

(No Model.)

J. W. GRAHAM.
EXTENSION CAR STEP.

No. 395,825.

Patented Jan. 8, 1889.

Fig. 1.

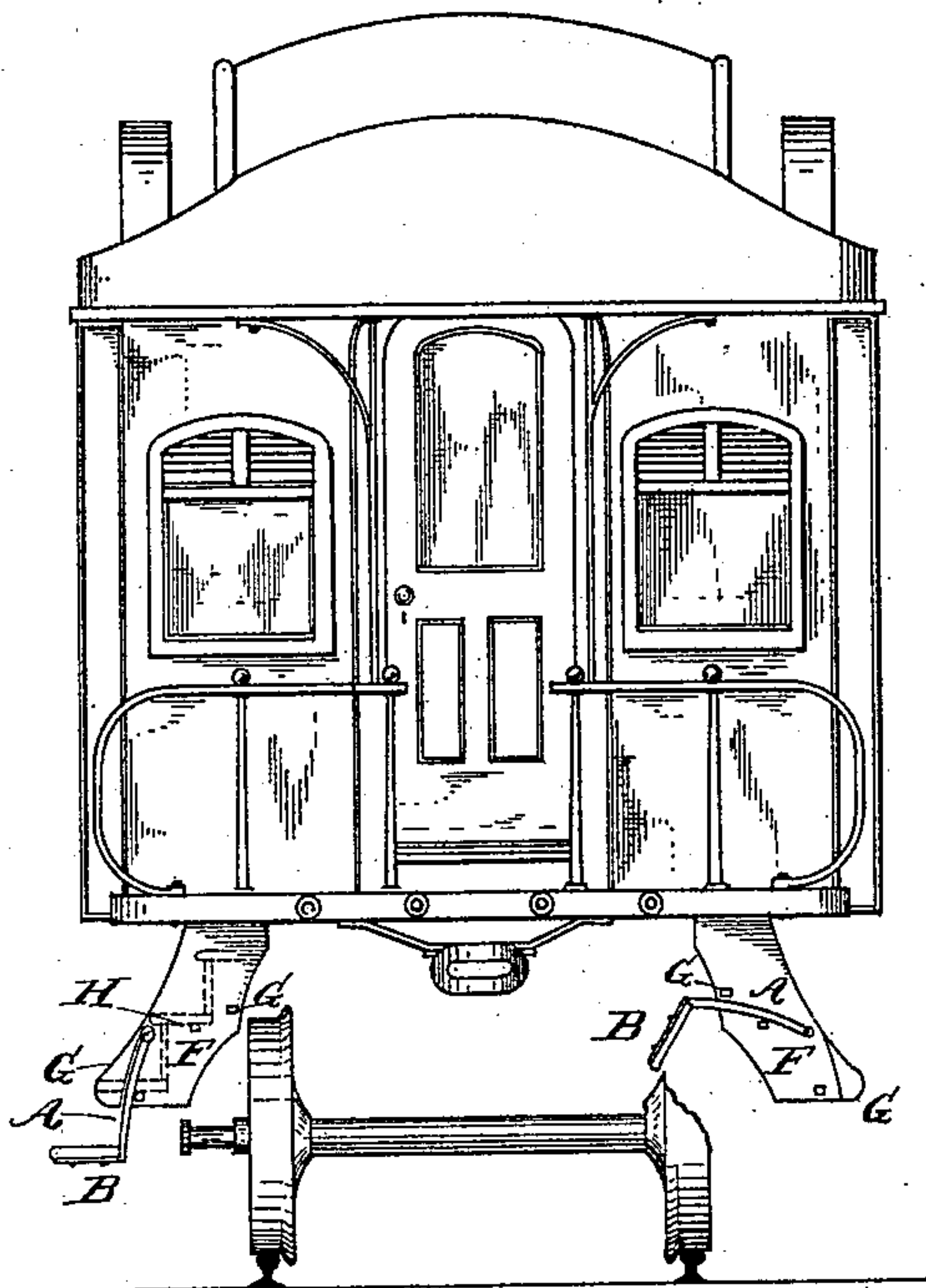
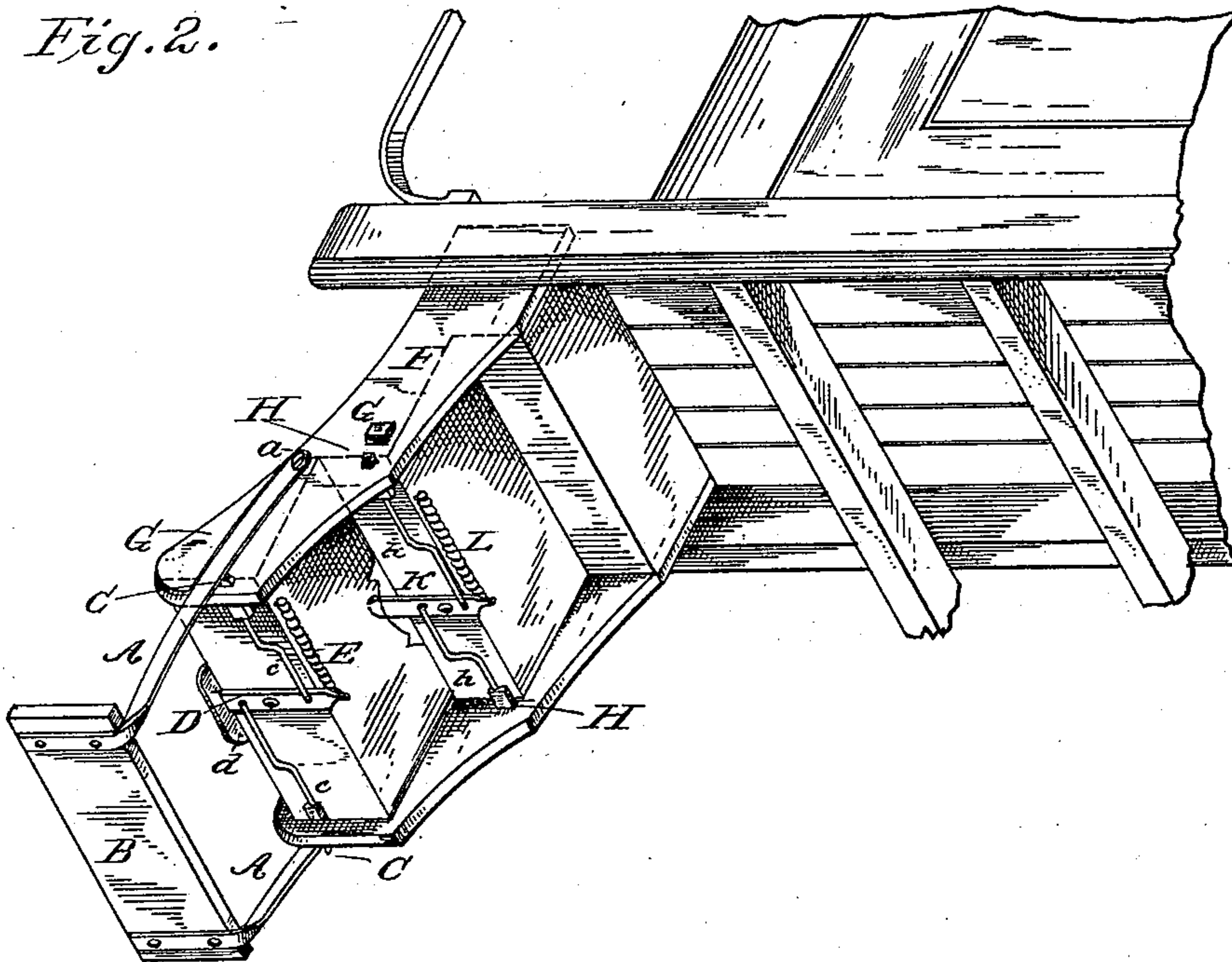


Fig. 2.



Witnesses.
Harry Ferris
as mchey

Inventor.
John W. Graham
By his Attorneys
Whittelsey Wright

UNITED STATES PATENT OFFICE.

JOHN W. GRAHAM, OF NYACK, NEW YORK.

EXTENSION CAR-STEP.

SPECIFICATION forming part of Letters Patent No. 395,825, dated January 8, 1889.

Application filed May 8, 1888. Serial No. 273,245. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. GRAHAM, a citizen of the United States, residing at Nyack, in the county of Rockland and State of New York, have invented certain new and useful Improvements in Extension Car-Steps; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in steps for railway-cars; and the object of my device is to provide an extensible tread-board or step in addition to those ordinarily in use, by means of which the first step is brought to a convenient distance from the railway-platform and renders unnecessary the cumbersome and dangerous stepping boxes or stools now in use, and at the same time is capable of being quickly thrown back into such a position as to render it impossible for it to come in contact with objects alongside the track when the car is in motion between stations.

In the accompanying drawings, which illustrate my invention, Figure 1 is an end elevation of a railway-car, showing my device applied to the steps; and Fig. 2 is a perspective view showing the mechanism in detail, by means of which my extensible step is operated.

Similar letters refer to similar parts in both figures.

To the outside of the string-boards of the ordinary car-steps are suspended by hangers A of suitable length and shape the additional tread-boards B. The hangers turn upon shoulder-bolts *a*, passing through the string-boards and rigidly connected to the tread-board B, having been bent at such an angle as to bring the tread-board B parallel with the treads of the other steps when the same is lowered into position for use. The extensible step is held in its lowered position by spring-catches C, connected with the lever D by rods *c*. The spring-catches are held normally outward by the spring E, attached to the lever D and the bottom of the tread-board of the lower step. Upon the string-pieces F are secured buffer pieces or stops G, to prevent the

extensible step from passing farther than a horizontal position after being lowered, or, when in a raised position, from jumping up and down. When the extensible step is in its lowered position, it will be seen that only an ordinary elevation of the foot is required to reach the steps of the car. When the extensible step is no longer wanted and the train is ready to leave the station, the spring-catches are withdrawn by means of the lever D and its handle *d*, and the tread-board B is swung backward and upward until the hangers A pass over and above the spring-catches H, which are held normally outward by the spring L, and retain the extensible step in a position secure from injury. When desired, the extensible step is released by a slight movement of the lever K, which withdraws the spring-catches H by means of connecting-rods *h*, thus allowing the extensible step to drop into the position shown in Fig. 1.

It will be seen that the device is securely locked in either position, and that the extensible steps on the same side of connecting cars can be lowered or raised by one person standing between them.

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

1. A railroad-car provided with an extensible step rigidly secured to pivoted hangers, and spring-catches for retaining said hangers and step in both their raised and lowered positions, substantially as set forth.

2. The combination, with the steps of a car, of the hangers A, pivoted to the steps, the tread-board B, supported by the hangers, the spring-catches C, for locking the hangers when lowered, and the spring-catches H, for locking the hangers when raised, substantially as described.

3. The combination of the pivoted hangers A, supporting the tread-board B, of the catches C H, the levers D K, the rods *c h*, connecting the catches with the ends of the levers, and the springs E L, attached to the levers, substantially as described.

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

JOHN W. GRAHAM.

Witnesses:

L. G. CLARK,
GEORGE W. ESSEX.