

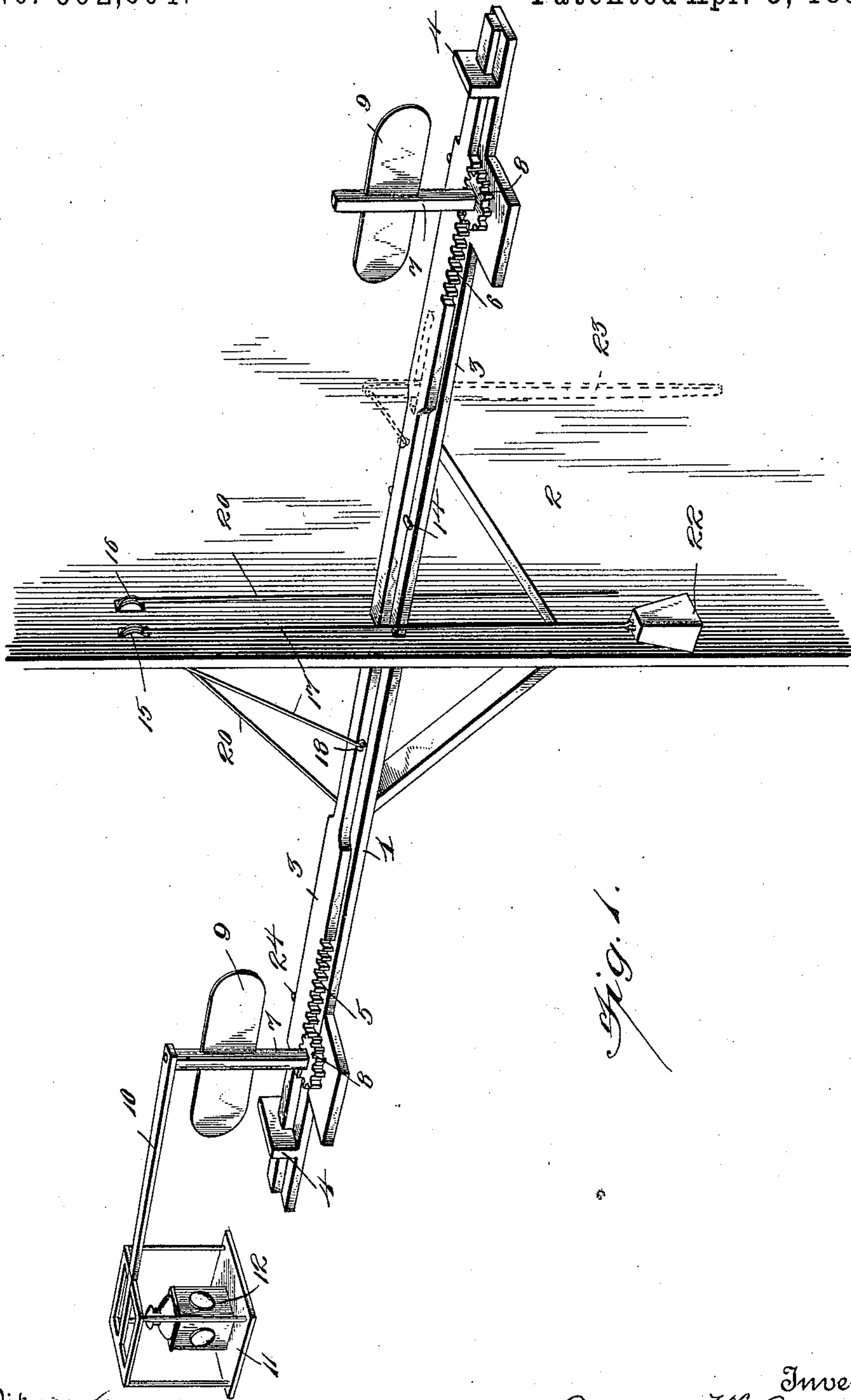
(No Model.)

2 Sheets—Sheet 1.

G. W. GREEN.
RAILWAY SIGNAL.

No. 602,004.

Patented Apr. 5, 1898.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

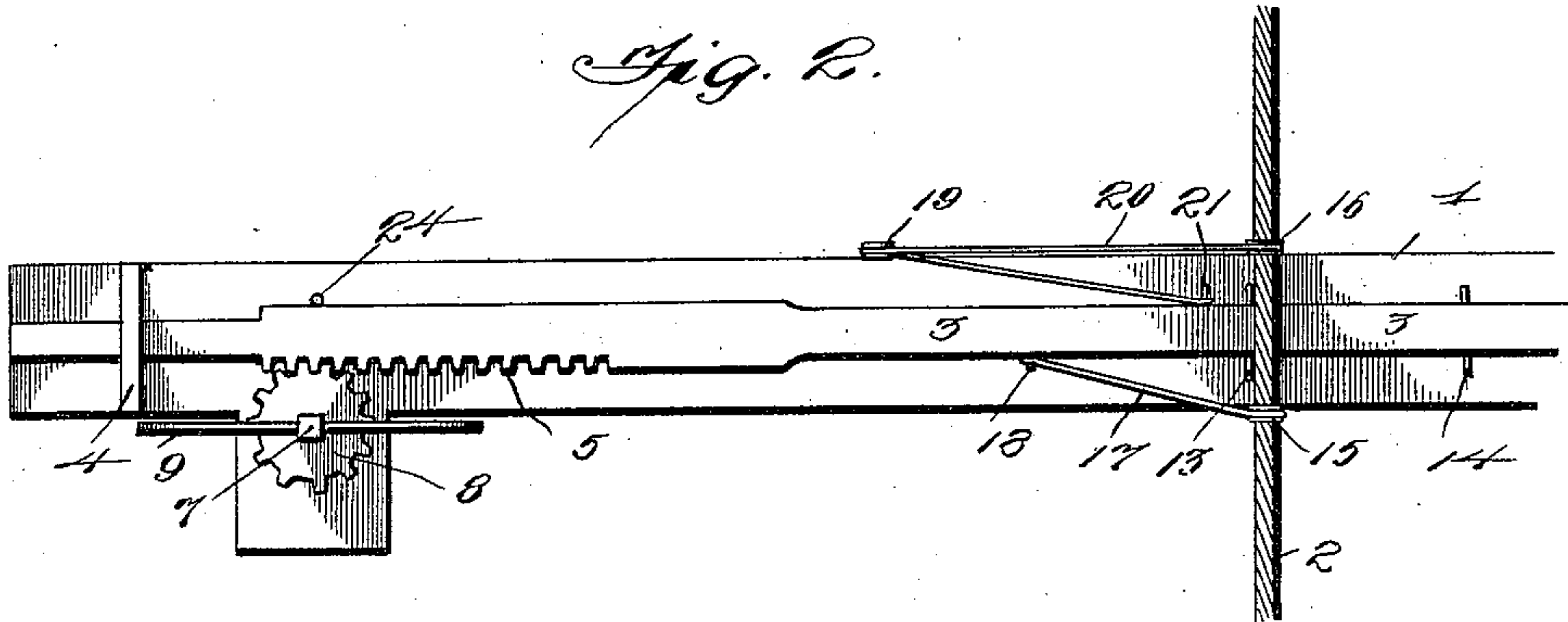


Fig. 3.

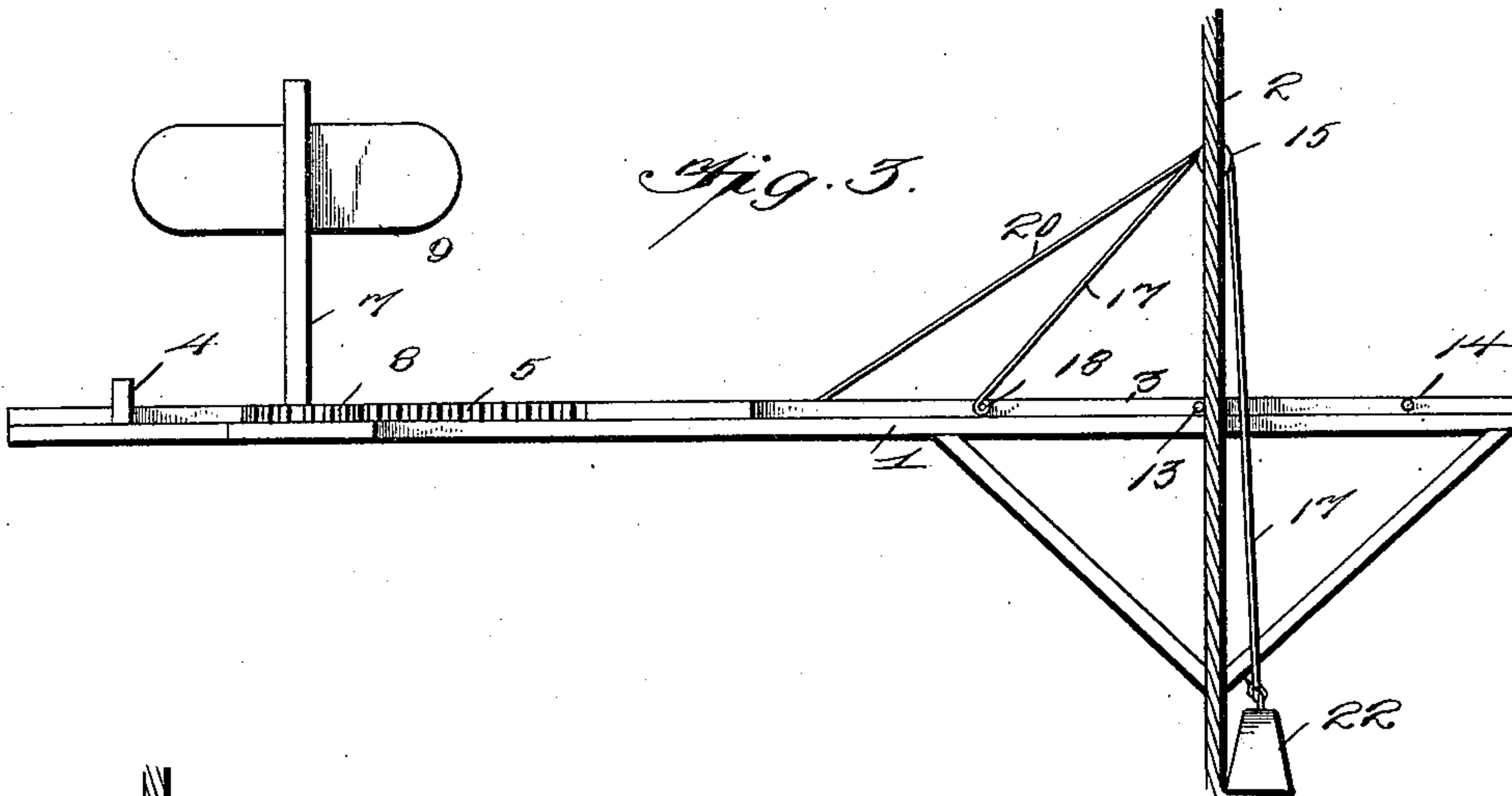
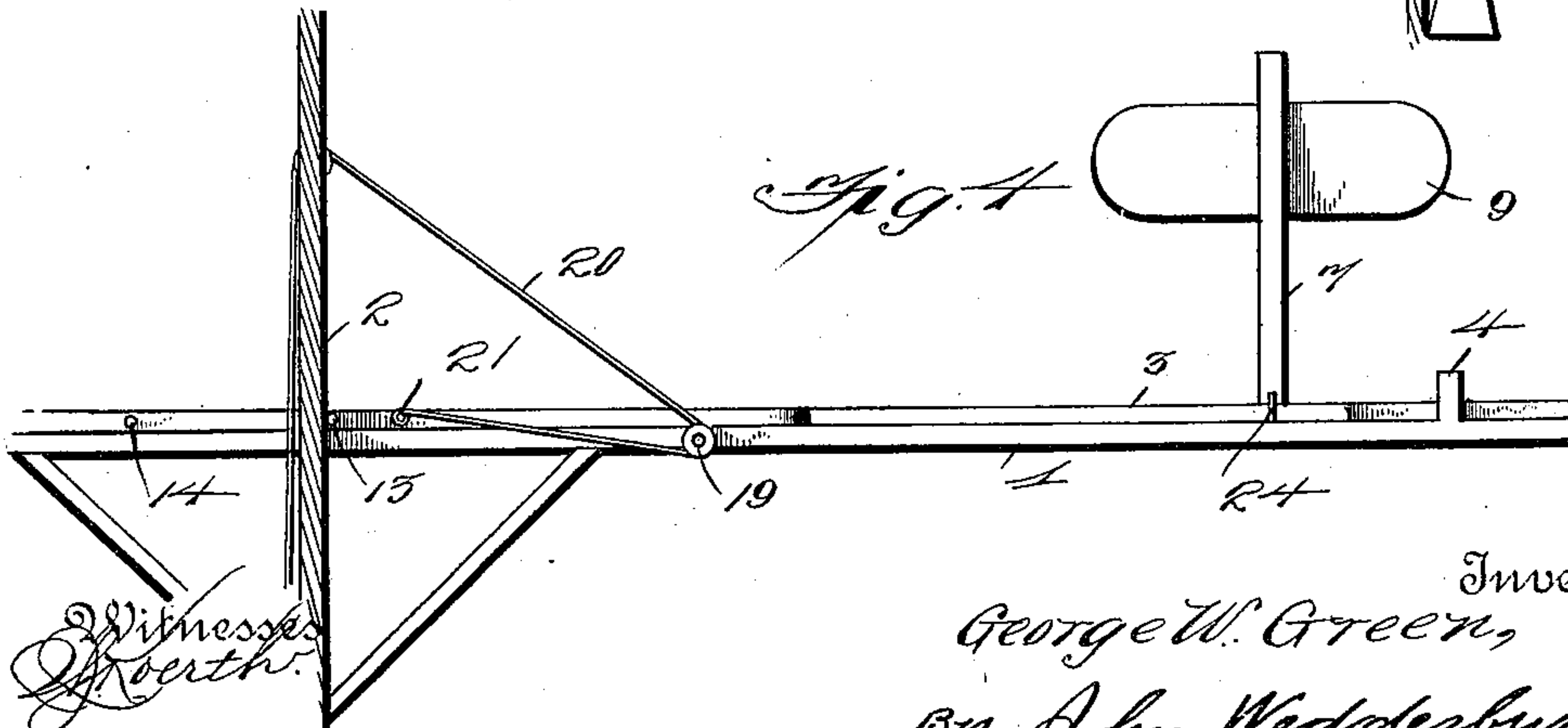


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON GREEN, OF SOUTH McALESTER, INDIAN TERRITORY.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 602,004, dated April 5, 1898.

Application filed June 10, 1897. Serial No. 640,193. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON GREEN, of South McAlester, in the Choctaw Nation, Indian Territory, have invented certain new and useful Improvements in Railway-Signals; and I 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.

My invention relates to railway-signals.

My object is to provide a device of the class described of simple and cheap construction, positive in its action, and which can be readily operated to display the proper signals at railway crossings or stations to give a clear track or to hold the train; and with these objects in view the invention consists in certain novel features and combinations of parts appearing more fully hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of the device in position for use; Fig. 2, a plan view of the arm, and Figs. 3 and 4 side views.

The numeral 1 designates the signal-arm, which in the present instance is shown as secured to the station 2, although, of course, it could be used on a separate post, if desirable. There is a shifting bar 3, which slides through a guide 4 and through the wall of the station, the same having its end projecting into the operator's room. This shifting bar has racks or teeth 5 and 6 near its end portions. At the extremity of the arm there is an upright spindle 7, which is suitably journaled, and a pinion 8 is carried thereby, said pinion meshing with the rack 5. The numeral 9 designates the signal-board, which is provided with the proper colors on its opposite sides. A similar arrangement is located inside the operator's room and actuated by the movement of the shifting bar, so that the operator can tell at a glance just how the signal is set. Of course, if desirable, the inside signal mechanism can be dispensed with.

At 10 there is shown a hanger-arm which is secured to the outer spindle 7, and the same carries a skeleton lamp-box 11, in which is located the lamp 12. Said box hangs low down above the center of the track, so that if a car passes the crossing it will strike the

box and swing the same around, thereby indicating over which track the engine has passed. It will be seen that when the signal is turned this box is swung around so that a different-colored light is exposed. For instance, if there are two tracks, running east and west and north and south, respectively, when the red lights are exposed along the east and west track the white lights will show along the north and south track, and when the arm is swung around the red lights will show along the north and south tracks and the white lights along the east and west tracks.

There is a shifting bar and two sets of pins 13 and 14, which are adapted to engage with the wall of the station and limit its inward and outward movements. There are two pulleys 15 and 16. A cord or rope 17 is connected to the shifting arm at 18 and runs over the pulleys 16 and down into the operator's room. The numeral 19 designates a pulley which is carried by the signal-arm. At 20 there is shown a separate rope or cord which passes over the pulley 15, thence over the pulley 19, and is connected to the shifting bar at 21. It will be seen that by pulling one cord the bar can be moved in one direction and by operating the other cord it can be moved in the opposite direction. It is to be observed that the weight 22 is connected to that cord which operates the shifting bar to expose the danger-signal, so that this signal will always be exposed unless the remaining cord is operated. My object in doing this is to retain the signal as set so that if struck by any object it will be returned to proper position. This weight could be applied to the other cord, if desirable, to exhibit the signal for a clear track. If desirable, a lever 23 (shown in dotted lines) could be employed, being connected directly to the shifting bar and having a depending end. The cable mechanism could then be dispensed with. It is desirable to employ guide-pins 24 to insure the proper movement of the shifting bar.

Of course it is not necessary to employ a hanger-arm extending out over the track, as the lamp-box can be connected directly to the upper end of the spindle of the signal-

board, and in some cases it is preferable to employ such a construction—as, for instance, where the signal is used on one track only.

The device is operated by pulling on the proper cord or operating the lever, if the same be used, whereupon the shifting bar is moved and by the engagement of its teeth with the pinions the signal-board is turned. Simultaneously with the movement of the signal-board the signal-lamp is swung around, so that the colors of the lights exposed along the respective tracks are changed, as before described.

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

1. In a device of the class described, the combination with a rotary signal-board, of a signal-lamp box carried thereby on a swinging arm and open on all sides, a lamp in said box, and means for turning the signal-board.

2. In a device of the class described, the combination with an outer rotary signal-board, of a similar inner rotary signal-board, a shifting rack-bar and pinions affording an operative connection between the two signal-boards, and means for moving said bar, substantially as described.

3. In a device of the class described, the combination with a signal, of a sliding rack-bar and pinion for operating the same, a pull-cord connected to the sliding bar and used for operating the same in one direction, and a second cord also connected to the bar and adapted for moving it in the other direction.

4. In a device of the class described, the combination with a movable signal, of a shift-

ing rack-bar and pinion for operating the same, pulleys, a pull-cord connected to the shifting bar and running over one pulley, a third pulley, carried on the support for the shifting bar and a cord running over the last-named pulley and the remaining pulley of those aforesaid, and having one end connected to the shifting bar.

5. In a device of the character described, the combination with a movable signal located in the path of a moving vehicle and designed to be operated thereby, of a flexible piece operatively connected with said signal, and a weight secured to said piece and designed to retain the signal in one position, and mechanism for moving the signal in opposition to the weight, substantially as specified.

6. In a device of the class described, the combination with an upright spindle and a signal-board and a signal-arm overhanging the track and carried by said spindle, of a pinion secured to the spindle, a shifting bar having a rack engaging with the pinion, a pull-cord connected to the shifting bar and adapted to move the same in one direction, and a second pull-cord connected to the said bar and adapted to move it in the opposite direction.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE WASHINGTON GREEN.

Witnesses:

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J. R. BRADLEY.