

N. JOHNSTON.
Horse-Detacher.

No. 200,541.

Patented Feb. 19, 1878.

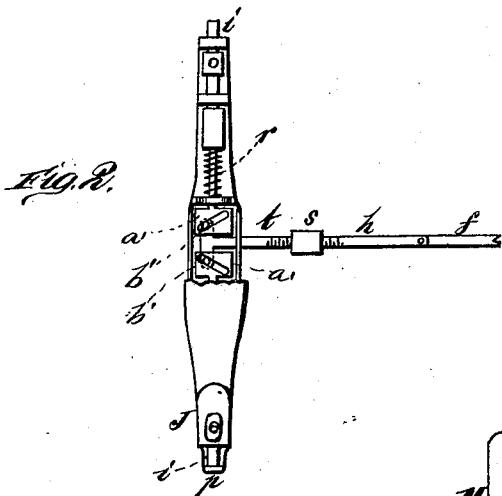
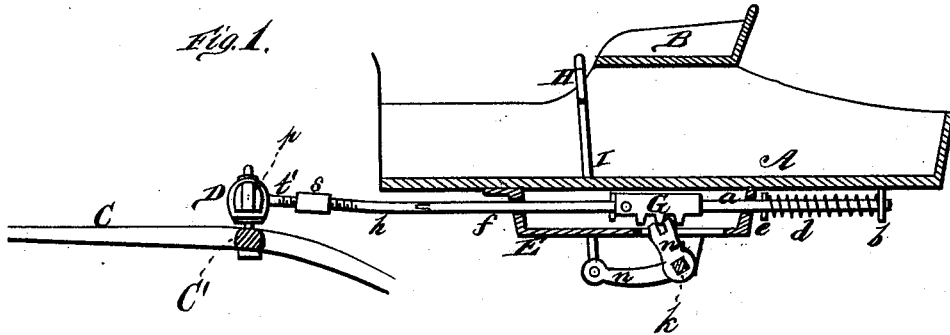


Fig. 4.

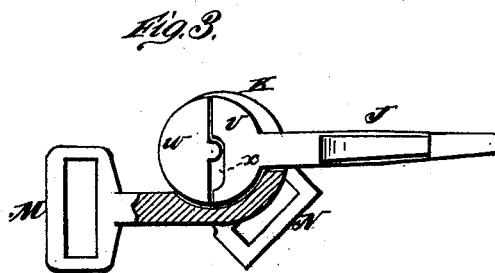
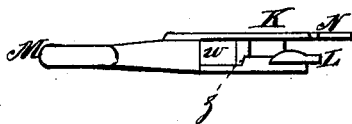


Fig. 5.

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UNITED STATES PATENT OFFICE.

NATHAN JOHNSTON, OF MAYFIELD, NEW YORK.

IMPROVEMENT IN HORSE-DETAACHERS.

Specification forming part of Letters Patent No. 200,541, dated February 19, 1878; application filed January 12, 1878.

To all whom it may concern:

Be it known that I, NATHAN JOHNSTON, of Mayfield, in the county of Fulton and State of New York, have invented a new and valuable Improvement in Horse-Detachers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical section of a wagon-body, showing my horse-detacher. Figs. 2, 3, 4, and 5 are details thereof.

The nature of this invention consists in the construction and arrangement of a device for detaching a horse from the whiffletree and shafts of a vehicle, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate this invention.

A represents the bed of a vehicle-body, with seat B. C C are the shafts, connected to the front axle, in the usual manner, and provided with a cross-bar, C', upon which the whiffletree D is pivoted. On the under side of the bed A is secured a box, E, in which is placed a slide, G, provided with a rearwardly-extending rod, *a*, passing out through the rear end of the box, and held in a bearing, *b*.

d is a spiral spring surrounding the rod *a*, between the bearing *b* and a pin or collar, *e*, in or on the rod *a*, so that the tendency of the spring will be to throw the slide G forward. Another rod, *f*, projects forward from the slide G through the front end of the box E, and to the forward end of said rod *f* is jointed a short rod, *h*, having screw-threads on its front end.

The slide G, with the rods *a* and *f*, may all be made in one piece, or separate and permanently united together, as may be most convenient.

In lugs on the under side of the box E is placed a rock-shaft, *k*, provided with two arms, *m* and *n*. The arm *m* extends upward into the box E through a slot therein, and engages with the slide G, while the arm *n* extends forward, and is pivoted to a rod, I, which passes upward through the bed A, and has a loop,

H, on its upper end, immediately in front of the seat B, or in such close proximity thereto that it can be easily reached by the driver on said seat.

The whiffletree D is at each end provided with a metal ferrule, J, having a guard, *p*, extending from its under side outward and upward. In each end of the whiffletree is a bolt, *i*, projected outward against the guard *p* by means of a spring, *r*, and each bolt is provided with a thumb-piece for drawing the same back when the trace is to be inserted between the end of the whiffletree and the guard *p*. The bolt then springs outward through a hole in the end of the trace, whereby the trace is held to the whiffletree.

The inner ends of the bolts *i i* are provided with plates *a'*, having inclined slots, as shown in Fig. 2, and in said slots work pins *b b'*, projecting from the arms of a T-shaped rod, *t*, which extends rearward from the center of the whiffletree, and has screw-threads on its outer end.

The threads on the rods *f* and *t* are one right hand and the other left hand, and the two are united by a tubular screw-coupling, *s*, as shown. When the parts have been properly adjusted by means of this coupling, and the traces attached as above described, the horse can be instantaneously detached from the whiffletree by the driver simply taking hold of the loop H and pulling the rod I upward. This, by means of the rock-shaft *k* and its arms *m n*, moves the slide G backward, and this, by the connections *f h* and *s t*, at once draws the bolts *i i* inward and releases the traces.

The joint between the parts *f* and *h* allows of the whiffletree turning upon its pivot sufficiently for all practical purposes. In connection with this, it will be necessary to use a self-operating device for detaching the breeching from the shafts. This is constructed as follows: J is an ordinary snap-hook, having on its shank or stem, instead of the usual eye or loop, simply a semicircular projection, *v*, with notch *x* therein. K represents a circular box, with arm and loop M projecting from one side, and a loop, N, projecting from the other side. The edge of the box K is open for one-half its circumference, and the part *v* of the snap-hook is inserted from one side of said opening on

top of a pivoted piece, *w*, therein, the notch *x* fitting over the pivot. The snap-hook can now be turned to one side, so that the shoulder *y* of the projection *v* will pass under a shoulder, *z*, in the box, the piece *w* turning with the snap-hook. A spring, *L*, is arranged to produce the necessary tension or friction of the parts.

The side strap is fastened in the eye or loop *M*, and a small strap fastened to the shaft is attached to the eye *N* on the under side of the joint. Now, when the traces are loosened, as above described, the small strap in the eye *N* prevents the side strap from turning as soon as the horse moves forward, and when the snap-hook is turned to a certain point it disengages, leaving the side strap in place on the shaft.

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

1. The combination, with the whiffletree *D*,

of the spring-bolts *i i*, connected to a rod, *t*, the slide *G*, connected to the rod *t*, and a device in close proximity to the seat of the vehicle for operating said slide, for the purposes set forth.

2. The combination of the slide *G* with rods *a f*, spring *d*, jointed screw-rod *h*, screw-rod *t*, and tubular screw-coupling *s*, substantially as and for the purposes herein set forth.

3. In combination with the slide *G*, arranged under a vehicle-body, the rock-shaft *k*, with arms *m n*, rod *L*, and loop *H*, passing through the vehicle-body, for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

NATHAN JOHNSTON.

Witnesses:

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CHAS. H. VAN BUREN.