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(54) **Corkscrew**

(57) A corkscrew comprising:
 a screw member (1) having a first coupling means (13)
 at an end distal to its screw end;
 a handle member (2) having a second coupling means
 (21) at one end;

wherein the handle member (2) is coupled to the screw
 member (1) by said first coupling means (13) for manip-
 ulating the corkscrew when the corkscrew is in use and
 wherein said first coupling means (13) is mated with said
 second coupling means (21) for securing the screw mem-
 ber (1) to the handle member (2) during storage.

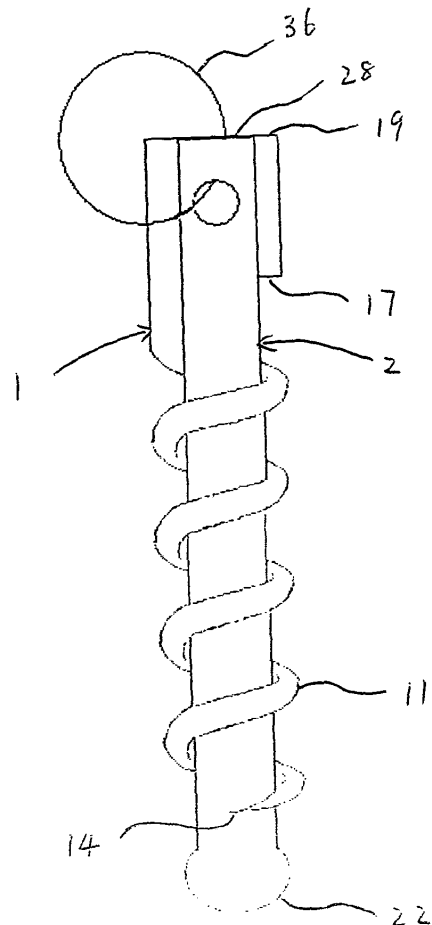


Fig. 3A

Description

[0001] The present invention relates to a corkscrew, and more particularly to a corkscrew which, when not in use, is compact with its component parts coupled together to prevent loss of a part.

[0002] Corkscrews which can be broken down are known. One such known corkscrew is a corkscrew of the peg and worm type where at least the peg is tapered and is insertable part way into the central hole of the screws of the worm (screw) portion for storage. A disadvantage of this prior art arrangement is that the peg portion (which is used as a handle of the corkscrew when the corkscrew is in use) can be accidentally shaken loose and lost.

[0003] A desire of the present invention is to provide a corkscrew to overcome or alleviate the above disadvantage.

[0004] Accordingly the invention provides a corkscrew comprising:

- a screw member having a first coupling means at an end distal to its screw end;
- a handle member having a second coupling means at one end;

wherein the handle member is coupled to the screw member by said first coupling means for manipulating the corkscrew when the corkscrew is in use and wherein said first coupling means is placed in registry with said second coupling means for securing the screw member to the handle member during storage.

[0005] Preferably said first coupling means and said second coupling means are placed in registry by mounting onto a securing means. More preferably said first coupling means and said second coupling means are placed in registry by mounting onto a ring. Yet more preferably the ring is a quick release ring. More preferably the ring is a split ring. Yet more preferably the handle member is insertable within the central hole of the screw member and said end of said handle member having said second coupling means is extendable beyond said screw when so inserted. Yet more preferably each of said coupling means further comprises a hole, and the screw member and the handle member are secured to the ring by passing the ring through said holes when the holes are in registry. Even more preferably the handle member has a ball on the end opposite said second coupling means for sheathing the pointed end of said screw during storage. More preferably said first coupling means is a first key ring mount and wherein said second coupling means is a second key ring mount. Yet more preferably the first coupling means comprises a flat tab portion disposed along the longitudinal axis of the screw, the flat tab portion being placed in registry with a flat portion of said second coupling means during storage for said securing. Even more preferably a body portion of said handle member is cylindrical, and said flat portion of said second coupling means is formed by cutting out from said one end of said

handle member along an axis parallel to the longitudinal axis of said body portion. More preferably said placing in registry is by overlapping of the respective flat portions. Even more preferably the first coupling means further comprises an additional tool element. More preferably said tool element is a bottle opener portion formed on a side surface thereof. More preferably said tool element is a screwdriver portion formed on a side surface thereof. More preferably a screwdriver portion is formed along a top side surface of the tab portion of the screw portion, said screwdriver portion being disposed perpendicular to the longitudinal axis of the screw member.

[0006] A preferred embodiment of the invention is described below by way of example only with reference to Figures 1 to 5B of the accompanying drawings, wherein:

Figure 1 is a side view of a screw member of the corkscrew in accordance with the present invention;

Figure 2A is a side view of a handle member of the corkscrew in accordance with the present invention;

Figure 2B is a further side view of the handle member of Figure 2A;

Figure 2C is yet a further side view of the handle member showing the opposite side of the handle member of Figure 2B;

Figure 3A is a plan view of the corkscrew showing the screw member and the handle member secured together to a ring for storage in accordance with the present invention;

Figure 3B is a (partial) side view of the corkscrew of Figure 3A;

Figure 4 shows a ready-to-use configuration of the corkscrew in accordance with the present invention.

Figure 5A is a side view of the corkscrew showing a bottle opener portion and a screwdriver portion formed thereof.

Figure 5B is a further side view of the corkscrew of Figure 5A.

[0007] Referring to Figure 1, the screw member 1 has a screw portion 11 and a tab portion 12. The tab portion 12 has a bottom surface 17 and a flat face 16 which can be placed in registry with a flat portion 25 (shown in Figure 2A) of a handle member 2 of the corkscrew. Bottom surface 17 faces towards the screw portion. The handle member and the screw member can be secured to each other during storage to avoid loss of one piece. The tab portion 12 is formed with a transverse hole 13 which is registered with a hole 21 (as shown in Figures 2A-2C) of the handle member 2 when the two members are secured

together during storage, which will be illustrated below in conjunction with Figures 3A and 3B. The transverse hole 13 is dimensioned to enable the handle member 2 to be inserted into the transverse hole 13. Preferably the transverse hole 13 is circular.

[0008] Referring to Figure 2A to 2C, the handle member 2 has a main body portion 23 and a ball 22 at one end of the main body portion 23 for sheathing the pointed end 14 of screw portion 11 during storage. The main body portion 23 of the handle member 2 is cylindrical and is dimensioned to be slideably insertable within the central hole of the screw portion 11 of the screw member 1. Preferably the diameter of the cylindrical main body portion of the handle portion is only a little less than the internal diameter of the screw portion 11 of the screw member 1 such that on insertion in the central hole of the screw portion 11, the handle member 2 moves smoothly along the longitudinal axis of the screw portion 11 without substantial divergence from said axis. As can be best seen from Figure 2A, the other end opposite to the ball end of the handle member is cut out along an axis parallel to the longitudinal axis of the handle member to form a flat face 25 and an end face 24 in the shape of a segment of a circle. Preferably said end of the handle member is cut out along the longitudinal axis of the handle member. The angle between the end face 24 and the flat portion 25 is so dimensioned that the flat face 16 and the bottom surface 17 of the screw member 1 are in close contact with the flat face 25 and the end face 24 of the handle member 2 respectively when the corkscrew is in its broken down configuration (as shown in Figures 3A and 3B). The end portion of handle member 2 having flat face 25 has a through hole 21 orthogonal to the longitudinal axis of the handle member 2. The through hole 21 is positioned to be in registry with the transverse hole 13 of the tab portion 12 of screw member 1 when handle member 2 is fully inserted within the screw portion 11 of screw member 1 as shown in Figure 3A.

[0009] Figures 3A and 3B show the corkscrew in its broken down configuration. When the corkscrew is not in use, the handle member is fully inserted within the central hole of the screw portion 11 of the screw member and extends beyond said screw portion 11 until the end face 24 of the handle member 2 abuts against the bottom surface 17 of the tab portion 12 of the screw member 1. The through hole 21 of the handle member 2 is registered with the transverse hole 13 of tab portion 12 of the screw member 1. The end 28 of the handle member 2 is flush with the end 19 of the screw member 1. The length of the main body 23 of the handle member 2 is chosen such that the ball 22 of the handle member 2 is positioned to sheath point 14 of the screw. When the corkscrew is in a user's pocket, the pointed end will neither tear through the pocket nor prick the user.

[0010] In the break down configuration, as shown in Figures 3A and 3B, the flat face 25 of the handle member 2 and the flat face 16 of the screw member 1 engage with and slide over each other. The spatial position of the tab

portion 12 and the size of the cut out portion of the handle member 2 are adjusted such that there is sufficient friction engagement between the respective flat faces, so that even if a user holds the corkscrew vertically, the screw member 1 will not slide off handle member 2 under gravitational force.

[0011] As shown in Figures 3A and 3B, the handle member 2 is secured to the screw member 1 by a securing means, such as a ring 36. The ring 36 passes through the holes to latch the handle member 2 to the screw member 1. The screw member 1 is secured to the handle member 2 by the ring during storage thereby avoiding loss of the handle member 2.

[0012] Preferably the ring 36 is a quick release ring for mounting the broken down corkscrew onto an ordinary key ring. Alternatively the ring 36 is an ordinary key ring of the split ring type. Alternatively again the securing means could be a bolt possibly with a bend in its shaft, or a piece of string with tied ends.

[0013] In other preferred embodiments the broken down corkscrew can be mounted on a chain or an earring for decoration.

[0014] Preferably the broken down corkscrew when mounted on a key ring would have a length similar to the length of an ordinary key such that the corkscrew can be unobtrusively and safely mounted on an ordinary key ring.

[0015] The main body portion 23 of the handle member 1 is not tapered along its longitudinal axis, i.e. the main body portion 23 is cylindrical. As discussed above (see Figure 2A) the central hole of the screw portion 11 is dimensioned such that cylindrical main body portion 23 of the handle member 2 is in substantial engagement with central hole wall of the screw portion 11 when the handle member is inserted into the central hold of the screw portion 11. The handle member 2 and the central hole of the screw member are respectively dimensioned to have diameters such that the respective longitudinal axes of the handle member 2 and the screw member 1 are maintained substantially parallel with each other by mutual engagement when the handle member is inserted into the central hole of the screw portion 11.

[0016] Figure 4 shows the corkscrew positioned ready for use i.e. when the corkscrew is not in its broken down configuration. To use the corkscrew, the handle member is withdrawn from the central hole of the screw 11 and inserted through the hole 13 in the tab portion 12 of the screw member 1 so as to extend at a right angle to the screw member 1 (i.e. the corkscrew is in a substantially "T" shape). The handle member then acts as a cross bar for the corkscrew to facilitate removal of corks from bottles in a conventional manner.

[0017] Preferably the handle member 2 is a close sliding fit within the hole 13 of the tab portion 12 of the screw member 1.

[0018] As shown in Figures 5A and 5B, the bottle opener portion is formed on a side of tab portion 12, and a screwdriver portion is formed on the top side of the tab

portion of the screw portion. Preferably said screwdriver portion is orthogonal to the longitudinal axis of the screw member so that in the break down configuration the screw can be safely hand held to screw the screwdriver blade even if a considerable torque is required. The screwdriver portion can be a standard screwdriver blade or a cross-head screwdriver portion, for example.

[0019] In another embodiment, the transverse hole 13 of the tab portion 12 of the screw member 1 is square shaped. In addition, the handle member may be secured to the screw member for storage via a string or a safety pin for example. Alternatively again the securing means could be a bolt possibly with a bend in its shaft, or a piece of string with tied ends.

[0020] The invention has been given by way of example only, and any various modifications and/or alterations to the described embodiments may be made by the skilled person without departing from the scope of the invention as specified in the appended claims.

Claims

1. A corkscrew comprising:
 - a screw member having a first coupling means at an end distal to its screw end;
 - a handle member having a second coupling means at one end;

wherein the handle member is coupled to the screw member by said first coupling means for manipulating the corkscrew when the corkscrew is in use and wherein said first coupling means is placed in registry with said second coupling means for securing the screw member to the handle member during storage.
2. The corkscrew according to claim 1, wherein said first coupling means and said second coupling means are placed in registry by mounting onto a securing means.
3. The corkscrew according to claim 1, wherein said first coupling means and said second coupling means are placed in registry by mounting onto a ring.
4. The corkscrew according to claim 3, wherein the ring is a quick release ring.
5. The corkscrew according to claim 3, wherein the ring is a split ring.
6. The corkscrew according to any preceding claim wherein the handle member is insertable within the central hole of the screw member and wherein said end of said handle member having said second coupling means is extendable beyond said screw when so inserted.
7. The corkscrew according to any one of preceding claims 3 to 6, wherein each of said coupling means further comprises a hole, and the screw member and the handle member are secured to the ring by passing the ring through said holes when the holes are in registry.
8. The corkscrew according to any preceding claim wherein the handle member has a ball on the end opposite said second coupling means for sheathing the pointed end of said screw during storage.
9. The corkscrew according to any preceding claim, wherein said first coupling means is a first key ring mount and wherein said second coupling means is a second key ring mount.
10. The corkscrew according to any preceding claim, wherein the first coupling means comprises a flat tab portion disposed along the longitudinal axis of the screw, the flat tab portion being placed in registry with a flat portion of said second coupling means during storage for said securing.
11. The corkscrew according to claim 10, wherein a body portion of said handle member is cylindrical, and said flat portion of said second coupling means is formed by cutting out from said one end of said handle member along an axis parallel to the longitudinal axis of said body portion.
12. The corkscrew according to claim 10 or claim 11, wherein said placing in registry is by overlapping of the respective flat portions.
13. The corkscrew according to any preceding claim, wherein the first coupling means further comprises an additional tool element.
14. The corkscrew according to claim 13, wherein said tool element is a bottle opener portion formed on a side surface thereof, or wherein said tool element is a screwdriver portion formed on a side surface thereof.
15. The corkscrew according to claim 10, wherein a screwdriver portion is formed along a top side surface of the tab portion of the screw portion, said screwdriver portion being disposed perpendicular to the longitudinal axis of the screw member.

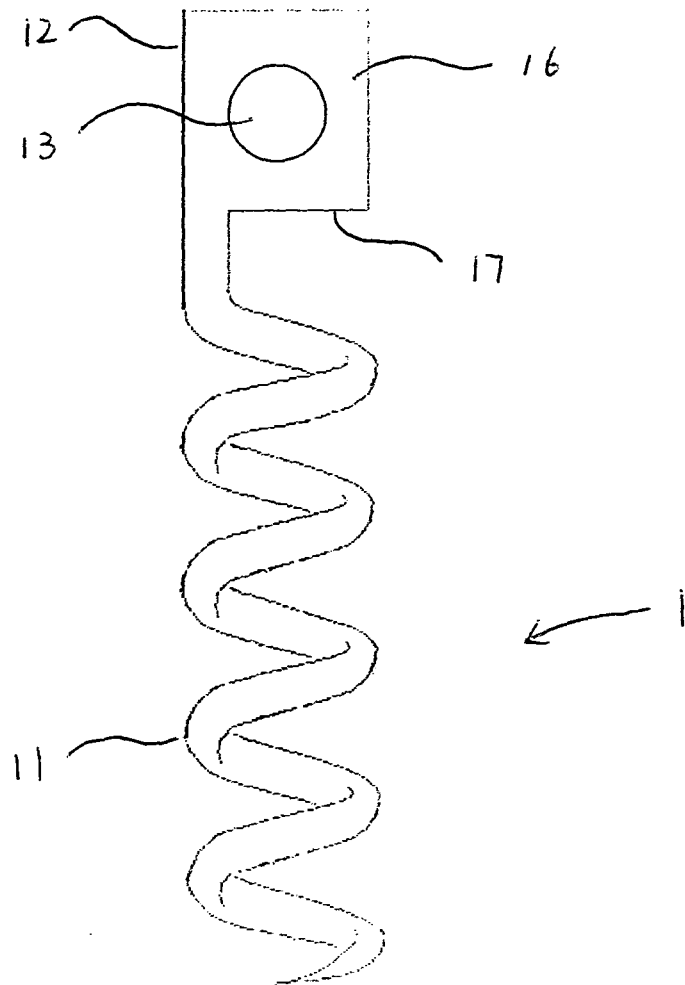


Fig. 1

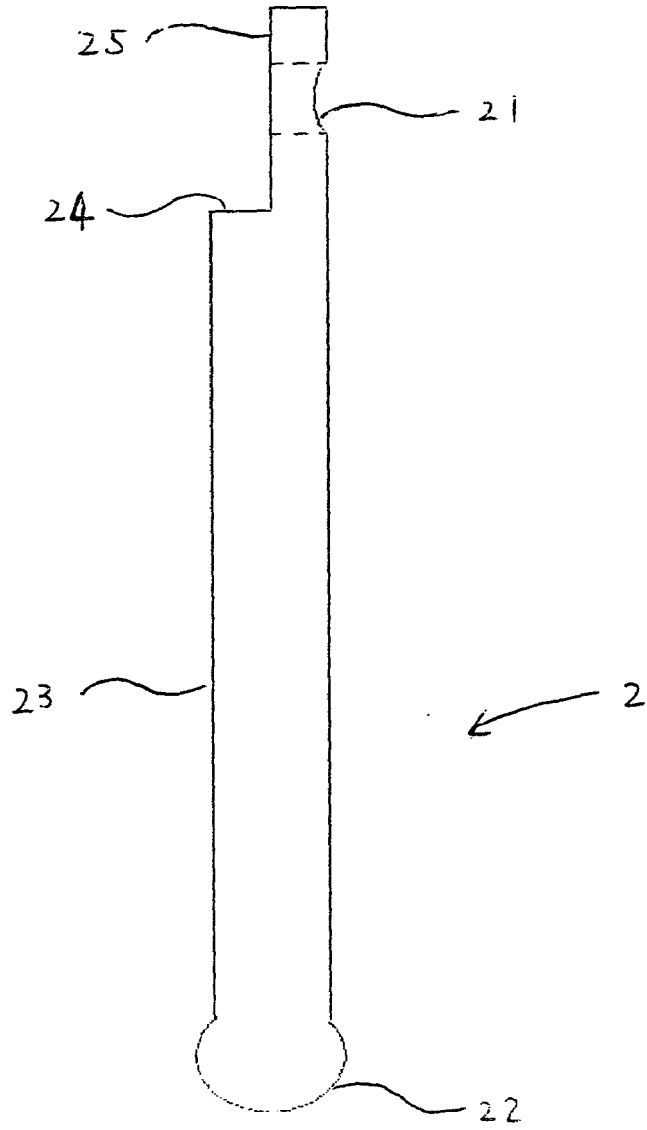


Fig. 2A

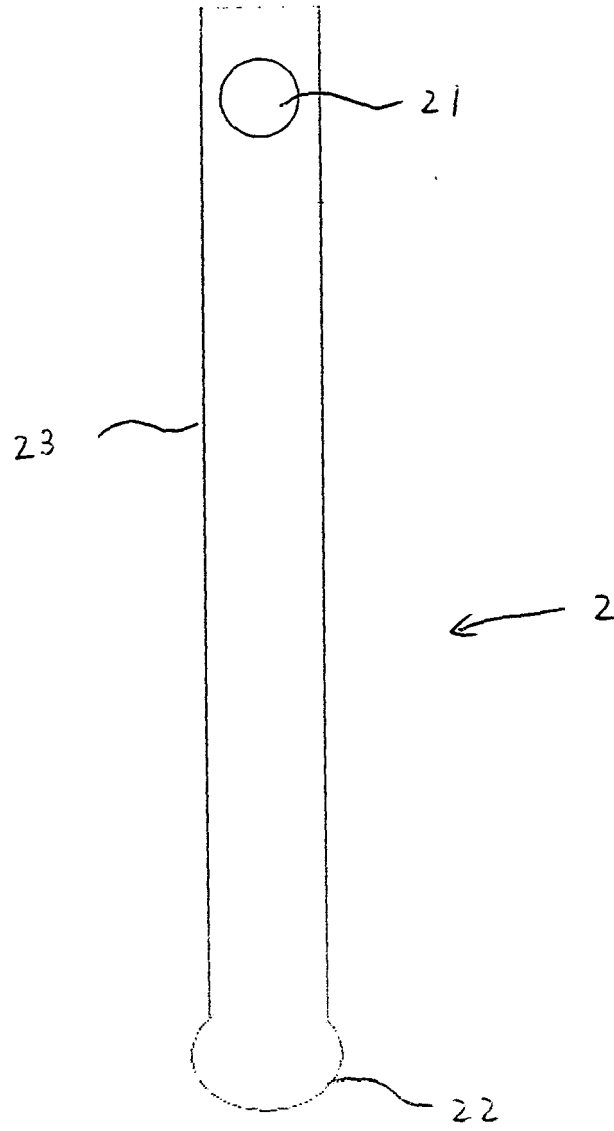


Fig. 2B

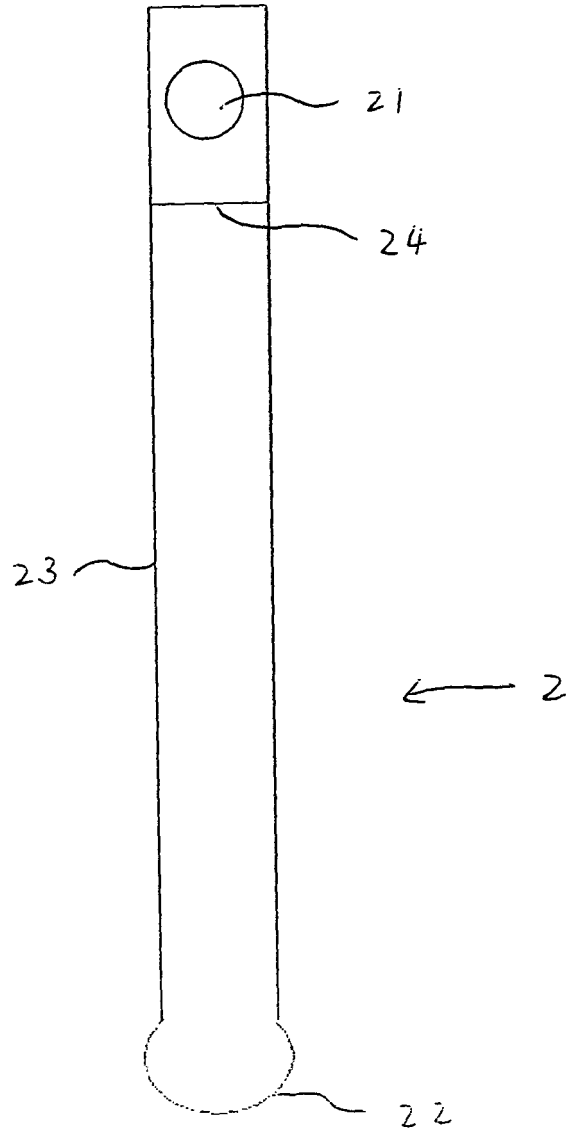


Fig. 2C

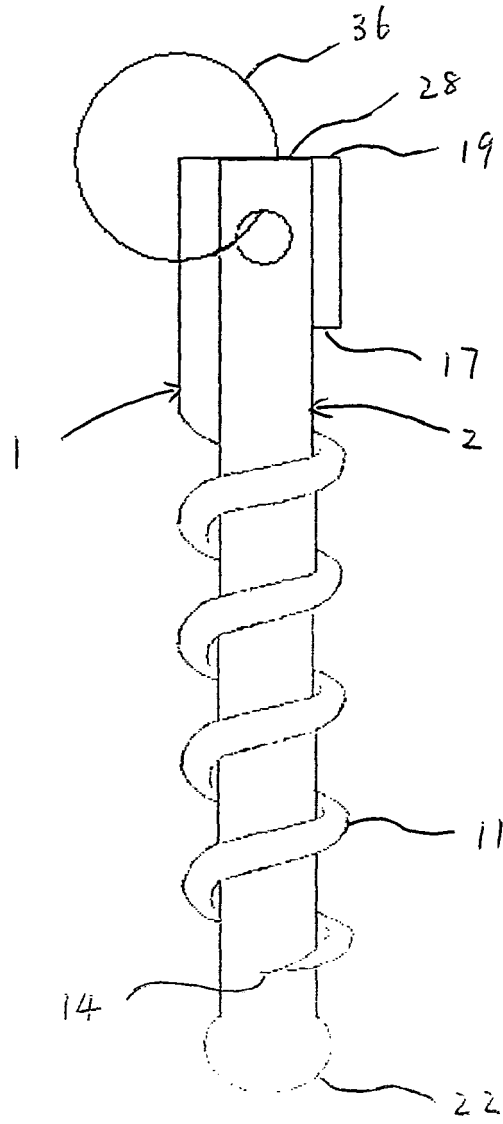


Fig. 3A

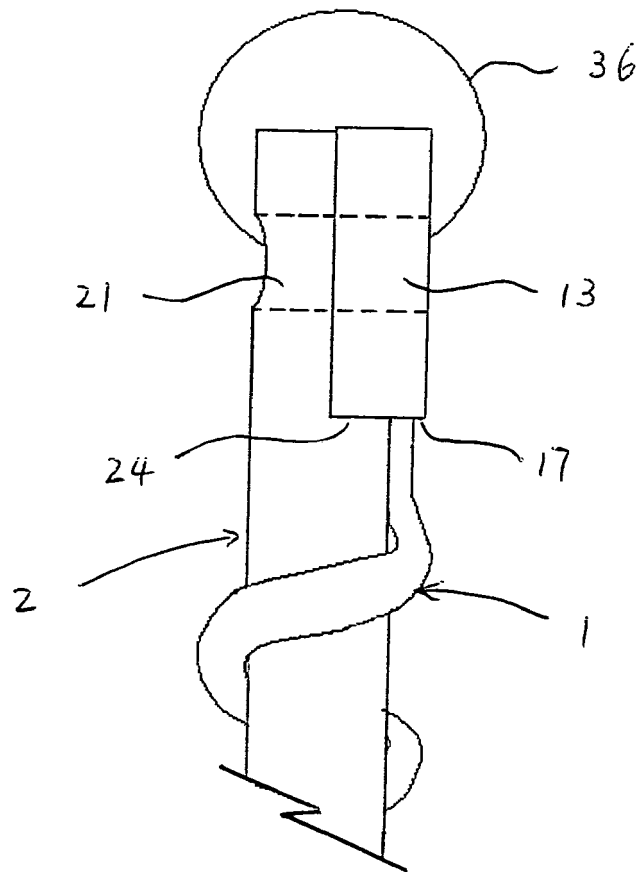


Fig. 3B

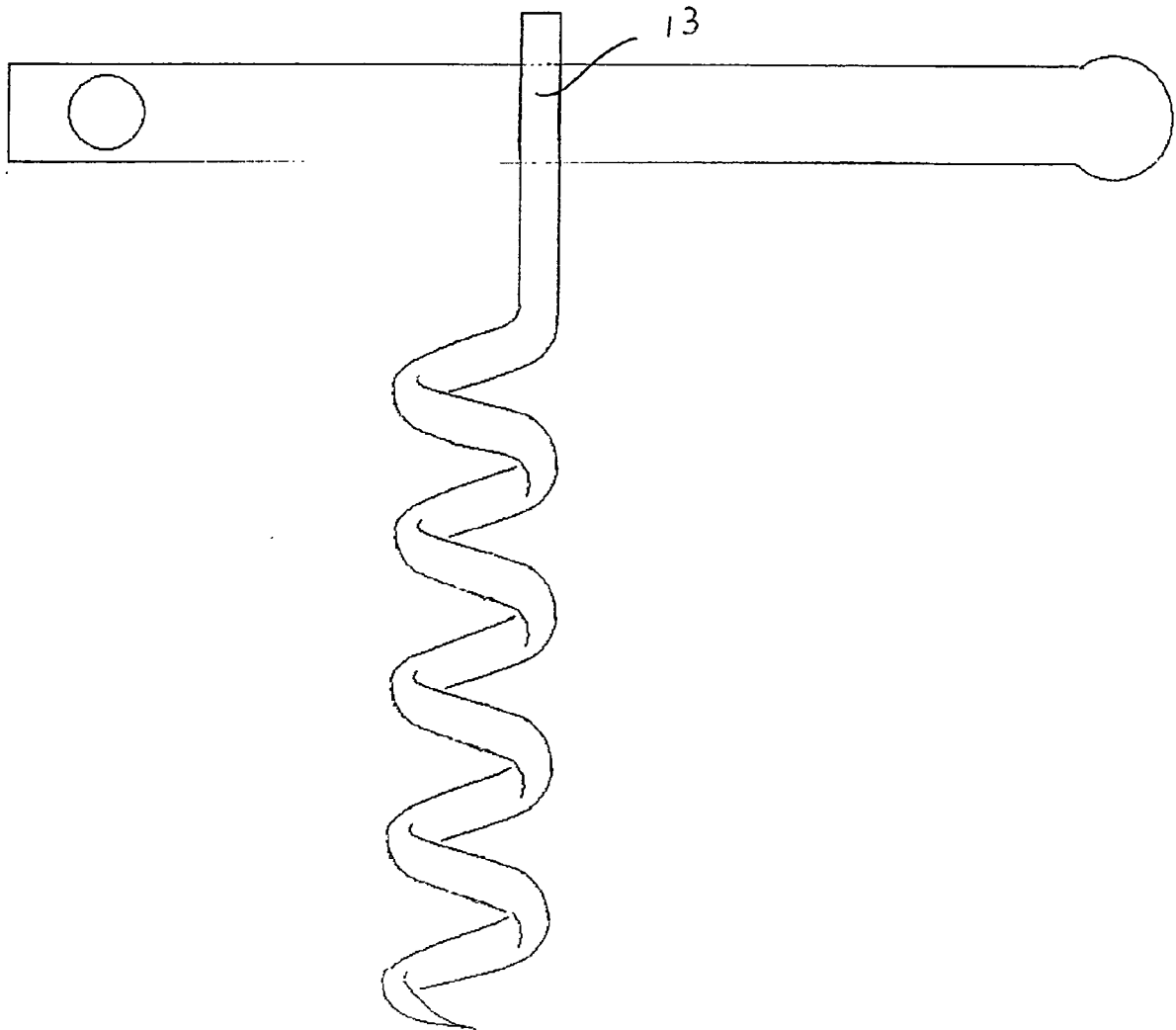


Fig. 4

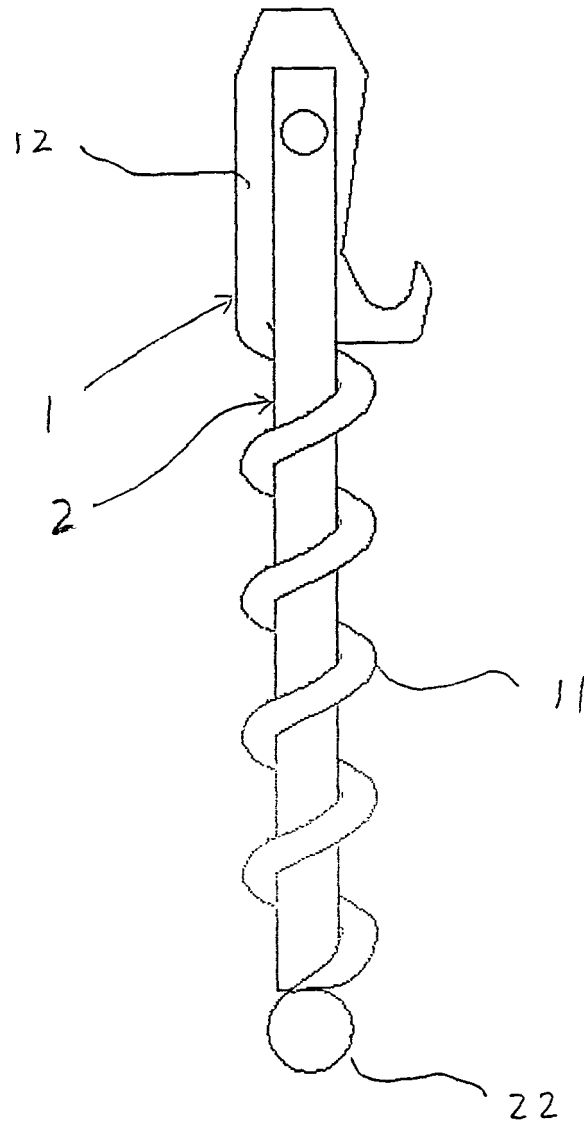


Fig. 5A

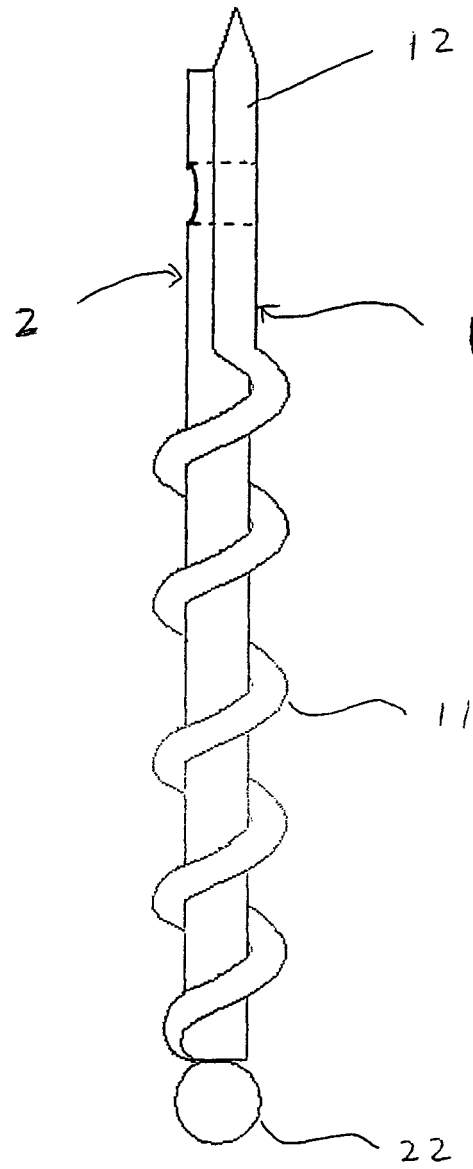


Fig. 5B



EUROPEAN SEARCH REPORT

 Application Number
 EP 09 25 1425

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 203 04 339 U1 (MOLL REINER [DE]) 22 July 2004 (2004-07-22) * figures *	1	INV. B67B7/04
X	FR 2 832 993 A (FECAN FRANCOIS [FR]) 6 June 2003 (2003-06-06) * figures *	1	
X	WO 00/40502 A (METROKANE INC [US]) 13 July 2000 (2000-07-13) * figures 10,14 *	1	
X	US 5 535 644 A (PAUL-ALEXANDRE RAOUL [US] ET AL) 16 July 1996 (1996-07-16) * figures 1,6 *	1	
X	DE 22 104 C (LEBOULLANGER FRÈRES) 15 May 1883 (1883-05-15) * figures 2,5 *	1	
X	FR 2 770 209 A (LEFEBVRE JACQUES [FR]) 30 April 1999 (1999-04-30) * figure 1 *	1	
A	DE 48 166 C (KIND E) 24 August 1889 (1889-08-24)		
A	GB 2 091 227 A (BILLINGS GEOFFREY MARTIN) 28 July 1982 (1982-07-28)		TECHNICAL FIELDS SEARCHED (IPC) B67B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 24 August 2009	Examiner Martínez Navarro, A
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EP 09 25 1425

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24-08-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 20304339 U1	22-07-2004	NONE	
FR 2832993 A	06-06-2003	NONE	
WO 0040502 A	13-07-2000	DE 10083679 T0 GB 2361232 A US 6151992 A	31-01-2002 17-10-2001 28-11-2000
US 5535644 A	16-07-1996	NONE	
DE 22104 C		NONE	
FR 2770209 A	30-04-1999	NONE	
DE 48166 C		NONE	
GB 2091227 A	28-07-1982	NONE	

EPO FORM P0453

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