No. 669,456. Patented Mar. 5, 1901.

J. DARLING.

WINDOW FOR RAILWAY CARRIAGES.

(Application filed Oct. 3, 1900.)

(No Model.)

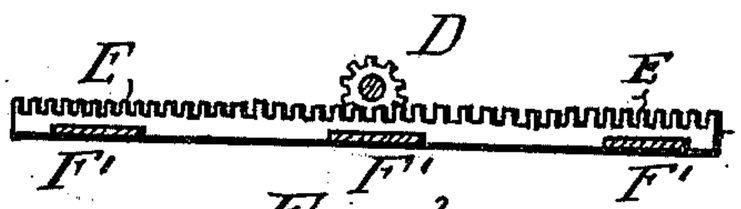


Fig. 3.

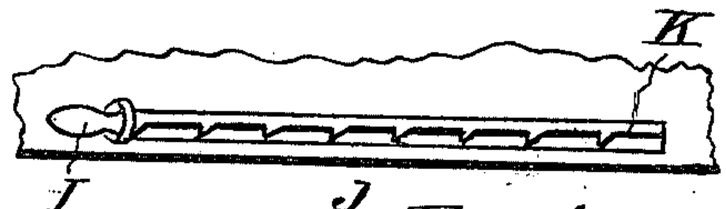


Fig. 4.

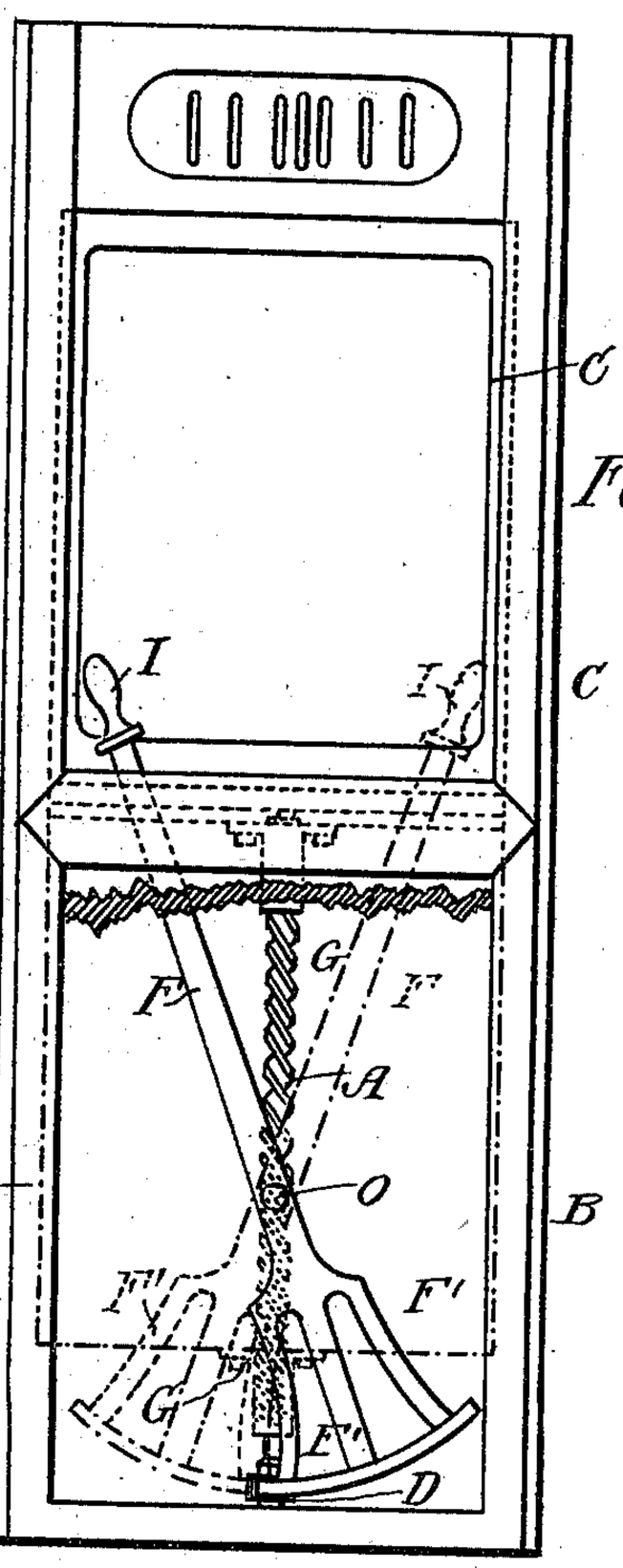
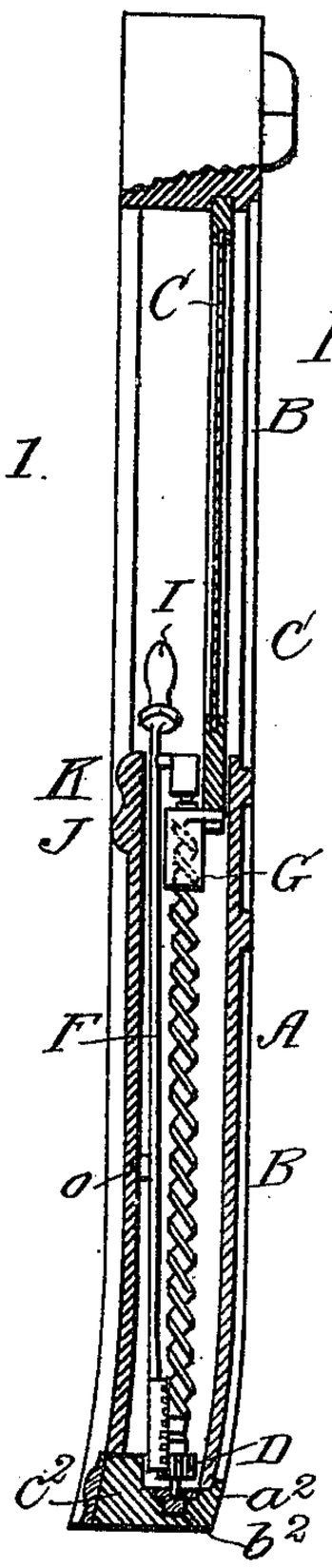


Fig. 1.



Fig

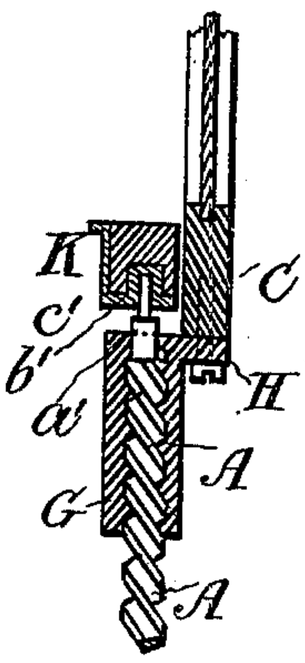


Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN DARLING, OF RUTHERGLEN, SCOTLAND.

WINDOW FOR RAILWAY-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 669,456, dated March 5, 1901.

Application filed October 3, 1900. Serial No. 31,893. (No model.)

To all whom it may concern:

Be it known that I, JOHN DARLING, engineer, of Gallowflats, Rutherglen, in the county of Lanark, Scotland, have invented certain new and useful Improvements in and Connected with the Windows of Railway-Carriages, Cabs, Omnibuses, Ships, and such Like, of which the following is a specification.

My invention relates to improvements in and connected with the windows of railway-carriages, cabs, omnibuses, ships, and such like, and has for its object to facilitate the opening and closing of these.

In order that my invention may be properly understood and readily carried into effect, I have hereunto appended one sheet of drawings, of which—

Figure 1 is a part section and elevation of a railway-carriage window, showing my improvements. Fig. 2 is an end view. Fig. 3 is a separate view of rack and pinion. Fig. 4 is a plan of the locking arrangement. Fig. 5 is a section showing how the top of the screw is connected to the frame of the carriage.

In carrying out my invention I provide a quick-threaded screw A, running lengthwise in the center of the space in the door or frame B, in which the window C slides. The top and bottom of the screw A are provided with a stepped end a' a^2, which rests in a recess b' b^2, formed in the top c' and bottom c^2 of the frame. At the lower end of this screw A there is a pinion D, in which a rack E, connected to a lever F, having suitable vanes F′ for strength and centered at O, works. Carried on the screw A there is a nut or thimble G, which is connected to the lower end of the sliding window C by means of the projecting arms or plates H or in any other convenient manner, so that in operating the lever F, to which a suitable knob or handle I is attached to either side, the rack E gives motion to the pinion D, which in turn revolves the screw A, and the window being connected to it by means of the thimble or nut G the window C is raised or lowered to the required distance.

A guide J for the knob or handle to work in is provided, and a notched plate K is also provided, so that when the window has been raised or lowered the desired distance the end of the lever F engages in one of these notches or recesses and the window becomes fixed there.

In place of having the guide at the top of the frame, as shown, I may have it in the beading, and any other convenient means for locking the window may be employed. I might also provide in the lower frame of the window a tube or core of rubber, so that when the window is closed it would become water-tight; but this may hardly be necessary, as when the window is closed it lies close up against the frame of the sash. I may also hinge the lower part of the inside of the frame of the door to facilitate cleaning out of any foreign matter which may be dropped into the open space.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The combination of a frame, a sliding window provided with a nut, a quick-threaded screw, pivoted to the frame working in the nut and provided with a pinion, and a lever pivoted to the frame, provided with a rack meshing with the pinion.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN DARLING.

Witnesses:
JOHN SIDDLE,
EDITH MARY EDMONDSTONE.