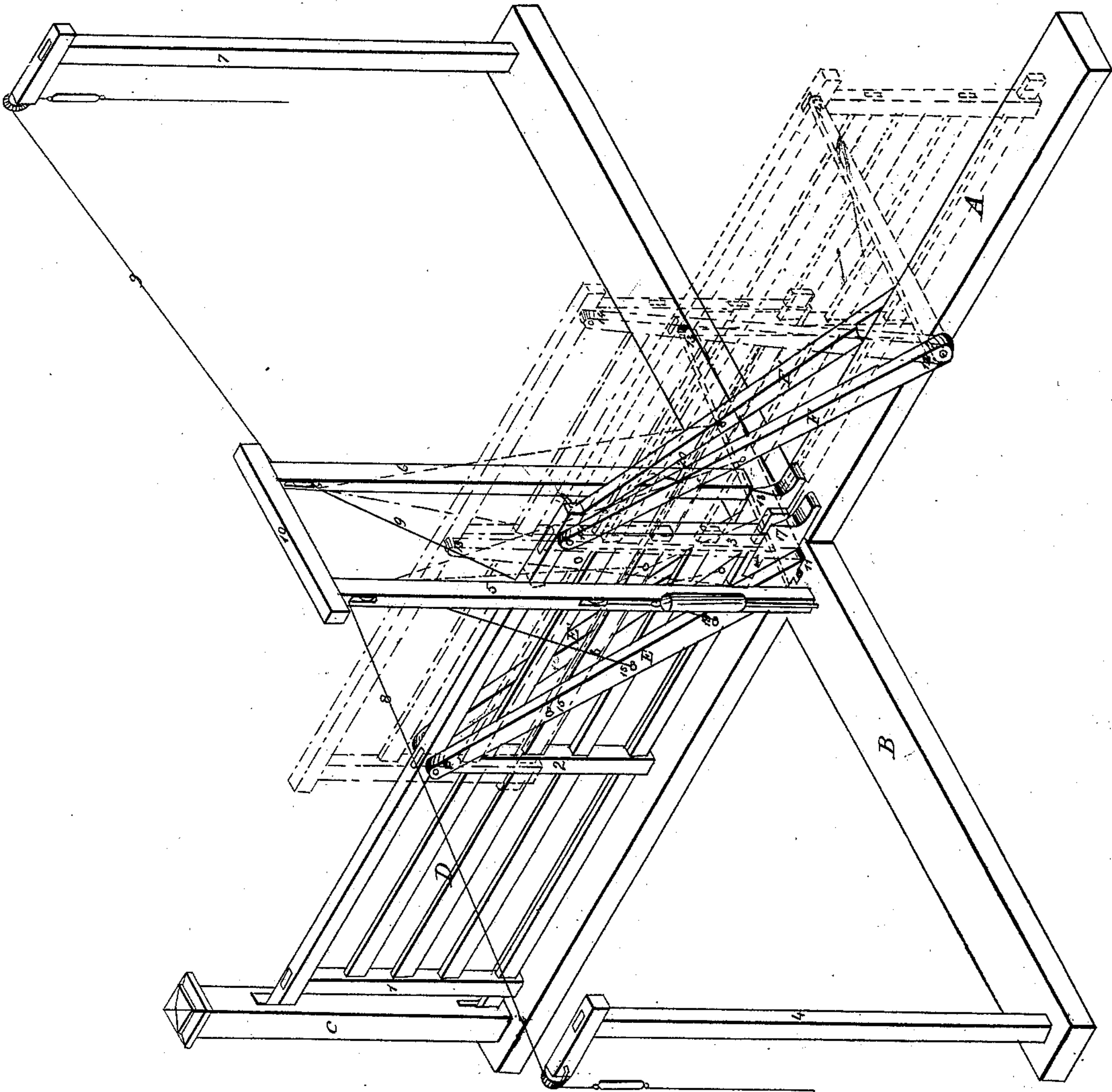


*W. I. Armstrong,
Automatic Gate,*

No. 57,432.

Patented Aug. 21, 1866.



Witnesses:

*J. I. Peyton.
Theodore Lang*

Inventor:

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By Baldwin & Son
attys*

UNITED STATES PATENT OFFICE.

WILBUR I. ARMSTRONG, OF ROCKFORD, ILLINOIS, ASSIGNOR TO HIMSELF
AND SOLOMON DWIGHT, OF SAME PLACE.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 57,432, dated August 21, 1866.

To all whom it may concern:

Be it known that I, WILBUR I. ARMSTRONG, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Gates, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making a part of this specification, which is a perspective view of my gate, shown closed in black lines, half-open in blue lines, and wide open in red lines.

My invention has relation to that class of farm or road gates that are partly self opening and closing, and which are capable of being opened or closed with balance-weights by passengers, without dismounting or leaving the carriage.

To this end my invention consists in supporting the gate between and upon parallel braces or levers, one end of which levers being pivoted near the bottom of the gate and the other to the gate itself, and so arranged that balance-weights and cords, when pulled, will open the gate with a slight resistance and close it without violent jars.

My gate may be effectively operated by properly inserting posts and stakes in the ground at suitable distances apart; but, as shown in the drawings, I prefer to use a ground-sill, A, crossing the roadway at a right angle, and a sill, B, crossing the former at a right angle.

The sill A supports at one end a gate-post, C, having mortises at the top and bottom to receive the projecting ends of the top and bottom rails of the gate D, which may be made of any desired dimensions or material. The gate shown in the drawing is composed of vertical bars 1, 2, and 3, having four cross-rails mortised into them, while they are secured by tenons into mortises in the top rail, which is heavier than the others.

The sill B has secured to it vertical posts 4, 5, 6, and 7, 4 and 7 being at the opposite ends of the sill, and carrying pulleys on cross-pieces, over which the cords 8 and 9, with their balance-weights, are suspended within reach of the passengers. The posts 5 and 6 are situated near the center of the sill B, and are

united at top by a cross-piece, 10, to hold them securely together, each of these posts carrying a guide-pulley for the cords 8 and 9.

Two pairs of levers, E and E' and F and F', are pivoted at 11 and 12 to the sides of the sill A, and about the same distance apart as are the second and third vertical bars of the gate. The gate is placed between the levers E and E' and F and F', which are pivoted to the top rail at 13 and 14, so that whatever the position of the gate the levers will be parallel to each other in pairs. The cords 8 and 9 are attached at one end to pins or holes 15 and 16 in the levers E and E' at such an angle to the vertical posts 5 and 6 as that, when the balance-weight is drawn, it will raise the gate from the sill A and release the projecting ends of its top and bottom rails from the mortises in the post C.

The sill A carries brace-blocks 17 and 18 between the posts 5 and 6, to brace the gate and hold it vertically when it is let down on the sill, whether opened or closed.

The operation is simple and obvious. The gate being closed, as shown in black lines, the approaching horseman pulls with a smart twitch the cord 8, which raises the supporting-levers and the gate to the position shown in blue lines, where it is nearly balanced by the weights suspended to the cords; but having still some momentum from the twitch on the cord it falls gently past the center posts to the position shown in red lines, being now fully open; and when the horseman passes the cord 9 he gives a corresponding pull, which throws the gate over upon its levers, and its balance-weights permit it to fall gently into the position shown in black lines, supported at one end by the ends of the rails passing into mortises in the post C, and by the brace-blocks at the other.

For the convenience of foot-passengers short cords 19 and 20, one or both having balance-weights, may be attached to the levers E and E' and pass over suitably-placed pulleys in the posts 5 and 6, by pulling which the gate can be opened with ease, as the balance-weights will act whenever the lever is raised to assist in lifting the gate, and will also diminish the

violence of its fall when returning to rest on the sill, and prevent all injurious jars in opening or closing the gate.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of a gate opened and closed on parallel levers with balance-weights to assist it in opening and prevent its receiving

injurious jars in closing, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

WILBUR I. ARMSTRONG.

Witnesses:

W. LATHROP,

W. D. ARMSTRONG.