(No Model.)

A. HEIM.

GATE.

No. 535,799. Patented Mar. 12, 1895.

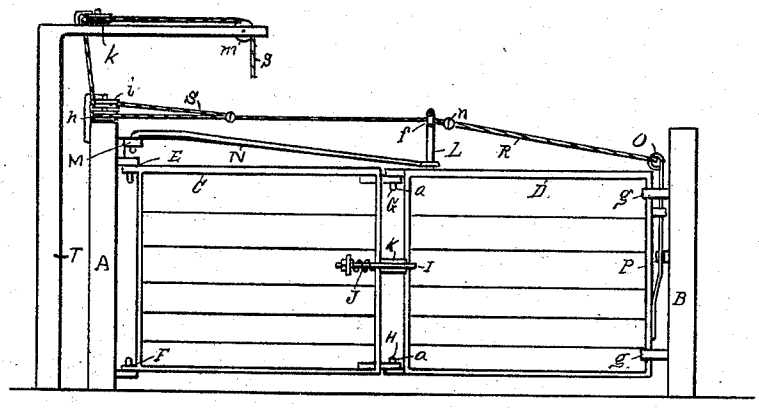

Fig. 1.

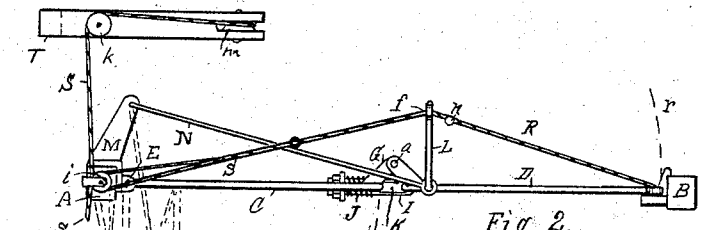

Fig. 2.

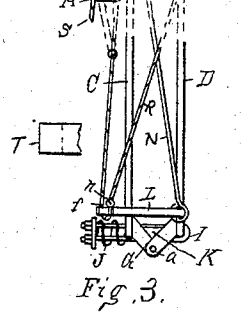

Fig. 3.

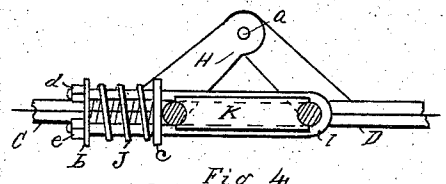

Fig. 4.

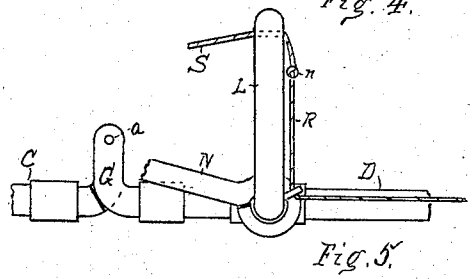

Fig. 5.

WITNESSES.

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ADAM HEIM, OF LIBERTY, INDIANA.

GATE.

SPECIFICATION forming part of Letters Patent No. 535,799, dated March 12, 1895.

Application filed October 22, 1894. Serial No. 526,532. (No model.)

To all whom it may concern:

Be it known that I, ADAM HEIM, of Liberty, Indiana, have invented certain new and useful Improvements in Gates, of which the following is a specification.

My invention relates to that class of gates operated at a short distance from either side by means of a cord, and the object of my improvement is to lessen the space occupied by the gate in its movement, and to lessen the lateral strain upon the hinge post under the weight of the open gate. These objects are attained in the following described manner as illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the gate closed; Fig. 2, a plan of the gate in a closed position; Fig. 3, a plan of portions of the gate in opened position, and Fig. 4 a detail showing the middle hinge and clamp. Fig. 5 is a modified form of hinge.

In the drawings A represents the hinge post and B the latch post planted securely in the ground on opposite sides of the gate way.

The gate proper consists of two similar members C and D. Member C is pivotally secured to the hinge post by hinges E and F in the usual manner, and they permit said member to swing in one direction to a position parallel with the road way. Member D is pivotally secured to the front edge of member C by means of hinges G and H located respectively near the top and bottom of the gate. The pintles *a* of said hinges are situated a short distance without the plane of the gate and on the same side thereof.

The contiguous edges of members C and D are yieldingly clamped together by means of the U-shaped clamp I that encircles said edges and pulls them toward each other under the action of compression spring J thereon.

Plates *b* and *c* are movable on the clamp and serve as abutments for the respective extremities of spring J. The extremities of the clamp are screw threaded and provided with nuts *d* and *e* by which the exertion of the spring may be regulated. A block K preferably of wood is formed with grooves in its opposite edges to receive the sides of the clamp and by which it is retained in place therein. Said block is interposed between the contiguous edges of the separate members of the gate and within the sides of the clamp to serve as a stop to limit the approach toward each other of said contiguous edges and to prevent member D from swinging on its hinges beyond the plane of member C when the gate is closed.

Actuating lever L is rigidly secured to the top of member D a short distance forward of its hinged edge. Said lever is extended vertically a short distance above the gate and turned at a right angle to the plane of the gate and on the same side thereof as the hinges G and H. Its extremity terminates in an eye *f* for the passage of a cord therethrough, and thereby forms a fulcrum at one side of the section D, through which power may be applied for moving the gate, either in opening or closing.

Arm M is rigidly secured on the hinge post just above the top hinge thereon. It is extended therefrom in a horizontal direction at an angle to the plane of the closed gate and on the same side thereof as the actuating lever. Its length is substantially twice that of the distance of pintle A of hinge G from the point where the actuating lever joins the top of the gate. Connecting rod N is pivotally attached at one of its ends to the extremity of arm M. Its opposite end movably encircles the bottom of the vertical portion of the actuating lever.

Spring latch O on the front edge of the gate engages with catch P on the latch post to retain the gate in a closed position and against stops *g* that project from said post. A couple of sheaves *h* and *i* are pivoted, the one above the other, on the top of the hinge post to turn in approximately horizontal planes. Cord R is attached by one of its extremities to the top of the vertical spring latch O and extended through the eye *f* in the extremity of the actuating lever, continuing toward the top of the hinge post. Cord S is secured at an intermediate point therein to the extremity of cord R adjacent to the hinge post. The extremities of said cord S are thence passed in opposite directions around the respective sheaves *h* and *i* on the hinge post and to the top of posts T. Said posts T are erected a short distance from opposite sides of the gate and along the roadway and each is provided with a horizontal arm to extend partially over the road-

way. The usual sheaves *k* and *m* are mounted on the arms of posts T to facilitate the movement of cord S which is supported thereby and whose extremities depend from the extremities of said arms and are accessible to the occupant of a vehicle in the roadway. A knot or stop *n* is formed in cord R near the actuating lever and toward the gate latch to limit the movement of the cord through the eye *f* in said lever and toward the hinge post.

In operation, either of the ends of cord S may be pulled sufficiently to disengage the latch from catch P on the latch post when stop or knot *n* of cord R makes contact with the actuating lever and by further pulling the cord forces the extremity of said lever in a direction toward the hinge post. This movement of lever L turns member D of the gate on its hinges in the direction of the dotted line P. Its continued movement however is resisted by the connecting rod N which acts as a fulcrum on the lower portion of the actuating lever to swing member C of the gate in the opposite direction on the post hinges. The pull on the cord should impart sufficient impetus to the movement of the gate to overcome the action of spring J and cause the hinges G and H to carry their pintles *a* to the opposite side of clamp I when the reaction of said spring will continue the movement of the gate until member C is parallel with the roadway and member D is folded closely against it, as shown in Fig. 3.

To close the gate either end of cord S is again pulled to reverse the movement of the actuating lever and overcome the exertion of spring J until the middle hinges pass to the opposite side of clamp I when the action of said spring continues the motion of the gate until it is closed and the latch is automatically engaged with the catch on the post.

The members of the gate are preferably formed of gas pipe and wire, but any suitable material may be used in its construction and its form and dimensions may be varied as desired.

By means of the middle hinges the gate is permitted to double back upon itself in its opening movements and thus occupy very little distance along the roadway on either side. A vehicle may approach quite near without interfering with its movements in either opening or closing.

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

1. In a gate, the combination, with two members pivotally secured together at a point at one side thereof, of yielding mechanism connected with said members and so constructed and arranged as to assist in drawing the members either into a line with or parallel with each other, and means for forcing the members out of said positions, substantially as set forth.

2. In a gate, the combination, with two members, of laterally projecting hinges for securing them together, a spring substantially in a line with the members when the gate is closed, a lever projecting laterally from the side of the gate beyond the hinges, and a cord secured to the outer end of the lever for operating the gate, substantially as set forth.

3. In a gate, the combination, with two members hinged together at one side of the gate when it is closed, of a U shaped clamp engaging with said members, two plates upon the clamp, a spring between the plates, and a block between the arms of the clamp and between the ends of the members, substantially as set forth.

4. In a gate, the combination, with a post, of an arm projecting laterally therefrom, a gate comprising two members yieldingly secured together at a point at one side of the members when the gate is closed, one of the members being pivotally secured to the post, a lever projecting from the other member beyond the pivotal point between the members, a rod for connecting the arm of the post with the lever, and a cord secured to the outer end of the lever for operating the gate, substantially as set forth.

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Witnesses:
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