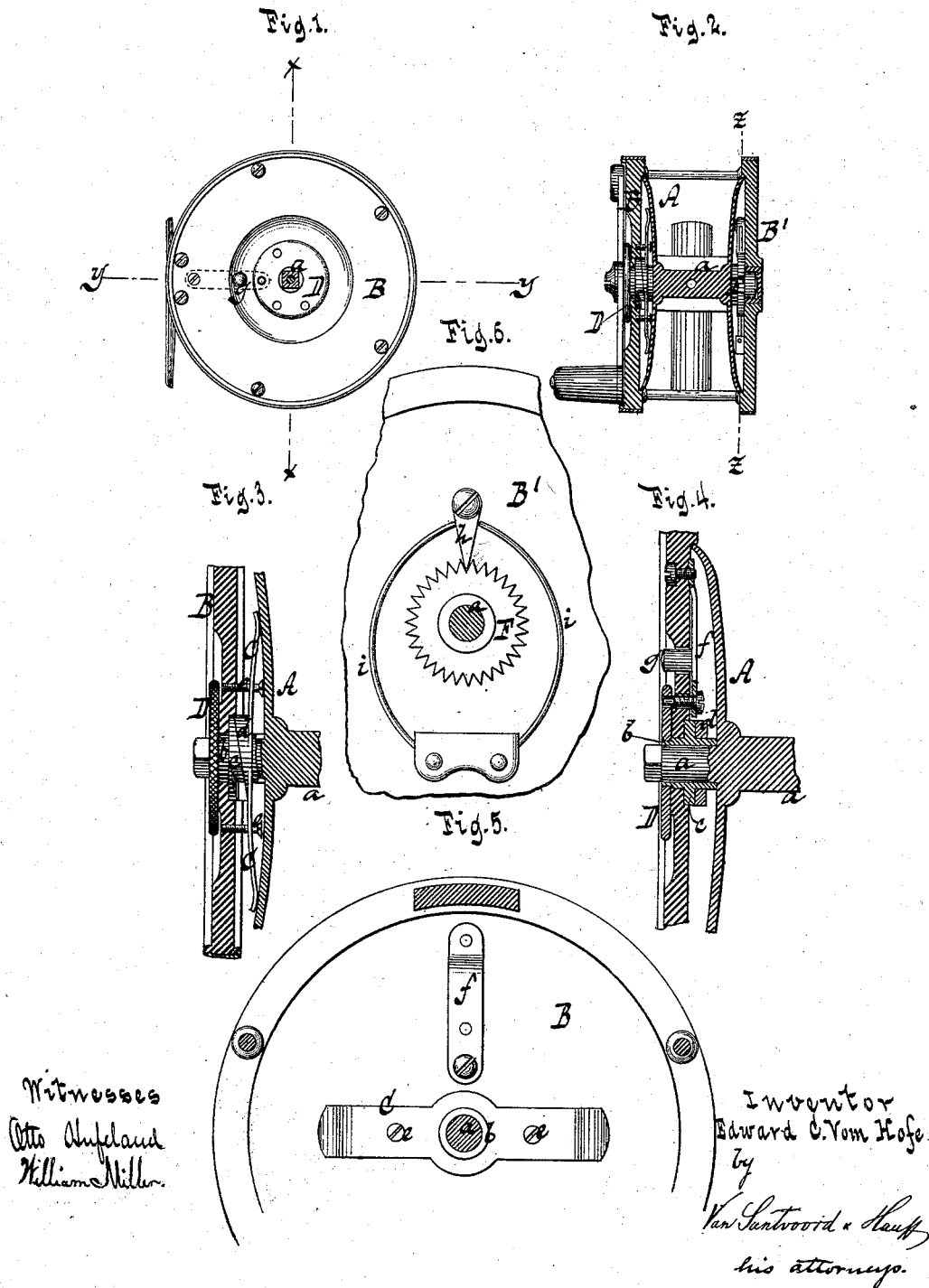


E. C. VOM HOFE.
Fishing-Line Reel.

No. 219,328.

Patented Sept. 2, 1879.



UNITED STATES PATENT OFFICE.

EDWARD C. VOM HOFE, OF NEW YORK, N. Y.

IMPROVEMENT IN FISHING-LINE REELS.

Specification forming part of Letters Patent No. **219,328**, dated September 2, 1879; application filed February 27, 1879.

To all whom it may concern:

Be it known that I, EDWARD C. VOM HOFE, of the city, county, and State of New York, have invented a new and useful Improvement in Fishing-Line Reels, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front view of a reel embodying my invention. Fig. 2 is a cross-section of the same in the line *x x*, Fig. 1. Fig. 3 is a similar section of a portion thereof, showing the tension device on a larger scale than in the previous figure. Fig. 4 is a cross-section of the same in the line *y y*, Fig. 1. Fig. 5 is an inner view of the plate carrying the tension device. Fig. 6 is a section of the apparatus in the line *z z*, Fig. 2.

Similar letters indicate corresponding parts.

My invention consists in the combination, with a fish-line reel and the reel-frame, of a tension device for controlling the motion of the reel, and means for adjusting said tension device so that the line may be allowed to unwind easy or hard.

The tension device consists of a flat spring provided with a cam between its ends, and the means for regulating the tension thereof consists of an exposed finger-wheel having a hub, on which the spring is mounted, and which surrounds the axle of the reel, while it carries a cam to engage the cam of the spring.

In the drawings, the letter A designates a reel of ordinary construction, and B B' are two heads, which, together with suitable cross-bars, constitute the reel-frame, the axle *a* of the reel having its bearings in said two heads. C designates a flat spring, composing a tension device, for controlling the motion of the reel A, and D is a milled wheel, whose function is to adjust or regulate the tension of said spring.

The wheel D is situated outside of the head B of the reel-frame, and on the same is formed a hub, *b*, (best seen in Fig. 4,) which extends through said head, around the reel-axle *a*, and carries a cam, *c*.

The spring C is provided with a hole between its ends, whereby it is mounted on the

inner part of the hub *b*, so that the ends of the spring bear on the reel A, and around said hole is formed or secured a cam, *d*. This cam *d*, like the cam *c* of the wheel, has a spiral form, so that when the wheel is turned in the proper direction the spring C is forced inward—namely, in the direction of the reel A—by the joint action of the cams until the highest part of the cam *c* passes the same part of the cam *d*, when the spring is allowed to move back. The tension of the spring C can thus be nicely adjusted.

To prevent the spring C from turning on the hub *b* of the adjusting-wheel, pins *e* are passed through the spring into the head B, and for the purpose of retaining the wheel D in its position I make use of a spring-catch, *f*. This catch consists of a spring which is attached to the head B, and carries a stop-pin entering one of a series of holes in the wheel, and with the same is combined a push-pin, *g*, for disengaging the wheel from the stop-pin.

On the head B' of the reel-frame is arranged a ratchet-wheel, F, and pawl *h*, (see Fig. 6,) to make known when the reel is turned. The ratchet-wheel F is secured on the axle *a* of the reel, and its teeth are so shaped that they present the same angle on both sides or edges, while the pawl *h* is pivoted to the head B' and has a tapering form, the point thereof being made to engage the teeth of the ratchet-wheel.

The pawl *h* is subjected to the action of two springs, *i*, which are attached to the head B' of the reel-frame and bear upon opposite sides of the pawl. By these springs *i* the pawl *h* is held in such a position that its point of contact with the ratchet-wheel F and the axis upon which it swings are in a plane radial to the axis of the ratchet-wheel, as clearly shown.

By this arrangement the ratchet-wheel F is permitted to turn in either direction, and the pawl is not liable to become disengaged from the wheel, while the teeth and pawl, moreover, are least liable to wear.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with a fish-line reel and the

reel-frame, of the adjusting-wheel D, having a hub which extends through one head of the reel-frame and carries a cam, *c*, and the tension-spring C, for controlling the motion of the reel, mounted on said hub, and having a cam, *d*, to engage the cam of the adjusting-wheel, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 26th day of February, 1879.

EDWARD C. VOM HOFE. [L. S.]

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.