(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 2 014 158 B9**

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Claims EN 1

(48) Corrigendum issued on:
14.08.2013 Bulletin 2013/33

(45) Date of publication and mention of the grant of the patent:
05.12.2012 Bulletin 2012/49

(21) Application number: **08159603.3**

(22) Date of filing: **03.07.2008**

(51) Int Cl.:
A01K 87/08 *(2006.01)*

(54) **Handle for fishing rod**

Griff für eine Angel

Poignée pour canne à pêche

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

(30) Priority: **12.07.2007 NO 20073599**
30.11.2007 NO 20076177

(43) Date of publication of application:
14.01.2009 Bulletin 2009/03

(60) Divisional application:
12182883.4 / 2 532 229

(73) Proprietor: **Selfors, Robert**
1450 Nesoddtangen (NO)

(72) Inventor: **Selfors, Robert**
1450 Nesoddtangen (NO)

(74) Representative: **Søndersrød, Gunnar Nilsen**
Acapo AS
P.O. Box 1880 Nordnes
5817 Bergen (NO)

(56) References cited:
WO-A1-2007/064217
US-A- 4 051 617
US-A- 6 067 741

EP 2 014 158 B9

Printed by Jouve, 75001 PARIS (FR)

Description

Technical field of the invention

[0001] The present invention relates to a fishing rod, especially fit for fly-fishing, comprising an oblong, thin and elastic body; a reel for a fishing line, seated on the rod at the rear part of the rod; and a gripping device comprising a butt handle arranged on the rear part of the rod in the area where the reel is attached to the rod, the butt handle being connected to the elongate body by means of an angular lever, forming an angle with and being offset the longitudinal axis of the elastic body.

Background of the invention

[0002] Casting with a fishing rod, and a fly rod in particular, is all about managing the casting technique. For the angler it is of importance to "present" a fly as far out from the rod as possible. This requires a good casting technique, using a fishing rod with optimal qualities.

[0003] Casts with conventional double handed fly rods are made using both hands. Today's traditional double handed fly rods are equipped with a fore and a butt handle, where both are connected to the rod's centre axis and longitude.

[0004] The butt handle makes up a part of the rod's rear end, positioned at the rear end of the reel seat of the rod. On conventional, prior art rods, the placement of the butt handle surrounding the centre axis of the rod may cause a detrimental position of the arm in the elbow and shoulder joints, seen in relation to a natural and anatomically correct movement pattern. Through long term use and repeated movements, the detrimental arm position may cause stress and strain injuries.

[0005] In order to create a powerful flick and to make the best possible use of the maximum resilience and elasticity of the rod, the application of force on a double-handed fly rod should mainly be carried out with the lower arm - that is from the butt handle. Most anglers perform an enclosing grip around the butt handle by holding the whole central palm of the hand in contact with the handle. An incorrect position may be caused because the elbow joint is being pushed away from the body at the same time as the shoulder is getting a prominent and strained position.

[0006] The prior art fore handles for fly rods are almost standardized, the actual fore handle being mainly made of cork material or foam rubber. It is common for the prior art fore handles that the handle itself is physically glued in its entire length directly to the oblong, thin and elastic body, often referred to as the "blank". A physically glued handle will contribute to a stiffening of the rear part of the rod. It gives stability, but it will also have a restrictive effect on the resilience and elasticity of the rod, because the blank is physically stiffened in the "glued" area.

[0007] Since the fore grip constitutes an integrated and rigid part of the rod, the elastic motion of the blank will start at the fore end of the handle, farthest away from the end of the rod.

[0008] The power needed for performing a cast with a fly rod is inflicted by hand, and the energy is transferred to the rod at the point of the grip, enclosed by the hand. The power is further transferred to the fly line or the bait/fly through the part of the blank which lies between this point and the top of the rod. The elastic nature of the blank material makes it bend like a bow and receive a potential energy which, once released, will give the fly line and the bait/fly an accelerating motion either forwards or backwards. The part of the blank which is below the point where the hand encloses the grip, will not receive a potential energy/being bent, and will thus not contribute to the acceleration of the bait/fly. The flexibility and resilience of the blank is thereby limited, since essential power reserves of a fishing rod lie in the lower part of the blank.

[0009] US 1,351,473 discloses a fishing rod where the grip is equipped with a handle in the shape of a tubular body. The rearmost end of the blank is fastened inside the rear end of this tubular body, in a way that to a certain extent allows the blank to move relative to the tubular body inside the tubular body. At its open end, the tubular body is provided with a cone shape design.

[0010] WO 2007/064217 describes a fishing rod with an offset handle attached to a flexing angular lever forming an angle with lever. In order to securely hold the rod disclosed in WO 2007/064217, the angler grip around the handle with the thumb on one side and the remaining fingers on around the other side of the side, like gripping around a stick closing the grip tightly in order to securely and effectively hold the fishing rod.

Summary of the invention

[0011] An object of the solution according to the invention is to provide a handle that gives an ideal accuracy and a maximum utilisation of the inherent flexibility of the rod, as well as providing an ergonomically correct grip and casting motion.

[0012] Another object of the solution according to the invention is to provide a butt handle preventing or at least reducing strains on skeleton, tendons and muscles in wrist, shoulder and arm, even for repetitive use during long periods of time.

[0013] Another object of the invention is to provide a rod with a butt handle that improves the grip on the rod, and which being anatomically correct.

[0014] Yet another object of the invention is to provide a fishing rod that enables good casting without requiring the use of great force and a lot of energy, and that improves the resilience and the inherent elasticity of the rod during the casting.

[0015] An additional object of the invention is to provide a fishing rod giving the angler a sense of casting with greater accuracy, since an anatomically designed butt handle will enable a better performance of the rod and the cast.

[0016] Another additional object of the invention is to provide a rod that gives greater acceleration and speed during the actual cast, due to the position and the shape of the handle in relation to the blank, thus giving a longer path of motion in the forward cast.

[0017] Yet another object of the invention is to provide a fishing rod which enables a reduction of the required force necessary to achieve an increased length of the cast, since the resilience and the elasticity of the rod are better exploited.

[0018] Yet an additional object of the invention is to provide a fishing rod where the fore grip of the rod is in a normal distance from the butt handle of the rod, without reducing the rod's inherent resilience and elasticity.

[0019] Another object of the invention is to make longer casts with less use of energy.

[0020] According to the invention, the objects are achieved with a fishing rod as further defined in the characterizing part of claim 1, read in connection with the preamble of the claim.

[0021] Various embodiments of the invention are defined in the dependent claims.

[0022] By developing a butt handle based on human anatomy, the butt handle of the rod will give a better anatomic position of the hand and thus contribute to an anatomically more correct arm movement during the casting. This reduces the strain on arm and shoulder.

[0023] The butt handle is angled in relation to the centre axis of the rod in such a way that the wrist is kept in a natural and relaxed angle as the hand grabs the handle.

[0024] In addition, the handle is placed in a way making the palm of the hand naturally enclosing the handle. This improves distribution of pressure and blood circulation in the palm of the hand and through the arm. It is common knowledge that good circulation reduces the risk of tendonitis and other strain injuries, as well as reducing the risk of cold fingers on cold days.

[0025] Furthermore, the position of the butt handle is positioned offset from the centre axis of the rod.

[0026] Moreover, an anatomically natural position of the arm generates a greater transfer of energy to the cast itself since the position of the arm during the casting movement approximately corresponds to oscillating arm movement during steady walking.

[0027] The position of the butt handle outside the centre axis of the rod allows a longer path of motion between the starting and stopping points during casting. This may in turn facilitate longer casts.

[0028] According to the invention, the butt handle is shaped as an elliptic cylindrical body. The handle may preferably be designed with profiles or surfaces that are adjusted to the palm of the hand and the grip of the fingers. The end face of the butt handle may be rounded.

[0029] The angle between the centre axis of the butt handle and the centre axis of the rod may be in the range between 40 to 70 degrees and preferably within 50 to 60 degrees, ideally around 54 degrees.

[0030] The butt handle is fixed to the blank by means of an angular lever arm, which is attached to the butt handle's backmost end. The angle between the centre axis of the angular lever arm and the centre axis of the butt handle is in the range between 90 to 120 degrees.

[0031] The angular lever arm may have a cross section which is considerably smaller than the cross section of the butt handle, providing space for the thumb to lie as close as possible to the centre of the angular lever arm.

[0032] According to the invention, a fishing rod giving improved casting lengths is obtained. Additionally, a rod giving less strain to the angler's back, shoulder and arms is provided, while casting lengths may be increased without the use of increased force.

[0033] According to the invention, the rod will provide an anatomically better grip than a rod with a round handle because of the elliptical fore handle, which physically fills the palm of the hand in a better way. It also gives the grip a better directional stability during the actual casting. The handle according to the invention may also be used as a handle on surf rods, spinning rods and traditional casting rods.

[0034] According to one embodiment of the invention, the fishing reel is fixed directly to the handle in such a way that the blank is free from physical contact with the surrounding handle as far as the rearmost part of the rod.

Brief summary of the drawings

[0035] One embodiment of the invention shall in the following be described more closely with references to the accompanying drawings, where:

Figure 1 shows a view, partly in section, of the rear part of a fishing rod for fly fishing, equipped with a gripping device according to the invention;

Figure 2 shows in greater detail a view of the butt handle of the gripping device according to a second embodiment of the invention;

Figure 3 shows a general outline of the fore handle on the fishing rod prior to casting;

Figure 4 shows the butt handle according to the invention, and also the angler's grip on the butt handle;

Figure 5 shows an alternative grip around the butt handle, according to the invention;

Figures 6-8 show in detail the lower part of a fishing rod equipped with the gripping device according to the present invention, where the different angles are indicated;

Figure 9 shows a view, partly in section of the lower part of a fishing rod, and

Figure 10 shows a view of the lower part of a fishing rod equipped with a gripping device according to the present invention, and also showing the angler's grip on the butt handle and the fore handle of the gripping device

Detailed description in connection to the drawings

[0036] Figure 1 shows a view of the rear part of a fishing rod 10 for fly fishing, including an oblong, thin and elastic body 11 and equipped with a gripping device 12 comprising a fore handle 13 and a butt handle 14 according to the invention. The rod 10 is further equipped with a reel 16 that contains a line (not shown) rolled up on the reel 16. The reel 16 rotates around an axis 17 located perpendicularly on the longitude axis of the rod 10. The reel 16 is attached to the rod 10 by means of conventional fasteners, well known to a person skilled in the art, such as axially movable rings on the rod 10 and levers on the seat of the reel 16.

[0037] The butt handle 14 is attached to the end of an angular lever arm 15 in such a way that the centre axis of the butt handle 14 forms an angle α with the centre axis of the rod 10, said angle being in the range of approximately 40 to 70 degrees and preferably within 50 to 60 degrees, ideally around 54 degrees. As indicated in the Figure, the butt handle 14 is in the shape of an elliptic cylindrical body.

[0038] Figure 2 shows a close-up perspective of the rear part of the rod 10, equipped with a butt handle 14 according to the invention. As shown in Figure 2, the butt handle 14 is fastened to the rod 10 by way of an angular lever arm 15. The lever arm 15 is configured in such a manner that the butt handle 14 is located in the same plane as the reel 16 and line guides (not shown) fastened on the rod 10 in front of the reel 16. Furthermore, according to the embodiment shown, the lever arm 15 is configured so that even the lever arm 15 is located in the plane mentioned above.

[0039] The Figures 3-5 show the rod 10 with the angler 30 handling the rod 10. Figure 3 shows a situation where the angler 30 only grips the handle 13 with his right hand 31, while Figure 4 shows a situation where the angler grips the fore handle 13 with his right hand and with his left hand 32 he grips the butt handle 14. Figure 4 shows one firm grip around the butt handle 14, while Figure 5 shows an alternative grip around the butt handle 14.

[0040] As shown, the angled butt handle 14 is designed so as to fit naturally into the palm of the hand 32. The actual forward cast may be performed with mainly two grips, - i) by holding a steady, enclosing grip where the thumb is on top (ref. Figure 4), or ii) by holding a two-finger grip through drawing back with the fore and middle fingers upon forward casting, ref. Figure 5.

[0041] Both of these gripping positions will give the rear casting arm an anatomically correct arm position in elbow and shoulder joints.

[0042] Figures 6-8 show in detail the rear part of a fishing rod 10 equipped with the butt handle 14 according to the present invention, where various angles used are indicated. As shown in Figure 6, the rod 10 is equipped at its rear end with a reel 16 and an angular lever arm 15, which at its bottommost end is equipped with a handle 14. The angular lever arm 15 forms an angle a with the longitudinal axis of the rod 10. This angle may approximately be between 5 degrees and 40 degrees, preferably between 10 degrees and 25 degrees and ideally around 18 degrees.

[0043] As shown in Figure 7, the centre axis of the butt handle 14 creates an angle φ with the longitudinal axis of the angular lever arm 15. This angle is between 90 to 120 degrees, while in figure 8 it is apparent that an angle β is formed between the centre axis of the fishing rod 10 and the centre axis of the handle 14. This angle is of a size between 40 to 70 degrees, preferably between 50 to 60 degrees and ideally around 54 degrees. The angle β is essential for the angler, because this corresponds to the placement and angle of his/her hands.

[0044] The position of the butt handle 14 in relation to the rod 10 will create a 7-10 cm longer path of motion in the forward cast compared to traditional fishing rods. This is particularly favourable in the case of a so-called spey cast, and will give a greater acceleration and speed to the cast itself.

[0045] The actual cast is performed with two hands, 31, 32, with the energy and path of motion mainly being created from the butt handle 14, because the greatest resilience lies in the rear part of the blank 11. By using the clock as a reference (12 o'clock is rod straight up, 9 o'clock flat forward, 3 o'clock flat backwards), one may say that the cast oscillates between 10 o'clock and 2 o'clock (stopping point between forward and back casts). The forward cast starts in the rear position (approximately 2 o'clock). The rear hand 32 grips the butt handle 14, pulling it towards the body with an accelerating movement, and stopping abruptly when touching the lower abdominal area. The top of the rod 10 is flung in an accelerating movement forward and stops at approximately 10 o'clock, pointing forward. The arm gripping the fore handle should keep its elbow joint locked in an angle of approximately 90 degrees during the whole casting motion, and pivot around the axis of the shoulder joint. As mentioned earlier, the essential energy is applied with the lower hand.

[0046] Additionally, the prominent position of the butt handle 14 results in a shorter path of motion in the back cast in traditional overhead cast, making it easier make an early stop in the rear "2 o'clock" position. This creates an additional advantage in that the line is being stretched out in a higher initial position, avoiding hitting the ground or the bushes behind the angler.

[0047] It should be mentioned that the grip shown in Figure 4 facilitates the maximum use of force, while the grip shown in Figure 5, described as the finger grip, is intended for maximum precision.

[0048] The angled lever arm 15 of the butt handle 14 is narrowing in its lower part, the transition to the actual handle, in order to give space for an ideal placement of the thumb, especially, but not exclusively, by use of a thumb grip with the thumb on top.

[0049] It should be mentioned that the fishing line (not shown) may be equipped with backing, shooting line,

shooting head and leader. Since none of these items form part of the invention, and since such items are well known to a person skilled in the art, these are not shown and will not be described. Moreover, it should be mentioned that the fishing rod 10 is further equipped with line guides, through which the line runs. These are not a part of the invention either, and will thus not be described any further.

[0050] Even though the Figures 2-5 and 9-10 show a lever arm 15 with a circular cross section it may be of interest to use a lever arm 15 that has a rectangular low-width cross section, in order to allow the placement of the thumb as close to the centre line of the lever arm 15 as possible, and where the height of the cross section of the leverarm 15 is chosen to give the greatest possible strength. To reduce the weight without reducing the strength, the lever arm 15 may possibly be perforated or equipped with laterally arranged openings.

Claims

1. Fishing rod (10), comprising an oblong, thin and elastic body (11); a reel (16) for a fishing line, seated on the rod (10) at the rear part of the rod (10); and a gripping device (12) comprising a butt handle (14) arranged on the rear part of the rod (10) in the area where the reel (16) is attached to the rod (10), the butt handle (14) being connected to the elongate body (11) by means of an angular lever (15), forming an angle with and being offset the longitudinal axis of the elastic body (11), the butt handle (14) being attached to the lever (15) of the elongate body (11), **characterized in that** the butt handle (14) has an approximately elliptic cylindrical form with a longitudinal axis which is transverse with respect to the angular lever (15), intended to lie naturally in the palm of the hand of an angler, and **in that** the longitudinal axis of the nearly elliptic cylindrical body forms an angle φ with the angular lever (15), which is in the region of 90 to 120 degrees.

2. Fishing rod (10) according to claim 1, wherein the longitudinal axis of the butt handle (14) forms an angle β with the longitudinal axis of the rod (10).

3. Fishing rod (10) according to claim 1 or 2, where the nearly elliptic cylindrical body is formed with traces or surfaces that are adjusted to the palm of the hand and the finger grip.

4. Fishing rod (10) according to one of the claims 1-3, where the nearly elliptic cylindrical body is broadest at the end that points away from the rod.

5. Fishing rod (10) as indicated in one of the claims 1-4, where the angular lever (15) is fastened to the butt handle (14) at the rear end of the handle (14).

6. Fishing rod (10) as indicated in one of the claims 1-5, where the angle β between the angular lever (15) and the centre axis of the rod (10) is between 5 to 40 degrees.

7. Fishing rod (10) according to claim 6, where the angle β is around 10 to 25 degrees.

8. Fishing rod (10) according to one of the claims 1-7 where the mentioned angular lever (15) has a cross section which is considerably smaller than the cross section of the fore handle (13) and/or the cross section of the nearly elliptic cylindrical body (14).

9. Fishing rod (10) according to one of the claims 1-8 where the gripping device (12) is configured to facilitate several different grips, depending on the angler and on phase of the cast.

Patentansprüche

1. Angelrute (10) umfassend einen länglichen, dünnen und elastischen Körper (11); einen Aufroller (16) für eine Angelschnur, der an der Rute (10) am hinteren Teil der Rute (10) sitzt; und eine Griffvorrichtung (12) umfassend ein, am hinteren Teil der Rute (10) in dem Bereich, an dem der Aufroller (16) an der Rute (10) angeordnet ist, angeordneten Handgriff (14), der mit der Rute (10) über einen gekanteten Hebel (15), der einen Winkel mit der Längsachse des elastischen Körpers (11) einschließt, verbunden ist, und der gegenüber der Längsachse des elastischen Körpers (11) versetzt ist, wobei der Handgriff (14) an dem Hebel (15) des länglichen Körpers (11) befestigt ist,
dadurch gekennzeichnet, dass
der Handgriff (14) eine im wesentliche elliptisch zylindrische Form mit einer Längsachse hat, die schräg zum gekanteten Hebel (15) ist, um auf natürlicher Weise in der Handfläche der Hand eines Anglers zu liegen, wobei die Längsachse der nahezu elliptisch zylindrischen Körpers einen Winkel φ mit dem gekanteten Hebel (15) einschließt, der in dem Bereich zwischen 90 und 120 Grad liegt.

2. Angelrute (10) nach Anspruch 1, wobei die Längsachse des Handgriffs (14) einen Winkel β mit der Längsachse der Rute (10) einschließt.

3. Angelrute (10) nach Anspruch 1 oder 2, wobei der nahezu elliptisch zylindrische Körper mit Spuren oder Flächen geformt ist, die an die Handfläche der Hand und die Fingerhaltung angepasst sind.

4. Angelrute (10) nach einem der Ansprüche 1 bis 3, wobei der nahezu elliptisch zylindrische Körper an dem von der Rute wegweisenden Ende am breite-

sten ist.

5. Angelrute (10) nach einem der Ansprüche 1 bis 4, wobei der gekantete Hebel (15) am Handgriff (14) am hinteren Ende des Griffs (14) befestigt ist.

6. Angelrute (10) nach einem der Ansprüche 1 bis 5, wobei der Winkel β zwischen dem gekanteten Hebel (15) und der Mittelachse der Rute (10) zwischen 5 und 40 Grad ist.

7. Angelrute (10) nach Anspruch 6, wobei der Winkel β um die 10 bis 25 Grad beträgt.

8. Angelrute (10) nach einem der Ansprüche 1 bis 7, wobei der gekantete Hebel (15) einen Querschnitt aufweist, der deutlich geringer ist als der Querschnitt des vorderen Griffs (13) und/oder der Querschnitt des nahezu elliptisch zylindrischen Körpers (14).

9. Angelrute (10) nach einem der Ansprüche 1 bis 8, wobei die Griffvorrichtung (12) dazu ausgebildet ist, mehrere verschiedene Griffe zu ermöglichen, abhängig vom Angler und von der Wurfphase.

Revendications

1. Canne à pêche (10), comprenant un corps oblong, fin et élastique (11) ; un moulinet (16) pour une ligne de pêche, assis sur la canne (10) au niveau de la partie arrière de la canne (10); et un dispositif de préhension (12) comprenant une poignée crosse (14) agencée sur la partie arrière de la canne (10) dans la zone où le moulinet (16) est attaché à la canne (10), la poignée crosse (14) étant reliée au corps allongé (11) au moyen d'un levier angulaire (15), formant un angle avec et étant décalé de l'axe longitudinal du corps élastique (11), la poignée crosse (14) étant attachée au levier (15) du corps allongé (11), **caractérisée en ce que** la poignée crosse (14) a une forme cylindrique approximativement elliptique avec un axe longitudinal qui est transversal par rapport au levier angulaire (15), destinée à reposer naturellement dans la paume de la main d'un pêcheur/d'une pêcheuse à la ligne, et **en ce que** l'axe longitudinal du corps cylindrique quasi elliptique forme un angle φ avec le levier angulaire (15), qui est dans la région de 90 à 120 degrés.

2. Canne à pêche (10) selon la revendication 1, dans laquelle l'axe longitudinal de la poignée crosse (14) forme un angle β avec l'axe longitudinal de la canne (10).

3. Canne à pêche (10) selon la revendication 1 ou 2, où le corps cylindrique quasi elliptique est formé avec des traces ou des surfaces qui sont ajustées à la paume de la main et à la prise de doigts.

4. Canne à pêche (10) selon l'une des revendications 1 à 3, où le corps cylindrique quasi elliptique est le plus large au niveau de l'extrémité qui est orientée en éloignement de la canne.

5. Canne à pêche (10) selon l'une des revendications 1 à 4, où le levier angulaire (15) est fixé à la poignée crosse (14) au niveau de l'extrémité arrière de la poignée (14).

6. Canne à pêche (10) selon l'une des revendications 1 à 5, où l'angle β entre le levier angulaire (15) et l'axe central de la canne (10) est entre 5 et 40 degrés.

7. Canne à pêche (10) selon la revendication 6, où l'angle β est d'environ 10 à 25 degrés.

8. Canne à pêche (10) selon l'une des revendications 1 à 7, où le levier angulaire mentionné (15) a une section qui est considérablement plus petite que la section de l'avant-poignée (13) et/ou de la section du corps cylindrique quasi elliptique (14).

9. Canne à pêche (10) selon l'une des revendications 1 à 8, où le dispositif de préhension (12) est configuré pour faciliter plusieurs prises différentes, en fonction du pêcheur/de la pêcheuse à la ligne et de la phase du lancer.

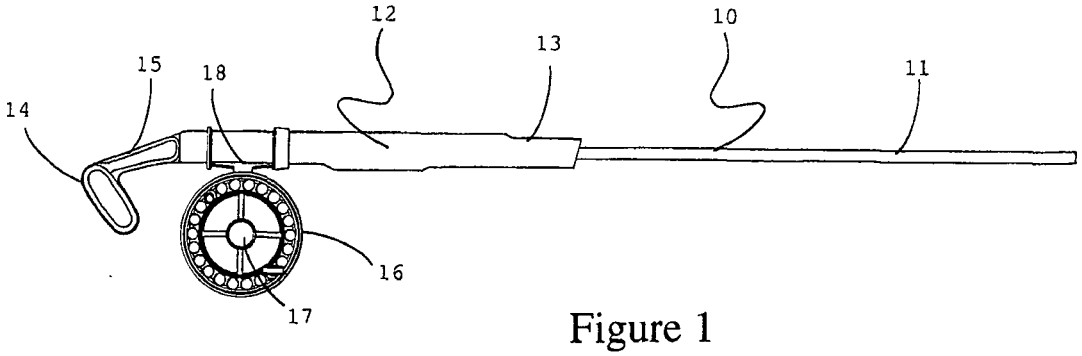

Figure 1

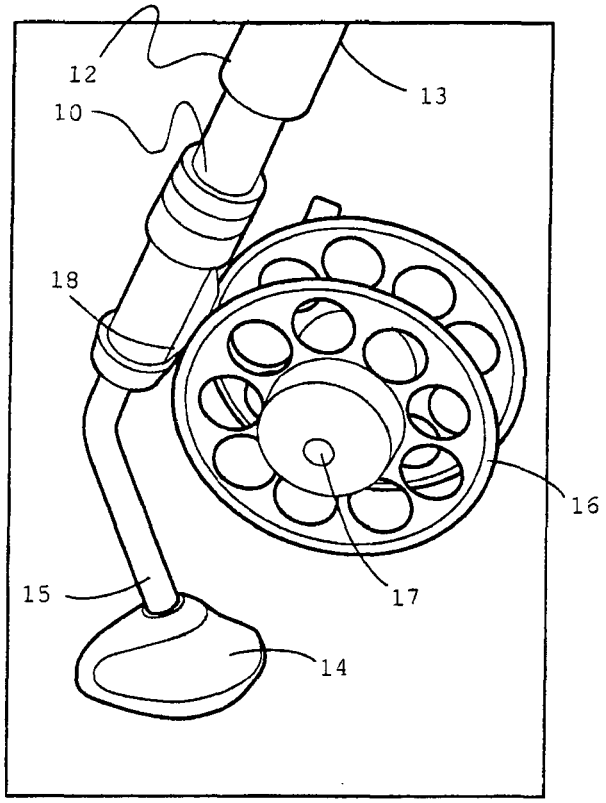

Figure 2

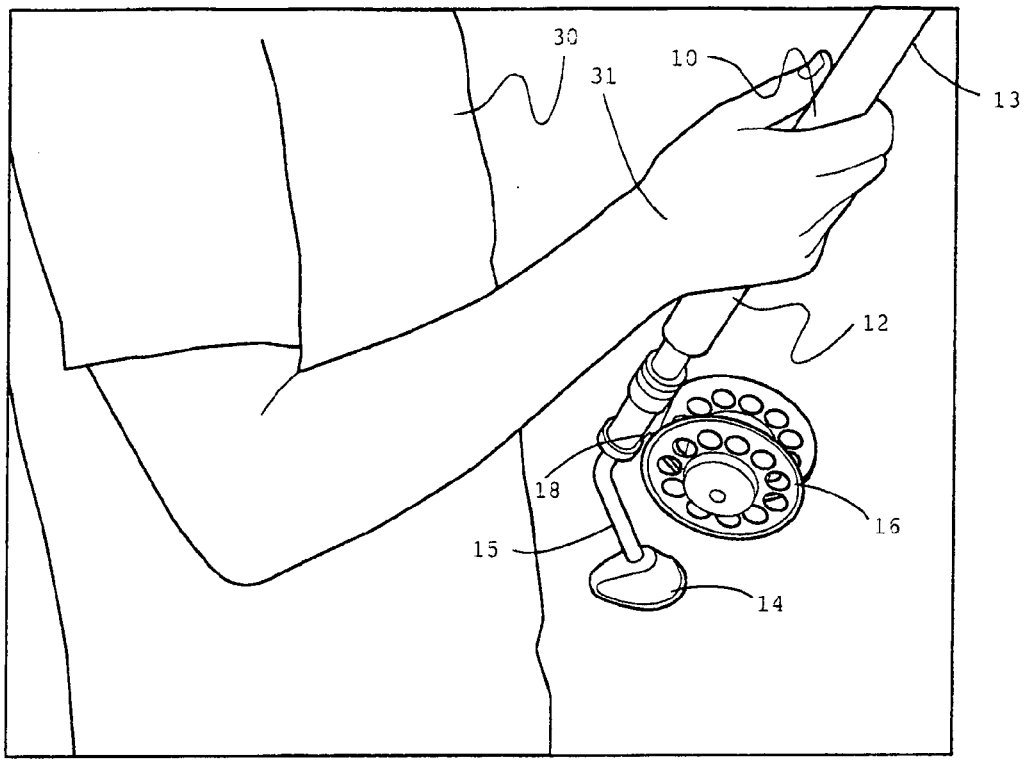

Figure 3

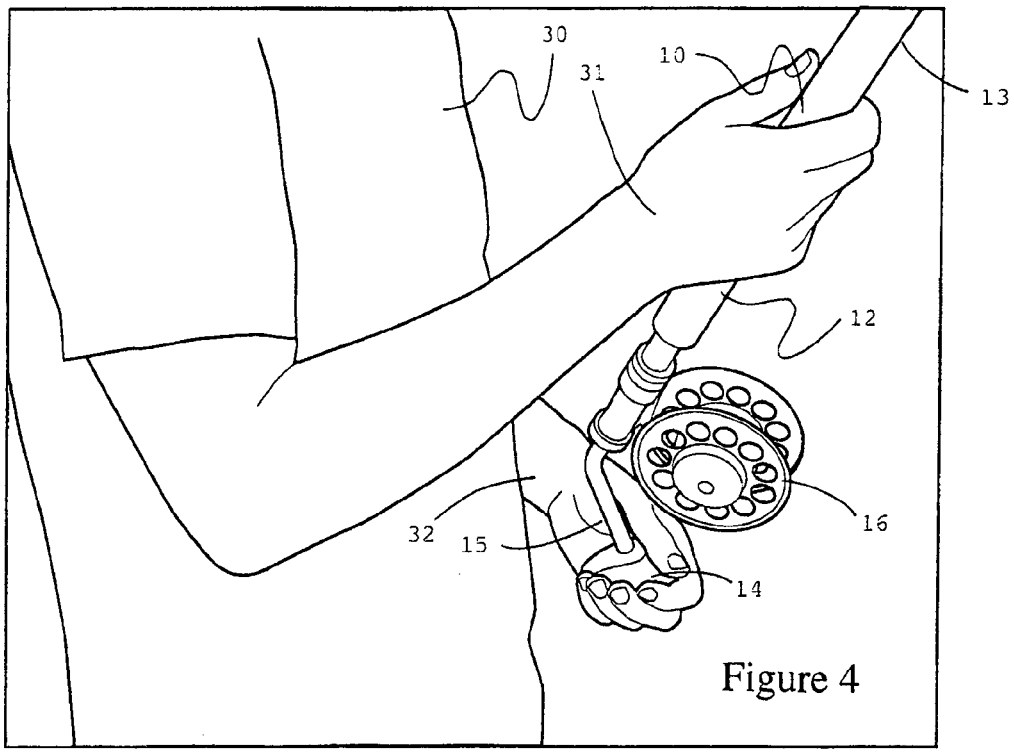

Figure 4

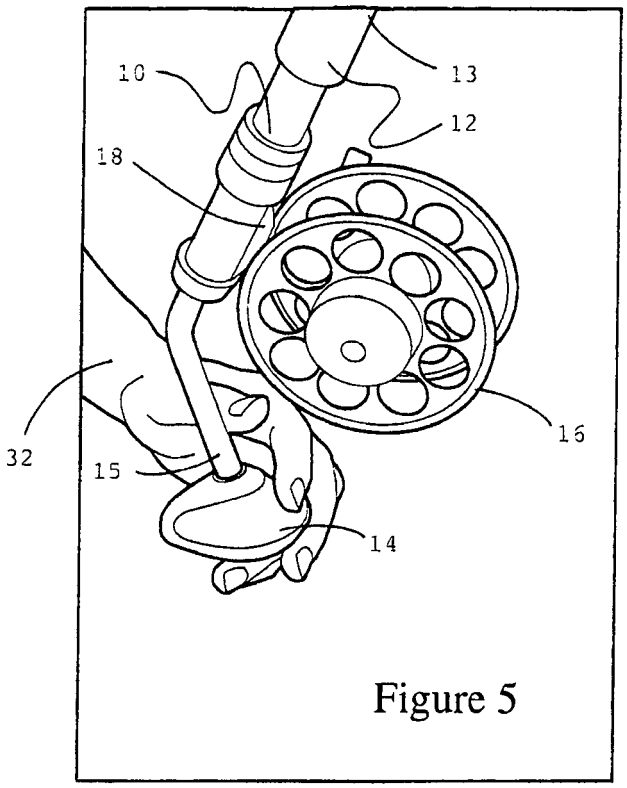

Figure 5

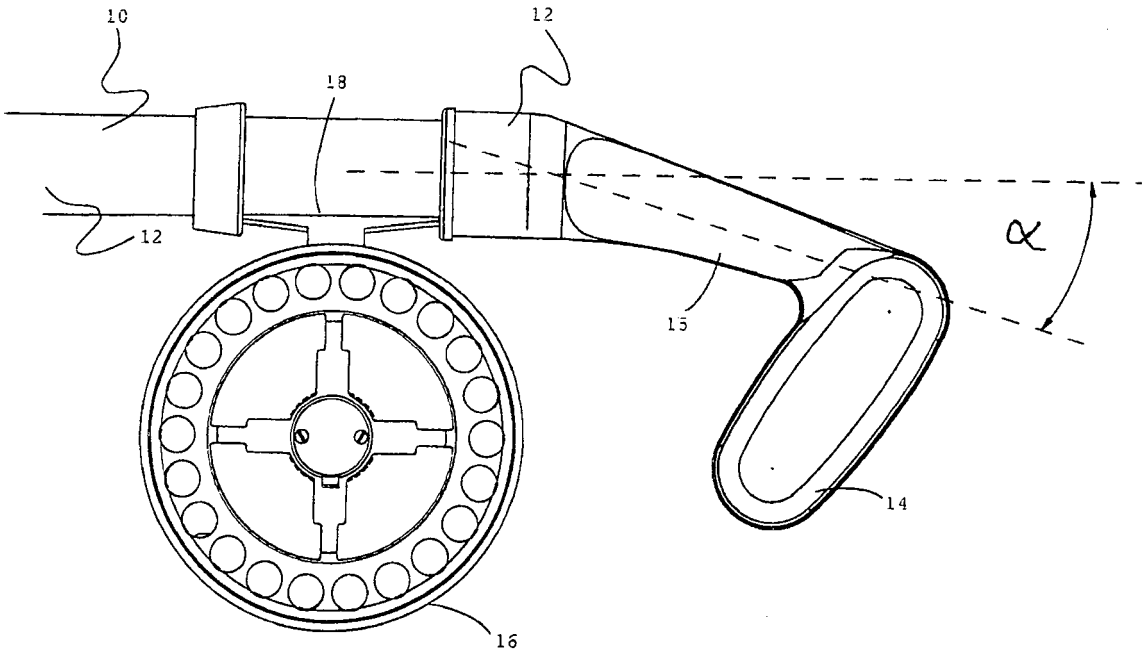

Figure 6

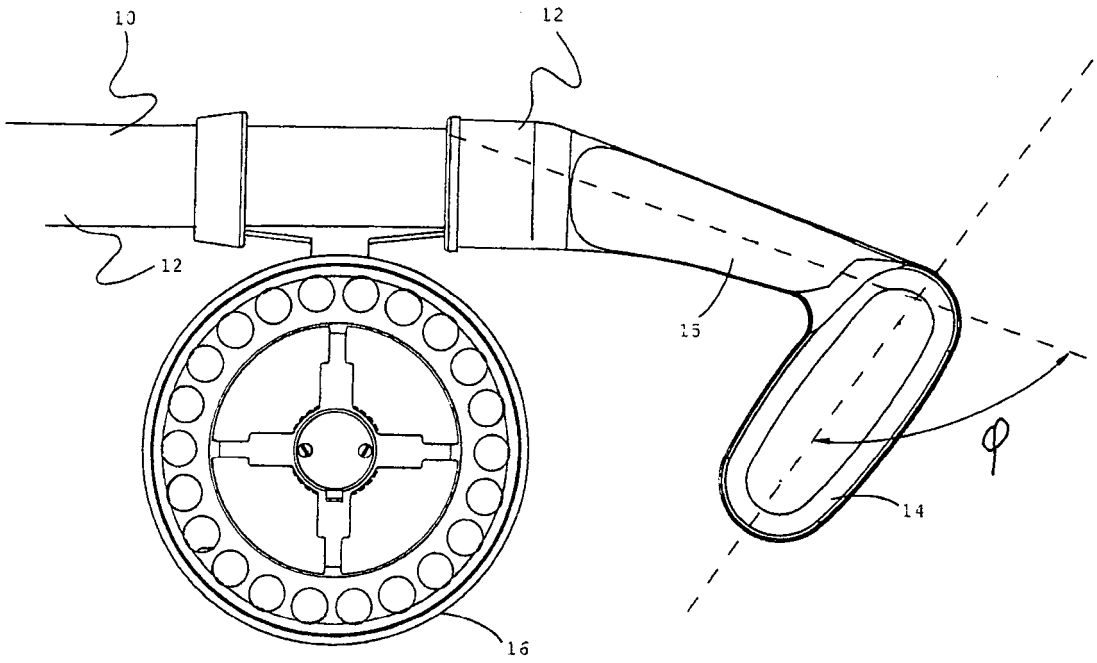

Figure 7

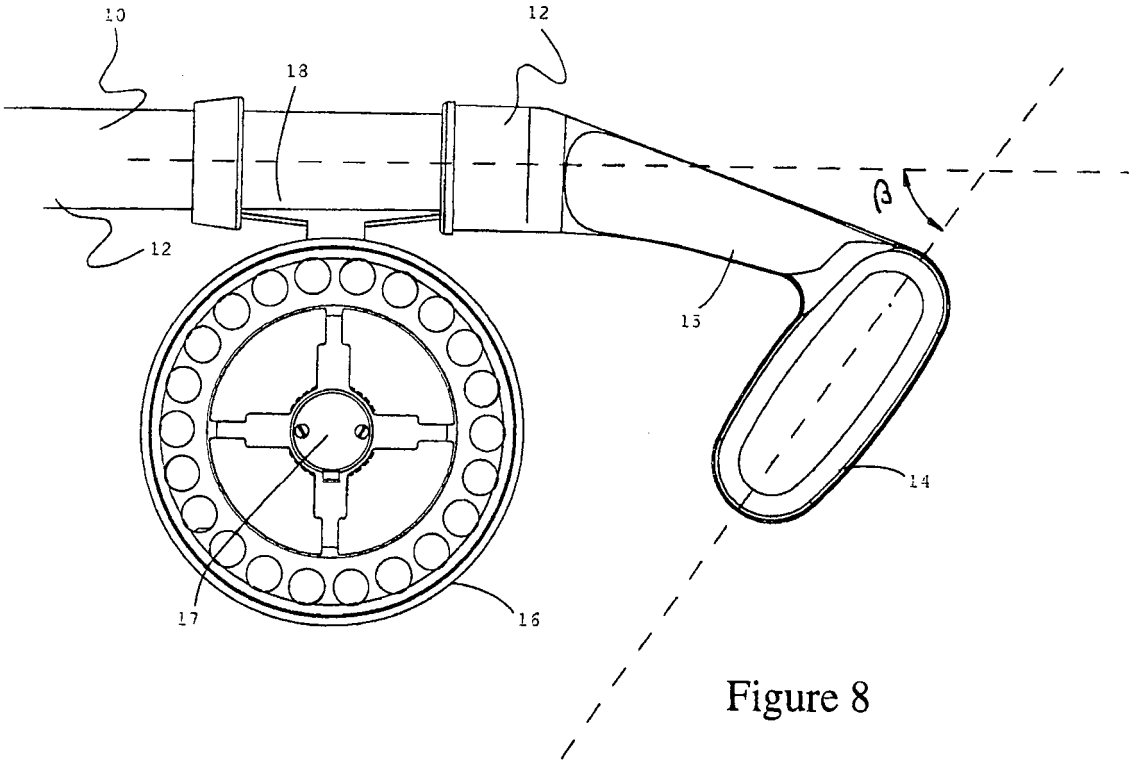

Figure 8

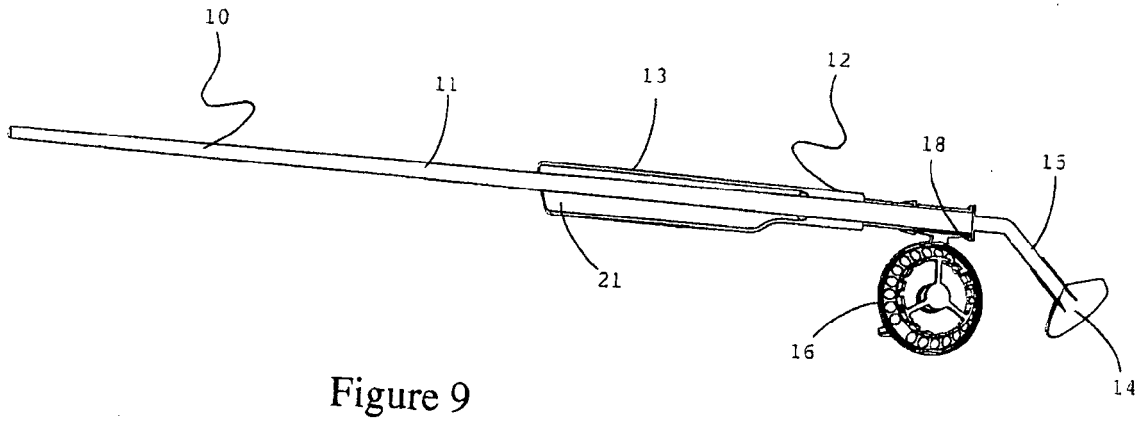

Figure 9

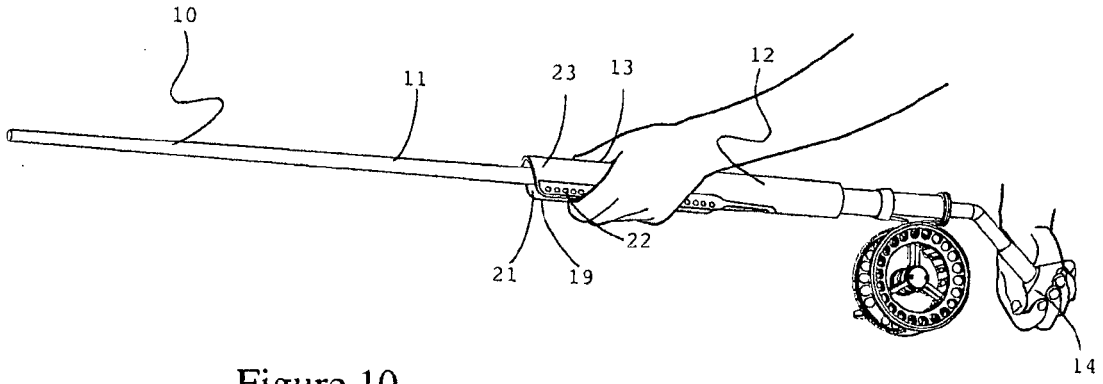

Figure 10

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 1351473 A **[0009]**
- WO 2007064217 A **[0010]**