

No. 643,741.

Patented Feb. 20, 1900.

E. T. CLARK.
GATE.

(Application filed Apr. 15, 1899.)

(No Model.)

2 Sheets—Sheet 1.

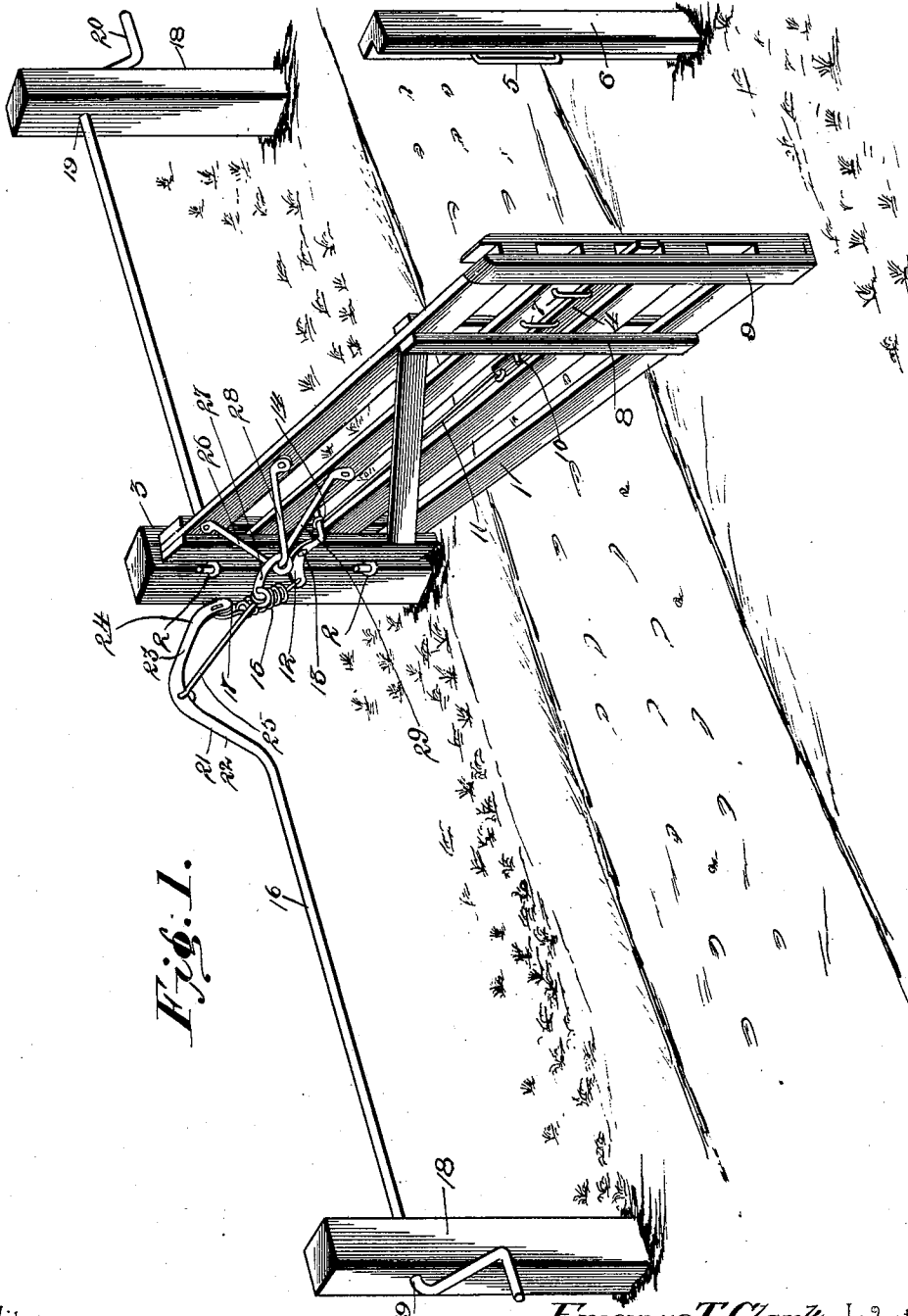


Fig. 1.

Witnesses

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By his Attorneys.

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2 Sheets—Sheet 2.

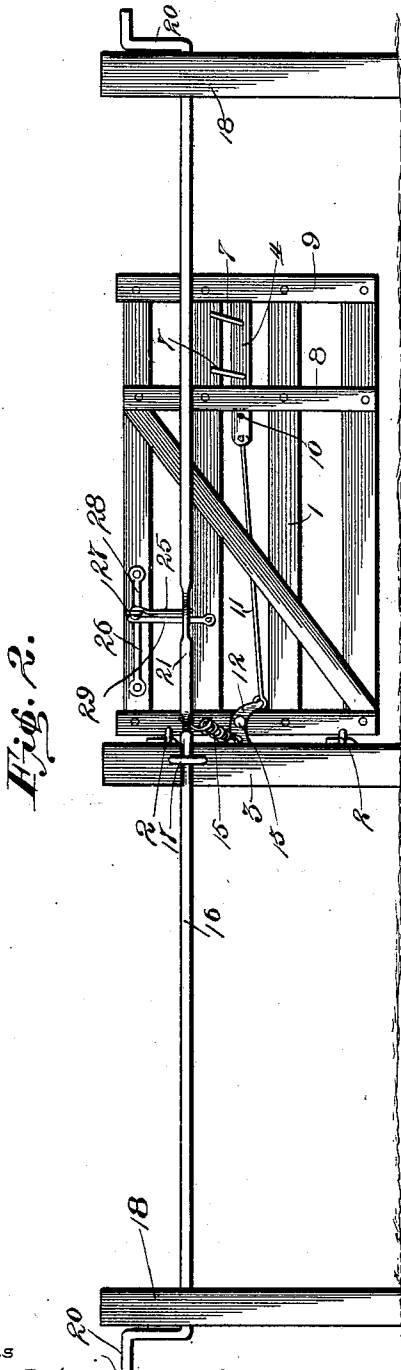


Fig. 2.

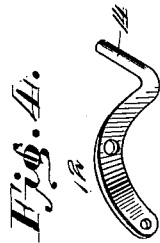


Fig. 4.

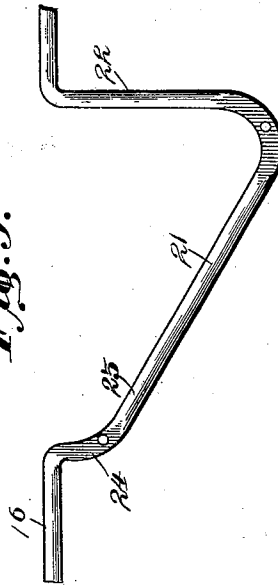


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

ERASMUS T. CLARK, OF DANVILLE, INDIANA.

GATE.

SPECIFICATION forming part of Letters Patent No. 643,741, dated February 20, 1900.

Application filed April 15, 1899. Serial No. 713,119. (No model.)

To all whom it may concern:

Be it known that I, ERASMUS T. CLARK, a citizen of the United States, residing at Danville, in the county of Hendricks and State of Indiana, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

One object of the present invention is to improve the construction of swinging gates, more especially the means for opening and closing the same, and to provide a simple, inexpensive, and efficient operating mechanism adapted to enable a swinging gate to be readily opened and closed at a distance from either side of it by persons in vehicles or on horseback.

A further object of the invention is to provide a gate-operating device which will not freeze and become inoperative in cold weather and which will enable gates to be opened and closed as freely on windy days as when there is no wind.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with this invention and shown partly open. Fig. 2 is a rear elevation, the gate being open. Fig. 3 is a detail view of the central portion of the rock-shaft. Fig. 4 is a detail perspective view of the bell-crank lever.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a swinging gate connected by hinges 2 to a post 3 and provided with a latch-bar 4, which engages a keeper 5 of a latch-post 6. The latch-bar is suspended by links 7 between two of the horizontal bars or rails of the gate, and it operates in the spaces between vertical bars 8 and 9, arranged in pairs and secured to the opposite faces of the horizontal bars or rails.

The outward movement of the latch-bar is limited by a stop 10, and its inner end is connected by a rod 11 with a bell-crank lever 12, fulcrumed at its angle by a fastening device 13 on one side of the inner end bar of the gate

and having one arm extending rearwardly and its other arm projecting forwardly and provided with a lateral extension 14. The lateral extension 14, which passes through an eye of the adjacent end of the rod 11, is located in advance of the inner end bars of the gate, and it has sufficient movement to withdraw the latch from engagement with the keeper to release the gate.

The rearwardly-disposed arm of the bell-crank lever is connected by a coiled spring 15 with an arm of a rock-shaft 16, extending parallel with the roadway a suitable distance from each side of the gate to permit the same to be opened or closed without coming in contact with a horse or a vehicle. The rock-shaft is journaled between its ends in a suitable bearing 17 of the hinge-post, and its ends are supported by uprights or posts 18, provided with bearing-openings 19; but any other suitable form of bearing may be employed. The ends of the rock-shaft are bent to form crank-handles 20; but hand-wheels or similar devices may be used for partially rotating the shaft, and the latter is provided between its ends adjacent to the hinge-post with a substantially V-shaped bend 21, which forms the arm for operating the gate. The V-shaped bend is composed of sides 22 and 23, the side 22 being shorter than the other side 23 and being arranged substantially at right angles to the rock-shaft. The side 23, which extends outward from the hinge-post, is provided with a bend 24 to offset it inwardly in the direction of the gate, and it is provided at this portion with a perforation through which the adjacent end of the coiled spring is passed. The V-shaped bend or arm is provided at its apex with a perforation, into which is linked an eye of a rod 25; which extends from the arm to a bracket 26. The link-rod is provided at its inner end with an eye, which engages a perforation of an arm 27 of the bracket 26. The bracket 26 consists of a horizontal V-shaped upper portion 28 and an inclined brace 29, which is coiled around the apex of the V-shaped upper portion and which is extended beyond the same to form the arm 27. The terminals of the sides or legs of the bracket are perforated for the reception of suitable fastening devices for securing them to the horizontal bars or rails of the gate.

When the rock-shaft is rotated, the intermediate arm is oscillated, and it carries with it the gate, and it also operates the bell-crank lever which reciprocates the latch-bar. The
 5 V-shaped arm or bend of the rock-shaft is arranged at a slight inclination and extends in the direction of the gate when the latter is closed, and it is swung backward to a horizontal position in opening the gate, in which position
 10 it is adapted to retain the gate open and prevent the same from accidentally closing.

The invention has the following advantages: The operating mechanism, which is simple and comparatively inexpensive in construction, is positive and reliable in operation and adapted to be readily opened and closed at a distance from either side of it without dismounting from a horse or leaving a vehicle. The entire operating mechanism
 15 is located above the ground, so that it cannot freeze, and wind will not affect the opening and closing of the gate.

Changes in the form, proportion, and the minor details of construction within the scope
 25 of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. The combination of a swinging gate, a
 30 rock-shaft provided with an arm, a bell-crank lever fulcrumed on the gate and provided with a lateral extension, a latch mounted on the gate and connected with the extension of the lever, and means for connecting the
 35 lever and the gate with the rock-shaft, substantially as described.

2. The combination of a swinging gate, a rock-shaft, a bell-crank lever fulcrumed on the back of the gate and provided with a lateral extension, a latch mounted on the gate
 40 and connected with the lateral extension, a coiled spring connecting the bell-crank lever with the rock-shaft, and connections between the rock-shaft and the gate, substantially as described.

3. The combination of a swinging gate, a rock-shaft provided with a substantially V-shaped arm having a bend adjacent to the gate, a bracket mounted on the gate, a link connecting the bracket with the apex of the
 50 V-shaped arm, a latch carried by the gate, and a lever connected with the latch fulcrumed on the gate and yieldingly connected with the said bend of the V-shaped arm near the base of the latter, substantially as described.

4. The combination of a swinging gate, a bracket mounted on the gate and composed of the horizontal V-shaped portion and the inclined brace connected with the apex of the
 60 V-shaped portion, a rock-shaft having an arm, a link connecting the arm with the bracket of the gate, a latch, and connections between the latch and the rock-shaft, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ERASMUS T. CLARK.

Witnesses:

CHAS. SYMONS,

CHAS. L. HOLLOWELL.