No. 649,205. Patented May 8, 1900.

M. HARFIELD.

LOCKING DEVICE FOR WAGONS, BUGGIES, &c.

(Application filed Feb. 23, 1900.)

(No Model.) 2 Sheets—Sheet 1.

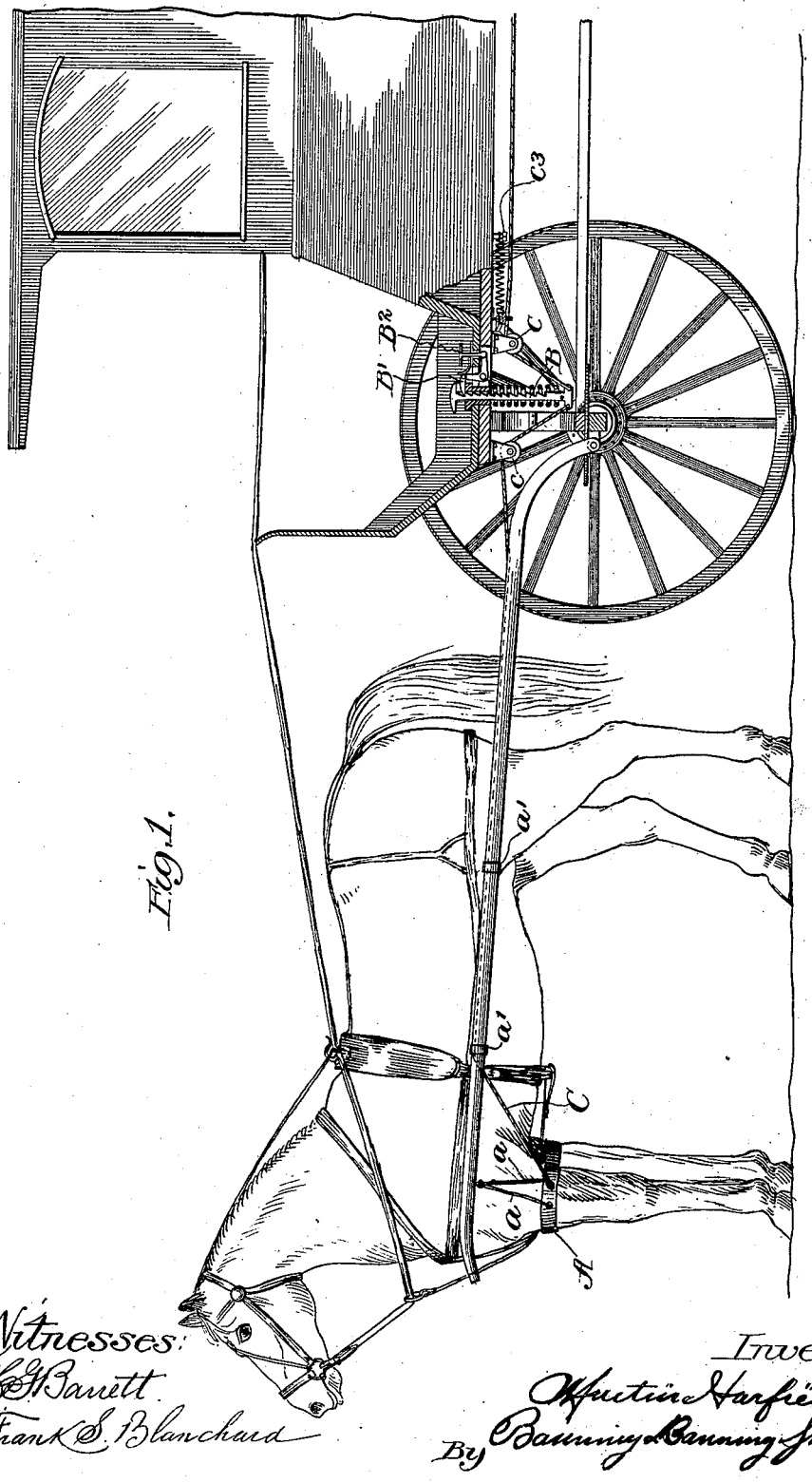

Fig. 1.

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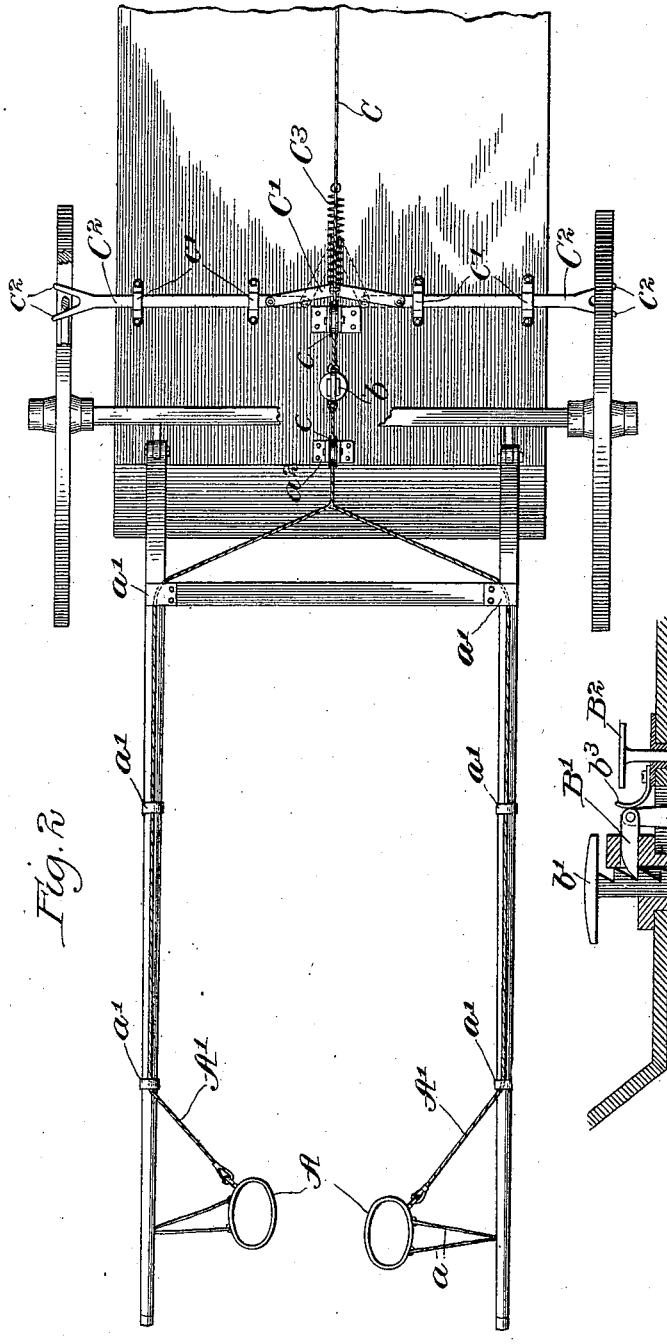

Fig. 2

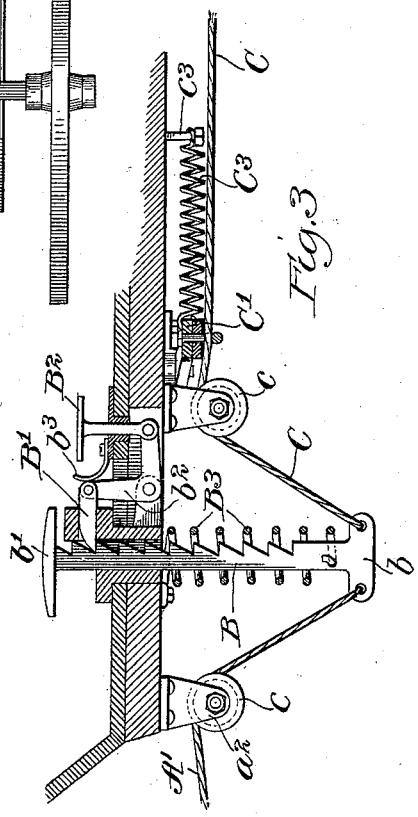

Fig. 3

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UNITED STATES PATENT OFFICE.

MARTIN HARFIELD, OF CHICAGO, ILLINOIS.

LOCKING DEVICE FOR WAGONS, BUGGIES, &c.

SPECIFICATION forming part of Letters Patent No. 649,205, dated May 8, 1900.

Application filed February 23, 1900. Serial No. 6,254. (No model.)

To all whom it may concern:

Be it known that I, MARTIN HARFIELD, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Locking Devices for Wagons, Buggies, and other Vehicles, of which the following is a specification.

The object of my invention is to make a lock for wagons, buggies, and similar vehicles drawn by horses, so that the attendant can readily and effectually lock them to prevent the horse from walking or running away in his absence; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation, partly in section, showing the front part of a wagon provided with my improvements; Fig. 2, a plan bottom view showing the position and arrangement of the locking devices; and Fig. 3 is a side elevation, partly in section, showing an enlarged detail view of the locking devices.

In making my improved locking device in the form and arrangement preferred by me I make two bands A, preferably of heavy stiff leather, adapted to be inserted over the front feet of the horse and drawn well up on his legs, as shown in Fig. 1, without, however, binding or normally hampering the movements of the same. These bands may be held up by straps a, caught into a hook located at the proper place on the buggy-shaft or to other parts of the harness, as may be preferred. Cords A′ are fastened to the bands around the horse's fore legs, preferably by snap-hooks, so that they can be readily attached and detached, and carried back under the wagon or buggy bed, preferably by running them through keepers a', arranged on the shafts to prevent them from hanging or otherwise being disarranged. These cords are preferably brought together and carried through or over a pulley a^2, as illustrated particularly in Figs. 2 and 3. The united cord is fastened under the wagon or buggy bed to a head b of a ratchet-bar B, whose upper end b' extends through the bottom of the bed to a position where it may be readily pressed down by the foot of the attendant in his seat. By pressing the ratchet-bar down with the feet the cord A′ is drawn over the pulley a^2 into a taut condition, so that as long as the ratchet-bar is in its down position the movements of the horse's fore legs will be hampered and he will only be able to take short or slow steps, thus being prevented from running away.

To hold the ratchet-bar down, a dog B′ is arranged to project or protrude through a hole in a proper holder or cross-bar in the buggy or bed bottom, so that when in its forward or protruding position it will engage with a tooth of the ratchet-bar and hold such bar in its down position. Of course any desired means may be used for holding the dog down when protruded forward into engagement with the ratchet-teeth. The rear end of the dog is pivoted to a bell-crank lever b^2, so that as such lever is oscillated the dog will be protruded forward into or drawn back from engagement with the ratchet-teeth. A foot-piece B^3, pivoted to the rear end of the bell-crank lever, affords means within easy reach of the attendant for effecting the disengagement of the dog, while a spring b^3 serves to oscillate the bell-crank lever in the opposite direction when released and effect the engagement of the dog with the ratchet-teeth. A spring B^3 serves to raise the ratchet-bar when released from the dog, so as to loosen or release the cord when it is desired to release the locking mechanism.

In order to lock the wheels of the vehicle, a cord C, attached to the head b of the ratchet-bar, passes back through or over a pulley c and engages toggle-arms C′. (Particularly shown in Fig. 2.) These toggle-arms are pivotally connected to locking-bars C^2, held under the bed of the wagon or buggy, by keepers c' or other convenient means to hold them in working position. These locking-bars are provided with forks c^2 at their ends, adapted to straddle spokes in the wheels and lock the wheels from turning. When the ratchet-bar is pushed down into its lowered position, the cord C is tightened and the toggle-arms C′ drawn forward, so as to cause the locking-bars C^2 to be thrust or protruded into their out positions, so that their forks may straddle or engage the spokes of the wheels and effect their locking. A spring C^3 is arranged with

one end connected to the toggle-arms and the other to a point c^3 in the bottom of the buggy or wagon bed, so that as the ratchet-bar and cord C are released the toggle-levers will be drawn back by the tension of the spring into the position shown by dotted lines in Fig. 2 and the locking-bars will be drawn inward, so as to release the wheels and unlock them. If desired, a similar set of locking-bars may be employed for the rear wheels of the buggy or wagon and operated in the same way as already described with reference to the bars for locking the front wheels, or, if preferred, a single set of locking-bars may be used with either the front or rear wheels. I may say, however, that I prefer to use two sets of locking-bars—one for the front wheels and one for the rear wheels—as in that way all of the wheels of the vehicle will be locked from turning and greater security against the movement of the vehicle obtained.

What I regard as new, and desire to secure by Letters Patent, is—

1. In vehicle-locking devices, the combination of bands adapted to encircle the fore legs of a horse when hitched to the vehicle, a bar adapted to be moved into a desired position, means connecting the bands with the bar adapted to be tightened or loosened by the movement of the bar in the one direction or the other, and means for holding the bar when moved into its position to tighten the connecting means, substantially as described.

2. In vehicle-locking devices, the combination of bands adapted to encircle the fore legs of a horse when hitched to the vehicle, a bar adapted to be moved into a desired position, means connecting the bands with the bar adapted to tighten or loosen by the movement of the bar in the one direction or the other, means for holding the bar when moved into its position to tighten the connecting means, and means for moving the bar into its position to loosen the connecting means when the holding means are released, substantially as described.

3. In vehicle-locking devices, the combination of bands adapted to encircle the fore legs of a horse when hitched to the vehicle, a ratchet-bar adapted to be moved into a desired position, cords connecting the bands with the ratchet-bar adapted to be tightened or loosened by the movement of the ratchet-bar in the one direction or the other, a dog for holding the ratchet-bar when moved into its position to tighten the connecting-cords, and a spring for moving the bar into its position to loosen the connecting-cords when the dog is released, substantially as described.

4. In vehicle-locking devices, the combination of locking-bars adapted to be protruded to engage the spokes of the wheels, a bar adapted to be moved into a desired position, means connecting the locking-bars with the last-mentioned bar adapted to be moved into a position for protruding the locking-bars by its movement in one direction, and means for holding the bar when moved into its position to protrude the locking-bars, substantially as described.

5. In vehicle-locking devices, the combination of locking-bars adapted to be protruded to engage the spokes of the wheels, a bar adapted to be moved into a desired position, means connecting the locking-bars with the last-mentioned bar adapted to be moved into a position for protruding the locking-bars by its movement in one direction, means for holding the bar when moved into its position to protrude the locking-bars, and means for withdrawing the locking-bars from their protruded position when the holding means are released, substantially as described.

6. In vehicle-locking devices, the combination of locking-bars adapted to be protruded to engage the spokes of the wheels, a ratchet-bar adapted to be moved into a desired position, toggle-arms connecting the locking-bars with the ratchet-bar adapted to be moved into a position for protruding the locking-bars by the movement of the ratchet-bar in one direction, and a dog for holding the ratchet-bar when moved into its position to protrude the locking-bars, substantially as described.

7. In vehicle-locking devices, the combination of locking-bars adapted to be protruded to engage the spokes of the wheels, a ratchet-bar adapted to be moved into a desired position, toggle-arms connecting the locking-bars with the ratchet-bar adapted to be moved into a position for protruding the locking-bars by the movement of the ratchet-bar in one direction, a dog for holding the ratchet-bar when moved into its position to protrude the locking-bars, and a spring for withdrawing the locking-bars from their protruded position when the dog is released, substantially as described.

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