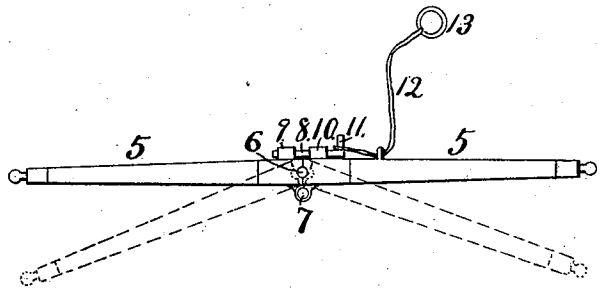
(No Model.)

G. H. DAVIS.

HORSE DETACHER.

No. 590,735. Patented Sept. 28, 1897.



WITNESSES,
N. Stevens.
Geo. M. Coffinberger.

INVENTOR.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE HENRY DAVIS, OF RICHMOND, VIRGINIA, ASSIGNOR OF ONE-HALF TO WILLIAM H. CULLINGWORTH, OF SAME PLACE.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 590,735, dated September 28, 1897.

Application filed March 10, 1897. Serial No. 626,779. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENRY DAVIS, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented a new and useful Improvement in Singletrees; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which the figure represents a singletree in plan or top view according to my invention.

5 represents the two arms of the singletree adapted to be hung at 6 upon a draw-bolt of the carriage, this pivot-bolt being usually fixed in a cross-bar of the thills and serving as the means by which the carriage is drawn when a horse is hitched to the singletree. The two arms 5 of the singletree are permanently hinged together at a point 7 in front of the bolt 6, and the bolt-hole for the bolt 6 is directly in the joint of the two arms, so that if the ends of the arms be bent forward around their pivot 7 the joint will be opened and the singletree may be freely pulled forward off from the bolt 6 and away from the carriage.

8 is a latch-bolt fitted to resist the bending and opening of the singletree by engaging the lugs 9 and 10 thereof. The engaging latch 8 is provided with an arm 11, which may be struck with a whip-handle to draw the latch, or the latch may be further provided with a cord 12 to pass into the carriage, where a handle 13 may enable the driver to pull the cord and draw the latch, by which means the singletree and the horse may be detached and set free from the carriage in any case of approaching danger. The singletree when thus detached will be bent forward, so that the traces will be pulled loose from the ends thereof, thus relieving the horse of any danger from the bounding and flying singletree.

The latch-bolt 8 extends through and a little beyond the retaining-lug 9 to take advantage of two mechanical results that may be utilized in this connection, as follows: First, the bolt being fitted to slide through the lug 9 with the usual degree of looseness would be withdrawn from the lug by the direct action of the two arms of the singletree bending around their hinge-pin 7 when the horse pulls at the ends of the arms, as usual in service, if the bolt were inserted into the lug a distance equal to only a little more than its thickness, because the bolt coincides with the tangent of the arc of the circle from center 7 for about that distance; but if the bolt be inserted further, and especially if its end be thrust through the lug 9, it will hold the singletree from being bent open, and, second, whether it be so originally made or not a little neck will be worn behind the projecting end of the bolt, leaving the projecting portion as a head to prevent its being too easily withdrawn, as it would be if worn smaller all the way to its end. The bolt thus inserted is bound tighter by the pulling of the horse in service, yet as the carriage and its load are sometimes wholly drawn by the reins the driver may at any time when there is danger pull on the lines and entirely free the strain on the bolt 8, permitting it to be readily withdrawn, or if it be but partly withdrawn the next action of the horse will swing open the singletree and withdraw the bolt from its little remaining engagement. The cord 12, being attached to the bolt, may be firmly held by the driver when the singletree is pulled free from the draw-bolt 6, and thus pulling the middle of the singletree rearward while the horse pulls the ends forward may so bend the singletree on its hinge as to insure the traces being pulled off from its forward hanging ends.

Having thus fully described my invention, what I believe to be new, and desire to secure by Letters Patent, is the following:

1. The combination in a singletree, of two arms hinged together at their front side and inner ends, and provided with a draw-bolt hole in the joint to the rear of the hinge; lugs upon the rear side of the arms near the joint, and a latch-bolt fitted to slide through the lugs parallel with the arms, across the joint and to project its free end beyond the retaining-lug; the said latch-bolt being provided with a lateral arm, substantially as described.

2. The combination in a singletree, of two arms hinged together at the front side and having a draw-bolt hole in their joint at the rear of the hinge; a latch-bolt attached to

the singletree near its center for securing the joint, and a cord attached to the bolt and adapted to be held in the carriage, substantially as described, whereby the singletree may be further bent to aid in freeing the traces after the singletree has been bent free from the draw-bolt.

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

GEORGE HENRY DAVIS.

Witnesses:
G. A. HANSON,
W. H. FELTHAUS.