

UNITED STATES PATENT OFFICE.

JOHN BOWMAN, OF WESSINGTON, SOUTH DAKOTA.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 706,516, dated August 12, 1902.

Application filed December 4, 1901. Serial No. 84,694. (No model.)

To all whom it may concern:

Be it known that I, JOHN BOWMAN, a citizen of the United States, residing at Wessington, in the county of Beadle, State of South Dakota, have invented certain new and useful Improvements in Railway-Gates; 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-gates; and it has for its object to provide a gate for use at railway-crossings which will be operated by an approaching train to move it in operative position and which after the train has passed will be automatically returned.

A further object of the invention is to provide such a specific mechanism connecting the track instrument with the gate as will insure a prompt and efficient operation of the gate.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a sectional view taken longitudinally of a portion of a railway-track at a crossing and showing the gate and its operating mechanism constructed and arranged in accordance with the present invention, the gate being shown raised. Fig. 2 is a view similar to Fig. 1 with the gate in lowered position.

Referring now to the drawings, there is shown a portion of a railway-track at a crossing including a rail 5, and adjacent to this crossing is erected a post 6, upon which is pivoted a gate 7, one end of which is adapted to lie across the crossing, while the opposite end 8 is weighted, so as to hold the gate normally in raised position, as shown in Fig. 1. At the lower end of the post 5 is pivoted an angular lever 9, one end of which is connected with a crank-arm 10 of a shaft mounted in the post and on which the gate 7 is mounted, said connection being through the medium of a connecting-rod 11. When this angular lever is operated in one direction, the horizontal arm to which the rod 11 is attached is moved downwardly and actuates the crank-arm 10 to move the gate into closed position. When the angular lever is released, the weights at

the end 8 of the gate move the gate to its inoperative position.

To actuate the angular lever 9, a track device is employed and consists of two links 13 and 14, which lie in a common plane longitudinally of the track and which are pivotally connected at their mutually adjacent ends, the outer end of the link 13 being hinged to a plate 15, attached to one end of the ties, while the outer end of the link 14 is slidably disposed upon a plate 16 upon a different tie, and the connected ends of the links lie close against the inner face of the rail 5 and are held normally projected slightly above the rail in a manner hereinafter described. It will be seen that if a train passes along the track the wheels of the train will engage the projecting portions of the links and will depress them and that the link 14 will be slid bodily from the post 6.

A lever 17 is pivoted beneath the connected ends of the links 13 and 14 and rests with its upper end against the under sides of the connected ends of the links, this lever 17 being inclined slightly away from the post 6 and being connected between its pivot and its upper end with the lower end of the vertical portion of the angular lever 9 through the medium of a connecting-rod 18, and thus when a train runs upon the links 13 and 14 and depresses them the lever 17 is moved upon its pivot in a direction away from the post 6 and the lever 9 is actuated to lower the gate into operative position. As soon as the train leaves the links 13 and 14 the weight of the end 8 of the gate swings the gate to vertical position and operates the lever 9 to return the lever 17 and raise the links 13 and 14. It will thus be seen that the train acts to shut the gate and that when the gate is released it automatically swings to its inoperative position.

What is claimed is—

1. In a device of the class described, the combination with a trackway and a rail thereof, of a supporting-post, a gate pivoted upon the post, links pivotally connected at their adjacent ends, one of said links being hinged to a support and the other link being free for slidable movement, said links being disposed to project with their connecting ends above a

rail of the trackway, a lever pivoted beneath the links and disposed with its free end therebeneath, said lever being inclined in the direction of sliding movement of the second
5 link when the links are depressed, connections between the lever and the gate for levering the latter, and a counterbalance upon the gate for raising it and returning the lever and links.
10 2. The combination with a trackway and a rail thereof, of a supporting-post having a gate pivoted thereon, an angular lever pivoted to the post, a shaft on which the gate is mounted, said shaft having a crank-arm,
15 connections between the angular lever and the crank-arm for operating one from the other, links pivotally connected at their adjacent ends and adapted to lie with said adjacent ends above and close to the rail, one
20 of the links having its outer end hinged to a

support whereby when the connected ends of the links are depressed the other link will be moved bodily from the post, a lever pivoted beneath the links, said lever being inclined in the direction of sliding movement of the
25 bodily-movable link when the links are depressed and having its free end in contact with the links for operation thereby, and a connecting-rod between the angular lever and the lever beneath the links, the gate having a weighted end for returning it to move
30 the links to their normal positions to project above the rail.

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

JOHN BOWMAN.

Witnesses:

J. A. MILBURN,
H. A. PEIRCE.