Nov. 6, 1923.

1,473,507

C. A. OBERMAIER

CASTING ROD

Filed Sept. 29, 1922

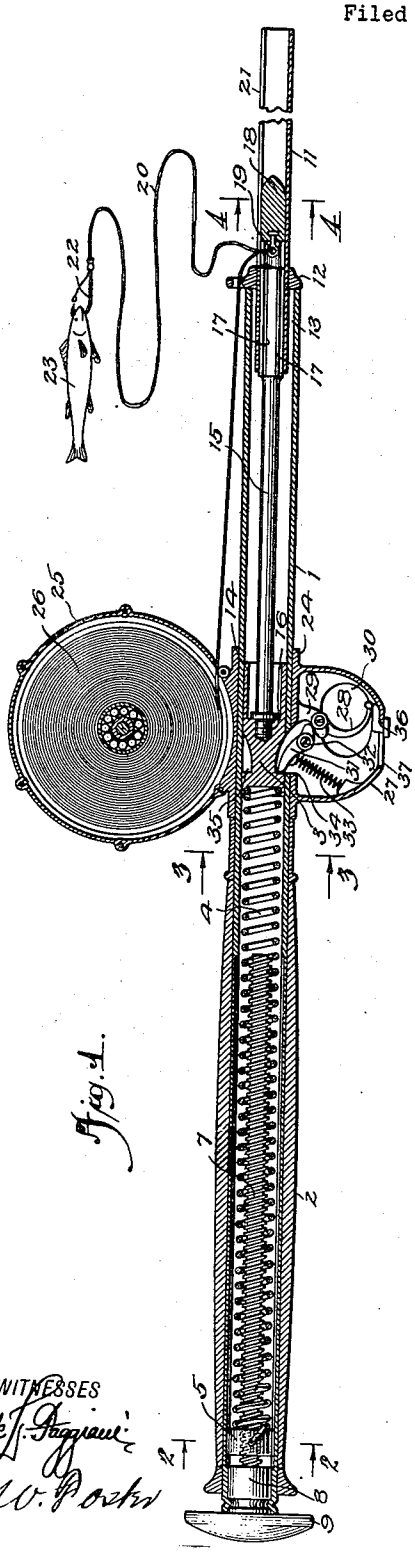

Fig. 1.

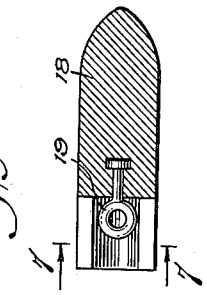

Fig. 6.

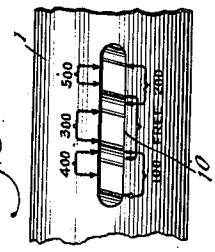

Fig. 5.

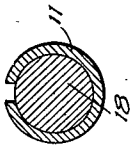

Fig. 4.

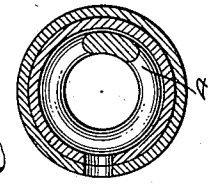

Fig. 3.

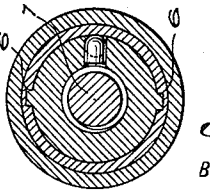

Fig. 2.

Fig. 8.

Fig. 7.

WITNESSES

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Patented Nov. 6, 1923. 1,473,507

UNITED STATES PATENT OFFICE.

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CASTING ROD.

Application filed September 29, 1922. Serial No. 591,378.

To all whom it may concern:

Be it known that I, CARL A. OBERMAIER, a citizen of Germany, and a resident of Lompoc, in the county of Santa Barbara and State of California, have invented a new and Improved Casting Rod, of which the following is a full, clear, and exact description.

This invention relates to improvements in casting rods, and more particularly to an automatic casting fishing tackle, or gun pole, an object of the invention being to provide a rod carrying a reel and operating to shoot a projectile carrying the line, hook bait, and the sinker, the desired distance.

A further object is to provide a device of the character stated which functions as a gun having a trigger and a projecting means released thereby which functions to discharge a projectile as far as may be desired, and in accordance with the aim of the operator.

A further object is to provide a device of the character stated, which permits the ordinary inexperienced fisherman to accurately cast in the surf or eleswhere, and enable him to enjoy the sport of fishing under such circumstances, which is now only enjoyed by those expert in casting.

A further object is to provide a device of the character stated which can be so adjusted as to permit the discharge or ejection of the projectile the desired distance by simply adjusting the tension of a spring, the compression of which being indicated by suitable marks on the barrel of the device.

With these and other objects in view, the invention consists in certain novel features of construction and combinations, and arrangement of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view in longitudinal section illustrating my improved device showing the parts in set position for casting.

Figure 2 is an enlarged view in transverse section on the line 2—2, of Figure 1.

Figure 3 is an enlarged view in transverse section on the line 3—3, of Figure 1.

Figure 4 is an enlarged view in transverse section on the line 4—4, of Figure 1.

Figure 5 is an enlarged fragmentary view in elevation of a portion of the barrel showing the compression indicating means.

Figure 6 is a view in longitudinal section through the projectile.

Figure 7 is a view in transverse section on the line 7—7, of Figure 6.

Figure 8 is a view in elevation of a rod section adapted to be connected to the device shown in Figure 1 after the projectile has been discharged.

1 represents a cylindrical barrel, having a handhold 2 around the same adjacent one end, this handhold being of cork or formed in any other approved manner to provide a grip on the rod. A plunger 3 fits the bore of barrel 1 and is mounted to slide therein.

Pressure is exerted against the plunger 3 by a coiled spring 4 located in the barrel back of the plunger and secured at its rear end to a ring 5 which is keyed to move longitudinally in the barrel as shown at 6, but held against rotary movement, as will be readily understood. The ring 5 is internally screw threaded to mesh with the threads of an adjusting screw 7. This screw 7 is relatively long, has rotary mounting in a sleeve 8 fixed in the rear end of the barrel 1 and is provided with an enlarged head 9 to facilitate the longitudinal movement of the ring 5, and consequently the compression of the spring 4.

The barrel 1 is provided with a longitudinal slot 10 through which the convolutions of the spring 4 can be seen, and indicating brackets are marked on the barrel which register with the convolutions of the spring and indicate the pressure of the spring so that by adjusting the screw 7 the spring can be given any desired pressure to throw the projectile the desired distance as will more fully hereinafter appear.

11 represents a tubular guide or rod extension which is secured in the forward end of barrel 1 by means of a collar or ring 12 and projects inwardly into the barrel 1 a distance sufficient to provide an air chamber 13 between the tube 11 and the barrel 1 for the reception of a tubular extension 14 on plunger 3 so that this space 13 functions as a dash pot to cushion the forward movement of the plunger.

A plunger rod 15 is at its rear end, screwed into a threaded socket in the plunger 3 as shown at 16, and at its forward end fits the tube 11 and is provided with longitudinal grooves 17 which constitute air outlets to prevent the formation of a too great air cushion in the discharge end of the barrel.

18 represents a projectile which is prefer-

ably shaped like an ordinary bullet and is provided at its rear end with a swiveled eye 19 to which an intermediate portion of the line 20 is secured. This line 20 is movable through a longitudinal slot 21 in tube 11 and carries any desired arrangement of hook 22, lure or bait 23 or other form of fishing apparatus.

Around the intermediate portion of barrel 1 a sleeve 24 is fixed and this sleeve 24 supports a reel casing 25 containing any desired arrangement of reel 26 on which the line 20 is wound.

The sleeve 24 has also fixed thereto a trigger casing 27 in which a trigger 28 is pivotally supported on a bracket 29 and finger openings 30 are provided in the sides of the casing 27 to admit the finger to operate the trigger. The trigger 28 engages one end of a pawl 31 which latter is pivotally supported as shown at 32, and is provided with a coiled spring 33 pressing the same through a slot 34 in barrel 1 and in position to be engaged by an annular shoulder 35 on the plunger 3 as clearly shown in Figure 1.

To prevent accidental movement of the trigger 28 I provide a safety device 36 which is mounted to slide in a slot 37 in casing 27 and is manually operated to be positioned under the trigger as shown in Figure 1 to prevent operation of the trigger or may be moved rearwardly out of the path of the trigger when it is desired to operate the latter.

In Figure 8 I illustrate a section of rod 38 which may be fitted into the end of the tube 21 after the projectile has been discharged, and the line 20 can be positioned in slotted line guides 39 and 40 to hold the line and permit the fisherman to manipulate the pole in landing his catch.

The operation of my improved device is as follows: Assuming the parts to be in the position shown in Figure 1, the rod is aimed and the trigger 28 forced rearwardly thus moving the pawl 31 from the path of shoulder 35 and allowing the spring 4 to force the plunger 3 and rod 15 forwardly to eject the projectile the desired distance and in the desired direction carrying with it the line, hook and bait or other tackle.

The plunger may be set by forcing the rod 15 inwardly in any approved manner, and it will be noted that by a construction of this kind any one of average intelligence can use the device for casting and perform the work accurately.

While I have described a particular construction of ejecting means I would have it understood that I do not limit myself in this regard as I wish to cover broadly the idea of a fishing rod or casting device which functions as a gun to discharge a projectile carrying with it the line, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. A casting rod, comprising a barrel, a projectile ejecting plunger in the barrel, a trigger mechanism normally holding the plunger in set position, an internally screw threaded ring keyed to move longitudinally in the barrel, a coiled spring in the barrel between the ring and the plunger, a screw mounted to turn in the barrel, a head on the end of the screw outside of the barrel, said screw engaging the internal threads of the ring, and said barrel having a slot therein exposing the convolutions of the spring, and having indicating marks thereon to indicate the tension of the spring by the spacing of the convolutions thereof.

2. A casting rod comprising a barrel, a tube fixed in the barrel, a projectile movable in the tube, a swiveled eye in the projectile adapted to receive a line to be cast, and a cylindrical extension on the plunger adapted to move between the barrel and the tube and compress the air in said space to check the forward movement of the plunger.

3. A casting rod, comprising a barrel, an ejecting plunger in the barrel, a slotted projectile guiding tube communicating with the barrel, a rod on the plunger engaging the projectile, a line supported on the barrel and connected to the projectile, and a rod extension fitting the end of the tube and having line guides thereon to receive the line after the projectile has been ejected.

4. In a casting rod, a barrel, a tubular member having a portion extending into an end of said barrel in spaced relation thereto and combining therewith to form an air chamber, a line carrying projectile in said tubular member, and a projectile ejecting member movable in said barrel to eject the projectile from said tubular member and having a portion engageable in said air chamber to cushion the movement of said ejecting member.

5. In a casting rod, a pair of members, one of which has a portion extending into the other in spaced relation to form an air chamber, a line carrying projectile movable in one of said members, and projectile ejecting means movable in the other member and having a portion thereof engageable in said chamber to cushion the movement of said means when ejecting the projectile.

6. In a casting rod, a barrel, a line carrying projectile movable with respect thereto, propelling means for said projectile, a sleeve on said barrel, a reel casing carried by said sleeve for receiving said line, a second casing on said sleeve on the opposite side thereof from the first named casing,

and a mechanism in said second casing operable to release said propelling means to release said projectile.

7. In a casting rod, a barrel having a longitudinal slot therein, a projectile ejecting member movable in said barrel, a coil spring visible through the slit in said barrel and operable to actuate said ejecting member, means for regulating the tension of said spring, and means on said barrel adjacent said slot for indicating the tension of said spring by the spacing of the convolutions thereof.

CARL AUGUST OBERMAIER.