

No. 717,379.

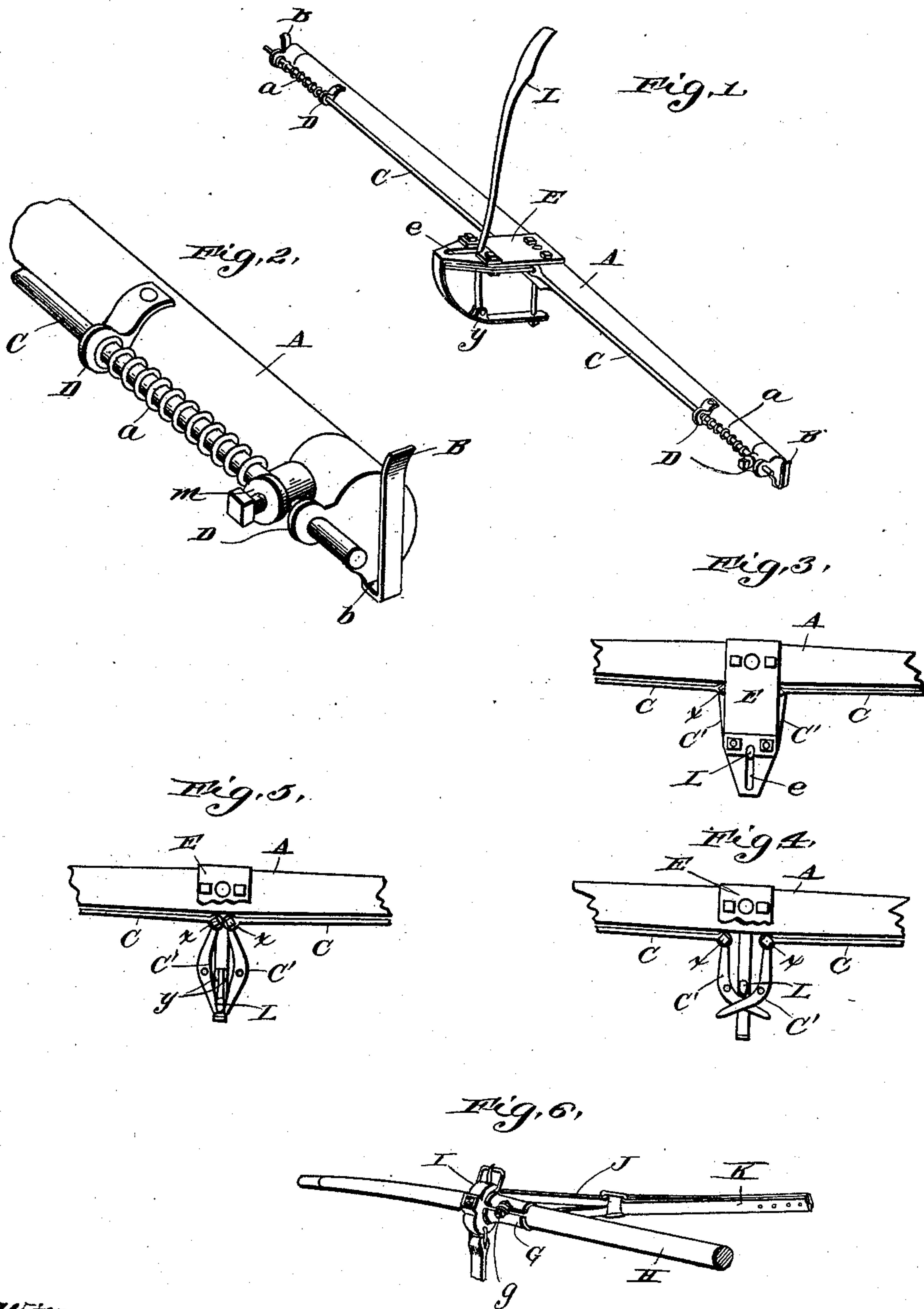
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L. L. & J. W. FOX.

DEVICE FOR CLEARING HORSES FROM VEHICLES.

(Application filed Apr. 12, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

LLOYD L. FOX AND JOHN W. FOX, OF LOWELL, MAINE.

DEVICE FOR CLEARING HORSES FROM VEHICLES.

SPECIFICATION forming part of Letters Patent No. 717,379, dated December 30, 1902.

Application filed April 12, 1902. Serial No. 102,564. (No model.)

To all whom it may concern:

Be it known that we, LLOYD L. FOX and JOHN W. FOX, citizens of the United States, residing at Lowell, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Devices for Clearing Horses from Vehicles; and we 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.

Our invention consists of an improvement upon the device for clearing horses from vehicles for which Letters Patent of the United States No. 694,363 were granted us, dated March 4, 1902, and is fully illustrated in the accompanying drawings, in which—

Figure 1 is an isometric view of whiffletree with tug-detacher. Fig. 2 is an enlarged isometric view of one end of whiffletree, tug-detacher, and guard. Fig. 3 is a plan of bracket and part of spring-bolts with detacher closed. Fig. 4 is a plan of detacher closed. Fig. 5 is a plan of detacher open. Fig. 6 is a perspective view of thill-holder, holdback, and connection-strap.

Similar letters refer to corresponding parts throughout the figures.

The object of our invention, as indicated by its title, is to enable the driver instantly and at will to free the horse from the vehicle to which he is harnessed and secured by the tugs and holdbacks, and by means of our device that object may be accomplished from the vehicle itself by a single motion, consisting in throwing backward the lever L and a few forward steps of the horse.

The operative part of our device is essentially the same as in our former device, consisting of a pair of spring-bolts C C, supported in bearings D on the back of the whiffletree A and working longitudinally therein and actuated and forced in opposite directions toward the ends of the whiffletree by springs c. The inner ends of the bolts C terminate with the arms C', pivoted upon the bracket E, which is rigidly secured to the whiffletree, and the bolts C and arms C' are pivoted together, forming toggle-joints at x, and the arms C' are so curved or bent as to cross each other when shot, as shown in Fig. 4, in which position

they are firmly held by the springs c. The lever L is pivoted at y to the hanger F, secured to the whiffletree, and projects upward in front of the crossed arms C', as shown in Figs. 1 and 4, through the slot e in the bracket E, by which slot it is supported and guided.

The construction thus far described is for the sole purpose of detaching the tugs, and before describing its operation we will briefly explain the other feature of our device. We use no holdback-hook, but in place thereof the stop G, adjustable at any desired point on the shaft H by means of a screw-bolt and nut g. Connecting-straps J unite the thill-holder I to the holdback K, and the thill-holder backed against the stop and connected, as stated, with the holdback-strap enables us to dispense with the holdback-hook.

In our former device U-shaped bearings having bolt-holes to receive the ends of the spring-bolts were attached to the outer ends of the whiffletree. These U-shaped bearings are discarded in our improvement, and in place thereof we have adopted an ordinary bearing D and attach to each end of the whiffletree and in line therewith the guards B B, having jaws b b sufficiently large to receive the thickness of the butts of the tug.

In operation, the spring-bolts being shot and the lever thrown forward, the horse, being harnessed, is backed into the shafts until the thill-holders rest against the stops G and the butt-holes of the tugs are slipped over the ends of the spring-bolts, the butts of the tugs resting in the jaws b of the guards B and being thus prevented from leaving the ends of the spring-bolts. The horse is now fully harnessed in the vehicle, the arms C' being crossed in the position shown in Fig. 4. By a single backward thrust of the lever L the crossed arms C' are forced open to the position shown in Fig. 5, and the spring-bolts C are simultaneously withdrawn from the butt-holes of the tugs, letting the tugs go free, while the moment the horse steps forward the thill-holders slide from the shafts and the horse is absolutely cleared from the vehicle. The grip of the opened arms upon the lever, due to the action of the springs c, holds the lever L in its reversed position until it is desired to harness again, when a forward thrust

of the lever permits the expansion of the spring to throw the spring-bolts forward into first position.

Stops M, locked by set-screws, may be used upon the spring-bolts to regulate the tension of the springs c.

The advantages of our device are easily apparent, enabling the driver instantly to set free an unmanageable animal, as well as to detach him from the vehicle when ready to unharness, with a minimum of labor and a considerable saving of time, while the advantages of the present improvement consist in greater ease of attaching the tugs to the spring-bolts, as this can now be done when the bolts are shot without operating the lever or bolts, as was necessary in our former invention, and an advantage is also gained in point of weight and size, as no tips or handles at the ends of the arms C' are necessary.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A device for clearing a horse from a vehicle consisting of the combination of a whiffletree having a backwardly-projecting bracket at its center and having U-shaped guards at each end adapted to receive the butts of the tugs, two spring-bolts working longitudinally in bearings on said whiffletree behind said

guards and having arms pivoted to their inner ends, said arms being also pivoted to said bracket and bent to cross each other when said bolts are shot; a hand-lever pivoted to a hanger below said bracket and projecting upwardly between said arms in front of the point where said arms cross; a stop on each shaft shaped to check the backward movement of the thill-holders on the shaft; two thill-holders; two holdback-straps; and means of connecting each holdback-strap with the corresponding thill-holder.

2. In the herein-described device for clearing a horse from a vehicle the combination of a whiffletree having a U-shaped guard on each end; two spring-bolts working longitudinally in bearings on said whiffletree behind said guards and actuated outwardly by springs; two arms pivoted to the inner ends of said spring-bolts and to a bracket attached to the whiffletree and bent to cross each other; and a lever pivoted to a hanger affixed to the whiffletree and projecting upwardly between said arms.

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