(No Model.) 2 Sheets—Sheet 1.

L. J. JOHNSTON.

FARM GATE.

No. 304,329. Patented Sept. 2, 1884.

FIG. 1.

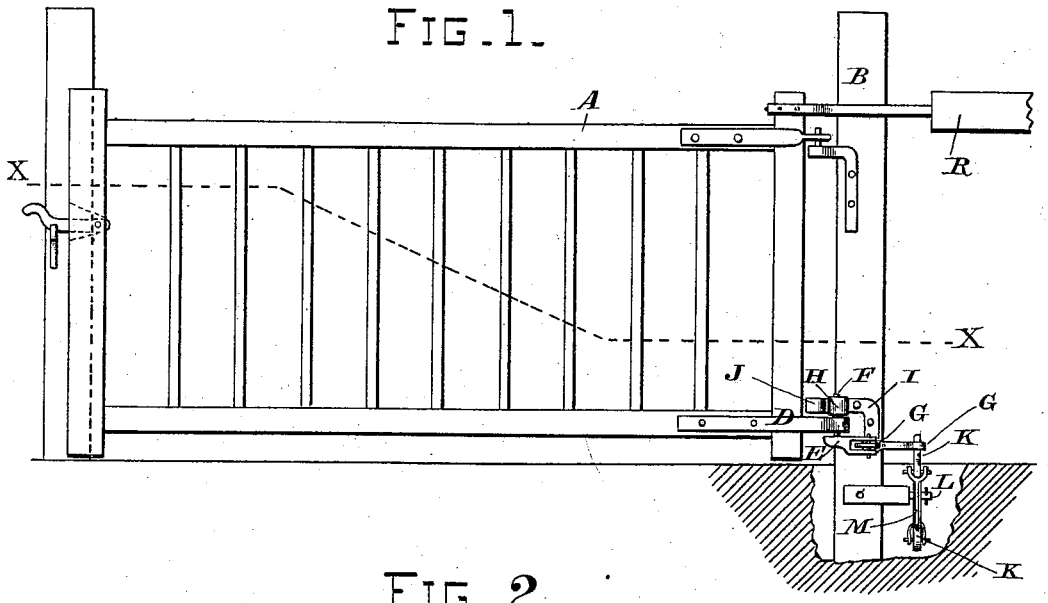
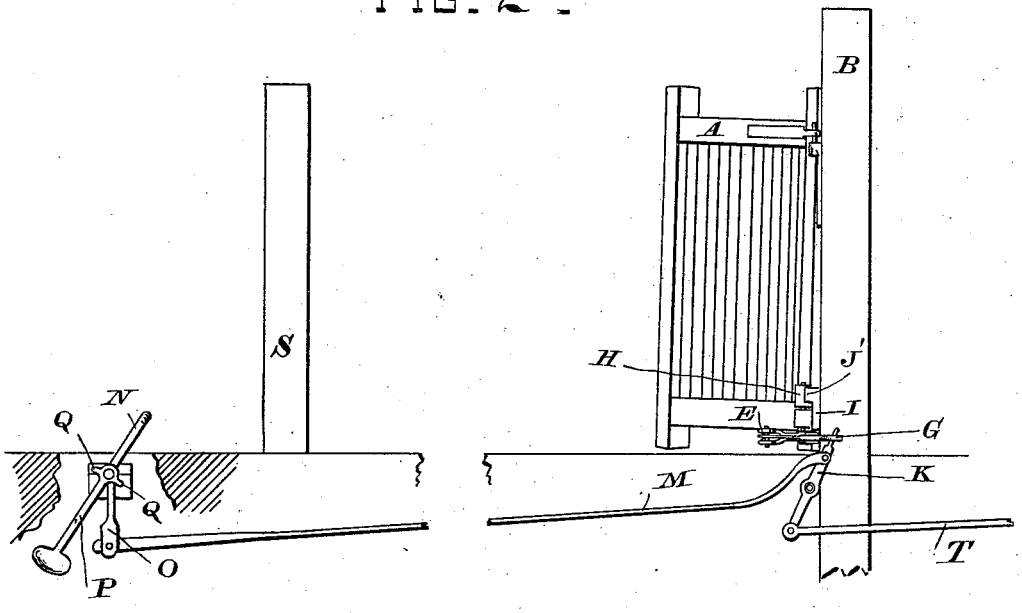


FIG. 2.



WITNESSES

Wilmer Bradford

Robert Duvall

INVENTOR.

Leune J. Johnston

By Wm Smith

Attorney.

(No Model.) 2 Sheets—Sheet 2.

L. J. JOHNSTON.

FARM GATE.

No. 304,329. Patented Sept. 2, 1884.

FIG. 3.

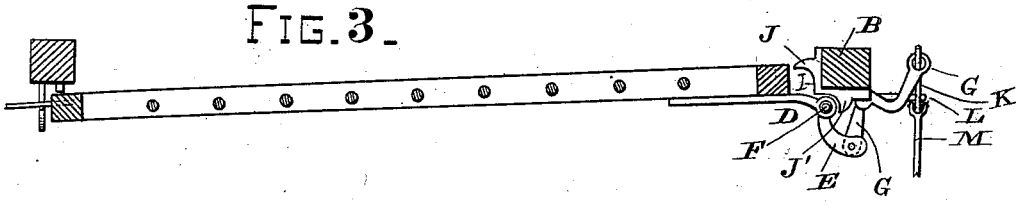


FIG. 5.

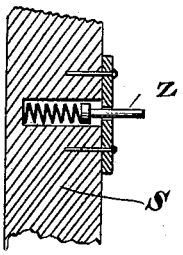


FIG. 4.

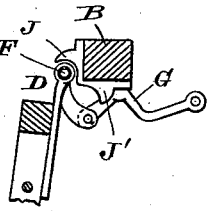


FIG. 6.

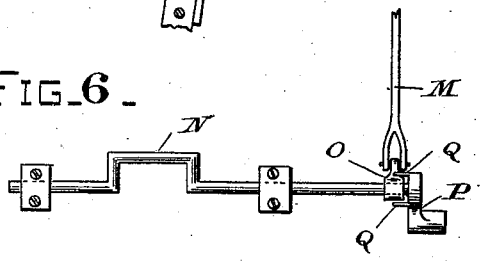


FIG. 7.

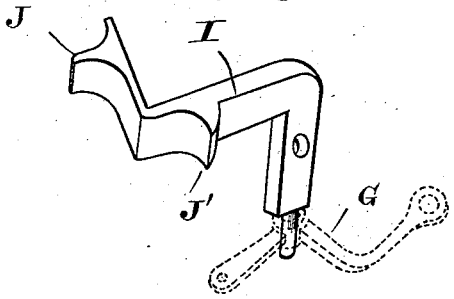
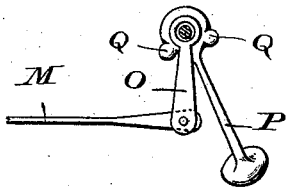


FIG. 8.



WITNESSES.

Wilmer Bradford

Herbert D. De Vall.

INVENTOR.

Leune J. Johnston

By C. W. M. Smith

Attorney.

UNITED STATES PATENT OFFICE.

LEUNE J. JOHNSTON, OF PETALUMA, CALIFORNIA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 304,329, dated September 2, 1884.

Application filed November 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, LEUNE J. JOHNSTON, a citizen of the United States, residing at Petaluma, in the county of Sonoma and State of California, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to improvements in swinging farm-gates which are opened and closed by the passage of a vehicle-wheel over a raised crank upon a shaft connected with the gate; and the invention consists in the construction and arrangement of parts, as hereinafter more fully set forth and claimed.

Figure 1 is a front view of a gate, showing a portion of my improved operating mechanism, which is attached thereto, broken away. Fig. 2 is a side view of a gate having my improved operating mechanism attached thereto. Fig. 3 is a horizontal section taken on line *x x* of Fig. 1. Fig. 4 is a top view showing the position of the lower hinge when the gate is opened. Fig. 5 is a sectional view showing the spring-buffer applied to the latch-post. Fig. 6 is a plan view of one of the cranks operated by a passing vehicle. Fig. 7 is a perspective view of the bearing-plate against which the lower hinge works. Fig. 8 is a side view of the balance-weight on the end of the crank-shaft.

Similar letters of reference are used to indicate like parts throughout the several views.

The top rail, A, of the gate is hinged to the post B by a loose strap-hinge, C, in the usual manner. The lower hinge, D, is a loose hinge, and is not connected directly to the gate-post B, except through the medium of a split arm, E, one end of which receives the pintle F of the hinge D, and the opposite or inner end is pivoted to a double-armed brace or bell-crank lever, G, pivoted to the gate-post B in any suitable manner. A frictional roller, H, is placed over the upwardly-projecting end of the pintle F of the hinge D, and this roller works upon the bearing-plate I, attached to the gate-post, as shown, and provided with the two shoulders J J′, one being placed opposite to the latch-post and the other one at right angles to it. These shoulders receive the frictional roller H, and hold it outward at a suitable distance from a vertical line dropped from the upper hinge. The outer end of the bell-crank lever G is provided with a pin-hole, as shown, which receives the upper end of the tripping bar or lever K, pivoted to the horizontal pintle L, attached to the gate-post beneath the surface of the ground.

To the upper end of the tripping-bar K, I pivot the long connecting-rod M, which in turn is connected to the tripping-crank N by means of a short crank or arm, O, loosely journaled upon the said tripping-crank. A weighted clutch, P, is rigidly connected to the outer end of the crank N, which serves to throw up the crank N when the vehicle-wheel has passed, by the falling downward of the said weighted arm or clutch. This clutch P has projecting inwardly from its hub two lugs, Q Q, which embrace the arm O and move it back or forth, according to the direction in which the tripping-crank N is moved. The balance-beam R is attached to the gate at any point sufficiently high to clear the top line of the fence, and its office is to counteract the effect of the pressure of the wind upon the surface of the gate in either the opening or closing of the same.

The spring-buffers Z are constructed by placing a headed bolt in an orifice bored in the face of the post, in the bottom of which is placed a coiled spring, as shown in detail in Fig. 5. Over the outlet to the orifice I place a plate having a perforation in it, through which the end of the bolt is passed, while the head of the bolt prevents it from being forced outward by the expansive power of the spring.

In operation, when the tripping-crank is in a vertical position the gate is closed; but when it is thrown down the lower end of the gate is carried from the position shown in Fig. 3, moving on the roller H, around to the inner side of the gate-post, where it is arrested by coming against the shoulder J on the bearing-plate, which action throws the gate out of a vertical and horizontal line, lifting up the outer end of the gate and freeing the latch from the catch, thereby permitting the gate to open or fly backward and latch itself to the post S, placed alongside the roadway at a proper distance from the gate-post. The gate will now be held in an open position until the vehicle shall have passed through the gate, when the wheels come in contact with a duplicate tripping-crank connected by the connecting-rod T with the lower end of the tripping-lever K, as

shown in Fig. 2. When this latter-named crank is borne down, it draws the gate back to its original position, carrying the frictional roller with it, against the lug or shoulder J′, as shown in Fig. 3.

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

The combination, with a gate and its post, of the lower or loose hinge, D, having the upper end of its pintle provided with a frictional roller, H, a bearing-plate, I, having shoulders J J′, and having its lower end pivoted in a split arm, E, the bell-crank lever G, and a tripping-bar, K, and tripping-crank N, substantially in the manner and for the purpose herein set forth and specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

LEUNE J. JOHNSTON. [L. S.]

Witnesses:
WILMER BRADFORD,
CHAS. E. KELLY.