

G. W. CHIPLEY.
SHAFT HOLDER.

Patented June 28, 1887.



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UNITED STATES PATENT OFFICE.

GARDINER W. CHIPLEY, OF ST. CHARLES, MISSOURI.

SHAFT-HOLDER.

SPECIFICATION forming part of Letters Patent No. 365,502, dated June 28, 1887.

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To all whom it may concern:

Be it known that I, GARDINER W. CHIPLEY, a citizen of the United States of America, residing at St. Charles, in the county of St. Charles and State of Missouri, have invented a new and useful Improvement in Shaft-Holders, of which the following is a specification.

My invention is an improvement in shaft or thill holders for road-vehicles and means for attaching and detaching the same.

It consists, essentially, of a horizontal rod loosely secured to an axle of a vehicle, the ends of which terminate in holding-pins, said rod being movable laterally by means of a lever and an intermediate bar under the control of the driver, in a manner herein set forth, to detach the shafts from the couplings.

In the drawings illustrating my invention, Figure 1 is a front elevation of a portion of the running-gear of a vehicle. Fig. 2 is a perspective view of the same. Fig. 3 is a transverse central section partly in elevation; Fig. 4, a partial longitudinal section.

Similar reference-letters indicate like parts in all of the figures.

Referring to the drawings, A is a bar, secured to an axle of a vehicle by clips C, D, and F, said clips being in the form of journal-boxes and secured by bolts and nuts or other suitable means. The bar A has its extremities bent horizontally at right angles, then vertically upward, then horizontally, parallel to the body of said rod, both ends moving in the same direction to form pins for securing the shaft or thills to the vehicle.

The vehicle-axle has secured to it near its two ends clips H, each of which has projecting forward loops or ears, *b b'*, one long and one short, the spaces between which furnish slots or spaces to receive the end loops or eyes of the shaft-irons. The ends *a a'* are adapted to slip freely into the loops or ears *b b'* and the eyes of the said shaft-irons, and thus the shaft or thills are held to place.

The bar A is flattened at a point near its middle, where it is clasped by the jaws *c* of the flat bar K. The bar K from its connection with the bar A is curved somewhat in S form upward and bolted to the coupling-pole of the vehicle by bolt *d*, which latter forms the axis of motion to said flat bar K. The

bifurcated end of said bar K is provided with an elongated hole, *e*, through which and the rod A a pin passes to hold the two together, and on account of the said elongation of the pin-hole *e* a slight play is admitted to compensate for the movement of the vehicle-axle when turning.

The flat bar K is provided, also, with a hole, *d'*, to receive the end of a hand-lever. R is the hand-lever, which has its fulcrum in a plate secured to the coupling-pole of the vehicle at such a point that the long arm of said lever will be within easy reach of the driver, and its short arm *t* in connection with the flat connecting-bar K.

The plate T, to which the hand-lever R is pivoted as a fulcrum, is provided with a slot, *f*, through which the long arm of said lever passes, and in which said lever, when free, finds lateral play. Fixed to the long arm of said hand-lever R is a rectangular piece, *g*, which forms a guide to a latch, *h*, pivoted to one end of a thumb-lever, S, which has its fulcrum in the long arm of the hand-lever R, under control of the operator. The thumb-lever S referred to has a spring, *i*, connected with it, which keeps said latch normally to engagement in the slot *f* of the plate T, to keep the lever R locked when the shafts are held in place by the bar A.

When it is desirable to detach the shaft or thills from the vehicle, the driver grasps the hand-lever, with his thumb on the thumb-lever, and by means of the latter lifts the latch to free the former. He then moves the long arm of the hand-lever to the left within the limit of the slot *f*, and this movement throws the bar K about its axis through a short segment to the right, carrying with it the rod A, to move the ends or pins of the same a distance sufficient to release the shaft or thills and the horse with it or them from the vehicle.

A reverse movement of the hand-lever, when the shaft or thills are replaced, brings the pins *a* to engagement with the eyes of the thills and the small loops or ears of the clips. The movement of the rod A being limited by the length of the slot in which the hand-lever plays, and the clips H having long ears, as stated, prevent the pins of the holding-rods from being entirely withdrawn from their guides, and by

reason of the length of said guides the engagement of said pins with the shorter ears is assured.

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

1. The combination, with a laterally-movable bar secured by suitable clips to a vehicle-axle, having its ends bent first at right angles horizontally, then at right angles vertically, then again at right angles horizontally and parallel to the body of said bar to form holding-pins, of holding-clips for said pins, secured to said axle, provided with long and short loops, as described, and the irons of the thills or shafts, as and for the purpose set forth.

2. The combination, with the bar provided

with pins, formed as described, and adapted to engage the holding-clips and the thill-irons, of the hand-lever having its fulcrum in a fixed slotted plate, a thumb-lever pivoted to said hand-lever, and a latch pivoted to said thumb-lever, adapted to engage the slot of the fixed plate, a spring adapted to act upon said thumb-lever and hand-lever, and a plate or arm connecting with a fixed portion of the vehicle, the movable bar, and the hand-lever, all arranged substantially as and for the purpose specified.

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