G. J. Fiedler,

Gate.

No. 105662. Patented July 26. 1870.

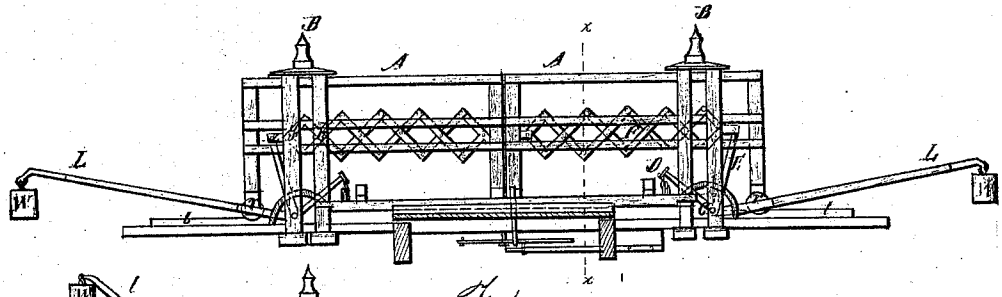

Fig. 1

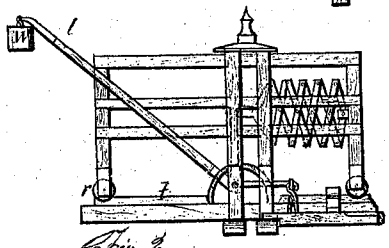

Fig. 2

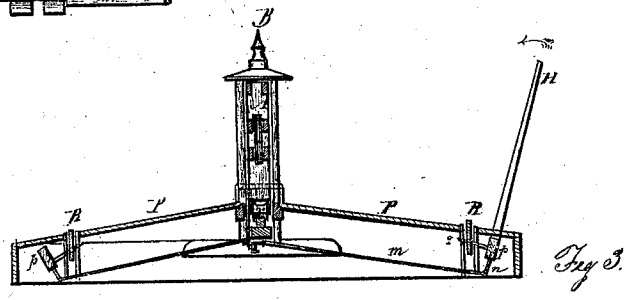

Fig. 3.

Fig. 4.

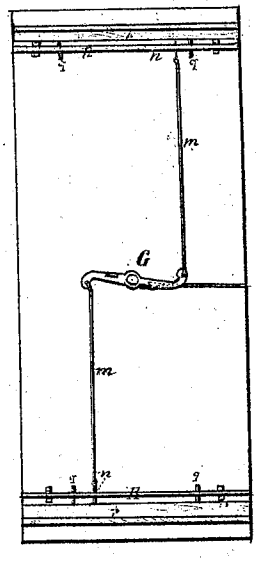

Fig. 5.

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GEORGE J. FIEDLER, OF DANBY, ILLINOIS.

Letters Patent No. 105,662, *dated July* 26, 1870.

IMPROVEMENT IN FARM-GATES.

The Schedule referred to in these Letters Patent and making part of the same.

I, GEORGE J. FIEDLER, of Danby, in the county of Du Page and State of Illinois, have invented certain Improvements in Farm-Gates, of which the following is a specification.

My invention relates to that class of gates which open by the weight of an approaching vehicle, horse, or foot-passenger pressing upon a platform leading up to the gate, which pressure will operate to open the gate only after the proper adjustment of a spring catch or latch.

The object of my invention is to render it unnecessary to alight from a horse or vehicle to open the gate before driving or riding through, or to close it afterward.

This I accomplish by inclined platforms, resting by their upper edges upon a double horizontal bar, which is connected with triple-armed levers and extension-lattices, which convert the downward motion of the platform into a lateral motion of the gate-leaves, as will be more particularly shown hereinafter.

The catch which fastens the gate, to guard against straying cattle, is opened by a hand-lever or a transverse rail along the foot of the platform, which, lying in the path, is pressed down by the front wheel of an approaching vehicle.

Description of the Accompanying Drawing.

Figure 1 is a front view of the gate, in which a section of the platform is shown.

Figure 2 is a view of one leaf of the gate, as it appears when open.

Figure 3 is a section on the line *x x* of fig. 1.

Figure 4 is a plan view of the bottom part of the gate, showing only the arrangement and operation of the spring catch.

Figure 5 is a plan or top view of one of the triple-armed levers.

General Description.

A A are the gate-leaves, which move along the track *t* upon the rollers *r*.

B B are the gate-posts, having apertures through which the gate-leaves move.

C C are pivots or fulcrums, bearing upon the gate-posts.

Radiating from C C are the triple-armed levers, composed of the several arms L, E, and D.

P P are the platforms, one upon each side, forming the roadway through the gate. These platforms rest, by their upper edges, upon the double bar *b b*.

Connected with the arms E of the triple-armed levers are the extension lattice-levers F F. These lattice-levers have bearings upon the gate-posts B B, and are attached to the gate-leaves A A. The operation of these lattice-levers will be more particularly hereinafter described.

The double bar *b b* is connected with the arms D of the triple-armed levers, and the weights W are hung to the arms L of the triple-armed levers. This arrangement of parts has for its object to convert the downward motion of the platforms P P into a lateral motion of the gate-leaves A A, the double bar, the triple-armed levers, and the extension lattice-levers serving to convey and convert the motion.

The extension lattice-levers F F consist of a series of X-shaped levers, with equal arms, pivoted together at the center in pairs, each pair being jointed to the succeeding pair. At both ends of this jointed series the free ends of the levers are connected by jointed bars *y*, the joints of which correspond in position to the line of pivots. From the joints of these bars short pieces *z* extend, by means of which the series is attached at one end to the arms E, and at the other to the gate-leaves, as is shown in fig. 1. The lattice-levers are pivoted, at *h*, to the gate-posts B.

Pressure applied to the platform P bears down the double bar *b b*, which communicates its motion to the triple-armed levers by the arms D. The arms E are connected with the extension lattice-levers F, and spread apart the X-shaped levers. The first pair, being fast to the gate-posts at the pivots of this pair *h*, the resultant motion will be a contraction of the length of the series; that is to say, the entire series of pairs will be spread apart in breadth, which will contract them in length. This contraction brings the gate-leaves open. At the same time, and by the same motion of the triple-armed levers, the arms L, with the weight W attached, are elevated, as shown in fig. 2.

The pressure being removed from the platform, the weights W assert themselves, and bring down the arms L, which move the arms E, so that the action of the extension lattice-levers, above described, is reversed, and the gate-leaves brought together in opposite directions and closed. At the same time the arms D bring up the double bar and platform to their normal position. However, before the above-described opening of the gate-leaves can take place, the spring catch G must be loosened. This spring catch, together with its operation, I will now proceed to describe.

Immediately at the meeting-point of the two gate-leaves, and pivoted to the sleeper which carries the track *t*, is the double latch G, to which a spring is attached, forming a spring catch. From each of the gate-leaves a tongue extends down, catching into this latch upon opposite sides, so that, when the gate-leaves are brought up and closed, the spring catch holds them in that position.

Attached to the double latch or spring catch G are two rods, *m m*. These rods connect with the short arms *n n*, which extend downward from the shafts *p p*. Extending upward from the end of these shafts

are the hand-levers H, one at the side of each platform. The shafts *p* have bearings at the sides of the platforms. Now, if the hand-lever H is moved in the direction of the arrow, fig. 3, it will turn the shaft *p*, which will move the short arm *n*, which, pulling the rod *m*, will open the spring catch.

From the shafts *p* also extend horizontally the short arms *q*, upon which rest the rails R. Now, if these rails are pressed down, the arms *q* will turn the shaft in the same manner as the above-described hand-levers H, and the rods will open the spring catch.

When it is desired to pass through the gate with a wagon, the horses are driven upon the platform, and the front wheels, following after, run over and press down the rail R, which lies in the roadway at the foot of the platform, and directly across the path of the wheels. The spring catch being loosened by the pressure of the front wheels upon the rail R, the platform sinks under the weight of the horses, and the gate rolls open; the team and wagon pass through, and as soon as the platform upon the other side is relieved from pressure, the gate is closed by the weights W, as above described.

A foot-passenger or person upon horseback may use the hand-lever H to open the spring catch; his own weight will then open the gate.

The hand-levers H H may be placed in any convenient place, by connecting them with rods to the shafts *p*. I place them directly upon the said shafts.

I do not limit myself to constructing a gate with two leaves, but the above-described arrangement of parts may be applied to a single leaf, requiring then but a single triple-armed lever and extension lattice-lever.

Claims.

I claim—

1. The triple-armed lever, composed of the parts L E D, when constructed and operating with extension lattice-levers F to open and close a gate, substantially as above, and in the manner specified and shown.

2. The combination of a triple-armed lever, a platform, and a double bar, a weight, and extension lattice-levers, substantially as above described and shown, and substantially for the purpose above specified.

3. The spring catch G, in combination with the parts that operate it and the gate, substantially as above described and shown, and substantially for the purpose above specified.

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