

UNITED STATES PATENT OFFICE.

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FISHING-REEL.

SPECIFICATION forming part of Letters Patent No. 691,073, dated January 14, 1902.

Application filed August 30, 1900. Serial No. 28,565. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS J. RABBETH, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Fishing-Reels, of which the following is a specification.

The objects of this invention are to provide improved means for playing the fish and preventing it from getting slack line, to avoid danger of injury to the hand of the fisherman when the fish makes his rushes, and to make provision for paying out the line in such a way as to absolutely prevent the breakage of tackle.

My invention, broadly considered, consists in providing a fishing-reel with an improved frictional connection between the crank-handle and the spool of the reel to turn the same and to allow the spool to turn while the crank is held stationary. I provide superior means for varying the frictional resistance between the crank and the spool, so that the angler can readily and easily adapt the reel to the character of the fish and the strength of line and rod used.

This invention embraces in a fishing-reel a frictional connection between the handle and the barrel of the spool, comprising a wheel member and a ring member on said wheel member, said members having annular engaging faces in frictional contact with each other and means for varying the friction between said faces, whereby ample frictional surfaces are provided and great durability is insured.

This invention may be embodied in many different forms, and no attempt will be made herein to enumerate or describe all of such forms.

The accompanying drawings illustrate my invention in two of the various forms in which it may be embodied.

Figure I is a view of a fishing-reel embodying my invention in a form which I now deem preferable. Parts are broken away for clearness of illustration. Fig. II is an enlarged fragmental section of the same. Fig. III is a fragmental view illustrating a modification of the invention.

a indicates a spool, which may be of any of the usual forms.

b indicates a crank-handle, which is connected with the spool through the medium of a suitable frictional connection.

In the application of the invention illustrated in Figs. I and II the frictional connection comprises a wheel member connected with the spool to turn the same and a ring member surrounding the wheel member, one of said members being formed with two parts embracing the other member between them. In the preferable form of this application the wheel member *c* is formed of three plates, the outer plates or parts 1 2 being of greater diameter than the inner plate 3, but all of the plates being arranged concentrically, thus leaving an annular space 4 between the two outside plates, in which the ring member *d* is embraced. The ring member *d* is formed of two plates 5 6. *e* indicates friction adjusting-screws screwed through the outer ring-plate 5 and engaging the inner ring-plate 6, thus to force the rims of the plates apart to engage more or less forcibly with the plates 1 and 2 of the wheel to increase or decrease the frictional contact between the ring and the wheel. *f* indicates screws which fasten the plates 1, 2, and 3 of the wheel together. The screws *f* are threaded into the middle plate and one of the outside plates and are not threaded in the plate with which the head of the screw engages, thus to clamp the plates firmly together. *g* indicates the screw for fastening the handle in place on the ring. Preferably two handles are applied to the ring, at opposite edges thereof, in order to enable the angler to more readily hold the crank-handle stationary when desired. The handles thus arranged serve as a counterbalance for each other and also enable the angler in case the crank should escape to more conveniently recover the same.

In the form shown in Fig. III the crank-handles are attached to a ring or plate *c'*, which is furnished on its inner face with a hub *c''*, having a conical socket 9. *h* indicates a shaft connected with the spool *a* through the medium of the spur-wheel 11, the pinion 12, and shaft 13. The shaft 10 of the spur-wheel 11 is angular in cross-section at its outer end, as indicated at 14, and outside the angular portion is screw-threaded, as at 15. The plate *c'* is perforated to fit over the screw-threaded portion 15 and is secured in place

by the nut 16. *f* indicates a cone perforated to fit on the shaft 10 and arranged to seat in the conical socket 9. The cone is fixed against rotation on the shaft 10 by means of the angular portion 14 of such shaft, and the friction between the hub *c''* and the cone is readily adjusted by the thumb-nut 16. *g* indicates a cushion between the spur-wheel 11 and the base of the cone *f*.

It is to be understood that the wheel *C'* and the cone *f* may be connected with the spool in any desirable way. In Figs. I and II of the drawings the wheel *C'* is shown connected with the spool by intermediate speed-increasing means consisting of a spur-wheel 11, a pinion 12, and a shaft 13, such as shown in Fig. III; but I do not limit myself in this regard, as the wheel may be formed as a part of the spool and the ring frictionally connected therewith. No illustration of the various forms of connection between the wheel and the spool is necessary for the reason that the same are well known in the art and form no part of my invention.

In practical use the angler will use the crank-handle in the ordinary manner when he desires to reel in the line. Whenever the fish makes a rush, the angler may continue to turn the crank-handle or he may hold the crank-handle stationary, and whenever the strain upon the line becomes sufficient to overcome the frictional connection between the crank-handle and the spool the spool will turn, while the crank-handle remains stationary, thus paying out the line until the struggle of the fish ceases.

The cushion *g* affords a resiliency for the friction adjustment, and the same purpose is served by the use of the plates 5 6 of the ring member pressing outward upon the inner faces of the rims of the plates 12 of the wheel members shown in Figs. I and II. This enables

the friction adjustment to be made without bringing the adjusting-screw to a positive stop.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a fishing-reel, a frictional connection between the handle and the barrel of the spool, comprising a wheel member; a ring member on said wheel member; one of said members being furnished with a groove in which the other member is seated, and said other member being formed in two parts in said groove; and means for varying the frictional contact between the grooved member and the other member.

2. In a fishing-reel, the combination with the spool; of a wheel member connected with the spool to turn the same; and a ring member furnished with a handle and surrounding the wheel member; one of said members being formed of two parts embracing the other member between them; and means for increasing and decreasing the frictional contact between said parts and the member embraced thereby.

3. In a fishing-reel, the combination with the spool; of a peripherally-grooved wheel connected with the spool to turn the same; a ring furnished with a handle and comprising two plates surrounding said wheel and embraced in the groove thereof; and means for moving said plates from and toward each other, to vary the frictional contact between the wheel and the ring.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, California, this 21st day of August, 1900.

FRANCIS J. RABBETH.

Witnesses:

JAMES R. TOWNSEND,
JULIA TOWNSEND.