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*Complete Specification Left, 4th Mar, 1889*  
*Complete Specification Accepted, 6th Apr, 1889*

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**A D 1888, 4th JUNE N° 8122**

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**PROVISIONAL SPECIFICATION**

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**Improvements in or Applicable to Fishing Reels**

I JOHN BROWN MOSCROP of Lorne Villa, Urmston in the County of Lancaster, Engineer, do hereby declare the nature of my invention to be as follows —

This invention relates 1st to improvements in Reels for which Letters Patent was granted to me on the 27th day of February 1888, Numbered 2900, in respect of an improved adjustable pivot or centre and 2nd to a novel construction of handle for rotating the reel. The first part of my invention consists in forming the pivot or centre hollow to contain a spiral or other spring holding in tension two friction plates one bearing on the outside of the case and the other on the reel.

One of these friction plates has a screwed pivot taking into a nut carried in the spring aforesaid and is milled on its edge. By adjusting this screw more or less frictional resistance can be interposed to the turning of the reel and the drag on the said reel can be adjusted to the greatest nicety.

One of these friction plates may carry a projecting peg which by taking into a series of holes on the reel may serve as a "click" or ratchet and as a substitute for the present arrangement of ratchet and pawl.

The second part of my invention relates to an improved construction of handle or knob for rotating the reel and consists in forming the handle in one piece preferably of brass with a projecting collar of larger diameter — A corresponding washer is placed over the collar and pinned, soldered or otherwise secured to the reel allowing the handle to rotate freely between the ring and the face of the reel.

This construction of handle is simpler and less liable to derangement than the old pattern.

These improvements are applicable wholly or in part to the existing construction of reels.

25 Dated this 1st day of June 1888

JOHN G WILSON,  
Agent for the Applicant

*Moscrop's Improvements in or Applicable to Fishing Reels*

## COMPLETE SPECIFICATION

## Improvements in or Applicable to Fishing Reels

I JOHN BROWN MOSCROP of Lorne Villa, Urmston in the county of Lancaster, Engineer do hereby declare the nature of my said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement —

This invention relates to improvements in that description of Fishing Reel for 5 which Letters Patent were granted to me on the 27th day of February 1888 numbered 2900 and consists in the novel application thereto of a spiral spring holding in tension a pair of friction discs or plates one bearing on the outside of the case and the other on the reel for the purpose of adjusting the drag on the reel—to the greatest nicety as hereinafter described 10

On the accompanying drawing Fig 1 is a side view and Fig 2 a transverse section of a Fishing Reel embracing my present improvements

In both views *a* is the frame or casing of the reel constructed with a hollow boss or axis *e* for supporting the reel *d* and which is capable of being drawn off sideways as in my former invention. In carrying out my present improvements I 15 dispense with the wire ring and annular grooves in the bearing surfaces previously employed for securing the reel in position and I substitute a pair of friction discs *f* and *g* (illustrated in separate view Fig 3) at either end of the hollow axis—the inner face of this disc *f* being in touching contact with the outside of the reel *d* whilst the other disc *g* presses upon the outside of the frame as illustrated more 20 clearly in Fig 2

Between these two discs is interposed a spiral spring *h* which is connected at one extremity to a boss on the disc *f* and which is prevented turning upon its axis by having a projecting pin *l* entering a slot formed to receive it in the said hollow axis. Projecting from the corresponding boss of the other disc *g* is a screw *i* which screws 25 into a nut *j* fixed in the other extremity of the spiral spring *h*. By having a milled edge formed upon this disc *g* a convenient means is afforded of turning it upon its axis and thus of drawing out or extending the spiral spring *h* to any desired extent. In this manner the tension between the two friction plates is increased and thus more or less frictional resistance can be interposed to the turning of the reel *d* and the drag 30 upon the reel can be adjusted to the greatest nicety

I find that a convenient and effective means of securing the extremities of the spiral spring to the boss of the disc plate *f* at one end and to the nut *j* at the other is to form a spiral groove upon such boss and nut to correspond with the inside of the coils of the spiral spring *h* and whereby I am enabled to screw one into the other to 35 the extent of two or three coils and thus to effect a connection which only becomes tighter the more the spiral spring is extended

It will be apparent that this my improved friction mechanism is applicable to other classes of fishing reel having a hollow axis

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*Moscrop's Improvements in or Applicable to Fishing Reels*

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In my Provisional Specification I described an improved construction of handle or knob for rotating a fishing reel but I do not desire to embrace the same in the present Specification

5 Having thus particularly described and ascertained the nature of this my said invention and in what manner the same is to be performed I declare that what I claim is —

- 1st The improved mode of securing the reel in position upon its axis substantially as and for the purpose hereinbefore described and illustrated on the accompanying drawing
- 10 2nd In Fishing Reels the employment of a pair of friction discs in combination with a spiral spring and adjusting screw all mounted and operating substantially as and for the purpose hereinbefore described and illustrated on the accompanying drawing

Dated this 2nd day of March 1889

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JOHN G WILSON,  
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Agent for the Applicant

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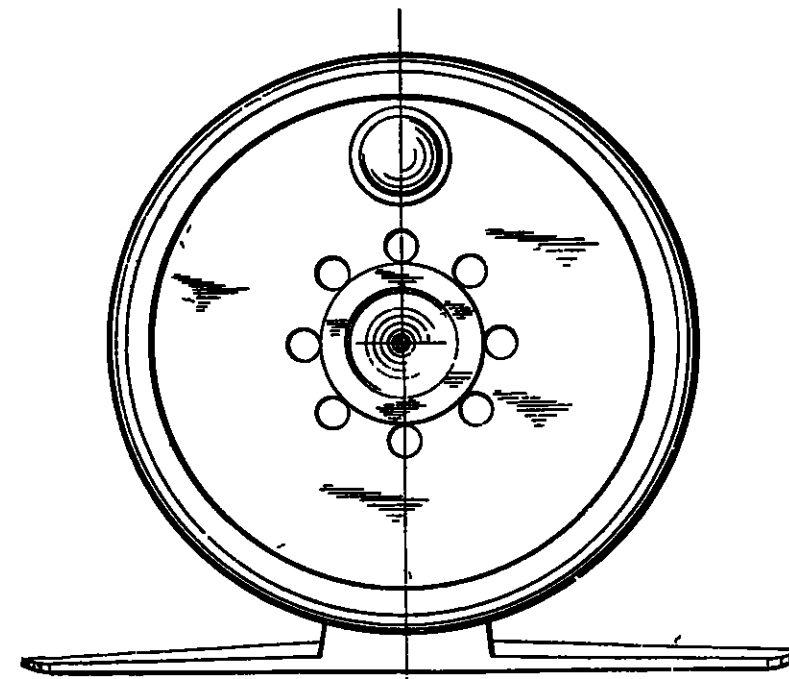


FIG 1

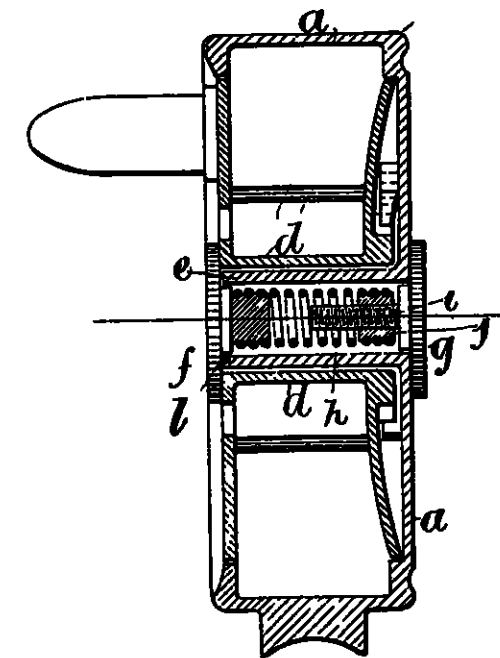


FIG 2

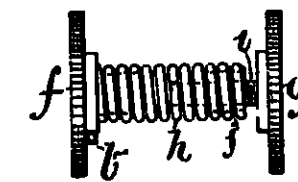


FIG 3

[This Drawing is a full-size reproduction of the Original]