G. MOTTER, Jr.

Gate.

No. 81,813. Patented Sept. 1, 1868.

Fig. 1.

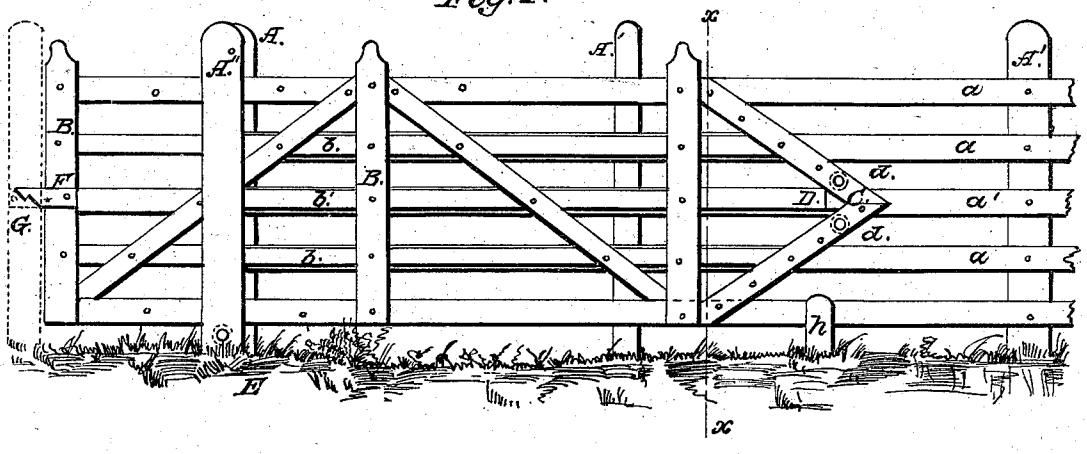


Fig. 2.

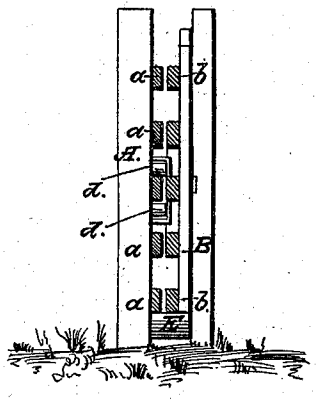
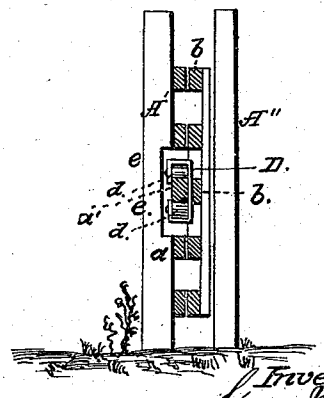


Fig. 3.



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United States Patent Office.

GEORGE MOTTER, JR., OF HENRY, ILLINOIS.

Letters Patent No. 81,813, *dated September* 1, 1868.

IMPROVEMENT IN SLIDING GATES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE MOTTER, Jr., of Henry, in the county of Marshall, and State of Illinois, have invented certain new and useful Improvements in Sliding Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My improvement consists in providing a horizontally-sliding gate with rollers or wheels, which are so applied as to sustain the whole weight of the gate while being opened, and this until the gate is moved the entire distance.

In gates of this class, as generally constructed heretofore, they supported themselves only until about half way open, and then the outer or free end must be sustained by the operator for the rest of the distance it is to move.

My invention further consists in a novel arrangement of braces for strengthening and supporting the gate. Also in a catch or fastening of novel form for automatically securing the gate shut.

In the drawings—

Figure 1 is a side view of my gate, shown open.

Figure 2 is an end view from the front end, and

Figure 3 is a cross-section on the line *x x* of fig. 1.

A′ and A are the stationary fence-posts, to which are attached the usual bars, *a′ a*, and B represents the gate, rectangular at the front end, but pointed or diamond-shaped at the rear, C. The bars *b b′* of the gate extend through and are attached to this pointed end, thus firmly holding and bracing the whole together, and preventing any sagging.

This gate B, I attach at its rear end to the bar *a′* of the fence, by means of anti-friction rollers, *d d*, which are journalled to a metal frame, D, said frame being bolted to the back side of the gate, on the point C. These rollers run, one above and one below the bar *a′*, as shown, and are held to the bar by arms or lugs, *e*, on the frame D, which pass or clasp over the bar, as in fig. 3, and thus prevent the gate from being separated from the fence, or the rollers from getting off from the bar, so that the back end of the gate is held in place against the fence and off of the ground.

At the front end the gate is supported by a roller, E, secured between the stationary posts A and A″, as clearly shown in fig. 2, the lower side of the gate running upon this roller, and the gate is guided and held upright by the said posts A and A″.

The gate is now ready for operation, and may be slid back and forth at will. The weight of the forward end of the gate is at all times sustained by the roller E, but the weight of the other end is alternately borne by one and the other of the rollers *d d*, as when the weight of the gate back of E more than equals that forward, then the strain is upon the upper roller, but when the weight of the forward end preponderates, the roller C is the fulcrum, and the strain is upon the lower roller, *d*.

To allow the passage of frame D with its rollers past the posts A′, those posts are cut away, as shown in fig. 3, otherwise the gate could open only half its length, as the frame D would strike against the post and prevent its further movement.

To limit the movement of the gate, I secure on one side a projecting pin, I, fig. 1, which is so placed that when the gate is closed it shall strike against the post A″, and when the gate is back as far as desired, shall strike the short stationary post *h*.

For the purpose of securing the gate shut, I attach to the front end a hook or catch, F, having an inclined face, which rides up on and engages over a corresponding hook attached to the post which the gate closes against. When the gate is to be opened, the front end is lifted up unhooked, and the gate is free to move.

By this arrangement of parts I construct a gate which is very simple and strong, and which can be easily operated.

Having thus described my invention, what I claim, is—

1. The gate constructed with the triangular brace at its rear end, and having the rollers *d d* applied so as to bear upon opposite sides of the rail *a'*, and being held thereon by the projections *e*, in combination with the posts A and A' with the roller C, all arranged to operate substantially as herein set forth.

2. The stationary hooks F and G, constructed and applied as shown and described.

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