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(54) **Corkscrew with double resting member**

Korkenzieher mit zwei Abstützarmen

Tire-bouchon à double levier

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US-A- 4 437 359

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Description

[0001] The present invention relates to a corkscrew with double resting member and double lever according to the preamble of claim 1.

[0002] Corkscrews are already known, from e.g. US-A-4 437 359, which comprise a lever element that is pivoted to arms for two resting members to be arranged successively on the rim of the mouth of the bottle from which the cork is to be removed.

[0003] A pointed element shaped like a cylindrical helix is articulated to the lever element and is inserted in the cork.

[0004] The double resting member is required when the stroke for extracting the cork performed by the lever element is not sufficient to extract said cork completely.

[0005] The distance between the resting member and the axis of the fulcrum between the lever element and the resting arm may in fact not be sufficient for a full extraction stroke.

[0006] In this case it is necessary to provide a new resting point arranged at a greater distance with respect to the axis of the fulcrum.

[0007] Types of corkscrew with double resting member substantially comprise corkscrews with a single resting arm formed by two mutually articulated parts (acting in series), each part being provided with a resting point, and corkscrews with two oscillating resting arms of different length (acting in parallel), which interact by means of their respective resting points with the rim of the bottle in separate steps.

[0008] These corkscrews are not free from drawbacks.

[0009] In both cases, the resting arms, due to their configuration with two resting members, can in fact interfere with the cork during its extraction stroke, making it more difficult or even breaking the cork itself.

[0010] Moreover, again due to their configuration, the arms tend to rest unstably on the rim of the mouth of the bottle.

[0011] The aim of the present invention is to eliminate the problems noted in conventional types of corkscrew with double resting member, by providing a corkscrew with double resting member that does not interfere with the cork during its extraction and is easy and comfortable to use for the user.

[0012] Within this aim, an object of the present invention is to provide a corkscrew with double resting member that rests stably on the rim of the mouth of the bottle from which the cork is to be extracted.

[0013] Another object of the present invention is to provide a corkscrew with double resting member and double lever that can be obtained easily, economically, and by way of known manufacturing means.

[0014] This aim and these and other objects that will become better apparent hereinafter are achieved by a corkscrew with double resting member and double lever with the characterizing features of claim 1.

[0015] Further characteristics and advantages of the invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment thereof, illustrated by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a side view of the corkscrew according to the invention, with a detail shown in cross-section;
Figure 2 is a view of the corkscrew according to the invention with its components arranged in the inactive step;
Figure 3 is a partial view of the invention with its components arranged in the active step;
Figure 4 is a partial view of the invention, with its components acting in a first step on a corked bottle neck that is shown partially in cross-section;
Figure 5 is a partial view of the invention, with its components acting in a second step on a corked bottle neck shown partially in cross-section;
Figure 6 is a perspective exploded view of the components of the corkscrew according to the invention.

[0016] With reference to Figures 1-5, the corkscrew of the invention, designated by the reference numeral 10, comprises a lever element 11, on which a pointed element 12, preferably made of metal, is pivoted; said element is shaped like a cylindrical helix and is adapted to be inserted in a cork 13 to be extracted from a mouth 14 of a bottle 15.

[0017] The lever element 11 is further pivoted about an axis 16, by means of a pivot designated by the same reference numeral in the figures, to a first resting arm 17 to be arranged on a rim 14a of the mouth 14.

[0018] The fulcrums are such as to form a second-class lever mechanism.

[0019] The first resting arm 17 has a C-shaped transverse cross-section, which forms a base 18 and two mutually opposite wings 19.

[0020] The two mutually opposite wings 19 have a longitudinal profile formed by a first portion 19a, which extends upward from a free end 20 of the first arm 17 until it connects to a second portion 19b, which is perpendicular to the base 18 of the first arm 17.

[0021] The second portion 19b acts as a resting member for the corkscrew 10, according to the invention, on the rim 14a of the mouth 14 from which the cork 13 is to be extracted.

[0022] The second portion 19b is connected to a third portion 19c that is shaped like a circular arc that descends and ascends with respect to the base 18 of the first arm 17.

[0023] The first portion 19a acts as a lateral abutment for the rim 14a of the mouth 14.

[0024] A second abutment arm 22, shorter than the first arm 17, is also pivoted to the lever element 11 on the axis 16 by means of the pivot 16a.

[0025] The second arm 22 has a C-shaped transverse cross-section, which forms a bottom 23 and two mutually opposite wings 24.

[0026] The two mutually opposite wings 24 have a longitudinal profile that is substantially similar to the profile of the first arm 17.

[0027] Such profile is formed by a first portion 24a, which extends upward from the free end 26 of the second arm 22 until it connects to a second portion 24b, which is perpendicular to the bottom 23 of the second arm 22.

[0028] The second portion 24b acts as a resting member for the corkscrew 10, according to the invention, on the rim 14a of the mouth 14 from which the cork 13 is to be extracted.

[0029] The second portion 24b is connected to a third portion 24c, which is shaped like a circular arc that descends and ascends with respect to the bottom 23 of the second arm 22.

[0030] The first portion 24a acts as a lateral abutment for the rim 14a of the mouth 14.

[0031] The second arm 22, moreover, can be accommodated within a receptacle 25 formed by the C-shaped profile of the first arm 17.

[0032] An elastic element, constituted by a thin metallic lamina 27, is arranged between the free ends 20 and 26 respectively of the first and second resting arms 17 and 22.

[0033] The lamina 27 is formed by a first straight portion 28 and a second straight portion 29, which are separated by an arc-like part 30, which part 30 protrudes from a rectangular opening 31 formed on the bottom of the first arm 17.

[0034] The opening 31 furthermore forms circular arc-like recesses 32 on the opposite wings 19 of the first arm 17.

[0035] The lamina 27, in the example shown in the figures, is fixed as regards the first and second straight portions 28 and 29 respectively to the free ends 20 and 26 of said first and second resting arms by riveting.

[0036] As an alternative, it is possible to fix the lamina 27 to a single point, for example as regards the first straight portion 28 to the free end 20 of the first resting arm 17, while the second straight portion 29 is free and comprised within the cavity 25 between the first and second resting arms 17 and 22.

[0037] The arc-like part 30 that protrudes from the opening 31 (and is convex with respect to it) can be pushed by the fingers of a user, so as to move the second resting arm 22 from an inactive configuration inside the receptacle 25 to an active configuration in which it is extracted from said receptacle.

[0038] The corkscrew according to the invention further comprises a capsule cutting blade 33, which is pivoted to the lever element 11 and is arranged inside a receptacle 34 formed in the lever element 11, so as to close the receptacle.

[0039] Moreover, the invention comprises a ring 35 for crown caps, which is rigidly associated with one end of the lever element 11.

[0040] The operation of the invention is as follows.

[0041] The pointed element 12 is inserted in the cork 13 to be extracted.

[0042] Then the second arm 22 is arranged so as to rest with the portion 24b on the rim 14a, pressing the lamina 27 with one finger and making it retract into the opening 31.

[0043] While keeping the lamina 27 pressed, the upward stroke of the lever element 11 is started until the cork is able to exit.

[0044] When the lifting stroke is no longer sufficient, the lamina 27 is released and the first arm 17 is arranged so as to rest by means of the portion 19b.

[0045] At this point the lifting stroke is continued until the cork 13 is fully extracted.

[0046] The particular arrangement and configuration of the two resting arms allows them not to interfere with the upward stroke of the cork during its extraction, facilitating the uncorking operation.

[0047] In practice it has been found that the invention thus described solves the problems of the prior art described above; in particular, the present invention provides a corkscrew with double resting member that does not interfere with the cork during its extraction and is particularly comfortable for the user, who simply has to press with the finger of the hand that is usually already arranged so as to hold the neck of the bottle.

[0048] Moreover, the present invention provides a corkscrew with double resting member that rests stably on the rim of the mouth of the bottle from which the cork is extracted.

[0049] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

[0050] In practice, the materials employed, so long as they are compatible with the specific use, as well as the dimensions, may be any according to requirements and to the state of the art.

[0051] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. A corkscrew with double resting member (10) and double lever, of the type that comprises a lever element (11) to which a pointed element (12) shaped like a cylindrical helix is pivoted, said pointed element being designed to be inserted in the cork (13),

a first resting arm (17) being further pivoted to said lever element (11) on an axis (16) and being designed to be arranged on the rim (14a) of the mouth (14) from which the cork (13) is to be extracted, a second resting arm (22) being further pivoted on the same axis (16), said second resting arm being shorter than said first arm (17) and being accommodated within a receptacle (25) formed by the profile of said first arm (17), said corkscrew being **characterized in that** it comprises an elastic element (27) that acts between said first resting arm (17) and said second resting arm (22), said elastic element (27) acting so as to contrast the exit of said second arm (22) from said receptacle (25), said elastic element (27) further protruding with a part (30) from an opening (31) provided in said first arm (17), said part (30) being available to the pressure of the fingers of a user so as to move said second resting arm (22) from an inactive configuration inside said receptacle (25) into an active configuration in which it is extracted from said receptacle.

2. The corkscrew with double resting member according to claim 1, **characterized in that** said elastic element is formed by a thin lamina (27) formed by first and second straight portions (28, 29) spaced by an arc-like part (30), which protrudes from said opening (31) formed in said first arm (17), with respect to which it is convex.

3. The corkscrew with double resting member according to claim 2, **characterized in that** said lamina (27) is fixed as regards both said first and second straight portions (28, 29) respectively to the free ends (20, 26) of said first and second resting arms (17, 22) by riveting.

4. The corkscrew with double resting member according to claim 2, **characterized in that** said lamina (27) is fixed on a single point adjacent to one of the ends of said opening (31).

5. The corkscrew with double resting member according to claim 1, **characterized in that** said first resting arm (17) is provided with a C-shaped transverse cross-section that forms on said first arm (17) a base (18) and two mutually opposite wings (19), which have a longitudinal profile formed by a first portion (19a) that extends so as to rise from the free end (20) of said first arm (17) until it is connected to a second portion (19b) that is perpendicular to said base (18) of said first arm (17) for resting on said rim (14a) of the mouth (14) from which said cork (13) is to be extracted, said second portion (19b) being connected to a third portion (19c) that is shaped like a circular arc that descends and ascends with respect to said base (18) of said first arm (17), said first portion (19a) acting as an abutment for said rim (14a) of said mouth (14).

6. The corkscrew with double resting member according to claims 1 and 5, **characterized in that** said second resting arm (22) is provided with a C-shaped transverse cross-section that forms on said second arm (22) a bottom (23) and two mutually opposite wings (24) which have a longitudinal profile that is formed by a first portion (24a) that rises from the free end (26) of said second arm (22) until it connects to a second portion (24b) that is perpendicular to said bottom (23) of said second arm (22) in order to rest on said rim (14a) of the mouth (14) from which said cork (13) is to be extracted, said second portion (24b) being connected to a third portion (24c) that is shaped like a circular arc that descends and ascends with respect to said bottom (23) of said second arm (22), said first portion (24a) acting as an abutment for said rim (14a) of said mouth (14).

7. A corkscrew with double resting member, according to claims 5 and 6, **characterized in that** said opening (31) is substantially rectangular and is formed in the base (18) of said first arm (17) and is comprised between the free ends (20, 26) of said first and second arms (17, 22), said opening (31) further forming circular arc-like recesses (32) on said mutually opposite wings (19) of said first arm (17).

Patentansprüche

1. Ein Korkenzieher mit einem doppelten Abstützglied (10) und einem doppelten Hebel, von der Art, die ein Hebelelement (11) umfasst, mit dem ein spitzes Element (12), geformt wie eine zylindrische Schraubenlinie, gelenkig verbunden ist, wobei das spitze Element dazu ausgestaltet ist, in den Korken (13) eingeführt zu werden, wobei weiter ein erster Abstützarm (17) auf einer Achse (16) mit dem Hebelelement (11) gelenkig verbunden ist und dazu ausgestaltet ist, an den Rand (14a) der Mündung (14), aus welcher der Korken (13) herausgezogen werden soll, angelegt zu werden, wobei weiter ein zweiter Abstützarm (22) auf derselben Achse (16) gelenkig gelagert ist, wobei der zweite Abstützarm kürzer ist als der erste Arm (17) und in einer Aufnahme (25) aufgenommen wird, die vom Profil des ersten Arms (17) gebildet wird, wobei der Korkenzieher **dadurch gekennzeichnet ist, dass** er ein elastisches Element (27) umfasst, das zwischen dem ersten Abstützarm (17) und dem zweiten Abstützarm (22) wirkt, wobei das elastische Element (27) so wirkt, dass es sich dem Austritt des zweiten Arms (22) aus der Aufnahme (25) widersetzt, wobei das elastische Element (27) weiter mit einem Teil (30) aus einer Öffnung (31) herausragt, die im ersten Arm (17) bereitgestellt wird, wobei der Teil (30)

für den Fingerdruck eines Benutzers zur Verfügung steht, um den zweiten Abstützarm (22) aus einer inaktiven Anordnung in der Aufnahme (25) in eine aktive Anordnung, in welcher er aus der Aufnahme herausgezogen wird, zu bewegen.

2. Der Korkenzieher mit doppeltem Abstützglied gemäß Anspruch 1, **dadurch gekennzeichnet, dass** das elastische Element aus einer dünnen Platte (27) gebildet wird, die durch einen ersten und einen zweiten geraden Abschnitt (28, 29), beabstandet durch einen bogenartigen Teil (30), gebildet wird, der aus der Öffnung (31) herausragt, die im ersten Arm (17) geformt ist, gegenüber welcher er konvex ist.

3. Der Korkenzieher mit doppeltem Abstützglied gemäß Anspruch 2, **dadurch gekennzeichnet, dass** die Platte (27) durch Vernieten in Bezug zum sowohl den ersten als auch den zweiten geraden Abschnitt (28, 29) jeweils an den freien Enden (20, 26) des ersten und des zweiten Abstützarms (17, 22) befestigt ist.

4. Der Korkenzieher mit doppeltem Abstützglied gemäß Anspruch 2, **dadurch gekennzeichnet, dass** die Platte (27) an einem einzigen Punkt neben einem der Enden der Öffnung (31) befestigt ist.

5. Der Korkenzieher mit doppeltem Abstützglied gemäß Anspruch 1, **dadurch gekennzeichnet, dass** der erste Abstützarm (17) mit einem C-förmigen transversalen Querschnitt ausgestattet ist, der am ersten Arm (17) eine Basis (18) und zwei einander gegenüberliegende Flügel (19) bildet, die ein Längsprofil haben, welches von einem ersten Abschnitt (19a) gebildet wird, der sich so erstreckt, dass er vom freien Ende (20) des ersten Arms (17) ansteigt, bis er mit einem zweiten Abschnitt (19b), der rechtwinklig zur Basis (18) des ersten Arms (17) ist, verbunden wird, um auf dem Rand (14a) der Mündung (14), aus welcher der Korken (13) herausgezogen werden soll, aufzuliegen, wobei der zweite Abschnitt (19b) mit einem dritten Abschnitt (19c) verbunden ist, welcher wie ein kreisförmiger Bogen geformt ist, der gegenüber der Basis (18) des ersten Arms (17) absteigt und ansteigt, wobei der erste Abschnitt (19a) als Auflager für den Rand (14a) der Mündung (14) wirkt.

6. Der Korkenzieher mit doppeltem Abstützglied gemäß Ansprüchen 1 und 5, **dadurch gekennzeichnet, dass** der zweite Abstützarm (22) mit einem C-förmigen transversalen Querschnitt ausgestattet ist, der am zweiten Arm (22) eine Unterseite (23) und zwei einander gegenüberliegende Flügel (24) bildet, die ein Längsprofil haben, welches von einem ersten Abschnitt (24a) gebildet wird, der vom freien Ende (26) des zweiten Arms (22) ansteigt, bis er mit einem zweiten Abschnitt (24b) verbunden wird, der rechtwinklig zur Unterseite (23) des zweiten Arms (22) ist, um auf dem Rand (14a) der Mündung (14) aufzuliegen, aus welcher der Korken (13) herausgezogen werden soll, wobei der zweite Abschnitt (24b) mit einem dritten Abschnitt (24c) verbunden ist, der wie ein kreisförmiger Bogen geformt ist, welcher gegenüber der Unterseite (23) des zweiten Arms (22) absteigt und ansteigt, wobei der erste Abschnitt (24a) als Auflager für den Rand (14a) der Mündung (14) wirkt.

7. Ein Korkenzieher mit doppeltem Abstützglied gemäß Ansprüchen 5 und 6, **dadurch gekennzeichnet, dass** die Öffnung (31) im wesentlichen rechteckig und in der Basis (18) des ersten Arms (17) gebildet ist und dass sie zwischen den freien Enden (20, 26) des ersten und des zweiten Arms (17, 22) umfasst wird, wobei die Öffnung (31) weiter kreisförmige bogenartige Vertiefungen (32) an den einander gegenüberliegenden Flügeln (19) des ersten Arms (17) bildet.

Revendications

1. Tire-bouchon à double élément d'appui (10) et à double levier, du type comprenant un élément levier (11) auquel un élément pointu (12) en forme de spirale cylindrique est monté pivotant, ledit élément pointu étant destiné à être inséré dans le bouchon (13), un premier bras d'appui (17) étant en outre monté pivotant au dit élément levier (11) sur un axe (16) et étant destiné à être placé sur le bord (14a) du goulot (14) d'où le bouchon (13) doit être extrait, un deuxième bras d'appui (22) étant en outre monté pivotant sur le même axe (16), ledit deuxième bras d'appui étant plus court que ledit premier bras (17) et étant logé dans un réceptacle (25) formé par le profil du dit premier bras (17), ledit tire-bouchon étant **caractérisé en ce qu'**il comprend un élément élastique (27) qui agit entre ledit premier bras d'appui (17) et ledit deuxième bras d'appui (22), ledit élément élastique (27) agissant de façon à contraster la sortie du dit deuxième bras (22) depuis ledit réceptacle (25), ledit élément élastique (27) faisant en outre saillie avec une partie (30) depuis une ouverture (31) prévue dans ledit premier bras (17), ladite partie (30) étant accessible à la pression des doigts d'un utilisateur de façon à déplacer ledit deuxième bras d'appui (22) d'une configuration inactive à l'intérieur du dit réceptacle (25) à une configuration active dans laquelle il est extrait du dit réceptacle.

2. Tire-bouchon à double élément d'appui selon la revendication 1, **caractérisé en ce que** ledit élément

élastique est formé par une fine lamelle (27) formée par des première et deuxième portions droites (28, 29) espacées par une partie (30) en forme d'arc, qui fait saillie depuis une ouverture (31) formée dans ledit premier bras (17), par rapport auquel elle est convexe.

3. Tire-bouchon à double élément d'appui selon la revendication 2, **caractérisé en ce que** ladite lamelle (27), en ce qui concerne à la fois lesdites première et deuxième portions droites (28, 29), est fixée par rivetage respectivement à des extrémités libres (20, 26) des dits premier et deuxième bras d'appui (17, 22).

4. Tire-bouchon à double élément d'appui selon la revendication 2, **caractérisé en ce que** ladite lamelle (27) est fixée sur un unique point adjacent à l'une des extrémités de ladite ouverture (31).

5. Tire-bouchon à double élément d'appui selon la revendication 1, **caractérisé en ce que** ledit premier bras d'appui (17) est muni d'une section transversale en forme de C qui forme sur ledit premier bras (17) une base (18) et deux ailettes mutuellement opposées (19), qui présentent un profil longitudinal formé par une première portion (19a) qui s'étend de façon à s'élever depuis l'extrémité libre (20) du dit premier bras (17) jusqu'à ce qu'elle soit reliée à une deuxième portion (19b) qui est perpendiculaire à ladite base (18) du dit premier bras (17) pour l'appui sur le bord (14a) du goulot (14) depuis lequel ledit bouchon (13) doit être extrait, ladite deuxième portion (19b) étant relié à une troisième portion (19c) qui a la forme d'un arc de cercle qui descend et remonte par rapport à ladite base (18) du dit premier bras (17), ladite première portion (19a) agissant comme une butée pour ledit bord (14a) du dit goulot (14).

6. Tire-bouchon à double élément d'appui selon les revendications 1 et 5, **caractérisé en ce que** ledit deuxième bras d'appui (22) est muni d'une section transversale en forme de C qui forme sur ledit deuxième bras (22) un fond (23) et deux ailettes mutuellement opposées (24), qui présentent un profil longitudinal formé par une première portion (24a) qui s'élève depuis l'extrémité libre (26) du dit deuxième bras (22) jusqu'à se qu'elle soit reliée à une deuxième portion (24b) qui est perpendiculaire audit fond (23) du dit deuxième bras (22) de façon à s'appuyer sur le bord (14a) du goulot (14) depuis lequel ledit bouchon (13) doit être extrait, ladite deuxième portion (24b) étant reliée à une troisième portion (24c) qui a la forme d'un arc de cercle qui descend et remonte par rapport audit fond (23) du dit deuxième bras (22), ladite première portion (24a) agissant comme une butée pour ledit bord (14a) du dit goulot (14).

7. Tire-bouchon à double élément d'appui selon les revendications 5 et 6, **caractérisé en ce que** ladite ouverture (31) est sensiblement rectangulaire et est formée dans la base (18)du dit premier bras (17) et est comprise entre les extrémités libres (20, 26) des dits premier et deuxième bras (17, 22), ladite ouverture (31) formant en outre un évidement en forme d'arc de cercle (32) sur lesdites ailettes mutuellement opposées (19) du dit premier bras (17).

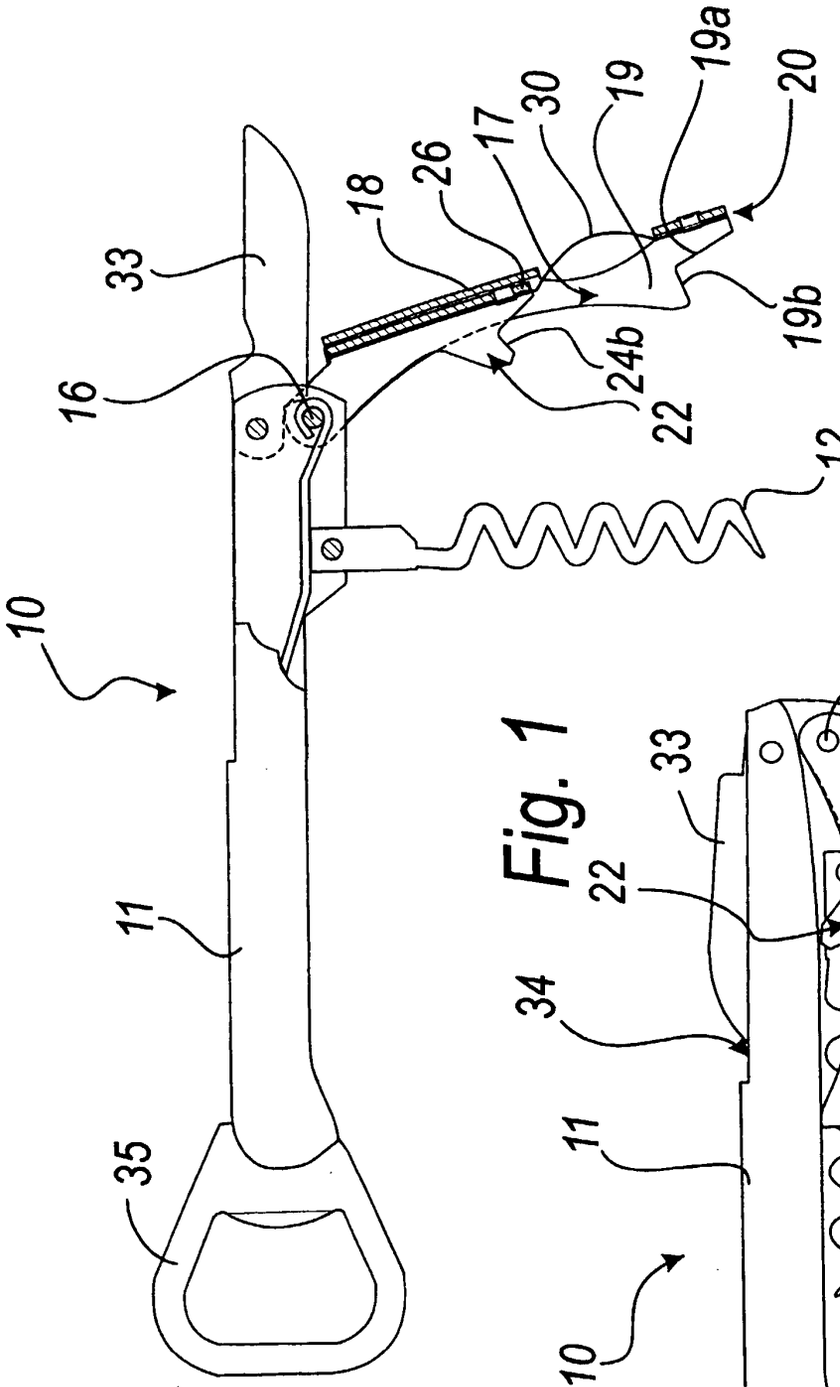

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19a
19b
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24b
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33
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Fig. 1

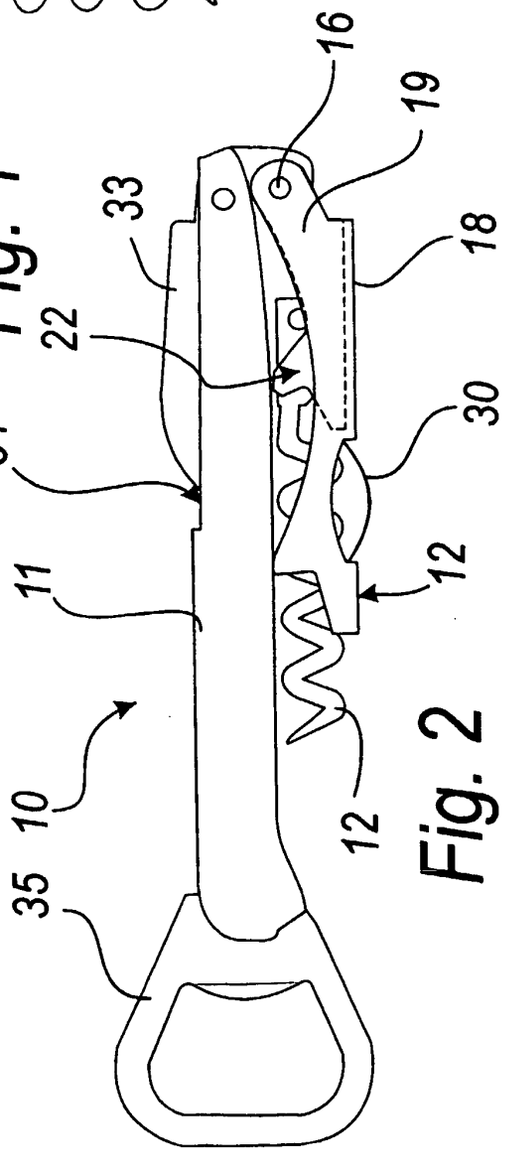

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Fig. 2

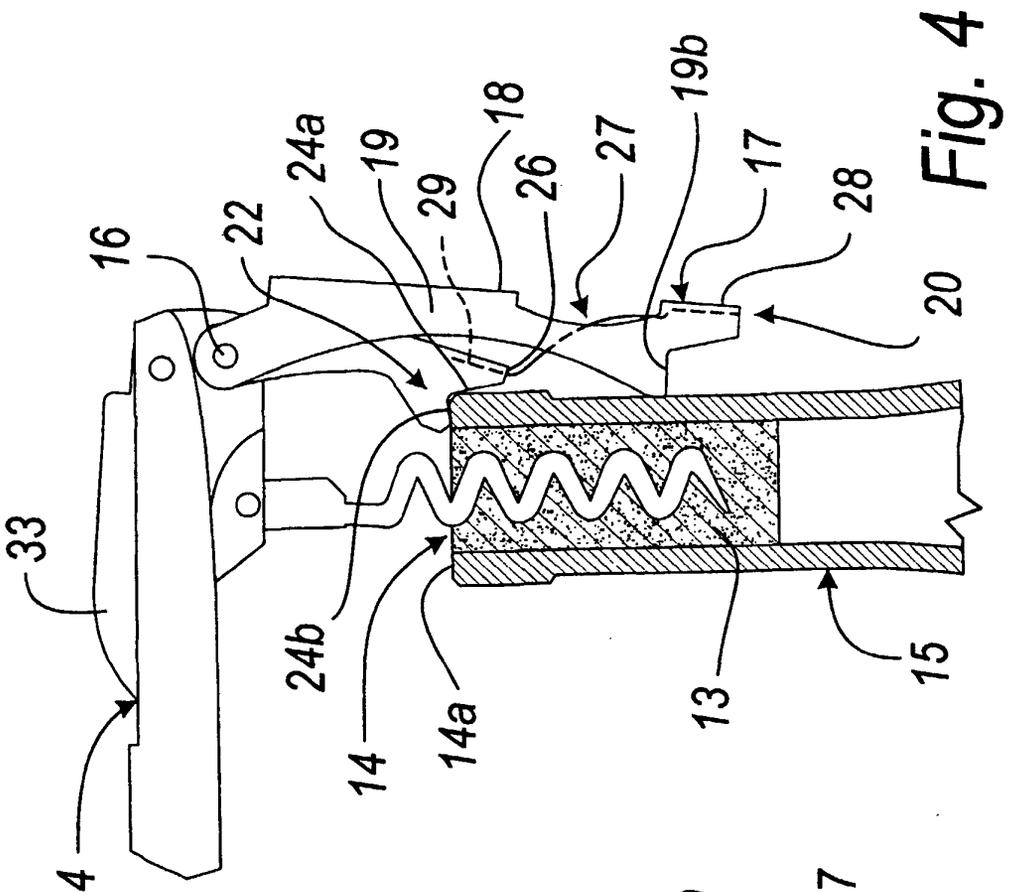

16
22
24a
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26
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19b
17
28
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33
24b
14
14a
13
15
34

Fig. 4

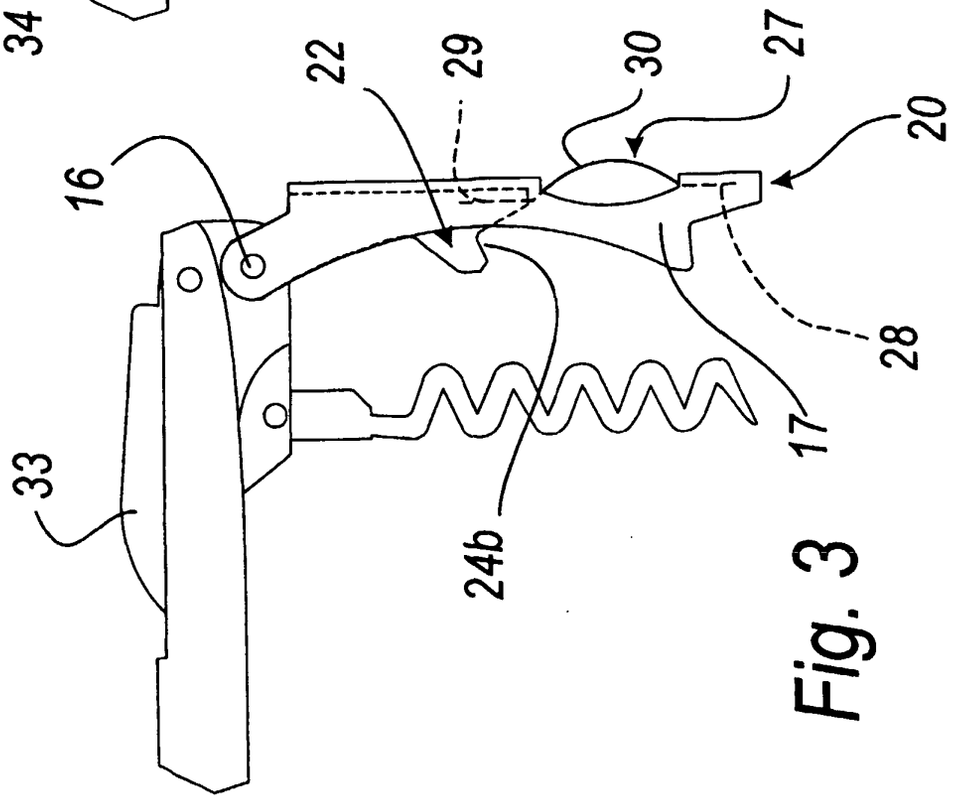

22
29
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27
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16
28
17
33
24b

Fig. 3

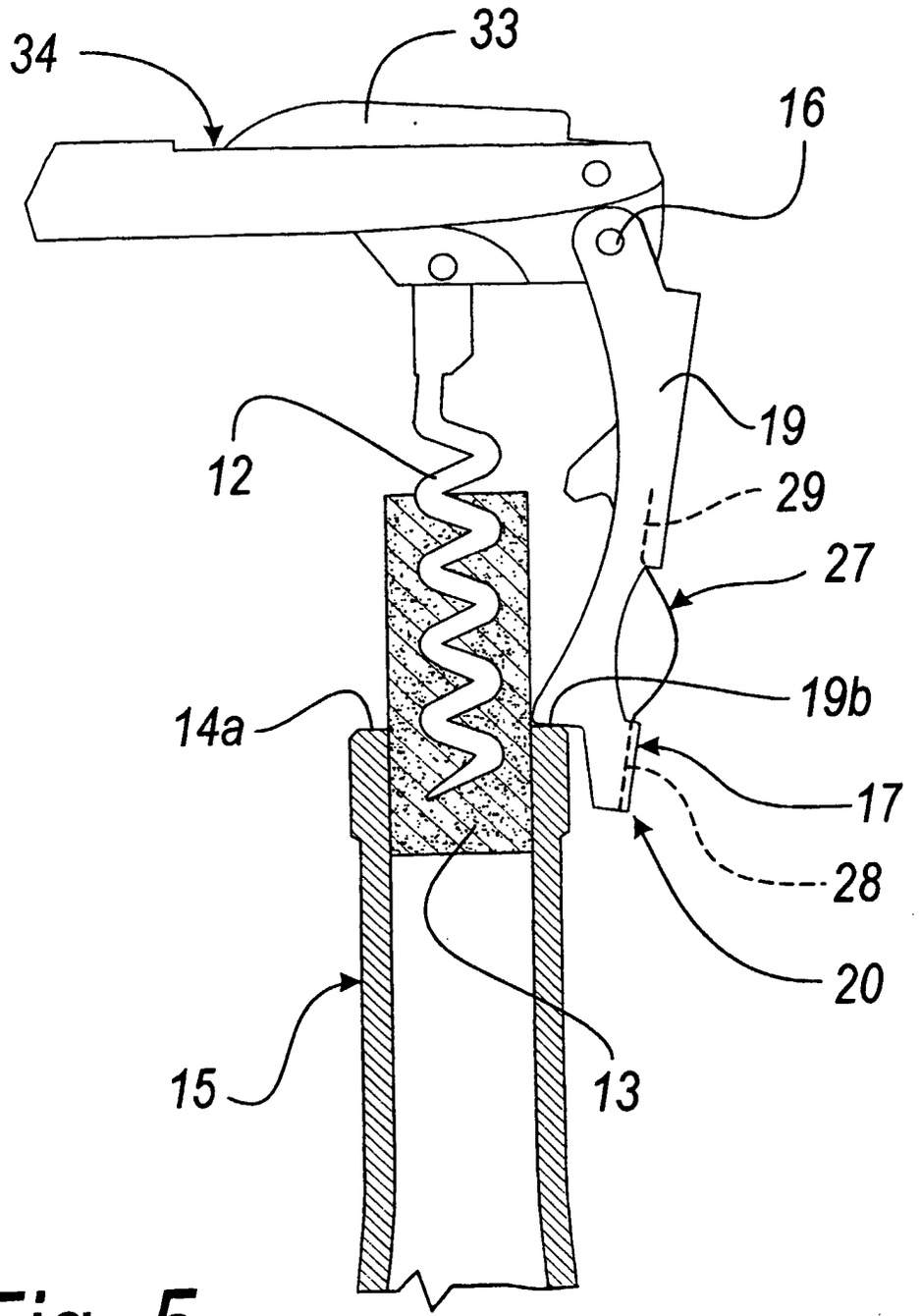


Fig. 5

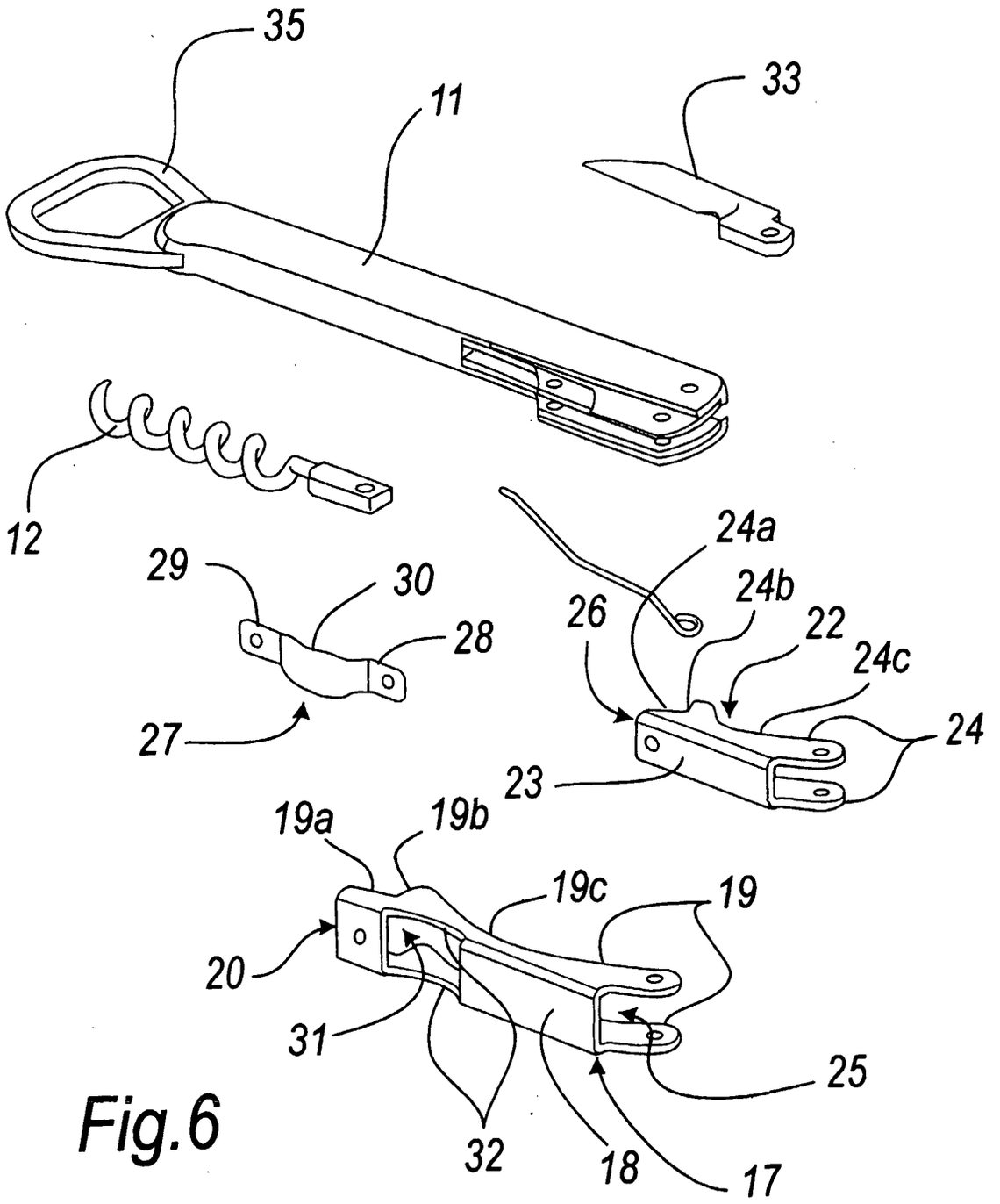

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Fig.6