

(No Model.)

W. H. RUSHFORTH.

CAR SIGNAL.

No. 282,569.

Patented Aug. 7, 1883.

Fig. 1.

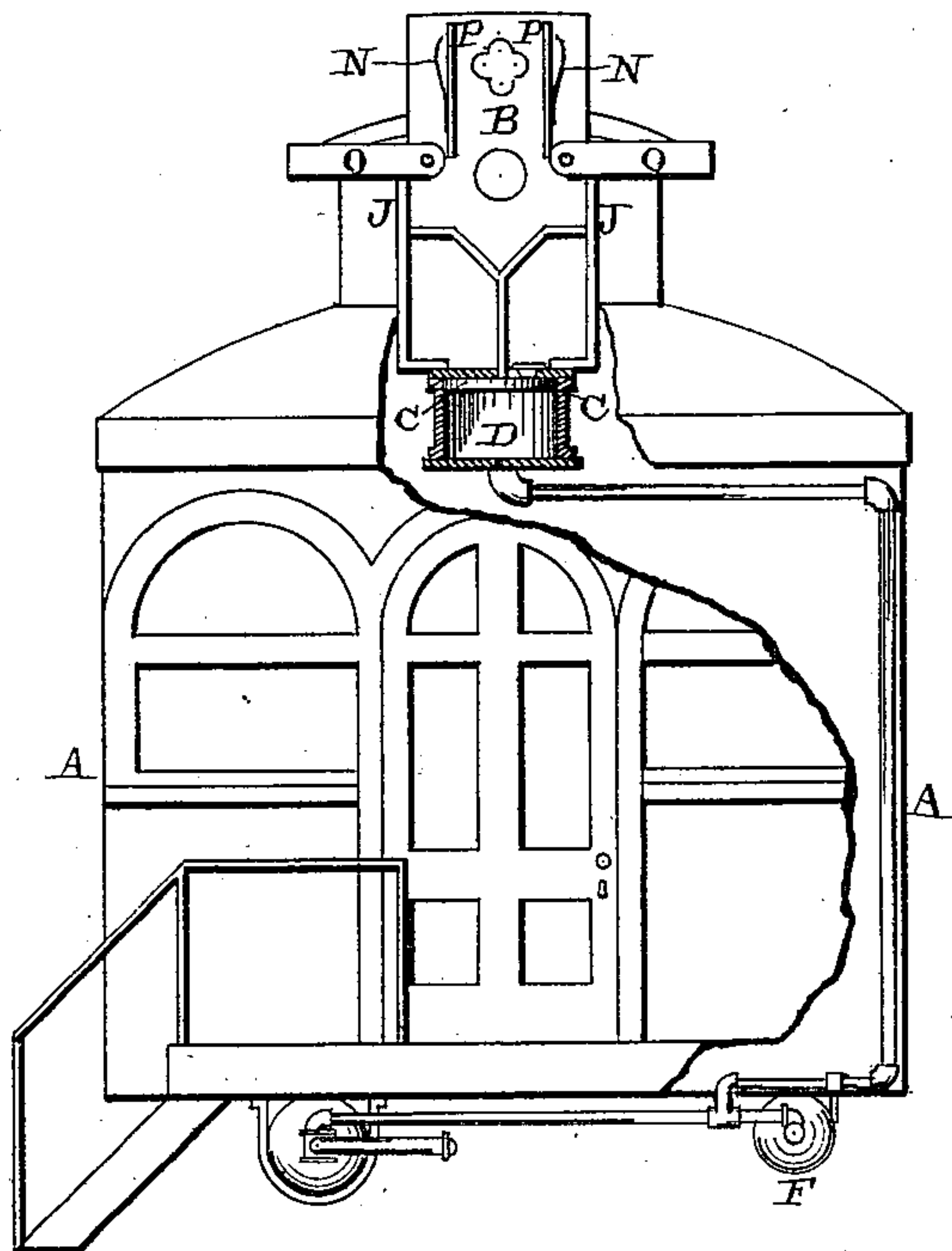
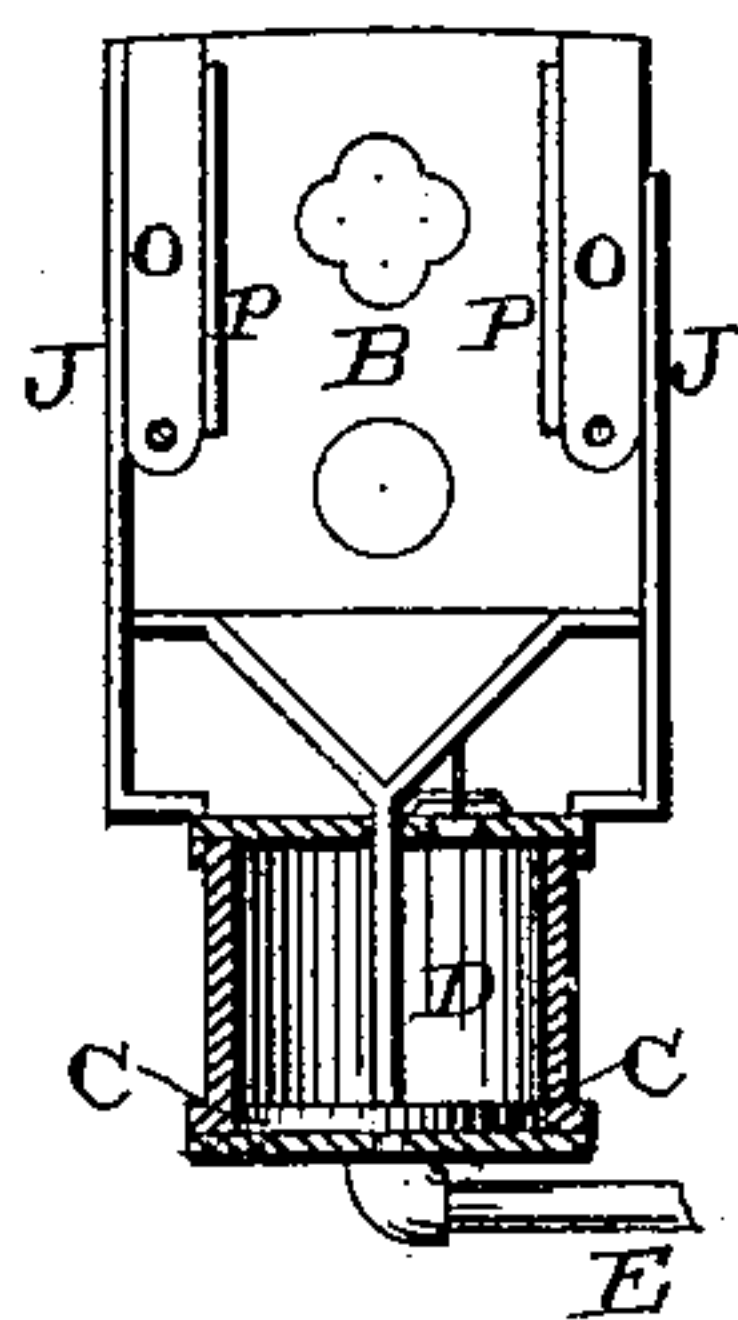


Fig. 2.



—Witnesses.—

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CAR-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 282,569, dated August 7, 1883.

Application filed October 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, WM. H. RUSHFORTH, a citizen of the United States of America, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Automatic Safety Car-Signals, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in automatic safety car-signals, and is intended as an improvement upon the application filed by me, and bearing date of March 4, 1882; and it consists in attaching to the vertically-moving slide which carries the bull's-eye two pivoted arms or signals, which, when the slide is raised upward upon the stoppage of the train, will extend horizontally outward at right angles to the slide; but which, when the car is in motion, will be closed so as to stand vertically in line with the slide, as will be more fully described hereinafter.

The object of my invention is to attach to the vertically-moving slide two arms which will drop downward and outward as soon as the car-brakes are applied, so as to indicate to trains approaching from the rear of the car that the car is standing at rest upon the track, and thus prevent all danger of the advancing train running into the car or train in front of it.

Figure 1 is an end view of my invention, showing the arms extending outward. Fig. 2 is a detail view, showing the arms closed up.

A represents a car, upon the end or any other suitable part of which is placed a signal-lantern, in front of which moves the slide B. This slide moves in suitable ways or guides prepared for the purpose, and is moved by the piston C, placed in the cylinder D. This cylinder D is connected by a pipe, E, with an auxiliary reservoir, F, which is connected with the air-brakes. When air is forced into the cylinder D, under the piston C, the piston is forced upward, carrying the slide with it, so as to change from a white to a red, or "danger," signal, and thus indicate to trains approaching from the rear of the car or train that the train upon which the signal is placed is standing at rest upon the track. The colored light answers for this purpose at night very well; but during the day, when the color of the glass

cannot be so well seen, something additional must be used which can be readily discerned at a distance, so as to enable the engineer upon the advancing train to tell whether or not the train in front of him is standing still upon the track or is in motion. For this purpose I pivot to opposite sides of the vertically-moving slide the two arms O, which, when allowed to move, drop downward and outward, as shown in Fig. 1, so as to stand at right angles to the position they occupy when the train is in motion. In order to prevent these arms from moving inward past a vertical position, the flanges P are formed upon the slide, and secured to the outer sides of these flanges are suitable springs, N, against which the arms close when the slide drops downward. These springs serve to start the arms on their downward movement as soon as the arms are left free to move, and then the weight of the arms causes them to drop downward to their full extent. The upper end of the guides J, between which the slide moves, serves to force the arms upward as the slide descends, and to hold them in the vertical position shown in Fig. 2 until the slide is again forced upward, when the train stops. After the slide has been forced upward the upper ends of the guides serve as supports upon which these arms rest while standing at right angles to the slide. As long as the arms are standing in a vertical position they indicate to the train in the rear that the train is in motion; but when the arms drop downward and extend at right angles to the slide they indicate to the approaching train that the train in front is standing upon the track. During the night the signal-lantern takes the place of these arms; but during the day the arms take the place of the signal-lanterns and indicate to the approaching train to slow up, as the train in front of it is standing at rest upon the track. The cylinder being provided with a valve for the escape of the air contained therein, the piston slowly descends, carrying the slide with it, and in proportion as the slide descends the arms are raised upward. While the car is standing at rest upon the track, and for a short distance after it is started in motion, the arms remain at right angles; but by the time the train has gotten in full motion the arms begin to close. No claim is here made to the vertically-

moving slide, the piston, nor its cylinder, as these are fully described in the application already pending.

Having thus described my invention, I
5 claim—

The combination of a suitable operating mechanism, a slide connected thereto, and adapted to be raised and lowered, and provided with suitable flanges or stops, with the

pivoted arms, and the guides for closing the 10 arms when the slide is lowered, substantially as described.

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

WM. H. RUSHFORTH.

Witnesses:

R. B. CHAMBERLIN,
F. L. BAUM.