M. L. HENDRICKS.

EXTENSION STEP.

APPLICATION FILED JUNE 13, 1913.

1,101,437. Patented June 23, 1914.

Fig. 1.

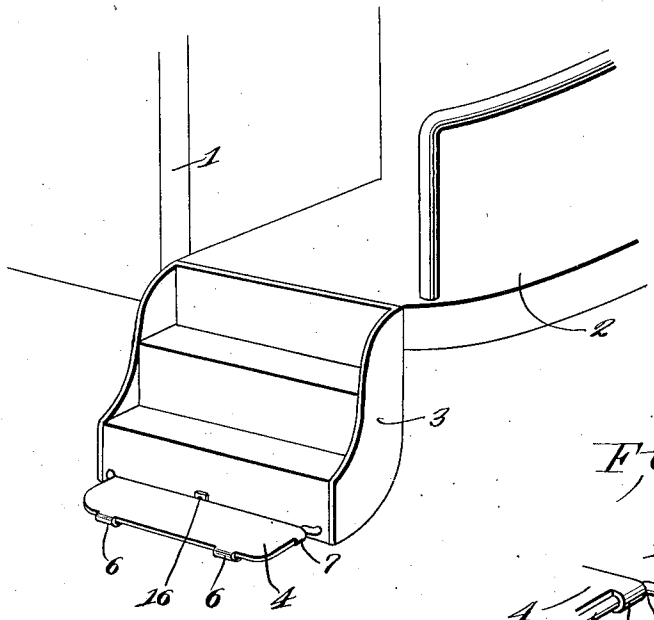


Fig. 4.

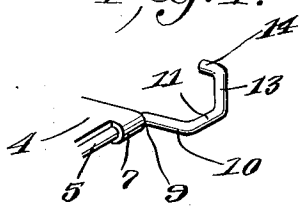


Fig. 2.

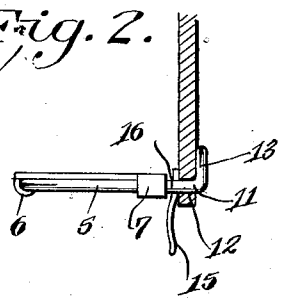
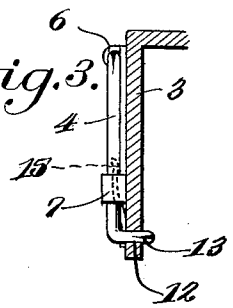


Fig. 3.



Witnesses

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EXTENSION-STEP.

1,101,437. Specification of Letters Patent. **Patented June 23, 1914.**

Application filed June 13, 1913. Serial No. 773,498.

To all whom it may concern:

Be it known that I, MARTIN L. HENDRICKS, a citizen of the United States, residing at Golden Prairie, in the county of Laramie and State of Wyoming, have invented certain new and useful Improvements in Extension-Steps, of which the following is a specification.

This invention relates to railway rolling stock, and more especially to car steps; and an object of the same is the production of an improved folded extension step whereby the step at the ends of a passenger car may be easily extended when a passenger is boarding or alighting from a train, and one which may be quickly reduced to its normal conditions at other times.

With the foregoing and other objects in view, this invention consists in such novel features of construction, combination, and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters of reference designate like or corresponding parts throughout the several views, and in which,

Figure 1 is a detail perspective view of a portion of a car showing the improved extension in an outward position; Fig. 2 is a detail cross-sectional view through Fig. 1; Fig. 3 is a detail cross-sectional view showing the improved step folded and the ordinary car steps in their normal conditions; and Fig. 4 is a detail perspective view showing the manner of connecting the improved extension steps to the ordinary car steps.

In the drawings the numeral 1 designates any type of car which has a rear platform 2 and steps 3 extending outwardly and downwardly therefrom. In most instances it is necessary that the steps 3 be of a definite height so as to prevent their engaging articles along the highway, and they are consequently so high that the mounting thereof of persons either boarding or alighting from the car is rather difficult. To overcome this difficulty, an auxiliary step 4 is pivotally connected to the outer side of the riser of the lowermost step of the series of the permanent steps, and is constructed of any suitable material having a metallic rod 5 extending about its outer edge and held in place by tongues 6 and 7 which are formed integral with the steps 4 and folded over the rod 5, as is shown in Fig. 3 of the drawings. The tongues 7 are formed upon the ends of the step 4 and near their inner ends, as is clearly shown in the drawings. The ends of the rod 5 are bent outwardly at right angles to the portion of the rods which are arranged alongside of the ends of the step 4, as at 9, and are again bent outwardly at 10 and form straight portions 11 which are parallel to the portion of the rod which extends along the ends of the step 4. The portions 11 of the rod 5 are inserted through openings 12 in the riser of the lower step of the series of permanent steps 3 when the step is in an outwardly extending position, as is shown in Figs. 1 and 2 of the drawings, the portion 13 of the rod 5 which is bent upwardly from the portions 11 is seated in the openings 12 allowing the step 4 to engage the side of the riser, as is clearly illustrated in Fig. 3. The extreme ends of the rod 5 are bent at right angles to the portion 13, as at 14, and form means for preventing the sections 13 of the rod from moving out of the openings 12.

A flat spring 15 is provided for holding the step in a folded position, as is clearly shown in the drawings, the same being pivotally mounted at 16 to the side of the riser of the lowermost of the steps 3 and is swung upwardly for engagement with the surface of the step 4 when the latter is folded.

In practical fields, certain minor features of construction, combination, and arrangement of parts may necessitate alterations to which the patentee is entitled, provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:

1. In a step structure, a flight of steps, a riser depending below the lowermost step of the flight, a folding step, and a rod pivotally connecting said folding step to said riser and havings its ends formed for coaction against the step structure for supporting the folding step in an operative position.

2. In a step structure, a flight of steps, a riser depending below the lowermost step of the flight, a folding step, a rod pivotally connecting said folding step to said riser and having its ends formed for coaction against the step structure for supporting the folding step in an operative position, and

means carried by said riser for engagement with the folding step for retaining it in an inoperative position.

3. The combination with the permanent steps of a car, of a step pivotally connected to the side of the lowermost of said permanent steps, a rod extending around the outer edges of said pivoted step, and means formed upon the end of said rod for holding said pivoted step rigidly in an extended position.

4. The combination with the permanent steps of a car, of a step pivotally connected to the side of the lowermost of said permanent steps, a rod extending around the outer edges of said pivoted step, means formed upon the end of said rod for holding said pivoted step rigidly in an extended position, and means for holding said pivoted step against the side of said permanent step when the same is not in use.

5. The combination with the permanent steps of a car, of a step pivotally connected to the side of the lowermost of said permanent steps, a rod extending around the outer edges of said pivoted step, means formed upon the end of said rod for holding said pivoted step rigidly in an extended position, means for holding said pivoted step against the side of said permanent step when the same is not in use, tongues formed upon said pivoted step and bent about said rod for securely holding the latter in engagement with said step.

6. The combination with the permanent steps of a car, of a step pivotally connected to the side of the lowermost of said permanent steps, a rod extending around the outer edges of said pivoted step, means formed upon the end of said rod for holding said pivoted step rigidly in an extended position, a flat spring pivotally connected to the side of the lowermost of said permanent steps and engaging said pivoted step for holding the same against the side of said permanent step when not in use.

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

MARTIN L. HENDRICKS.

Witnesses:
H. L. NOYES,
JOHN L. PEDDYCOART.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."