

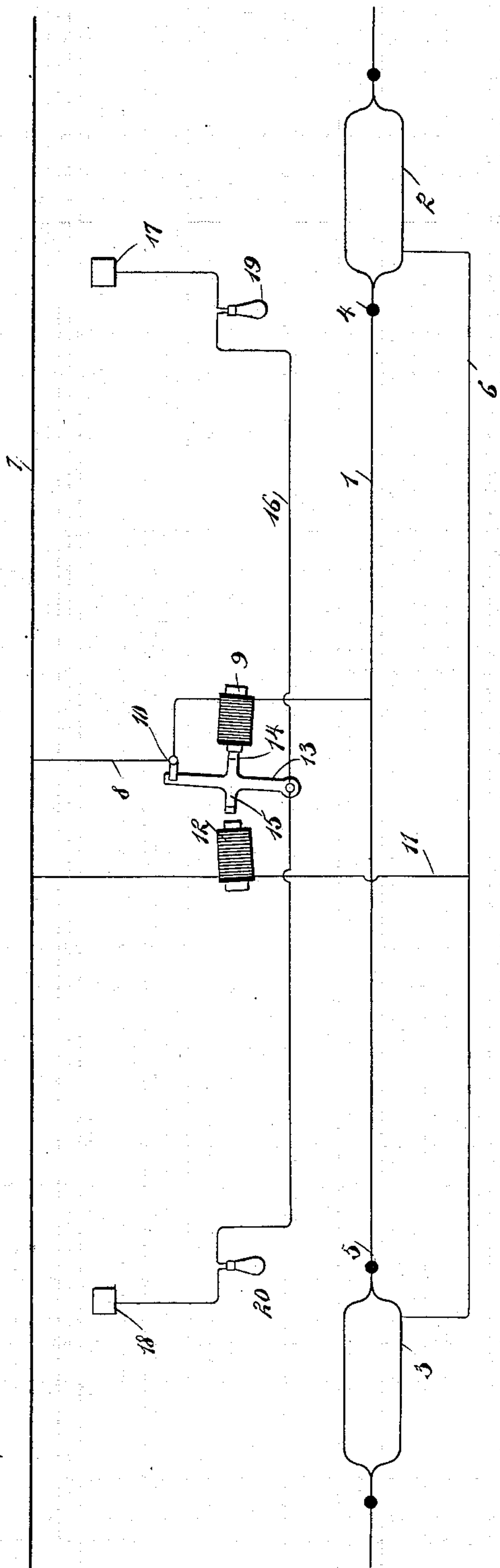
No. 615,584.

Patented Dec. 6, 1898.

W. L. STOCKTON.
BLOCK SIGNAL SYSTEM.

(Application filed Dec. 20, 1897.)

(No Model.)



WITNESSES:

H. Walker
C. Ferguson

INVENTOR

W. L. Stockton

BY

Wm. L. Stockton

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM L. STOCKTON, OF TRENTON, OHIO.

BLOCK-SIGNAL SYSTEM.

SPECIFICATION forming part of Letters Patent No. 615,584, dated December 6, 1898.

Application filed December 20, 1897. Serial No. 662,592. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. STOCKTON, of Trenton, in the county of Butler and State of Ohio, have invented a new and Improved Block-Signal System, of which the following is a full, clear, and exact description.

This invention relates to block-signal systems for electric railways; and the object is to provide a lamp at each end of the section, at the ends of which section turnout-track switches are located, and so arrange the wiring that the lamp-circuit may be energized from the main current that operates the car, and, further, to provide a simple switch operated to close the lamp-circuit while the car is on the section between the track-switches and to open the lamp-circuit when the car is on either one of the track-switches.

I will describe a block-signal system embodying my invention and then point out the novel features in the appended claim.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure is a diagrammatic view of a block-signal system embodying my invention.

Referring to the drawing, 1 designates a trolley-wire for a section between the two switch-wires 2 3. The section 1 is insulated from the switch-wires, as at 4 and 5, and the two switch-wires are connected by a wire 6. The current for the section 1 is taken from the main feed-wire 7 through a shunt 8, in which are located an electromagnet 9 and a contact-point 10. The wires 2 3 are connected to the feed-wire by a shunt 11, leading from the feed-wire to the wire 6, and in this shunt 11 is an electromagnet 12.

The electromagnets 9 and 12 are designed to operate a switch for controlling the signal-lamp circuit. This switch, as here shown, consists of an arm 13, adapted to be engaged with the contact 10. The switch-arm is located between the electromagnets, and at one side it has an armature 14, coacting with the electromagnet 9, and at the other side it has an armature 15, coacting with the electromagnet 12. To the switch-arm 13 is con-

nected the lamp-circuit wire 16, which is grounded at both its ends, as at 17 and 18, and connected to the wire 16, at the ends of the section 1, are the signal-lamps 19 20.

In operation when a car passes out of the switch 2 and enters the section 1 the circuit will be closed through the usual track or ground connections, and the current flowing through the wire 8 will energize the electromagnet 9, so that it will draw the arm 13 into engagement with the contact 10. Then a portion of the current will flow through the wire 8, the switch-arm 13, the lamp-wire 16, the lamps, and the ground connections. At this time the lamps will be lighted and indicate that a car is on the section 1 between the points 4 and 5. As the car passes onto the switch-section 3 the electromagnet 12 will be energized to draw the switch-arm out of engagement with the contact 10, thus cutting out the lamp-circuit, indicating that the section 1 is clear. Of course the same operation will take place when a car is running in the opposite direction to that indicated above.

While I have shown and described the invention in connection with a single-track system, it is obvious that it may be used in connection with a double-track system or in any system where the cars are electrically operated from a central station.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In an electric block-signal system, a feed-wire, a trolley-wire having shunt connection with the feed-wire, switch trolley-wires at the ends of the trolley-wire, but insulated therefrom, a wire connecting the switch-wires, a shunt between said connecting-wire and the feed-wire, an electromagnet in each of the shunts, a signal-circuit, and a switch operated by the electromagnets for cutting in and out a connection between the feed-wire and signal-circuit, substantially as specified.

WILLIAM L. STOCKTON.

Witnesses:

W. W. CRAWFORD,
M. SCHOENHALS.