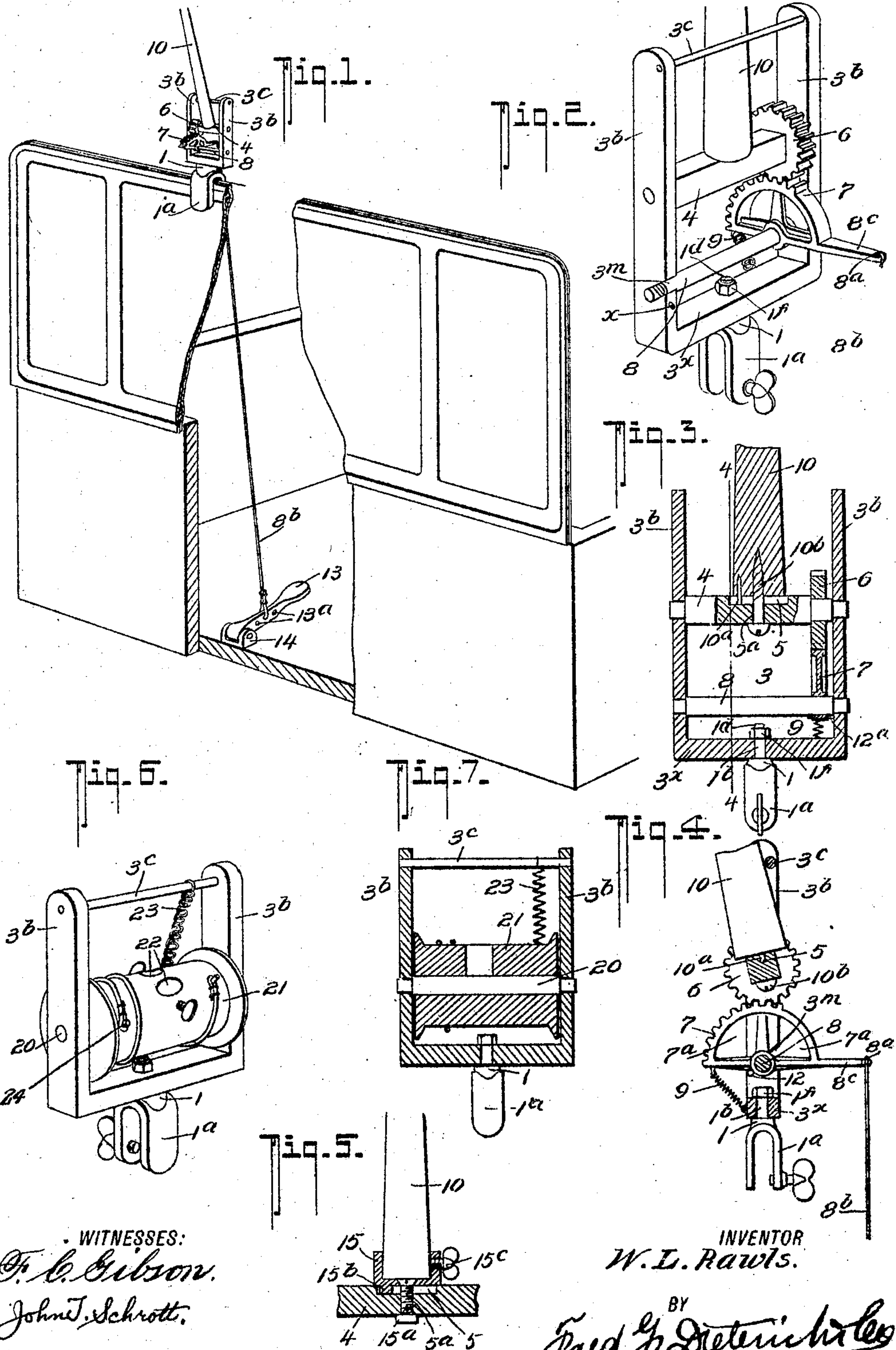


W. L. RAWLS.
WHIP ACTUATING DEVICE.
APPLICATION FILED JUNE 26, 1905.



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WHIP-ACTUATING DEVICE.

No. 806,292.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM L. RAWLS, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Whip-Actuating Devices, of which the following is a specification.

This invention relates to certain new and useful improvements in whip-actuating devices, and has for its object to provide a device of this character of a very simple and economical construction, whereby the whip may be controlled to swing the same downwardly against the horse, and to provide for an automatic return of the device to its normal position after the completion of the whipping action.

Another object of my invention is to provide certain improvements on the type of whip-actuating devices disclosed in my Patent No. 781,458, granted January 31, 1905.

With other objects in view the invention also comprehends certain novel construction, combination, and arrangement of parts, all of which will be first described in detail and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing the same in use on a buggy or runabout. Fig. 2 is an enlarged detail perspective view of the whip-actuating devices *per se*. Fig. 3 is a vertical longitudinal section thereof. Fig. 4 is a vertical cross-section on the line 4-4 of Fig. 3. Fig. 5 is a detail view of a slightly-modified construction hereinafter specifically referred to. Fig. 6 is a perspective view of a modified form of my invention. Fig. 7 is a vertical longitudinal section thereof.

Referring now to the accompanying drawings, in which like numerals of reference indicate like parts in all of the figures, 1 designates a bracket having a clamping portion 1^a, securable to the vehicle-dash by set-screws or otherwise and having a vertical post 1^b and a threaded stem 1^c, onto which the U-shaped frame 3 is placed and held in position by a stop-nut 1^d, as shown.

The frame 3 comprises the vertical parallelly-arranged arms 3^b 3^b, which are connected together near the top by the cross rod or bar 3^c, as shown. 4 designates a shaft journaled in bearings in the arms 3^b 3^b, and the shaft 4 between the bearing ends thereof is preferably square in cross-section and provided with a longitudinal groove or indenture

5 and an aperture 5^a. In my present invention the whip 10 has a pin or lug 10^a in its end, which is adapted to fit into the groove 5, and the said whip 10 is adapted to be held onto the shaft 4 by a screw 10^b, which passes through the aperture 5^a of the shaft 4, as clearly shown in Fig. 3 of the drawings.

Near one end the shaft 4 carries a pinion or gear 6, which coöperates with a semi pinion or gear 7 on a second shaft 8, which is journaled in bearings in the arms 3^b 3^b below the shaft 4, as shown. The gear 7 is cut away, as at 7^a 7^a, to lighten and cheapen the construction thereof and is provided with an integrally-formed lever portion 8^c, which projects radially from the gear and is provided with an aperture 8^a, to which the connecting chain or cord 8^b, hereinafter again referred to, is secured.

9 designates a coil-spring having one end secured to the gear 7 and its free end secured to the lower or cross member 3^x of the frame 3 to hold the parts in their normal position with the whip 10 held vertical, as shown.

12 12 designate apertures in one of the arms 3^b, in which a stud-pin 12^a is adapted to be placed to limit the movement of the gears 7, as clearly shown by reference to the drawings.

13 designates a foot-lever pivotally secured to a bracket 14 on the floor of the buggy adjacent the dash, and the lever 13 is provided with a plurality of apertures 13^a, to which the other end of the connecting chain or cord 8^b is attached.

3^m 3^m designate slots in the standards 3^b, which terminate in bearing portions for the shaft 8, as shown. In practice the shaft 8 will be readily held in place by the gears 6 and 7, and, if desired, I may secure a pin $\times \times$ across the said slots to hold the shaft in position.

In Fig. 5 I have shown a slightly-modified form of my invention in which I provide a cup or thimble 15, which is secured to the shaft 4 by a screw-bolt 15^a, passing through the aperture in the shaft 4 and secured by means of nuts, a pin 15^b being provided on the under side of the thimble 15 to enter the groove of the shaft 4. The whip 10 is then held in the thimble by a set-screw or thumb-screw 15^c, as shown.

In Figs. 6 and 7 I have shown a further modification of my invention, by reference to which figures it will be seen that mounted in suitable bearings in the uprights 3^b 3^b of the

frame 3 is a shaft 20, upon which a drum 21 is rotatably mounted. The drum 21 is provided with a plurality of peripherally-arranged apertures 22 22 of different sizes to serve as whip-sockets in which the whip 10 is secured, the different-size apertures serving to permit the use of different-size whips when desired. Secured to the drum 21 is a cord or cable which is wound around the drum and passes downwardly and connects with a foot-lever similar to that shown in Fig. 1 of the drawings, or the said cord or cable may pass rearwardly through the front of the vehicle to be manipulated by hand when attached to vehicles, that renders this the better mode of manipulation. At the upper end of the frame 3 a rod 3° is mounted similarly to the rod 3° in Fig. 1 to serve as a stop against which the whip 10 is adapted to rest, and to which rod 3° a coil-spring 23 is secured. The other end of the coil-spring 23 connects with a cord which passes around the drum 21 and is secured thereto, as at 24, as shown, and the said spring 23 serves to hold the parts in their normal position.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the complete construction, operation, and many advantages of my invention will be readily apparent to those skilled in the art to which it appertains, and I desire to call attention to the fact that the several parts of my present invention can be used interchangeably with those disclosed in my Patent Nos. 781,458 and 781,459 of January 31, 1905, as well as with the parts of the device disclosed in my copending application, Serial No. 257,561, filed April 26, 1905.

It is understood that changes in the form, location, and size may be made without departing from the spirit of the claims or detracting from the validity of my Letters Patent, these changes being adaptable to the numerous constructions of different vehicles.

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

1. In a device of the class described, comprising a supporting-bracket, a U-shaped frame secured thereto, a drive-shaft mounted in said U-shaped frame, a segmental gear mounted on said drive-shaft and having an integrally-formed lever, a coil-spring secured to said segmental gear and said U-shaped frame for holding said segmental gear in its normal position, a whip-holding shaft mounted in said U-shaped frame above said drive-shaft, a gear-wheel on said whip-holding shaft meshing with said segmental gear, a whip directly connected to said whip-holding shaft and a cross-bar secured between the upper ends of said U-shaped frame, and means connected with said lever for imparting motion to said drive-shaft, substantially as shown and described.

2. In a device of the class described, com-

prising a supporting-bracket, a U-shaped frame secured thereto, a drive-shaft mounted in said U-shaped frame, a segmental gear mounted on said drive-shaft and having an integrally-formed lever, a coil-spring secured to said segmental gear and said U-shaped frame for holding said segmental gear in its normal position, a whip-holding shaft mounted in said U-shaped frame above said drive-shaft, a gear-wheel on said whip-holding shaft meshing with said segmental gear, a whip directly connected to said whip-holding shaft and a cross-bar secured between the upper ends of said U-shaped frame, and means connected with said lever for imparting motion to said drive-shaft, said means comprising a foot-lever mounted below said U-shaped frame and connections between said foot-lever and said first-mentioned lever substantially as shown and described.

3. A device of the class described, comprising a U-shaped frame and supporting-bracket to which it is secured, said U-shaped frame having slots terminating in bearings, a drive-shaft mounted in said bearings of the U-shaped frame, a semicircular segmental gear secured to said drive-shaft, a coil-spring having one end attached to said segmental gear and the other end attached to the U-shaped frame, said segmental gear having an integrally-formed operating-lever, a whip-holding shaft mounted in bearings in said U-shaped frame, a gear-wheel on said whip-holding shaft for meshing with said first-mentioned gear, said whip-holding shaft having an aperture and a groove, a screw passing through said aperture, a whip secured to said whip-holding shaft by said screw and having a pin for entering the groove of the shaft, and a stop-rod mounted above said whip-holding shaft on said U-shaped frame against which the whip is adapted to rest when the parts are in their normal position, substantially as shown and described.

4. A device of the class described, comprising a U-shaped frame and supporting-bracket to which it is secured, said U-shaped frame having slots terminating in bearings, a drive-shaft mounted in said bearings of the U-shaped frame, a semicircular segmental gear secured to said drive-shaft, a coil-spring having one end attached to said segmental gear and the other end attached to the U-shaped frame, said segmental gear having an integrally-formed operating-lever, a whip-holding shaft mounted in bearings in the U-shaped frame, a gear-wheel on said whip-holding shaft for meshing with said first-mentioned gear, said whip-holding shaft having an aperture and a groove, a screw passing through said aperture, a whip secured to said whip-holding shaft by said screw and having a pin for entering the groove of the shaft and a stop-rod mounted above said whip-holding shaft on said U-shaped frame against which

the whip is adapted to rest when the parts are in their normal position, said U-shaped shaft-frame having apertures, and a stop-pin held in one of said apertures to limit the movement of said segmental gear, substantially as shown and described.

5 5. A device of the class described, comprising a U-shaped frame, a shaft mounted therein, a drum mounted on said shaft, a rod mounted across said U-shaped frame at its upper
10 end, a coil-spring having one end secured to said rod and its other end connected to said drum, an operating-cord connected to said drum, said drum having a plurality of whip-
15 receiving apertures, all being arranged substantially as shown and described.

6. A device of the class described, comprising a U-shaped frame, a shaft mounted therein, a drum mounted on said shaft, a rod mounted across said U-shaped frame at its upper
20 end, a coil-spring having one end secured to said rod and its other end connected to said drum, an operating-cord connected to said drum, said drum having a plurality of per-
25ipherally-arranged whip-receiving apertures of different sizes, all being arranged substantially as shown and described.

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Witnesses:

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