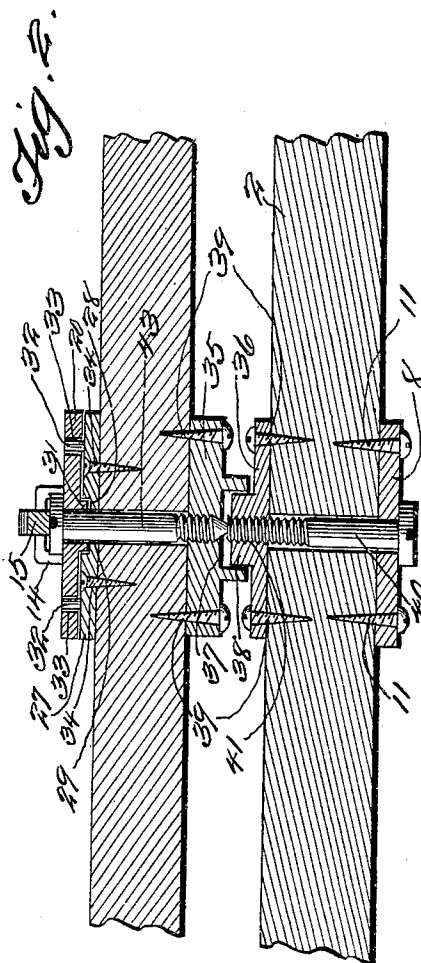
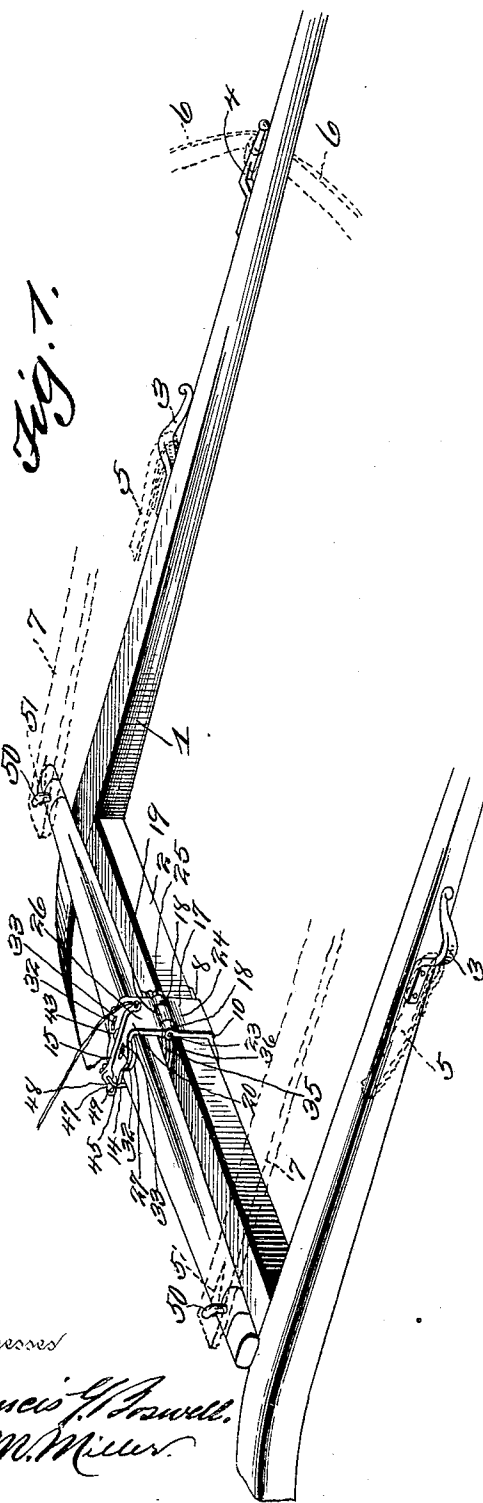


J. L. MILLER.
HORSE RELEASING DEVICE.
APPLICATION FILED NOV. 18, 1909.

979,322.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 1.



Witnessed

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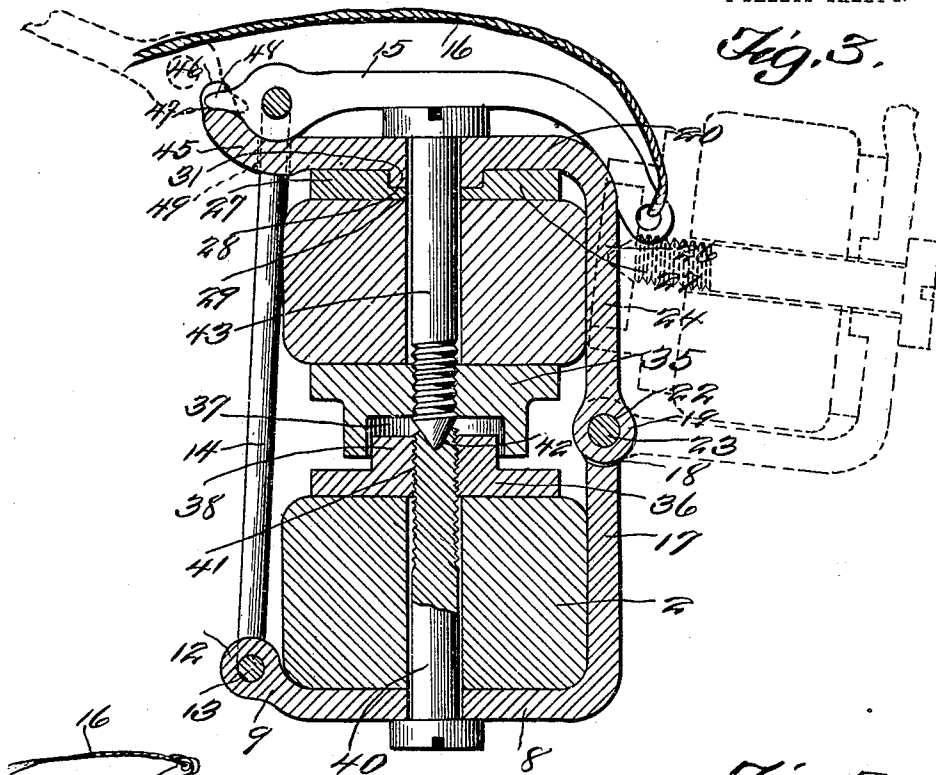


Fig. 3.

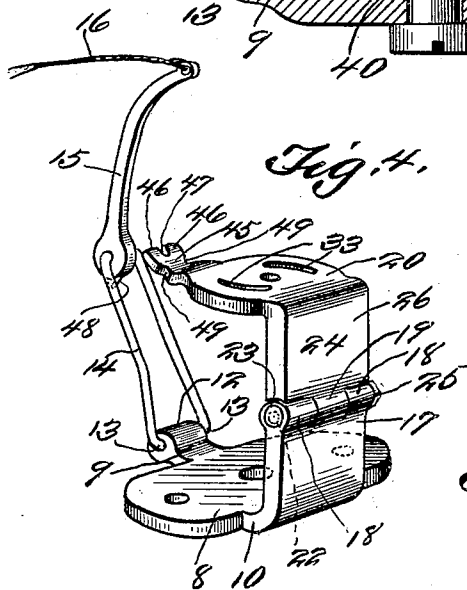


Fig. 4.

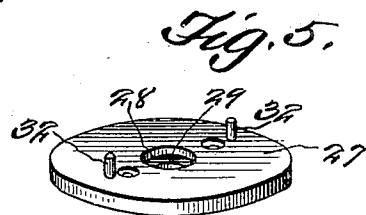


Fig. 5.

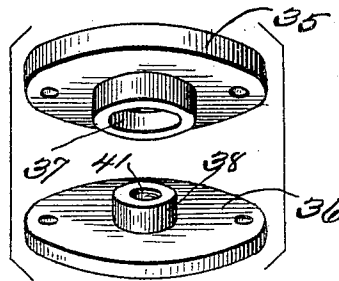


Fig. 6.

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UNITED STATES PATENT OFFICE.

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HORSE-RELEASING DEVICE.

Specification of Letters Patent. **Patented Dec. 20, 1910.**

979,322.

Application filed November 18, 1909. Serial No. 528,769.

To all whom it may concern:

Be it known that I, JOHN L. MILLER, a citizen of the United States, residing at Cobb, in the county of Santa Rosa and State of Florida, have invented a new and useful Horse-Releasing Device; 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.

The invention about to be set forth and claimed belongs to the art of vehicles, and it particularly pertains to a new and useful releasing device for singletrees or double-trees, whereby the singletrees or double-trees may be released in order to rotate, so that the traces of the harness may automatically disconnect therefrom.

The main object of the invention is to provide a device of this design comprising simplicity and durability.

A further object of the invention is to provide a two-part clevis member so constructed and connected with the cross-bar of the shafts and the singletrees that the singletree is allowed to oscillate, and when the two parts of the said clevis member are disconnected, as will be hereinafter set forth, the singletree may be allowed to rotate or twist so as to automatically release the traces of the harness.

Another object of the invention is the provision of means disposed between the cross-bar of the shafts and the singletree, to allow the singletree to oscillate easily and to be properly maintained in position.

In the drawings:—Figure 1 is a perspective view of a pair of shafts, showing the improved releasing device for the singletree and the traces of the harness applied thereto. Fig. 2 is a sectional view transversely of the shafts and the cross-bar thereof, showing the singletree mounted properly in position. Fig. 3 is a cross sectional view through the cross-bar of the shafts and the singletree, showing the detail structure of the various parts. Fig. 4 is a detail perspective view of the two-part clevis member, and Figs. 5 and 6 are detail views of the plates, one of which being carried by the singletree is adapted to cooperate with one of the parts of said clevis member, while the other two are arranged between the cross-bar of the shafts and the singletree.

Referring to the annexed illustrations, 1

denotes a pair of shafts, which are transversely connected by the usual cross-bar 2. These shafts are provided with the usual hooks 3 and 4, to which the back straps and the belly-band 5 and 6 are adapted to be connected. These hooks are so constructed as to allow the back straps and belly-band to disconnect therefrom, as the traces 7 are released from the singletree.

Secured to the under part or surface of the cross-bar 2 of the shafts is a plate 8, having laterally extending portions or lugs 9 and 10. Suitable screws 11 are employed for securely fastening this plate in position. The laterally projecting portion or lug 9 is provided with a rolled portion 12, in which the free ends 13 of the wire loop 14 are disposed. Pivotally mounted upon the cross-bar of this wire loop is a lever 15, to the outer free end of which a wire or cord 16 is suitably connected.

The laterally projecting portion or lug 10 is provided with an upwardly bent portion 17, the upper edge of which is provided with ears 18, which interengage with the ear 19 of the plate 20 and through the apertures 22 of the ears 18 and 19 a bolt or pin 23 extends, thereby hingedly connecting the two plates or parts of the clevis member 24. A suitable nut or other threaded member 25 is connected to the threaded end of the said bolt or pin 23 in order to prevent displacement thereof. The ear 19 is integral with a downwardly extending portion 26 of the plate 20.

Secured to the upper face of the singletree and below the plate 20 is a bearing plate 27 (which is provided with a socket 28 and aperture 29) with which the plate 20 cooperates. The plate 20 is provided with a projection 31 to be received by the socket of the bearing plate 27. The bearing plate 27 at each end thereof is provided with upwardly extending lugs 32, which extend through slots 33 of the plate 20. These slots are curved on the arc of a circle using the pivot or center of the plate 20 as a center, in order to allow the singletree and the bearing plate 27 to readily move. This plate 27 is secured to the singletree by screws or other means 34.

Secured to the adjacent faces of the cross-bar 2 of the shafts and the singletree are bearing plates 35 and 36. The bearing plate 35 is carried by the singletree and is pro-

vided with a socket member 37, which is adapted to receive the projection 38 of the bearing plate 36 (which is carried by the said cross-bar). These bearing plates 35 and 36 are secured in position by screws or other means 39. Extending upwardly through the plate 8, the cross-bar 2 and the bearing plate 36 is a threaded bolt 40, the said bearing plate 36 having suitable threads in the aperture 41 thereof to engage said bolt 40. This bolt 40 is provided with a socket portion or recess 42 in the end thereof (which receives the lower extremity of the bolt 43). This bolt 43 extends downwardly through the plate 20, the bearing plate 27, through the swingletree and through and into the bearing plate 35, there being a suitable threaded aperture in the plate 35 to receive the lower threaded end portion of said bolt 43.

The plate 20 is provided with a laterally extending lug 45, the end of which is provided with ears 46. Between the ears 46 a recess 47 is formed, and into which a lug 48, integrally carried by the lever 15, engages, when the lever is in a closed or locked position. When the lever 15 is in a closed or locked position, the swingletree is held properly in position upon the cross-bar 2 and in such a manner as to allow the traces to be suitably connected thereto. Upon either side of the ears 46 are recesses or depressions 49, in which the side portions of the wire loop 14 are received, as will be clearly seen in Figs. 1, 2 and 3. When it is desired to raise the lever 15, by a pulling action upon the cord or wire 16, the lug 48 cooperating with the recess 47, acts as a fulcrum for the lever 15, in order to throw the side portions or bars of the loop 14 out of engagement with the recesses or depressions 49, thereby allowing the swingletree to twist, and permitting the traces to be withdrawn from the lugs or hooks 50. When the swingletree is allowed to twist or turn, the upwardly extending portions or lugs 32 are withdrawn from the curved slots of the plate 20. When the side portions of the loop 14 are disconnected from the recesses 49, the plate 20 pivotally moves at the hinged connection between it and the plate 8, and when the swingletree is moved in this position, as shown in dotted lines in the cross sectional view of the drawings, the

lugs to which the traces are connected are withdrawn from the apertures of the traces.

From the foregoing, it will be observed that a novel structure of releasing device is provided, which will allow the traces of a harness to be easily and quickly disconnected in case of an accident or runaway.

Having thus fully described the invention, what is claimed as new and useful is:—

1. In a horse releasing device, the combination of a pair of shafts having a cross bar and a swingletree, of a separable coupling comprising two inter-engaging plates, a clevis member comprising two hinged parts, one engaging over the swingletree and the other engaging under the cross bar, the part engaging over the swingletree having curved slots, a plate secured to the upper portion of the swingletree beneath the part having the slots and provided with pins extending into the slots, screws penetrating the bar and the swingletree having threaded portions threaded into the plates forming the coupling, one of said screws having a conical recess, while the other screw is provided with a conical shaped point to seat in said recess to form a drill bearing, means for locking the two parts together, and means for releasing said locking means.

2. In a horse releasing device, a pair of shafts having a cross bar, a swingletree positioned thereabove, a clevis member comprising two hinged parts for hingedly mounting the swingletree with regard to the cross bar, inter-engaging plates carried by the adjacent faces of the cross bar and the swingletree, screw bolts penetrating the cross bar and the swingletree and the said two parts of the clevis member and provided with threaded connections with the inter-engaging plates, one of said screws having a conical recess, while the other screw is provided with a conical point to engage the recess to form a pivotal cone bearing for the swingletree, and a loop for connecting the free portions of the two hinged parts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN L. MILLER.

Witnesses:

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J. A. HART.