

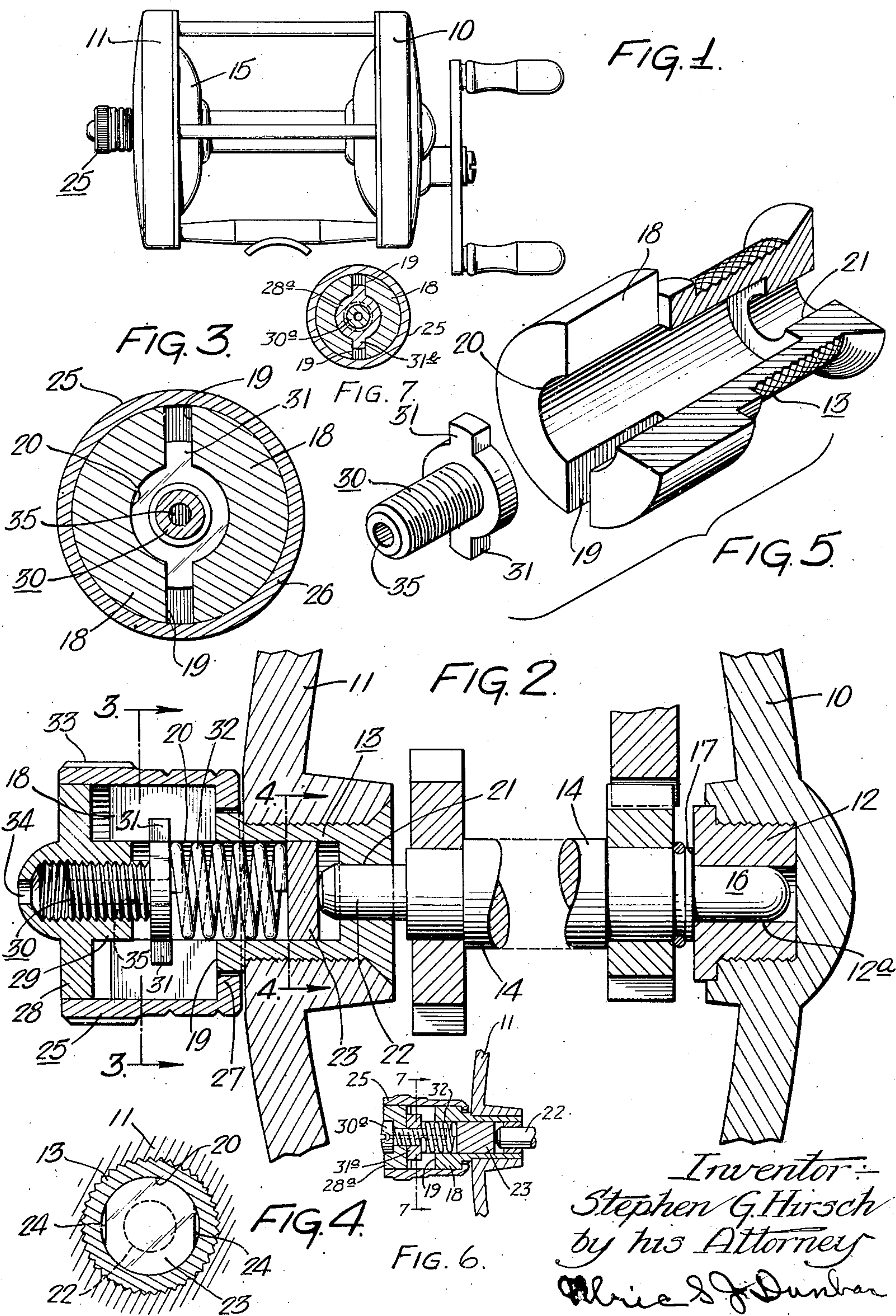
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FISHING REEL

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FISHING REEL

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This invention relates to fishing reels and, more particularly, to a mounting for the spools thereof constructed to prevent over-running of the spool during casting.

As is well known to those familiar with the art, during casting it is the practice of most fishermen to "thumb" the reel to prevent the over-running which will normally occur toward the latter end of the cast. Specifically, the objects of the present invention are to provide a means for introducing a friction load resisting rotation of the reel spool to overcome such over-running which will act directly upon the shaft of the spool which may be very readily regulated and in which the parts after assembly comprise a complete unit the elements of which are not separable from one another and, accordingly, cannot be lost, and in which the presence of exposed threaded parts is eliminated.

These and other objects I attain by the construction shown in the accompanying drawings wherein, for the purpose of illustration, I have shown a preferred embodiment of my invention and wherein:

Fig. 1 is a rear elevation of a fishing reel embodying my invention;

Fig. 2 is an enlarged fragmentary diametrical section illustrating the mounting of the reel spool shaft;

Fig. 3 is a section on line 3—3 of Fig. 2;

Fig. 4 is a section on line 4—4 of Fig. 2; and

Fig. 5 is a combined perspective of the left-hand bearing element and the associated stud of the bearing cap.

Referring now more particularly to the drawings, the numerals 10 and 11 denote end plates mounting bearings 12 and 13 which receive the ends of the shaft 14 mounting spool 15 and fixed thereto. The end bearing 12, or right-hand end bearing, may be of any usual or ordinary construction having engagement with the shaft to limit axial movement of the shaft toward the right-hand end of the reel. As at present shown, the shaft has a reduced end portion 16 producing a shoulder 17 which abuts the inner end face of the bearing, portion 16 fitting within the bearing bore 12a. The left-hand bearing 13 projects through and is rigidly mounted in end plate 11 and at its outer end comprises a head 18 the inner end of which is slightly spaced from the outer face of end plate 11. This end plate is, for a purpose presently to appear, transversely slotted at 19. The head and the major portion of the bearing 13 are pierced by a bore 20 of greater diameter than the bore of the bearing

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surface 21 which receives the reduced left-hand end portion 22 of shaft 14. This reduced end portion projects through the bearing bore 21 into the enlarged bore 20 and is there abutted by a thrust plate 23 which, for a purpose presently to appear, is flatted or otherwise formed at 24 to provide a slight space or spaces between the periphery of the thrust plate and the wall of bore 20.

Engaged with the head is a cap 25 comprising a barrel portion 26 having at its inner end an inturned flange 27 engaging beneath the inner face of head 18, an end plate 28 press-fitted into the outer end of the barrel 26 and provided centrally with an internally threaded boss 29, and a threaded stud 30 engaged in the threaded boss and having projecting arms 31 engaging in the slots 19 of head 18.

Disposed within the bore 20 between thrust plate 23 and the inner end of stud 30 is a spring 32 and it will be obvious that by rotation of cap 25, the outer surface of the barrel of which is knurled at 33 to assist in this operation, the compression of spring 32 may be closely regulated and, accordingly, the frictional resistance to rotation of shaft 14 regulated. It will be obvious that the spring 32 will set up frictional resistance between the threads of boss 29 and stud 30 and between the confronting faces of flange 27 and head 18 so that likelihood of disturbance of a set adjustment is eliminated, particularly in view of the fact that rotation of shaft 14 and the friction thus set up cannot be transmitted to stud 30 because of its engagement with the fixed bearing 13.

In order that the bearing surface may be readily lubricated, a small opening 34 may be formed in end plate 28 and an axial bore 35 formed through the stud 30. Lubricant introduced through these openings will find its way to the bearing surface 21 through the spaces left between the wall of bore 20 and thrust plate 23 at 24.

It will be obvious that while this construction has been illustrated as applied to the left-hand end plate because of the convenience of access afforded by this location it may be employed at either end plate as desired.

An obvious variation of the construction above described is illustrated in Figures 6 and 7, wherein the end plate 28A has a stud 30A fixed therein, said stud being threaded and being, in the present instance, provided by threading an ordinary screw axially through the end plate 28A. The spring compressor in this instance becomes a disc 31A, threaded on the stud 30A and having wings 31B for engagement in slots 19.

It will also be obvious that the particular construction of bearing 12, except as to its functions as a means for properly mounting shaft 14 and limiting its movement in one direction, is purely a matter of choice. I, accordingly, do not wish to be understood as limiting myself to the construction herein shown except as hereinafter claimed.

I claim:

1. In a fishing reel, spaced end plates, fixed bearings carried by said end plates, a line spool having a shaft mounted in said bearings, said shaft having engagement with one of said bearings limiting axial movement of the shaft in one direction, a cap rotatably mounted on the outer end of the other of said bearings and held against axial movement with relation thereto, a stud held against rotation with relation to the bearing and having threaded engagement with the cap, a thrust element guided by the bearing and abutting the adjacent end of the shaft and a spring between said stud and thrust element.

2. In a fishing reel, spaced end plates, fixed bearings carried by said end plates, a line spool having a shaft mounted in said bearings, said shaft having engagement with one of said bearings limiting axial movement of the shaft in one direction, a cap rotatably mounted on the outer end of the other of said bearings and held against axial movement with relation thereto, said cap and bearing combining to form a housing into

which the associated end of said shaft extends, an axially movable abutment in said housing and having engagement with the end of the shaft permitting rotation thereof and a spring engaging the outer face of said abutment and means operated by rotation of said cap for regulating the compression of said spring.

3. In a fishing reel, spaced end plates, fixed bearings carried by said end plates, a line spool having a shaft mounted in said bearings, said shaft having engagement with one of said bearings limiting axial movement of the shaft in one direction, a cap rotatably mounted on the outer end of the other of said bearings and held against axial movement with relation thereto, the outer end of said bearing being slotted a stud having portions engaged in the slots of the bearing and having threaded engagement with the cap, a thrust element guided by the bearing and engaging the adjacent end of the shaft and a spring between said stud and thrust element.

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