

(No Model.)

2 Sheets—Sheet 1.

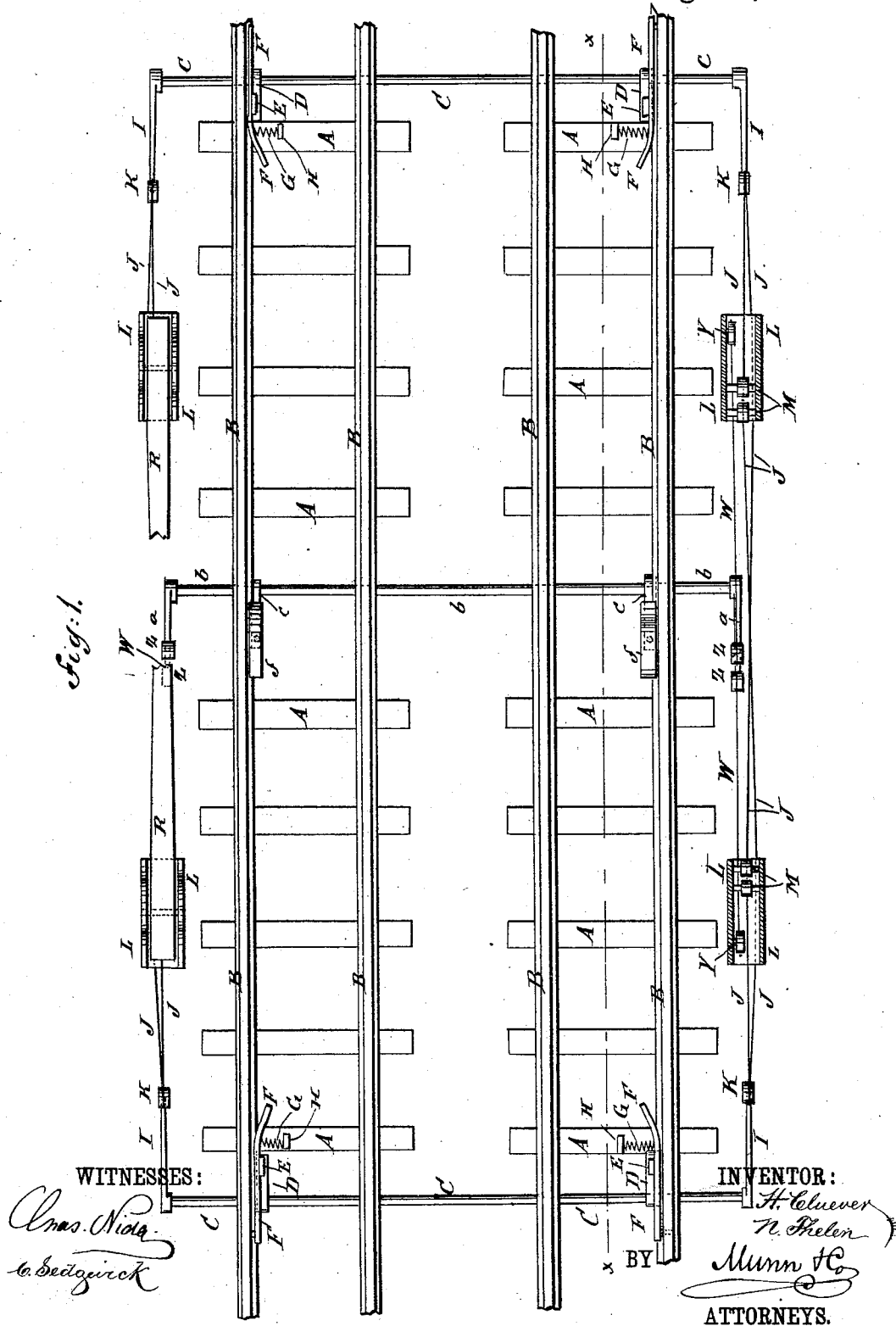
H. CLUEVER & N. THELEN.

RAILROAD GATE.

No. 347,574.

Patented Aug. 17, 1886.

Fig. 1.



(No Model.)

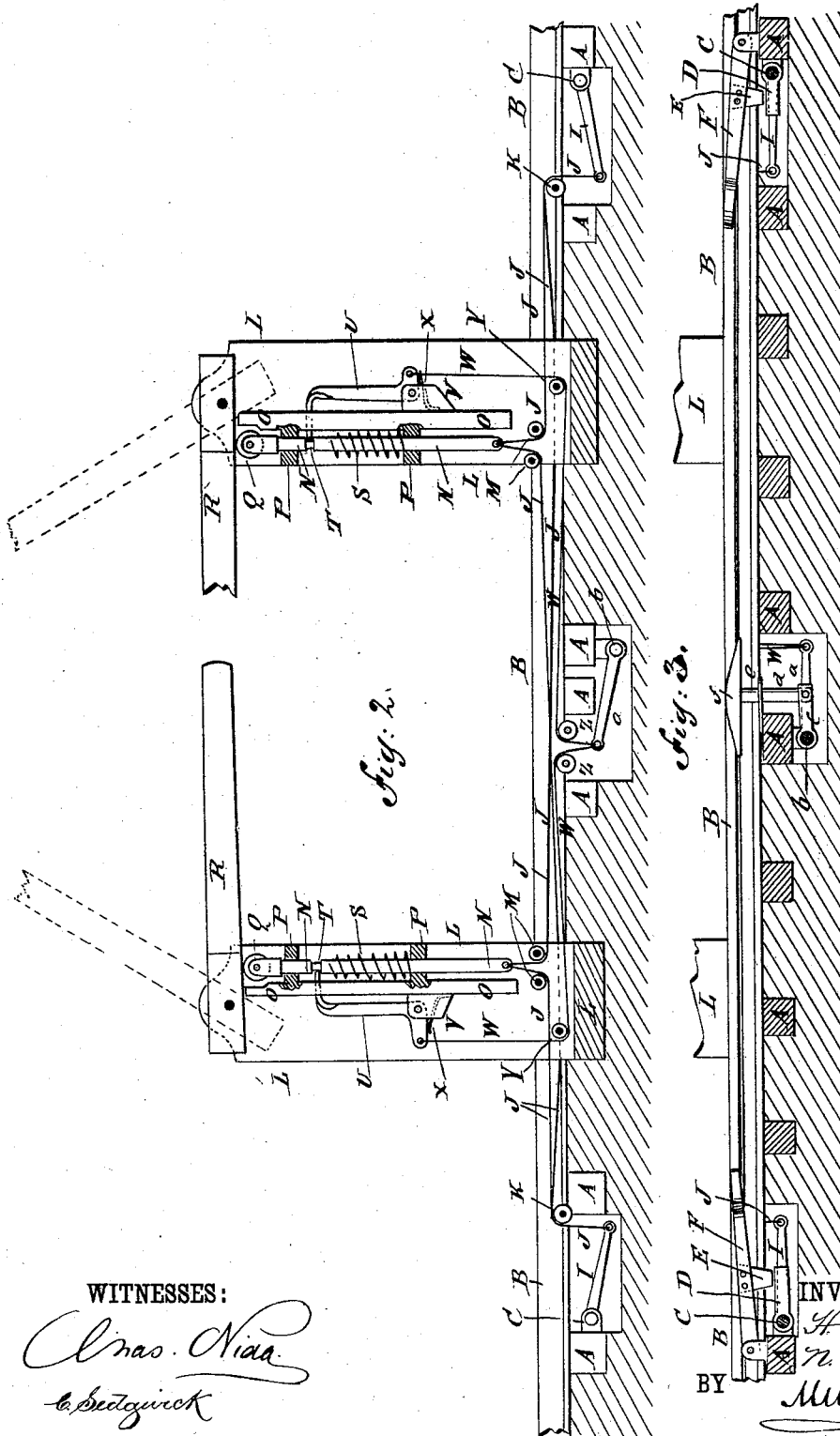
2 Sheets—Sheet 2.

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HENRY CLUEVER, OF ALBANY, AND NICHOLAS THELEN, OF SCHENECTADY, NEW YORK.

RAILROAD-GATE.

SPECIFICATION forming part of Letters Patent No. 347,574, dated August 17, 1886.

Application filed June 3, 1886. Serial No. 204,029. (No model.)

To all whom it may concern:

Be it known that we, HENRY CLUEVER, of the city and county of Albany, and State of New York, and NICHOLAS THELEN, of the city and county of Schenectady, and State of New York, have invented 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, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of our improved railroad-gate, partly in section and parts being broken away. Fig. 2 is a side elevation of the same, the gate-posts being shown in section and parts being broken away. Fig. 3 is a sectional side elevation of the same, taken through the line *xx*, Fig. 1.

The object of this invention is to provide railroad gates constructed in such a manner that they will be closed by the wheels of an approaching train and opened by the wheels of a passing train, and which shall be simple in construction, reliable in operation, and not liable to get out of order.

The invention consists in the construction and combination of various parts of the railroad-gate, as will be hereinafter fully described and then claimed.

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

Care shafts placed upon the opposite sides of and at suitable distances from the crossing or other place where a gate is required. To the shafts C, at the inner side of a rail, B, are rigidly attached horizontally-projecting arms D, upon the upper sides of which rest projections E, formed upon or attached to the levers F. The ends of the levers F farthest from the gate are pivoted to supports attached to ties A in such position that the said levers will be struck and pressed downward by the flanges of the wheels of cars approaching the gate. The free ends of the levers F are bent away from the rail B, so that the flanges of the wheels of cars leaving the gate will pass in between the rail and the said ends of the levers F, force the said levers away from the said

rail, and pass along without operating the said levers.

The levers F are held in place at the side of the rail B by spiral or other springs, G, one end of which rests against the sides of the said levers farthest from the rail, and their other ends rest against and are secured to supports H, attached to ties A or set in the ground.

To the ends of the shafts C, at a little distance from the outer sides of the rails B, are attached horizontally-projecting arms I, to the free ends of which are attached the ends of wires or chains J, which pass over guide-pulleys K, pivoted to supports attached to ties A or set in the ground. From the guide-pulleys K the wires J pass to the gate-posts L, set in the ground at a little distance from the track and at the opposite sides of the crossing or other place to be guarded, where the said wires J pass around guide-pulleys M, placed within and pivoted to the said posts L, and are attached to the lower ends of vertical sliding bars N. The posts L are formed of two parallel upright bars or plates, kept at the proper distance apart by upright bars O, interposed between and secured to the said bars or plates. Upon the adjacent sides of the interposed bars O are formed lugs P, which are perforated to receive and serve as guides for the vertical sliding bars N. The upper ends of the sliding bars N are forked, and to them are pivoted small rollers Q, which rest against the lower sides of the pivoted gate-bars R, at a little distance from their pivoted ends, so that the said gate-bars will be raised or opened by the upward movements of the said sliding bars N. Upon the sliding bars N are placed spiral springs S, the upper ends of which are attached to the said bars and their lower ends rest upon the lower lugs, P. The springs S must be of sufficient strength to press the bars N upward with sufficient force to raise the gate-bars R, and thus open the gates.

Around the upper parts of the sliding bars N are formed annular grooves T, in such positions as to receive the inwardly-bent forked upper ends of the latches U, which are pivoted at a little distance from their lower ends to lugs V, formed upon the lower parts of the bars O. The lower ends of the latches U are bent

outward about at right angles, and to them are attached the ends of wires or chains W, so that a downward pull upon the said wires will withdraw the engaging ends of the said latches U from the sliding bars N and allow the springs S to force the bars N upward and open the gates. The engaging ends of the elbow-latches U are held forward against the sliding bars N by springs X, attached to the lugs V or the bars O, so as to engage automatically with the grooves T of the said sliding bars as soon as the said grooves come opposite the said ends and hold the said bars down until the said latches are withdrawn, in the manner herein-
after described.

The wires W pass around guide-pulleys Y, pivoted in and to the lower parts of the posts L, and pass around guide-pulleys Z, pivoted to supports attached to the ties or set in the ground. The ends of the wires W are attached to the ends of horizontally-projecting arms a, attached to the ends of the shaft b, placed beneath the rails B, and rocking in bearings attached to the ties or other suitable supports. To the shaft b, at the inner side of a rail of each track, is rigidly attached a horizontal arm, c, to the outer end of which is pivoted the lower end of a short upright bar, d, which moves up and down in a perforation in a guide-plate, e, attached to a tie, A, or other support. Upon the upper end of the bar d is formed, or to it is rigidly attached, a cross-head, f, the upper side of which inclines downward from the center toward each end.

The shafts C b are made of such a length as to extend across as many tracks as there may be at the crossing or other place where gates are required. In the drawings they are represented as extending across two tracks.

With this construction, as a train of cars approaches the gate, the flanges of the engine-wheels strike or press down the lever F, which rocks the shaft C at that side of the gate, and causes the wires J to draw down the sliding bars N, allowing the gate-bars R to swing down by their own weight, closing the gate. As the engine passes the gate, the flanges of its wheels strike and press down the double-inclined

cross-head f, which rocks the shaft b, and causes the wires W to withdraw the elbow-latch U from the sliding bars N and the gate-bars R to be forced upward by the springs S, opening the gate.

The levers F should be placed at such a distance from the crossing that the gates will be closed in time to prevent any one from attempting to cross the track with the engine so near that the said person would be liable to be run over.

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

1. In a railroad gate, the combination, with the gate-posts L and the pivoted gate-bars R, of the rock-shaft C, having arms D and I, the pivoted lever F, engaging with the said arm D, the wires J, attached to the arm I, the vertical bars N, sliding within the said gate-posts and connected with the said wires, and the spring-pressed latches U, engaging with the said sliding bars, substantially as herein shown and described, whereby the mechanism may be operated by the wheels of an approaching train to permit the gate to close, as set forth.

2. In a railroad gate, the combination, with the gate-posts L and the pivoted gate-bars R, of the rock-shaft b, having arms c and a, the bars d, pivoted to the said arms c, and provided with double-inclined cross-heads f, the wires W, connected with the said arm a, the spring-pressed elbow-latches U, pivoted to the said posts and connected with the said wires, the sliding bars N, held by the said latches, and engaging with the said gate-bars, and the springs S, connected with the said sliding bars, substantially as herein shown and described, whereby the said latches will be withdrawn from the said sliding bars by the wheels of a passing train, allowing the gate to be opened by the action of the said springs, as set forth.

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