(No Model.) 2 Sheets—Sheet 1.

I. S. SHERWIN.

FARM GATE.

No. 412,128. Patented Oct. 1, 1889.

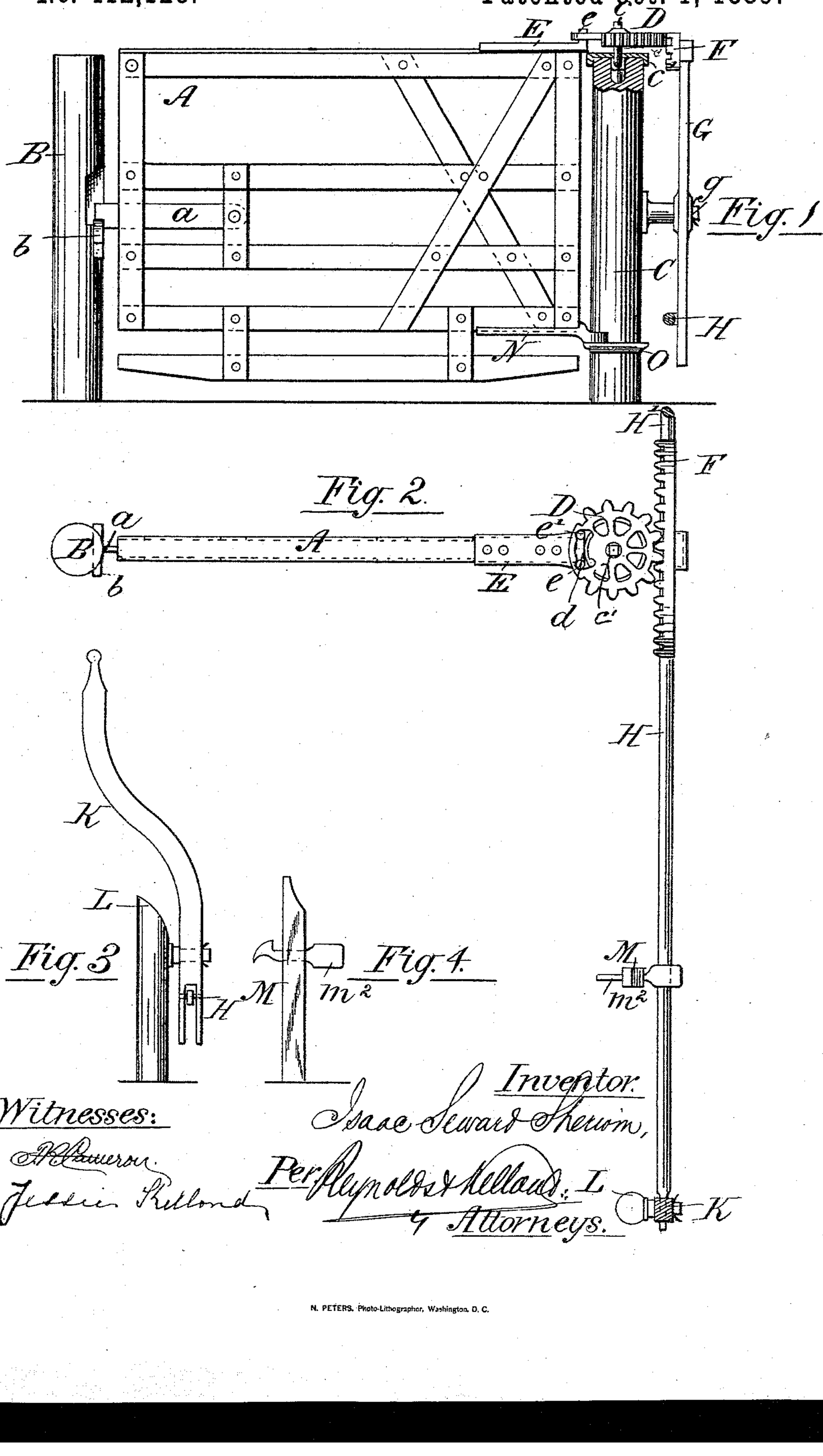

Fig. 1

Fig. 2.

Fig. 3

Fig. 4.

Witnesses:

H. Cameron.

Jessie Kelland

Inventor.

Isaac Seward Sherwin,

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(No Model.) 2 Sheets—Sheet 2.

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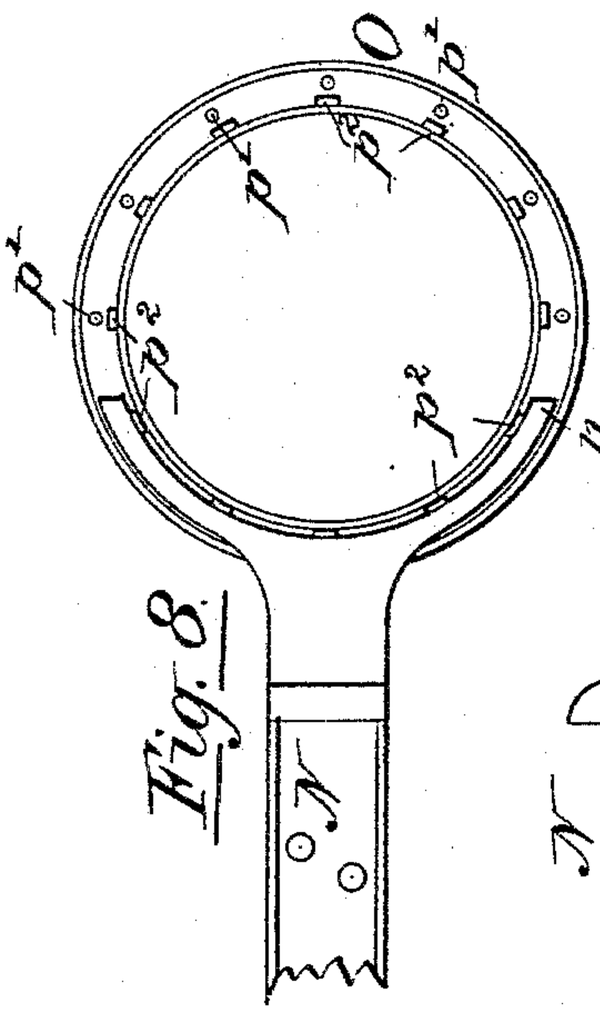

Fig. 8.

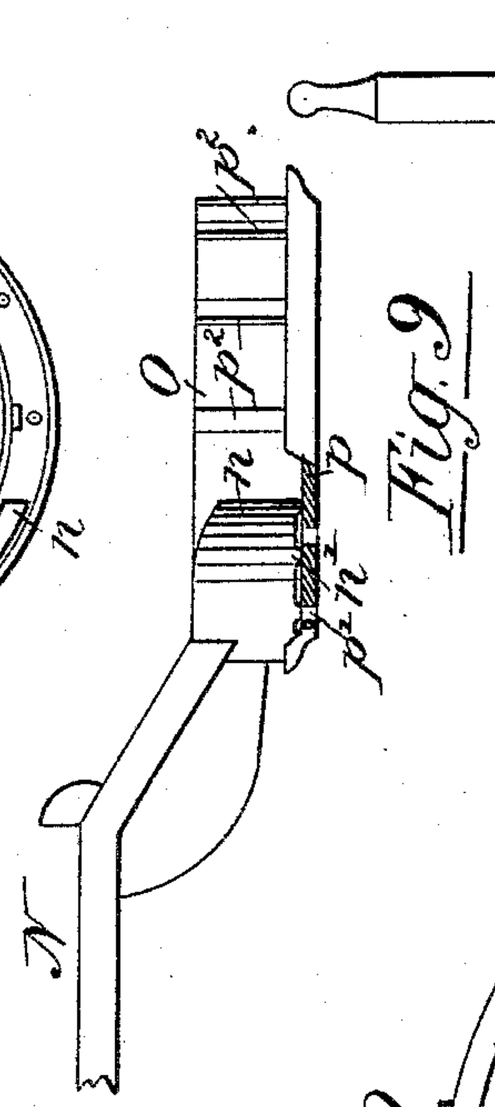

Fig. 9.

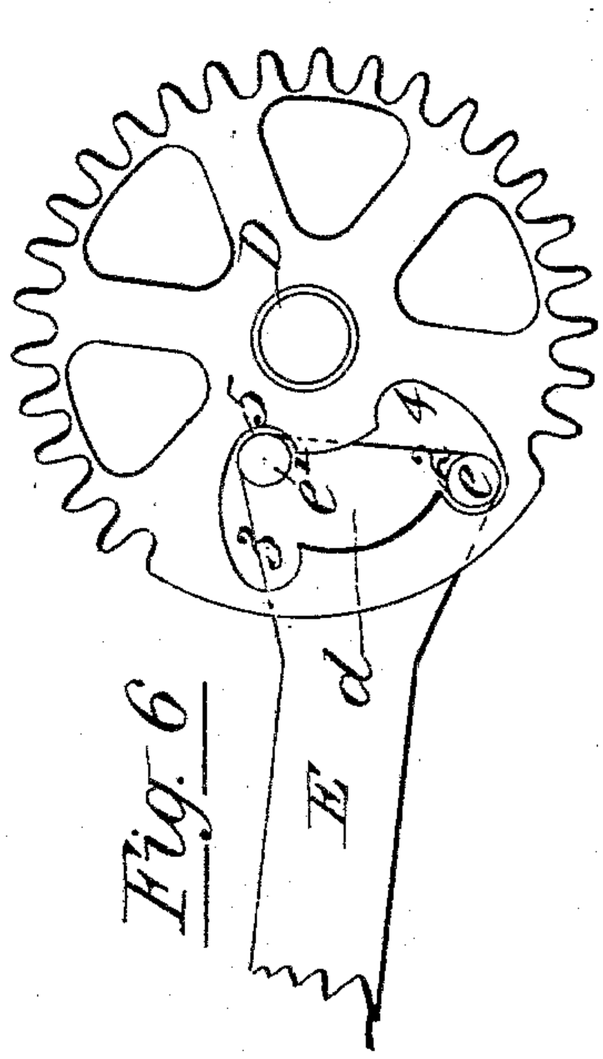

Fig. 6.

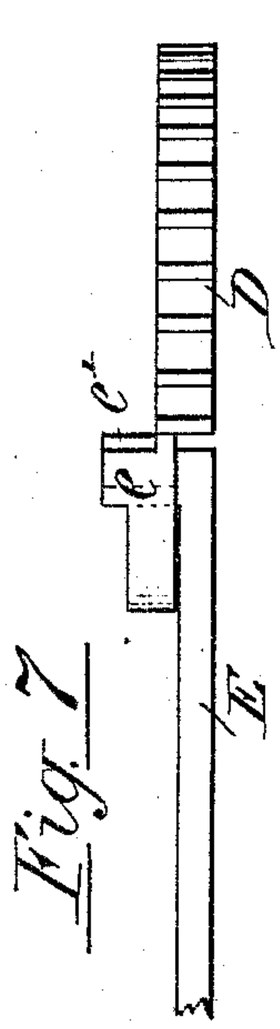

Fig. 7.

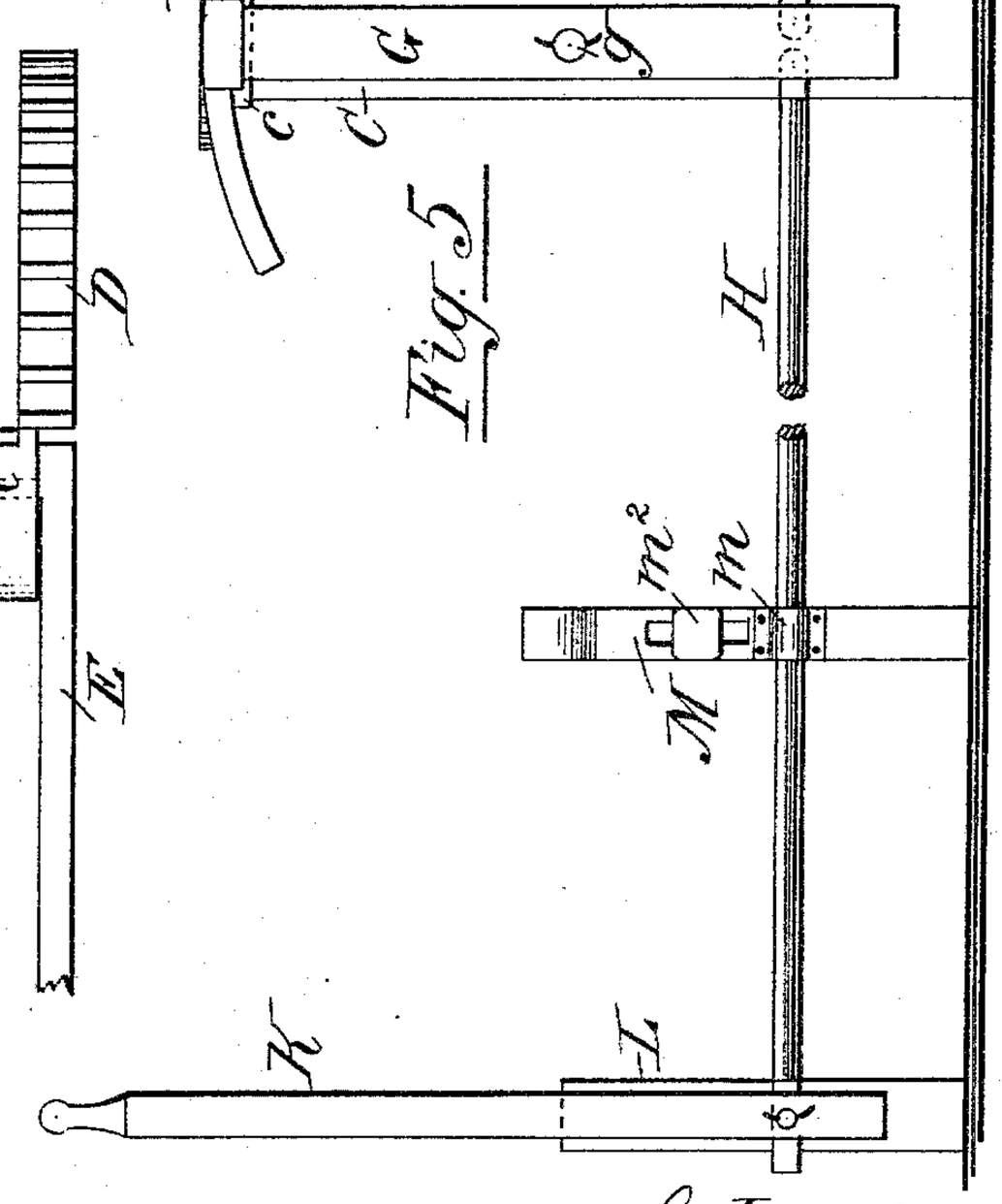

Fig. 5.

Witnesses:

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Per: Inventor: Isaac Seward Sherwin, Reynolds & Kellond: Attorneys.

UNITED STATES PATENT OFFICE.

ISAAC SEWARD SHERWIN, OF TORONTO, ONTARIO, CANADA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 412,128, dated October 1, 1889.

Application filed May 13, 1889. Serial No. 310,662. (No model.) Patented in Canada July 24, 1888, No. 29,536.

To all whom it may concern:

Be it known that I, ISAAC SEWARD SHERWIN, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Farm-Gates; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to gates, and is especially adapted for use on farms, and in other situations where it is desirable that the occupant of a vehicle shall not be obliged to descend to open and close the gate when passing through.

Letters Patent of the Dominion of Canada were granted for this invention on the 24th day of July, 1888, under No. 29,536.

In the accompanying drawings, Figure 1 represents a side view of the gate and its immediate attachments. Fig. 2 is a plan view of same, showing also the mechanism whereby the gate may be opened from one side. Fig. 3 is a view of one of the operating-levers. Fig. 4 is a view of one of the locking-posts. Fig. 5 is a longitudinal elevation (viewed from the back of the hinge-post) showing the operating-levers and locking-posts at both ends. Figs. 6 and 7 are respectively a plan and side elevation of the operating-gear and arm connecting with top rail of gate. Figs. 8 and 9 are similar views of the lower hinge device.

A is the gate, which may be constructed of wooden slats, as shown, or of wire, combinations of wire and wood, or in any desired manner.

B is the latching-post, provided with a suitable catch *b*, with which the pivoted latch *a* on the gate engages in the usual manner.

C is the hinge-post, having by preference a metal plate *c* secured to its top, as shown in Fig. 1, a spindle *c'* in which plate acts as the pivot for a gear D, of special construction, to be hereinafter more particularly described. Into this gear meshes a segment-gear F, fixed to the top end of a depending oscillating bar G, pivoted at *g* to the hinge-post C, but having its lower end free, as seen in Figs. 1 and 5. To this bar, just below the pivot, are loosely connected the ends of longitudinal rods H H', which extend away from the gate at opposite sides, their extreme outer ends being in connection with operating-levers K K', pivoted to posts L L', as shown in Figs. 2 and 5. These rods H H' may pass through guides *m m'*, attached to locking-posts M M', situated about midway between the hinge-post C and the lever-posts, such locking-posts having pivoted catches m^2 m^3, adapted to lock under one of the bars of the gate as the latter is swung back in either direction.

An arm E, affixed to the top bar of the gate A, has at its outer end two upwardly-projecting pins *e e'*, (or they may project downward,) which pins enter a slot (or groove) *d* in the gear D. This slot is formed with four recesses 2 3 4 5, as shown in Figs. 2 and 6, so that when the gate is closed or completely opened in either direction the pins *e e'* occupy the recesses 2 3, as in Fig. 2, while in its movement between the open and closed positions these pins will enter the recesses 2 and 5, as in Fig. 6, or 3 and 4, according to the direction in which the gate swings. In either case, while the gate is swinging, the toothed segment F, operated by the levers named and meshing with the gear D, causes the latter to revolve on the spindle *c'* and pulls the pins *e e'* into the paired recesses named, and the slot *d* is so shaped as to afford sufficient leverage against the pins to move the gate easily into the required position.

To one of the lower bars of the gate I affix an arm N, the outwardly-projecting end *n* of which is curved so as partially to embrace a ring O, firmly attached to the post C near the ground, and to move thereon, (thus forming a hinge,) the lower edge of this curved end *n* being corrugated, as shown at *n'* in Fig. 9.

The flange P of the ring O is perforated, as at *p' p'*, so as to carry off water and dirt, and the ring proper is formed with vertical ribs p^2 p^2, against which the curved surface *n* of the arm N will impinge.

The operation of my improved farm-gate will be readily understood from the foregoing description and the drawings; but I may say that as a vehicle approaches from either side of the gate the driver will draw upon the operating-lever K or K', and this, acting through the rod H or H', bar G, and segment F, will rotate the gear D, and by the peculiar conformation of the slot *d* so act upon the pins *e e'* of the arm E as first to raise the front

end of the gate A sufficiently to release the latch *a*, and thus swing the gate away from him until it engages the latch on one of the posts M or M′, as the case may be. When the vehicle has passed through, the driver pulls upon the operating-lever at the farther end, and the gate is at once released from the locking-post and swung back and latched at the post B.

The lifting of the front end of the gate is due to the engagement of the curved segment F with the horizontal gear D and the formation of the slot *d* therein, allowing the peculiar movement of the pins *e e′*.

What I claim, and desire to secure by Letters Patent, is as follows:

1. In a farm-gate, the combination, with the posts and levers for opening and closing the gate from either side, of an oscillating bar pivoted to the hinge-post, a curved segmental gear carried by such bar, a slotted gear mounted on such hinge-post, and an arm affixed to the gate and engaging with such slotted gear in such manner that by the operation of the levers the gate will be raised and unlatched at its front end and swung back in either direction, substantially as specified.

2. In a gate apparatus, the combination, with a segmental gear and levers for operating same, of a horizontal gear having a slot with four recesses, and an arm affixed to the gate and having two pins or projections entering such slot and adapted to be drawn into pairs of such recesses alternately, and thus afford a leverage for tilting and swinging the gate, substantially as described.

3. In combination, the gate, the gate-post, the horizontal segmental gear thereon, a rack having operating-connections to each side of the gate, and a connection between the segmental gear and the gate, substantially as described.

4. The combination, with the gate and its posts and with the gears D and F and their connections, of the pivoted bar G, rods H H′, posts L L′, and operating-levers K K′, substantially as and for the purpose described.

Toronto, 2d day of August, 1888.

ISAAC SEWARD SHERWIN.

Witnesses:
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F. R. CAMERON.