

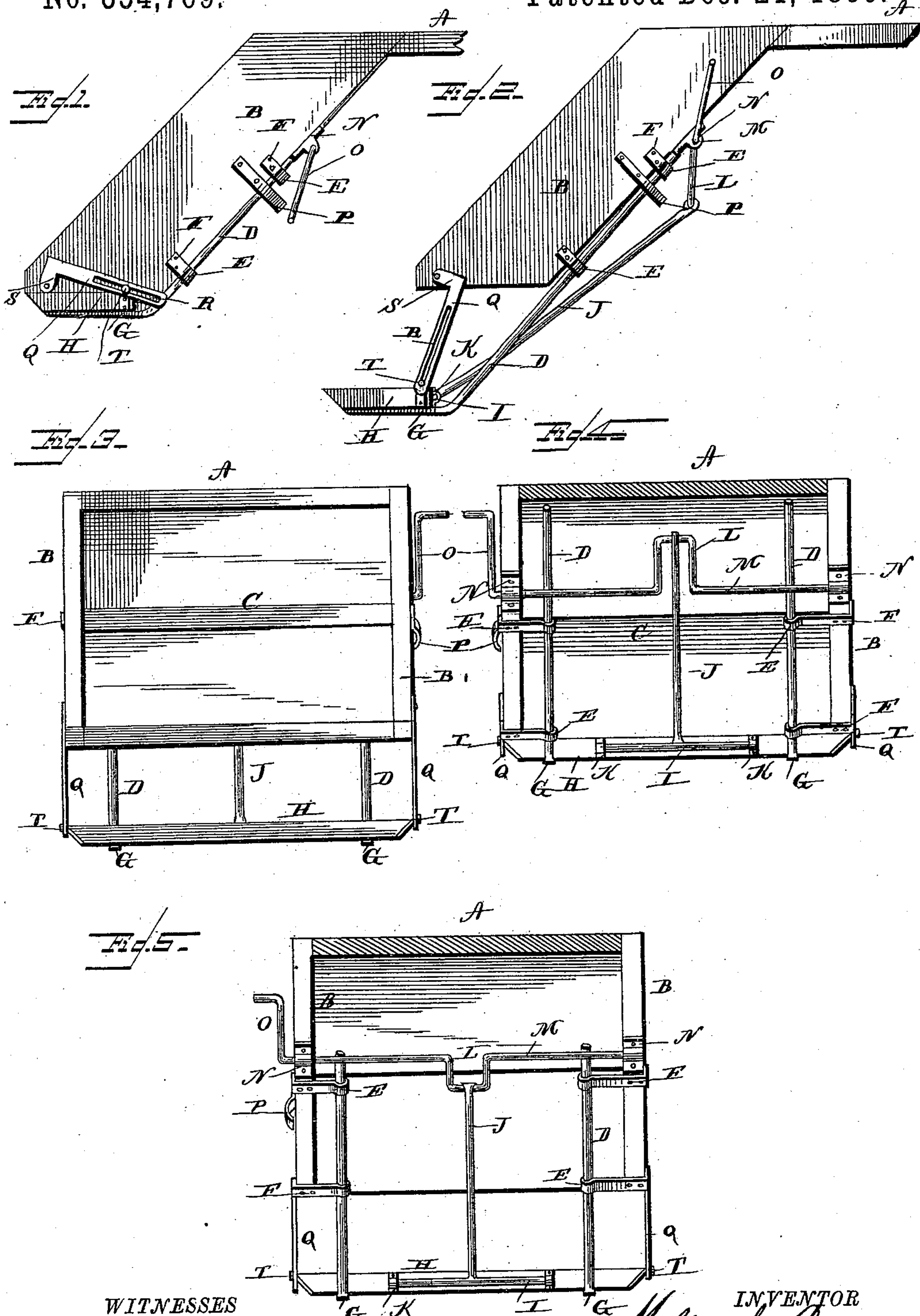
(No Model.)

M. E. COMPANY.

STEP FOR PASSENGER COACHES.

No. 354,769.

Patented Dec. 21, 1886.



WITNESSES

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UNITED STATES PATENT OFFICE.

MILTON E. CAMPANY, OF MUSKEGON, MICHIGAN.

STEP FOR PASSENGER-COACHES.

SPECIFICATION forming part of Letters Patent No. 354,769, dated December 21, 1886.

Application filed July 17, 1886. Serial No. 208,277. (No model.)

To all whom it may concern:

Be it known that I, MILTON E. CAMPANY, a citizen of the United States, and a resident of Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Extension-Steps for Passenger-Coaches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved step for railway-coaches, showing the extension-step drawn up. Fig. 2 is a similar view showing the step extended. Fig. 3 is a front view of the step with the lower step extended. Fig. 4 is a rear view showing the step drawn up, and Fig. 5 is a similar view showing the step extended.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to steps for railway passenger-coaches having a lower extensible step; and it consists in the improved construction and combination of parts of a set of steps for a passenger-coach provided with a lower step secured to rods sliding in bearings upon the rear side of the upper steps, and having a pitman and crank for raising and lowering it, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the platform of the car or coach. B B are the side pieces of the usual steps, and C are the steps.

Two rods, D D, slide in bearings E, formed in the inner ends of brackets F, secured to the rear edges of the side pieces of the steps, and the lower ends of these rods are bent outward at an obtuse angle to form horizontal portions G G, to which the extensible step H is secured. The cross-head I at the lower end of a pitman, J, is pivoted with its ends in bearings K K upon the inner or rear edge of this extensible step, and the upper end of the pitman is pivoted to a double crank, L, formed upon the middle of a shaft, M, journaled in bearings N N upon the rear edges of the side pieces of the steps and formed with a handle or crank, O, at one end.

A bulged downwardly-projecting spring, P, is secured to the side piece of the steps and engages the handle when the step is raised, preventing it from dropping down, and at the same time possessing sufficient elasticity to allow the handle to be forced over it when tilted upward, throwing the step down.

Arms Q Q, having longitudinal slots R in their outer portions, are pivoted at their inner rectangularly-bent ends, S, upon the side pieces of the steps at the outer lower corners of the same, and pins T T project from the inner ends of the end edges of the extensible step and slide in the slots of the arms, resting in the lower ends of the slots when the step is lowered, receiving support from the said arms.

It will thus be seen that when the handle upon the crank-shaft is thrown upward the double crank and the pitman are thrown downward, throwing the step down until the bolts or pins upon the ends of the step reach the ends of the slots in the pivoted arms, when the said extensible step will be supported, the step filling in the space between the ground and the lower step of the rigid steps, which renders the ascent of steps for railway-coaches so inconvenient without an auxiliary step or stool.

This extensible step will be more conveniently carried and handled than a stool or small platform, which may be placed upon the ground at the step, and on account of its being secured to the steps it will always be in place, even if the train should move while stopping at a station; and the step and its operating mechanism is made of so few parts, and of parts which may be made very strong and durable on account of their simplicity, that the mechanism is not liable to break or to get out of order during use.

When the step is raised, it will be out of reach of obstructions near the track similarly to the rigid steps and will occupy but slightly more space than the rigid steps, and any person descending the rigid steps when the extensible step is raised will step upon the lower step of the rigid steps without touching the extensible step, which is drawn up under the lower rigid step.

The slotted arms may be dispensed with, and the pitman may either be relied upon as support for the step or the sliding rod may be provided with suitable stops for bearing against

their bearings, which stops will limit the throw of the step and of the rods.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

5 The combination, with a rigid set of steps for a railway passenger-coach, of rods sliding in bearings upon the rear side of the said steps and having horizontally-bent lower ends,
10 a step secured to the said horizontal ends and having pins projecting from its ends near the rear edge, a crank-shaft journaled upon the rear side of the rigid steps and having a double crank at its middle and a crank or handle
15 at its end, a bulged spring upon the side of the steps engaging the said handle, a pitman

pivoted to the double crank and with a cross-head at its lower end to the rear edge of the extensible step, and rectangularly-bent arms pivoted at their bent ends upon the forward lower corners of the side pieces of the rigid steps, and having the pins of the extensible step sliding in the slots in the outer ends, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

MILTON E. CAMPANY.

Witnesses:

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