

No. 675,983.

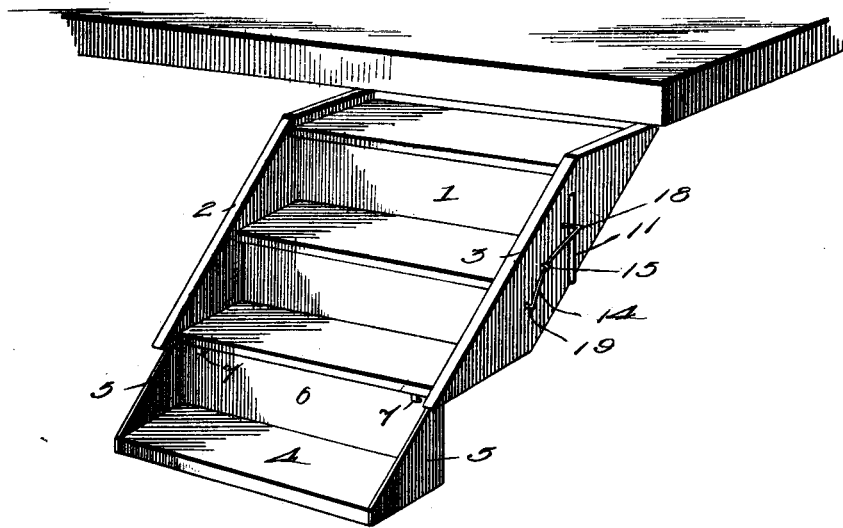
Patented June 11, 1901.

R. C. SMITH.  
EXTENSION STEP FOR RAILWAY CARS.

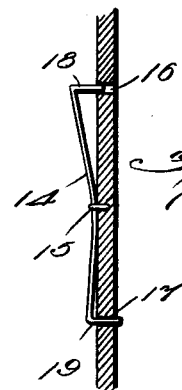
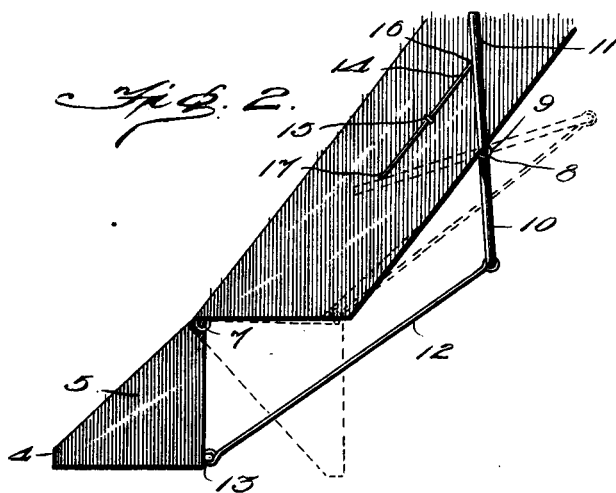
(Application filed Oct. 24, 1900.)

(No Model.)

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

Witnesses  
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# UNITED STATES PATENT OFFICE.

RUFUS C. SMITH, OF CHATTANOOGA, TENNESSEE.

## EXTENSION-STEP FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 675,983, dated June 11, 1901.

Application filed October 24, 1900. Serial No. 34,212. (No model.)

*To all whom it may concern:*

Be it known that I, RUFUS C. SMITH, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented new and useful Improvements in Extension-Steps for Railway-Cars, of which the following is a specification.

My invention relates to extension-steps for railway-cars, the object being to provide a simple and effective device of this character which may be constructed at small expense and readily applied to the car-steps in common use.

A characteristic feature of the invention is that the rod which connects the movable step to the crank which operates it also serves as a brace for said step when the latter is unfolded or extended.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and its novel features will be defined in the appended claim.

In the drawings, Figure 1 is a view in perspective of a car-stairway equipped with my improvement. Fig. 2 is a side elevation of the same, the folded position of the movable step being shown by dotted lines; and Fig. 3 is a sectional view showing the device for securing the step in either its folded or extended position.

The reference-numeral 1 designates the usual stationary steps or stairway of a car-platform, and 2 and 3 the sides thereof.

The supplemental movable step consists of the step proper, 4, triangular side pieces 5, and a back or riser 6. The riser 6 is secured below the bottom stationary step by hinges 7.

8 designates a rock-shaft supported on the under edges of the sides 2 and 3 of the stairway in loops or keepers 9 and formed midway of its length with a bend or crank-arm 10 and at one of its ends with a lever crank-handle 11. The crank-arm 10 is connected to the inner side of the lower edge of the riser 6 by a rod 12, one end of which is loosely secured to the crank-arm, while its opposite end is loosely secured to an eye 13, projecting centrally from the lower edge of the riser 6.

To secure the supplemental step in either

its folded or unfolded position, I employ a double-acting rod 14, of resilient metal, secured centrally by means of an eye or staple 15 to the outer side of the side 3 of the stairway and having its ends bent at right angles to project through openings 16 and 17, formed in the side 3.

The bending of the ends of the catch forms shoulders 18 and 19, against which the lever 11 bears.

The utility and operation of the mechanism will be readily understood from the foregoing description in connection with the accompanying drawings. When the supplemental step is not required for use, it is turned to the position shown by the dotted lines in Fig. 2 by means of the lever 11, the latter being tilted downward to be engaged by the shoulder 19. By raising the lever to the position shown in Fig. 1 and by the full lines in Fig. 2 the movable step is swung down to its unfolded position and is held therein by the engagement of the lever 11 with the shoulder 18 of the catch device, the connecting-rod 12 serving to firmly brace the step.

I claim—

An extension-step for railway-cars comprising stationary steps having sides, one of the sides being provided with upper and lower openings, a supplemental step having a riser hinged to the lower step of the stationary steps, a rock-shaft supported on the lower edges of the sides of the stationary steps, having a crank-arm midway of its length and a crank-handle working alongside one of the sides of the stationary steps, a rod connected at its lower end with the lower edge of the riser of the supplemental step, a double-acting rod of resilient metal having its ends bent at right angles and working in the openings, and a staple whereby the rod is centrally secured in line with the side to which it is secured; the rod being adapted to retain the crank-handle in either its upper or lower position.

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

RUFUS C. SMITH.

Witnesses:

A. J. EAST,  
SAMUEL WALLACE.