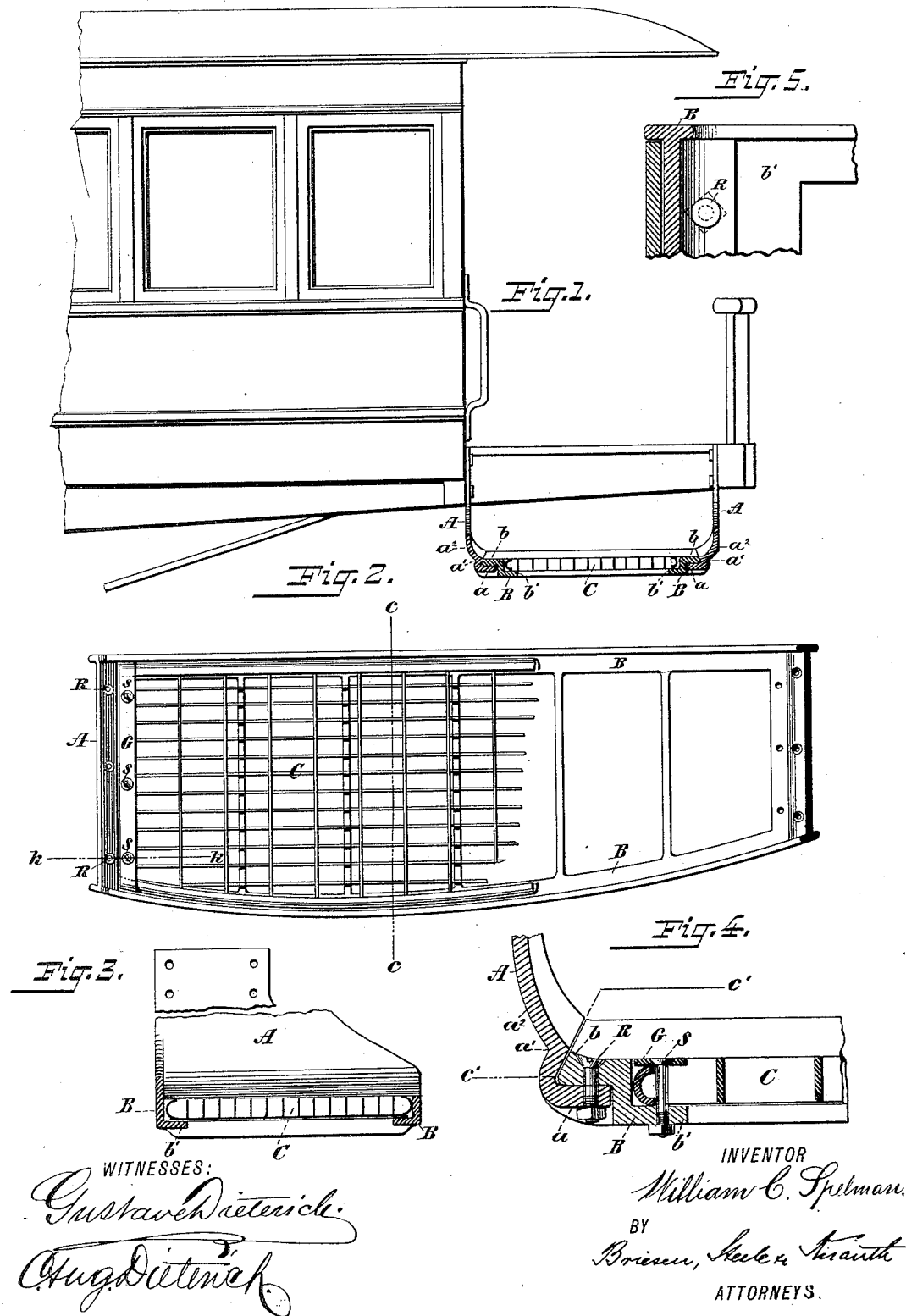


(No Model.)

W. C. SPELMAN.
CAR STEP.

No. 419,229.

Patented Jan. 14, 1890.



UNITED STATES PATENT OFFICE.

WILLIAM C. SPELMAN, OF NEW YORK, N. Y., ASSIGNOR TO THE NEW YORK
STEEL MAT COMPANY, OF SAME PLACE.

CAR-STEP.

SPECIFICATION forming part of Letters Patent No. 419,229, dated January 14, 1890.

Application filed October 30, 1889. Serial No. 328,632. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. SPELMAN, a resident of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Car-Steps, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

My invention relates to an improved construction of steps for tram or horse cars or the like; and it consists of a removable frame containing a metallic mat which may be inserted in the bearings of the removable frame.

The object of my invention is to provide a tread for car-steps which may be removable in all its parts at pleasure from the walls or supports.

My invention is illustrated in the drawings, in which—

Figure 1 is a front view of one end of a tram-car, showing the car-step partially sectional. Fig. 2 is a plan view of the frame containing the open-work metallic mat, with a portion of said mat removed. Fig. 3 is a cross-sectional view through the line *c c*, Fig. 2. Fig. 4 is a detailed cross-sectional view of the support, frame, and mat through the line *k k*, Fig. 2; and Fig. 5 is a plan view of the removable frame, but without the mat, on the line *c' c'*, Fig. 4.

A A are the walls or supports of the car-step.

B is the removable frame holding the open-work metallic mat C, composing the tread.

R are bolts for securing the frame B to the walls or supports A, and S are bolts for securing the metallic mat C to the frame B.

The side walls A A are really hangers, shaped substantially as shown in the drawings, each having a transverse ledge *a* on its inner lower part. This ledge *a* is adapted to support the frame B, which is shaped at its ends to fit snugly upon said ledges *a*. The frame B has also an inner ledge *b'*, which supports the metallic mat C, composing the tread. The frame B is an open frame of metal or

other suitable material, and for additional security it is preferable to bolt or rivet this frame to the ledges *a* in such a manner that it can be removed when worn out or broken. The metallic mat C may be bolted or riveted to the frame B in a similar manner, and a strip of metal G may serve to retain the rivet-heads that hold the mat within the frame.

In car-steps as now made the tread by constant use is worn smooth and thin and the steps rendered slippery and after continuous use easily broken. In my improved step the metallic mat forming the tread affords a firm and secure hold for the feet, and the frame in which it is held, being adapted to be removed from the walls or supports of the step, can be replaced at slight expense when worn smooth at the exposed outer edge. The metallic mat may be what is known as the "Rochester mat," formed of cross-bars of thin metal, allowing the dirt, ice, snow, or débris to fall through its perforations. It is obvious that any suitable construction of the supports, removable frame, and metallic tread may be used without departing from the spirit of my invention.

I desire to emphasize the fact that in my step the frame B is liable to be worn out before the mat proper is worn, and that for this reason I place a removable mat upon a removable frame to enable the frame to be replaced.

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

1. A car-step consisting of hangers A, removable open frame B, and removable open-work mat C, as and for the purpose set forth.

2. A car-step consisting of hangers A, having ledges *a*, removable frame B, having ledges *b*, and removable metallic mat inserted in said frame, as and for the purposes set forth.

WILLIAM C. SPELMAN.

Witnesses:

HARRY M. TURK,
FREDERIC BONN.