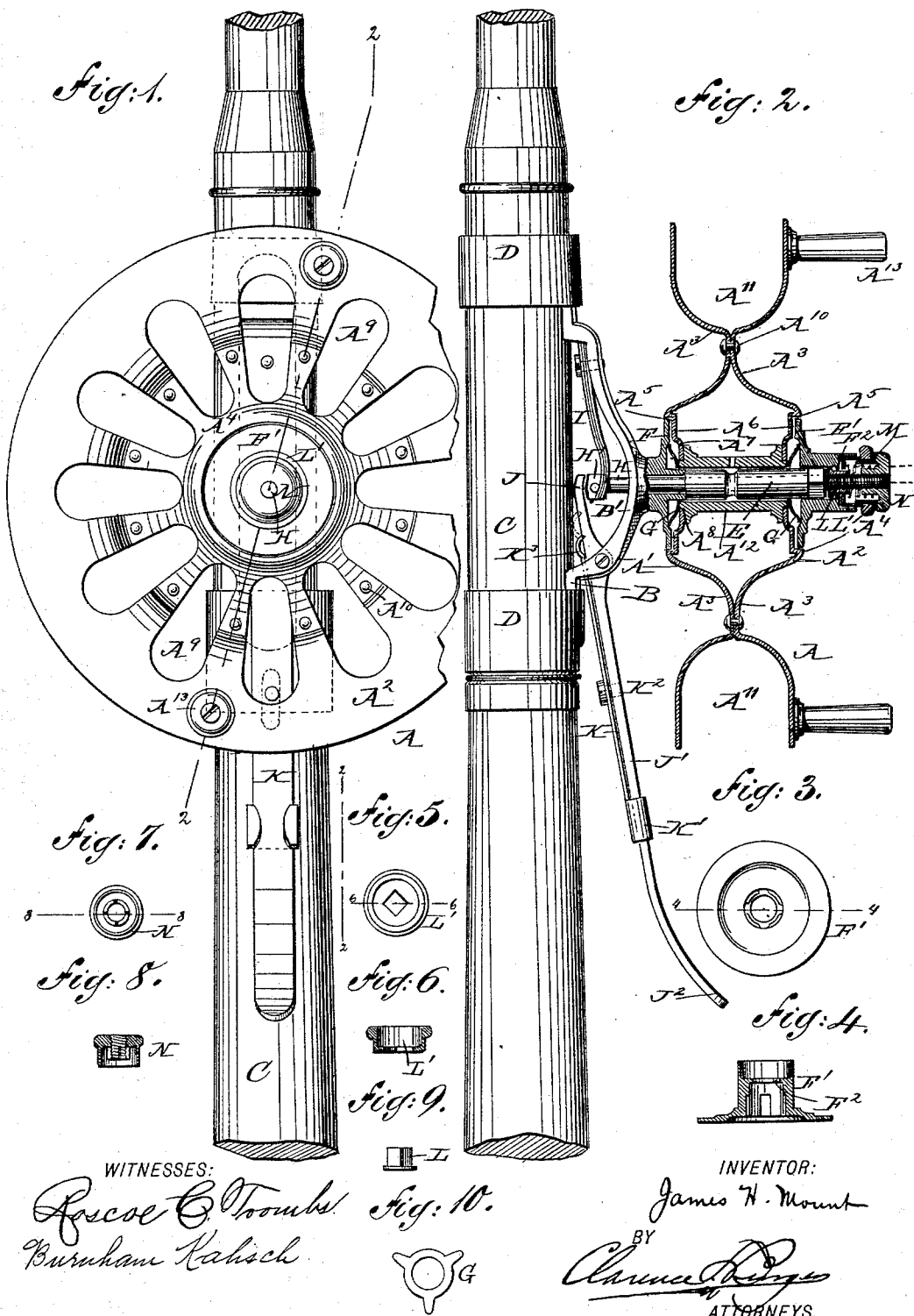


(No Model.)

J. H. MOUNT.
FISHING REEL.

No. 485,208.

Patented Nov. 1, 1892.



WITNESSES:

Roscoe C. Trumble
Burham Kahsch

Fig. 10.



INVENTOR:

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UNITED STATES PATENT OFFICE.

JAMES H. MOUNT, OF JAMESBURG, NEW JERSEY.

FISHING-REEL.

SPECIFICATION forming part of Letters Patent No. 485,208, dated November 1, 1892.

Application filed March 3, 1892. Serial No. 423,575. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. MOUNT, a citizen of the United States, residing in Jamesburg, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Fishing-Reels, of which the following is a specification.

This invention has for its particular object a fishing-reel, which by the simple instinctive exercise of the hand grasping the fishing-rod can be instantly either braked to resist tension on the line, as in holding a fish, or placed under a variable drag to retard the line, as in casting or in playing a fish, or left entirely free to run for casting or for simple fishing.

The invention has also various other objects, which will be fully set forth hereinafter.

The invention comprises a number of novel features, and in order that my invention may be clearly ascertained I shall first give a detailed description of the invention, and then point out its various features in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a face view of a reel embodying my invention applied to a fishing-rod. Fig. 2 is a cross-sectional view of the said reel on the line 2 2, Fig. 1, the rod and adjoining parts of the reel, however, being in side view. Figs. 3 to 10 are detail views of parts hereinafter referred to.

Corresponding parts are designated by like letters of reference in the several figures.

The fishing-reel thus chosen to illustrate my invention is of the class designed particularly for heavy fishing, in which the winding-bobbin A is of large diameter in comparison with its length and its journal E substantially perpendicular to, but in the plane of, the axis of the base-plate B, and hence, also, the rod C, when secured thereto, as by the ordinary sliding clamping-rings D. The bobbin A is by preference formed from two plates A' A², of appropriate sheet metal, which are struck up, as in a die, so as to form the annular beads A³, and within said beads and projecting oppositely thereto the raised disks A⁴, with sunken circular recesses A⁵, the bottoms of which have smooth surfaces A⁶ and central

depressions A⁷, surrounding openings A⁸. The plates A' A² thus "struck up" and having openings A⁹ for lightness and ventilation are placed back to back, so that their annular beads A³ project inward to a meeting, where they are united as by a circular row of rivets A¹⁰, the united outer portions of the plates A' A² thus forming the winding-groove A¹¹ of the bobbin. The perforated centers of the plates A' A² are further united by a journal-sleeve A¹² in a well-known manner, and the bobbin thus formed provided with ordinary handles A¹³. By this construction of the bobbin extreme lightness, simplicity, stiffness, and durability are attained. The journal E in which the bobbin A is mounted and which projects fixedly from the base-plate B may be, as is common, slightly inclined, as indicated, to the outer end of the rod C to better guide the fishing-line from the winding-groove A¹¹ to the rod-guides. The bobbin A is mounted between friction-plates F F', fitted within the circular recesses A⁵ on the respective outer sides of the bobbin, the inner friction-plate F being fixed on the journal E, but the outer friction-plate F' fitted to slide axially on the squared end of the journal E, whereby it is prevented from turning thereon, so that when the friction-plate F' is moved inward it, together with the fixed friction-plate F, will engage the respective friction-surfaces A⁶ of the bobbin and brake or stop or check the bobbin, according to the pressure placed upon the friction-plate F'.

In order that the friction-plates F F' may be thrown wholly out of contact with the bobbin A and the play of the bobbin taken up when the friction-plates F F' are separated, light dished spider-like springs G (shown in detail in Fig. 10) are placed on the journal E in the chambers formed by the depressions A⁷ in the bobbin and corresponding depressions in the corresponding friction-plates F F', which springs will thus tend to keep the friction surfaces and plates apart and leave the bobbin perfectly free to run, but will yield to permit the approach of the said plates and surfaces. The bobbin-journal E is made tubular and opens inward through the base-plate B, the middle portion of which is sprung outward, so as to form a bridge B', between which and the rod C will thus be left a space

for working parts, for which the bridge B' will serve as a guard and shield. In the bore of the journal E is fitted to slide axially a spindle H, the outer end of which is connected, as hereinafter described, to the movable friction-plate F', and the inner end of the spindle projecting through the bridge B' is provided inside thereof with a head H', which is held from turning in and connected to the free end of a stiff spring I, fixed to and beneath the bridge B'. The spring I thus tends to draw the friction-plate F' inward and compress the bobbin tightly between the friction-plates F F', so as to brake and stop the reel.

The spindle head H' is adapted to be engaged and borne outward to throw off the described brake by the short arm J of a lever, which is pivoted to and in a slot of the base-plate B close to the rod to swing to and from the rod in the plane of the axis thereof, and hence that of the bobbin, and the long arm J' of said lever extends alongside the rod, so that it may be grasped with the rod in one hand, and by simply closing the grip the spindle H thrown outward and the pressure of the brake-spring I taken off the friction-plate F'. The end of the lever-arm J' is turned outward to form a stop J², which will effectively prevent the rod and said lever-arm J' from slipping out of the hand while casting or fishing. The lever J J' is also arranged to first apply a drag as it is compressed to throw off the described brake, and then, as it is further compressed, to throw off the drag and leave the bobbin perfectly free, as follows: The friction-plate F', although connected to the outer end of the spindle H, as before stated, permits said spindle H to play axially a short distance through, the outward play of the spindle in the friction-plate F' being limited by a nut L, screwing on the spindle H, which is threaded, and which nut has a flange turning in, but adapted to engage and carry outward with it, a flange F² on the friction-plate F. The nut L is also fitted to slide axially in the squared opening of a burr L, (shown in detail in Figs. 5 and 6,) by which it is turned, and on the outer end of the spindle H is screwed an adjustable locking-collar N, (shown in detail in Figs. 7 and 8,) between which collar N and the burr L', bearing on the friction-plate F', is interposed a coiled spring M, which thus exerts its pressure on the friction-plate F'. The collar N, burr L', and friction-plate F' are provided with sleeves nested into each other, as shown, to exclude dust, &c. The collar N is ordinarily so adjusted on the spindle H as to bear against the burr L', and hence throw the weight of the brake-spring I on the friction-plate F' when the spindle H is in its inmost position, as before stated; but when the spindle H is first thrown outward by the lever J J', as before described, the collar N will be thrown off the burr L', and the brake thus taken off the reel; but the coiled spring M will keep the friction-plate F'

pressed against the bobbin as the spindle plays outward through the friction-plate F', and thus leave a drag upon the reel until, as the spindle continues its motion, the flanged nut L engages and carries outward the friction-plate F', and thus leaves the bottom perfectly free. Thus by simply and instinctively tightening the grip of the hand on the rod and lever-arm J', the brake or drag can be instantly applied, varied, or entirely removed at will. The nut L can be turned by means of the burr L' to adjust the drag as desired, and the collar N can be adjusted, if desired, to free the bobbin entirely from the brake-spring I in all positions. Adjustment can in like manner be made for different rods to which the reel is applied.

On the lever J J' is guided by a clip K' and pin-and-slot connection K² a slide K, having on its inner end a bearer K³, adapted to each of a series of rests on the lever-arm J, which bearer can be readily adjusted by the hand grasping the rod to so engage the rod and limit the return of the lever J J' and spindle H as to throw the brake or drag on or off at will while fishing.

I claim as my invention—

1. In a fishing-reel, the combination of instrumentalities herein represented as follows, to wit: a base-plate, a tubular bobbin-journal projecting at substantially a right angle from the base-plate, a bobbin, a bobbin-governing device, including a spindle, working axially in said tubular journal, and an operating-lever pivoted to the base-plate to work in the plane of the axis of the rod and having an arm to engage and work said spindle, as set forth.

2. A reel for fishing-rods, the axes of whose bobbin is to be in the plane of but substantially perpendicular to the axis of the rod, provided with a base-plate sprung outward medially to form a bridge, and a bobbin-governing device including a part working beneath said bridge, substantially as described.

3. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a bobbin-journal, a bobbin formed with friction-surfaces on its opposite sides, non-rotatable friction-plates corresponding thereto, adjustable relatively toward and from each other, and means for so adjusting the friction-plates.

4. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a bobbin-journal, non-rotatable friction-plates thereon adjustable relatively toward and from each other, a bobbin having friction-surfaces corresponding to said friction-plates, and take-up springs between said friction-plates and friction-surfaces.

5. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a friction-plate fixed thereon, a non-rotatable friction-plate movable axially on the said journal, a bobbin hav-

ing friction-surfaces, and a spindle movable axially in the tubular journal and carrying the movable friction-plate.

6. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in the bobbin-journal, a friction-plate carried by said spindle, a lever to work said spindle, and a spring opposing said lever.

7. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in the tubular journal and carrying a friction-plate, and means for adjusting the position of said friction-plate axially on its carrying-spindle.

8. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in the tubular journal, a friction-plate movable axially on said spindle, a collar on said spindle, and a coiled spring on said spindle retained by said collar and exerting pressure upon the said friction-plate.

9. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in said journal, a friction-plate playing axially on said spindle, a spring on the spindle pressing said friction-plate, and a collar screwing on said spindle to retain said spring and adjust the limit of play of the friction-plate.

10. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in the tubular journal, a friction-plate playing

on said spindle, a spring acting on the friction-plate, and a nut screwing on said spindle and serving as an adjustable stop for limiting the movement of said spindle in the friction-plate.

11. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in said journal, a friction-plate incapable of rotation, but axially adjustable on said journal, and having a flange, a nut screwing on said spindle and having a flange to move axially but turn on that on the friction-plate, a spring holding the friction-plate toward said nut, and a retaining-collar for said spring.

12. A reel comprising in its make-up the following instrumentalities, to wit: a base-plate, a tubular bobbin-journal, a bobbin having friction-surfaces, a spindle movable axially in said journal, a friction-plate carried by said spindle, a spring acting on said spindle, a lever to move said spindle against the spring, and a bearer adjustable on said lever to engage a fixed bearing, as the rod, and adjust the said spindle, as set forth.

13. A reel-bobbin whose construction is represented herein as follows, to wit: two plates of sheet metal struck up alike and united back to back, so as to show in cross-section the winding-groove A^{11} outside, the opposite plates meeting and united immediately within said groove A^{11} and then diverging and forming opposite central disks A^4 , which are separated by and fixed to the respective ends of a sleeve or cylinder A^{12} , as set forth.

JAMES H. MOUNT.

Witnesses:

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