No. 757,964. PATENTED APR. 19, 1904.

E. D. ROCKWELL.

FISH LINE REEL.

APPLICATION FILED MAR. 27, 1903.

NO MODEL.

Fig. 1.

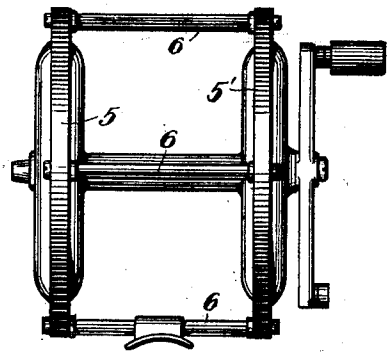


Fig. 2.

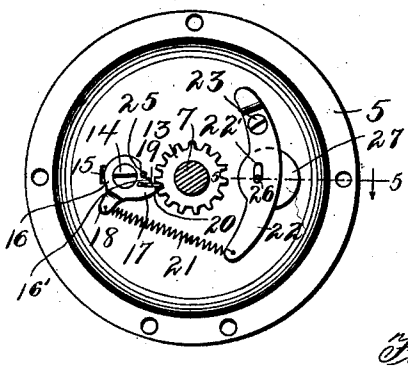


Fig. 3.

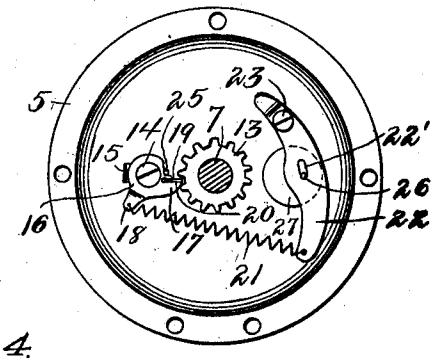


Fig. 4.

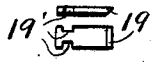


Fig. 5.

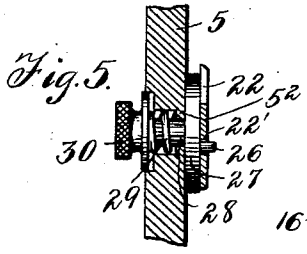


Fig. 7.

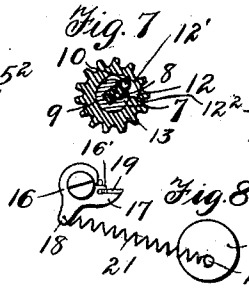


Fig. 6.

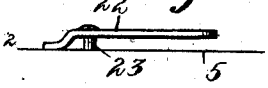


Fig. 8.

Witnesses:

Josiah H. Peck

Mason T. Peck

Inventor:

Edward D. Rockwell.

By his Attorney.

Frank G. Campbell.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 757,964. Patented April 19, 1904.

UNITED STATES PATENT OFFICE.

EDWARD D. ROCKWELL, OF BRISTOL, CONNECTICUT, ASSIGNOR TO THE LIBERTY BELL COMPANY, OF BRISTOL, CONNECTICUT, A CORPORATION OF CONNECTICUT.

FISH-LINE REEL.

SPECIFICATION forming part of Letters Patent No. 757,964, dated April 19, 1904.

Application filed March 27, 1903. Serial No. 149,845. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. ROCKWELL, a citizen of the United States, residing at Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Fish-Line Reels, of which the following is a specification.

My invention relates to fish-line reels. The principal object of the invention is the provision of improved click mechanism to which varying degrees of tension or drag may be applied.

A further object of the invention is the provision of means whereby the click mechanism will be operative when the line is pulled out, but will not be affected when said line is wound in.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawings, Figure 1 is a side view of a reel constructed in accordance with the invention. Fig. 2 is a view of the inner face of the end plate of the reel, in which the click mechanism is mounted. Fig. 3 is a view similar to Fig. 2 with the various parts in the positions they occupy when tension or drag has been applied to the click. Fig. 4 illustrates the construction of a hardened-steel point carried by the click. Fig. 5 is a horizontal section of the end plate upon line 5 5 of Fig. 2. Fig. 6 is a detail view of an oscillatory arm which will hereinafter be more fully described. Fig. 7 is a sectional view of the click-wheel and the reel-spindle, and Fig. 8 is a modified form of the device hereinafter described.

Like numerals designate similar parts throughout the several views.

Referring to the drawings, the numerals 5 5′ designate the end plates of a fish-line reel, and 6 the rods commonly employed for fastening said plates together. The spindle 7 of the reel is recessed, as at 8, and in said recess is a spring 9, bearing against a ball 10 to force said ball into a recess 12, formed in a toothed click-wheel 13, mounted for rotative movement upon the spindle 7. The recess 12 has an inclined wall 12′, terminating in a locking-shoulder 12^2, the parts described forming a ball-ratchet between the spindle 7 and click-wheel 13, whereby said spindle may rotate independently of the click-wheel when the line is being wound in, but will automatically engage said wheel when the line is drawn out, as will be hereinafter described.

Pivoted upon a screw 14, mounted for transverse movement in a slot 15 of plate 5, is a click 16, having a tongue 17 and an extension 18. This click is provided with a hardened-steel point 19 to resist wear, said point being recessed, as at 19′, as is fully illustrated in Fig. 4, and after the point 19 has been inserted in a slot 20, formed in tongue 17 of the click, the metal forming the walls of said slot is struck over with a punch and thus caused to enter the recesses 19′ and secure point 19 firmly in place.

The point 19 of click 16 is normally kept in engagement with the teeth of the click-wheel by the tension of a spring 21, one end of which is secured to extension 18 of the click and the other end of which is secured to an oscillatory arm 22, pivoted at 23 to end plate 5. A pin 25, carried by end plate 5, serves the double purpose of limiting the swing of the click and of locking said click out of engagement with the click-wheel when desired, this latter object being achieved by the provision of a shoulder 16′ upon the click, said shoulder snapping behind pin 25 when the click is moved to the left in Figs. 2 and 3.

The oscillatory arm 22 is slotted at 22′ for the reception of a wrist-pin 26, carried by a disk 27, whereby when said disk is rotated an oscillatory movement will be imparted to arm 22 to thereby vary the tension of spring 21 to any desired degree.

The disk 27 is mounted upon a stem 28, surrounded by a spring 29, of which one end bears against a shoulder 5^2 of end plate 5, and the other end bears against the base of a knob 30 upon the exterior of plate 5 and carried by stem 28. By virtue of this construction the disk 27 is held against plate 5 with sufficient friction to prevent its partial rotation by the

tension of spring 21 when the wrist-pin 26 is on the half-center, and by referring to Figs. 2 and 3 it will be seen that the slot 22′ is so disposed as to limit the movement of the wrist-pin 26 in either direction, whereby the operator of the reel will know when the limit of movement of arm 22 has been reached. If the construction just described had not been provided and the slot 22′ had been so disposed as to permit the disk 27 to rotate continuously in one direction, the operator might at a critical moment decrease the drag in an attempt to increase it, and it is to provide against such a contingency that the slot 22′ is caused to limit the movement of the disk 27, as above stated.

The operation of my invention is as follows: After the line has been set the click is moved into engagement with the click-wheel, as illustrated in Figs. 2 and 3. When a fish takes the hook and starts to run with the line, the ball-ratchet (shown in Fig. 7) operates to lock the spindle of the reel to the click-wheel, and thereby cause the click to sound. When it is desired to apply drag to the line, the disk 27 is rotated by the knob 30 to thereby move the arm 22 to a position where the spring 21 will be sufficiently distended to place the desired tension upon the click. When the line is wound in, the ball-ratchet permits the spindle to rotate free of the click-wheel, and in consequence the click is not operative at such time.

If desired, the arm 22 may be dispensed with and the end of spring 21 attached directly to wrist-pin 26, as illustrated in Fig. 8, and various other changes may be made without departure from the invention, for while the construction shown serves the purpose for which it is intended it is distinctly to be understood that the invention is not limited thereto, but includes within its purview any means for placing varying degrees of tension or drag upon the click.

Having described my invention, what I claim is—

1. In a fish-line reel, the combination, with a spring-controlled click, of a member, movable toward and from said click, to which one end of the click-spring is secured.

2. In a fish-line reel, the combination, with a click-wheel actuated only when the line is drawn out, of a spring-controlled click in engagement with said click-wheel, and a member, movable toward and from said click, to which one end of the click-spring is secured.

3. In a fish-line reel, the combination, with a click-wheel actuated only when the line is drawn out, of a spring-controlled click in engagement with said click-wheel, a member, movable toward and from the click, to which one end of the click-spring is secured, and means upon the exterior of the reel for controlling the movement of the movable member.

4. In a fish-line reel, the combination, with a spring-controlled click, of a member, movable toward and from said click, to which one end of the click-spring is secured, and means upon the exterior of the reel for controlling the movement of said movable member.

5. In a fish-line reel, the combination, with a click device, of a spring controlling said click device, a swinging arm to which one end of the spring is attached, a crank-pin connected to said arm, and means for controlling the movement of said crank-pin.

6. In a fish-line reel, the combination with a click device controlled by a spring, of a swinging arm to which one end of said spring is secured, a crank-disk having a crank-pin engaging said arm, means for rotating said disk and means for limiting the movement of said disk in either direction.

7. In a fish-line reel, the combination, with a click device, of a spring controlling said click device, an arm to which one end of said spring is secured, a crank-disk frictionally bound against one of the end plates of the reel and having a crank-pin connected to said arm, and means for rotating said crank-disk.

8. In a fish-line reel, the combination, with a click device, of a spring controlling said click device, an oscillatory arm to which one end of said spring is secured, and means for controlling the movement of said arm.

9. In a fish-line reel, the combination, with a click-wheel actuated only when the line is drawn out, of a click device in engagement therewith, a spring controlling said click device, and an oscillatory arm to which one end of said spring is secured.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD D. ROCKWELL.

Witnesses:

EDSON M. PECK,

HOWARD T. PECK.