

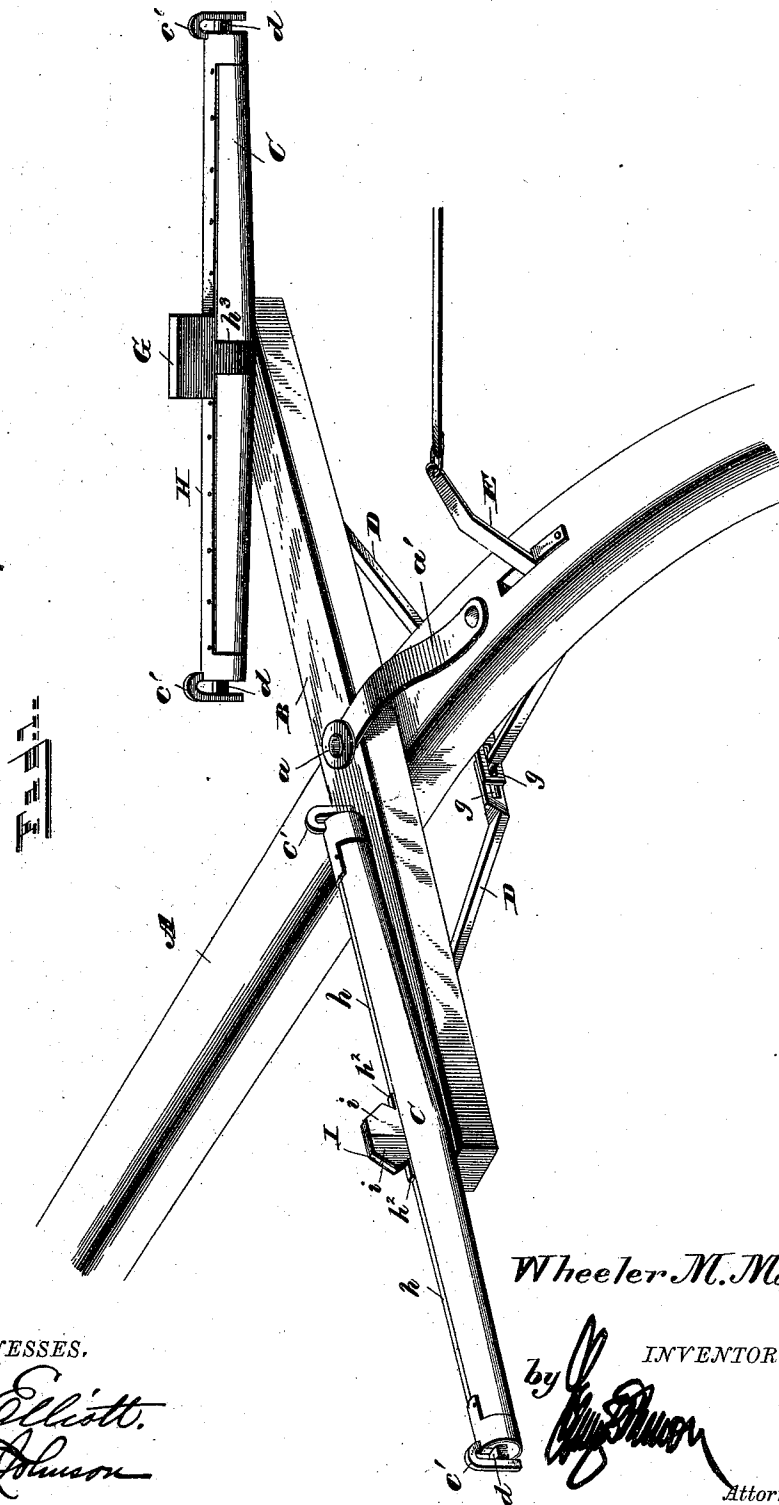
(No Model.)

2 Sheets—Sheet 1.

W. M. MORRISON.  
HORSE DETACHER.

No. 402,097.

Patented Apr. 23, 1889.



WITNESSES.  
*G. S. Elliott.*  
*E. M. Johnson*

*Wheeler M. Morrison*

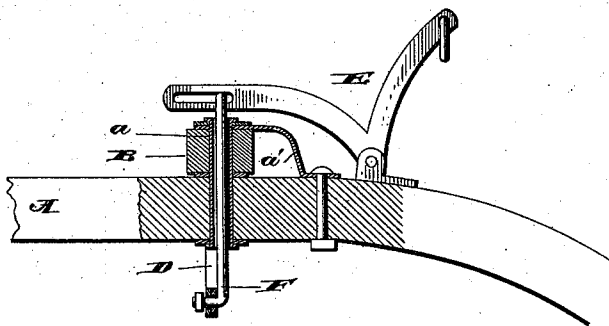
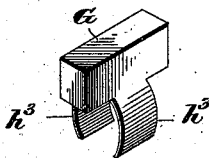
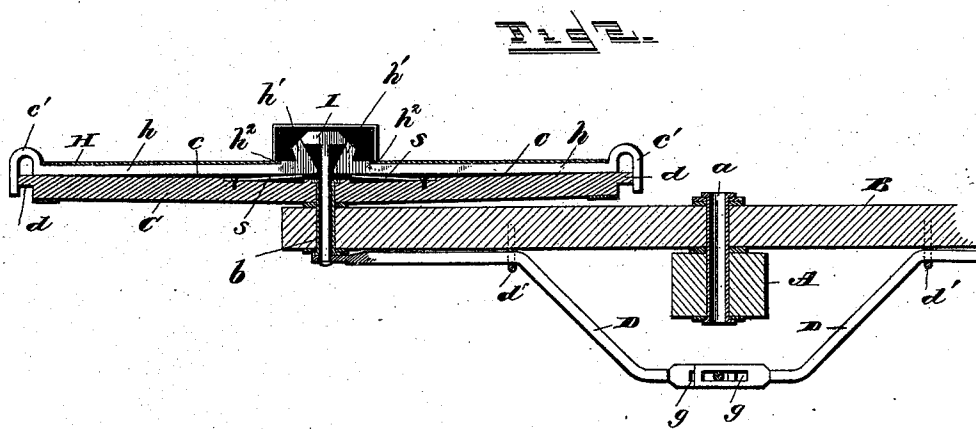
INVENTOR

by *[Signature]*  
Attorney

2 Sheets—Sheet 2.

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*WITNESSES.*

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G. S. Elliott.  
E. W. Johnson

INVENTOR

INVENTOR  
by  Attorney

# UNITED STATES PATENT OFFICE.

WHEELER M. MORRISON, OF TOWER HILL, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO DAVID O. MILLER, OF SAME PLACE.

## HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 402,097, dated April 23, 1889.

Application filed January 31, 1889. Serial No. 298,167. (No model.)

*To all whom it may concern:*

Be it known that I, WHEELER M. MORRISON, a citizen of the United States of America, residing at Tower Hill, in the county of Shelby and State of Illinois, have invented certain new and useful Improvements in Horse-De-  
tachers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled  
in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a  
part of this specification.

My invention relates to certain new and useful improvements in horse-detachers, the same being designed more especially as an improvement upon Patent No. 391,381, dated October 16, 1888; and my invention consists in the construction and combination of the parts, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a perspective view. Fig. 2 is a sectional view. Fig. 3 is a sectional view of a modification. Fig. 4 is a detail perspective view.

A refers to the pole or tongue, which has pivotally attached thereto a singletree, B, the connection between the pole and singletree being made by means of a hollow bolt, *a*, the upper and lower ends of this bolt being either upset or screw-threaded to engage with nuts or washers. This bolt *a* also passes through a perforation in the rearwardly-extending strap *a'*, the rear end of the strap being attached to the pole by the ordinary bolt and nut.

The singletree B is provided at its outer ends with hollow bolts *b*, which serve to connect the whiffletrees C thereto, so that they can have a pivotal movement thereon. The whiffletrees C are provided with longitudinal recesses *c*, within which lie bars *h*. These bars at their outer ends have hook-shaped portions *c'*, which serve to hold the traces upon projecting ends *d* of the whiffletrees when placed thereon, and when the bars are slid outwardly the traces will be forced off of said ends. The inner ends of these bars *h* have angular heads *h'*, which provide upwardly-projecting inclined sides, and adjacent to the inner ends of these bars they are provided with notches *h<sup>2</sup>*, which engage with the inner ends

of the covering-plates H. These covering-plates H are rigidly attached over the slot or recess in the whiffletrees, and are provided at their ends with rings or bands, which embrace the ends thereof. Beneath the bars *h* the whiffletrees are provided with springs *s*, which will throw said bars upwardly, so that the notches *h<sup>2</sup>* will engage with the inner ends of the covering-plates when said bars are moved inwardly to abut against the ends *d* of the whiffletree.

I refers to a T-headed rod, the ends of the cross member thereof being beveled to correspond with the inclination of the upwardly and outwardly projecting portions *h'* of the bar *h*. The vertical member of this T-headed rod passes through the hollow bolt *b*, and is secured in any suitable manner to the rod D. The rod D is pivoted by a suitable loop or bail, *d'*, to the singletree B, and beyond this bail the rod D extends downwardly, the ends thereof being bent horizontally and slotted for the reception of a pin or operating-lever attached to the pole for the purpose of lowering the outer ends of the rods to depress the T-headed rods I, and thereby cause the bars *h* to be moved or slid in the recess, thus detaching the traces from the whiffletrees.

It will be observed that, owing to the construction of the ends of the bars *h* and the beveled ends of the upper member of the T-headed rod, the inner ends of these bars *h*, which are held raised by pressure of the springs, are depressed to cause the notches *h<sup>2</sup>* in the bars *h* to become disengaged from the ends of the plates H.

In Fig. 1 of the drawings I have shown a bell-crank lever, E, as passing through the pole and pivoted within a slot or opening, the forwardly-projecting member of this lever having a pin which engages with the slots *g g* in the inner ends of the bars D. Instead of this construction, I may employ the arrangement shown in Fig. 3 of the drawings, wherein the bell-crank lever E is pivoted above the pole, the forward member thereof being slotted to engage with the bent end of the pin F, which passes through the hollow bolt *a*, the lower end thereof being bent to engage with the slots *g g*, hereinbefore described.

G refers to a box or casing having depend-

ing spring portions  $h^2 h^2$ , by means of which it is held upon the whiffletrees so as to cover the ends of the bars  $h$  and the T-headed rod. To the upwardly-projecting ends  $h'$  of the bars  $h$  are secured side plates,  $i$ , against which the rod I will engage to prevent said rod turning.

Instead of employing covering-plates extending from the end bands of the whiffletree inwardly, as shown, said covering-plates may be dispensed with and bands or straps used.

In practice a cord or strap is attached to the rearwardly-projecting member of the bell-crank lever E, and extends either through the floor of the vehicle or over the dash-board, so as to be within easy access, and by drawing upon this cord all the traces will be detached from the whiffletrees and the horses released from the vehicle. When it is desired to unhitch the horses, the rods D are simply pressed down, which movement will throw the traces off the whiffletrees. In harnessing, the eyes of the traces are passed into the loops  $c'$  and the bars  $h$  pressed inwardly. Each bar  $h$  being independent of the other, the traces are not attached to the whiffletrees simultaneously.

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

1. In a horse-detacher, the combination, substantially as described, of the whiffletrees and singletree connected by hollow bolts, hooked bars  $h$ , mounted to slide on the whiffletrees and provided at their inner ends with inclines, rods I, seated loosely in the hollow bolts and engaging directly with the inclines of the hooked bars, levers D, fulcrumed on the singletree and connected at their outer ends with the rods I, and a device connected with the inner ends of the levers to operate them simultaneously.

2. In a horse-detacher, the combination, substantially as described, of the whiffletrees and singletree connected by hollow bolts, hooked bars  $h$ , mounted to slide on the whiffletrees and provided at their inner ends with inclines, rods I, seated loosely in the hollow

bolts and engaging directly with the inclines of the hooked bars, levers D, fulcrumed on the singletree and connected at their outer ends to the rods I, and a lever connected at one end to the slotted inner ends of levers D.

3. The combination, with the singletree and whiffletrees constructed and arranged as described, of hooked bars mounted to slide in the grooves of the whiffletrees and having at their inner ends upwardly-projecting inclined or beveled webs, rods I, seated between the inner ends of said hooked bars and provided with T-heads beveled to correspond to the bevel of the webs, levers D, fulcrumed on the singletree and connected at their outer ends to the rods I, and a bell-crank lever fulcrumed on the tongue and having its forward end in engagement with the slots at the inner ends of said levers D, substantially as set forth.

4. The combination, with a singletree constructed substantially as shown and provided with a longitudinal recess, of the sliding bars  $h$ , having upwardly-projecting inner ends which are beveled, notches  $h^2$ , which engage with the covering-plates H, and springs  $s$ , substantially as shown, and for the purpose set forth.

5. The combination, with a singletree, of the T-headed rod I, sliding bars  $h$ , said bars having their inner ends inclined and extended upwardly, plates  $i$ , attached to the upwardly-extended portions of the bars  $h$ , so as to lie over the upper portion of the T-headed rod, substantially as shown.

6. The combination, with the singletree provided with a longitudinal recess and sliding bars  $h$ , of covering-plates H and a box, G, having downwardly-extended members  $h^3 h^3$ , which are adapted to embrace the singletree to retain said box in position, substantially as shown.

In testimony whereof I affix my signature in presence of two witnesses.

WHEELER M. MORRISON.

Witnesses:

H. A. HOLT,  
J. J. SEIGHTY.