

R. FOX.  
Horse Detaching Device.

No. 205,182.

Patented June 25, 1878.

Fig. 1.

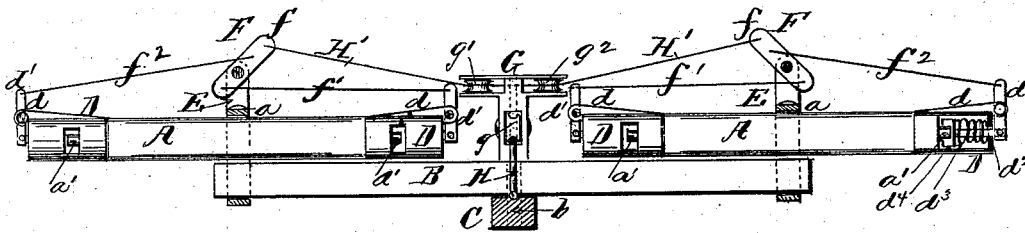


Fig. II

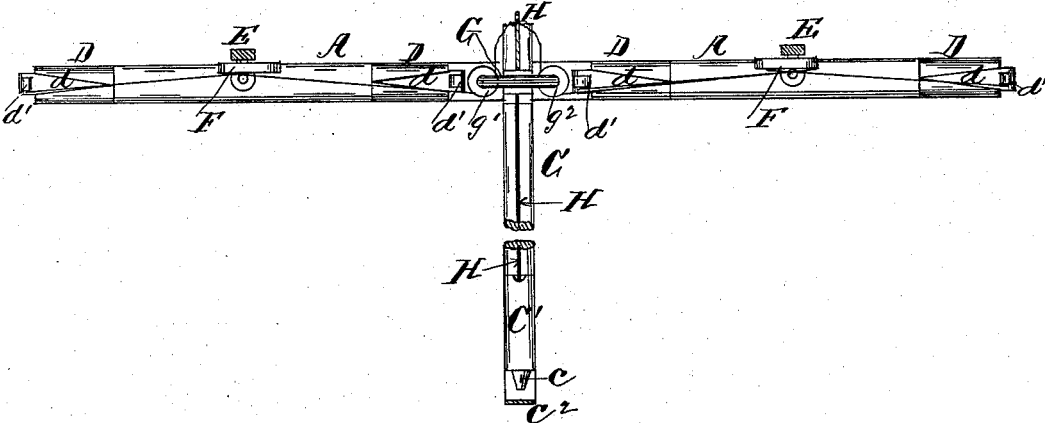
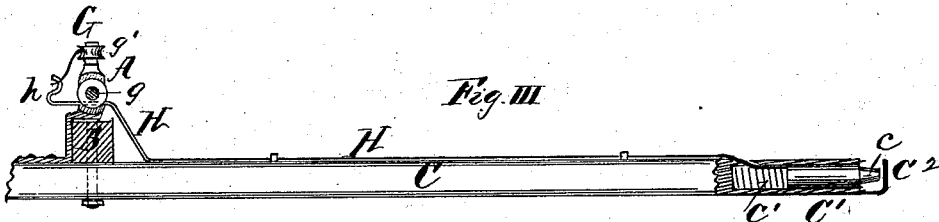


Fig. III



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# UNITED STATES PATENT OFFICE.

ROBERT FOX, OF DEERFIELD, IOWA.

## IMPROVEMENT IN HORSE-DETACHING DEVICES.

Specification forming part of Letters Patent No. 205,182, dated June 25, 1878; application filed December 11, 1877.

### *To all whom it may concern:*

Be it known that I, ROBERT FOX, of Deerfield, in the county of Chickasaw and State of Iowa, have invented a new and useful Improvement in a Device for Detaching a Team from a Vehicle, of which the following is a specification:

This invention will be readily understood by reference to the accompanying drawings, of which—

Figure 1 is a sectional elevation of a pair of double whiffletrees provided with the improved device. Fig. 2 is a general plan of the same attached to a pole of a vehicle. Fig. 3 is a sectional elevation of the parts shown in Fig. 2.

The single-trees A are pivoted by a central pin, *a*, to the double-tree B, in the usual manner. The double-tree is also attached to the pole C by the pin *b*, as is customary.

To each end of the single-trees are attached ferrules D, which carry lugs *d* at their outer ends, to which said lugs are pivoted levers *d*<sup>1</sup>.

The lower ends of the levers *d*<sup>1</sup> are coupled to pulls *d*<sup>2</sup>, which extend inwardly into the interior of the ferrules in the axial line of the single-trees.

Springs *d*<sup>3</sup> are arranged within the ends of the ferrules, so as to throw the pulls *d*<sup>2</sup> habitually inward, but yet so as to allow the levers *d*<sup>1</sup> to draw them out.

A pin or lug, *a*<sup>1</sup>, is fixed to the end of the single-tree, as shown in Fig. 1, and upon this pin or lug the trace is to be hooked, an opening in the front side of the ferrule permitting the trace to be easily hooked upon this pin.

The pull *d*<sup>2</sup> has a clutch, *d*<sup>4</sup>, embracing the pin *a*<sup>1</sup> a little back from its front end, so as to allow the trace to be hooked onto the said pin; but when the lever *d*<sup>1</sup> is moved, as will be presently explained, the said clutch will be drawn outwardly by its pull *d*<sup>2</sup>, so as to draw the trace off the pin or hold *a*<sup>1</sup>, and so allow the trace to be instantly detached from the whiffletrees.

A fulcrum-post, E, is attached to the central part of each single-tree by its pin *a*, and to the top end of each of these posts is fulcrumed a lever, F, which has its upper arm *f* longer than its lower arm.

Two rods, *f*<sup>1</sup> and *f*<sup>2</sup>, are attached at two

points of the lever F, which said points are on opposite sides of the pivot-point of the lever, and the outer ends of the two rods *f*<sup>1</sup> and *f*<sup>2</sup> are coupled, respectively, to the top ends of the levers *d*<sup>1</sup>, so that by moving the top end *f* of the said lever the levers *d*<sup>1</sup> will be moved in the proper direction to disengage the trace from their lugs *a*<sup>1</sup>, as has been already described.

A ferrule, C', on the front end of the pole contains a sliding bar, *c*, which is surrounded by the spiral spring *c*<sup>1</sup>, which throws the said bar habitually forward, but still allows it to be drawn back.

A lug, *c*<sup>2</sup>, is attached to the front part of the ferrule C', and extends upwardly in front of it, as shown in Fig. 3, and when the bar *c* is thrown forward it stops against this lug *c*<sup>2</sup>, and the neck-yoke, when the team is attached to the vehicle, will be engaged by the bar *c*, and so held fast by the said bar between the end of the ferrule and its overlapping lug *c*<sup>2</sup>. When the bar *c* is drawn back, however, the neck-yoke will instantly be released from its hold on the end of the pole, and so become detached.

A stand or pulley-block, G, will be erected on the center part of the double-tree, and attached thereto by the bolt or pin *b*. This stand will furnish bearings for the axles of three pulleys, *g*, *g*<sup>1</sup>, and *g*<sup>2</sup>.

A cable or rod, H, will pass around the lower pulley *g*, and, continuing along on the top of the pole, on which it will be guided by suitable attachments, its front end will be attached to the rear end of the bar *c*.

Behind the stand or block G the cable or rod H will terminate in a loop, *h*, to which will be attached two cords or cables, H', which latter cords will pass around the sheaves *g*<sup>1</sup> and *g*<sup>2</sup>, and be attached, respectively, to the top ends of the levers F.

A rope or strap (not shown) may be attached to the loop *h*, and pass thence up into the vehicle, so that the driver, when required, can, by giving a sharp pull on the loop *h*, detach the traces from their holds *a*<sup>1</sup> and the neck-yoke from the bar *c* at the same moment, thereby instantly detaching the team from the vehicle.

If only one horse is to be used, of course the

details of the attachment can readily be varied so as to apply only to a single-tree.

Having described my invention, I claim—

1. The fulcrum-post E, lever F, and rods  $f^1$  and  $f^2$ , in combination with the single-tree A, with ferrule D, lugs  $d$ , levers  $d^1$ , spring  $d^2$ , pulls  $d^3$ , and pin  $a'$ , substantially as and for the purpose set forth.

2. The stand-block G, with pulleys  $g$ ,  $g^1$ , and  $g^2$ , and cable H and H', in combination with the levers F, bar  $c$ , single-tree A, and pole C, substantially as and for the purpose set forth.

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Witnesses:

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