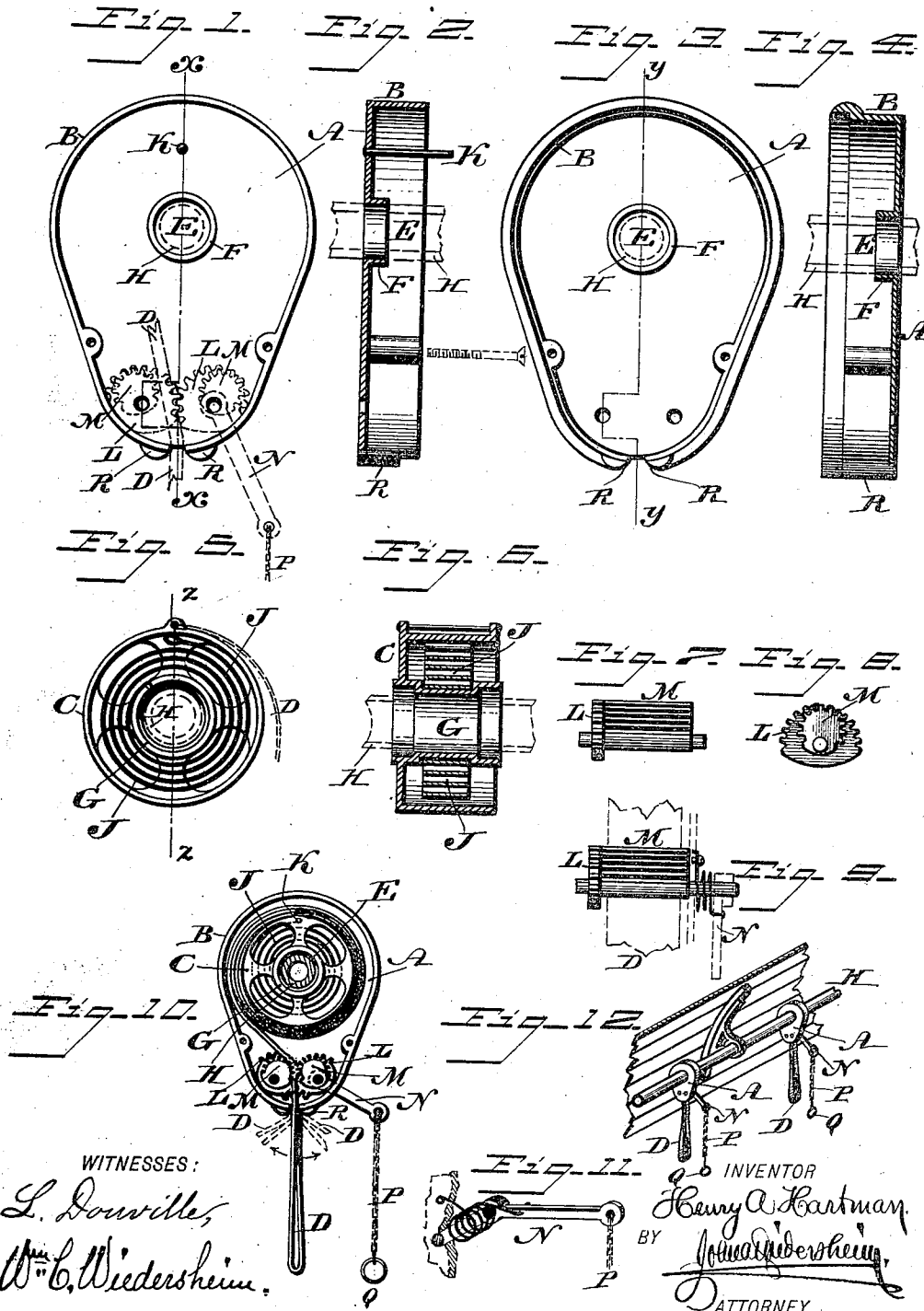


(No Model.)

H. A. HARTMAN.
HOLDING STRAP FOR CARS.

No. 473,255.

Patented Apr. 19, 1892.



UNITED STATES PATENT OFFICE

HENRY A. HARTMAN, OF PHILADELPHIA, PENNSYLVANIA.

HOLDING-STRAP FOR CARS.

SPECIFICATION forming part of Letters Patent No. 473,255, dated April 19, 1892.

Application filed January 9, 1892. Serial No. 417,488. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. HARTMAN, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Holding-Straps for Cars, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in holding-straps for cars; and it consists of mechanism whereby a holding-strap for a passenger standing in a car may be readily adjusted to suit the different heights.

Figures 1 and 3 represent inner views of the two sections of the casing of a device embodying my invention. Figs. 2 and 4 represent sectional views on lines $x x$ and $y y$, respectively, of Figs. 1 and 3. Fig. 5 represents a face view of the drum and winding-spring embodied in my invention. Fig. 6 represents a sectional view on line $z z$, Fig. 5. Figs. 7 and 9 represent face views of the clamps and operating-gear for engaging the holding-strap.

Fig. 8 represents an end view of parts shown in Fig. 7. Fig. 10 represents an inner view of the device, one of the sections of the casing being removed. Fig. 11 represents a side view of a detail portion of the device. Fig. 12 represents a perspective view of a portion of a car, showing my device in operative position.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the casing, composed of two sections having the rims B, which are connected by bolts or screws so as to be adapted to hold within the same a rotatable drum C, to which one end of the holding-strap D is attached, the other end of the strap projecting through an opening in the lower end of the casing and having a loop for the convenience of the passenger and for preventing its passage into the casing. Each of the two sections of the casing is provided with an opening E, having a surrounding flange F within the casing, and the axle G of the drum is hollow, so that the said casing may be mounted on a shaft or rod H, properly secured to the ceiling or upper part of a car. Located between the peripheral shell of the drum and the axle G is a coiled spring J, one end of which is secured to the axle and the

other end to a pin or stud K, secured to one of the sections of the casing. The said spring J is adapted to so rotate the drum as to wind the strap D thereon.

Journaled in the walls of the casing A are two segmental gears L, each having connected therewith a serrated or roughened eccentric or cam M. The said cams are adapted, when raised by the lowering of a spring-actuated lever N, connected outside of the casing with an end of a journal of one of said gears L, to freely permit the strap D to pass between them, (see dotted lines, Fig. 1,) so that it can be drawn down or lowered to the extent required by the party using the same. After the strap is drawn down the required distance the lever N rises, so as to engage the cams with the sides of the strap. Any further pulling on the strap now causes the cams to more firmly take hold of the said strap, thereby retaining it in place. When it is desired to release the cams from the strap, the lever is lowered, whereby the cams are raised so as to be thrown past their centers, and thereby freed from engagement with the strap, whereupon the spring J of the drum will rotate the latter, thus winding thereon the strap, which freely passes between the cams and returning it into the casing, thereby raising or shortening its free or looped end.

The spring J is of such strength that it will act slowly upon the drum and strap when the latter is let go by the party using the same, it occupying some time before the strap will be raised sufficiently to throw the cams out of engagement therewith, thus permitting the withdrawal of the hand of the user for a few moments, if desired, without it being raised out of position.

The walls of the casing at the opening in the rims through which the strap passes are thickened and rounded at R so as to provide additional strength at these parts and also to lessen the wear of the strap. A chain P and ring Q are shown as attached to the lever N, for the convenience of the operator.

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

1. A casing, a rotary spring-controlled drum mounted therein, a strap secured at one end to said drum and having the opposite or hold-

ing end depending from said casing, and mechanism, substantially as described, for clamping said strap in place, said parts being combined substantially as described.

5 2. A casing with an axle, a drum on said axle, a strap projecting therefrom and connected with winding mechanism within said drum, and a clamping device engaging opposite sides of said strap, said parts being combined substantially as described.

10 3. A holding-strap consisting of a casing adapted to be mounted on a shaft, a rotatable spring-controlled drum within said casing, a strap having one end secured to the drum and the other passing through the casing, and eccentrics adapted to bear on said strap, said parts being combined substantially as described.

4. A casing, a strap having a winding mechanism

attached to one end thereof within the casing and the other depending from said casing, meshing gearing journaled within the casing, eccentrics connected with said gears and adapted to bear on said strap, and a lever connected with one of said gears for releasing the eccentrics from contact with the strap, said parts being combined substantially as described.

5. In a device of the character described, a holding-strap, mechanism for shortening the same, eccentrics for clamping said strap, and means for releasing the eccentrics from said strap, said parts being combined substantially as described.

HENRY A. HARTMAN.

Witnesses:

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