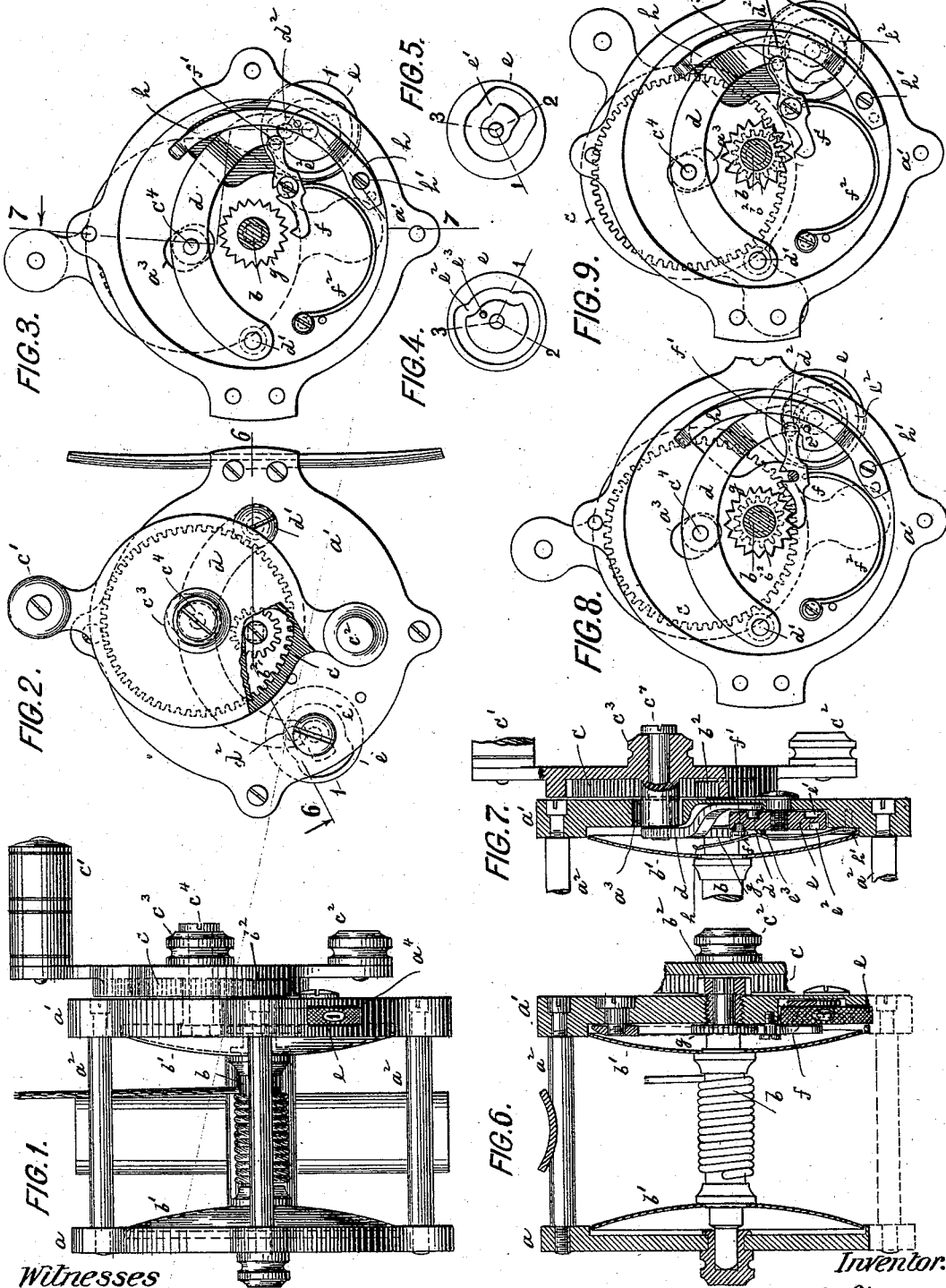


(No Model.)

J. S. FREESE.
FISHING REEL.

No. 522,323.

Patented July 3, 1894.



Witnesses
John Becker.
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UNITED STATES PATENT OFFICE

JOHN S. FREESE, OF BROOKLYN, NEW YORK.

FISHING-REEL.

SPECIFICATION forming part of Letters Patent No. 522,323, dated July 3, 1894.

Application filed April 16, 1894. Serial No. 507,645. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. FREESE, of Brooklyn, New York, have invented an Improved Fishing-Reel, of which the following is a specification.

This invention relates to a fishing reel in which the entire operating mechanism is concealed and protected, and which may be readily set to its various positions of casting, fishing and winding up.

In the accompanying drawings, Figure 1 is a plan of my improved reel; Fig. 2 a side view partly in section thereof; Fig. 3 an inner face view of head a' ; Fig. 4 an inner face view of cam e ; Fig. 5 an outer face view of such cam; Fig. 6 a section on line 6, 6, Fig. 2; Fig. 7 a section on line 7, 7, Fig. 3; Figs. 8 and 9 are inner face views of head a' , showing the parts in different positions.

The letters a, a' , represent the two heads of a reel connected by rods a^2 , as usual, and of which the head a' , is hollow to contain part of the operating mechanism. Through the heads a, a' , passes the shaft b , upon which the line is wound, and which is provided with the cup-shaped disks b' , that bear against the heads.

The outer end of spindle b , is squared to form the seat for a cog wheel b^2 , which is adapted to be engaged by an internally geared movable wheel c . This wheel carries the usual handle c' , and the counterweight c^2 . It is provided with a hub c^3 , containing a screw c^4 , which passes through a slot a^3 , of head a' , and connects the wheel to a lever d . This lever is pivoted at d' , within the hollow of head a' .

The free end of lever d , is provided with a pin d^2 , that engages the external groove e' , of a revolving cam e . This cam has a milled edge partially exposed and accessible through a slot a^4 , of head a' . Upon the edge of cam e , are marked the figures 1, 2 and 3, so that the position of the cam and of the operating mechanism is indicated by the exposed figure.

By revolving the cam e , the lever d is vibrated on its pivot and thus the wheel c , attached thereto, is correspondingly shifted, and is thrown either into or out of engagement with wheel b^2 .

The inner face of the cam e , is provided with the groove e^2 , engaged by the pin f' , of a pivoted click f . This click is provided with a spring f^2 , and is, by the movement of the cam, either thrown into or out of engagement with a ratchet wheel g , fast on shaft b .

Over the inner face of the cam e , there extends a drag or spring brake h , secured to head a' , at one end by screw h' . This drag is adapted to be thrown with its free end into contact with the disk b' , of shaft b , by a pin e^3 , on the inner face of cam e . That is to say, when the cam is revolved so as to bring the pin in line with the drag, the free end of the latter will bear against the outer face of the disk b' , to brake the shaft b . When however the cam is revolved so as to liberate the drag, the latter will recede from the disk b' , by its own spring action and thus the brake will be removed from the shaft b .

In use, the cam e , is revolved to either of its three main positions, adapted for casting, for fishing and for winding up the line.

For casting (Fig. 3), the cam is revolved into its position 1. It will in this position withdraw the click f , from ratchet wheel g , while the pin e^3 , will bear against the drag h , so as to put the latter into action. In this way, the click does not prevent the free revolution of the shaft, while the drag at the same time, properly checks the speed of such revolution.

For fishing (Fig. 8), the cam is revolved into its position 2. It will in this position cause the click f , to engage the ratchet wheel g , so that a pull on the line by a fish is properly indicated. At the same time, the pin e^3 is out of line with drag h , and the latter is off, to permit the line to be freely played out.

For winding up the line, (Fig. 9,) the cam is revolved into position 3. Here the click f , is out of engagement with the ratchet wheel g , and the drag h , is off. At the same time, the lever d , has been vibrated to draw the wheel c , into engagement with the wheel b^2 . By now revolving the handle, the line is wound upon the reel while no impediment is presented to the free revolution of the shaft.

My improved reel will be found to be very convenient in use, as it can be accurately set to its various functions. Moreover all parts

of the operating mechanism are entirely concealed and protected.

What I claim is—

- 5 1. The combination in a fishing reel of a shaft with a cog wheel mounted thereon, a lever, a revolving cam engaging the same, an internally geared wheel secured to the lever, and a handle secured to the internally geared wheel, substantially as specified.
- 10 2. A fishing reel provided with a shaft, a cog

wheel and ratchet wheel mounted thereon, a cam, a click and lever operated thereby, a gear wheel connected to the lever and adapted to engage the cog wheel, and a handle secured to the gear wheel, substantially as specified. 15

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Witnesses:

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