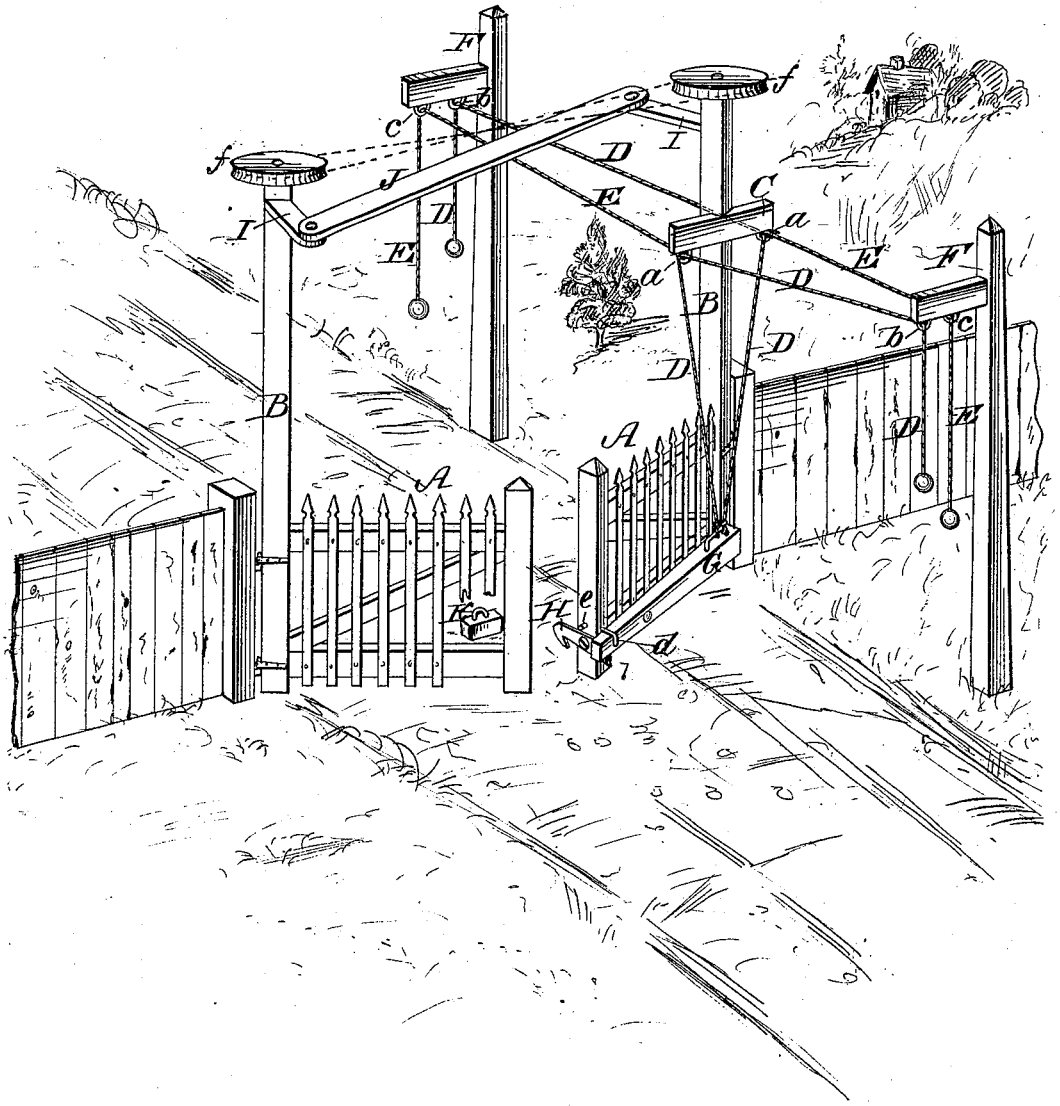
F. J. BORGIA.
Gate.

No. 200,430. Patented Feb. 19, 1878



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UNITED STATES PATENT OFFICE.

FELIX J. BORGIA, OF WILSON, ASSIGNOR OF ONE-FOURTH HIS RIGHT TO FRANK J. McLEAN, OF MENOMONEE, WISCONSIN.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **200,430**, dated February 19, 1878; application filed November 13, 1877.

To all whom it may concern:

Be it known that I, FELIX J. BORGIA, of Wilson, in the county of St. Croix and State of Wisconsin, have invented certain Improvements in Farm-Gates, of which the following is a specification:

My invention relates to that class of gates which are designed to be operated by persons riding or driving through the gateway without alighting; and the improvements consist in the special combination and arrangement of parts hereinafter described.

In the accompanying drawings, A A represent the two sections of a double gate, each furnished with an upright, B, next to the post to which it is hung. To one of these uprights is secured a horizontal beam or bar, C, its ends extending outward on opposite sides of the upright, preferably at an angle of about forty-five degrees to the line of the fence. The outer ends of this beam or bar C are each provided with an eye or staple, *a*, as shown, and through each eye or staple is passed a cord or rope, D, which cords or ropes are carried in opposite directions, and each passed through an eye or staple, *b*, in an arm extending from a post, F, of which there is one on either side of the fence or gate, as shown, at one side of the roadway.

From the eyes or staples *b* the cords D hang down within easy reach of a person approaching the gate. The cords D extend downward from the staples or eyes *a*, and are attached to the rear end of a pivoted bar or lever, G, the forward end of which bears upon the rear end of a pivoted latch, H, as shown, the movements of the lever G and latch H being limited by stops *d* and *e*. The cords D pass from the beam C at such points that if either be drawn down at its outer end the upright B will be caused to rotate in the proper direction to open the gate as soon as the lever G has reached the limit of its movement, incident to the tension on the cord D, the cord from that moment drawing on the staple *a* through which it passes. This operation continues until the gate is thrown sufficiently open, when the cord D is released and the operator passes through the gateway.

In order to close the gate after passing through, similar cords, E, are attached to the staples *a* and carried in opposite directions to and through staples or eyes *c*, one on the arm of each post F, whence they hang down by the side of the cords D, as shown, they being, however, attached to the staples *a*, each at the opposite end of the beam or bar C from that to which the cord D running to the same post F passes, in order that by drawing down upon the outer ends of the cords E the upright B shall be rotated in a direction the reverse of that given it by the cords D, or in the proper direction to close the gate.

By this arrangement it will be seen it is only necessary for the party to pull upon the cord D in approaching the gate in order to open it, and to pull upon the cord E after passing through to close the same.

So far the construction described is applicable alike to single and double gates; but when double gates are thus constructed it is either necessary to provide each section or part of the gate with operating devices, or so connect the gates that the operation of one shall cause the simultaneous operation of the other. Either plan may be adopted, but in practice the latter is preferred.

To accomplish this result I provide both of the uprights B B with an arm or beam, I, projecting from the uprights on opposite sides, and at a right angle, or nearly so, to the line of the gate or fence, and connect said arms by a cross-bar or rod J, as shown, so that as one of the uprights is rotated its motion is communicated to the other, and the two sections caused to move simultaneously and in the same direction; or the same result may be accomplished by furnishing the uprights B each with a horizontal wheel or pulley, *f*, around and between which is passed a cord or band, as shown in dotted lines, the band being crossed, as shown. If desired, the gates may be arranged to swing in opposite directions, in which case the connecting bar or rod or the cord or band may be carried straight across instead of passing to opposite sides of the uprights, as above described.

The opening of the two gates in the same direction is advantageous, in that it permits the operator to approach them as they open;

that it avoids the extension of the connections as far as would be otherwise required; and that it permits the gates to be used at railroad crossings and similar places, where gates swinging in opposite directions could not be used.

In order to provide a latch which shall be automatically released in the act of drawing upon the cord D by which the gate is opened, said cords are attached to the rear end of a pivoted bar or lever, G, weighted at its rear end, and bearing at its forward end upon a pivoted latch, H, in rear of its pivot, said latch being heaviest at its forward end. When the cords D are neither of them under tension, the weighted end of the bar or lever G drops down, permitting the forward end to rise up and allow the latch H to fall and engage with its keeper K. When the cord D is pulled it first draws upward the rear end of the lever G, causing its forward end to raise the latch H, upon which it bears, clear of the catch or keeper K, when it comes in contact with a stud or stop, *e*, preventing the further movement of the lever G and latch H, when the cord D draws or pulls upon the staple *a*, which, being secured to the beam C, causes the latter to be drawn in the direction in which the cord is pulled, and to open the gate, as above described. When the gate is closed, there being no tension on the cord D, the lever G and latch H are free to fall of their weight, and the latter is thus permitted to engage with its catch K, and fasten or lock the gate in position. It will be observed that this method of operating the latch is equally well adapted to single and double gates.

The cords of each pair are of such length that when the gates are closed the end of the opening-cord hangs above that of the closing-cord, E; but when the gates are open the elevations of the cords are reversed. Thus it will be seen the cord which is to be used always hangs higher than the other. This arrangement serves as a very simple guide or indication to the operator as to which cord is to be used in every case.

It is, of course, necessary to place the posts F at a sufficient distance from the gate to permit it to swing around without interfering with the team when in position to permit the driver to reach the operating-cords; and it is also necessary, when double gates are used, having the connecting-bar J between them, that the latter shall be sufficiently elevated to permit the passage of loaded wagons under it.

By placing the bar or beam C at an angle of about forty-five degrees, as mentioned, a farther movement of the gate may be obtained than otherwise; but care must be taken that the end of the beam C to which the cord D, by which the gate is opened, passes, is placed farthest from the operating end of said cord.

I am aware that self-opening gates and gates to be operated from a distance have been made in a variety of forms, and that two gates have been connected in such manner as to open in opposite directions, and I therefore make claim to my improved construction only.

What I claim and desire to secure is—

In combination with the gate A, having the upright B and arm C, the two cords D E, connected to opposite ends of the arm, and extended thence through the standard F and down within reach, as shown and described.

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