No. 692,357. Patented Feb. 4, 1902.

J. H. RODGERS.

HORSE DETACHER.

(Application filed Apr. 27, 1901.)

(No Model.)

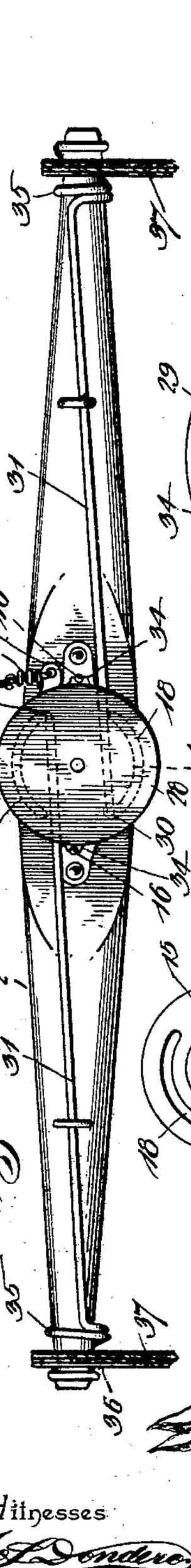

Fig. 2.

Fig. 4.

Fig. 6.

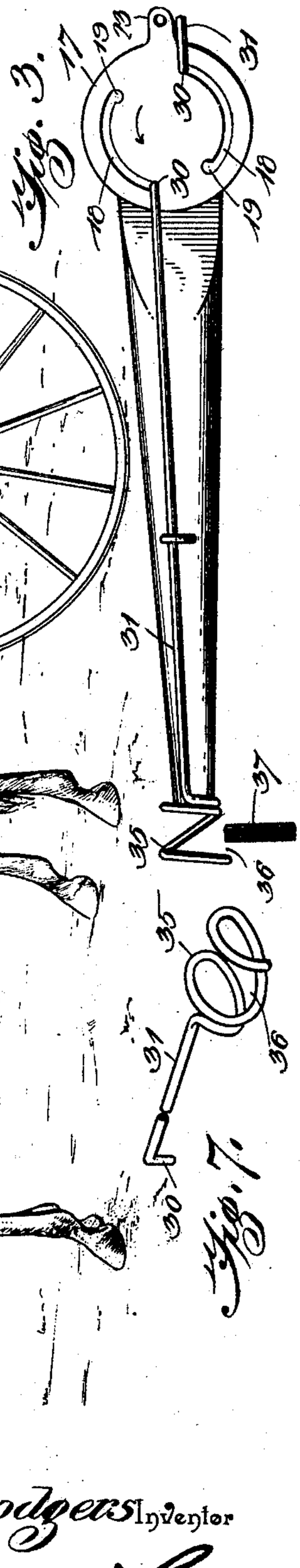

Fig. 3.

Fig. 5.

Fig. 1.

Fig. 7.

Witnesses
Leo Dondero
Chas. D. Hoyer

J. H. Rodgers Inventor
by Crosby & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JOHN H. RODGERS, OF HASTINGS, NEBRASKA.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 692,357, dated February 4, 1902.

Application filed April 27, 1901. Serial No. 57,829. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. RODGERS, a citizen of the United States, residing at Hastings, in the county of Adams and State of Nebraska, have invented a new and useful Detaching-Harness, of which the following is a specification.

This invention relates to detaching-harness, and the object of the same is to provide simple and effective means in connection with harness and the thills of a vehicle for readily detaching a horse without requiring unbuckling of straps or other devices, and controllable by the occupant of the vehicle.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a portion of a vehicle and thills and harness applied, showing the improved features embodying the principle of the invention. Fig. 2 is a top plan view of a singletree, showing a part of the mechanism thereon. Fig. 3 is a similar view of a portion of a thill, showing the devices thereon in different position and a portion of said devices removed, as shown by Fig. 2. Fig. 4 is a transverse vertical section on the line 4 4, Fig. 2. Figs. 5, 6, and 7 are detail views of different parts of the mechanism.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates thills of any preferred contour, having a singletree 2 and attached to the running-gear of a vehicle in the ordinary manner, the vehicle having a body 3, with an opening 4 through the front end thereof to one side of the center.

The harness 5 is of the usual form, with the exception that no holdback-straps are used in connection therewith, as in ordinary harness, and in place of said straps elongated straps 6 are adjustably secured to the front terminal rings of the breeching 7, the front ends of said straps 6 being attached to the inner portions of the tugs 8 and the latter held down in place by straps 9, running to the girth below. The tugs are provided with a metallic lining 10 to cause them to easily slip off the thills, and to facilitate this easy movement of the tugs in the detaching operation the under portions of the front extremities of the thills have metallic plates 11 secured thereto. The tugs are held back by the straps 6 against under angular braces 12, which are adjustably applied to the thills, and by having the straps 6 adjustable and the braces likewise movable at will the several parts may be easily arranged to suit horses of different lengths.

On the center of the upper side of the singletree a disk 13 is secured and is formed with a central socket 14, which has an upstanding pin 15 adjacent thereto, headed studs 16 being also located at diametrically opposite points in relation to the said disk. On this disk 13 a shifting disk 17 is movably mounted and is formed with opposite segmental slots 18 of equal length and in concentric relation to the said shifting disk, the said slots having the reverse terminals thereof formed with seat enlargements 19. In the under side of the said shifting disk 17 a socket 20 is formed to receive a spring 21, surrounding a central hub 22, integral with or forming a part of the latter disk and rotatably fitted in the socket 14 of the disk 13, one end of the spring being secured to the disk 17 and the opposite end thereof to the pin 15 of the disk 13, so that when the said disk 17 is turned into a detaching position the spring will be wound and a release of the disk 17 will cause the spring to return the latter in automatic manner to normal position. The disk 17 is provided with a peripheral lug 23, having an aperture therein, to which one end of a compensating spring 24 is secured, a pull-cord 25 or the like being secured to the opposite end of the said spring 24 and passed through the opening 4 in the front end 3 of the vehicle-body within convenient reaching distance of the occupant of a vehicle. The upper central portion of the disk 17 also has a shouldered hub projection 26, with the reduced portion 27 thereof seated in a central socket in the top portion of a cap 28, provided with a peripheral flange 29, which incloses the said disk 17. A space is formed between the upper side of the disk 17 and the top of the cap, and movably engaging the segmental slots 18 are the inner angularly-bent or hooked ends 30 of slidable controlling-rods 31, which are held on the upper side of the singletree in guides 32, the

said rods being freely movable in said space and through diametrically-opposed slots 33 in the flange 29 of the cap 28 and have the said hooked ends thereof normally located in the seat enlargements 19 of the slots 18. The cap 28 is held down in place on the disk 13 over the disk 17 through the medium of oppositely-disposed angular toes 34, which are slotted and engage the headed studs 16. The outer extremities of the rods 31 are formed with irregular coils 35, with throats 36 defined between a portion of the same and open at the front, the said coils being of dimensions corresponding to the taper of the outer reduced ends of the singletree to snugly fit over said ends, as clearly shown by Fig. 2. The throats 36 permit the rear ends of the traces 37 to be disposed between the coils at each side, and when the rods 31 are operated by the disk 17 to simultaneously push the trace ends off from the outer ends of the singletree the traces will reliably clear or become fully released from the said coils. It is obvious that the rear ends of the traces may be provided with any suitable devices for fitting over the opposite ends of the singletree, and the said ends of the latter may also be provided with suitable corresponding devices that will let the trace ends readily slip off the same. By pulling on the cord 25 the disk 17 will be turned against the resistance of the spring 21 and force the rods equally and simultaneously outward, and thereby release both traces from the singletree, and as there will be no further obstruction to the movement of the animal from between the thills and outward from the latter he will release himself by moving forward, and thereby save the time usually employed in disconnecting straps, snap-hooks, and the like. When the rods move outwardly, as explained, they remain in such position when the disk 17 returns to normal position by reason of the segmental slot construction in said disk, and when the operation of hitching up the animal is carried on the only attachment made is the connection of the trace ends, which are inserted in the throats 36 and the rods 31 then individually pushed inwardly by manual force to guide and secure the trace ends over the singletree ends, the rods having sufficient resiliency to permit them to spring into place or have the hooked ends thereof engage the seat enlargements 19 of the slots 18 in the disk 17 ready for the releasing operation that may be subsequently effected, as before explained.

The segmental slots 18 are concentrically arranged in the disk 17, and by this means the rods 31, which are of equal length, will be equally projected or moved outwardly to cause the coils 35 to positively and reliably push off the ends of the traces from the singletrees. A simultaneous movement of the rods 31 is also insured by this construction, so that the trace ends may be released at one and the same time without danger of a drag on one side or the other of the singletree. Moreover, when the rods 31 are manually pushed inwardly to connect the trace ends to the singletree they dispose said trace ends at like distances from the ends of the singletree.

The advantages of the simple detaching-harness devices heretofore explained will be readily appreciated, particularly the time saved in detaching a horse or other animal from a vehicle.

Having thus described the invention, what is claimed as new is—

1. The combination with a singletree of a spring-actuated rotatable disk having independent segmental slots concentrically arranged therein with reversely-disposed terminal seats formed by enlarging the said slots at said points, controlling-rods of equal length longitudinally slidable on the singletree on opposite sides of the center of the latter and having their inner extremities bent at an angle and loosely engaging said slots, the outer extremities of the said rods being coiled to move the ends of the traces off from and inwardly over the opposite ends of the singletree, the coiled extremities having forwardly-opening throats, a cap mounted over said disk and having opposite slots through which the rods movably extend and also provided with angular toes adjacent to said slots for securement to the disk, and an operating pull device attached to the disk and extending backwardly to the vehicle.

2. The combination with a singletree, of a spring-actuated rotatable disk having opposite segmental slots therein, controlling-rods longitudinally slidable on said singletree and having inner angular extremities loosely engaging said slots and free to be shoved inwardly by a manual operation, the outer ends of the said slots being coiled and provided with forwardly-opening throats to move the ends of the traces off from and inwardly over the ends of the singletree, a cap mounted over said disk and having opposite slots through which the rods movably extend, and angular toes adjacent to said slots for securement to the disk, and means for operating the disk to move the trace ends off from the ends of the singletree.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN H. RODGERS.

Witnesses:
JOHN M. HINER,
W. D. ABBOTT.