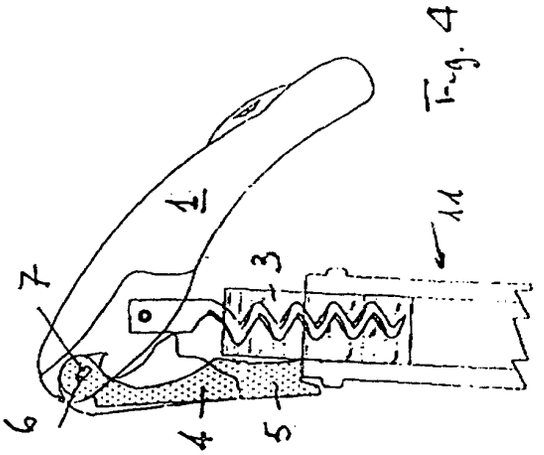


Fig. 4

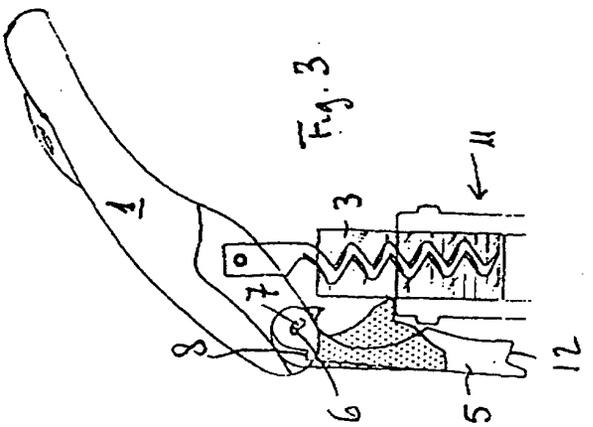


Fig. 3

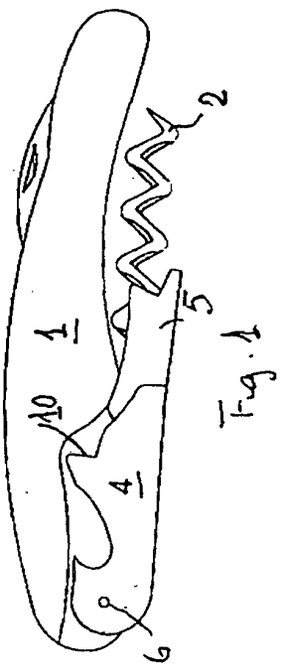


Fig. 1

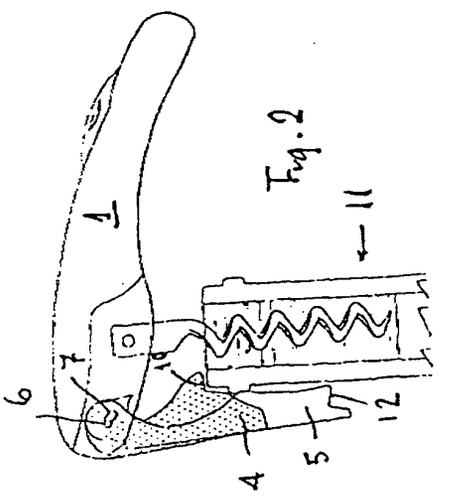


Fig. 2

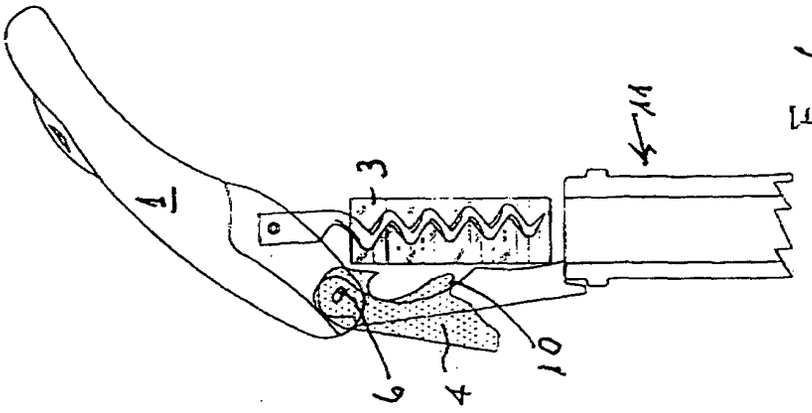


Fig. 6

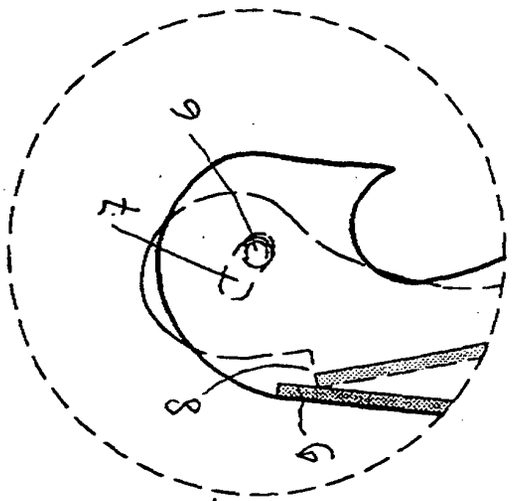


Fig. 5b

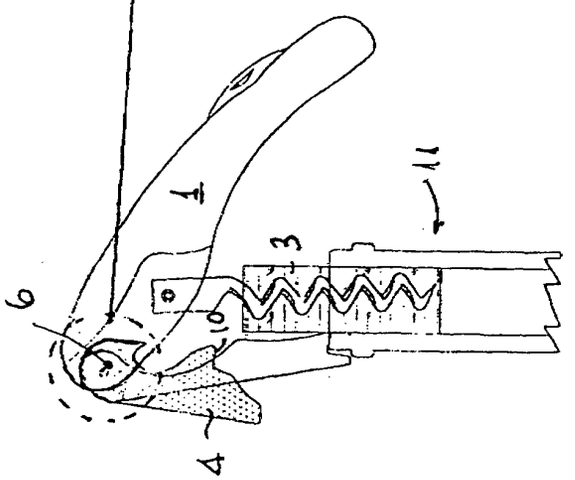


Fig. 5a