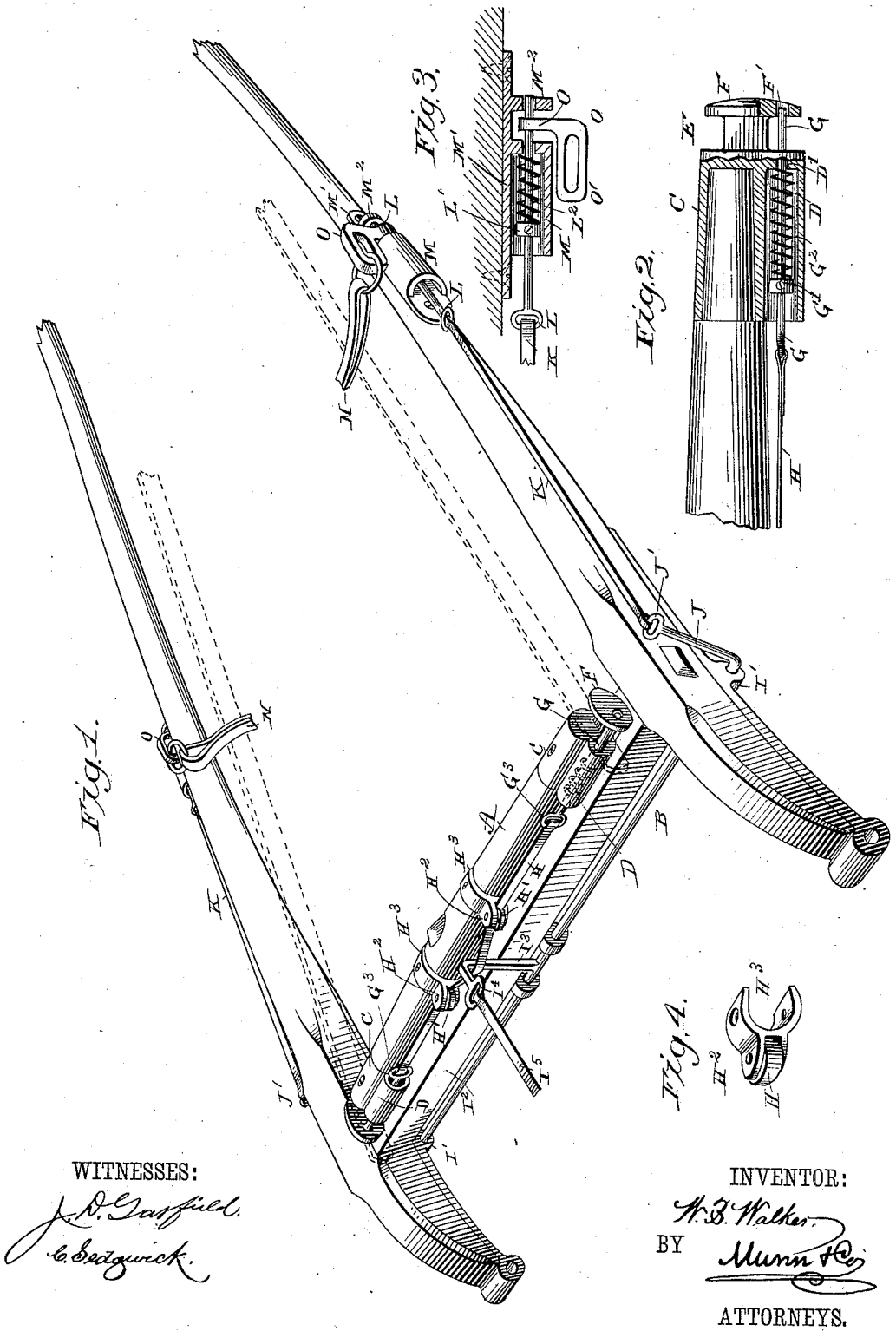
(No Model.) 2 Sheets—Sheet 1.

W. B. WALKER.

HORSE DETACHER.

No. 385,490. Patented July 3, 1888.



WITNESSES:

J. D. Garfield.

C. Sedgwick.

INVENTOR:

W. B. Walker.

BY Munn & Co.

ATTORNEYS.

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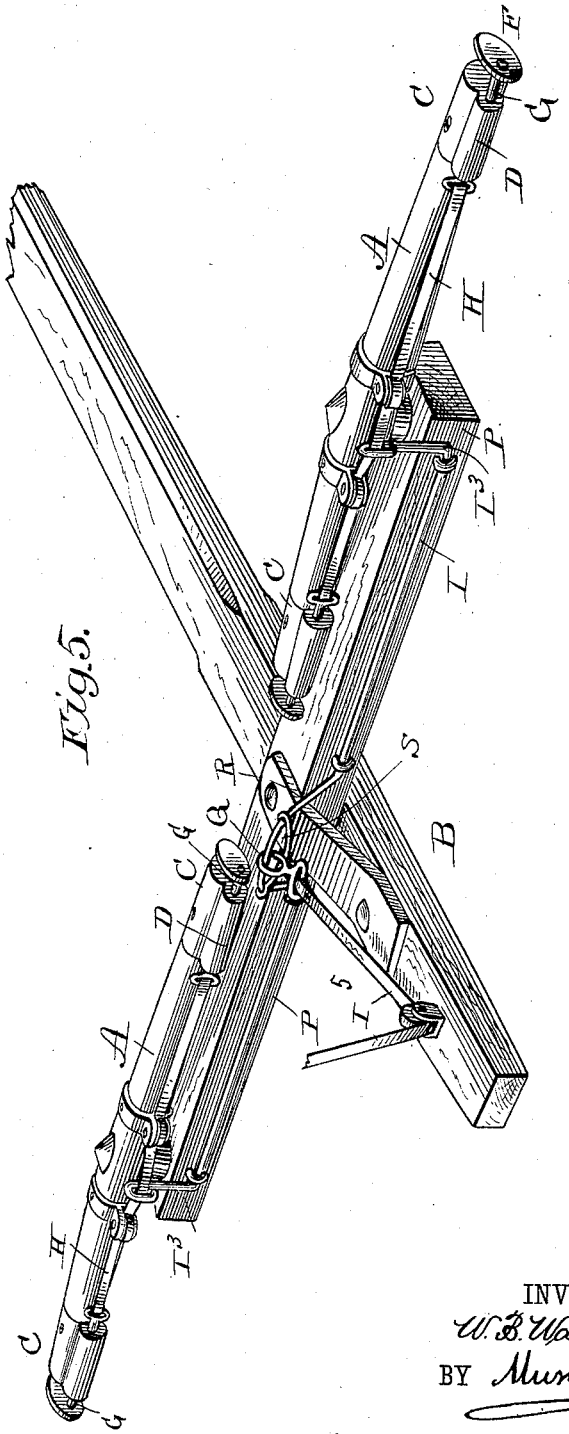

Fig. 5.

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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM B. WALKER, OF NEVADA, MISSOURI, ASSIGNOR TO HIMSELF AND JOHN R. EDDLEMON, OF SAME PLACE.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 385,490, dated July 3, 1888.

Application filed February 21, 1888. Serial No. 264,855. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. WALKER, of Nevada, in the county of Vernon and State of Missouri, have invented a new and useful Improvement in Horse-Detachers, of which the following is a full, clear, and exact description.

This invention relates to an improvement in horse-detachers for vehicles, in which the ends of the singletree and the shafts, if in a single team, are provided with bolts normally held projected to secure the traces and breeching-straps, respectively, by springs, and connected to draw-lines and devices adapted to be operated by the driver of the vehicle to retract the bolts and release the traces and breeching-straps in case the horse or horses should run away.

The object of my improvement is to insure the proper action of the bolts and release of the traces, breeching-straps, or tugs held thereby when the bolt-retracting devices are operated, and to simplify and strengthen the general arrangement.

The invention consists of certain novel combinations of parts and features of construction hereinafter fully described, and distinctly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view illustrating the application of a single horse-detacher embodying my improvement to vehicle-shafts. Fig. 2 is an enlarged sectional plan view of the releasable trace-fastener on each end of the singletree. Fig. 3 is a sectional plan view of the releasable breeching-strap fastener on each shaft. Fig. 4 is a perspective view of a part hereinafter described. Fig. 5 is a perspective view illustrating a modified form of the horse-detacher adapted for a double team.

Referring first to Figs. 1, 2, 3, and 4, on each end of the singletree A, which is mounted on cross-bar I^2 of the vehicle-shafts B in the usual way, is fitted and secured an outwardly-tapering metallic socket, C, on the inner face of which is cast integrally and parallel therewith a tube, D, closed at its outer end, except for a central aperture, D′, and on the end of which socket is also cast a neck, E, projecting from the lower part of said socket end and formed with a flat head, F, projecting upward parallel with said end.

The head F is formed with a socket, F′, on its inner face to receive the end of a trace-bolt, G, which is mounted to slide within the tube D in the aperture D′ in the head thereof, and carries a collar, G′, between which and said head a coiled spring, G^2, is interposed to normally hold the bolt projected into the socket F′ and secure the trace.

The inner projecting ends of the two trace-bolts G on opposite ends of the singletree are formed with eyes G^3, which are connected together by a draw line or strap, H. The strap H is arranged to run, on either side of its middle, over friction-pulleys H′, which are each pivoted between a pair of ears, H^2, formed integrally with an approximately semicircular clip-plate, H^3, adapted to embrace the top and bottom of the singletree A, and having upper and lower screw-holes for fastening thereto.

A rock-shaft, I, is mounted in bearings I′, transversely fixed to the under side of the whiffletree-bar I^2, and is formed at its center with a finger, I^3, arranged to project upward between the strap H and singletree, so that when swung rearward the middle of the strap will be drawn upon and both bolts G retracted against the pressure of their springs, thereby immediately releasing the traces. The upper end of the finger I^3 is bent rearward at an angle to better retain the strap, and is formed with an eye, I^4, for connection, as an arm, with a strap or line, I^5, which is arranged so as to be conveniently pulled by the driver for swinging the finger I^3 rearward, as described.

The ends of the rock-shaft I project beyond the sides of the shafts B, and are formed thereat with upwardly-projecting arms J, having end eyes, J′, which are connected by lines or straps K, running along the outside of the shafts, with the rear end eyes of breeching-strap-fastening bolts L. Each bolt L is mounted to slide lengthwise in the apertured head of a tube, M, and is provided with a collar, L′, and projecting spring L^2, similarly to the trace-bolts G. The tube M is, however, cast integrally on the

outer face of a flat plate, M′, projecting beyond either end thereof and formed thereat with screw-holes, whereby it may be secured to the outside of the shaft B. The plate M′ is also cast with a socketed abutment, M^2, separated from the forward end of the tube to engage the end of the bolt when projected.

For connecting the breeching-straps N properly to the bolts L a metallic coupling-piece, O, is provided, formed with a flat loop, O′, for attachment of the strap, and an eye-lug, O^2, projecting and opening at right angles to the loop for reception of the bolt.

For a doubletree the construction and arrangement of parts on each singletree A are the same as just described. The transverse rock-shaft I is, however, mounted in bearings on the back of the doubletree P, has fingers I^3 on either end looped over the bolt-operating straps H, and is cranked upward at its middle to form the arm for connection with the draw line or strap I^5 for the driver. The strap I^5 is provided with an eye, Q, adapted to ride laterally on the crank R, so as not to interfere with the movement of the doubletree, and a yoke, S, is attached at its ends to the opposite arms of the crank, near their outer ends, to serve as stops for preventing the eye Q from slipping down thereon.

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, with a vehicle-tongue and singletree, of spring-projected trace-bolts on the singletree, a strap or flexible line connecting the two bolts, guide-pulleys for the strap or line on either side of the middle of the singletree, a transverse rock-shaft on the tongue, a finger on the rock-shaft projecting upward behind the strap between the two guide-pulleys, and a draw shaft or line for swinging the finger rearward, substantially as described.

2. In a horse-detacher, the combination, with vehicle-shafts and a singletree, of retractible trace-bolts on the singletree, a strap or line connecting them, a transverse rock-shaft having a finger for drawing on said strap or line and retracting the trace-bolts simultaneously, a strap or line for swinging the rock-shaft, projecting arms on the rock-shaft outside the shafts, retractible breeching-strap bolts on either shaft, and a strap or draw-line connecting the breeching-strap bolt on each shaft with the respective arm of the rock-shaft, substantially as described.

3. In a horse-detacher, the combination, with a vehicle-tongue and singletree, of spring-projected trace-bolts on the singletree, a strap or line connecting them, a transverse rock-shaft having a finger projecting upward back of the connecting strap or line, bent rearward to retain the strap, and formed with an eye, and a draw strap or line connected with said eye, substantially as described.

4. In a horse-detacher, the socket C, formed on its side with the parallel tube D, neck E, projecting beyond the end of the socket and tube, the head F, parallel with the end of the socket to form a trace-receiving space, and a spring-projected bolt, G, extending through the said tube across the trace-receiving space and above the neck E into the aperture F′, substantially as set forth.

5. In a horse-detacher, the attaching-plate M′, formed on its outer face with a longitudinally-extending socket, M, and an abutment, M^2, parallel with the front end of the socket and apertured in line therewith, the spring-projected bolt L, extending across the space between the end of the socket and the abutment into the aperture in the latter, and the L-shaped breech-strap coupling O, the arm or lug O^2 of which extends downward into said space and has an aperture to receive the bolt, the rearward longitudinally-extending arm of said coupling forming a flat loop, O^3, at right angles to the aperture in lug O^2, substantially as set forth.

WILLIAM B. WALKER.

Witnesses:
W. H. WOOD,
W. S. BOWDEN.