Aug. 25, 1970 L. A. WORSHAM 3,525,174

SELF-IMPELLED SPIN-CASTING RIG

Filed July 16, 1968 2 Sheets-Sheet 1

FIG. 1.

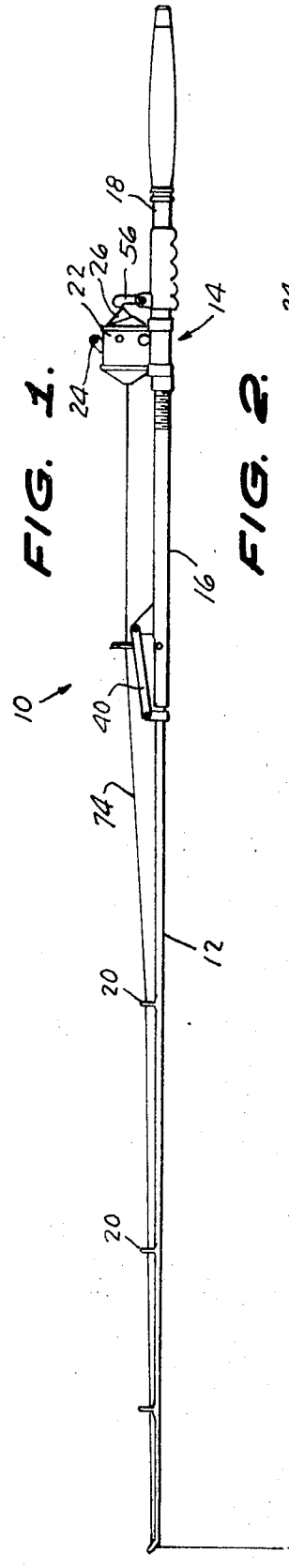


FIG. 2.

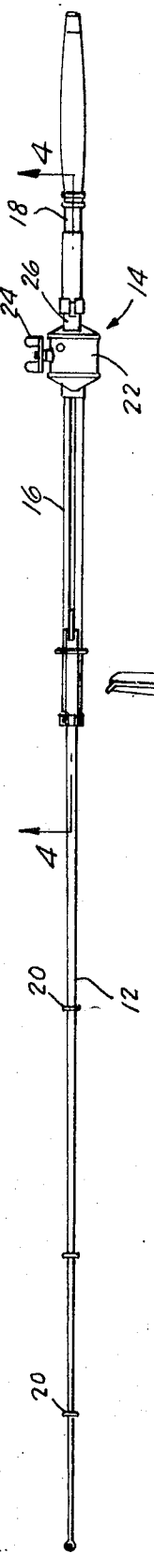
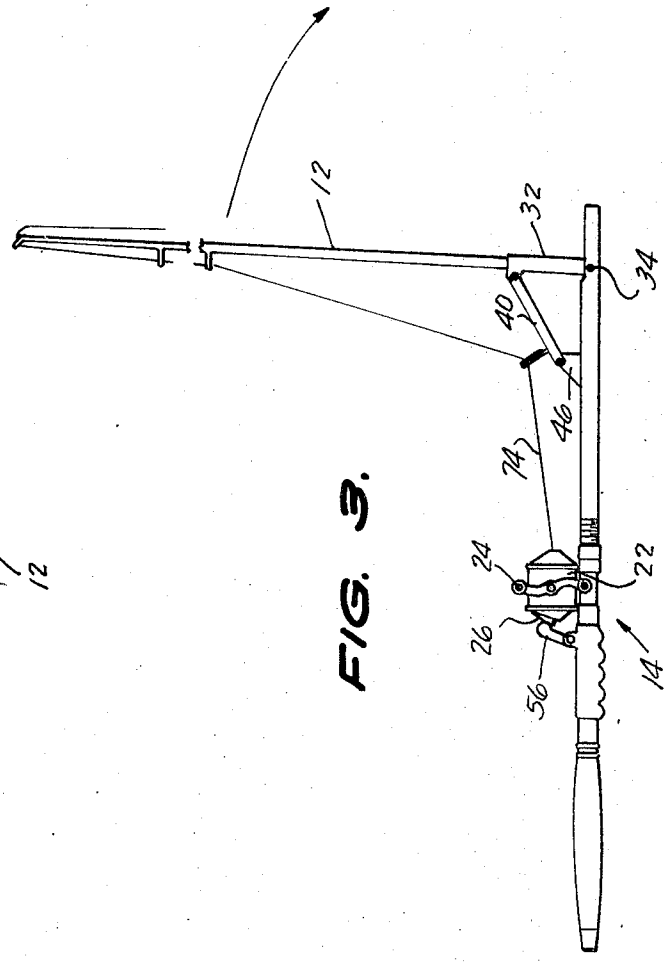


FIG. 3.



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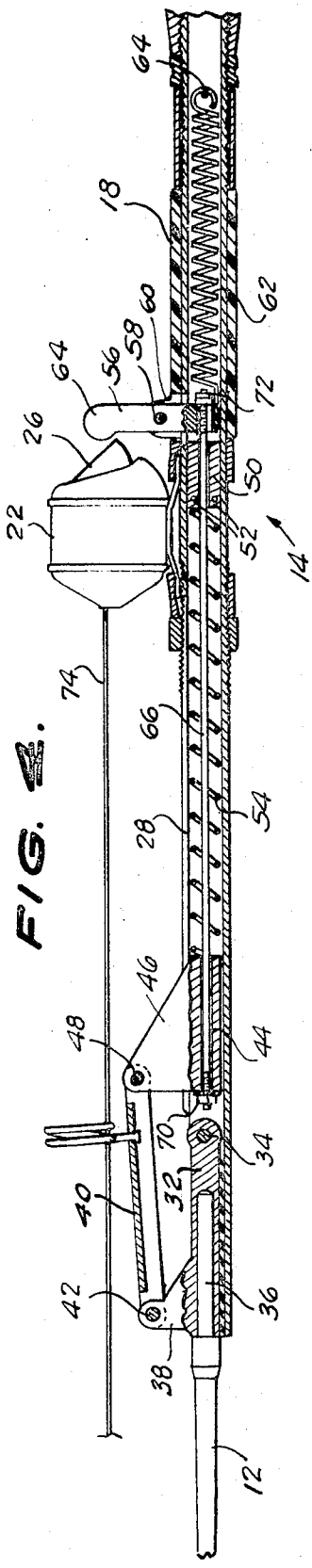

FIG. 4.

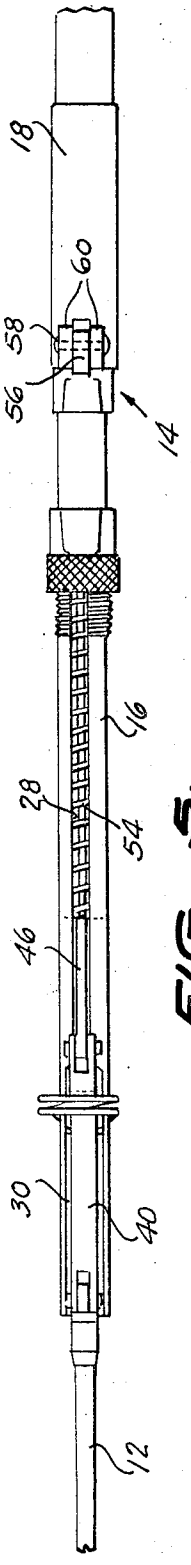

FIG. 5.

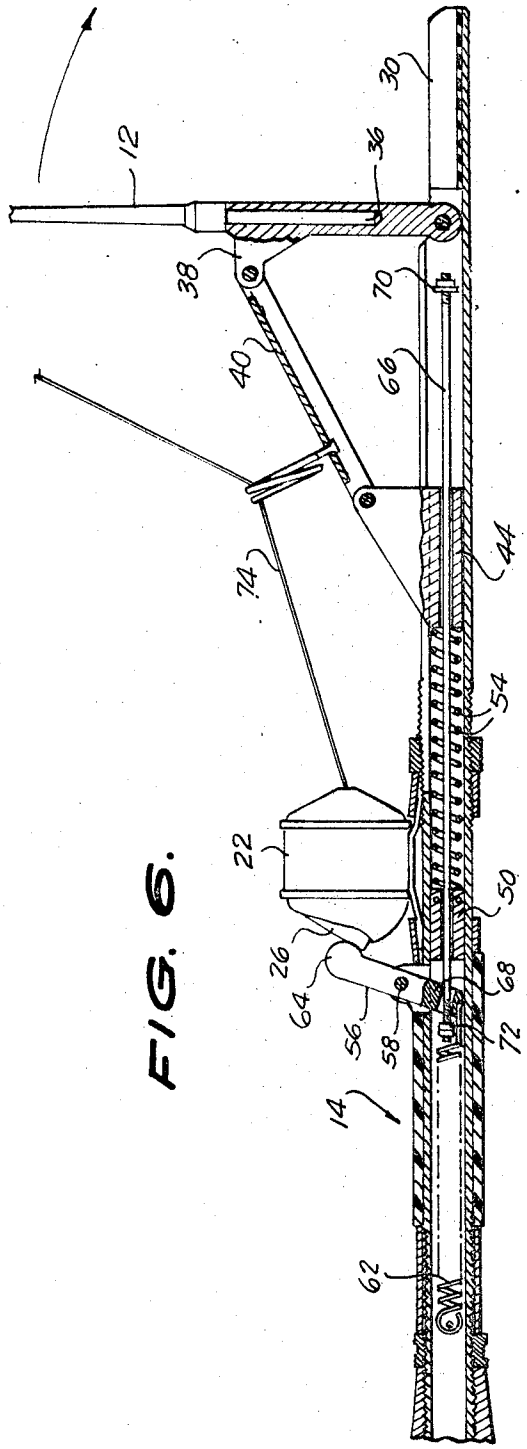

FIG. 6.

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SELF-IMPELLED SPIN-CASTING RIG

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Int. Cl. A01k 91/02
U.S. Cl. 43—19 9 Claims

ABSTRACT OF THE DISCLOSURE

A spin-casting rig comprising a butt portion adapted to have a spinning reel mounted thereon and a rod portion pivotally connected to said butt portion. A slide is mounted in said butt portion and a rigid link is pivoted at one end to the rod portion and at the other end to the slide. A spring within the butt portion resists rearward movement of the slide. A lever is pivoted to the butt portion adjacent the reel mounted thereon and a spring in the handle portion biases the upper end of the lever toward the reel. A tie-rod slidably penetrates both the slide and the lower end of the lever. The tie-rod has stops at each end, one bearing on the slide and the other on the lever. The spring biasing the slide has a more powerful constant than that of the spring biasing the lever.

The primary object of this invention is to enable anyone, regardless of skill or experience, successfully to operate spin-casting tackle with no more coaching than is contained in the usual directions accompanying the tackle when purchased.

It is a further object of this invention to provide a spin-casting rig which, while minimizing the skill requirement of the user, nevertheless will interfere not at all with the normal behavior of this class of tackle when playing a fish.

It is a further object of this invention to provide a spin-casting rig as aforesaid in which the force and hence the distance of the cast is under the control of the caster.

A further object of this invention is to provide a spin-casting rig as aforesaid in which proper control and timing of the reel action is entirely automatic.

The above and other objects will be made clear from the following detailed description taken in connection with the annexed drawings, in which:

FIG. 1 is a side elevation of the rig as a whole;

FIG. 2 is a top plan view of FIG. 1;

FIG. 3 is an elevation from the opposite side of the rig showing the parts in condition to initiate a cast;

FIG. 4 is a section on the line 4—4 of FIG. 2;

FIG. 5 is an enlarged top plan view of a portion of FIG. 1; and

FIG. 6 is an enlarged view partly in section and corresponding to FIG. 3.

Referring now to FIGS. 1 and 2, the rig as a whole is designated **10** and is made up of a casting rod portion **12** and a butt portion generally designated **14**. The butt portion **14** is made up of a forepiece **16** and a handle portion **18**.

The casting rod portion **12** has the usual spin tackle guides **20** secured at intervals throughout its length and a conventional closed face spinning reel **22** is affixed by conventional means to the handle portion **18**. The reel **22** carries a conventional winding handle **24** and a conventional line trigger **26**.

Referring now to FIGS. 4 and 5, it will be noted that the forepiece **16** has a slot **28** on its top side and extending most of its length. Adjacent its front end, forepiece **16** has a wider continuation **30** of the slot **28**.

A rod-receiving member **32** is pivoted in the forepiece **16** on a pin **34** running transverse to the forepiece. The

member **32** has a longitudinal bore which snugly receives the butt **36** of the rod **12**. This is entirely conventional practice permitting dismantling of the rig.

A lug **38** is formed at the front end of the member **32** and is pivotally connected to a link **40** which at one end has a pair of ears engaging a pin **42** projecting through the lug **38**.

A slide **44** has a generally cylindrical body slidable within the forepiece **16** and guided by a lug **46** projecting through the slot **28**. The link **40** has its opposite end pivoted by a pair of ears engaging a pivot pin **48** mounted in the lug **46**.

At the rear end of the forepiece **16** is a plug member **50** secured against sliding by pins **52** which penetrate the forepiece **16**.

A compression spring **54** is mounted in the forepiece **16** and bears at one end against the plug **50** and at the other against the slide **44** and constantly biases the slide **44** towards its forwardmost position.

A lever **56** is pivoted on a pin **58** which penetrates lugs **60** formed in the handle portion **18**. A tension spring **62** is mounted in the handle portion **18** and has one end hooked to a transverse pin **64**, the other end being secured to the lower end of the lever **56** so as to bias the lever **56** in a counterclockwise direction around pin **58**, as viewed in FIG. 4. The pin **58** has a hammer-like head **64** adapted to bear against the line trigger **26** of the reel **22** for a purpose to be presently described.

As best seen in FIGS. 4 and 6, a tie-rod **66** freely penetrates the slide **44**, the plug **50** and the lower end **68** of the lever **56**. The tie-rod **66** is threaded at both ends and at its forward end carries a nut and washer combination **70** while the threaded portion at its opposite or rear end carries a nut and lock nut combination **72**.

The closed face spin reel **22** is a standard item and per se forms no part of this invention. It may, however, aid in understanding the present invention if the action of the reel **22** is briefly described. When mounted on a conventional rod, depression of the line trigger **26** activates the drag built into the reel **22**. The drag holds the line **74** against premature withdrawal from the reel. When a cast is made, the fisherman at the proper instant releases the line trigger **26** permitting the line **74** to be drawn freely from the reel **22** and this results in a cast. The moment the handle **24** is turned in a rewinding direction the drag is reset and the line can be rewound even against the struggles of the fish. One of the great advantages of this invention lies in the fact that when a cast is made, the line trigger **26** is always released automatically at precisely the correct moment and is kept released until another cast is to be attempted.

This functioning will now be described.

First, assume the parts to be in the condition of FIGS. 1, 2 and 4, in which the rod **12** is in alignment with the butt **14**. This is the condition prevailing while the fisherman awaits a strike, is playing a fish or is reeling in preparatory to another cast. When the bait or lure has been brought close to the tip of the rod **12**, the fisherman simply grasps the butt portion **14** in his left hand, the rod portion **12** in his right hand, and bends the rod **12** relative to the butt **14** to or approximating the position of FIGS. 3 and 6. This movement causes the link **40** to thrust the slide **44** rearwardly, as shown in FIG. 6. Normally, since the spring **54** is more powerful than the spring **62**, slide **44** pressing against the stop **70** on the rod **66** overpowers the spring **62**, drawing the end **64** of the lever **56** back from the line trigger **26**. As the rod approximates the positions of FIGS. 3 and 6 and the stop **70** is no longer engaged by the slide **44**, the spring **62** thereupon rocks the lever **56** about the pivot **58**, engaging the head **64** with the trigger **26** and activating the drag mechanim of the reel **22**. This locks the line **74**,

preventing premature withdrawal of the line **74** from the reel **22.**

It is then only necessary that the fisherman release the rod **12** whereupon the spring **54** drives the slide **44** forward, whipping the rod back to the position of FIGS. 1 and 4. As will be clear from FIG. 6, there is considerable travel of the slide **44**, hence a considerable flipping movement to the rod **12** before the slide **44** again engages the stop **70** on the rod **66**. When this happens, the rod **66** is drawn forwardly against the action of the spring **62** and by engagement of the stop **72** on the rod **66** with the base **68** of the lever **66**, the lever head **64** is quickly withdrawn from the line trigger **26**, permitting the line to flow freely while the lure maintains the momentum established by the whipping action of the rod **12**. A successful cast is therefore assured by automatic action of the rig. The length of cast is varied by the angle to which the rod **12** is drawn relative to the butt portion **14**. The cast may be either "overhand" or "side arm" or any point intermediate to two styles. This is important in situations where there may be overhanging branches near the extremity of the intended cast.

Examination of FIGS. 4 and 6 will show that if it is desired to shorten the handle portion **18**, the plug **50** may be moved forward and a compression spring inserted between the plug and the lever **56**. This dispenses with the tension spring **62** and shortens the handle **18** without altering the action.

An examination of FIGS. 1 and 2 will show that this invention alters almost not at all the proportions and the outline of a conventional spin-casting rig.

While certain constructional details have been illustrated and described herein, no doubt perusal of this application will suggest to those skilled in the art numerous modifications and structural details. Accordingly, it is not intended to limit the invention to the precise details disclosed.

What is claimed is:

1. A spin-casting rig comprising: a rod and a butt; said rod being pivoted to the butt and swingable between a position aligned with said butt and a position at an angle thereto; a slide mounted in said butt; said rod and said slide each having a laterally projecting lug, said lugs being in alignment; a link pivoted to each of said lugs to connect the same; a spring biasing said slide toward said rod; a lever pivoted on said butt to engage the line trigger of a spinning reel when such reel is mounted adjacent thereto; a spring biasing said lever toward said trigger; means connecting said slide and said lever and overcoming said lever spring when said rod and butt approach mutual alignment and means disabling said connecting means when said rod is pivoted to a substantial angular relationship to said butt.

2. The rig of claim **1**, in which said springs are axially aligned.

3. The rig of claim **1**, in which the slide spring acts in compression and the lever spring acts in tension.

4. The rig of claim **1**, in which said springs are enclosed within the butt.

5. The rig of claim **1**, in which a rod-holding member is pivoted on said butt and to said link, said rod being detachably secured to said rod-holding member.

6. The rig of claim **2**, in which the slide spring acts in compression and the lever spring acts in tension.

7. The rig of claim **2**, in which a rod-holding member is pivoted on said butt and to said link, said rod being detachably secured to said rod holding member.

8. The rig of claim **3**, in which a rod-holding member is pivoted on said butt and to said link, said rod being detachably secured to said rod-holding member.

9. The rig of claim **4**, in which a rod-holding member is pivoted on said butt and to said link, said rod being detachably secured to said rod-holding member.

References Cited

UNITED STATES PATENTS

3,143,823	8/1964	Brown et al.	43—19
3,217,442	11/1965	Nygren	43—19

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