

JACOB SUMMERS.

Improvement in Detaching Horses from Carriages.
No. 124,703.

Patented March 19, 1872.

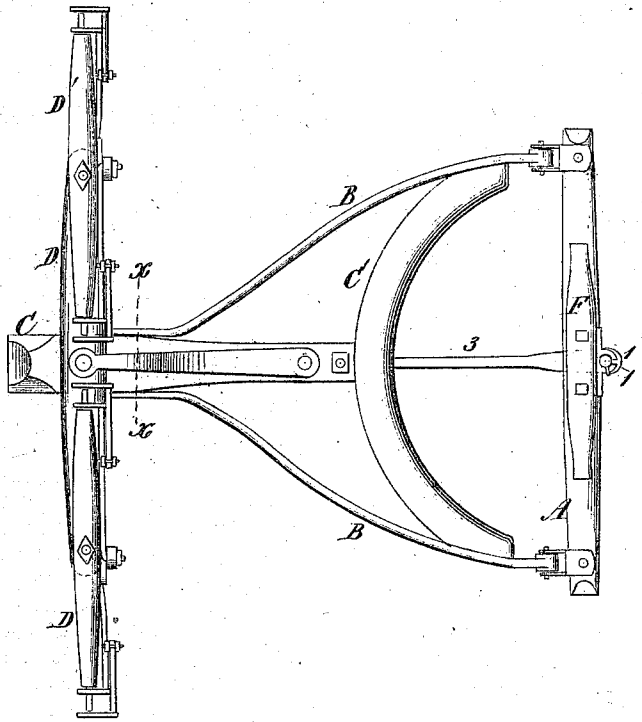


Fig. 1.

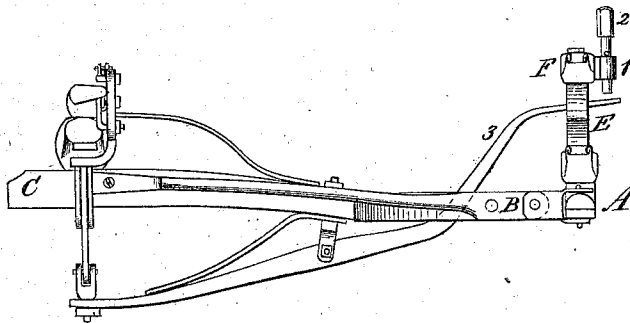


Fig. 2.

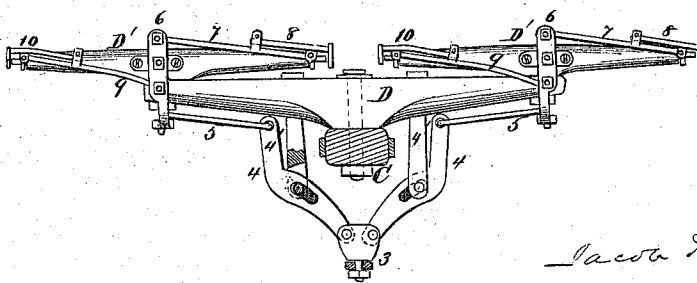


Fig. 3.

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UNITED STATES PATENT OFFICE.

JACOB SUMMERS, OF KOKOMO, INDIANA, ASSIGNOR TO HIMSELF AND GEO. W. HEWITT, OF SAME PLACE.

IMPROVEMENT IN DETACHING HORSES FROM CARRIAGES.

Specification forming part of Letters Patent No. 124,703, dated March 19, 1872.

Specification describing certain Improvements in Devices for Detaching Animals from Carriages, invented by JACOB SUMMERS, of Kokomo, in the county of Howard and State of Indiana.

Figure 1 is a plan view of the forward bolster, hounds, tongue, single and double-trees of a carriage with my improved detaching devices attached. Fig. 2 is a side view, showing a vertical bolt or pin which passes down by the side of the front bolster, a lever upon which the bolt acts, two short levers operated by the long one, rod, and yet other levers and keepers, which hold the tugs or traces upon the pins in the ends of the single-trees. Fig. 3 is a sectional elevation on line *x x* of Fig. 1, showing the construction and arrangement of the parts above alluded to.

Corresponding letters refer to corresponding parts in the several figures.

In constructing carriages with my improvements attached I use any approved form of forward axle, A, to which hounds B B are attached, which extend to and have their forward ends attached to the tongue C, a curved brace, C' being attached to their rear ends, which are attached to the axle by the usual or any approved form of joint. Upon the tongue at the proper point the double-tree D is pivoted, and upon it are placed the single-trees D' D', which, at their centers, are pivoted to the double-tree, and are provided at their ends with pins of metal, onto which to place the tugs or traces. Upon the front axle a bolster is placed, upon which an elliptic spring, E, is placed, and upon it a bolster to which the body of the vehicle may be secured.

The above-referred to parts form no part of my present invention, except in so far as they are used in combination therewith, and consequently they need not be more particularly described here.

In combination with the parts above enumerated, I use the parts which constitute the present improvement, and which are designated by the following words and figures: To the rear side of the bolster F, which rests upon the forward spring of the carriage, there is bolted a socket, 1, in which there is cut a slot, 1', as shown in Fig. 1. Through the hole in this socket a bolt, 2, passes, which is provided

with a projecting pin, the diameter of which is such as to allow it to slide freely in the slot 1', so that when it becomes necessary to force the bolt down, the pin will pass through the slot and permit the descent of the bolt; and when the bolt is not in use it can be drawn up and turned around in its socket, so that the pin will rest upon the upper surface thereof, and thus prevent it from resting upon the lever 3, the rear end of which terminates under the bolt 2, it being pivoted to the tongue or brace at the proper point, so that as its rear end is forced down, its front end will be raised up and carry with it the lower ends of two curved and slotted levers, 4 4, which are pivoted to the double-tree D by means of the hinges 4' 4', the whole being arranged to turn with the double-tree, a hole being made in the end of the lever to permit the stud, to which the lower ends of the levers are pivoted, to turn with the other parts. Extending from the upper ends of levers 4 4 are rods 5 5, which extend outward to and connect with short bent levers 6 6, which are pivoted to the single-trees upon their rear sides, their upper ends passing above such trees far enough to permit rods 7 7 to be attached thereto, which rods extend to the inner end of one of the single-trees and to the outer end of the other, where they are connected to a plate of metal, or to an arm which has a hole formed in it of sufficient diameter to allow it to slide freely upon the pin which is inserted in the end of the single-tree. At some point upon the rods 7 7, between the levers to which they are attached and the plate upon their ends, there is affixed a bifurcated stud or projection, to which the inner ends of rods 8 8 are attached, these last-named rods being extended in the same direction as are those to which they are attached, and having their outer ends supplied with arms or plates of metal for sliding upon the pins in the single-trees, as above described in the case of rods 7 7. The rods 8 8 extend further from the ends of the trees than do the rods 7 7, and consequently there is left a space between the plates or arms upon their ends sufficiently broad to admit the end of the tug or trace to work therein. From that portion of the levers 6 6 which is below the pivotal point there extend rods 9 9, which are sup-

plied with arms or plates, and with bifurcated projections, rods 10 10 being affixed to them as in the case above referred to, the rods 10 10 having the arms, as do the rods 8 8.

The arrangement of the parts designated by figures or numerals, and their operation is as follows: In the event of it becoming desirable to detach the animal or animals from a vehicle by disconnecting the tugs or traces from the single-tree or trees in the event of their taking fright, or for any other reason, it is only necessary for the occupants to reach forward and turn the bolt or pin 2, until the projection upon it will pass down through the slot in the socket, and then press down upon such bolt, which action will cause the upper ends of the levers 4 4 to be carried further from each other, and thus, through the agency of the rods 5 5, levers 6 6, rods 7 7, 8 8, 9 9, and 10 10, the plates upon said rods to be forced toward the ends of the pins in the single-trees, which movement will carry the tugs or traces off from said pins, and thus liberate the animals from the vehicle.

This mode of detaching the tugs or traces from the trees will be found a very convenient one in ordinary cases, as all of such tugs or traces will be detached at one movement of the lever 3.

I have described my improvement as principally applicable to two single-trees when used in conjunction; but it is equally applicable to a single carriage by using only the requisite number of levers and rods.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the running gear of a vehicle, the bolt or rod 2, lever 3, and the system of levers and rods, constructed and arranged substantially as described, for detaching the tugs or traces from the single-tree or trees of a vehicle, as set forth.

2. I claim the combination and arrangement of the socket 1, bolt 2, levers 3 and 4, rods 5, levers 6, and rods 7, 8, 9, and 10, with the single-trees and the double-tree D and tongue C', their arrangement with reference to each other being such that all of the parts, except the lever 3, the bolt 2, and the tongue C', will, in use, turn upon the pivotal point of the double-tree, substantially as shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB SUMMERS.

Witnesses:

GEORGE W. HEWITT,
FRANCIS M. GILES.