(No Model.)

F. T. AIKINS.

DEVICE FOR CHECKING HORSES.

No. 381,316. Patented Apr. 17, 1888.

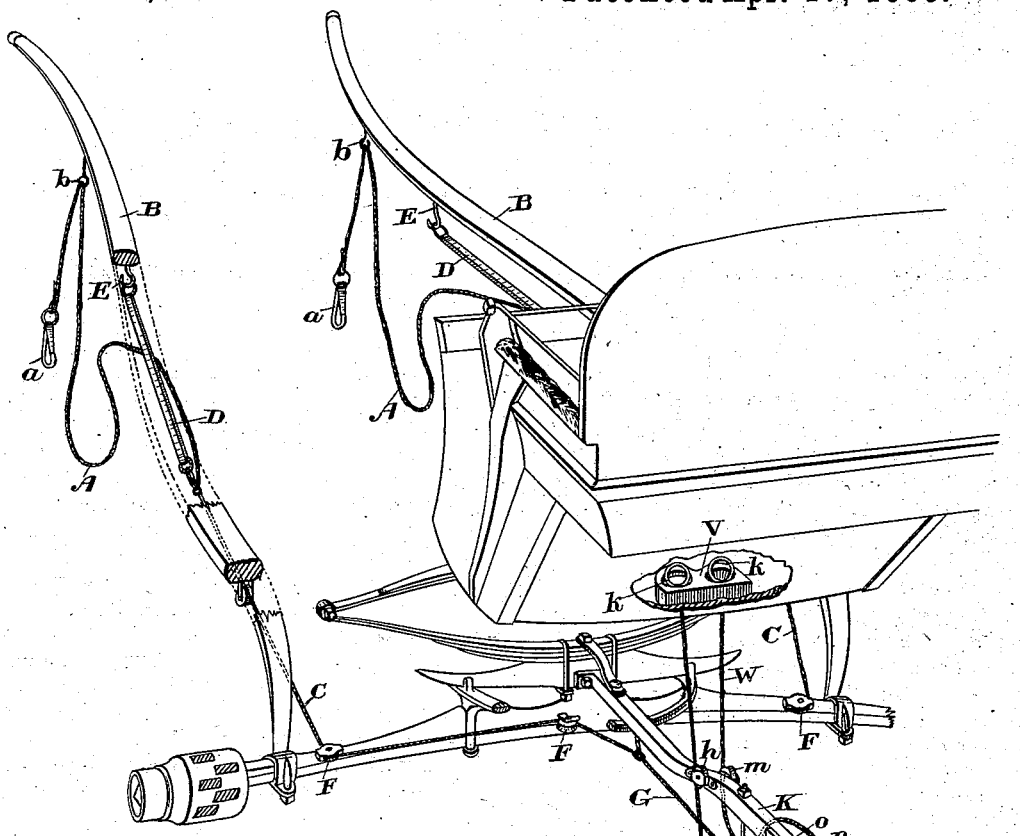

Fig. 1.

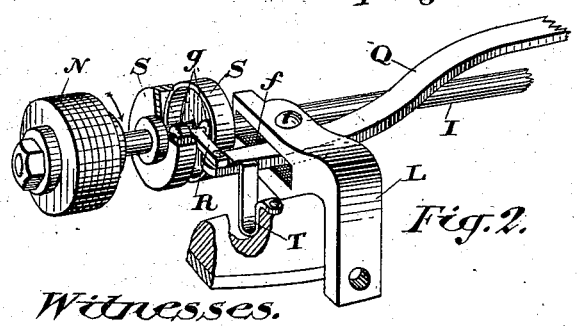

Fig. 2.

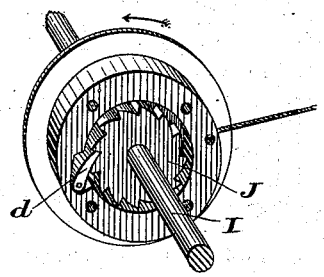

Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERICK THEOPHILUS AIKINS, OF TORONTO, ONTARIO, CANADA.

DEVICE FOR CHECKING HORSES.

SPECIFICATION forming part of Letters Patent No. 381,316, dated April 17, 1888.

Application filed October 28, 1887. Serial No. 253,645. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK THEOPHILUS AIKINS, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, clerk, have invented a certain new and Improved Device for Checking or Holding a Horse, of which the following is a specification.

The object of the invention is to arrange a simple device by which the motion of the wheels of a vehicle may be utilized for the purpose of checking or holding the horse hitched to the said vehicle; and it consists, essentially, of one or more hitching-cords connected to the bridle-bit of the horse and preferably through other cords to a drum carried on a shaft suitably journaled in proximity to the axle of the vehicle, and provided with gearing so arranged that it may be thrown in or out of connection with the hub of the wheel, so that the motion of the latter may be utilized at the will of the driver for the purpose of rotating the drum and winding the cord, thus imparting a strain on the bridle-bit sufficient to hold the horse from running away, the whole being constructed in detail substantially as hereinafter more particularly explained.

Figure 1 is a perspective view, partially in section, of a vehicle provided with my improved hitching device. Fig. 2 is a perspective detail of the gearing. Fig. 3 is an end view of the winding-drum, showing its connection with the shaft.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A represents two hitching-cords provided with ordinary snaps, *a*, by which they are connected to the bridle-bit. These cords pass through loops *b*, projecting from the bottom of the shafts B, and are connected at their back end to the cord C, which has a spring, D, the opposite end of which loops over the hook E, connected to the shafts B, as indicated, so that the tension of the spring D shall draw upon the cord C, one of which is supplied for each shaft. The cords C pass around pulleys F and connect at their back end with a cord, G, which is suitably supported from the reach of the vehicle, and is connected at its back end with a drum, H. This drum H is loosely journaled on the shaft I, and, as may be seen in Fig. 3, has a ratchet-dog, *d*, pivoted in it and designed to engage with the ratchet-wheel J, which is keyed or otherwise fastened to the shaft I. By thus forming a ratchet-connection between the drum H and the shaft I the said shaft will revolve in one direction without moving the drum, but when revolved in the other direction will carry the drum H with it. One end of the shaft I is provided with a journal, *e*, connected to the reach K, while its other end passes through and is supported in a horizontal slot, *f*, formed in the bracket L, which is clipped upon and secured to the axle M, as shown. A friction-pulley, N, is keyed or otherwise fastened to the end of the shaft I, and is designed to fit into the flanged friction-pulley O, which is secured to the hub P of the wheel.

A lever, Q, is pivoted in the bracket L, and has pivoted on its end a small T-shaped plate, R, carrying on its T-end the two friction-pulleys *g*, which fit between the flanged disks S, so that by the movement of the lever R they may be pressed against the flanges on the disks S, which disks are fitted upon the shaft I, as indicated. A spring, T, is arranged to press against the back of the lever Q, so as to hold the friction-pulley N out of gear with the flanged friction-pulley O when the said lever is not otherwise acted upon. A cord, U, is attached to the long end of the lever Q, and after passing over the pulley *h* is carried through a hole in the bottom of the vehicle, and is attached to a ring, *k*, designed to fit into a recess made in the block V, which is attached to the bottom of the vehicle, as indicated.

W is a cord provided with a similar ring, *k*, and in the same manner passing through the block V, so that when not used its ring will also fit into a recess formed in the said block V. The cord W passes around the pulleys *m* and *n*, and its end is connected, as indicated, to the spring-plate X, which is adjustably connected to the reach K by the bolt *o*, passing through a slot, *p*, made in the plate X, as indicated. It will be noticed on reference to Fig. 1 that the end of the lever Q fits behind the head *q*, formed on the end of the plate X. When the lever is in this position, the friction-pulley N is pressed against the flanged friction-pulley O.

Having now described the general construc-

tion of my device, I shall proceed to explain briefly its operation.

The cords A, which I term "hitching-cords," will be connected to the bridle-bit when the horse is harnessed to the vehicle; but the end of the lever Q will not be in contact with the plate X, and the spring T will hold the friction-pulley N away from the flanged pulley O. Consequently the shaft I will remain stationary while the vehicle is in motion. By the action of the spring D, which may be an ordinary elastic strap, as shown, or a spring of any other suitable description, the cords C and G are kept taut and the cords A loose, so as not to interfere with the head of the horse. When the driver of the vehicle desires to hitch his horse, he will seize the ring *k* and pull upon the cord U until the end of the lever Q springs past the head *q* of the plate X, which plate is so adjusted that when the end of the lever is in the position just described and indicated in Fig. 1 the friction-pulley N will be held in contact with the flanged friction-pulley O, and, as this latter pulley derives motion from the hub P, it follows that the shaft I, on which the pulley N is fixed, must revolve and carry with it the drum H, thus winding the cord G until the cords A are sufficiently taut to stop the horse.

It will be seen that the machinery described may be put into action when the vehicle is in motion, or it may be set so that it will act the moment that the vehicle is moved. Consequently my device is applicable for stopping a runaway, or it may be used instead of a weight or hitching-post.

When it is desired to throw the mechanism out of gear, it is merely necessary to draw upon the cord W, which action will pull the spring-plate X away from the end of the lever Q, which lever will then be forced back by the action of the spring T.

I have shown my device applied to a single-horse vehicle; but of course it may be easily applied to a double-horse vehicle without in any way altering the principle of the invention. I therefore do not confine myself to the exact arrangement of the cords A, C, and G, as they will be arranged to suit the style of vehicle the device is to be applied to. Nor do I restrict myself to the friction-gear shown, as other kinds of gear might be adapted to accomplish the same purpose.

What I claim as my invention is—

1. A hitching-cord independent of the reins and attached to the bridle-bit and to a cord connected at one end to a drum and a spring connected at or near its other end, and connecting said cord with the under side of the shaft, in combination with driving mechanism arranged to connect the drum to the wheel of the vehicle, and with mechanism arranged to throw the driving mechanism in and out of gear, substantially as and for the purpose specified.

2. The cord A, connected at one end to the bridle-bit and at its other end to the cord C, which is held taut by the spring D, and is connected, either directly or through the cord G, to the drum H, and a shaft, I, on which the drum H is journaled, and connected by means of the ratchet-dog *d* and ratchet-wheel J to the said shaft, in combination with the pulley N, fastened to the shaft I, and arranged to engage with the pulley O, fastened to the hub P, substantially as and for the purpose specified.

3. The cord A, connected at one end to the bridle-bit and at its other end to the cord C, which is held taut by the spring D, and is connected, either directly or through the cord G, to the drum H, a shaft, I, on which the drum H is journaled, and connected by means of the ratchet-dog *d* and ratchet-wheel J to the said shaft, a pulley, N, fixed to the shaft I and arranged to engage with the pulley O, fixed to the hub P, in combination with the pivoted lever Q, having attached to one end a T-shaped plate, R, carrying friction-pulleys *g*, which project behind the flanges of the disks S, and a cord, U, connected to the long end of the lever Q, and extending through a hole in the bottom of the vehicle, substantially as and for the purpose specified.

4. The pivoted lever Q, connected to and arranged to adjust one end of the shaft I, in combination with the adjustable spring-plate X, having a head, *q*, formed on it to engage with the end of the lever Q, substantially as and for the purpose specified.

5. The pivoted lever Q, connected to and arranged to adjust one end of the shaft I, in combination with the adjustable spring-plate X, having a head, *q*, formed on it to engage with the end of the lever Q, and a cord, W, arranged to withdraw the spring-plate X away from the end of the lever Q, substantially as and for the purpose specified.

6. A lever, Q, pivoted in the bracket L and having the friction-pulleys *g* attached to its short end and arranged to engage with the flanged disks S, which are connected to the shaft I, in combination with the spring T, arranged to actuate the lever Q, substantially as and for the purpose specified.

Toronto, October 15, 1887.

FREDERICK THEOPHILUS AIKINS.

In presence of—
CHARLES C. BALDWIN,
CHAS. A. RICHES.