

(No Model.)

J. J. MURRAY, Jr.

RAILROAD GATE.

No. 324,780.

Patented Aug. 18, 1885.

Fig. 1.

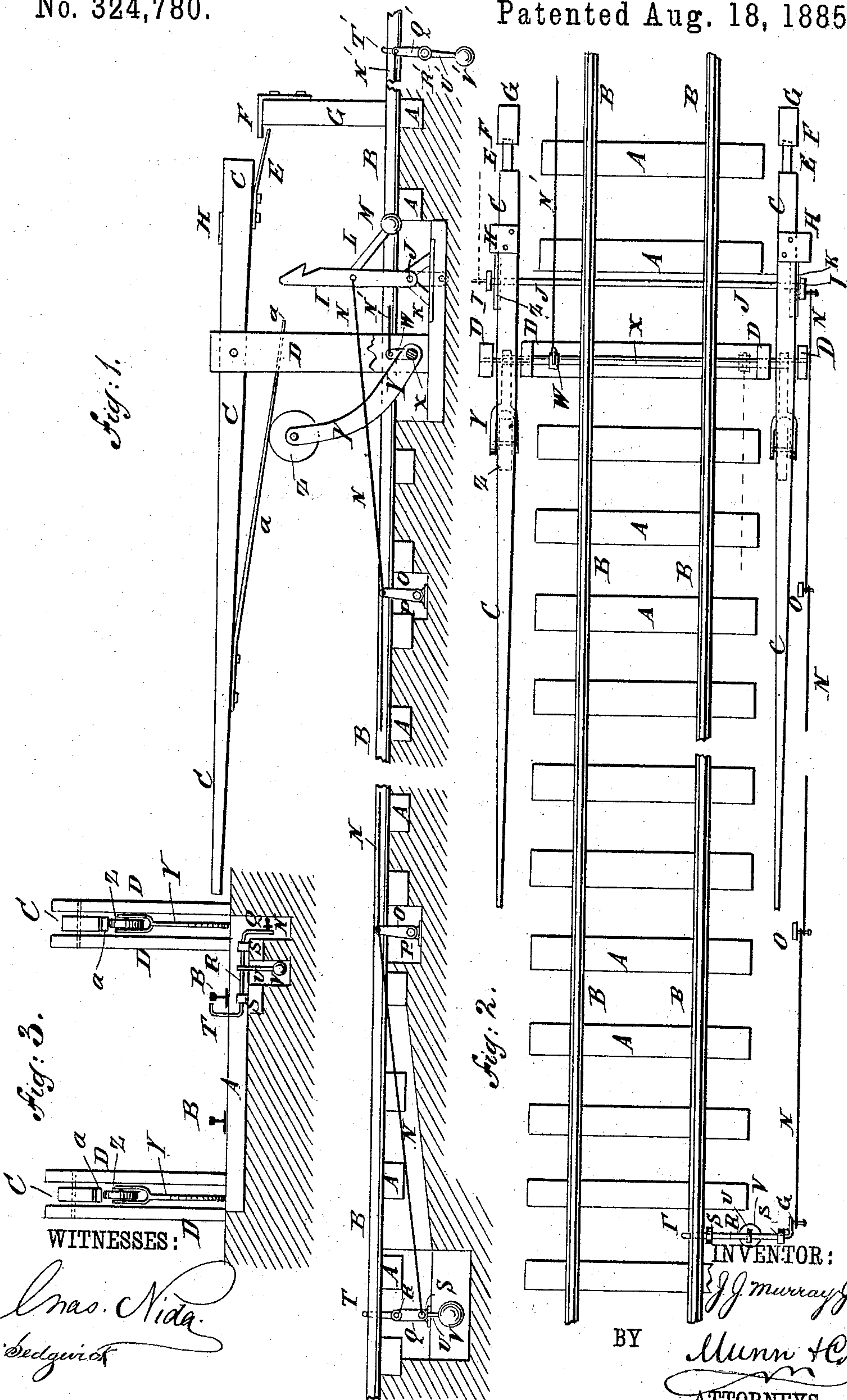


Fig. 3.

Fig. 2.

WITNESSES:

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RAILROAD-GATE.

SPECIFICATION forming part of Letters Patent No. 324,780, dated August 18, 1885.

Application filed April 8, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN JOSEPH MURRAY, Jr., residing in Brooklyn, in the county of Kings and State of New York, have invented
5 a new and useful Improvement in Railroad-Gates, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification,
10 in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of one of my improved railroad-gates, parts being broken away. Fig. 2 is a plan view of the same. Fig.
15 3 is an end elevation of the same.

The object of this invention is to provide railroad-gates constructed in such a manner that they will be closed by the approach of a locomotive or of a train of cars, and will be
20 opened by the departure of the said locomotive or train.

The invention consists in the construction and combination of various parts of the operating mechanism, as will be hereinafter fully
25 described, and then pointed out in the claims.

A represents the ties, and B the rails, of a railroad-track.

C is the gate-bar, which is pivoted at a little distance from its lower end to a post, D.
30 The gate-bar C is tapered toward its upper end, and its lower end is made so heavy or is so weighted as to nearly balance the upper part, so that when the gate is open and the gate-bar is released the long upper part of the
35 said gate-bar will slowly descend until the spring E, attached to its lower end, strikes against a stop-plate, F, which gradually checks the movement of the said gate-bar, and then brings it to a horizontal or nearly horizontal
40 position and holds it there. The stop-plate F is attached to the short post G, set in the ground in proper position for the spring E to strike against the stop-plate F as the gate-bar C in its descent approaches a hori-
45 zontal position.

The gate-bar C, when open, is held in nearly an erect position by a catch-bar, H, attached to its lower part, which engages with the hook I, attached at its lower end to a shaft, J, jour-
50 naled to supports K, anchored in the ground at the opposite sides of the track.

The hook I is held forward in position to engage with the catch-bar H by a bar, L, and weight M. The upper end of the bar L is rigidly attached to the middle part of the
55 hook I, and the said bar inclines downward and forward, and has the weight M attached to its lower end.

To the middle part of the hook I is attached the end of a wire, N, which extends along the
60 outer side of the track, and is connected with the upper ends of supporting-arms O, the lower ends of which are pivoted to supports P, anchored in the ground at suitable distances apart. The other end of the wire N is at-
65 tached to the downwardly-projecting arm Q, attached to or formed upon the short shaft R, journaled in bearings S, anchored in the ground. The inner part of the shaft R passes beneath the rail B, and has an arm, T, formed upon or
70 attached to its inner end, which projects upward at the inner side of the rail B, and has its upper end bent toward the head of the said rail into such a position that the flanges of the wheels of a passing locomotive or car will
75 strike against the said arm T and force it downward, turning the shaft R and swinging the arm Q in the opposite direction.

In the case of a train approaching the gate the arm Q will be swung from the gate and
80 will draw the wire N in the same direction, causing it to withdraw the hook I from the catch H, and allowing the gate-bar C to swing down or close.

In the case of a train moving from the gate
85 the movement of the shaft R will produce no effect upon the wire N.

To the shaft R is rigidly attached a downwardly-projecting arm, U, having a weight, V, attached to its lower end, to bring the shaft R
90 and arms Q T back to their former positions when the arm T is released from the locomotive or car wheels.

To supports anchored to the ground at a suitable distance at the other side of the gate
95 is journaled a shaft, R', provided with arms Q' T' U', in the same manner as the shaft R, except that the arm Q', to which the end of the wire N' is attached, projects upward instead of downward. The other end of the wire N' is
100 attached to an upwardly-projecting arm, W, attached to or formed upon the shaft X, which

rocks in bearings in the lower part of the posts D, and to which is rigidly attached the lower end of a curved arm, Y, having a friction-roller, Z, pivoted to its slotted upper end.

5 The curved arm Y is made of such a length that the friction-roller Z will be directly beneath the lower part of the downwardly-inclined spring α , the upper end of which is attached to the gate-bar C.

10 With this construction, when the wheels of a locomotive or car moving from the gate strike the arm T' of the shaft R', the said shaft will be rocked, causing the wire N' to draw upon the arm W, rocking the shaft X 15 and swinging the arm Y upward, so as to cause the friction-roller Z to press against the spring α with sufficient force to raise the gate-bar C into an upright position, when the catch H will engage with the hook I and lock the said 20 gate-bar C in place until released and closed by the approach of another train, as herein-before described.

It will be understood that this invention is exclusively designed for use in connection with 25 double-track railroads.

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

30 1. A railroad-gate constructed substantially as herein shown and described, and consisting of the combination of the pivoted bar C, provided with a stop-spring, E, a catch-bar, H, and an inclined lifting-spring, α , a stop-bar and post, F G, for holding the gate in place 35 when closed, a pivoted hook, I, provided with a weighted arm, L M, for holding the gate in

place when open, a shaft, X, having arms W Y and friction-rollers Z, for opening the gate, and the wires N N', connecting the catch-hook 40 and the armed opening-shaft with armed shafts operated by the wheels of a locomotive or car, whereby the gate will be worked by the said wheels, as set forth.

2. In a railroad-gate, the combination, with the pivoted gate-bar C, of the stop-spring E 45 and the stop-plate and post F G, substantially as herein shown and described, whereby the said gate-bar will be stopped and held in a horizontal position, as set forth.

3. In a railroad-gate, the combination, with 50 the pivoted gate-bar C, of the catch-bar H, the catch hook I, having weighted arm L M, the wire N, and the rock-shaft R, having arms Q T and weighted arm U V, substantially as herein shown and described, whereby the gate- 55 bar will be held in an erect position, and will be released by the wheels of an approaching locomotive or car, as set forth.

4. In a railroad-gate, the combination, with the pivoted gate-bar C, of the inclined spring 60 α , the rock-shaft X, having arm W and arm Y, provided with a friction-roller, Z, the wire N', and the rock shaft R', having arms Q' T' and weighted arm U' V', substantially as 65 herein shown and described, whereby the said gate-bar will be raised into an upright position by the wheels of a retiring locomotive or car, as set forth.

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Witnesses:

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