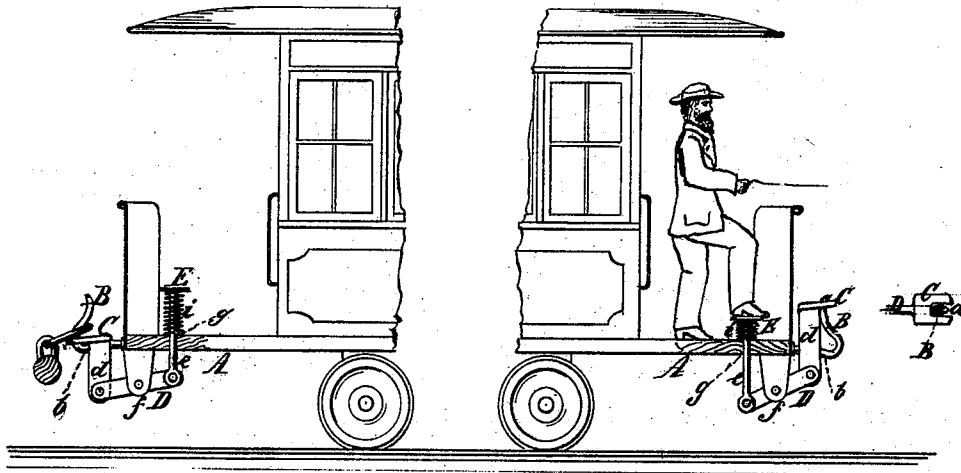


R. S. VAN ZANDT.

HORSE-DETACHER.

No. 172,800.

Patented Jan. 25, 1876.



Witnesses:

Ernst Billhuber.

H. Wells Jr.

Inventor.

Robert S. Van Zandt

by James A. Whitney

Atty.

UNITED STATES PATENT OFFICE.

ROBERT S. VAN ZANDT, OF BROOKLYN, E. D., NEW YORK, ASSIGNOR OF
ONE-HALF HIS RIGHT TO GEORGE BOYD, OF PLAINFIELD, N. J.

IMPROVEMENT IN HORSE-DETACHERS.

Specification forming part of Letters Patent No. 172,800, dated January 25, 1876; application filed
December 29, 1875.

To all whom it may concern:

Be it known that I, ROBERT S. VAN ZANDT, of Brooklyn, E. D., in the county of Kings and State of New York, have invented an Improvement in Means of Detaching Whiffletrees from Street-Cars, of which the following is a specification:

This invention comprises a novel combination of a lifting-plate, lever, and foot-rest, with the draft-hook of a street-car, whereby the whiffletrees may be readily and effectually detached from a street-car by the simple pressure of the driver's foot, thereby leaving free both hands of the driver for the manipulation of the reins, the operation of the brake, &c.

The drawing is a vertical longitudinal sectional view of a vehicle or car fitted with my invention, the several parts comprised in my said invention being shown at one end of the car in the position occupied by them when the whiffletree is attached to the hook for the usual draft, and, at the other end of the car, in the position occupied by them at the moment of casting off or detaching the whiffletrees from the said hook.

A indicates the platform or end portions of the car, commonly occupied by the driver, and which requires no specific description.

B is the draft-hook, provided at each end in the ordinary manner, said draft-hook differing in no important respect from that in common use.

C is a lifting-plate, notched or slotted, as shown at *a*, and situated above the horizontal lower portion *b* of the hook, with the upright portion *c* of said hook extending upward through the slot *a* aforesaid. The plate C is attached to the upper end of a rod, *d*, which, preferably, is slotted to straddle the part *b* of the hook, in order that the said part may serve as a guide to retain the plate C in its requisite horizontal position.

D is a lever, pivoted at *f* to the under side of the platform, and having its outer end pivoted to the lower extremity of the rod *d*, while its inner end is pivoted to a vertical stem, *e*, which passes up through a suitable hole or

guide, *g*, in the platform. Upon the upper end of this stem *e* is a foot-rest, E, and between this foot-rest and the platform, in such wise as to tend to press the foot-rest upward, is a spring, *i*.

It will be seen that from the relations of the herein-described parts the upward movement of the foot-rest will bring the plate C downward upon the lower part *b* of the hook B, and vice versa.

When no pressure is exerted upon the foot-rest from above the spring *i* forces the foot-rest upward, and thereby bringing the plate C downward to the bottom of the hook B, as hereinbefore described, permits the usual attachment thereto of the whiffletree, and the normal use of said whiffletree in the draft of the car.

When it is desired to detach the whiffletrees, it is only necessary for the driver to press down the plate C with his foot, whereupon, as shown at the right-hand end of the drawing, the plate C is lifted, and, lifting the whiffletree above the top or point of the hook, casts off the whiffletree from said hook, entirely detaching the same from the car.

Inasmuch as the disengagement of the whiffletrees from the car is effected wholly by the power exerted by the driver's foot, it follows that both hands are left free for the management of the horses and for the working of the car-brake, thereby enabling the driver to more effectually guard against accident in many cases than is now possible, as well as providing a more expeditious means of detaching the whiffletrees in changing the horses from one end of the car to the other than is afforded by the usual "car-hook," so termed.

What I claim as my invention is—

The combination of the lifting-plate C, lever D, and foot-rest E, with the hook B of a street-car, substantially as and for the purpose set forth.

ROBERT S. VAN ZANDT.

Witnesses:

JAMES A. WHITNEY,
H. WELLS, Jr.