

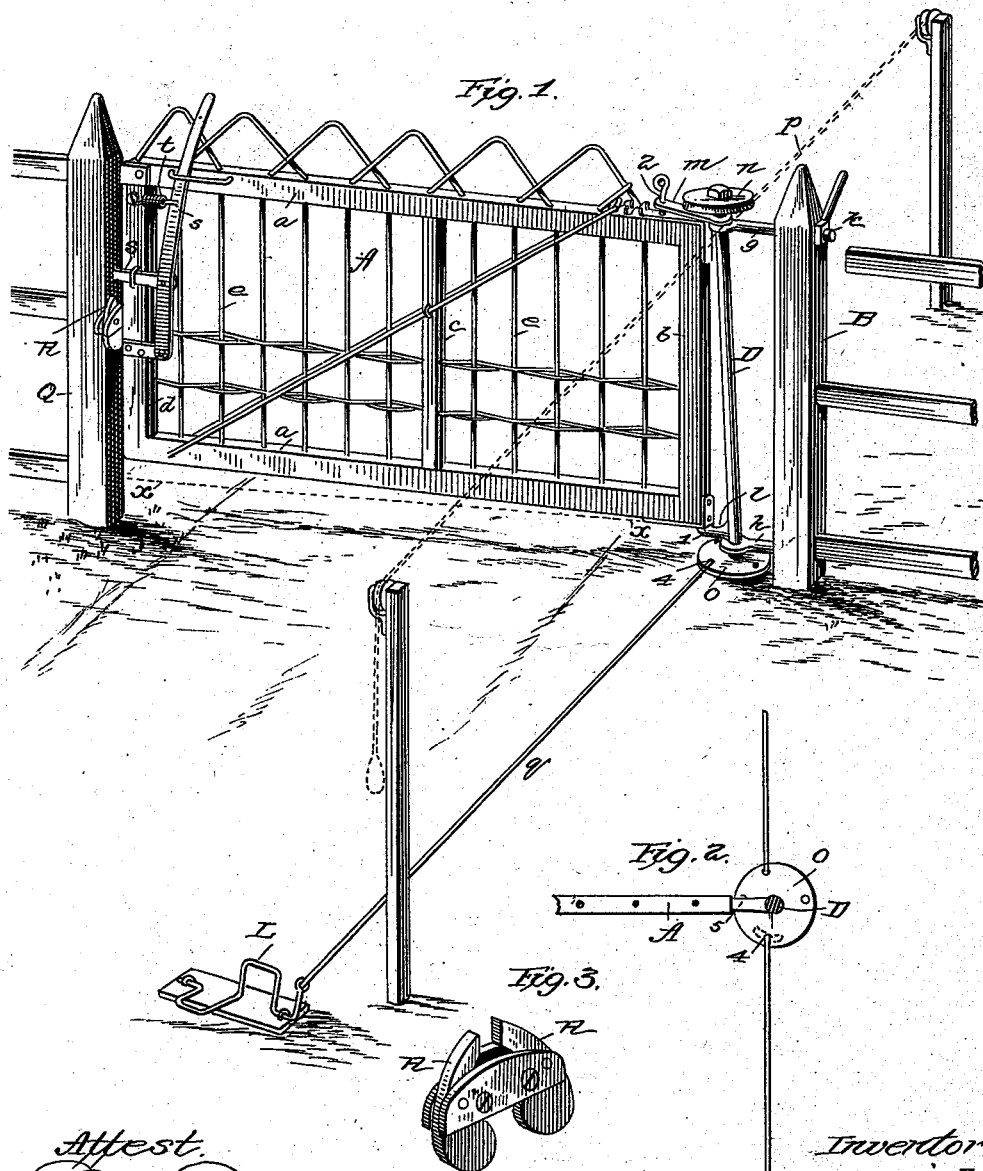
(No Model.)

M. F. FINK.

GATE.

No. 382,601.

Patented May 8, 1888.



Attest.
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UNITED STATES PATENT OFFICE.

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GATE.

SPECIFICATION forming part of Letters Patent No. 382,601, dated May 8, 1888.

Application filed December 13, 1887. Serial No. 257,747. (No model.)

To all whom it may concern:

Be it known that I, MILLARD F. FINK, of Middletown, in the county of Frederick and State of Maryland, have invented a new and useful Improvement in Gates; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention which is the subject of the foregoing petition is mainly an improvement in the opening and closing mechanism for a gate.

The object sought is primarily to provide means whereby the gate may be opened by persons riding or driving without the trouble of dismounting or alighting either to open or close the gate. I am aware that many devices have been heretofore devised for this general purpose, and I present only an improved form of devices, but a form or construction of a very simple character, and one which is at the same time inexpensive, durable, and effective. Included with the devices for throwing the gate open or closing it are also automatic latching devices and hand unlatching devices.

In the accompanying drawings, Figure 1 represents a perspective view of the improved gate and its attachments. Fig. 2 shows a plan view of a portion of the gate, and Fig. 3 a view of the catch.

The gate A is shown as composed of a rectangular wooden frame, *a b c d*, with pickets *e*, of rod or wire, and stay-wires interwoven therewith; but any form of gate may be used in connection with my invention. The main supporting-post B has eyebolts *g* and *h*, one or both of which may be adjustable in or out by means of a nut, *k*. In the eyes of these bolts a shaft, D, is placed to turn freely, but inclined from the post. On its lower end is an arm, *l*, having an upturned pivot, 1, on which the gate is pivoted below near the extreme end of the bottom rail. To the upper end of the shaft D is fixed a straight arm, *m*, longer than the arm *l*, and having a pivot, 2, in its outer end to engage with the gate, which is pivoted thereto at a little distance from the end of the upper rail. The pin 2 is made removable so that the gate may be easily set up or taken down. On the upper end of the shaft D is a pulley, *n*, and on the lower a disk, *o*. The upper or pulley disk is adapted to receive a rope, *p*, by means of which it may be manipulated.

It will be observed that the devices above

described swing the gate in either direction by simply shifting the pivotal points and withdrawing the free end of the gate from the latch. The gate then swings by gravity to open.

In Fig. 1 the shaft D is shown as partially turned, and it will be seen that the movement given the arm *m* causes the free end of the gate to be raised from the position shown by dotted line *x x*.

It is always desirable to open the gate away from the rider or driver to avoid startling the horses, and this is provided for in my improved gate. The rod may be moved by a cord around the pulley *n* on the upper end of the pivoting-rod. One end of the cord runs over a sheave in one direction, and the other over another sheave in the opposite direction, and by pulling either, the gate is swung in an opposite direction. A treadle-lever, L, with rod *q*, may be used on each side, (only one being shown,) the rods hooking into the lower disk.

To allow the gate to swing either way, it must pass the post Q, and a double catch is therefore provided. This consists of two rounded cam-shaped catches, R, pivoted in a plate, with weighted lower ends. The outer rounded face on the upper side of each is pushed down, when the latch rides over it; but the latch strikes against the vertical face of the other and the depressed catch again rises and fastens the gate. For this a latch, S, is required, moving horizontally only in a guide. It is drawn back by a lever, *s*, and pushed forward by a spring, *t*, and may be operated by a rider.

The lever L is of ordinary construction, and is connected with the shaft D as follows: The lower disk on the shaft has holes, nearly one-fourth of the circumference from each other, and into these the ends of the lever-rods *q* are hooked, as at 4. It will be observed that these holes 4 are a little to one side of the dead-center, so that the rod moves the disk from 4 to 5 about one-fourth of the circumference. The other rod on the opposite side, working in the same way, turns the disk to carry the point 4 to 6 on the back side. Instead of setting the holes a little off the dead-center, they may be slotted, as shown in Fig. 2.

A very important feature in this gate is the inclination of the shaft D and the longer and shorter arms of the shaft on which the gate is

pivoted. This gives a constant rise in the outer end of the gate as the gate swings open, and it is the same whichever way the gate swings. The gate may be made to rise more or less by
5 lengthening or shortening the lower arm, and for this purpose the lower arm may be screwed into the shaft or connected in any suitable way, by means of which it may be lengthened or
10 shortened. By this construction the gate may be made to swing clear of snow or other obstructions on the roadside.

I am aware that it is not new to furnish a gate with an inclined shaft provided with means for turning the shaft to open the gate,
15 and I do not broadly claim this.

I claim as my invention—

The gate, combined with the inclined shaft D, having arm 7 and pivot 1 on the lower end and longer straight arm on the upper end, the lower pivot being near and the upper pivot 20 farther from the end of the gate, a disk on the shaft D and devices for turning it, a double catch on the post Q, and a horizontal-moving arm on the gate, all substantially as described.

In testimony whereof I have signed my name 25 to this specification in the presence of two subscribing witnesses.

MILLARD F. FINK.

Witnesses:

CHAS. L. STURTEVANT,
ROBERT E. MORRIS.