

(No Model.)

H. H. BERNARDS.
HORSE DETACHER.

No. 578,593.

Patented Mar. 9, 1897.

Fig. 1.

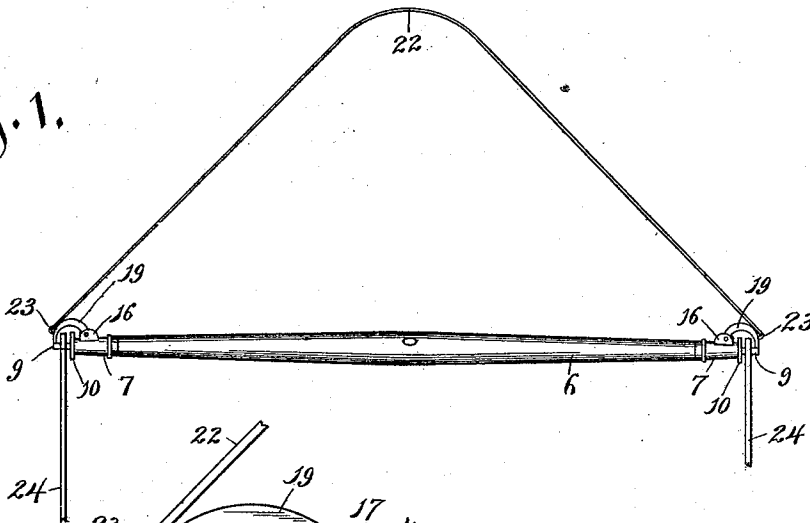


Fig. 2.

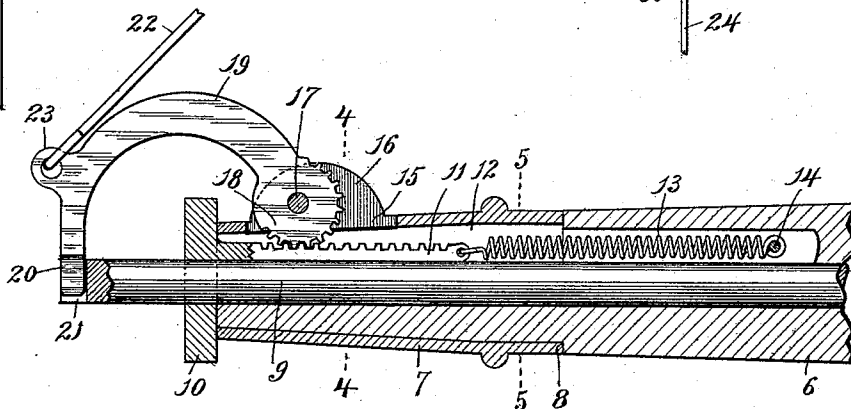


Fig. 3.

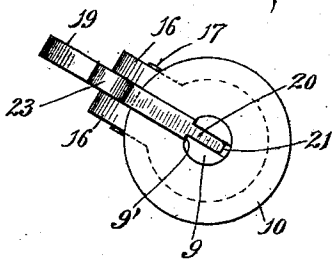


Fig. 4.

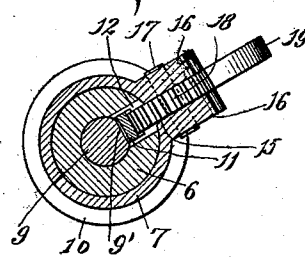
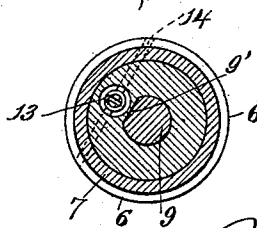


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY H. BERNARDS, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO FRANK SCHROFF, OF SAME PLACE.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 578,593, dated March 9, 1897.

Application filed May 18, 1896. Serial No. 591,894. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. BERNARDS, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Horse-Detachers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The invention relates to improvements in horse-detachers.

The object is to provide an improved construction by means of which a horse is readily detached from the vehicle in case the animal becomes unmanageable or in the event of a horse falling.

The invention provides a positively-acting device whereby the traces are disconnected from the ends of the whiffletree by a pushing force, which insures absolutely the disengagement of said traces.

The invention consists in the devices and parts or their equivalents, as hereinafter more fully set forth.

Referring to the drawings, Figure 1 is an elevation of a whiffletree equipped with my improvements, showing the rear ends of the traces connected to the devices at the opposite ends of the whiffletree. Fig. 2 is a longitudinal sectional view, on an enlarged scale, of one end of the whiffletree. Fig. 3 is an end view. Fig. 4 is a cross-section on the line 4 4 of Fig. 2, and Fig. 5 is a cross-section on the line 5 5 of Fig. 2.

Referring to the drawings, the numeral 6 indicates the whiffletree. The opposite ends of this whiffletree are reduced to receive thereon sleeves 7 7, said sleeves forming parts of the detaching devices. As the constructions at opposite ends of the whiffletree are duplicates of each other, for the sake of convenience only the arrangement at one end will be herein described.

The end of the sleeve fits against an annular shoulder 8, formed at the rear of the reduced end of the whiffletree. Fixed rigidly in a recess therefor in the end of the whiffletree is a rod 9, the outer end of said rod projecting out laterally from the end of the whiffletree. Adapted to slide on this rod is a plate 10, preferably of annular form. Connected to this plate and extending inwardly

therefrom for a desired distance, and resting upon the top of the rod, (preferably a flat surface 9' formed on said rod,) is a rack-bar 11, said rack-bar working in a recess 12 in the whiffletree. The rear end of the rack-bar has connected thereto a coiled spring 13, the inner end of said spring being connected to a pin 14, extending into a continuation of the recess 12. This spring normally retracts the rack-bar and holds the plate 10, connected to or forming a part of said rack-bar, against the outer end of the socket.

The top of the sleeve is provided with an elongated opening 15, and projecting upwardly from the opposite side edges of this opening are lugs or ears 16 16. These lugs or ears are intersected by a pin 17, which pin forms a pivot for a toothed segment 18, said toothed segment meshing with the rack-bar 11. The segment is formed or provided with an upwardly-curved and outwardly-extending arm 19. The lower outer end of this arm is adapted to contact with the end of the rod 9. It is advisably provided with a tongue 20, which fits in a slot 21, formed at the outer end of the rod 9, whereby a close fit between the two parts is secured and sidewise twisting prevented.

The opposite ends of an operating cord or strap 22 are secured to the respective arms 19 19 at the ends of the whiffletree. These arms are advisably provided with apertured lugs 23 for the convenient attachment of the ends of the cord.

In operation, when it is desired to release the horse, all that is necessary to be done is to pull on the operating-cord 22, which is carried back into the vehicle in convenient position to be readily reached by the driver. The pull thus exerted on the operating-cord will have the effect of raising the arms 19 19, so as to free the outer ends thereof from the ends of the rods 9 9, and at the same time turn the toothed segments formed at the inner ends of said rods. As the teeth of these segments mesh with the teeth of the rack-bars 11, said rack-bars will be forced outwardly and the plates or heads secured to the ends of said rack-bar will be forced outwardly on the rods 9 until they contact with the traces 24 24. As the ends of the arms 19

19, as previously stated, are pulled back from engagement with the ends of the rods the plates 10 will necessarily cause the ends of the traces to be pushed off the outer extremities of the rods, and thus release the animal. The moment the horse is thus detached the operating-cord can be released, and by the retraction of the springs 13 the rack-bars 11 are pulled inwardly to their normal position, and by reason of their meshing with the segmental racks the curved arms 19 are brought back to their locking positions. As shown in Fig. 1, the eyes at the ends of the traces are passed onto the rods 9, and the extremities of the traces therefore, when engaging the whiffletree, lie on said rods between the plates 10 and the outer ends of the arms 19. They are therefore under normal conditions effectually prevented from working off the rods.

From the above description it will be seen that my invention is of a most simple character, comprising but few parts, little liable to damage, and forming an effective and positive means for releasing the animal. It therefore reduces to the minimum the liability of accident from runaway horses, and may be also used to advantage under many other circumstances, as, for instance, when the horse accidentally falls; and in unhitching it forms a quick method of detaching the horse from

the vehicle prior to taking off the harness and stabling the animal.

In the case of a double team the end of the thill or shaft could be provided with some suitable method for releasing the neck-yoke from the tongue or thill in order to insure the complete detachment of the animals from the vehicle.

What I claim as my invention is—

In a horse-detacher, the combination, of a whiffletree, a rod extending therefrom, a rack disposed longitudinally of the whiffletree, a coiled spring disposed, and secured at one end, in a recess of the whiffletree, and having its opposite end secured to the rack-bar, a pivoted arm having one end against the end of the rod, and its pivoted end formed into a toothed segment, the teeth thereof adapted to mesh with the teeth of the rack-bar, and means for turning the pivoted arm on its pivot to free its outer end from the end of the rod, and to cause the actuation of the rack-bar, said rack-bar on its outward movement adapted to act on the trace carried by the rod, and push said trace laterally off the rod.

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

HENRY H. BERNARDS.

Witnesses:

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