(No Model.)

B. BLAKE.

HORSE DETACHER.

No. 521,581. Patented June 19, 1894.

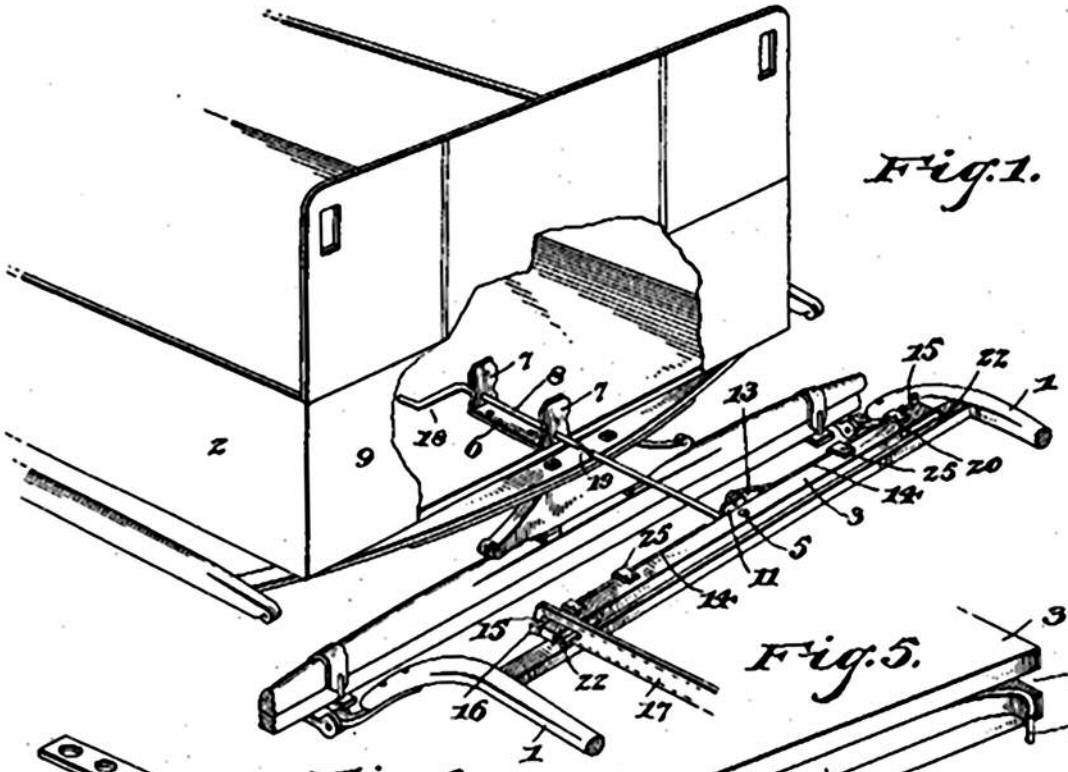


Fig. 1.

Fig. 5.

Fig. 6.

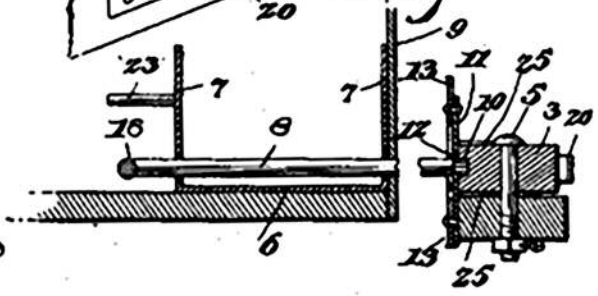


Fig. 3.

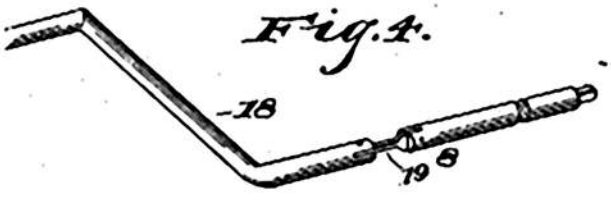
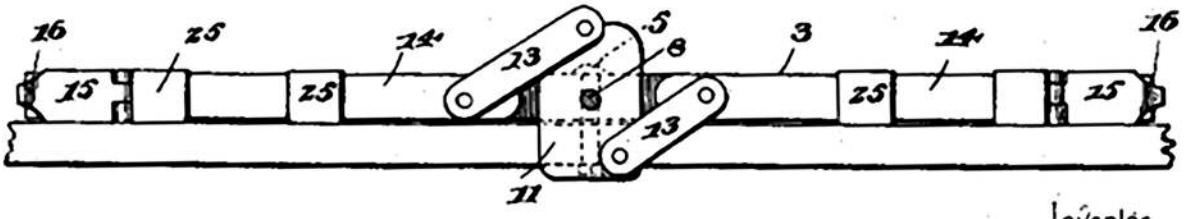


Fig. 4.

Fig. 2.



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UNITED STATES PATENT OFFICE.

BURDINE BLAKE, OF LONDON, OHIO.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 521,581, dated June 19, 1894.

Application filed March 9, 1894. Serial No. 503,022. (No model.)

To all whom it may concern:

Be it known that I, BURDINE BLAKE, a citizen of the United States, residing at London, in the county of Madison and State of Ohio, have invented a new and useful Horse-Detacher, of which the following is a specification.

The primary object of my invention is to produce a horse detacher which may be operated with greater ease than those heretofore known, and when so operated will be more effective in releasing the horse. To this end I provide a whiffletree having two longitudinally movable bars mounted thereon and adapted to secure the trace in place, the outer ends of the bars being provided with lugs hinged thereto, and adapted to hold the trace in place on the whiffletree, and to move outwardly with the bars and thereby release the trace, and detach the horse.

In the drawings—Figure 1 represents a perspective view of my invention; Fig. 2 a rear elevation of the detacher, with the operating-bar shown in cross-section; Fig. 3 a longitudinal section taken through the operating shaft; Fig. 4 a detail perspective of the crank for operating the shaft; Fig. 5 a similar view of the rod for holding the trace from lateral movement; Fig. 6 a view of the hold back necessary to my invention.

The reference numeral 1 indicates the thills of the vehicle to which my invention is shown as applied, and 2 the body thereof.

9 is the dash board, and 3 the whiffle- or singletree, which is pivoted to the thills 1 by means of the bolt 5. Secured to the bottom of the vehicle body is the plate 6, which is bent up at its ends to form the lugs 7, in which is journaled the shaft 8. The front lug 7 lies flush with the dash board 9, and the shaft 8 extends through the dash board to the opening 10 in the singletree. This opening is enlarged to receive the end of the shaft and to allow the singletree movement thereon, under the influence of the thills 1. By this means the shaft projects to the singletree and may be mounted in rigid bearings irrespective of the movements of the thills. The front end of the shaft 8 is formed square and adapted for the reception of the plate 11, which has a square opening 12 therein, and this opening is formed larger than the squared end of shaft 8, so that it will be allowed a limited movement thereon, but the opening is not large enough to permit the shaft 8 to revolve independently of the plate. Thus the plate may be allowed free movement on the shaft when oscillating with the singletree, and yet be subject to the rotary movements of the shaft.

Pivotally connected to the ends of the plate 11 are the two links 13, which project out parallel with the singletree. The outer ends of these links are pivotally connected to the bars or rods 14, which are reciprocally mounted in the guides or eyes 25, and which extend parallel with the inner side of the singletree. The connections, plate 11 and links 13, of bars 14, are so disposed that when the plate is lying horizontally the ends of the bars will be even with the ends of the singletrees, and when the plate 11 extends vertically the ends of the bars will be drawn in and lie some distance in from such ends. This operation is obvious from the drawings.

Hinged to the ends of the bars 14 are the fingers 15, which are capable of free movement on their respective bars, and, when the bars are drawn in, they will lie flush with the rear sides of the singletrees. Formed integral with the ends of the fingers 15 are the inwardly projecting studs 16. These studs are adapted to hold the traces 17 in their place on the fingers 15. The inner end of the shaft 8 is formed with the crank 18 thereon, and the shaft has formed on it, just outside the dash board, a knuckle joint 19. By this means the shaft 8 may be swung in all directions so as to compensate for the movements of the shafts.

Rigidly secured to the outer side of the singletree and at each end thereof are the spring rods 20 which project out to the ends of the singletree, and which are capable of swinging horizontally. To permit this operation I provide the singletree with the slots or grooves 21, which are adapted for the reception of the spring rods when moving rearwardly. The free ends of the rods 20 are bent forwardly to form lugs 22, which assist in holding the traces in place, as will fully appear hereinafter, and the rods are formed with a normal tendency to lie out from the singletrees.

The normal position of the parts occurs

when the bars 14 are drawn inward, so that fingers 15 will lie adjacent to the ends of the singletrees, and the traces 17, are then arranged with the openings or eyes of their ends embracing the ends of the singletrees and prevented from outward movement by the studs 16, and rods 20. The studs 16 engage the rear end of the trace-eye, while the rods 20 pass through the eyes and are disposed so that their lugs 22 will bind against the trace. By means of these two devices, studs 16 and 22 and their attached rods, the traces are normally secured in place so that it will not be possible for them to be accidentally removed. Now, should it be desired to detach the horse, in event of his running away, the crank 18 is turned from a horizontal position to a vertical one, and until its movements are suppressed by the stop or pin 23, whereupon the plate 11 will be moved to assume a horizontal position and the bars 14 consequently extended. This will result in a moving of the fingers 15 to points beyond the ends of the singletree, so that they will be free to swing forwardly. As the bars 14 move out the traces will engage the hinges of fingers 15 and by that means will be pushed out also, and as soon as the fingers 15 clear the ends of the singletrees, the force on the traces will cause them to swing forward, thus releasing the traces. When the fingers 15 have swung forward the traces will have been completely released, since the rods 20 will have no effect on the forward movement of the traces, they only operating to prevent the traces from lateral movement. In order to release the breeching of the harness when the traces are detached, I provide the peculiarly constructed hold back of Fig. 6. This consists of the spring arm 4, rigidly secured to the under side of the thill at its rear end and curving downwardly and thence upwardly until the under side of the thill is reached, thus forming a hold back which will permit the breeching to pass out of engagement therewith when moving outwardly and one which will hold the breeching secure when operating as ordinarily.

Thus it will be seen that by means of my invention a horse can be quickly and effectively detached from the vehicle in event of his running away, and that the detaching apparatus does not interfere in any way with the operations of the singletree under ordinary circumstances.

Having described my invention, what I claim is—

1. A horse detacher comprising the combination of a singletree, two reciprocating bars arranged one at each end thereof, fingers hinged to the ends of the bars, the fingers being adapted for the reception of the traces and to normally lie flush with the rear side of the singletree, and means for moving the bars and their fingers longitudinally, whereby the fingers will be made to clear the singletrees and release the traces, substantially as described.

2. A horse detacher comprising the combination of a singletree, two reciprocating bars arranged one at each end thereof, fingers hinged to the outer ends of the bars and adapted for the reception of the traces, the fingers being further adapted to lie normally against the rear side of the singletree, a spring rod arranged at each forward end of the singletree and operating with the fingers to normally hold the trace in place, and means for reciprocating the bars and whereby the fingers are moved to clear the ends of the singletrees and the traces detached, substantially as described.

3. A horse detacher comprising the combination of a singletree, two reciprocating bars arranged one at each end of the singletree, fingers hinged to the outer ends of the bars and adapted to normally lie against the rear ends of the singletree, the fingers being adapted to receive the traces and hold them in place, links connected to each of the inner ends of the bars, a revolving plate to which the links are connected, and a shaft upon which the plate is mounted, whereby the bars and the attached fingers may be moved longitudinally and the traces released, 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.

BURDINE BLAKE.

Witnesses:
CARY JONES,
O. M. BRYAN.