(No Model.)

W. P. KIRKLAND.

VEHICLE DEVICE FOR CHECKING HORSES.

No. 259,765. Patented June 20, 1882.

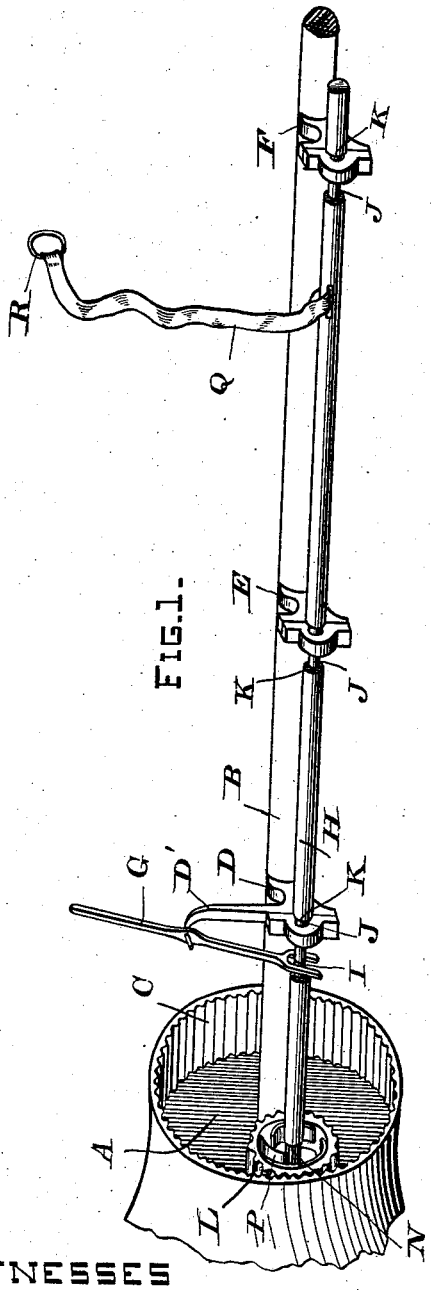

FIG. 1.

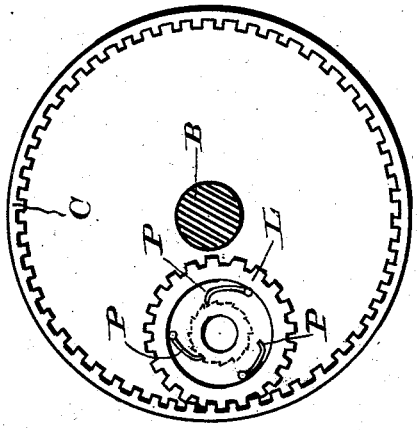

FIG. 3.

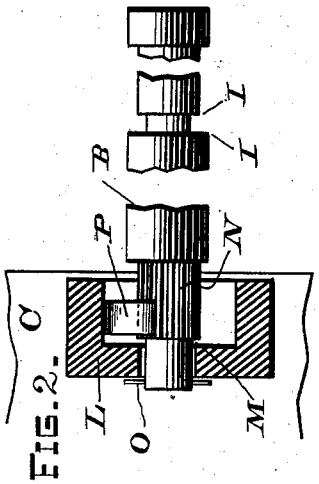

FIG. 2.

WITNESSES

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VEHICLE DEVICE FOR CHECKING HORSES.

SPECIFICATION forming part of Letters Patent No. 259,765, dated June 20, 1882.

Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. KIRKLAND, a citizen of the United States, and residing at Hanford, in the county of Tulare and State of California, have invented a certain new and useful Vehicle Device for Checking Horses, of which the following is a specification.

My invention relates to improvements in vehicle devices for checking horses; and the objects of my improvements are, first, to provide a device which will enable a driver to fasten his animal without the aid of ropes and hitching-posts or weights connected to the bridle or bit; second, to provide a means whereby a sliding windlass-rod or pinion-shaft connected to the driving-reins may be rotated by being thrown or moved into gear with an internally-toothed band upon the inner end of the wheel-hub.

In the drawings hereto annexed, and which form a part of this specification, Figure 1 is a perspective view, showing my device in position. Fig. 2 is a sectional side view, partly broken away, showing the pinion and its loosely-journaled shaft. Fig. 3 is a plan view of the pinion and the internally-toothed band-wheel.

Similar letters of reference are used to designate like parts throughout the several views.

A represents the inner end of a wheel-hub journaled upon the axle B, both being constructed in the usual manner. The internally-toothed band C is securely placed upon the wheel-hub and projects a short distance beyond it, as shown in Fig. 1.

Upon the vehicle-axle are secured the journal-boxes D E F, one of which—preferably the one marked D—is provided with an upwardly-projecting tang, D′, the point of which is bent over to form a fulcrum, upon which is pivoted the lever-arm G, the lower bifurcated end of which embraces the sliding windlass-rod or pinion-shaft H at a point where the diameter of said shaft is reduced so as to form two shoulders, I I, between which the forked end of the lever rests; or, if deemed preferable, collars may be secured upon the shaft, against which the lever-arm may impinge when moved backward or forward.

The sliding rod H revolves upon its bearings or journals J J J, which are turned of a smaller diameter than the shaft proper, and thus a shoulder, K, is formed at each end of each bearing, the length of the journals or position of the shoulders regulating the length of end movement of which the shaft is capable.

Upon the outer end of the sliding rod is loosely journaled the pinion L, held in place by means of a collar, M, formed by the ends of the ratchet-teeth N and the pin or key O. The pinion L has its center recessed for a greater portion of its thickness, as seen in Fig. 2, and upon the periphery of said recess are hinged the pawls P P P. These pawls, which operate by their own gravity, or by a spring, if deemed preferable, engage with the ratchet-teeth N upon the end of the sliding shaft H, and thereby produce a revolution of said rod, when by the action of the lever-arm G the pinion is thrown or moved into gear with the internally-toothed rim or band upon the wheel-hub, and the wheel is revolved by the starting of the horse attached to the vehicle.

The outer ends of the pawls P are curved, as shown in Fig. 3, in order that they may more easily engage with the ratchet-teeth, which they only do when the revolution of the pinion has brought one of the pawls nearly over or above the center of the sliding shaft, when the weight of the pawl's outer end will cause it to swing down and engage with its teeth, from which it is released when the rotation of the pinion has brought the pawls beneath the center of the sliding shaft, and the weight of the pawl causes the outer end to disengage itself and fall down upon the outer edge of the recess, as shown in Fig. 3.

When the device is not set for action the pinion is to be withdrawn from contact with the wheel-hub by sliding the pinion-shaft backward through its journal-boxes for a sufficient distance to permit of such clearance.

The operation of my improved vehicle device for checking horses will be as follows, to wit: When it is desired that the animal should stand without hitching, the driver, by means of the hand-lever G, moves the sliding arm H outward and throws the loosely-journaled pinion L into mesh with the internally-toothed band C. He then attaches the driving-reins to the strap Q, having a ring, R, upon its outer end and securely attached by its inner end to the sliding rod H. If the animal now attempts to start

forward, the revolution of the vehicle-wheel will cause a rotation of the pinion, the internal pawls of which will engage with the ratchet-teeth upon the sliding rod and produce rotation of the same, winding up the strap to which the reins are attached, and by drawing backward upon the bridle-bit compel the animal to stop. When the animal has stopped and the wheel to which this device is attached no longer revolves the tension of the reins or a stretching movement of the animal's head and neck will cause a backward free revolution of the sliding shaft, unwinding the strap and slackening the reins sufficiently to allow the horse to stand at ease.

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

1. The combination of the axle B, having journal-boxes D E F, shouldered windlass-rod H, adapted to rotate and slide in said boxes, and provided at one end with ratchet-teeth N, the recessed pinion L, journaled loosely on said shaft, and having internal pawls, P, adapted to engage with the ratchet, the internally-bent band C, secured to the wheel-hub, bifurcated lever G, fulcrumed to an arm, D′, on the bearing D, and adapted to engage with the shaft H, and the strap Q, secured to said shaft, all constructed and arranged for joint operation, substantially as and for the purpose described.

2. The combination of the internally-toothed hub-band C, loosely-journaled pinion L, having internal pawls, P P P, arranged to engage during the forward motion of the vehicle with the ratchet-teeth N upon the end of the pinion-shaft or sliding windlass-rod H, having a strap, Q, and held in bearings J J J, secured upon the axle B, in which it is slid backward or forward by the pivoted hand-lever G, when constructed and arranged to operate substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 2d day of February, 1882.

WILLIAM P. KIRKLAND. [L. S.]

Witnesses:
HUGH WILSON,
E. J. PLUMMER.