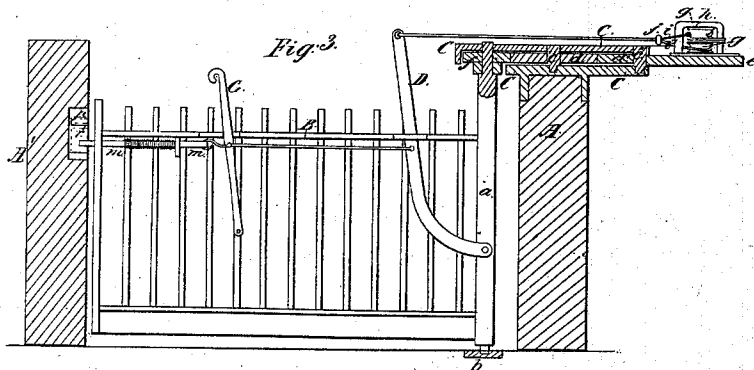
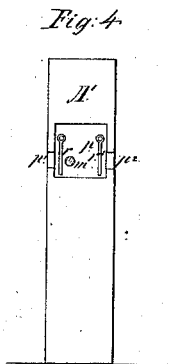
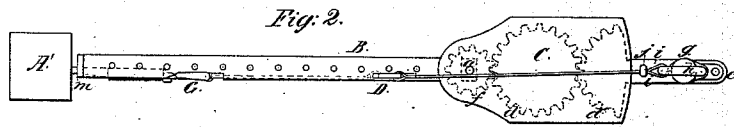
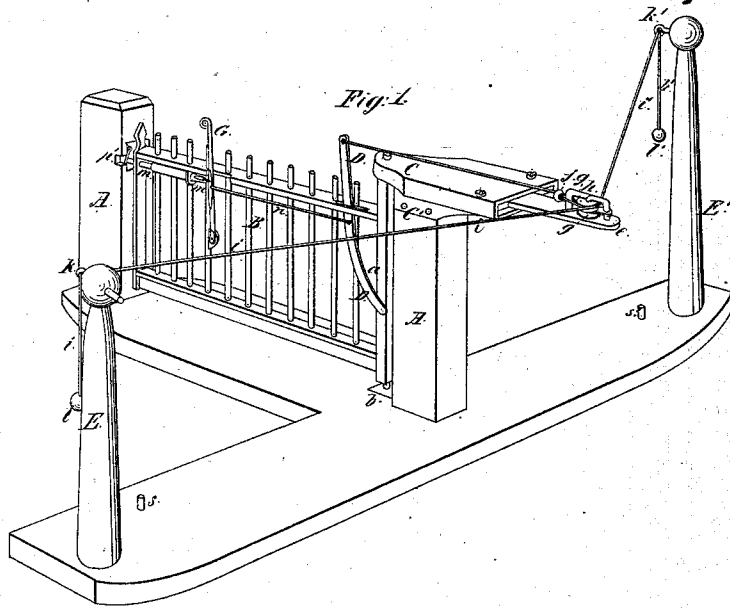


*J. G. Hunt,  
Automatic Gate,*

*N<sup>o</sup> 47,307-*

*Patented Apr. 18, 1865.*



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# UNITED STATES PATENT OFFICE.

JAMES G. HUNT, OF CINCINNATI, OHIO.

## IMPROVED FARM-GATE.

Specification forming part of Letters Patent No. 47,307, dated March 28, 1865.

*To all whom it may concern:*

Be it known that I, JAMES G. HUNT, of Cincinnati, Hamilton county, State of Ohio, 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 a perspective view, showing the contrivances for opening and closing the gate. Fig. 2 is a top view of the gate and its two posts. Fig. 3 is an elevation of one side of the gate and sectional views of the gate posts. Fig. 4 shows the catches for receiving the gate-bolt and securing the gate in a closed state.

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

The object of this invention is to apply certain contrivances to a farm-gate which may be hung in the usual well-known manner, which will enable any person while riding in a vehicle or on horseback to readily unlatch and open the gate and again close it after him, and while this is the case the latch on the gate can be readily operated and the gate opened and closed by a person on foot, as will be hereinafter described.

Another object of my invention is to enable any person, either riding or walking, and approaching the gate from either side, to unlatch and open it by pulling a single rope or chain, which is connected to a draw-bolt and also to a lever, which operates to open or to close the gate, as will be hereinafter described.

Another object of my invention is to support the upper end of the pivoted gate-post in one end of a box which is so constructed that it serves as a protecting-cap for the stationary gate-post, and also a protection against the weather for the mechanism which is used for swinging the gate open and shut, as will be hereinafter described.

Another object of my invention is to practically employ a sliding or draw bolt for securing the gate in a closed state, and to provide for locking or bolting the gate automatically when closed, as will be hereinafter described.

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

In the accompanying drawings, A represents one of the gate-posts to which the gate B is attached, and A' represents the post to which the gate is fastened when it is closed, as shown in Figs. 1, 2, and 3. The gate B is hung by means of its post *a*, one end of which is stepped in a foot-plate, *b*, and the other end is pivoted to the overhanging portion of a cap, C, as shown in Figs. 1 and 3. The gate being hung in this manner, it will be seen that it can be readily opened or closed, or moved on either side of the stationary post A. The cap C may be made of cast metal, with two studs, *c c'*, cast on its lower side to form centers for receiving a spur-wheel, *d*, and a spurred segment, *d'*, which latter has an arm, *e*, projecting from it and extending beyond the end of the cap C, as shown in Figs. 2 and 3. The rack or segment *d'* engages with the teeth of spur-wheel *d*, and this latter wheel engages with a pinion-wheel, *f*, which is keyed near the upper end of the gate post *a*, as clearly shown in Fig. 3. The cap C which I have referred to covers the rack *d'* and the two spur-wheels *d f*, and protects them from ice, snow, &c., and forms, in conjunction with the lower socket-plate, C', in which the upper end of the post A fits, a box for supporting and inclosing said toothed wheels and the lever segment, and also for protecting the upper end of the post A, by preventing water from entering therein. Near the outer end of the arm or lever *e* are two grooved pulleys, *g g*, arranged one over the other and pivoted between the vertical portions of the staple *h*. These pulleys receive two cords or chains, *i i'*, which pass around them in opposite or reverse directions, and thence on each side of the forward upright portion of the staple *h*, as shown in Figs. 1 and 2.

The ends of the cords nearest the pulleys are fastened to a stop piece, *j*, which is connected to a vertical lever, D, the upper arm of which projects above the gate, to the post *a* of which it is pivoted. The other ends of the cords *i i'* are carried off and passed through staples *k k'*, (or over pulleys,) which are secured at or near the upper ends of the posts E E'. The weights *l l'* are attached to the ends of cords *i i'*, for the purpose of keeping these ends always in a convenient position to be grasped by the hand of a person approach-

ing the gate. The posts E E' should be located at such distance from the gate as will enable a person while riding in a carriage to open the gate without turning out of the road.

The upright lever D passes through a vertical slot which is made through the upper rail of the gate, and this lever is attached by means of a rod, *n*, to an upright lever, G, which is suitably connected to a bolt, *m*, as shown in Figs. 1 and 3. The bolt *m* is arranged in a horizontal position directly under the upper gate-rail, and the spiral spring, which is coiled around said bolt, forces this bolt forward and keeps it in this position when not otherwise acted upon. The projecting end of the bolt *m* is received in a recess which is formed in the post A', as clearly represented in Figs. 1, 3, and 4; but in order for it to enter this recess *p*, two notches, *p' p'*, are formed on the sides of said recess and in a horizontal line with the bolt, and through one or the other of these notches the end of the bolt must pass before entering the recess. *r r'* are two pivoted gates or catches which are arranged within the recess *p* in such manner that in the act of closing the gate B, with its bolt thrown forward, as shown in Fig. 3, this bolt will strike one of said pendent catches and force its lower end forward until it passes over the bolt and falls back to its position, as shown in Fig. 4, when the gate will be bolted. In this condition the gate cannot be opened without drawing back the bolt, as the catches *p' p'* both open inward.

To open the gate, either one of the cords *i i* is pulled, the effect of which is, first, to draw back the bolt *m* until the stop-piece *j* is brought in contact with the staple *h*, then the lever-

arm with its segment *d'* acts, through the medium of spur-wheel *d*, upon the pinion-wheel *f*, and the gate swings open in a direction opposite to that in which the cord *i* was pulled. After passing through the gate the cord *i'* is pulled, and the gate will close, the bolt *m* flying out into the recess *p* when the tension on said cord is released.

If a person is on foot, and does not desire to open and close the gate by means of the cords *i i'*, he can force the spring-bolt *m* back by applying a slight pressure on the lever G. The gate can then be opened, and when it is closed again the bolt will lock itself.

The gate is prevented from swinging too far around by means of the short stops *s s'*, applied near the posts which support the outer ends of the pull-cords *i i'*.

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

1. The hollow cap composed of plates C C', constructed and applied together and to the gate-post A, substantially as and for the purpose described.

2. The arrangement of pulleys *g g'* on the arm *e* of the segment, in combination with the pull-cords *i i'*, arranged and operating upon the gate and bolt *m*, substantially as described.

3. The levers D G, rod *n*, and spring-bolt *m*, applied to a swinging gate which is opened and closed by means of two cords, *i i'*, acting upon a system of levers, substantially as described.

JAMES G. HUNT.

Witnesses:

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