J. E. JOHNSTON.

Gate.

No. 200,398. Patented Feb. 19, 1878.

Fig. 1.

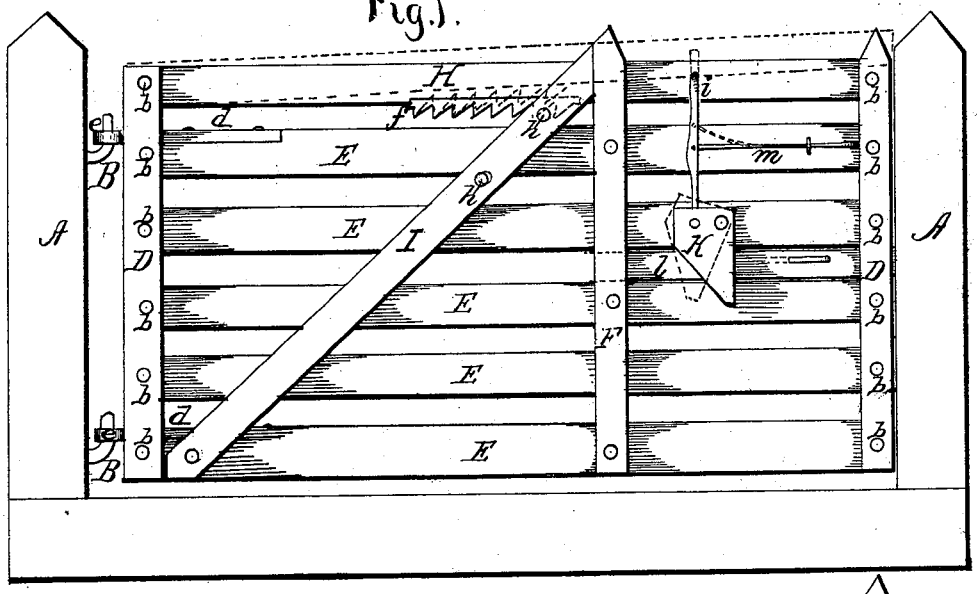
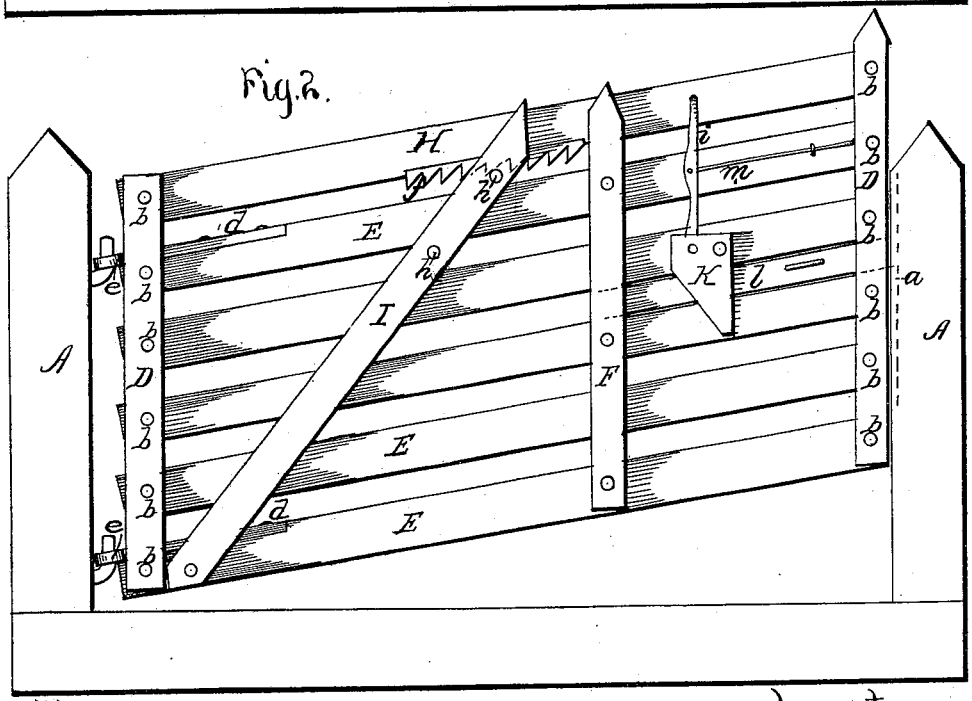


Fig. 2.



Witnesses;

J. Walter Fowler,

Chas. C. Gill

Inventor;

John E. Johnston

By his attys.

Cox and Cox

UNITED STATES PATENT OFFICE.

JOHN E. JOHNSTON, OF CLARK'S HILL, INDIANA.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **200,398**, dated February 19, 1878; application filed December 12, 1877.

To all whom it may concern:

Be it known that I, JOHN E. JOHNSTON, of Clark's Hill, Tippecanoe county, in the State of Indiana, have invented a new and useful Improvement in Gates, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in gates; and consists in the devices hereinafter fully described.

The object of the invention is to furnish a gate in which all the parts are joined by pivots, thereby permitting one portion thereof to be elevated while the remainder is stationary; also, to provide a means for retaining such elevated portion in position, and to afford a latch which will secure the gate when closed, and at the same time lock the parts composing the same in any desired position, whether elevated or depressed.

Figure 1 is a side elevation of a device containing an incorporation of the elements of the invention. Fig. 2 is a like view, exhibiting the gate in a partially-elevated position.

In the accompanying drawings, A represents the two gate-posts, one of which is provided on its inner face with the hooks B, and the other with the vertical groove *a*. D represents the vertical end stiles, between which the horizontal rails E of the gate are secured by pivots *b*, upon which the said rails have a hinged or an oscillatory movement, permitting the elevation of their front ends, while their rear ends remain depressed, and which pivots retain the stiles D in a vertical position.

It is obvious that all the horizontal slats or rails will be simultaneously elevated, and that they will carry upward any attachments that may be connected with them. Thus the front stile D will be elevated, and as the rear stile D will remain in a vertical position, and as all the rails are of equal length, it is evident that the front stile will assume a position parallel with that of the rear stile, whether the former be elevated or depressed.

Upon either side of the rails E, at a suitable distance from the front of the gate, are pivoted the vertical stiles F, which are similar to the stiles D, and will be mentioned hereinafter.

Upon the upper edges of the upper and lower rails E are secured the bars *d*, having upon their rear ends the eyes *e*, which engage the hooks B, and form a hinge for the support of the gate. The rail H is placed horizontally between the upper ends of the stiles D, and is pivoted at its rear end, its opposite end being free and capable of vertical movement. The rack *f* is attached to the under edge of the rail H in the rear of the stiles F, and has the vertical edges of its teeth facing rearward. Adjacent the lower corner of the rear stile D, on either side of the lower rail E, are pivoted the inclined corresponding bars I, which extend forward and upward at an angle of about forty-five degrees, and are supplied on either side of the uppermost rail E with guide-pins *h*, which retain the upper ends of the bars in proper relation to the stiles F, against which the said ends press, thereby preventing any swagging of the gate. The upper guide-pin *h*, while preserving the position of the bars I, also meshes with the rack *f*, and retains the whole structure in a fixed condition. To the front portion of the rail H is secured the upper end of the draw-rod *i*, the lower end of same being attached to the rear end of the dog K, pivoted at its other end to the rail E, and carrying the sliding bar *l*, placed in the space beneath the same, and having its front end extending slightly beyond the outer edge of the stiles D, so as to enter the slot *a* when the gate is closed. Upon the uppermost rail E is secured the bar-spring *m*, which has its rear end connected with the draw-rod *i*, and serves to give the same a downward tension, thus drawing the rail H, with rack *f*, downward to a point in close relation to the upper guide-pin *h*.

It is obvious that when the lower end of the dog K is forced toward the rear of the gate the sliding bar *l* is withdrawn from the slot *a*, and that the draw-rod *i* will be forced upward. Thus the rail H, with rack *f*, is also elevated, and while the front end of the gate is being raised the guide-pin *h* can freely slide toward the rear stile D.

When the front portion of the gate has been sufficiently elevated, the pressure on the lower end of the dog K should be relieved, when the spring *m* will retract the rail H, and cause the teeth of the rack *f* to press upon the pin *h*, thereby retaining the gate in this position until pressure is again applied to the dog K,

when the rail H will be again slightly raised, disengaging the pin and rack, and allowing the front portion of the gate to assume its former horizontal position, the front end of the bar *l* entering the slot *a* and latching the gate.

It is plain that by this construction the gate, instead of being swung open, can have its front end sufficiently elevated to permit small stock to pass beneath it, at the same time preventing large cattle escaping, and that the gate can be partially elevated and then swung open over a snow-drift or other obstruction.

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

1. The dog K, pivoted to the rail E, and having attached to it the sliding bar *l* and draw-rod *i*, in combination with the spring *m*, rail H, rack *f*, and pin *h*, substantially as and for the purpose set forth.

2. In a gate, the stiles D, rails E, rail H, provided with rack *f*, stiles F, and inclined bars I, furnished with pins *h*, in combination with the pivoted dog K, sliding bar *l*, draw-rod *i*, and spring *m*, all being arranged substantially as and for the purpose expressed.

In testimony that I claim the foregoing improvement in gates, as above described, I have hereunto set my hand this 6th day of December, 1877.

JOHN E. JOHNSTON.

Witnesses:

DAVID R. RINEHART,

MARTEN RASH.