Dec. 24, 1940. J. C. SHOTTON 2,225,719

BAIT CASTING DEVICE

Filed April 27, 1939

FIG. 1.

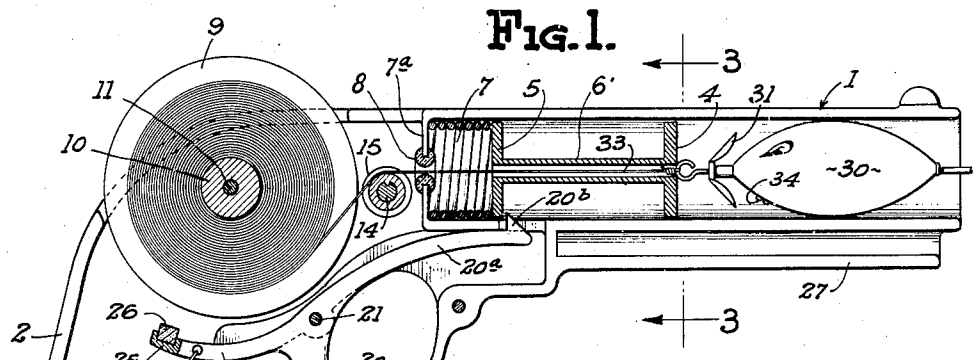


FIG. 2.

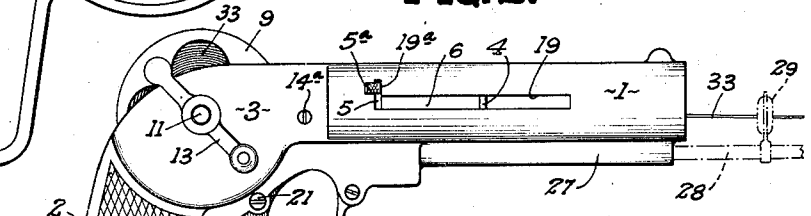


FIG. 3.

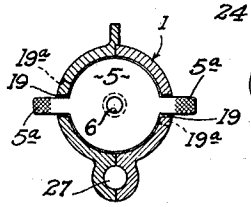


FIG. 5.

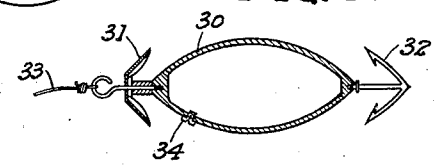
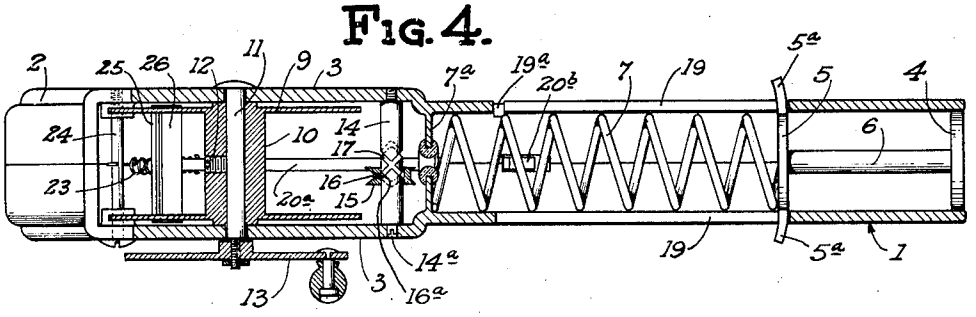


FIG. 4.



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BAIT CASTING DEVICE

John C. Shotton, Cleveland, Ohio

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11 Claims. (Cl. 43—19)

This invention relates to casting devices for use by fishermen and has for its general object to enable the operations of casting to be performed efficiently and to minimize the liability of the lines and hooks to become fouled by foliage or other obstructions during such operations.

A further object of the invention is to provide a device which can be utilized efficiently for casting purposes without the necessity for the operator to undergo the long period of practice and training without which proficiency in the use of the standard casting equipment cannot be acquired.

I accomplish the foregoing objects by the use of a device which can be operated similarly to the ordinary pistol, not only for the purpose of casting, but also for the purpose of exerting the desired braking effects upon the reel. The aforesaid device is shown in the drawing hereof wherein Fig. 1 represents a view in elevation of one of the longitudinal halves of a casting device embodying my invention, certain parts associated therewith being shown in section, the said device being in the semblance of a pistol; Fig. 2 a side elevation on a reduced scale, of the complete casting device; Fig. 3 a detail in section taken on the line 3—3 of Fig. 1; Fig. 4 a longitudinal sectional view of the device shown in Fig. 2 and taken approximately midway between the top and bottom of the pistol barrel; and Fig. 5 a detail in longitudinal section through the bait or lure shown in elevation in Fig. 1.

Describing by reference characters the parts illustrated in the drawing, 1 denotes the barrel, and 2 the grip of the pistol-like device. The barrel, the grip and the intermediate reel-mounting cheek plates 3 are preferably formed of two symmetrical parts, the line of separation between these parts corresponding to a plane passing longitudinally through the device midway between the sides thereof.

Slidably mounted within the barrel is a plunger comprising a front head 4 and a rear head 5 and provided with a guide bore formed within a tube 6 connecting the said heads; 7 denotes a coil spring which is interposed between the rear head 5 and the abutment 7ª at the rear of the barrel. The abutment 7ª is composed of two members each carried by one of the symmetrical barrel parts and each having half of a central opening within which is mounted an annular agate bearing 8 which constitutes a guide for the line, the opening of said guide registering axially with the tubular guide 6. 9 denotes the sides and 10 the drum of a reel, the said drum being secured to a shaft 11 which is rotatably mounted in the side or cheek plates 3. The drum is secured to the shaft 11 by means of a set screw 12. One end of the shaft 11 is provided with the usual reel winding handle 13.

14 denotes a shaft having one end threaded into one of the side members or cheek plates 3 and its opposite end inserted into an opening in the opposite one of said side members or cheek plates and provided with a screw driver slot 14ª. This shaft is located between the reel and the agate bearing 8 and preferably in close proximity to the latter. It is provided with a pulley 15 having a screw 16 backing up a ball 16ª projecting into an endless traversing thread 17 on the shaft 14 whereby, as thet pulley is rotated by the friction of the line thereagainst, the pulley will be made to move back and forth along the shaft 14 for the purpose of distributing the line laterally and evenly upon the reel drum as the line is being wound thereupon and for preventing fouling or kinking of the line when being unwound rapidly from the drum.

The coil spring 7 constitutes means for ejecting the plunger 4, 5, 6 and the barrel constitutes a guide for the said plunger.

The opposite sides of the barrel are provided with slots 19 through which project lugs or projections 5ª on the rear plunger head 5; and each of these slots is provided at its rear end with a notch 19ª, one of these notches projecting upwardly from one of the slots shown in Fig. 2 and the other projecting downwardly from the other slot as shown in Fig. 4. By pulling rearwardly upon the lugs 5ª, the spring 7 may be compressed into the position shown in Fig. 1 and thereupon the head 5 may be given a sufficient rotary movement to enable the projections 5ª to enter the notches 19ª, thereby to hold the plunger in its safety position. My device is also provided with a trigger, indicated at 20, which is pivotally supported upon a pin 21 mounted in the opposite side members 3 of the pistol, the trigger being located within the guard 22. The trigger is provided with a forwardly projecting arm 20ª which is formed at its front end into a latch member 20ᵇ which, when the plunger is in its safety position, is spaced a short distance from the front wall of the plunger head 5, being retained in a position to engage the said head, when the lugs 5ª shall have been disengaged from the notches 19ª, by means of a spring 23 connected at one end to an arm 20ᶜ projecting rearwardly from the pivot

21 and at its opposite end to a pin or bolt 24 mounted in the opposite sides of the pistol grip and preferably providing means whereby the opposite portions of the grip are secured together. At its rear end the arm 20c is provided with a transversely extending channeled seat 25 for a brake pad 26 which is adapted to engage the edges of both side members of the reel in order to check or stop the unwinding of the line therefrom.

Beneath the barrel 1 there is provided a cylindrical sleeve 27 into which an end of a rod 28 may be inserted, said rod being provided with an agate guide 29.

I have shown herein a bait or lure 30 including a spinner 31 and hooks 32, with the line 33 attached to the spinner-end of the lure and extending through the tube 6, agate bearing 8 and over the pulley 15, being wound upon the drum of the reel. The bait or lure being made of light metal (such as aluminum), can be used for surface fishing. When, however, it is desired to use it for deep fishing, it may be filled with water through an aperture closed by a screw plug 34.

With the parts constructed and arranged as described, it is believed that the operation will be readily understood. The plunger will be moved rearwardly by the lugs 5a to the safety position shown in Figs. 1 and 2 and the line will be wound upon the reel to bring the bait or lure within the outer or front end of the pistol. When it is desired to use my device for casting, the lugs 5a will be rotated out of the notches 19a and the spring 7 will then move the rear head 5 into engagement with the latch 20b. The operator then need only pull the trigger 20, thereby to disengage the latch 20b from the rear head 5, whereupon the spring will perform the casting operation, the front ends of the slots 19 limiting the ejecting movement of the plunger. It will be noted that considerable clearance is provided between the brake pad 26 and the adjacent edges of the reel sides. This permits the casting operation to be performed without danger of applying the brake until such time as the operator may desire to do so, whereupon, by exerting a considerable additional pull upon the trigger 20, the brake pad can be applied to the reel and the desired braking action obtained.

When it is desired to use my device for ordinary casting purposes, the rod 28 will be inserted and secured within the cylinder 27 and the outer end of the line will be led through the agate guide 29 before being attached to the lure or bait 30. The pistol may then be used as a pistol grip for the rod while the latter is being used for casting in the manner ordinarily practiced.

By the term "barrel" as employed herein, I do not propose to limit my invention to the use of a guiding and supporting means for the plunger which must substantially surround the latter, since obviously the same function might be subserved by the employment of other forms of guiding and supporting means.

Having thus described my invention, what I claim is:

1. A device of the character described comprising a grip, a barrel, means for rotatably supporting a reel between the said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the bottom of said barrel, a trigger having a latch adapted to engage the said plunger when the latter is moved rearwardly to a predetermined position in said barrel, means pivotally supporting the said trigger, and a spring connected with said trigger and tending to hold the latch in a position to engage the plunger when the latter is in the rearwardly retracted position, the said plunger being provided with means for guiding a line wound upon said reel and attached to a bait or lure in front of said plunger.

2. A device of the character described comprising a grip, a barrel, means for rotatably supporting a reel between said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the bottom of said barrel, a trigger having a latch adapted to engage the said plunger when the latter is moved rearwardly to a predetermined position in said barrel, means pivotally supporting the said trigger, a spring connected with said trigger and tending to hold the latch in a position to engage the plunger when the latter is in the rearwardly retracted position, the said plunger being provided with means for guiding a line wound upon said reel and attached to a bait or lure in front of said plunger, a brake for said reel, and means operative by the movement of said trigger for applying said brake to said reel by further movement of the trigger in a direction to release the latch thereof from the plunger and after said release.

3. In the device set forth in claim 2, the means for applying the brake to the reel comprising an arm extending rearwardly from the trigger and a braking element carried by said arm and adapted and arranged to be brought into engagement with a portion of said reel.

4. A device of the character described comprising a grip, a barrel, means for rotatably supporting a reel between the said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the said reel, a trigger having a latch adapted to engage the said plunger when the latter is moved rearwardly to a predetermined position in said barrel, means pivotally supporting the said trigger, a spring connected with said trigger and tending to hold the latch in a position to engage the plunger when the latter is in the rearwardly retracted position, the said plunger being provided with means for guiding a line wound upon said reel and attached to a bait or lure in front of said plunger, the said barrel being provided with an abutment at the rear end thereof for engagement by the said coiled spring, and a guide for the line carried by said abutment and registering with the guiding means of said plunger.

5. A device of the character described comprising a grip, a barrel, means for rotatably supporting a reel between the said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the bottom of said barrel, a trigger and means pivotally supporting the same, a latch adapted to engage the said plunger when the latter is moved rearwardly to a predetermined

position in said barrel, means tending to hold the latch in a position to engage the plunger when the latter is in the rearwardly retracted position, the said plunger being provided with means for guiding a line wound upon said reel and attached to a bait or lure in front of said plunger, and means interposed between the line guiding means and the said reel for imparting lateral movement alternately in opposite directions to the line while being wound upon and unwound from the said reel.

6. A device of the character described comprising a grip, a barrel, means for rotatably supporting a reel between the said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the said reel, a trigger pivotally supported below the said reel and having a forwardly projecting arm provided with a latch adapted to engage the plunger when the latter is moved to a predetermined position rearwardly within the barrel and the said trigger also having a rearwardly projecting arm within the grip and having a braking element adapted to engage a portion of the reel, one of the said arms having a spring connected thereto tending to force the first mentioned arm upwardly and the second mentioned arm downwardly, the said plunger having a guide for a line wound upon said reel and attached to a bait or lure in front of said plunger.

7. A device of the character described comprising a grip, a plunger guide and a reel support, a plunger in said guide having means for guiding a line wound upon said reel, a spring for moving said plunger forwardly along said guide, a latch for holding said plunger in the rear portion of said guide against the resistance of said spring, a reel on said support and means for rotating said reel to wind thereupon a line attached to a lure or bait and passing through the guiding means, a trigger, and means connecting said trigger and said latch whereby the latch may be disengaged from the plunger by movement of said trigger.

8. A device of the character described comprising a grip, a plunger guide and a reel support, a plunger in said guide having means for guiding the line wound upon said reel, ejector means for moving said plunger forwardly along said guide, a latch for holding the said plunger in the rear portion of said guide against the action of said ejector means, a reel on said support and means for rotating said reel to wind thereupon a line attached to a lure or bait and passing through the guiding means, a trigger, and means connecting said trigger and said latch whereby the latch may be disengaged from the plunger by movement of said trigger.

9. In the device set forth in claim 8, the means for guiding the line comprising a tubular bore extending longitudinally through the said plunger.

10. A device of the character described comprising a grip, a barrel having an abutment at the rear end thereof, means for rotatably supporting a reel between the said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the said abutment, a trigger and means pivotally supporting the same, a latch adapted to engage the said plunger when the latter is moved rearwardly to a predetermined position in said barrel thereby to compress the spring and provide a space in front of the plunger for the reception of a bait or lure, means tending to hold the latch in a position to engage the plunger when the latter is in its rearwardly retracted position, the said plunger being provided with means for guiding a line attached to a bait or lure and wound upon the said reel, means connecting the trigger and the latch for moving the latter out of engagement with the plunger by a movement imparted to the trigger, and means interposed between the reel and the abutment for imparting lateral movement to the line alternately in opposite directions while being wound upon and unwound from said reel.

11. A device of the character described comprising a grip, a barrel, means for rotatably supporting a reel between the said barrel and the said grip, a reel rotatably mounted on the said supporting means and means for rotating said reel to wind a line thereupon, a plunger within said barrel, a coiled spring interposed between the said plunger and the bottom of said barrel, a trigger and means pivotally supporting the same, a latch adapted to engage the said plunger when the latter is moved rearwardly to a predetermined position in said barrel thereby to compress the spring and provide a space in front of the plunger for the reception of a bait or lure, means tending to hold the latch in a position to engage the plunger when the latter is in its rearwardly retracted position, the said plunger being provided with means for guiding a line attached to a bait or lure and wound upon the said reel, and means connecting the trigger and the latch for moving the latter out of engagement with the plunger by a movement imparted to the trigger, the barrel being provided with a longitudinal slot having a notch extending laterally from the rear end thereof and the plunger having a lug mounted in said slot and adapted to be moved into said notch, the notch being arranged rearwardly of the said latch thereby to retain the plunger in a safety position.

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