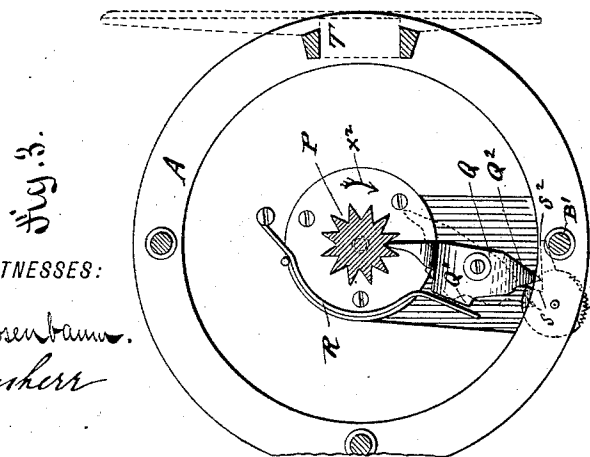
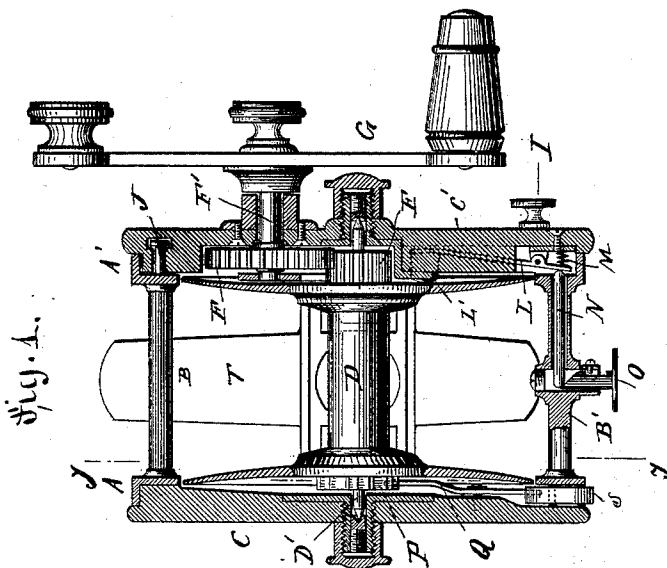


E. HOLZMAN.
FISHING REEL.

Patented Mar. 4, 1890.



INVENTOR

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UNITED STATES PATENT OFFICE.

ERNEST HOLZMANN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
AUGUST H. DIRKES, OF SAME PLACE.

FISHING-REEL.

SPECIFICATION forming part of Letters Patent No. 422,786, dated March 4, 1890.

Application filed June 13, 1889. Serial No. 314,175. (No model.)

To all whom it may concern:

Be it known that I, ERNEST HOLZMANN, of the city, county, and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Fishing-Reels, of which the following is a specification.

This invention relates to improvements in fishing-reels; and the object of my invention is to provide a reel which is simple in construction, can be readily taken apart without requiring the use of implements, and which is provided with attachments that serve as a drag or brake for the line while the same is being unwound while casting or trolling.

The invention consist in the construction and combination of parts and details, as will be fully described hereinafter, and finally be pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical transverse sectional view of my improved reel on the line *x x*, Fig. 2. Fig. 2 is an inner face view of the detachable end plate. Fig. 3 is a vertical longitudinal sectional view on the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The casing of the reel is composed of two flanged rings *A A'*, united by posts *B B'*. To said flanged rings *A* and *A'* the end plates *C* and *C'* are attached, the former one permanently and the latter detachably, said plates forming the bearings for the spindle or shaft *D'* of the pulley or reel proper *D*. Said reel is provided at one end with a pinion *E*, that engages a cog-wheel *F*, mounted on the inner end of a shaft *F'*, journaled in the detachable end plate *C'* and provided with the usual handle *G* for turning it.

The detachable end plate *C'* is provided with three undercut segmental grooves *H*, into which the headed studs *J*, that project from the ring *A'*, can pass, said undercut grooves being each provided at one end with an enlargement to permit of inserting the heads of said studs. To attach the plate *C'* to the casing, the heads of the studs are passed through the enlargements of the grooves *H*, and then said plate is turned to the right until the studs are at the opposite ends of the grooves, thus forming a bayonet-lock. A

screw *I* is screwed through the plate *C* into the ring *A'* to prevent accidental turning and loosening of said plate *C'*. In a recess *K* in the inner surface of the detachable plate *C'* a brake-lever *L* is pivoted, which is provided at one end with a head *L'*, that can act on the outer surface of one of the end plates of the reel proper *D*. On the opposite end of said lever a spring *M* acts, which is interposed between said lever and the bottom of the recess, and which presses said end of the lever outward, thereby pressing the brake-head *L'* in a direction from the end plate of the reel proper.

Part of the cross-bar *B'* of the frame of the reel is made tubular, and in the same a sliding rod *N* is mounted, the ends of which are rounded. One of said ends rests against the shorter end of the lever *L*, and on the other the beveled inner end of a sliding push-pin *O* in said cross-bar *B* can act. By pressing the push-pin *O* inward the beveled inner end of the same acts on the inner end of the sliding rod *N* and pushes said sliding rod *N* to the right, whereby the shorter end of the lever *K* is pressed to the right and the head *L'* of said lever is pressed against the outer surface of the one end plate of the reel proper *D*, and thus acts as a brake or drag.

On that end of the reel opposite the one on which the pinion *E* is mounted the ratchet-wheel *P* is affixed, with which a pawl *Q* can engage, that is pivoted on the inner surface of the end plate *A*, said pawl having a squared offset *Q'*, against which a spring *R* rests, which spring is secured on the end plate *C*. A disk *S*, having teeth on its edge, is pivoted in the flange of the ring *A* and is provided with a recess *S'*, into which a prong *Q²* of the pawl *Q* projects. The disk *S* is provided with a stop-pin *S²*, which can strike against one of the cross-posts of the frame or casing. By means of the thumb, which is placed on the serrated projecting edge of the disk *S*, said disk *S* is rotated in the direction of the arrow *x'* until the pin *S²* strikes against the post *B'*, as shown in Fig. 3. Thereby the pawl *Q* is brought in engagement with the ratchet-wheel *P*, and when the line is unwound by a fish pulling on it the reel *D* and the ratchet-wheel *P* are turned in the direction of the

arrow x^2 , and this pawl and ratchet-wheel serves as a drag to prevent the fish from unwinding the line too rapidly, and also produces a clicking noise, calling the attention of the fisherman to the fact that a fish is pulling on the line.

As soon as the fisherman begins to turn the handle G to wind up the line, the direction of rotation of the reel D and ratchet-wheel P are reversed, and a tooth of the ratchet-wheel acting on the pawl throws the same out of engagement with the ratchet-wheel, and at the same time the prong Q³, acting on the disk S, turns the same slightly in the inverse direction of the arrow x' . Whenever the pawl is to be thrown into engagement with the ratchet-wheel, it is only necessary to turn the disk S by means of the thumb in the direction of the arrow x' , and as soon as the reel is turned to wind up the line the pawl is automatically thrown out of engagement with the ratchet-wheel, and no adjusting or setting of this ratchet is thus required.

The reel is provided with the usual arm T for securing it to the end of the pole. My improved reel is very simple in construction, not apt to get out of order, and requires no manipulation to set the drag, and by simply pressing the thumb on the push-pin O the fisherman is at all times enabled to control the line when the same is being unwound for casting or by the fish.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a fishing-reel, the combination, with a frame composed of two flanged rings and cross-bars uniting them, of a fixed end plate on one flanged ring, a detachable end plate on the other flanged ring, a reel mounted in said end plates, and gearing in the detachable end plates for operating the reel, substantially as set forth.

2. In a fishing-reel, the combination, with two flanged rings united by cross-bars, of a fixed end plate on one flanged ring, a detachable end plate on the other flanged ring,

headed studs projecting from one flanged ring, undercut grooves on the inner surface of the detachable end plate, a reel mounted to turn between said end plates, and gearing in the detachable end plates for operating said reel, substantially as set forth.

3. In a fishing-reel, the combination, with a frame, of a reel mounted to rotate in the same, a brake mounted in one of the end plates of the reel-frame, a push-pin in one of the cross-bars of the frame, and a sliding rod which transmits motion from the push-pin to the brake, substantially as set forth.

4. In a fishing-reel, the combination, with a frame, of a reel mounted to rotate in the same, a brake-lever pivoted in one of the end plates of the reel, a spring acting on said brake-lever, a sliding rod in one of the cross-bars of the frame, which sliding rod can act on the brake-lever, and a push-pin in said cross-bar, which push-pin acts on the sliding rod, substantially as set forth.

5. In a fishing-reel, the combination, with a reel casing or frame, of a reel mounted in the same and provided with a ratchet-wheel, a pawl pivoted on one of the end plates of the frame and adapted to engage said ratchet-wheel, and a serrated disk pivoted in the rim of the frame and having a notch for receiving a prong of the pawl, and of a spring acting on said pawl, substantially as set forth.

6. In a fishing-reel, the combination, with a casing or frame, of a reel mounted in the same, a ratchet-wheel on said reel, a pawl pivoted on one of the end plates, a serrated disk mounted in the edge of the frame and having a recess into which a prong of the pawl passes, and also having a stop-lug, and of a spring acting on said pawl, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ERNEST HOLZMANN.

Witnesses:

OSCAR F. GUNZ,
JOHN ALONZO STRALEY.