(No Model.)

W. H. VOSS.

EXTENSIBLE STEP FOR CARS.

No. 481,658. Patented Aug. 30, 1892.

Fig. 1.

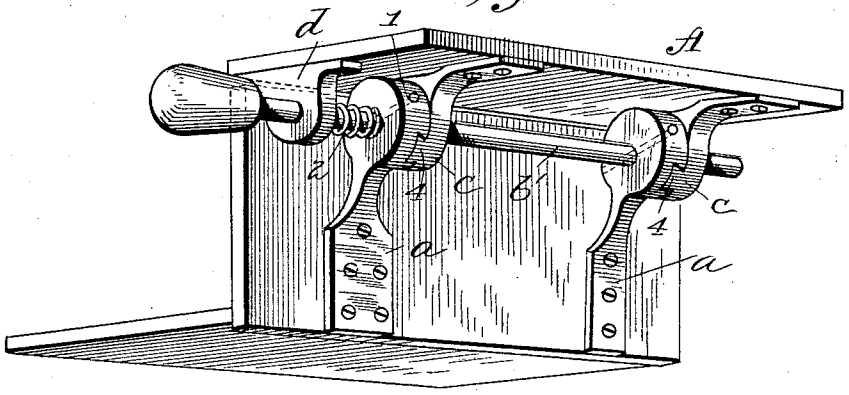


Fig. 2.

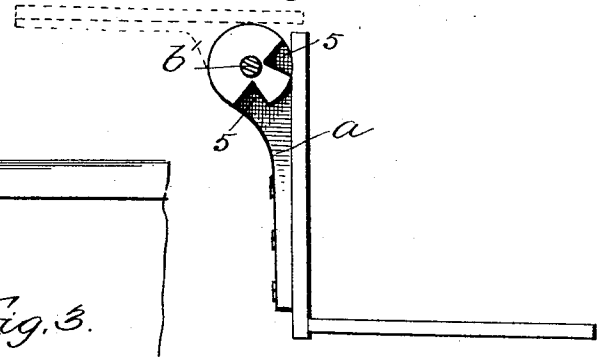
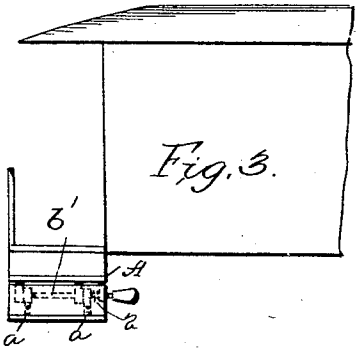


Fig. 3.



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WILLIAM HENRY VOSS, OF EAST STROUDSBURG, PENNSYLVANIA.

EXTENSIBLE STEP FOR CARS.

SPECIFICATION forming part of Letters Patent No. 481,658, dated August 30, 1892.

Application filed May 16, 1892. Serial No. 433,201. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY VOSS, a citizen of the United States of America, residing at East Stroudsburg, in the county of Monroe and State of Pennsylvania, have invented certain new and useful Improvements in Extensible Steps, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention is an improvement in car-steps and is designed to provide an additional step for use when occasion requires and to render unnecessary the lowering of the tracks in stations or the use of the movable box-steps ordinarily provided by the porters for shortening the considerable space between the lower fixed step of the cars as ordinarily constructed and the platform.

Various forms of extensible steps have been provided prior to my invention; but these have been usually complex, requiring additional operating mechanism and the additional lever or levers, and have been objectionable for this and other reasons.

My object is to provide an additional step, which may be folded out of the way when not required for use and capable of being thrown into use immediately by the porter or any unskilled person.

While I have described the invention as applied to a railway-car, I do not limit myself in this connection, as the invention is capable of use upon other kinds of vehicles, such as wagons, carriages, omnibuses, and the like.

In the accompanying drawings, Figure 1 is a perspective view of the step extended. Fig. 2 is a detail view of the step and its hanger. Fig. 3 is a detail view of the end of a car with my improved step attached.

In the drawings, A represents the fixed step, which is the lowest of the series, and it may represent any fixed step in a railway-car or other vehicle. An additional step is made up of a vertical and horizontal portion constituting a single step, and this step is secured to hangers *a*, which hangers have upper rounded ends constituting bearings which are journaled on a rod *b'*, which has its bearings in hangers secured to the fixed step, these hangers being shown at *c*. This rod has an additional bearing in a third hanger *d*, secured to the step, and the rod is secured to the hangers *b* by pins 1, passing through the same into the rod, and it will thus be seen that the rod has longitudinal movement in its bearings in the hanger secured to the fixed step, and this longitudinal movement of the rod moves the extensible step in like manner. The opposing faces of the hangers *b c* are notched, as shown, so as to form interlocking parts when the steps are in normal condition, and these locking-faces are kept together to maintain the steps either open or closed by means of the spring 2, which encircles the rod and is interposed between the face of the hanger *d* and the face of the hanger *b*. The rod terminates in a suitable handle, which projects to one side of the step, and it will be seen that by grasping this handle and drawing it out the spring is compressed and the extensible step is drawn laterally with the rod until it is out of line of the projections on the hanger *c*, and then the extensible step is permitted to be turned with the pivoted rod either into position to be used as an additional step or folded under the fixed step out of the way.

I have shown a projection 4 on each of the fixed hangers *c*, engaging notches 5 in the face of the movable hangers; but this construction may be reversed, if desired.

It will be observed that the recesses and lugs are provided with beveled faces, making practically a dovetail connection, which I have found to be a desirable construction.

I claim as my invention—

1. In combination with a fixed step provided with suitable hangers, a movable step pivoted thereto by a suitable rod, and hangers secured to the movable step and secured to the said rod, the said hangers being provided with locking-faces engaging each ether, said pivoted rod being capable of longitudinal movement with the folded step, so as to disengage the locking-faces of the hangers and to permit the step to be turned, substantially as described.

2. In combination with a fixed step, hangers carried thereby, a movable step pivoted by means of a rod to the fixed step through suitable hangers, the hangers of the fixed step being provided with locking-faces, and a spring for keeping the faces in engagement, the said rod being secured to the hangers of the movable step and adapted to be moved longitudinally against the pressure of the spring, substantially as described.

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

WILLIAM HENRY VOSS.

Witnesses:

OLIVER HEATER,

W. W. WARNE.