

(No Model.)

F. O. EKHOLM.

GUN CARRIAGE.

No. 318,239.

Patented May 19, 1885.

Fig. 1.

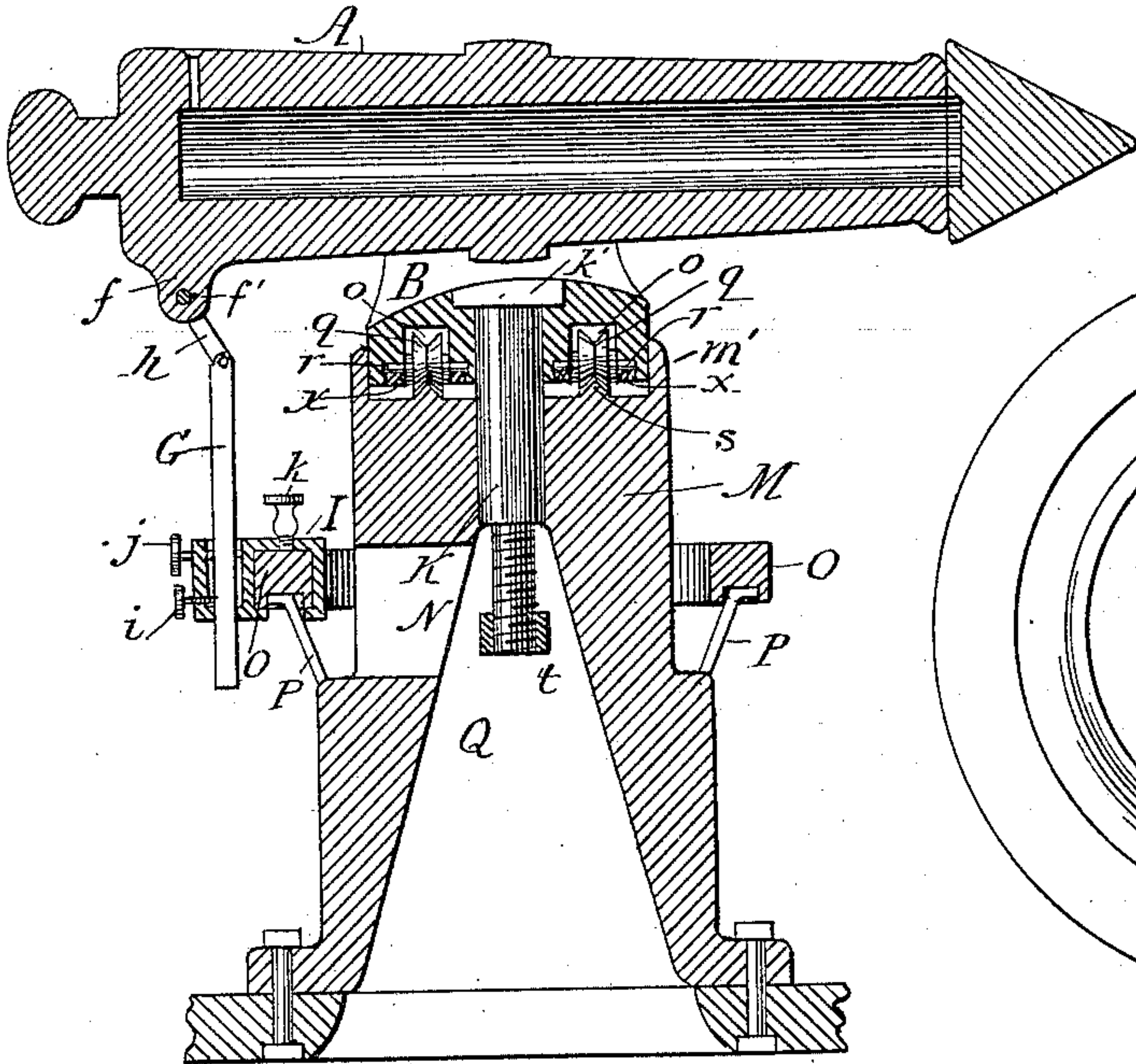


Fig. 2.

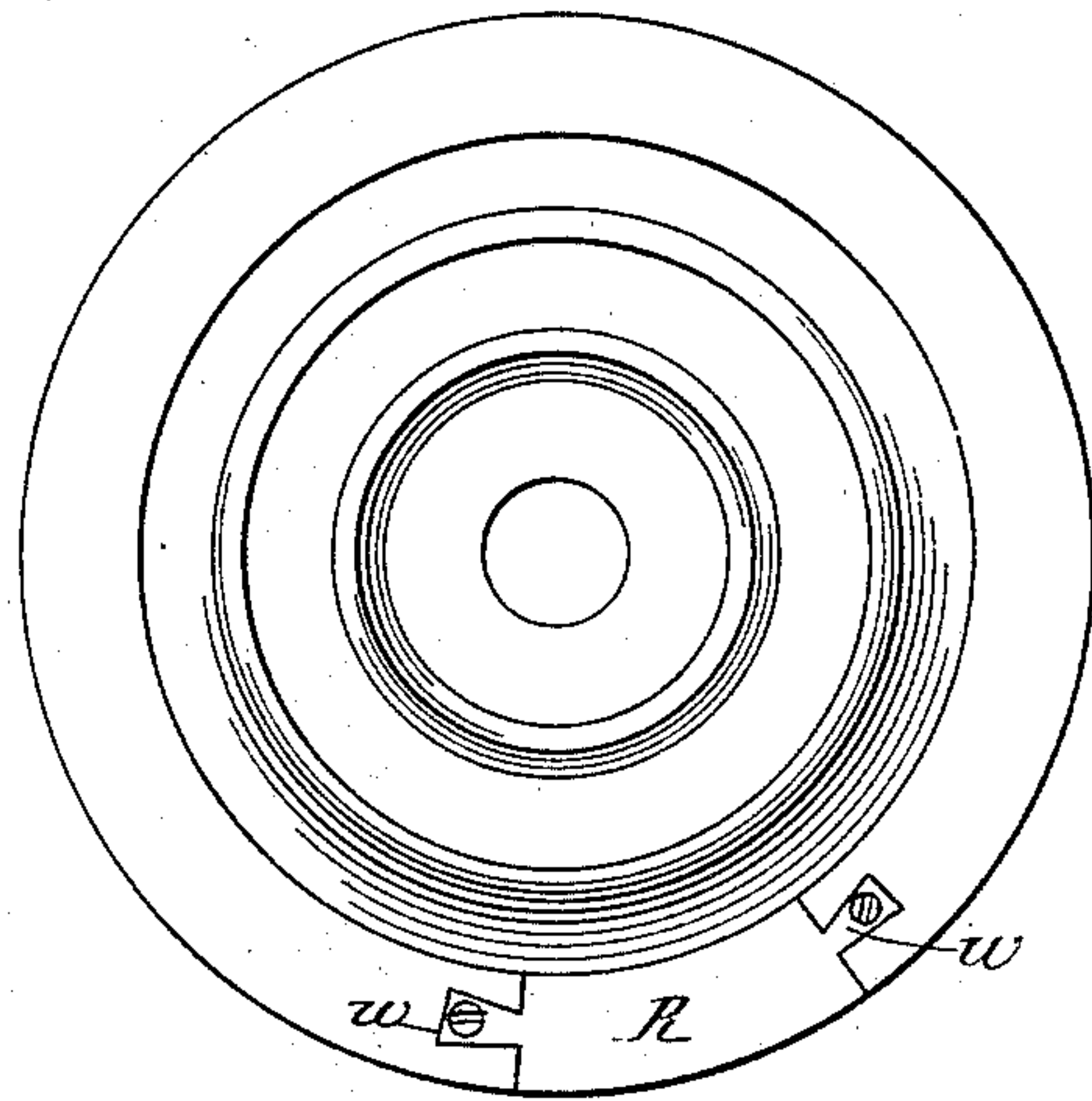


Fig. 3.

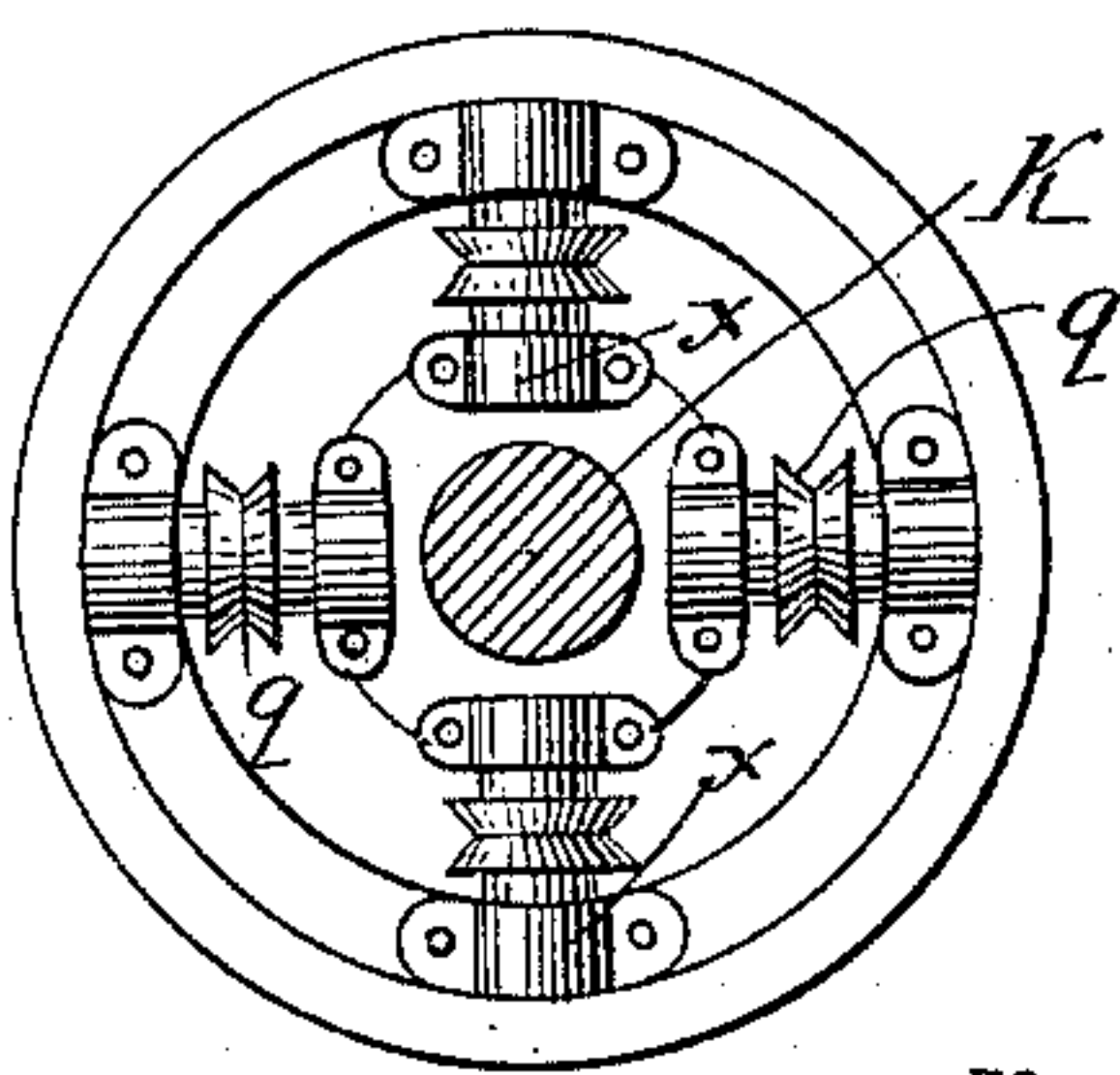


Fig. 4.

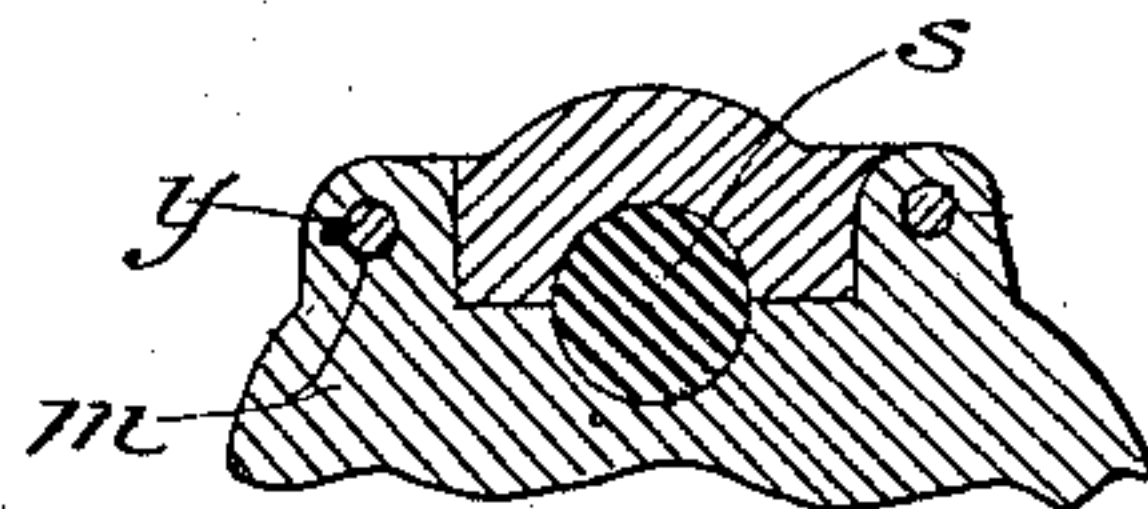


Fig. 6.

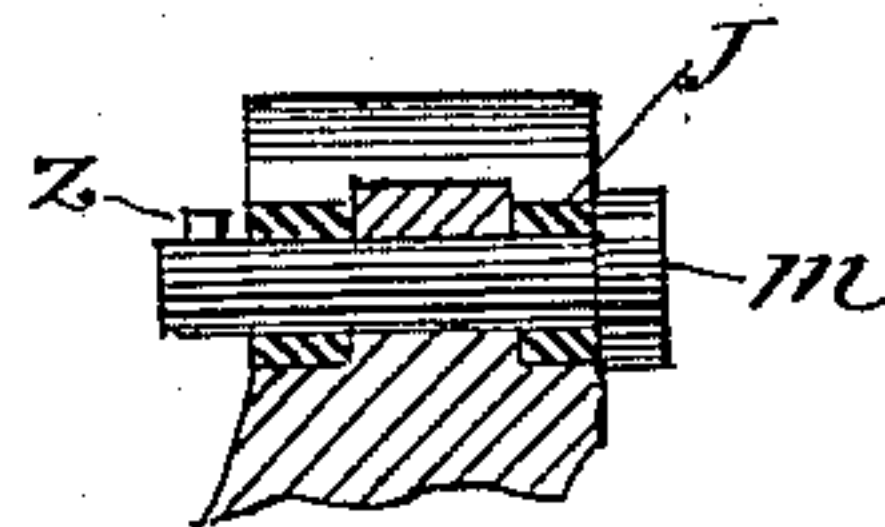
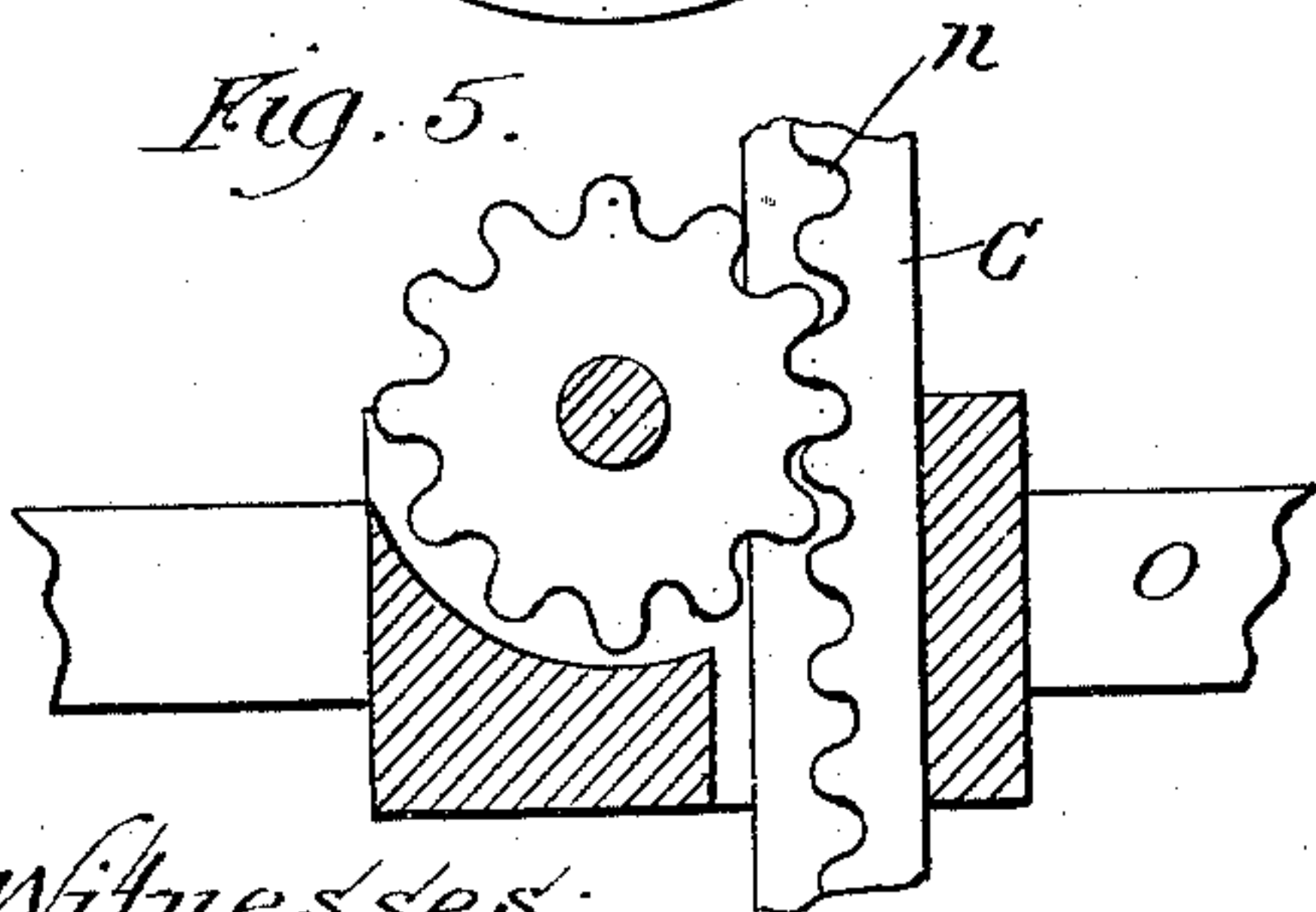


Fig. 7.



Fig. 5.



Witnesses:

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FRANS O. EKHOLM, OF CHICAGO, ILLINOIS.

GUN-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 318,239, dated May 19, 1885.

Application filed November 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRANS O. EKHOLM, of Chicago, county of Cook, and State of Illinois, have invented certain Improvements in Gun-Carriages, of which the following is a specification.

My said improvement relates to certain devices for mounting, supporting, and operating guns upon boats and vessels afloat upon water, which will be hereinafter fully described with reference to the accompanying drawings, in which—

Figure 1 represents a central vertical section of a stationary turret mounted upon the deck of a boat with my improvements in connection therewith; Fig. 2, a plan of the turret and of the annular bar O, a portion of the latter being broken away; Fig. 3, a bottom view of the revolving turret which immediately supports the gun, in which are displayed the grooved rollers *q* and a section of the center bolt, K; Figs. 4, 5, 6, and 7, detail views of parts.

Reference is here made to my application, No. 143,512, for a patent for gun-carriages, filed September 19, 1884.

In the drawings, M represents the stationary turret standing on the deck of a boat. It is provided with a ledge extending entirely around it, which supports the feet of the studs P, upon the top ends of which rests the annular bar O, which surrounds the turret, and which itself is a plain rectangular bar, except that on its lower side it is provided with a wide groove, as shown, into which the top ends of the studs P enter, and in which they are confined. The making of this groove results in the formation of downward projections or tongues of the material of the bar O, one on each side of the groove, as shown, and these I utilize as the means of confining the box I upon the bar, so that it cannot come off the same when in use; but it may move around upon the same and make a complete circuit upon it. The shell of the box I is preferably made of metal, and is made to extend and hook around the lower corners of the bar O, which is also preferably made of metal, and in order to confine the box to any horizontal adjustment upon the bar the bind-

ing-screw *k* turned through a hole in the box against the bar will effect that object.

In order to elevate and depress the muzzle of the gun, a vertical bar, G, provided with teeth *n*, (shown on an enlarged scale in Fig. 5,) is hinged at its upper end to the breech of the gun, as shown in my said other application, while the lower end passes down through a suitable vertical chamber for it in the box I, and by means of the pinion *p* it is operated vertically by the use of the hand-wheel *j*, the hand-wheel and pinion being on the same shaft, the shaft having its bearings in the box. Thus the muzzle of the gun is made to sweep the whole horizon, and also can have any vertical adjustment that may be needful.

The top of the stationary turret is provided with the upwardly-projecting flange *m'*, in order to hold in position the revolving turret B, which carries the gun, and it is also provided with a circular V-formed rail, *s*, and the revolving turret B is provided with a series of grooved pulleys, *q*, corresponding with the rail, to prevent friction, as much as may be, in the revolving motion of the upper turret. The two turrets are connected and held together by the center bolt, K, having a head, *k'*, at the upper end, and a nut, *t*, at the lower end.

In order that the box I may be put on and off the annular bar O, as required, the latter is made with a removable section, R, which, as shown in Figs. 2 and 7, is provided with dovetail tenons at each end, which are fitted into corresponding mortises in the adjoining parts of the main portion of the bar, and the part R, when in position, is held down by two screws, W, as shown.

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

1. In combination with the revolving gun-support B, carrying in its base the grooved anti-friction rollers *q*, the stationary turret M, having a circular V-shaped tread for the rollers *q*, and a flange, *m'*, which encircles and supports the revolving gun-support B, substantially as and for the purpose described.

2. In combination with a gun, its supporting-turret, the studs P, borne thereby, the annular bar grooved underneath and supported

by such studs, the box I traveling on such bar, and the gun-elevating mechanism supported by such box, substantially as set forth.

3. In combination with a gun and its turret, having an annular bar supported about it, a box, I, traveling on the bar, and having a vertical chamber for the support of a rack-bar and its operating-gear, and a link-con-
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tion between the rack-bar and the breech of the gun, whereby the gun may be both elevated and traversed on its stationary support, all substantially as set forth.

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Witnesses:

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