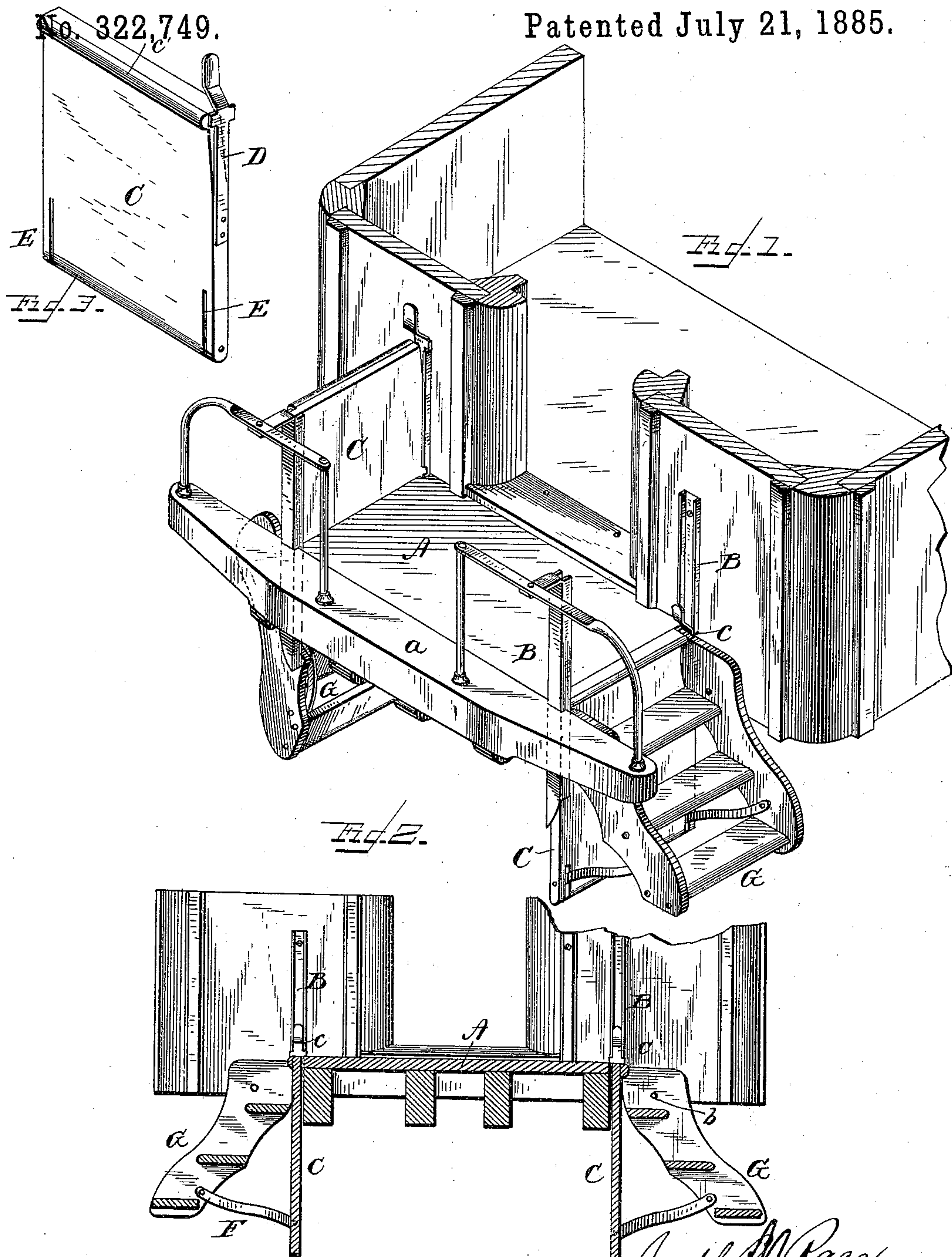


(No Model.)

J. P. RACE & E. E. GUERNSEY.

CAR STEP.

Patented July 21, 1885.



WITNESSES
F. L. O'Rand
E. H. Johnson

Joseph P. Race
E. E. Guernsey
INVENTOR
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH P. RACE AND ELMER E. GUERNSEY, OF ST. PAUL, MINNESOTA.

CAR-STEP.

SPECIFICATION forming part of Letters Patent No. 322,749, dated July 21, 1885.

Application filed May 14, 1885. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH P. RACE and ELMER E. GUERNSEY, citizens of the United States of America, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Car-Steps; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to certain new and useful improvements in gates or steps for the platforms of railway-cars, the object of our invention being to provide the side exits of the platform with gates which operate the steps so that they will fall inwardly when the fender is raised so as to be out of the way and prevent persons standing or attempting to get on the steps when the fenders or gates are raised.

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

In the accompanying drawings, which illustrate our invention, Figure 1 is a perspective view. Fig. 2 is a sectional view; Fig. 3, a detail perspective view.

A represents a car-platform, which is provided with the usual exits and hand-rails and rear transverse beam, *a*. The steps are pivotally attached to the end of the car and the ends of the rear transverse beam, *a*, by means of bolts *b b*, or otherwise, which pass through the side pieces of the steps. At the ends of the platform A the car and hand-rails have attached thereto grooved bars B, within which slides movable gates C. The grooved side pieces extend beneath the platform, as shown at Fig. 1, and on a line with the platform the guides adjacent to the end of the car are provided with notches *c* for engagement with the projecting portions of a spring-catch, D, which is attached to the edges of the gates. The upper portions of the gates are provided with a bead or projecting portion,

c', which may be attached to or formed on the gate, and the lower portions of the gates, adjacent to their edges, are provided with slots E, within which are pivoted bars F, the opposite ends of said bars being pivoted to the side pieces of the steps.

The side pieces, G G, of the steps are preferably of the shape shown in Fig. 2, so that when the gate is depressed and the steps thrown outward the upper portion of the side pieces of the step will bear against the bars B, and when turned inwardly will provide a space for the play of the rod F, which may be curved or straight, according to the shape of the step.

The operation of our invention is as follows: When the gate is raised, the movement of raising the same will draw the side pieces of the steps inwardly, so that the lifts will be almost in a vertical position. The steps and gate are held in this position by the spring-catch D, which engages with the upper portion of the guide-bars B. When it is desired to have the exit open, the spring-catches are drawn so as to bring the same out of engagement with the upper end of the guide-bar, and the gate depressed until its upper edge is on a line with the platform, which movement will throw the side pieces of the step outwardly so that the lifts will be in a horizontal position.

Our invention may be employed either upon street or steam cars, and will prevent persons entering or leaving the platform after the cars start. The gates may also be closed so as to only leave an entrance and exit on one side. It will be also noticed that the steps when not in use are in an almost vertical position, which will prevent snow and ice from accumulating on the same so as to render them dangerous, and also removing them out of the way of any obstructions which may be near the track.

We claim—

1. In a combined car step and gate, the vertical sliding gate attached at its lower end to the lower portion of the pivoted step, so that when the gate is raised the steps will be drawn inwardly, and the lifts thereof assume a nearly vertical position, substantially as shown, and for the purpose set forth.

2. In a railway-car, the combination of a

vertical sliding gate having a spring-catch secured to one edge of the same, and the pivoted steps connected by a bar to the lower portion of the gate so that when the gate is raised the
5 steps will be drawn inwardly so that the lifts thereof will assume a nearly vertical position, substantially as shown, and for the purpose set forth.

3. In combination with a sliding gate, the
10 grooved side bars extending below the platform and provided with notches, bars F F

pivoted to the lower end of the gate and to the pivoted side pieces of the steps, substantially as shown, and for the purpose set forth.

In testimony whereof we affix our signatures 15
in presence of two witnesses.

JOSEPH P. RACE.

ELMER E. GUERNSEY.

Witnesses:

S. P. CROSBY,

OSCAR MALMSTROM.