(No Model.)

R. J. CLARK.

HARNESS.

No. 429,084. Patented May 27, 1890.

Fig. 1.

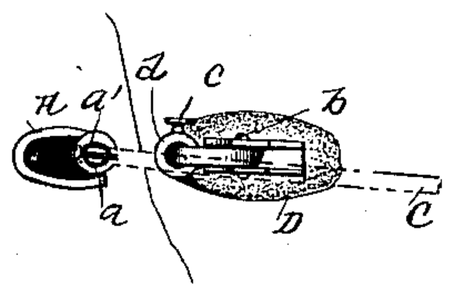

Fig. 2.

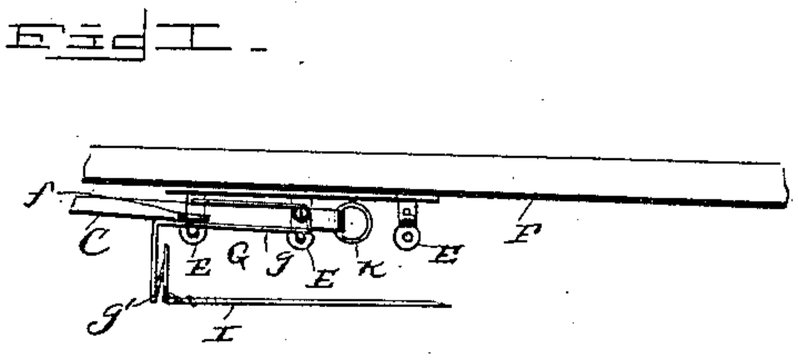

Fig. 5.

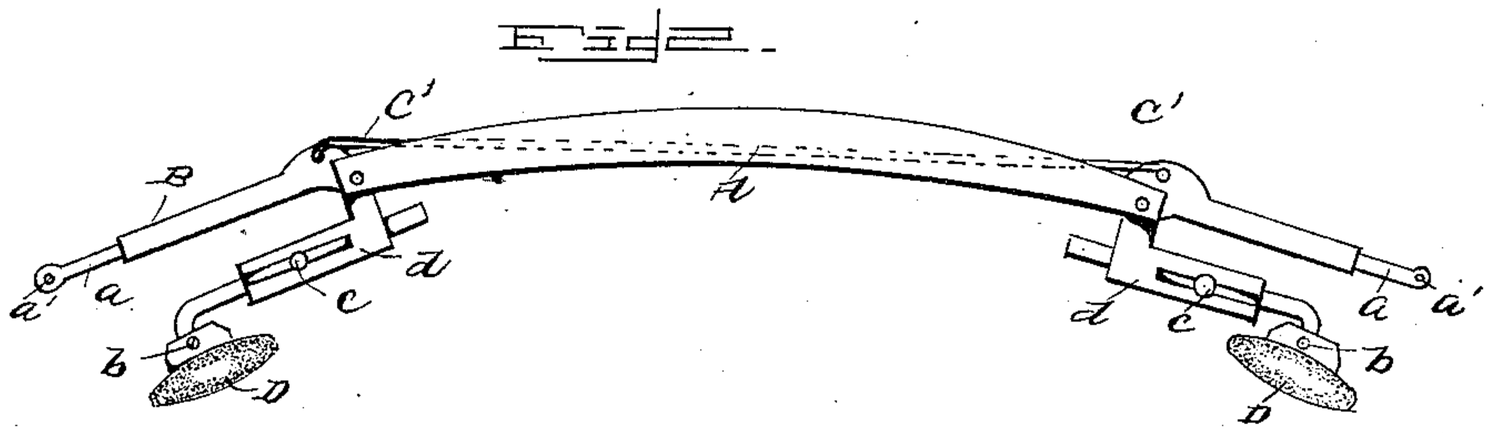

Fig. 3.

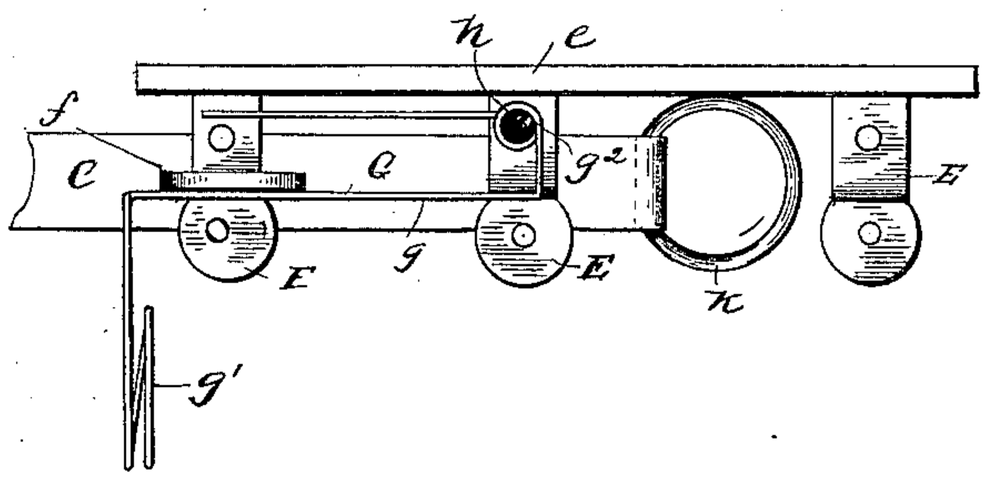

Fig. 4.

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SPECIFICATION forming part of Letters Patent No. 429,084, dated May 27, 1890.

Application filed July 3, 1889. Serial No. 316,476. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. CLARK, a citizen of the United States of America, residing at Chestnut Level, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Harness and in Detaching Horses, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has for its object an improvement in harness and to provide means for the detachment of a runaway horse from the vehicle; and it consists of the novel construction and combination of parts, as will fully appear from the following description and accompanying illustration, in which—

Figure 1 is a side elevation of my device, showing the relation of the parts, parts being broken away. Fig. 2 is a plan view of my invention. Fig. 3 is a side elevation of the detaching mechanism. Fig. 4 is a plan view of a trace, parts being broken away.

In the embodiment of my invention I employ a breast iron or bar A, which is curved horizontally and downwardly in the center, and preferably made of plate metal, which is rolled into shape, or it may be of cast metal and hollow.

B B are two angle-levers, the outer arms of which are tubular and receive the screw-threaded shanks of screw-studs *a a*, provided with eyes *a'* and passed through apertures in the traces C, the traces C being secured to said studs upon said levers, the rear end of the trace being provided with a ring attachment, to which is secured the holdback-strap, and near which, extending from the side of the traces, is a fastener attached to the trace for securing the trace to the shaft-iron by slipping the slot on the projection or studs E.

The levers B B are applied one to each end of the breast-bar A, being pivoted at its angle thereto. The inner ends of said levers are connected together by a rod C', extending through said bar, thus holding said levers at right angles to the traces, while they are allowed to more or less rock or yield, as necessary, in connecting the traces thereto, and to respond to the movements of the animal.

D D are the pads which rest against the animal or horse, to hold the breast iron or bar A out of contact therewith, said pads being pivotally secured to studs *b*, passed through and being adjustably connected at *c* with sleeves or tubes *d*, cast or formed upon the ends of the breast iron or bar A.

E E are headed studs cast with and pendent from a casting or plate *e*, secured to the under side of each thill or shaft F.

G is a spring clasp or fastening, which consists, preferably, of a stout spring-wire formed with horizontal parallel loops *g g*, the lower arms of which have their forward connecting portion looped downward and contracted and coiled into a spring, as at *g'*, while the rear connecting portions or the upper and lower arms of each loop are coiled into eyes g^2. These eyes g^2 receive pins or bolts *h*, which pass through apertures in the rear studs E, thus securing the fastening G to said studs, while the downward-looped contracted portions or springs *g'* are sprung upon the headed ends of the forward studs E. Upon the studs E are first received, however, eye-pieces or straps *f* of the traces C, which it is the purpose of the fastening G to detachably secure in place thereon. To the lower looped portion *g'* of each fastening G is connected a line or cord I, passed under a suitably-disposed pulley secured to the under side of each thill or shaft, and which line or cord is passed up within convenient manipulating distance of the driver.

It will be observed that by pulling upon the line or cord I of each fastening G the latter is readily detached from its stud, consequently allowing the disengagement of the traces therefrom and the detachment of the horse, it being assumed that the latter is in motion. It will be further observed that the number of the studs on the shaft-plates may be increased to adapt the same to horses of different size. I have also found in practice that this form of connection between the traces and the plates secured to the thills prevents the traces from becoming muddy, as is the case in the ordinary method of securing the long traces to singletrees in the rear of the shafts, and also facilitates hitching and unhitching.

The force in drawing and holding back

from the same point or from the under part of the shaft is upward, and thus tends to lift the harness-saddle, and hence as there is less pressure on the harness-saddle on the back of the horse the saddle is not so liable to chafe the horse's back.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a horse-detaching device, the hollow breast iron or bar carrying the pivotal angle-levers and pads, said angle-levers being connected by a rod, the plates, and the traces, substantially as shown and described.

2. In a horse-detaching device, the hollow breast iron or bar having pivoted therein angle-levers, the connecting-rod, and the pads having pivotal and adjustable connection with said breast-iron, the plates connected to the thills, and the traces, substantially as shown and described.

3. In a horse-detaching device, the hollow breast iron or bar carrying the angle-levers and the pads, in combination with the plates carried by the thills, having the headed and flanged studs projecting therefrom, and the traces, substantially as shown and described.

4. In a horse-detaching device, the breast iron or bar carrying the pivotal angle-levers and pads, the plates connected to the under side of the thills, having flanged studs projecting therefrom, the traces having a slotted right angular projection, and the spring pivoted to one of said studs, substantially as shown and described.

5. In a horse-detaching device, the breast iron or bar, in connection with the pivoted angle-levers and pads, the plates on the thills having flanged studs, and the traces having projecting at right angles therefrom a slotted fastener, and a ring secured in its rear end, substantially as shown and described.

6. In a horse-detaching device, the traces having slots in their forward ends and rings in their rear ends, and slotted fasteners projecting at right angles therefrom near their rear ends, in combination with the breast iron or bar, the pivoted angle-levers and pads, and the plates on the thills, substantially as shown and described.

7. In a horse-detaching device, the breast-iron carrying pivoted angle-levers connected by a rod and adjustable pads, in combination with the traces, the plates having projecting flanges and secured to the thills, the releasing-cord, and the approximately U-shaped spring pivoted to one of said studs, substantially as shown and described.

8. In a horse-detaching device, the breast iron or bar carrying the pivoted angle-levers and pads, the plates connected to the thills having flanged studs, the spring clasp or fastener formed with horizontal parallel loops, the lower arms having their forward connecting ends bent down and contracted to form a spring and the upper rear end coiled into eyes by which they are pivoted, and the traces, substantially as shown and described.

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

ROBERT J. CLARK.

Witnesses:
PAUL W. STEVENS,
CHAS. F. MYERS.