

**No. 658,135.**

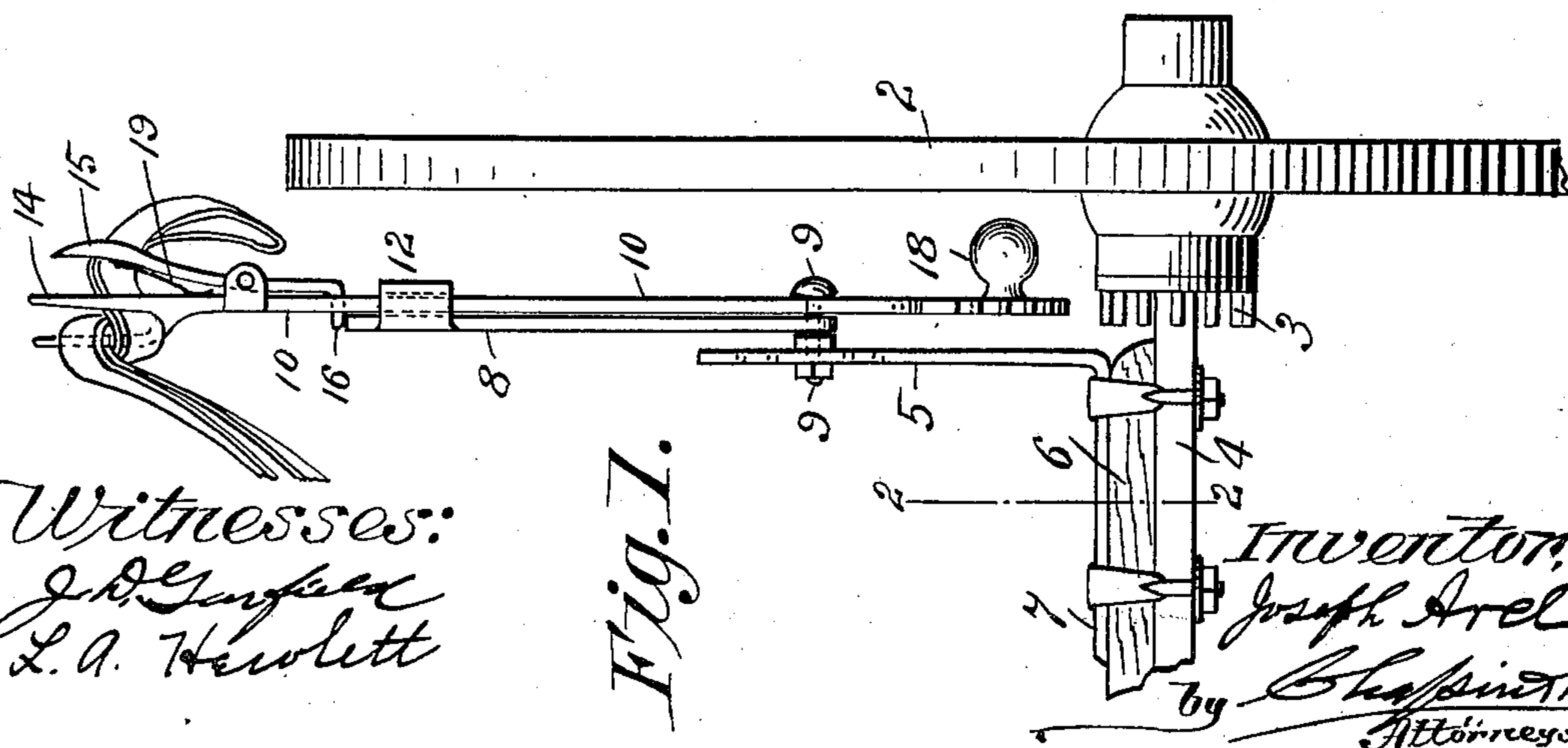
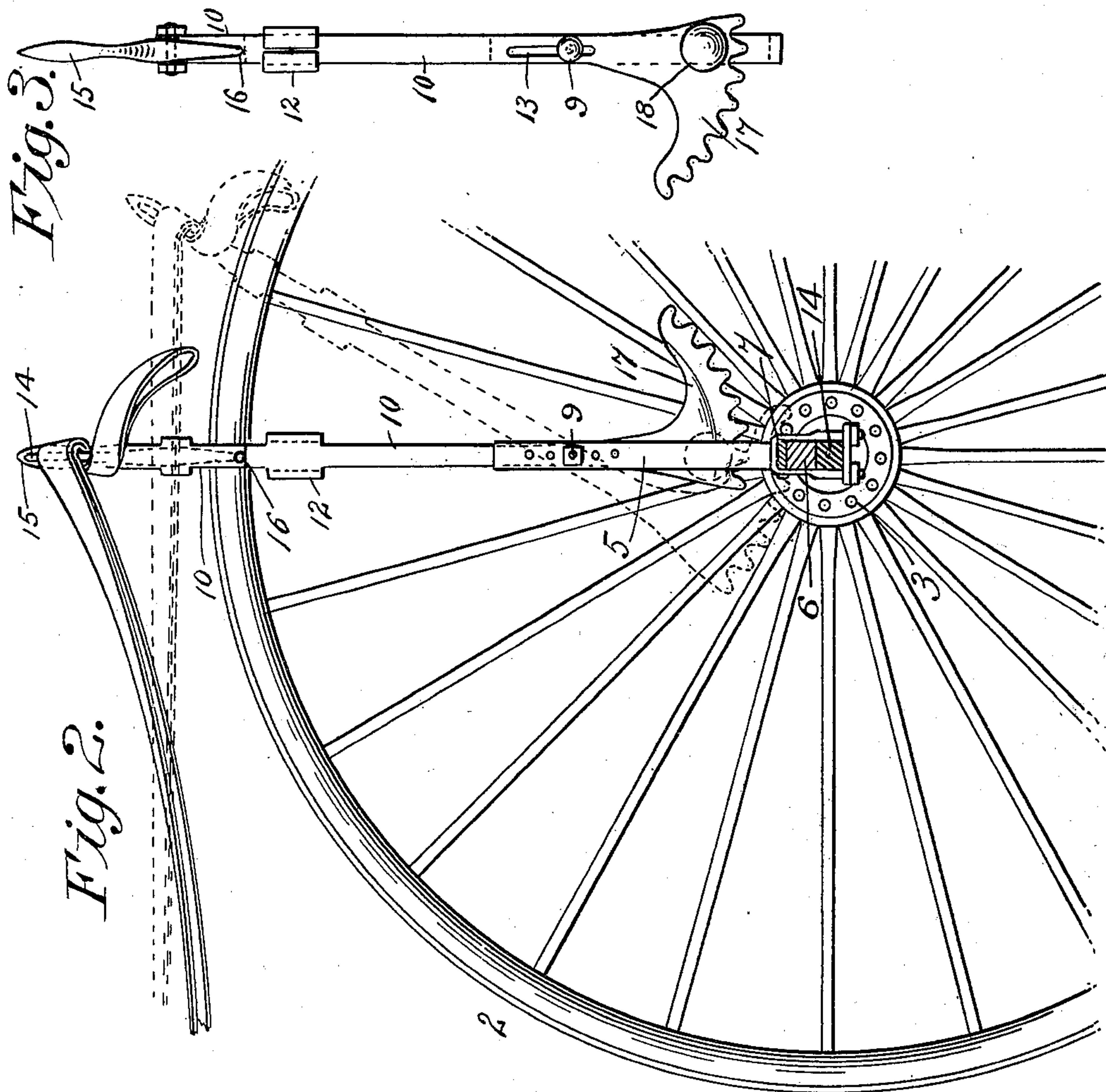
**Patented Sept. 18, 1900.**

**J. AREL.**

**HORSE ARRESTING DEVICE.**

(Application filed Aug. 2, 1899.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## HORSE-ARRESTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 658,135, dated September 18, 1900.

Application filed August 2, 1899. Serial No. 725,859. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH AREL, a citizen of the United States, residing at Northampton, in the county of Hampshire and State of Massachusetts, have invented new and useful Improvements in Horse-Arresting Devices, of which the following is a specification.

This invention relates to improvements in horse-arresting devices for carriages, the object being to provide an improved device of this class to which the reins by which the horse is driven may be connected when a person leaves the carriage, whereby should the horse start or attempt to move off with the carriage the said arresting devices will draw upon said reins automatically to the same effect that the driver himself would if present, and thus arrest the movement of the horse; and the invention consists in the peculiar construction of the device and the means contained thereon whereby the said object is effected and whereby the device is caused to maintain an alternately-operative position relative to the wheels of the carriage or to be supported out of connection with said wheels, all as hereinafter fully described, and more particularly pointed out in the claim.

In the drawings forming part of this specification, Figure 1 is a side elevation of a portion of the axle of a carriage and of one of the front wheels on said axle, said figure illustrating in rear elevation horse-arresting devices constructed according to my invention, the rear ends of the reins of a harness being shown wound about the upper extremity of said devices. Fig. 2 is a side elevation of said carriage-wheel and the horse-arresting devices above referred to and shows a sectional view on line 2 2, Fig. 1, of said axle and of a support for said arresting device attached to said axle. Fig. 3 is a side elevation of said arresting devices detached from the axle.

In the drawings, 2 indicates one of the front wheels of a carriage, having fixed on the inner end of the hub thereof a number of separated pins, thereby providing spaces therebetween which are adapted to receive the teeth of a segment of a gear below referred to, whereby the rotary movement of said hub and pins may impart a movement to said segment and to parts, as below described, connected thereto. On the said carriage-axle 4

is a vertical post 5, which is firmly strapped to said axle, as shown in Fig. 1, a cushion-block of wood 6 being interposed between the horizontal part or step 7 of said post and said axle. A guide-lever 8 is pivoted by its lower end to said fixed post 5 by a bolt 9, which bolt is held in a fixed position on said post 5 by two nuts, as shown in Fig. 1, the said bolt first passing through the rein-lever support of the device and having its head engaging the outer side thereof and subsequently being secured to the said support 5, as described. The said rein-lever of the device (indicated by 10) has its upper portion extending through a guide-box 12 on said guide-lever 8 and has a degree of free sliding movement within said box. The said bolt 9, as shown in Fig. 3, passes through a slot 13 in said lever 10, thus guiding the latter in its vertical movements. On the upper extremity of said rein-lever is formed a rein-engaging fork 14, as shown in Fig. 1, and on the side of said extremity is pivoted a stop-latch 15, whose lower end 16 projects through a perforation in said lever 10 at such a point on the latter that when the end of said latch 16 is in the position shown in Fig. 1 the said rein-lever 10 is maintained in the upward position shown in the last-named figure, and the gear-segment 17 on the lower end thereof is held out of engagement with said pins 3 on said wheel-hub, as shown in Figs. 1 and 2. Said gear-segment is provided with teeth having curved extremities, to the end that the movement of said hub-carried pins 3 while engaging said segment shall produce a vibratory movement of the upper extremity of the rein-holding lever when the reins are hung thereon whose action is similar to that of a person holding the reins and imparting such movement thereto. A counterbalancing-weight 18 is fixed on said segment 17, which serves to maintain the said lever 10 in the vertical position shown in Fig. 2, swinging, as it is adapted to, on said bolt 9. The said latch 15 is held in the position shown in Fig. 1 by a spring 19, as shown. The positions of the devices shown in the drawings are those which they normally occupy on the carriage; but when a person leaves the carriage the devices are so arranged that a start of the horse forward will rotate said carriage-wheel



2, thus swinging the upper end of lever 10 and restrain the horse from further forward movement by drawing in on the reins, and to accomplish this result the devices are adjusted and operated as follows: The upper end of said lever 10 is grasped by the fingers, thus operating lever 15 to draw its lower end 16 backward and out of engagement with the top of said post 8, thereby letting said lever 10 drop vertically and the teeth of said gear-segment 17 to become engaged between the said pins 3 on the wheel-hub. The reins are then suitably folded around the end of lever 10, as shown in Fig. 1, and with the devices thus arranged should the horse commence a forward movement, as in starting, the rotary movement of said hub caused by such action will operate to throw the upper extremity of said lever 10 backwardly, and thus it will "draw in" upon the reins and check the horse against further forward movement.

The peculiar construction of the parts of this device through which in connection with the attached reins the rotation of the wheels imparts the said swinging action to the lever 10, to which said reins are attached, as described, provides (should the horse not stop immediately upon the first movement of the reins rearwardly) for producing series of sharp pulls rearwardly upon the reins occasioned by the slipping engagement of said pins 3 with the teeth of said segment. Such action of the reins being so much like the repeated backward movements of a person to

stop the horse serves to effectually arrest the latter. The "arrester" parts are restored to their normal positions by simply drawing the lever 10 upward and allowing the latch to self-engage the swinging arm 8, as shown in Fig. 1, said weight 18 serving to retain the rein-engaging parts in normally-vertical positions, as shown in Figs. 1 and 2.

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

In a horse-arresting device, the axle, the wheel provided with a series of projections or teeth upon the inner end of its hub, a vertical support secured to the axle, a pivot which is passed through the said support, and which is vertically adjustable therein, the lever 8 pivoted at its lower end upon the pivot 9, and provided at its upper end with a guide-box, and a slotted vertically-movable lever 10 provided with teeth upon its lower end, a weight to cause the lever to move automatically when left free to move, and a spring-actuated catch pivoted to the upper end of the lever 10, and having its lower end to pass through an opening in the lever so as to catch over the upper end of the lever 8, and thus hold the lever 10 in a raised position, substantially as shown and described.

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