(No Model.)

A. HEIM.

GATE ATTACHMENT.

No. 553,283. Patented Jan. 21, 1896.

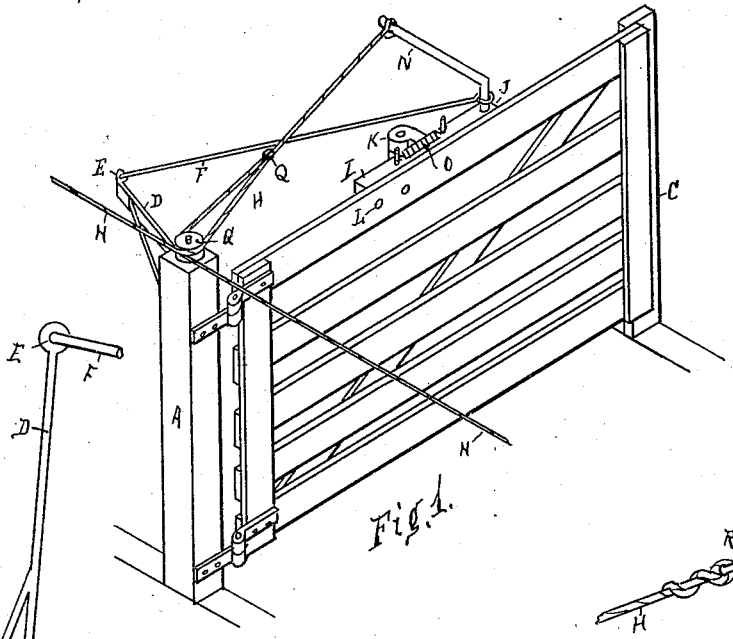

Fig. 1.

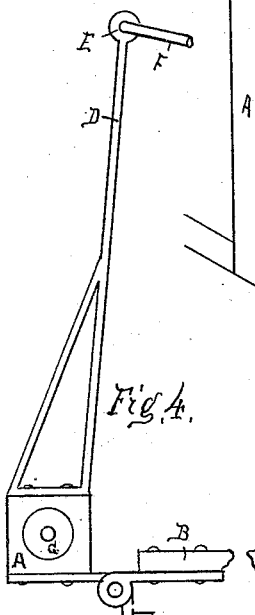

Fig. 4.

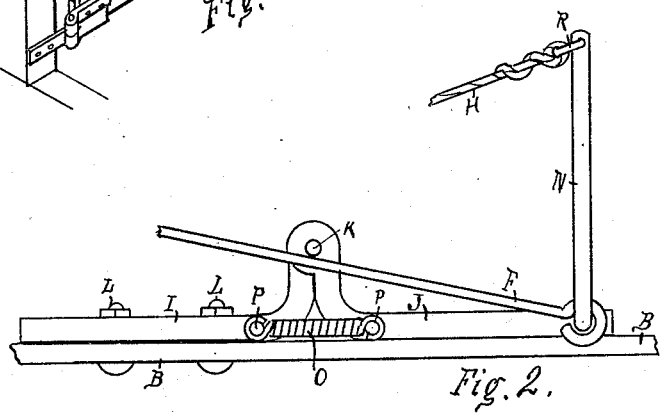

Fig. 2.

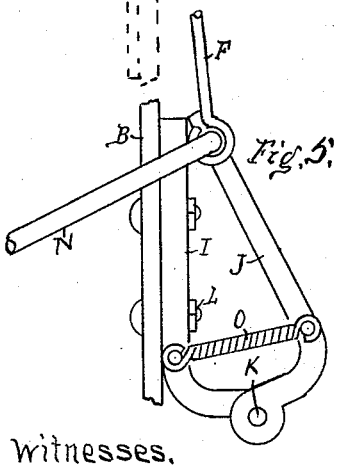

Fig. 5.

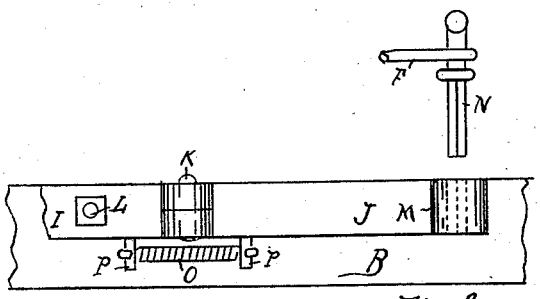

Fig. 3.

Witnesses.

W. A. Gray

J. J. Richardson.

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By Robert S. Carr Atty.

UNITED STATES PATENT OFFICE.

ADAM HEIM, OF MARION, INDIANA.

GATE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 553,283, dated January 21, 1896.

Application filed November 30, 1894. Serial No. 530,368. (No model.)

To all whom it may concern:

Be it known that I, ADAM HEIM, of Marion, Grant county, Indiana, have invented certain new and useful Improvements in Gate Attachments, of which the following is a specification.

My invention relates to gate attachments that are applicable to ordinary farm-gates for the purpose of opening or closing them and locking them in either the open or closed position; and my improvement consists in the peculiar construction and application of the attachment to effect the desired purpose and in the following-described manner, as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of an ordinary farm-gate equipped with my device; Fig. 2, a plan of the attachment when the gate is closed; Fig. 3, a front elevation of the same; Fig. 4, a plan of the hinge-post with fulcrum-arm; Fig. 5, a plan of the attachment when the gate is open.

In the drawings, A represents the hinge-post, B an ordinary farm-gate hinged thereto in the usual manner, and C the front post against which the gate is closed. The gate opens rearwardly through the quadrant of a horizontal circle. Fulcrum-arm D is secured to the upper portion of the hinge-post on a line with the top of the gate and projects from the post in a horizontal direction and slightly toward the roadway. Its extremity is formed with an eye E to receive the end of fulcrum or connecting rod F. One or more grooved pulleys or sheaves G are mounted on the top of the hinge-post to guide cords H that are extended therefrom along the roadway and in opposite directions to posts. (Not shown.) Angle-arms I and J are movably hinged together by pintle K. Angle-arm I is attachable to the front side of the middle portion of the top board or rail of the gate by means of bolts L. Angle-arm J is formed with boss M on its face and near its extremity. Said boss is perforated in a vertical line by a square or rectangular opening and forms a socket for the rectangular depending extremity of the actuating-lever N. Said lever may be inserted in the socket from either direction and should rest rigidly therein with the horizontal portion of the lever extended perpendicular from the face of said angle-arm. A coiled spring O is stretched between pins P that project from the same edge of the respective angle-arms I and J. Said spring affords a yielding resistance to the movement of angle-arm J on pintle K toward an intermediate point in its range of movement and accelerates its movement in receding therefrom.

Connecting-rod F, which is pivotally engaged with the extremity of the fulcrum-arm D, is extended therefrom to lever N and terminates in a loop or eye that encircles the vertical portion of said lever just above the top of the gate.

Cords H are fastened together at Q and terminate in engagement with the outer extremity of lever N or preferably with ring R, loosely swiveled in the extremity of said lever, as shown in Fig. 2.

In operation when cord H is pulled the gate moves upon its hinges, drawing pintle K from its position under arm F and giving angle-arm J room to turn toward roller G. This is effected by the resistance of arm F, which guides one end of angle-arm J through an arc described from the extremity of fulcrum-arm D as a center. Pintle K moves in the arc of a circle around the gate-hinge. Lever N is actuated in either direction by the cord until the distance between its eye end and the roller G on the post is least. The movement of lever N to this extent is resisted by the tension of spring O and carries pintle K into the line of exertion of said spring. The gate is carried past this dead-center by its own momentum, after which the contractile energy of the spring is sufficient to complete its swinging movement.

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

1. The combination with an angle arm attachable to a gate and a similar angle arm hinged thereto, of an actuating lever on the movable arm and a spring arranged to afford yielding resistance to the action of the movable arm on the hinge.

2. The combination with an angle arm arranged to be bolted to a gate and a similar angle arm hinged thereto, of an actuating lever on the movable arm and a spring arranged to afford yielding resistance and assistance to the respective actions of the movable arm on

the hinge in its approach toward and departure from an intermediate position in its range of movement.

3. The combination with an angle arm attachable to a gate, a similar angle arm pivotally movable thereon and an actuating lever removably secured to the movable arm, of a fulcrum rod engaging with the lever and with a gate post whereby the movement of the angle arm by the lever is translated to the gate to effect its opening or closing movement as desired.

In testimony whereof I have subscribed my name in the presence of two witnesses.

ADAM HEIM.

Witnesses:
GEO. W. THOMPSON,
WILSON D. LETT.