No. 635,931. Patented Oct. 31, 1899.

J. T. HARRISON.

HORSE DETACHER.

(Application filed Sept. 2, 1899.)

(No Model.)

Fig. 1.

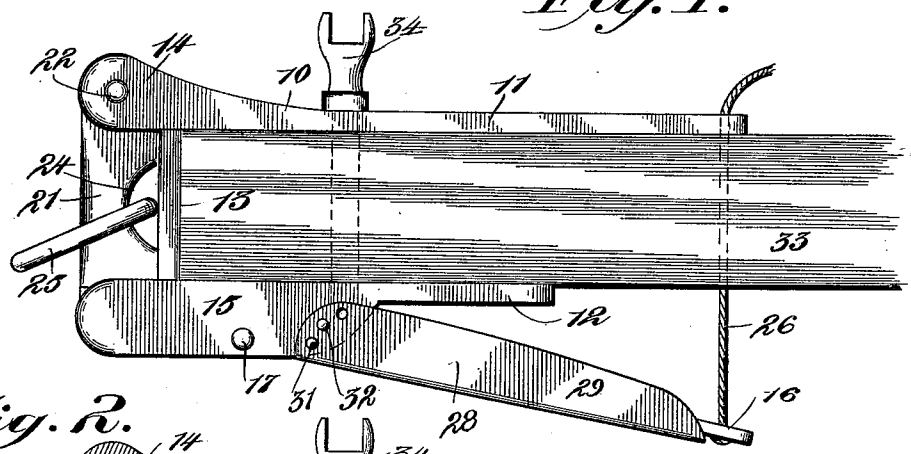
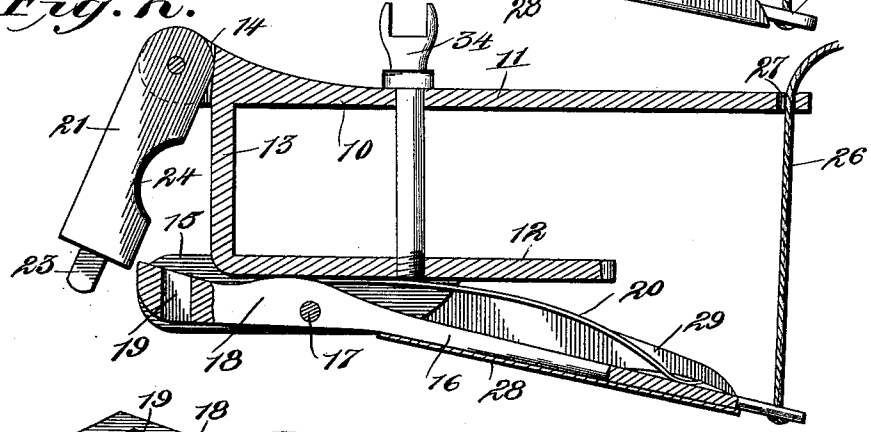


Fig. 2.



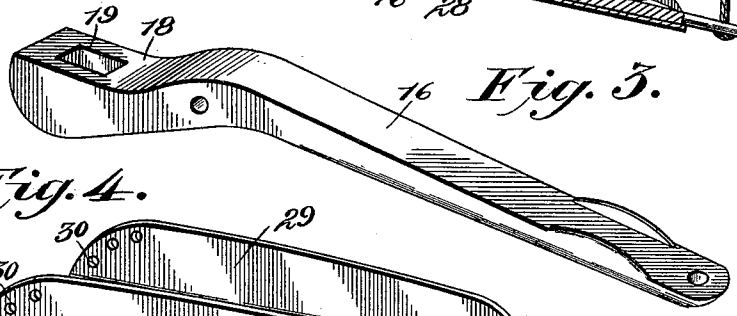
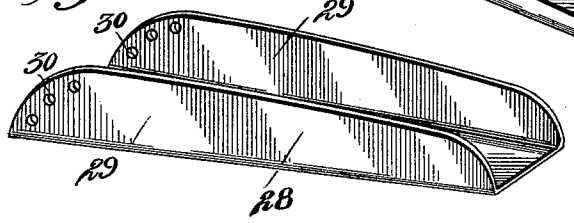


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN THOMAS HARRISON, OF RIVERSVILLE, MISSISSIPPI.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 635,931, dated October 31, 1899.

Application filed September 2, 1899. Serial No. 729,379. (No model.)

To all whom it may concern.

Be it known that I, JOHN THOMAS HARRISON, a citizen of the United States, residing at Riversville, in the county of Newton and State of Mississippi, have invented a new and useful Horse-Detacher, of which the following is a specification.

My invention relates to improvements in horse-detaching appliances; and one object in view is to provide an improved appliance which may be used on a plow, carriage, or vehicle for quickly detaching the draft appliance in the event of the horse running away or becoming unmanageable.

A further object is to provide a detaching appliance consisting of few parts, each simple in construction and readily assembled together to render the appliance cheap of manufacture and also to afford a protection to the pressure-spring against the accumulation of mud or dirt.

With these ends in view the invention consists in the peculiar construction and arrangement of parts, which will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a side elevation of my detaching appliance fitted to one end of a plow-beam. Fig. 2 is a longitudinal sectional elevation of the detaching appliance removed from the beam and showing the draft-link thrown out of its locked position. Fig. 3 is a detail perspective view of the locking-lever. Fig. 4 is a similar view of the spring-housing.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

The frame 10 of my draft appliance constitutes a single casting, and it consists of the parallel plates 11 and 12 and a cross-plate 13. The plate 11 is somewhat longer than the plate 12, while the cross-plate 13 is at right angles to the plates 11 and 12, so as to join them together near one end, thus disposing the parts of the frame to form an oblong space adapted to receive a portion of a plow-beam or a part of a vehicle to which the frame may be applied for the purpose of rendering the detacher available for use. The long plate 11 of the frame is provided with lugs 14, which project in front of the cross-plate 13, said lugs 14 serving to support the pivot for the movable draft-link. The short plate 12 of the frame has a pair of parallel flanges 15, which are spaced apart a suitable distance to accommodate a portion of the locking-lever 16. As shown by Fig. 3 of the drawings, this locking-lever is cast in a single piece of metal and of angular form to provide a short arm 18, which is disposed at an obtuse angle to the major length of the lever. This lever is fitted between the flanges 15, so as to occupy a compact relation to the frame, the angular arm 18 of said lever extending beyond the cross-plate 13, and the lever is supported in place by a fulcrum-pin 17, which passes through said lever at the bent portion thereof and is secured in the flanges of the frame. The short arm 18 of the lever has a transverse socket 19 formed therein for the reception of a tenon on the draft-link. A pressure-spring 20, preferably of the leaf-spring variety, is arranged between the lever and the plate 12 of the frame, one end of said spring being fitted between the flanges 15. If desired, said end of the spring may be secured in place to the plate 12, or the spring may be confined by wedging it between a curved part of the lever and the plate 12. The unconfined end of the spring extends beyond the flanges and the lower plate 12, so as to act against the free end of the lever, the tension of the spring serving to normally press the long arm of the lever, thus throwing the angular socketed arm 18 in a direction toward the pivot of the draft-link 21. This draft-link has one end fitted between the lugs 14 and confined in place thereto by a pivot-pin 22, which passes through the lugs and link. At its free end this draft-link has a tenon 23, which is adapted to enter the socket 19 in the short arm of the lever, whereby the link may be locked in its upright operative position by its engagement with the lever. It is to be observed that the draft-link has one end pivoted to the frame and its other end engaged detachably with the locking-lever; but when the long arm of the lever is raised against the tension of its spring the short arm 18 thereof is moved away from the draft-link, so that a pull or strain on the link will move the latter out of position and permit the draft appliance to be detached automatically. The draft-link is furthermore provided in its rear edge and at a point between its tenon and the pivot-pin

with a recess 24, adapted to receive a draft link or ring 25 of any suitable construction, as indicated by Fig. 1. A pull-cord 26 is fastened to the long arm of the locking-lever, said cord passing through an eye 27 in the frame-plate 11, thus making provision for adjusting the lever to release the draft-link without requiring the operator to leave his seat in the vehicle or the station at the handles of an agricultural implement.

My invention also contemplates the provision of means by which the long arm of the lever and the pressure-spring for said lever are housed against accumulations of mud and dirt. This means consists of a boxing 28, which is bent from a single piece of sheet metal into angular form in cross-section, so as to form the side flanges or walls 29, said flanges having the rows of perforations 30 near one end, as shown by Fig. 4. The boxing is applied by slipping it over the flanges, so as to embrace a part of the latter and to house the spring 20, and said boxing is confined in place by the employment of pivotal pins 31, which are fitted in corresponding openings 30 in the flanges of said boxing, a detaining-pin 32 being fitted in either of the openings for the purpose of holding the boxing in its adjusted position.

In Fig. 1 of the drawings I have illustrated my detacher applied to the beam 33 of an ordinary plow, and in this connection a pin or bolt 34 is fitted in the plates 11 12 and passes through the plow-beam to hold the frame 10 in proper place. I would have it understood, however, that I do not limit myself to the use of my detacher in connection with this particular type of implement, because I am aware that the improvement may be used on agricultural machines generally, as well as in connection with carriages and other vehicles.

In the service of the detacher the frame is properly applied to the implement or vehicle, the bolt 34 fastens the frame in place, the operating or pull cord is connected to the lever and carried through the eye 27 to a place within convenient reach of the driver, and the draft-link is allowed to hang free. To hitch the vehicle or implement to the draft appliance of a team, a draft link or ring is slipped over the draft-link, so as to enter the recess 24 therein, and the lever is then raised for the link to be pressed back far enough for the tenon 23 to enter the socket in the short arm of the lever, whereupon the lever is released for the spring to raise its short arm and thereby confine the draft-link in proper place. The strain on the draft-link is taken up by the frame and the lever, which serve to lock the draft-link in its operative position. Should the team become unmanageable, it is only necessary for the driver to pull the cord 26 in a direction to move the lever for its socketed arm to be disengaged from the tenon of the draft-link, and the ring or link 25 will pull the link 21 in an outward direction until the ring or link 25 will slip off the draft-link, thereby automatically detaching the team and minimizing the liability of injury to life and property.

Changes may be made in the form and proportion of some of the parts, while their essential features are retained and the spirit of the invention embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described the invention, what I claim is—

1. In a horse-detacher appliance, the combination of a frame, a horizontally-arranged lever fulcrumed to the under side of said frame and having one end extended beyond the same, a vertical draft-link pivoted to said frame for its free end to have interlocking engagement with said lever, and a spring acting against the lever to hold it in the path of the draft-link, substantially as described.

2. A horse-detaching appliance consisting of an angular single-piece frame provided with the lugs and the flanges, a recessed draft-link pivoted to said lugs and provided with a locking-tongue, an angular lever fulcrumed to the flanges and having a socketed arm for engagement by a draft-link, a flat spring confined on the frame and acting against the lever, a pull-cord, and a boxing adjustably supported on the frame independently of the lever and arranged to partly inclose the lever and the spring, substantially as described.

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

JOHN THOMAS HARRISON.

Witnesses:
THOMAS KEITH,
J. B. MCALPIN.