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MARK MARTIN.

Improvement in Gates.

No. 122,125. Patented Dec. 26, 1871.

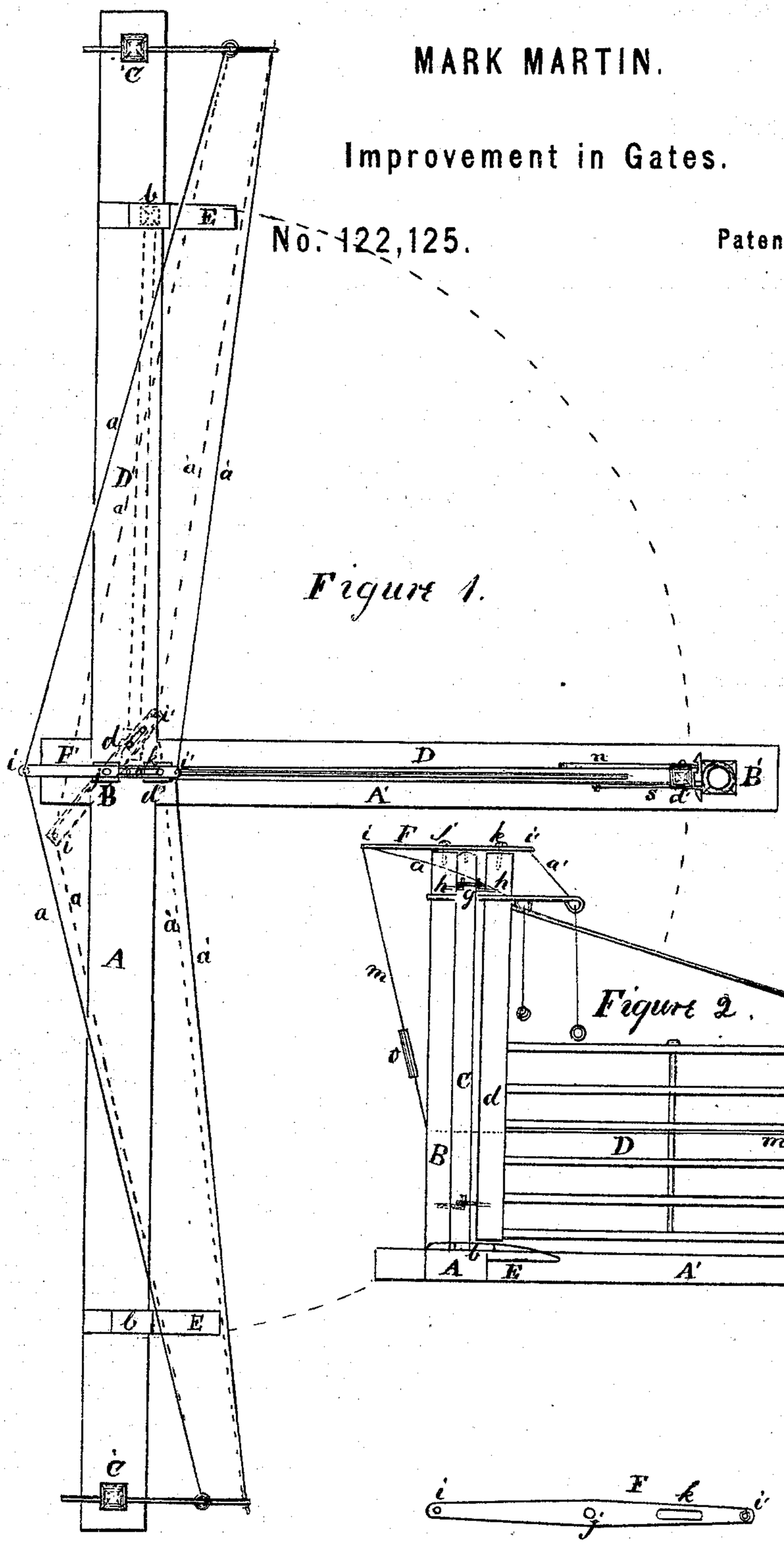

Figure 1.

Figure 2.

Figure 3.

Figure 4.

Witnesses
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MARK MARTIN, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 122,125, dated December 26, 1871.

I, MARK MARTIN, of Rockford, in the county of Winnebago and State of Illinois, have invented certain Improvements in Automatic Gates, of which the following is a specification:

The first part of my invention relates to the hinging of a gate with what is known as an "eye-and-stud" hinge below, and for the upper hinge putting the common stud piece of hinge in both the gate-post and gate-stile and connecting them by a link, whereby the gate may be opened in either direction, in the manner and by the means hereinafter to be described. The second part of my invention relates to the use of a swinging lever pivoted on the gate-post *c* at *j*, having a slot, *k*, in which a stud moves which is placed in the gate-stile *d*. In this lever the cords *a a'* are attached in the holes *i i'*, which extend out from the gate in the direction of the roadway and are drawn upon to open the gate, as described further on. The third part of my invention relates to the use of a latch, *n*, pivoted to the gate-stile *d'* at *n'*, which stops in a suitable catch fastened to the post B'. The cord *m* is attached to the latch *n*, and, passing along the gate, passes through the gate-stile *d* and through the post B, is brought through the hole *i* of lever F, and the cords *a a* are attached to this cord. On the cord *m* below the lever F is placed a weight, *o*, which is to counteract the weight of the cords *a a* and allow the latch *n* to catch in the stop and hold the gate closed. The latch *s* is also used to assist in stopping and holding the gate closed. The fourth part of my invention relates to the use of the notched stop-blocks E E, in which are the recesses *b b*, which hold the gate open until lifted out of them by the action of the cords *a a* when drawn upon for the purpose of closing it.

Figure 1 is a plan view of my gate, the full lines showing it closed and the dotted lines showing it open. Fig. 2 is an elevation, showing the gate closed. Fig. 3 shows the lever F. Fig. 4 shows the upper hinge of the gate.

In the drawing, A A' are the sills to which are secured the upright posts B B' C C' C'. To the post B is hinged the gate D, which latches to post B'. The gate D is hinged to post B by the common eye-and-stud hinge below and by my peculiar hinge above shown in Fig. 4, in which the pieces *h h* are inserted in the post B and stile *d* near the top and are connected by the link *g*. The lever F is hinged at *j* to the post B, and a stud in the top of the stile *d* moves in the slot *k* of lever F. The latch *s* placed on the front end of the gate is of the usual kind. It is made to strike against a projection above the notched catch, which stops the gate, when the latch drops into the catch and is held until raised out of it by the action of the cords *a a*, as described further on. In addition to latch *g* the latch *n* is hinged to the stile *d'* and catches into a notch perpendicularly fastened upon post B', so that it will not be unfastened by the action of raising the gate. To the latch *n* the cord *m* is attached in such manner that on being drawn upon it draws the latch out of its fastening, permitting the gate to be opened. The cord *m* is passed through the hole *i* of lever F, and the cords *a a* are attached to this cord instead of being directly attached to the lever.

My gate is intended, of course, to be opened from the horse or carriage without dismounting, and may be approached from either side, always opening from the operator. The posts *c' c'* supporting the cords *a a* should be far enough from the gate to be reached from the carriage without interfering with the opening or closing of the gate.

In operation, drawing upon the cord *a* will first pull back latch *n* by the cord *m;* then, acting upon lever F, will move the stile *d* to one side and somewhat backward by the link-hinge *h g h*, which raises the front end of the gate, and with it latch *g*, out of its catch. The hinges, being now out of plumb, incline the gate to swing open by its gravity. A certain amount of leverage can also be exerted upon it by the action of the lever F operating upon the gate through the stud in slot *k* to move it in addition to gravity. When the gate is opened it comes to rest in the notch *b* of piece E, and is securely held there until it is closed by the action of the cords *a* or *a'*. If the gate is to be closed after passing through, the cord *a* is drawn, which raises it out of the stop-notch *b*, and, inclining the hanging properly, the gate swings shut and the latch *g* stops it, while the latch *n* secures it against danger of being opened by lifting, as might otherwise be done by hogs or other stock. If it is desired to close the gate from the same side from which it was opened, then it will be necessary to draw upon the cord *a'*, which will change the inclination of the hinges in the same manner as when the cord

a is drawn from the opposite side. The cord *a'* can also be used to adjust the movement of the gate in opening, as when the wind may be blowing, or from any other cause, it may be opening with too much violence.

It will be noticed that the gate can be operated by the cords *a a* alone; but in such an arrangement it cannot be closed from the same side upon which it is opened, nor can its movements in opening or closing be so completely controlled; otherwise a single cord running out on either side is sufficient for practical operation.

It will be further noticed that the latch *g* will not hold the gate closed against any cause that may raise the front end of it. This is accomplished by the latch *n*, which, having its fastening-blade perpendicular, is not affected by raising until drawn back by the action of the cord *m* or otherwise, when the gate will open as before described. The latch *n* cannot be relied upon for stopping the gate from swinging past post B', as it cannot take hold of the stop-catch so long as the cord *a* is drawn upon. The combination of the two latches meets every requirement of the case.

I claim as my invention—

The combination and arrangement of the hinge *h g h*, gate D, cords *a a'*, lever F, with latches *n* and *g*, cords *m a a'*, and weight *o*, the whole constructed and operating substantially as described.

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Witnesses:

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