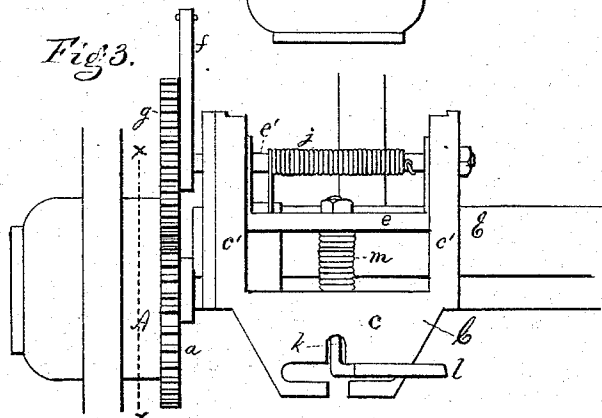
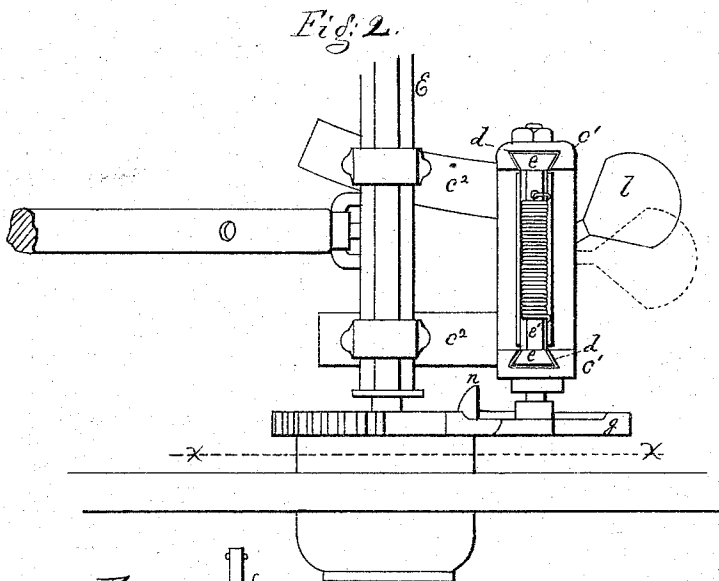
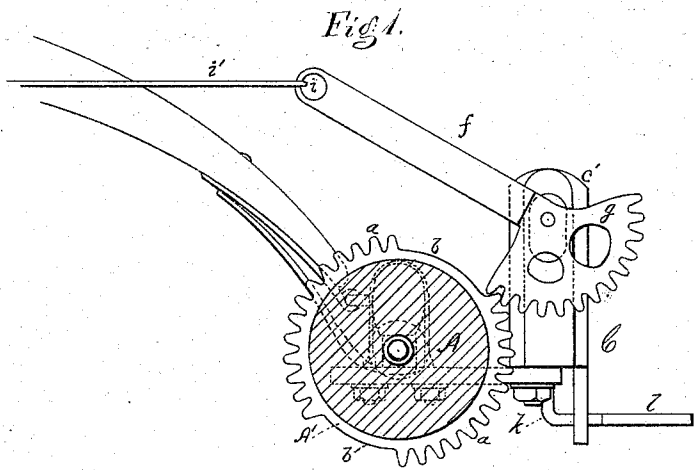


W. T. & J. B. BURTON.
Vehicle Devices for Checking Horses.

No. 157,712.

Patented Dec. 15, 1874.



Witnesses.
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L. H. Spatimer.

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UNITED STATES PATENT OFFICE.

WILLIAM T. BURTON AND JOHN B. BURTON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VEHICLE DEVICES FOR CHECKING HORSES.

Specification forming part of Letters Patent No. 157,712, dated December 15, 1874; application filed October 27, 1874.

To all whom it may concern:

Be it known that we, WILLIAM T. BURTON and JOHN B. BURTON, both of the city of Boston and State of Massachusetts, have invented certain Improvements in Mechanism for Stopping or Checking Horses, of which the following is a specification:

The object of this invention is to provide a cheap, compact, and effective device to stop or check horses when left in the street, or other places, and before a vehicle; and the invention consists in an attachment to be applied to the axle and adjacent hub, and constructed to move a pivoted vibrating arm connected by means of a strap with the bridle-bit or other portion of the bridle.

Figure 1 is a side view looking from that side of the carriage on which the attachment is applied, the hub being shown in section and on lines *x x*, Fig. 3. Fig. 2 is a top view, and Fig. 3 is a rear view.

On the inner side of the hub *A* of one of the forward wheels is applied a band, *A'*, with toothed surfaces *a* and plain surfaces *b*. The frame of the attachment is designated by the letter *C*, and it consists of a plate, *c*, having rising therefrom standards *c'*, and held securely to the axle *B* of the carriage by suitable clips *c'' c''*. The plate *c* has a vertical slot and side slots intersecting the vertical slot, as shown in Fig. 3, and the standards are provided with dovetailed ways *d*, to receive and guide the bracket-like bearing-piece *e*. This bearing-piece *e* has a cross shaft or rod, *e'*, to which the holding or checking arm *f* is pivoted. This arm has at one side of its pivot a toothed sector, *g*, and its opposite end is provided with an opening, *i*, or hook to receive the checking-strap *j'*. About this rod is a spring, *j*, one end of which is attached to the rod, and the other end of the spring is attached preferably to the bearing-piece *e*. This spring may be a spiral spring, as shown, or a strong clock-spring, or a spring of other suitable construction, and its force may be adjusted by turning the rod, the latter being provided with set-nuts for holding it in any adjusted position. To this bearing-piece *e* is attached the step-rod *k*, and the step *l* projects, as shown, from its lower end. A spiral spring, *m*, surrounding this rod *k*, rests on the plate

c, and supports the bearing-piece *e* and step. A suitable strap or cord extends from the arm *f* to the bit, passing through suitable guide-rings, if desired. A person leaving the carriage steps on the foot-piece or step *l*, depresses the bearing-plate *c*, and throws the foot-piece to one side, as shown in dark lines in Figs. 2 and 3, so that its shank enters one of the horizontal slots in plate *c*. This operation confines and sets the parts so that the teeth of the band will engage the teeth of the sector if the wheel is turned. Assume that the bearing-plate has been depressed and locked, as described, and that the carriage is left; now, should the horse go forward, the teeth of the band will soon engage the teeth of the sector, as shown in Fig. 1, and further movement will move the arm back about its pivot, pulling harder and harder, thereby checking or holding the horse. The degree of the holding action or strength of pull is determined by the strength of the spring used. Should the horse not be stopped by a partial rotation of the wheel, then, when the sector meets the plain portion of the hub, it is thrown quickly forward under the action of the spring about its rod or pivot, but the sector is again quickly caught by the next section of teeth on the hub, and the jerk is repeated. In this embodiment of our invention, the strap or cord will be jerked twice at each rotation of the wheel, but it might be jerked oftener by increasing the number of sections of teeth. Preferably the spring, in connection with the checking-arm, will be made of sufficient strength to stop and hold the horse by a half rotation of the hub, or so strong that the wheel will not turn, but drag on the ground as a brake. Instead of teeth on the band and sector, friction-surfaces might be used, and the sector might be made somewhat eccentric to bite or hold the hub. Should the horse attempt to back, a stop or check piece, *n*, on the side of the sector, will meet the first tooth of the approaching section of teeth on the band, and will prevent the further backward movement of the hub.

We are aware that it is not new to provide a hub with a toothed band, the teeth running completely around the band, to operate through other devices to draw on straps con-

nected with the bit; but in no instance has a vibrating or pivoted arm under the control of a spring been arranged to be engaged with or disengaged from sectors of teeth on the hub, in order to vibrate such arm back and forth at intervals to check or stop a horse, as described by us.

We claim—

1. The combination, with the toothed and plain-surfaced band applied to the hub, of the checking-arm *f*, toothed to engage the teeth of the sector, all to operate substantially as described.

2. The combination, with the movable bearing piece or bracket *e*, of the checking-arm, provided with its sector, and the shaft and spring for regulating the resistance of the arm, as and for the purpose set forth.

3. The combination, with the attachment frame, of the bearing piece or bracket, the checking-arm, the step and step-rod, and the spring for elevating the bracket, substantially as and for the purpose set forth.

4. The checking-arm *f*, pivoted to the movable frame, and provided with stop *n*, in combination with the band having toothed and plain sections, as and for the purpose set forth.

This our specification signed this 20th day of October, A. D. 1874.

WILLIAM T. BURTON.

JOHN B. BURTON.

Witnesses:

G. W. GREGORY,
S. B. KIDDER.