(No Model.)

J. M. KIRBY.

HORSE DETACHER.

No. 302,001. Patented July 15, 1884.

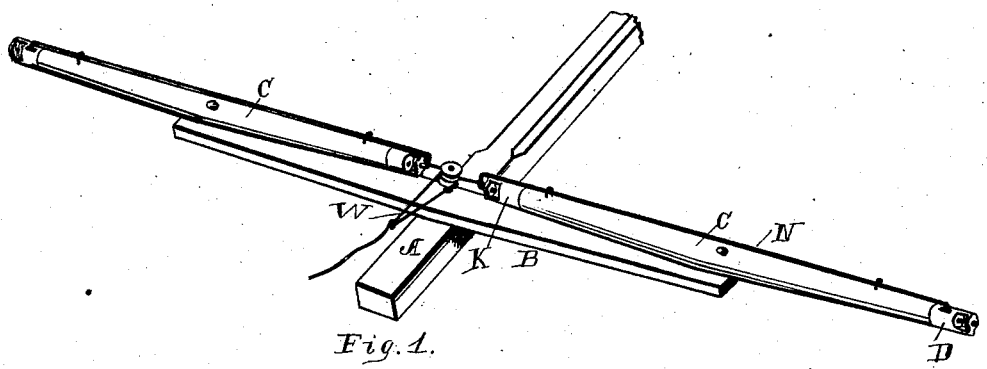

Fig. 1.

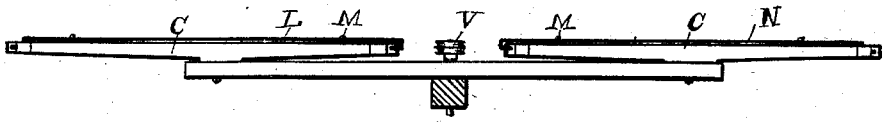

Fig. 2.

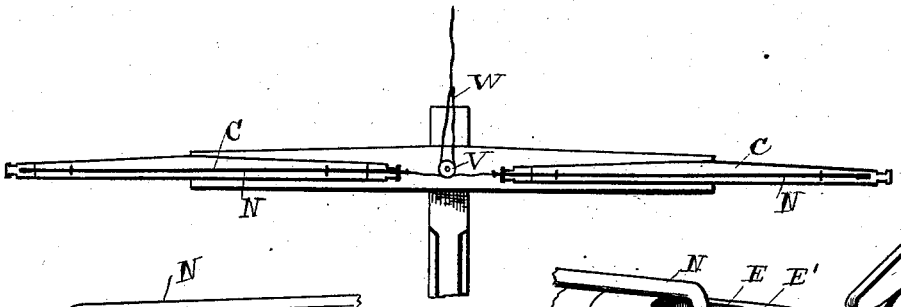

Fig. 3.

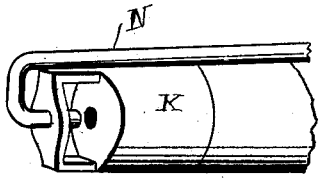

Fig. 5.

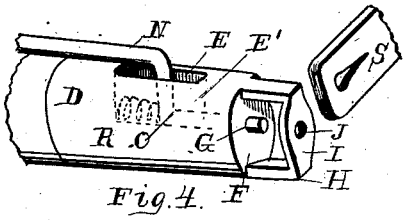

Fig. 4.

WITNESSES:

C. D. Zerbe

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INVENTOR:

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By J. S. Zerbe

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UNITED STATES PATENT OFFICE.

JOHN M. KIRBY, OF PACOLETT, SOUTH CAROLINA, ASSIGNOR OF ONE-HALF TO R. T. SLOAN, OF SAME PLACE.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 302,001, dated July 15, 1884.

Application filed October 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. KIRBY, of Pacolett, in the county of Spartanburg and State of South Carolina, have invented a new and useful Improvement in Horse-Detachers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front view, partly in section, of a double-tree with my improved horse-detacher. Fig. 2 is a front view of the same. Fig. 3 is a plan view. Fig. 4 is an enlarged perspective view of one end of a single-tree, showing manner of arranging same. Fig. 5 is an enlarged perspective view of the opposite end of the single-tree.

The present invention relates to an improvement in horse-detachers; and it consists of a double-tree having on its upper face the single-trees, with the ends arranged for holding the tugs. By means of a rope or strap working through a pulley over the double-tree, between the inner ends of the single-trees and extending into the vehicle, the rod on the single-trees can be moved laterally, thus releasing the tugs in case the horses become unmanageable. When it is desired to again secure the tugs, the same lateral movement is produced by means of the rope, and the ends of the tugs are inserted in the openings at the end of the collar of the single-trees, and a spring within the collar returning the rod to its original position, the tugs are secured by means of the studs on the ends of the rod.

In the drawings, A is the tongue of any ordinary vehicle. This double-tree B is of customary construction and secured in the usual manner. The single-trees C are placed immediately over the double-trees, and the main or wood part is formed in the customary way. A metallic end piece or collar, D, on one end of the single-tree is provided on its upper side with a longitudinal slot, E. The wood portion of the single-trees beneath the slot E in the collar is cut away, E′, the size of the slot and to a little beyond the center of the single-tree. The end face, F, of the collar is closed, except a small circular opening, G, extending into the end of the single-tree and meets the opening E′. Outwardly from the top and bottom of the face F extend the arms H. Connecting with the ends of the arms H is a vertical piece, I. This piece is at such a distance from the face F of the collar that a tug can pass between the two. Immediately opposite the opening in the face F an opening, J, of the same size is provided in the vertical piece. The collar K at the opposite end of the single-tree is formed in all respects in the same manner, except that the slot in the upper side of the collar and single-tree is dispensed with. A rod, L, of suitable size is placed over the single-tree and parallel with it. Staples M are driven over the rod into the single-tree, to secure it in position and prevent it from becoming bent. One end, N, of this rod is bent at right angles, and passes into the slot and opening E E′. It is then again bent at right angles, O, and passes out through the opening G in the face-plate, and into the opening J of the vertical piece I.

Within the opening, and back of the angle formed by the rod, is placed a coil-spring, R, its object being to keep the end of the rod far enough through the opening of the face-plate and into the vertical piece, so that a tug, S, can be placed on the stud.

The opposite end of the rod extends to and is bent down over the end piece, I, to the central opening, J, in the vertical piece, where it is bent inwardly at right angles and extends through the opening J to the opening G in the face-plate. It is designed that this rod shall be of such a length and have such a reciprocal lateral motion that when the stud at one end of the rod extends through into the openings of the vertical piece from the inside the stud at the other end shall pass through the opening between the vertical piece and the face of the collar from the outside. When the rod is reversed by means of the rope and the coil-spring is at a tension, the stud at one end is pushed back into the opening of the collar, while the opposite end is moved outwardly, thus permitting the insertion of the tugs at both ends of the single-trees at the same time. By releasing the rope the rod is reversed by the action of the spring and the tugs held in position.

Immediately over the tongue on the double-tree is secured a double-sheaved pulley, V. A rope or cord is secured to the rod at the inner end of the single-tree, and extends around

one sheave of the pulley and toward the body of the vehicle. A similar rope extends from the end of the opposite single-tree, and passes in the opposite direction around the other sheave of the pulley. At a short distance from the pulley the two ropes unite and extend into the vehicle. The spring back of the rod keeps the studs through the space between the face of the collar and the vertical piece, so that the tug placed therein will at all times be held in position by the studs on the ends of the rod. When it is desired to release the tug, in case the horses become unmanageable, the rope is pulled, which reverses the rod and releases the tugs, and thus allows the horses attached thereto to disengage from the vehicle.

The same device can be used on single-trees of shafts by placing a pulley near the middle of the single-tree and extending the cord around it and up to the vehicle.

What I claim is—

1. The combination of a double-tree with the single-tree C, each provided with the disengaging-rods N, and having a return portion or hook on one end automatically actuated by a spring, and a double right-angled extension on the opposite end, so that when the said rod is moved to the right or to the left both tugs will be simultaneously released or held by one motion, substantially as herein set forth.

2. The combination of the single-tree C, slotted at E, and having the end pieces or collars, D and K, constructed as described, with the rod N, spring R, pulley V, and cord W, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 25th day of September, 1883, in the presence of witnesses.

JOHN M. KIRBY.

Witnesses:
H. L. FARLEY,
E. E. BOMAR.