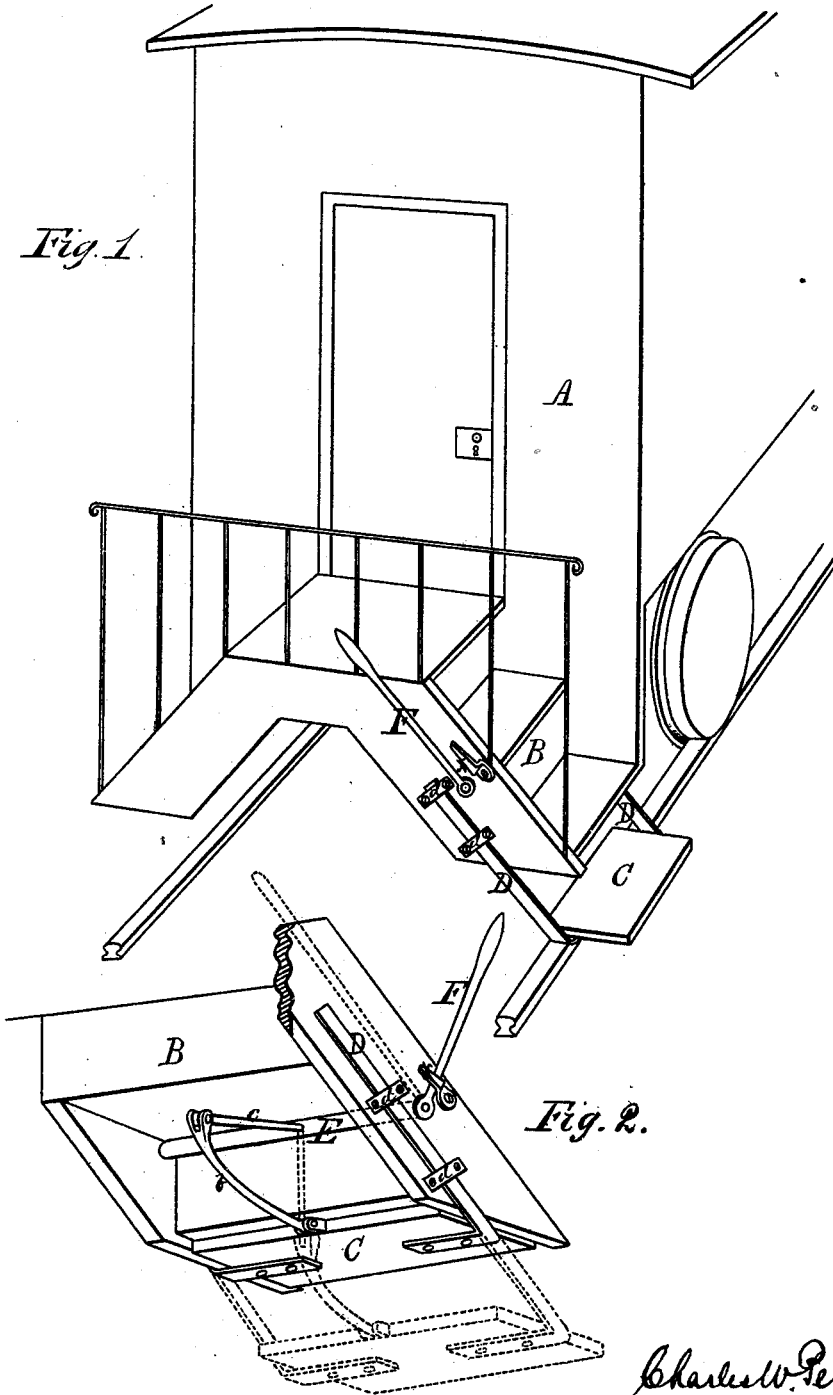


C. W. PERKINS.  
EXTENSION STEPS FOR CARS.

No. 188,665.

Patented March 20, 1877.



WITNESSES  
*Mary S. Utley.*  
*Howard B. Crittenden.*

*Charles W. Perkins.*  
INVENTOR  
*By* *Marion C. Stone*  
His ATTORNEY

# UNITED STATES PATENT OFFICE.

CHARLES W. PERKINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN EXTENSION-STEPS FOR CARS.

Specification forming part of Letters Patent No. **188,665**, dated March 20, 1877; application filed February 9, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES W. PERKINS, a citizen of the United States, and a resident of Washington city, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Extension-Steps for Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains, to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a perspective, showing the steps of a railroad-car, with an extension or drop step down. Fig. 2 is also a perspective of the under side of the car, showing the step in a like position and the operating parts.

A represents the car, and B the ordinary steps thereof. C is a drop-step, hung on slides D D, which work in suitable loops or staples *d d*. E is a rock-shaft extending across under the ordinary steps, as shown, and has connected to the outer end a lever or handle, F, which extends to the platform in convenient position to be operated by the brakeman. A suitable friction or other stop, *x*, may be used to hold the handle in the position desired. Connected with the drop-step is a connecting-rod, *b*, and to the rock-shaft a rigid arm, *c*,

the parts *b* and *c* being pivoted together. By partially rotating the shaft E in one direction the step is thrown out or down, and in the other direction the step is drawn up under the lower fixed step.

By this simple combination of instrumentalities a convenient drop-step is provided under complete control of an officer of the car or train, which affords easy egress and ingress to a car whether opposite a platform or not.

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

1. The combination, substantially as hereinbefore set forth, with the fixed steps of a railway-car, of a drop-step operated by rock-shaft, rigid arm, and connecting link, behind the fixed steps, and a lever extending to the platform.

2. The combination of a drop-step, connecting-rod, vibrating arm, rock-shaft, and hand-lever extending to the platform, the combination being and operating as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES W. PERKINS.

Witnesses:

JOHN T. KEYWORD,  
WARREN C. STONE.