(No Model.)

W. H. RAGSDALE.

FARM GATE.

No. 384,280. Patented June 12, 1888.

Fig 1.

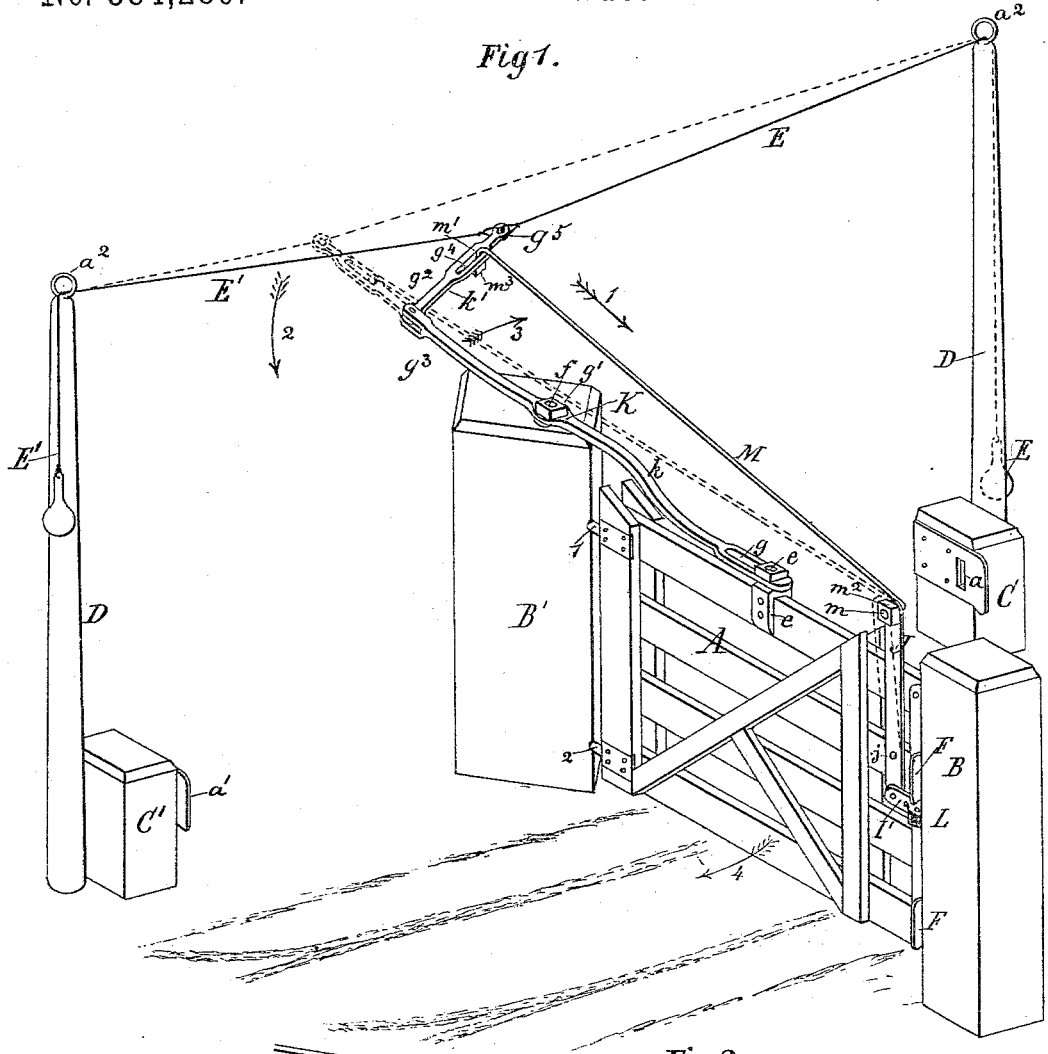
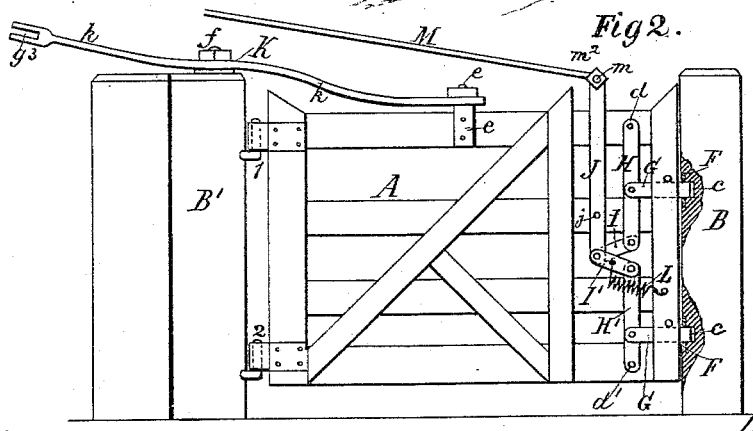


Fig 2.



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UNITED STATES PATENT OFFICE.

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FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 384,280, dated June 12, 1888.

Application filed February 13, 1888. Serial No. 263,802. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. RAGSDALE, a citizen of the United States, residing at Versailles, in the county of Morgan and State of Missouri, have invented certain new and useful Improvements in Farm-Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to gates which can be unlatched and opened and closed from the inside or outside of an inclosure by persons who may be either riding or walking; and it consists in a novel construction, combination, and arrangement of the parts for latching and unlatching the gate while closed or opened, and swinging it open and closing it, as will hereinafter be described and specifically claimed.

The invention enables me to make a very durable farm-gate of the description above named, the same being provided with two simultaneously-moving latches, both of which serve for latching the gate when closed, and one for latching it when fully opened, said latches being respectively attached to a lever of a toggle-jointed device and to a powerful jointed lever, and operated thereby through a weighted hand-cord by a person either walking or riding and by a retracting-spring.

In the accompanying drawings, Figure 1 is a perspective view of my improved gate closed and latched and ready to be swung open from the outside of the inclosure, the dotted lines illustrating the main latch-operating lever and the gate-operating lever in the positions they stand in when the gate is being swung open from the inside of the inclosure. Fig. 2 is a side elevation of the gate and its posts, showing a portion of the mechanism broken away, and also the latching-posts broken away at points and sectioned.

A in the drawings represents the gate; B, the latching and B′ the hinging post.

C and C′ are inner and outer stub-posts arranged laterally and on a line with the post B′, and provided with keeper-plates *a a′*, for holding the gate open either when swung outward or inward.

D D are higher standards extending up from the posts and provided with guiding eye-staples a^2 (or grooved pulleys) for ordinary balancing or weighted hand-operated cords or chains, E E′, to pass through or over.

F are keeper-plates fastened to the inner side of the latching-post.

G are latches for entering the keeper-sockets *c* of the post B in line with corresponding slots of the keeper-plates F. These latches are respectively pivoted to vertical levers H H′, which are pivoted, respectively, at *d d′* to the top and bottom rails or bars of the gate.

I I′ are toggle-jointed links, pivoted by one of their respective ends to the free ends of the levers H H′, and by their other ends to another vertical lever, J, which is pivoted at *j* to an intermediate rail or bar of the gate.

K is a jointed angularly-bent and horizontally-vibrating lever, pivoted at *f* to the top of the post B′. The part *k* of this lever is slotted at its front end, as indicated at *g*, and a bifurcated screw-threaded pivotal standard, *e*, fastened to the top rail of the gate, passes through its slot *g* and receives on its end a nut, *g′*. By this construction the lever K is loosely connected to the gate, and, while it serves for moving the gate on its hinges 1 and 2, it allows the gate freedom to make the necessary swinging movements without any undue binding resistance. The other part, *k′*, of this lever is free to move on the pivot g^2 of its joint g^3, and it is slotted at its rear end, as indicated at g^4, and just beyond this slotted portion it is provided with an eyed extension, g^5, to which the weighted cords or chains E E′, for balancing and aiding in closing and opening the gate, are fastened, as illustrated. The part *k* of the lever is connected to the vertical lever J by a long rod, M, having a screw-threaded horizontal arm, *m*, and a screw-threaded vertical arm, *m′*. The arm *m* forms a pivot and receives on its end a nut, m^2, while the arm *m′* enters the slot g^4 and receives on its end a nut, m^3. The latter arm, while forming a pivot, is free to play in slot g^4 from end to end thereof, and thus, while the jointed lever serves as a means by which the gate is unfastened and swung open, either outwardly or inwardly, and is closed either from the inside or outside of the inclosure, there is every freedom allowed the gate to make said necessary swinging movements without undue binding of the parts upon one

another, the slots g and g^4 and the joint g^3 of the lever serving perfectly for accommodating the parts in their movements.

L is a spiral spring connected by one of its ends to one of the links of the toggle-joint device and by its other end to a front upright of the gate-frame. This spring is retracted when the latch is withdrawn, and by its thus accumulated power serves for forcing and keeping the latches in their keeper-plates when the gate is closed, as shown in Figs. 1 and 2.

From the foregoing description and the accompanying drawings it will be seen that if the gate is closed and latched, as shown by full black lines in Fig. 1, it is only necessary for a pedestrian or an equestrian to pull upon the cord E, as by this action the part k' of the lever K will be drawn farther in the direction of the arrow 1, and thereby the pivot m' of the rod M caused to traverse the slot g^4 and produce a forward thrusting action upon the upper end of the lever J sufficient to force back the lower end thereof, move the toggle-joint links I I′ and the free ends of the levers H H′ backward, and thereby withdraw the latches G from their keeper-plates F, and now by continuing to pull the cord E in the same direction the part k' of the lever K is caused to draw the rear end of the part k of said lever around in the direction of the arrow 3, while the front end of said part k of the lever K, with the gate, is caused to move in the direction of the arrow 4. If the gate is to be left open, the lower latch, G, will enter the keeper-plate a' of the stub-post C′; but if the gate is to be closed immediately, the cord E′ is pulled and the gate swung to its closed position, whereupon the spring L causes the toggle-joint lever-links I I′ to operate upon the levers J and H H′, and thereby cause the latches G to enter the sockets c in line with the slots in the keeper-plates F. During this action of the spring the rear pivot-arm m' of the rod M is caused to traverse the slot g^4 in the portion k' of the lever K.

If the gate should be latched open and it is desired to unlatch and close it, the pedestrian or equestrian by pulling upon the cord E′ in the same manner as just described can release the latch from plate a', and by continuing to pull said cord he can close the gate so that the spring L may force the latches G into the slots of the keeper-plates F.

In Fig. 1, I have illustrated, by dotted lines, a backward movement of the main latch-operating lever J during the time that lever K is straight, or its two parts, k k', and the rod M are all in a line with the upper edge of the gate. To permit this movement, the sockets c are made deep enough in the post B to allow the latches to pass the necessary distance beyond the keeper-plates.

If desirable, the upper latch, G, may be omitted; but I regard it far preferable to provide the two latches upon the gate.

What I claim is—

1. The combination, with the swinging gate and its latching-post, of one or more latches, G, levers H H′, toggle-joint links I I′, and the lever J, substantially as described.

2. The combination, with the swinging gate and its weighted operating-cords E E′, of the jointed lever K, pivoted to the hinging-post and formed of parts k k', one of said parts having the slot g, substantially as described.

3. The combination, with the gate, its hinging and latching posts, standards, and weighted operating-cords, of one or more latches connected to lever mechanism, as H H′, I I′, and J, and pivoted rod M and slotted jointed lever K, substantially as described.

4. The combination of the jointed slotted lever K, for operating the gate, and the pivoted rod M, for operating the lever J of the latch mechanism, substantially as and for the purpose described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WM. H. RAGSDALE.

Witnesses:
B. R. RICHARDSON,
JOE TAYLOR.