C. W. SEITZ.

EXTENSIBLE CAR STEP.

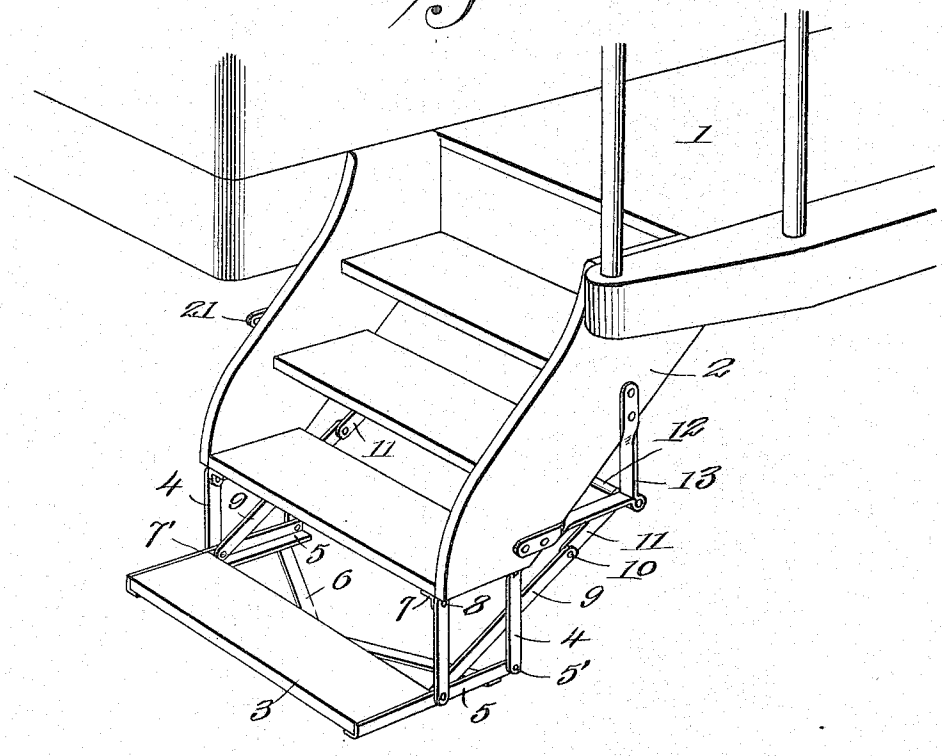
APPLICATION FILED APR. 15, 1914.

1,129,238.

Patented Feb. 23, 1915.

2 SHEETS—SHEET 1.

Fig. 1.



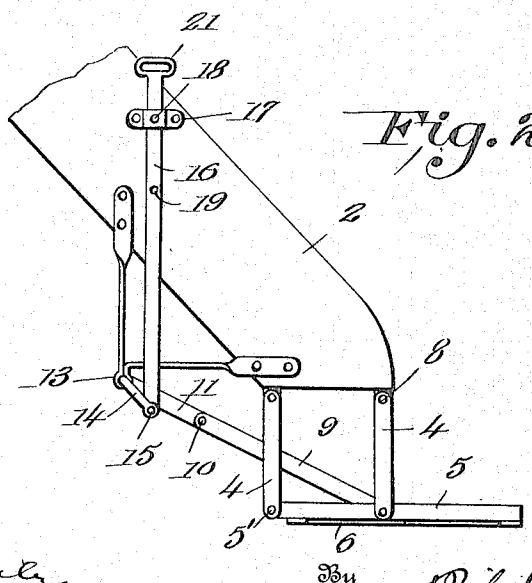




Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

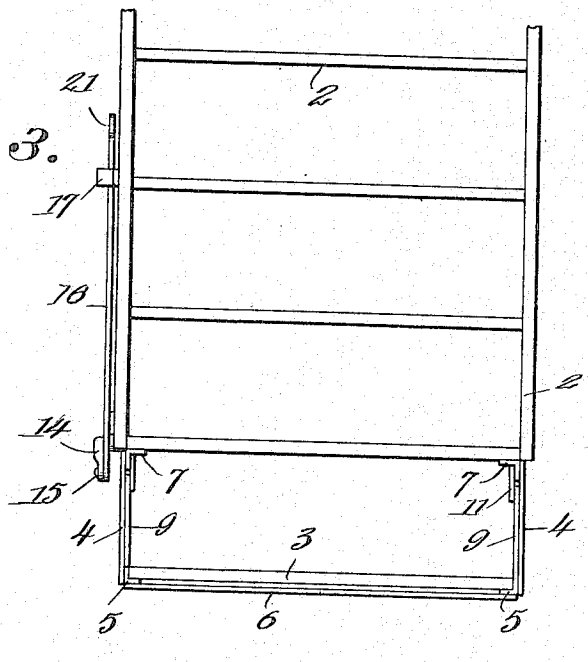



Fig. 4.

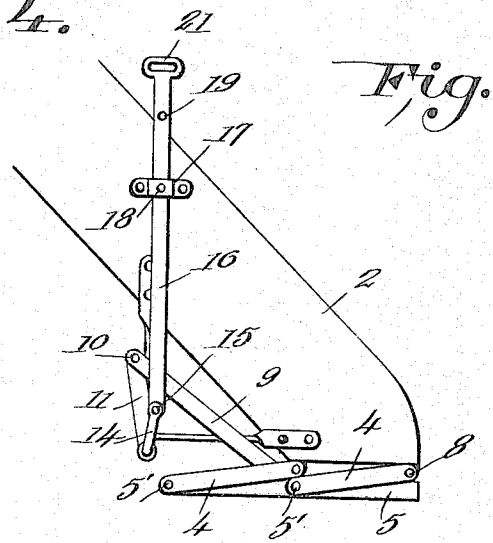
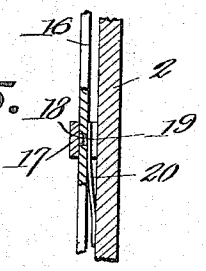



Fig. 5.




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# UNITED STATES PATENT OFFICE.

CHARLES W. SEITZ, OF WALLACE, KANSAS.

## EXTENSIBLE CAR-STEP.

1,129,238. Specification of Letters Patent. Patented Feb. 23, 1915.

Application filed April 15, 1914. Serial No. 832,082.

*To all whom it may concern:*

Be it known that I, CHARLES W. SEITZ, citizen of the United States, residing at Wallace, in the county of Wallace and State of Kansas, have invented certain new and useful Improvements in Extensible Car-Steps, of which the following is a specification.

My invention relates to an extensible car step for railway cars or the like, said step being adapted to fold out of the way when the car is in motion and to be let down into position for use when the car is at a stop.

The invention consists in the construction, combination and arrangement of the various parts hereinafter described and pointed out in the claims, reference being had to the accompanying drawings, wherein:

Figure 1 is a perspective view illustrating the application of the invention, the extensible step being shown in extended position; Fig. 2 is a side elevation of the device as illustrated in Fig. 1; Fig. 3 is a front elevation; Fig. 4 is a view similar to Fig. 2, the extensible step being folded; and Fig. 5 is an enlarged fragmentary sectional view illustrating the manner in which the step is locked immovable when folded.

Like letters of reference indicate like parts throughout the several views in the drawings.

Proceeding now with the detail description, 1 designates the platform of an ordinary railway car or coach, the said platform having the usual steps 2 leading therefrom. The auxiliary or extensible step designated 3 is normally held folded beneath the lowermost step of the stationary car steps 2 through the medium of links 4 pivoted to angle irons 5 as indicated at 5′ and to brackets 7 as indicated at 8, the said brackets being rigid with the lowermost of the said car steps 2. The angle irons 5, as is apparent upon reference to Fig. 1 of the drawings, in the extended position of the step 3, are of a length sufficient to extend beneath the lowermost of the car steps 2, the said extended portions being braced as indicated at 6. Pivoted as at 7′ to each angle iron 5 is a suitable link 9, the latter being pivoted at its opposite end as at 10 to a second link 11 rigid with a rod 12 journaled within brackets 13 suspended from the sides of the car steps 2 as shown. The said rod, at one end, as indicated at 14 is bent at a right angle, the free end of the bent portion being pivoted as at 15 to an operating lever 16 extending vertically at one side of the car step 2 and through a keeper 17 rigid with the said step. A lug or pin 18 is rigid with the keeper 17 which lug, in the extended position of the extensible step, is alined with an opening 19 of the lever 16, the latter being forced, by means of a leaf spring 20 and as illustrated to advantage in Fig. 5, against the keeper 17 causing the lug 18 to fit the said opening whereby to lock the lever immovable and the step 3 extended. A suitable handle 21 may be provided for the said lever.

In operation, when it is desired that the auxiliary step be swung or moved from the position indicated in Fig. 4 to the position indicated in Fig. 2, the lever 16 is grasped by the handle 21, forced downwardly until the opening 19 is alined with the lug 18, in which event, spring 20 will cause said lug to fit said opening and lock the lever immovable. As the lever 16 is forced downwardly, rod 12 is partially rotated, causing links 11 to move forwardly and to in turn move links 9 attached to the auxiliary step. The forward movement of the links 9 will lower and extend the auxiliary step, which, when in final position, is so arranged relatively to the lowermost of the car steps 2 as to assume the position indicated in Fig. 2, the links 4 being parallel and in a vertical position to effectually support the said auxiliary step immovable. To raise or fold the said auxiliary step, a reverse operation of lever 16 should be executed.

From the foregoing, taken in connection with the accompanying drawings it is apparent that the links 9 and 11, in the extended position of the step, are alined while the operating lever 16 is held immovable by reason of the engagement of the lug 18 therewith; that if desired, the operating lever may be extended to be conveniently operated by a person standing upon the car steps 2; and that the links 9 and 11 by reason of their relative disposition in the extended position of the step serve as a means whereby the said step cannot be projected forwardly a greater distance than is desired.

In reduction to practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment is the most efficient and practical; yet realizing that the conditions concurrent with the

adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as defined in the appended claims.

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

1. In combination with the stationary steps of a car, an auxiliary step, means connecting the lowermost of the said steps and the said auxiliary step, an operating lever, guide means for said lever, the said lever having an opening formed therein, means operable through movement of and connected to the lever for moving the said auxiliary step relatively to the stationary steps, and a lug rigid with the guide means and adapted for engagement with the opening in the lever to serve as a locking means to maintain the auxiliary step in its normal folded position, as and for the purpose set forth.

2. In combination with the stationary steps of a car, an auxiliary car step, support means for the said auxiliary step, said support means projecting rearwardly of said steps, links pivoted to the stationary car steps and to the projected portion of the said support means, a rod, means connecting the said rod with the said support means of the step, a right angled extension at one end of the said rod, an operating lever pivoted to said extension, a bracket rigid with the car step through which the operating lever extends, means operating within the bracket to lock the said lever immovable in the folded position of the auxiliary step, movement of said lever, when unlocked adapted to project the said auxiliary step forwardly and downwardly relatively to the lowermost of the said stationary steps, as and for the purpose set forth.

3. In combination with the stationary steps of a car, an auxiliary car step, means operable to move said auxiliary step relatively to the lowermost of said stationary steps, an operating lever actuatable to control movement of said operating means, means upon said stationary steps serving as a guide for said operating lever, said operating lever having an opening formed therein, a lug upon said last mentioned means fitting said opening in the folded position of the said auxiliary step to lock the said lever immovable, said lever when unlocked being movable to project said auxiliary step forwardly and downwardly relatively to the lowermost of the said stationary steps, as and for the purpose set forth.

4. In combination with the stationary steps of a car, an auxiliary car step, links pivoted at one end to the lowermost of the stationary steps and at their opposite end to the said auxiliary step, said links serving as a support for the said auxiliary step, a rod, a right angled extension at one end of said rod, means connecting said rod with said auxiliary step to move the latter upon actuation of said rod, an operating lever pivoted to the free end of said right angled extension, a keeper rigid with the stationary steps through which the said operating lever extends, said operating lever having an opening formed therein, a lug upon said keeper engageable with the said opening to lock the said lever immovable in one position of the step, spring means engageable with said lever to maintain the latter in engagement with said keeper, a movement of said lever when unlocked adapted to actuate said rod and move said auxiliary step relatively to the lowermost of the stationary car steps, as and for the purpose set forth.

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

CHARLES W. SEITZ.

Witnesses:

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