(No Model.)

L. W. SHELDON.

CAR STEP.

No. 369,129. Patented Aug. 30, 1887.

Fig. 1.

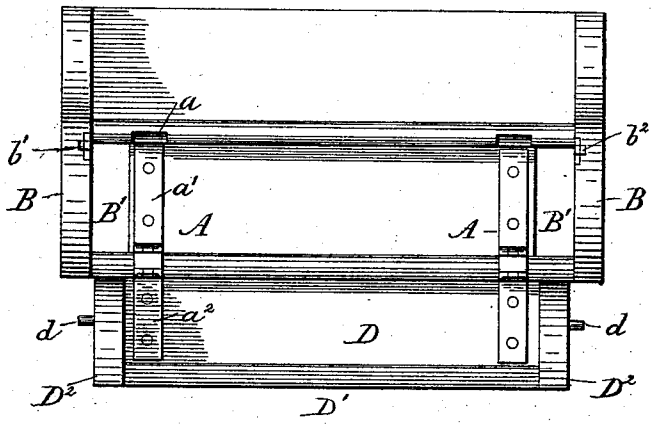


Fig. 2.

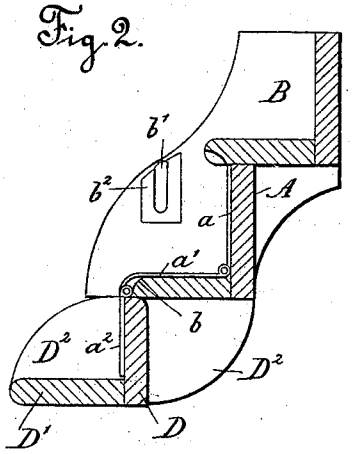


Fig. 3.

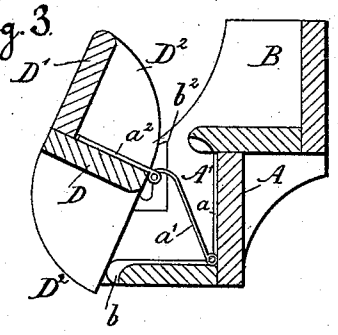
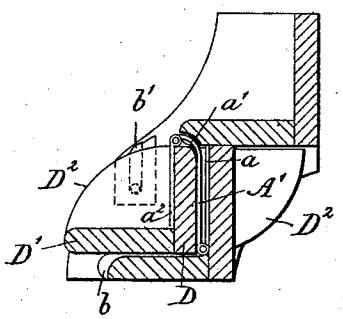


Fig. 4.



WITNESSES:

D. C. Reusch.

C. Sedgwick

INVENTOR:

L. W. Sheldon

BY Munn & Co.

ATTORNEYS.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

LEWIS W. SHELDON, OF NEW YORK, N. Y.

CAR-STEP.

SPECIFICATION forming part of Letters Patent No. 369,129, dated August 30, 1887.

Application filed May 21, 1887. Serial No. 238,985. (No model.)

To all whom it may concern:

Be it known that I, LEWIS W. SHELDON, of the city, county, and State of New York, have invented a new and Improved Car-Step, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car-steps, and has for its object to provide an auxiliary step purposed for use when the ordinary step is at too great a distance above the ground or platform, wherein when the said auxiliary step is folded up it forms an integral part of the ordinary fixed step, and wherein when folded down a regular additional step is provided substantially similar in all respects to the fixed steps.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the additional step applied and folded down, and Fig. 2 is a central vertical section of the same. Fig. 3 is a central vertical section illustrating the lower step partially folded up; and Fig. 4 is also a central vertical section, the attached or auxiliary step being illustrated as completely folded up.

In carrying out the invention the back board, A, of the last step of a railroad-carriage is cut away at the sidings B to form the rectangular apertures B′, and to the outer side of said back board at each end one section, *a*, of a three-strap hinge, A′, is secured by screws, bolts, or in any other approved manner. The second section, *a′*, of the said strap-hinges is hinged to the aforesaid section *a* at the intersection of the last step and its riser or back board, the said middle section, *a′*, of the hinges being adapted to extend transversely the face of the lower step and down over the outer edge, as shown in Figs. 1 and 2, the said step being provided with recesses *b* in the edge, whereby the outer ends of said middle sections, which are curved downward, are made to lie flush with the outer edge surface of the step, or nearly so.

The third and last section, a^2, of the hinges, connected with the downwardly-curved end of the middle section is adapted to be vertically attached to the back board, D, of an auxiliary step, D′, which step is slightly narrower than the fixed steps of the car, and the sidings D^2 thereof are extended to project inwardly beneath the last fixed step to a bearing upon the under side of the same. The sidings D^2 are made rectangular with the outer and upper end edges and the lower and inner end edges cut away to form a semicircle.

In each inner face of the sidings B vertical end slots, *b′*, are produced, partially surrounded by a metal shield, b^2, as shown in Figs. 2, 3, and 4, and in the outer face of the sidings D^2 of the auxiliary step, near the top, pins *d* are secured, adapted when the auxiliary step is folded up to enter the aforesaid slot *b′*.

In the foregoing description the auxiliary step is represented as being in position for use with the fixed steps to lessen the distance intervening the steps and the ground or platform. When, however, the cars leave a station where the said auxiliary step is made necessary, it is preferably folded up out of the way, as at the next station it may not be needed. This is accomplished, as follows, in a simple and expeditious manner:

The auxiliary step is carried upward and inward in direction of the second fixed step, as shown in Fig. 3, and is then turned down in direction of the lower step. In this latter movement that portion of the sidings D^2 of the auxiliary step which formerly projected beneath the lower fixed step enters and passes through the apertures B′. The pins *d* at the same time automatically enter the slots *b′*, and the middle section of the hinges, folding against and parallel with the first section, as shown in Fig. 4, the said auxiliary step drops down upon the lower fixed step, forming a cover for the same and acting for said fixed step.

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

1. The combination, with the main steps, of an auxiliary step, and a strap-hinge connecting said step at the top of its riser with the main steps at the juncture of the lower step with its riser, substantially as set forth.

2. The combination, with the main step, of the auxiliary step having its sides extended

to rest under the lower main step when lowered, and the strap-hinge connecting the auxiliary step at the top of its riser with the lower main step at its juncture with its riser, substantially as set forth.

3. The combination, with the lower main step having vertical slots in its riser, of the auxiliary step having side pieces to pass through said slots when the step is folded, and the strap-hinge connecting the top of the riser of the auxiliary step with the lower main step at its juncture with its riser, substantially as set forth.

4. The combination, with the main step having vertical slots in its ends and riser, of the auxiliary step having pins on the outer faces of its sidings, said sidings being extended rearward to rest against the lower face of the main step when lowered and to pass through the vertical slots in the riser when folded, and the strap-hinge having the ends of its middle section hinging at the top of the riser of the auxiliary step and at the juncture of the lower main step and its riser, substantially as set forth.

5. The combination, with the main step, the forward edge of the lower step being recessed at *b*, the riser A of which is slotted at B′, and the sidings B, having vertical slots *b′*, of the auxiliary step having its sidings D^2 extending both front and rearward, and rounded pins *d* in the outer faces of the sidings, and the strap-hinges formed of the three hinged sections *a* *a′* a^2, the forward ends of the middle sections, *a′*, being curved to enter the slots *b* when the step is lowered, substantially as set forth.

LEWIS W. SHELDON.

Witnesses:
J. F. ACKER, Jr.,
JAN. H. TARSNEY.