

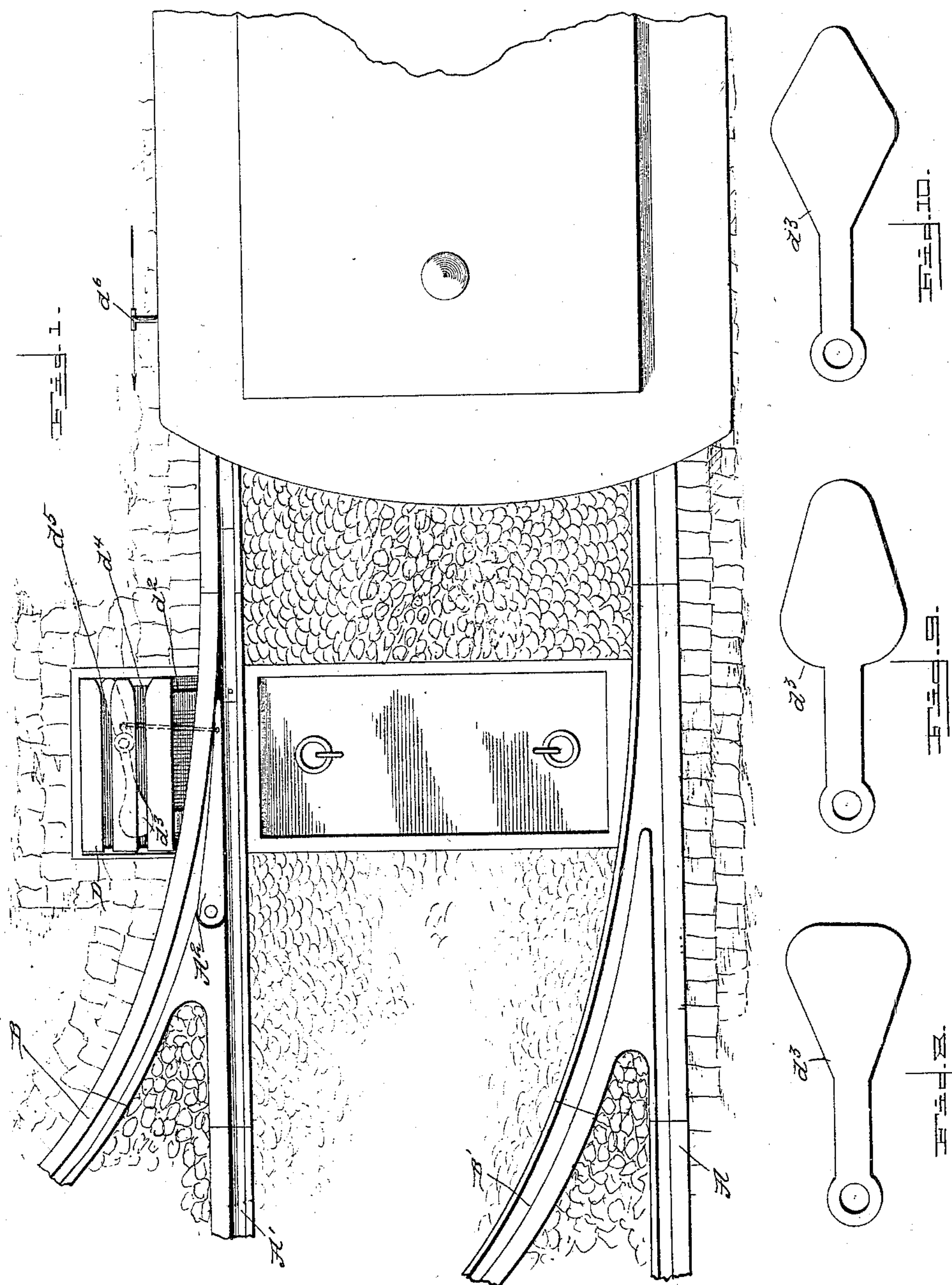
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3 Sheets—Sheet 1.

J. R. WIGGINTON.
AUTOMATIC RAILWAY SWITCH.

No. 448,171.

Patented Mar. 10, 1891.



Witnesses

N. W. Humphrey
J. B. Tucker

Inventor

John R. Wigginton

By his Attorney

A. E. Dyrenforth

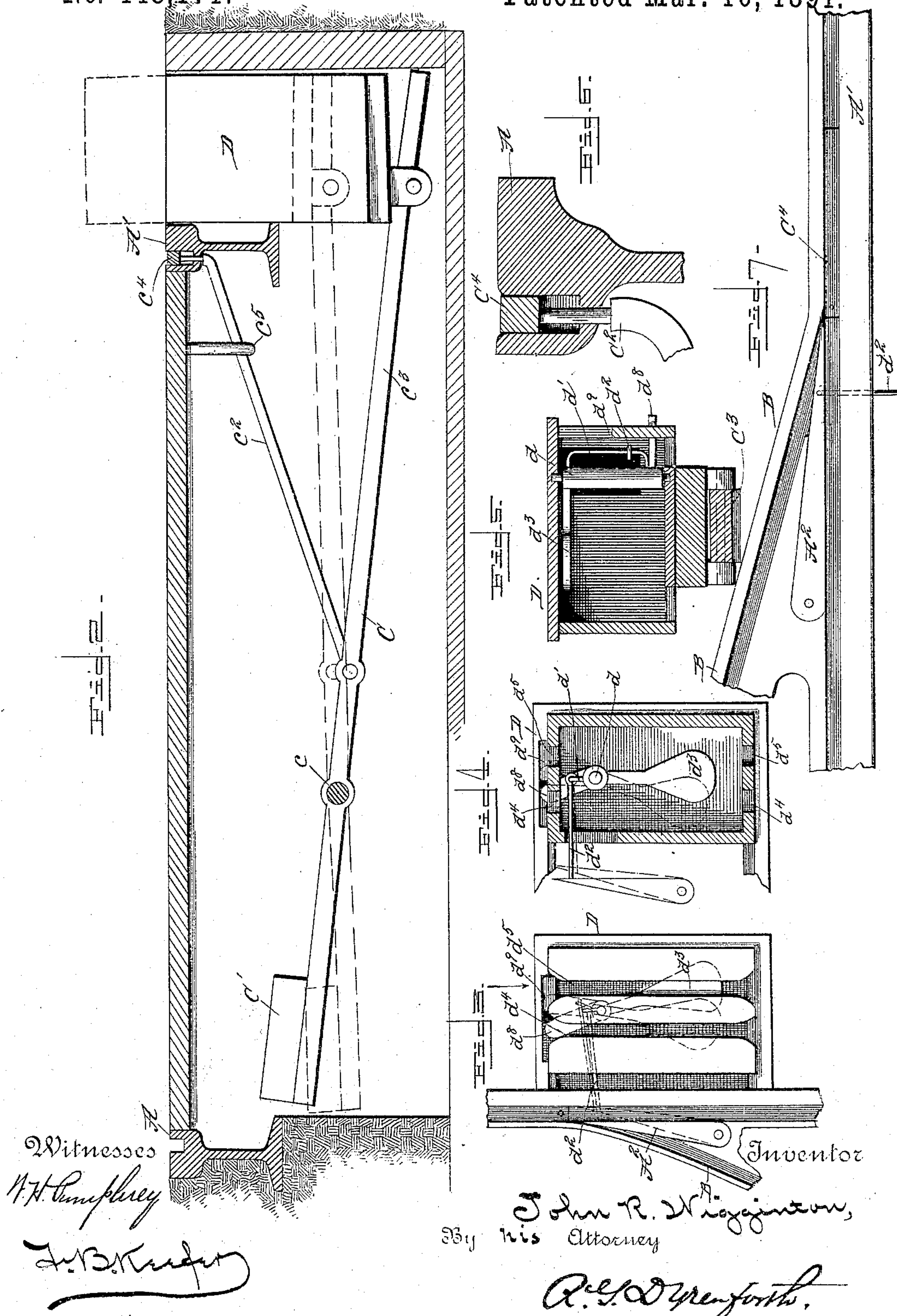
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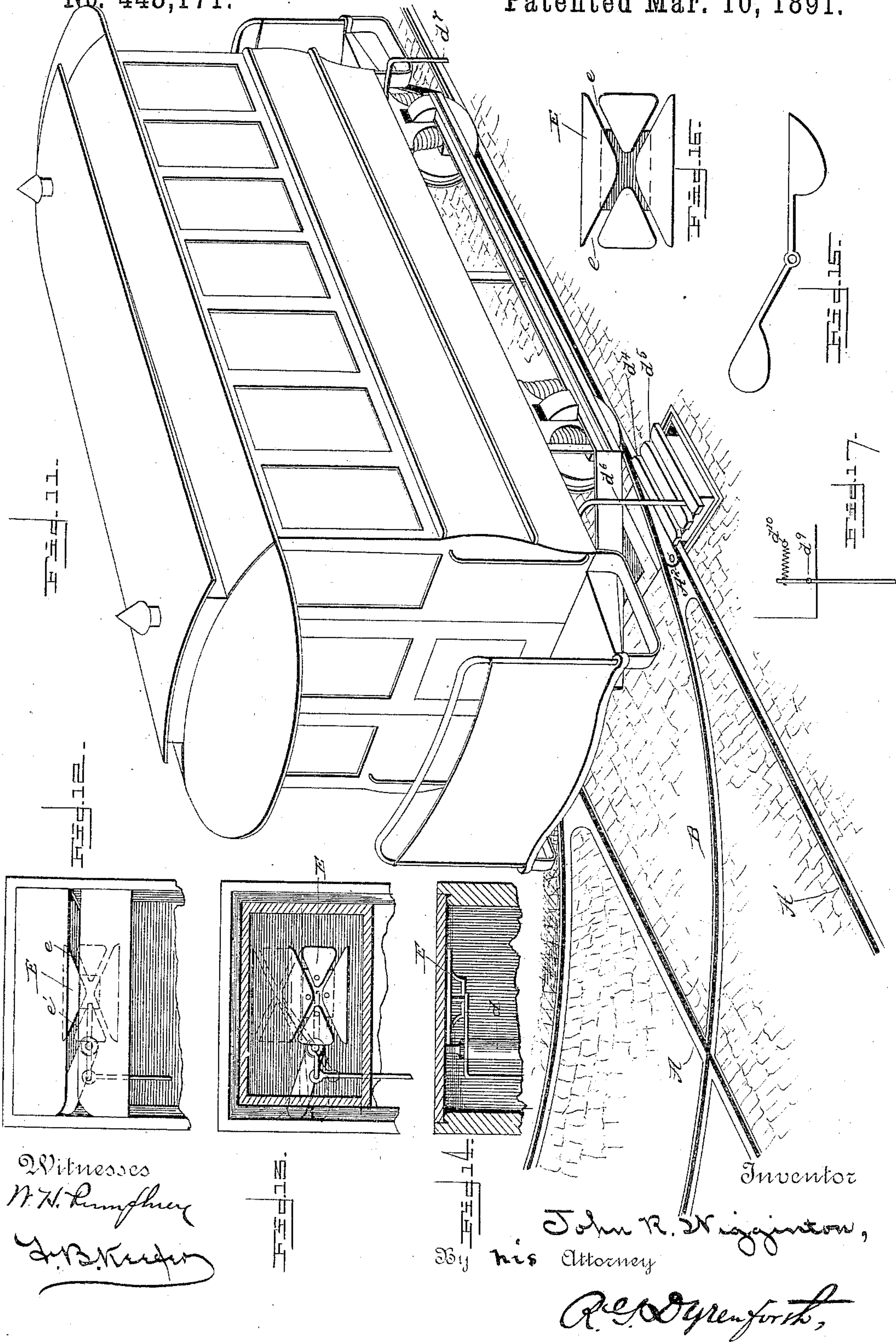
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3 Sheets—Sheet 3.

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Patented Mar. 10, 1891.



UNITED STATES PATENT OFFICE.

JOHN R. WIGGINTON, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
OF ONE-HALF TO WILLIAM R. H. ALEXANDER, OF SAME PLACE.

AUTOMATIC RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 448,171, dated March 10, 1891.

Application filed December 2, 1890. Serial No. 373,311. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. WIGGINTON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Automatic Railway-Switches; 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.

This invention relates to railway-switches.

The object of the invention is to produce a railway-switch which shall be simple and inexpensive in construction, reliable and certain in operation, and whereby cars may be switched without requiring manual labor of any kind.

With this object in view the invention consists in a railway-switch comprising a box or frame situated adjacent to the rails of a track either at the outside or between the rails, the said box or frame containing a connection with the switch, a lever or projection for working the connection, and arms from the cars engaging the lever or projection, whereby as the car passes over the switch it is moved from its normal position and returned thereto automatically.

Furthermore, the invention consists in a railway-switch comprising a vertically-movable box or frame containing a rod or other means of connection with the switch, a lever or projection joined to this connection situated in the box, a locking device whereby the box is retained in an elevated position, and arms extending from the car and engaging the projection in the box or frame, whereby the switch is moved from its normal position, the box locked in an elevated position, and the box unlocked and the switch returned to its normal position automatically after the car is switched.

Furthermore, the invention consists in a railway-switch comprising a box or casing arranged contiguous to the rails of the track, a lever having one end on or adjacent to the tread of the track, connected with the box or frame, whereby the frame is raised or lowered, a connection between the box and the switch, an operating-lever joined to the connection,

and arms depending from the cars to be switched engaging the operating-lever.

Furthermore, the invention resides in various novel details of construction whereby the objects of my invention are obtained.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a track, showing my improved switch applied thereto and a car approaching the switch. Fig. 2 is a section taken transversely with the tracks, illustrating the levers by which the box or frame is elevated by the wheels of the car passing along the track. Fig. 3 is a detail view illustrating the connection between the movable box or frame and the switch, the positions of the operating-lever being shown in dotted lines. Fig. 4 is a view showing the top of the box or casing removed and showing the different positions of the operating-lever and switch. Fig. 5 is a detail view showing a sectional view of the movable box containing the operating-lever. Fig. 6 is a detail view showing the connection of the lever for raising the box or frame with the track. Fig. 7 is a detail view showing the switch and its connection with the operating-lever contained in the box or casing. Figs. 8, 9, and 10 represent modified forms of operating-levers for moving the switch. Fig. 11 is a perspective view of a car, showing my improved switch in a position to be operated. Figs. 12, 13, 14, 15, and 16 represent modified constructions of the operating head or lever. Fig. 17 is a detail view of the arm depending from the car.

In the drawings, A and A' represent the rails of an ordinary railway-track, and B and B' represent the rails of a switch to an adjacent track.

A² represents a pivoted switch arranged in the track A and A'.

Arranged below the track in a suitable opening prepared for the purpose is a lever C, pivoted at a point c and provided at one end with two extensions c² and c³ and at the other end with a counter-weight C'. The projection c² extends upward from the lever and projects through an opening in the rail, preferably in the case of a grooved rail

through the grooved portion, at which point it is provided with a head c^4 , to be depressed by the wheels of the car in passing over.

The portion c^3 of the car is pivotally connected to the bottom of the box or casing D. The portion c^2 is pivoted in the hanger c^5 , so that as the head c^4 is depressed the portion c^3 is raised, and therewith the box or frame D. Arranged within this box or frame D is a post d , provided with an elongated loop or staple d' . Connected with this staple is a rod d^2 , the eye whereof incloses the staple d' and the other end of which is connected to the switch A^2 , whereby by the rotation of the post d the switch is moved back and forth.

Any desired means of moving the post back and forth automatically from the car may be employed; but I prefer the construction herein shown and now particularly to be described. Connected with the post d is a lever d^3 , having an enlarged end, as shown, and the top of the box or casing is provided with two slots or openings d^4 and d^5 , through which are to pass the arms d^6 and d^7 , depending from the car to engage the lever d^3 on one side or the other. As the car passes along the track the projection at the forward end of the car passes through the slot d^5 , thus drawing the switch A^2 outward to open the switch for the siding, and as the projection d^7 at the rear end of the car passes through the slot d^4 the lever d^3 is moved in an opposite direction, returning the switch to its normal position. As the post d is moved by the projection d^6 from the car to open the switch for the siding the projection d^8 from the post d is moved into a slot d^9 in the side of the box or casing, thus locking the box or frame in an elevated position until released therefrom by the passage of the projection or arm d^7 through the opening d^4 to return the switch to its normal position.

Instead of the operating-lever d^3 herein shown, I may employ the block E, particularly illustrated in Figs. 12, 13, 14, and 16. This block performs the same function as the lever. As one of the projections from the car enters one of the slots in the box D it passes into one of the grooves or ways $e e'$, and as the projection slides into a straight line through the slot in the top of the box, and at the same time into one of the grooves $e e'$, the block is moved either backward or forward, according to the slot in which the projection slides.

To avoid danger to the car or to the switch device, the projecting arms d^6 and d^7 , depending from the car, are preferably connected to the car after the manner shown in Fig. 17—that is, they are pivotally connected at their upper ends to the car at a point d^9 and are retained in position by the spring d^{10} , this

spring being sufficiently strong to retain the projections to their work under ordinary circumstances, but will be overcome readily by the projection coming in contact with an unyielding body, such as a stone or other body, forced into one of the slots of the movable box or the like.

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

1. A railway-switch comprising a box or frame situated adjacent to the rails of a track and capable of vertical movement, an operating-lever arranged within the box or frame, a switch connected with the operating-lever, and arms projecting from a car engaging the operating-lever, substantially as described.

2. A railway-switch comprising a box or frame situated adjacent to the rails of a track and capable of vertical movement, an operating-lever arranged within the box or frame, a switch connected to the operating-lever, projections from the car engaging the operating-lever, and a locking device retaining the box or frame in an elevated position, substantially as described.

3. A railway-switch comprising a box or frame situated adjacent to a railway-track, a lever arranged beneath the track, one end having a projection extending through one of the rails, the lever being also connected with a box or frame, an operating-lever in the box or frame, a switch connected with the operating-lever, and projections from a car engaging the operating-lever when the box or frame is in an elevated position, substantially as described.

4. A railway-switch comprising a lever arranged beneath the track and having a pivoted arm projecting through the rail and terminating in the rail, the lever being connected to a vertical box or frame containing an operating-lever, a switch connected with the operating-lever, and projections from a car engaging the lever, substantially as described.

5. In a railway-switch, a lever arranged beneath and adjacent to a car-track, connected with a vertical box or frame and having a pivoted arm terminating in the track, an operating-lever connecting with a rotating post in the box or frame, a switch connecting with an elongated staple in the box or frame, and projections from the car engaging the operating-lever, substantially as described.

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

JOHN R. WIGGINTON.

Witnesses:

DAVID H. MEAD,
F. B. KEEFER.