W. G. HERMANCE.

Farm Gate.

No. 52,713. Patented Feb. 20, 1866.

Fig: 1.

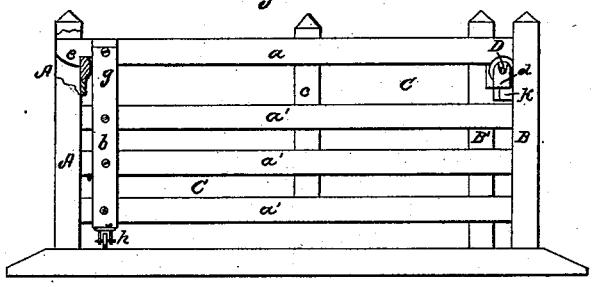


Fig: 2.

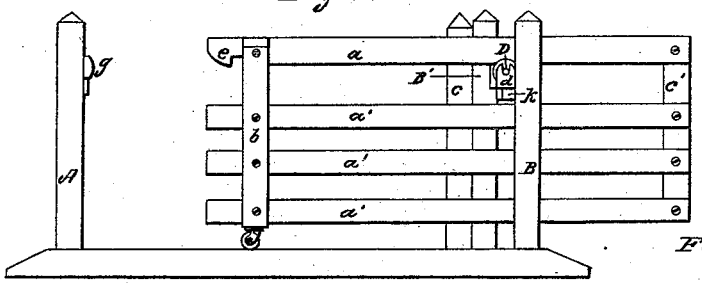


Fig: 3.

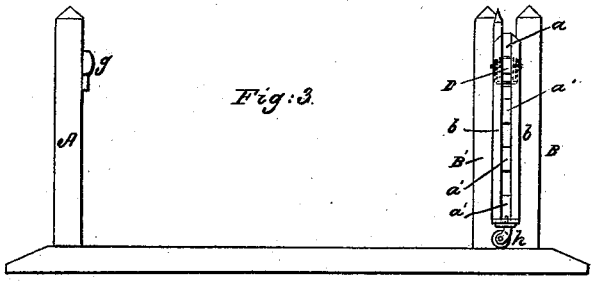


Fig: 4.

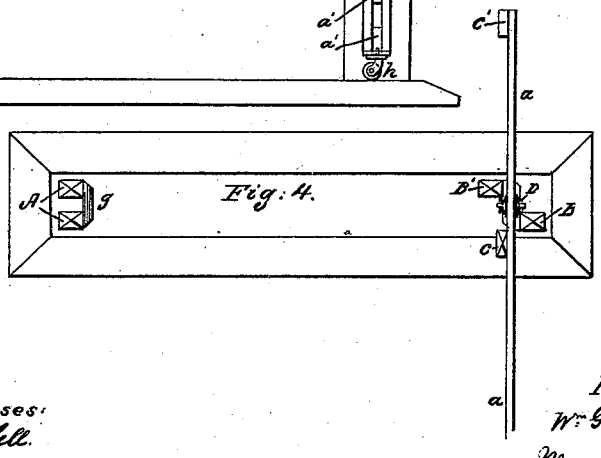
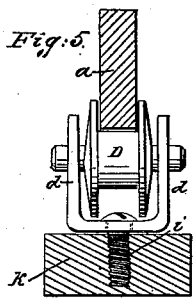


Fig: 5.



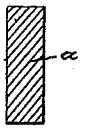
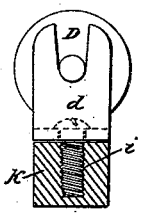


Fig: 6.



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UNITED STATES PATENT OFFICE.

WILLIAM G. HERMANCE, OF ALBANY, NEW YORK.

IMPROVEMENT IN FARM-GATES.

Specification forming part of Letters Patent No. **52,713**, dated February 20, 1866.

To all whom it may concern:

Be it known that I, WILLIAM G. HERMANCE, of Albany, in the State of New York, have invented a new and Improved Farm-Gate; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an elevation of one side of my improved farm-gate. Fig. 2 is a similar view showing the gate partially open. Fig. 3 is a view showing the gate fully open. Fig. 4 is a top view, showing the gate fully open. Figs. 5 and 6 are views of the friction-roller support.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on farm-gates which are so constructed that they are susceptible of being partially opened or closed by moving them in a direction with their length, and also of being fully opened by swinging them in the arc of a circle, like the movement of opening and closing an ordinary hinged gate.

I have invented a means of supporting such gates upon anti-friction rollers at both ends, so that they shall not require lifting during the act of opening or closing them, said rolling supports being so constructed that there will be no side friction upon the gate, but a free longitudinal or swinging movement will be allowed the gate, both in opening or in closing it, as will be hereinafter described.

I have also invented a means of supporting such gates upon a rolling bearing, so that the rail of the gate which moves upon this bearing will be prevented from tilting without being brought in contact with the supporting-standards of said rolling bearing in whatever position the gate may be placed, as will be hereinafter described.

I have also invented a mode of latching a gate of the above-mentioned description by means of a hook which is formed on one of the ends of the gate-rails, thus dispensing with other fastenings than that which is formed by said rail, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A A represent two posts, which are placed side by side, so as to leave a space between them of sufficient width to receive the ends of the gate-rails. In a line with these two posts, and arranged at the same distance apart, are two posts, B B′, the latter one of which is somewhat nearer the posts A than the former one, for the purpose of allowing the gate to be fully opened, as shown in Figs. 3 and 4.

The gate C is composed of four or more horizontal rails, *a a′ a′ a′*, which are secured together at suitable intervals apart by means of upright battens *b*, *b*, *c*, and *c′*. The two battens *b b* are secured opposite each other a short distance from those ends of the rails which enter between the two posts A A, and the batten *c* is secured to the rails at an intermediate point between the ends of the gate, while the batten *c′*, which is on the same side of the gate as *c*, is secured to the ends of the rails, as shown in Figs. 2 and 4.

The uppermost rail, *a*, has a notch and beveled edge formed on that end which projects beyond the two battens *b b*, as shown at *e*, Figs. 1 and 2, for the purpose of catching over the transverse piece *g* on the two posts A A, and thus latching the gate. The upper edge of the piece *g* is beveled or rounded on the inside for the purpose of allowing the beveled nose of the latch *e* to ride easily over it in closing the gate. Beneath the projecting latch *e* the rails *a′ a′ a′* project from the battens *b b*, so as to pass between the posts A A, and thus sustain the gate against pressure on its sides in consequence of high winds.

The latch *e* and the piece *g* also serve to sustain one end of the gate when it is closed, and relieve the roller which is intended to sustain this end when the gate is open. The catch-piece *g* also serves as a means for tying the two gate-posts A A together near their upper ends, so that they will be in effect as one post.

At the lower ends of the battens *b b*, I apply a caster-wheel, *h*, the object of which is to sustain this end of the gate when open, and to allow the gate to be opened either in a direction with its length, as shown in Fig. 2, or by swinging it around in the arc of a circle without the necessity of lifting the gate. The caster being a swiveling wheel, it will turn in any direction in which the gate is moved and support the gate while being moved.

The transverse support K, which ties the two posts B B together near their upper ends, also serves to sustain an anti-friction bearing upon which the lower edge of the upper gate-rail, *a*, rests. This bearing consists of a flanged cylinder, D, the shaft of which has its bearings in slotted standards *d d*, which are allowed to turn about a vertical pin, *i*, as clearly shown in Figs. 5 and 6. The flanges on the ends of said cylinder or roller are of sufficient diameter to form side guides for the rail *a*, and also to prevent this rail from overriding them when the gate is opened or closed; but the main object of these flanges is to prevent the rail *a* from striking the standards *d d*, which it would do if these flanges were not used.

By having a flanged roller supported upon swivel-bearings the gate may be swung open and at the same time moved backward without any liability of the rail *a* scraping upon the standard-bearings and creating friction and unnecessary labor.

Instead of securing the swiveling standards *d d* to the support K by a screw, as shown in the drawings, a stem may be formed on said standards and seated into a hole made through the support K.

The gate which I have thus improved may be partially opened for persons to pass through by unlatching it and then rolling it back in a direction with its length, as shown in Fig. 2, and when thus opened it may be fully opened, as shown in Figs. 3 and 4, by swinging it about the axis of motion of the standard-supports *d d;* or, if desirable, the gate may be swung fully open after it is free from the posts A A without first moving it to the position shown in Fig. 2. In all of these movements the flanged roller-bearing D protects the rail *a* from the standards *d d*. These flanges may be formed on the roller D, or they may be made in the form of circular disks and interposed between the standards and the ends of said roller.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The construction of the roller D with flanged guards for the rail *a* of a gate which operates substantially as described.

2. The latch *e* and supporting-catch *g*, said latch being formed on the rail of the gate so as to enter between the posts A A and support the gate upon said catch, substantially as described.

3. The combination of a swiveling roller, D, for sustaining the gate at one end, with a caster, *h*, for sustaining the opposite end of the gate, substantially as described.

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