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PATENT SPECIFICATION 754,444

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Index at Acceptance :—**Class 48**, A26(A : B).

COMPLETE SPECIFICATION.

Improvements in Fishing Reels.

I, JOSEPH BRINDLEY GURNEY GRICE, a British Subject, of The Cottage, Seafield Road, Friars Cliff, Christchurch, Hampshire, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The chief object of the invention is to evolve a fishing reel which will combine the advantages of a Nottingham type reel with one of the fixed spool type.

A fishing reel in accordance with the present invention comprises an annular body or cover of shallow dish-shape, an axially mounted spool carrying spindle carried by said body or a part associated therewith, a second spool carrying spindle carried by said body and arranged at right angles to the first spindle and of similar dimensions, a spool adapted to be mounted on the first spindle in the usual manner or alternatively mounted on the second spindle in a position in which the spool driving handles project either forwardly or rearwardly and means for locating said spool on either spindle in any of its three alternative positions and in a quickly detachable manner.

It will be appreciated that the spool will normally be mounted on the first spindle, but can quickly be removed and placed on the second or dummy spindle with the handles projecting forwardly so that the spool lies at right angles to the rod, the handles facing the tip of the rod. In this position the line peels off without the spool turning and obviates normal inertia of a rotating spool.

It will be appreciated that after the cast has been made a twist will have been put in the line, this disadvantage being inherent in all fixed spool reels as at present manufactured, but with the reel in accordance with the present invention this twist may be removed after retrieving by placing the spool on the dummy spindle with the handles facing rearwardly, i.e., the position of the spool on the dummy spindle is reversed.

Referring to the drawings:—

Figure 1 is a side elevation of a fishing reel in accordance with the invention:

Figure 2 is a vertical section on the line A-B in Figure 1:

Figure 3 is a section drawn to an enlarged scale on the line C-D in Figure 2:

Figure 4 is a side elevation showing the spool in its alternative fixed spool position:

Figure 5 is a fragmentary side elevation of the reel showing the clicker mechanism, the spool being detached.

In a preferred embodiment of the invention as applied to a reel in which the body or cover 1 contains suitable check mechanism, for example, clicker mechanism or frictional braking mechanism or both, it is preferred that such mechanism shall be arranged beneath an annular cover plate 2 which fits closely within the walls 3 of the body and protects the mechanism against ingress of dirt or dust.

In such a case it is preferred to form the first spindle as a bush 4 which is mounted centrally on the cover plate 2 the bush and cover plate revolving about a fixed spindle 5 which is mounted centrally on the body, means such as the securing screw 6 being provided for securing the bush and cover plate on the centrally arranged fixed spindle but in a detachable manner so that access can be obtained to the check mechanism when required.

The second spindle 7 which is attached to the body and lies in a vertical plane lying at substantially 90° to the vertical plane containing the first spindle will have the same dimensions as the bush 4 and to enable the position of the spool 8 on the second spindle to be reversed, it is proposed to form the second spindle 7 and also the bush 4 with a centrally positioned annular groove 9

[*Price* 3*s.* 0*d.*]

Price 4s 6d

with which a spring urged catch, mounted on the spool, can engage irrespective of the position of the spool, the catch being releasable by a finger actuated knob.

To enable the spool to be quickly placed in position on either spindle, spindle 7 is formed with a part conical or domed extremity whilst the securing screw 6 is similarly formed which provides a lead and serves to hold back the catch until it registers with the groove. The catch projects inwardly into the interior of the spool bush, the latter being removable from the spool when required, for example, when replacing a broken spring.

The preferred form of catch mechanism is more clearly shown in Figures 2 and 3 the catch being releasable from either side of the spool. The catch mechanism comprises a catch proper 10 pivotally mounted at 11 between two flange-like parts of the spool bush 12, the latter being slotted to permit entry of the catch through the wall of the bush and into the annular groove 9 in either the bush or the second spindle. The catch is urged into engagement with the groove 9 by an associated spring 13. To disengage the catch from the groove, a catch segment 14 is pivotally mounted at 15 between the flanges on the spool bush, the free end 16 of the segment bearing downwardly on the catch near its free end. The segment is urged upwardly under the action of the spring 13 into engagement with an annular projection 17 on a catch lever 18 the latter projecting through radially arranged slots 19 formed in the front and back plates of the spool.

The catch lever 18 will be maintained normally in a horizontal position by the upward pressure exerted by the spring 13 in which position it engages the upper extremities of the grooves 19. If one of the projecting ends of the lever 18 is depressed, the opposite groove extremity forms a fulcrum about which the lever 18 pivots and consequently the segment 14 will be forced downwardly to disengage the catch 10 from the groove 9. The catch lever 18 is centralised by a ball end projection 20 which enters a radial boring 21 in the spool bush, the ball joint thus provided permitting the required rocking movement in either direction.

The spool is drivably connected with the bush 4 and its connected cover plate 2 by a plunger 22 which engages a hole 23 formed in a flange 24 to which the cover plate 2, bush 4 and clicker wheel 25 are secured. The plunger 22 is urged into engagement with the hole 23 by a coiled spring 26 and is held in position thereon by means of a spring clip 27 which engages a recess in the periphery of the plunger. Diametrically opposite the catch lever 18 is a balance screw 28 having a mass sufficient to balance the weight of the catch lever and ensure a balanced rotational movement of the spool.

The front plate of the spool carries the usual handles 29 and as is clearly shown in Figure 4 when the reel is to be used as a reel of the fixed spool type, the spool is mounted on the second spindle 7 the handles projecting either forwardly as shown or rearwardly as indicated by dotted lines. To prevent rotation of the spool when mounted on the second spindle the latter carries a fixed flange 30 which is formed with a series of holes 31 (see Figure 2) any one of which holes is enterable by the plunger 22 or by a similarly positioned pin 32 (see Figures 1 and 2) when the position of the spool is reversed.

The body is carried by the usual inverted "L" shaped bracket 33 for attachment to the rod.

Figure 5 shows the clicker mechanism which comprises a lever 34 pivotally mounted on the body at 35 and carrying a hair pin type spring 36, the latter bearing on the inner face of the body wall and on the clicker tooth 37. Penetration of the clicker tooth between the teeth of the clicker wheel is limited by a fixed stop 38 which is engaged by the extremity of the lever 34. The clicker lever 39 which projects through a slot in the body wall is pivotally mounted at 40 and carries at its opposite end a roller 41 which bears on the edge of the lever 34 to move the clicker out of operation when the lever 39 is moved into the dotted line position in which position the lever 39 has moved through a dead centre position. The lever 39 is fitted with a double knob 42 by which the line can be trapped preparatory to casting.

The fishing reel may with small modification incorporate step up gearing arranged between the cover plate and inner surface of the body in which case the spool will be driven through the gearing by means of the handles which instead of being carried by the spool are mounted on a two armed lever revolvable concentrically with the spool.

What I claim is:—

1. A fishing reel comprising an annular body or cover of shallow dish-shape, an axially mounted spool carrying spindle carried by said body or a part associated therewith, a second spool carrying spindle carried by said body and arranged at right angles to the first spindle and of similar dimensions, a spool adapted to be mounted on the first spindle in the usual manner or alternatively mounted on the second spindle in a position in which the spool driving handles project either forwardly or rearwardly and means for locating said spool on either spindle in any of its three alterna-

tive positions and in a quickly detachable manner.

2. A fishing reel as claimed in Claim 1 having means for positively locating the spool against rotational movement when mounted on the second spindle.

3. A fishing reel as claimed in Claim 2, wherein said locating means includes a flange or its equivalent fixedly associated with the second spindle and formed with one or more holes for engagement by a projection on each side of the spool.

4. A fishing reel as claimed in any of the preceding claims, wherein the spool is fitted with a spring urged but manually releasable catch for engagement with an annular groove in the first and second spindle.

5. A fishing reel as claimed in Claim 4, wherein the spring urged catch is operated in a releasing sense by a rocking finger actuated catch release lever, the extremities of which project through front and rear spool plates.

6. A fishing reel as claimed in Claim 5, wherein the lever is rockably mounted on a ball headed projection seating in a radial boring in the spool bush.

7. A fishing reel as claimed in Claim 4, 5 or 6 including a segment shaped catch release pivotally mounted on the spool bush and bearing on the catch to move the latter out of its associated groove on depression of either end of the catch release lever, the ends of the catch release lever projecting through radial slots in the front and rear spool plates.

8. A fishing reel as claimed in any of the preceding claims including a first spindle in the form of a bush fixedly associated with a cover plate fitting closely within the walls of the body and readily removable together with the cover plate to obtain access to check mechanism disposed beneath the cover plate.

9. A fishing reel as claimed in Claim 8, wherein the check mechanism is controlled by a lever which projects upwardly from the body and is fitted at its extremity with a double knob by means of which the line can be trapped preparatory to casting.

10. A fishing reel having its component parts constructed, arranged and adapted to operate substantially as and in the manner hereinbefore described with reference to the accompanying drawings.

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PROVISIONAL SPECIFICATION.

Improvements in Fishing Reels.

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It will be appreciated that the spool will normally be mounted on the first spindle, but can quickly be removed and placed on the second or dummy spindle with the handles projecting forwardly so that the spool lies at right angles to the rod, the handles facing the tip of the rod. In this position the line peels off without the spool turning and obviates normal inertia of a rotating spool.

It will be appreciated that after the cast has been made a twist will have been put in the line, this disadvantage being inherent in all fixed spool reels as at present manufactured, but with the reel in accordance with the present invention this twist may be removed after retrieving by placing the spool on the dummy spindle with the handles facing rearwardly, i.e., the position of the spool on the dummy spindle is reversed.

In a preferred embodiment of the invention as applied to a reel in which the body or cover contains suitable check mechanism, for example, clicker mechanism or frictional braking mechanism or both, it is preferred that such mechanism shall be arranged beneath an annular cover plate which fits closely within the walls of the body and protects the mechanism against ingress of dirt or dust.

In such a case it is preferred to form the first spindle as a bush which is mounted centrally on the cover plate the bush and cover plate revolving about a fixed spindle

which is mounted centrally on the body, means being provided for securing the bush and cover plate on the centrally arranged fixed spindle but in a detachable manner so that access can be obtained to the check mechanism when required.

The second spindle will have the same dimensions as the bush and to enable the position of the spool on the second spindle to be reversed, it is proposed to form the second spindle and also the bush with a centrally positioned annular groove with which a spring urged catch, mounted on the spool, can engage irrespective of the position of the spool, the catch being releasable by a finger actuated knob on the outer spool face.

To enable the spool to be quickly placed in position on either spindle each spindle is formed with a part conical or domed extremity which provides a lead and serves to hold back the catch until it registers with the groove. The catch projects inwardly into the interior of the spool bush, the latter being removable from the bush when required, for example, when replacing a broken spring.

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FIG.1.

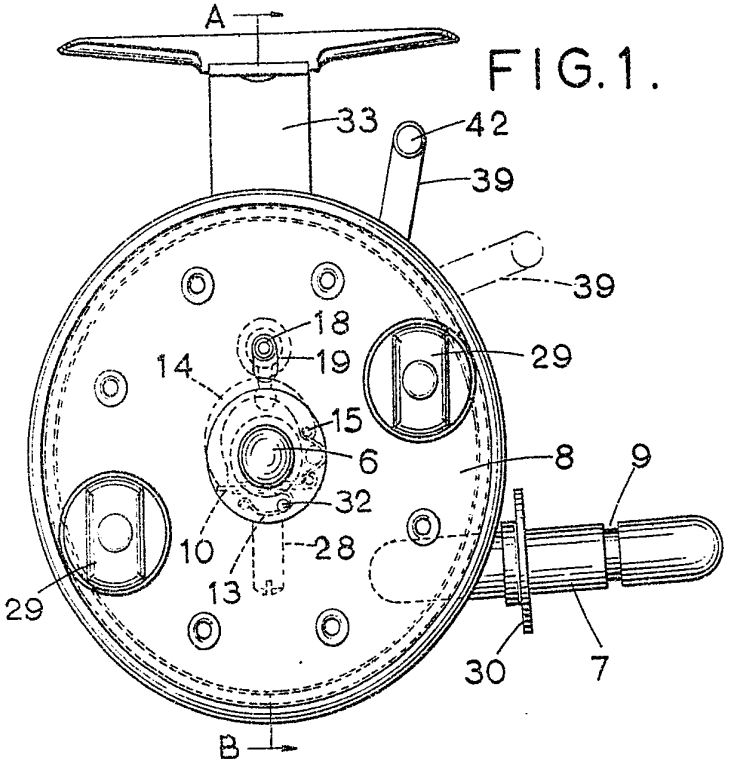


FIG.2.

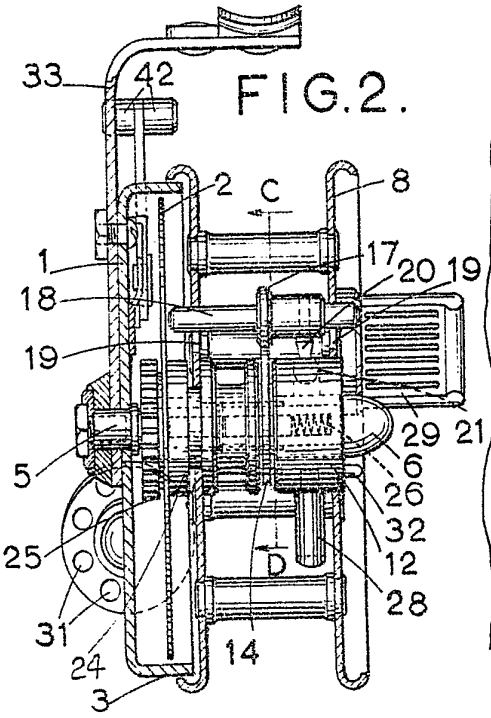
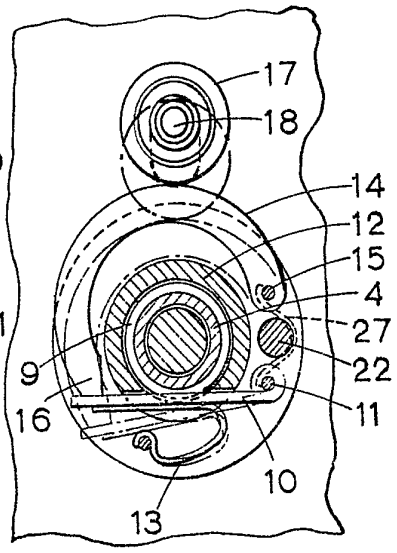


FIG.3.



754,444 COMPLETE SPECIFICATION

2 SHEETS

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SHEETS 1 & 2

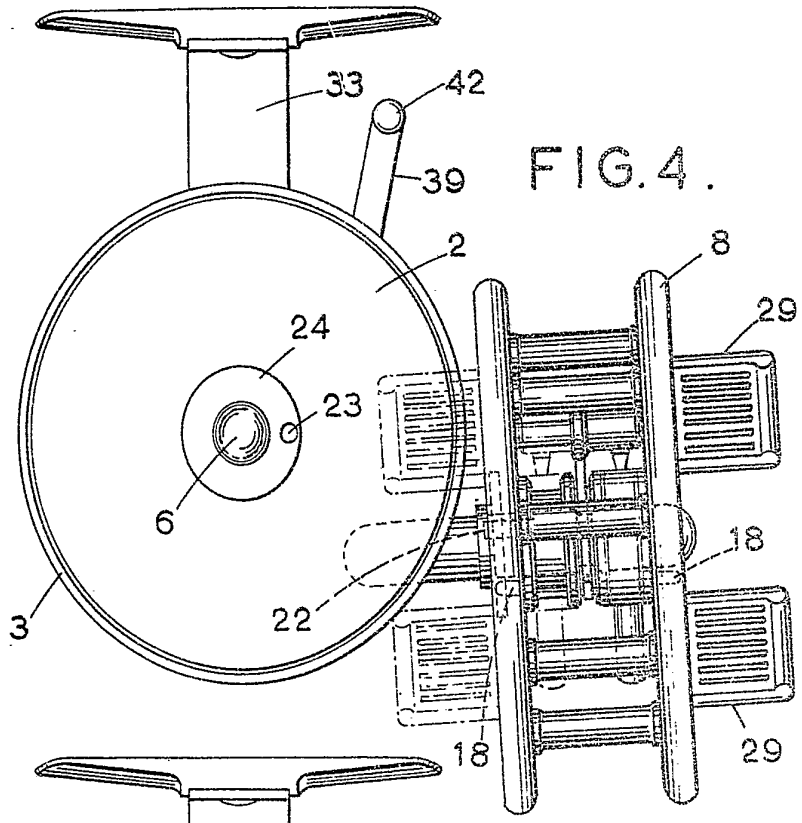

FIG. 4.

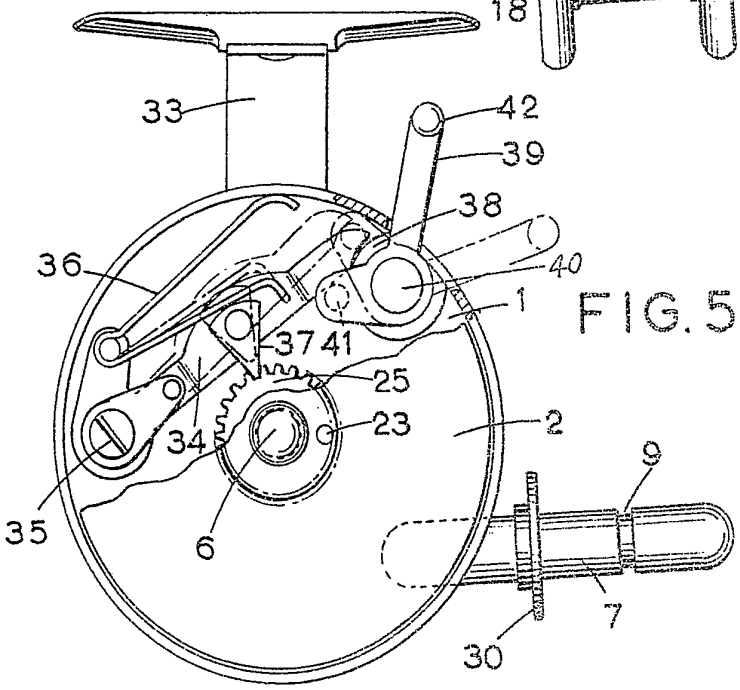

FIG. 5.

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2 SHEETS This drawing is a reproduction of the Original on a reduced scale.
SHEETS 1 & 2

FIG.1.

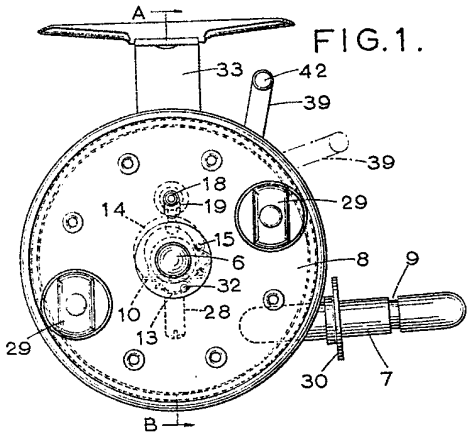

FIG.2.

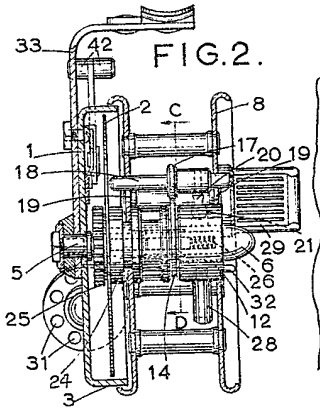

FIG.3.

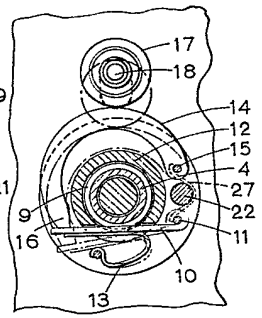

FIG.4.

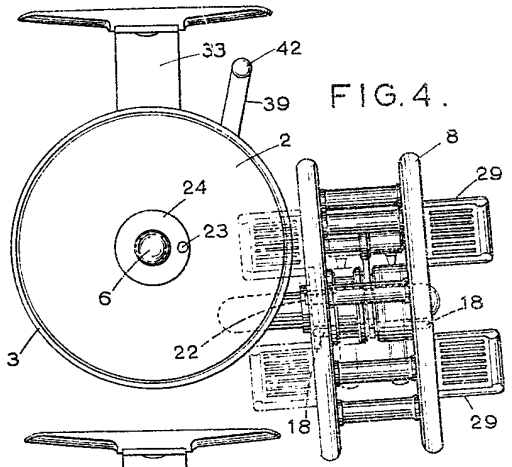

FIG.5.