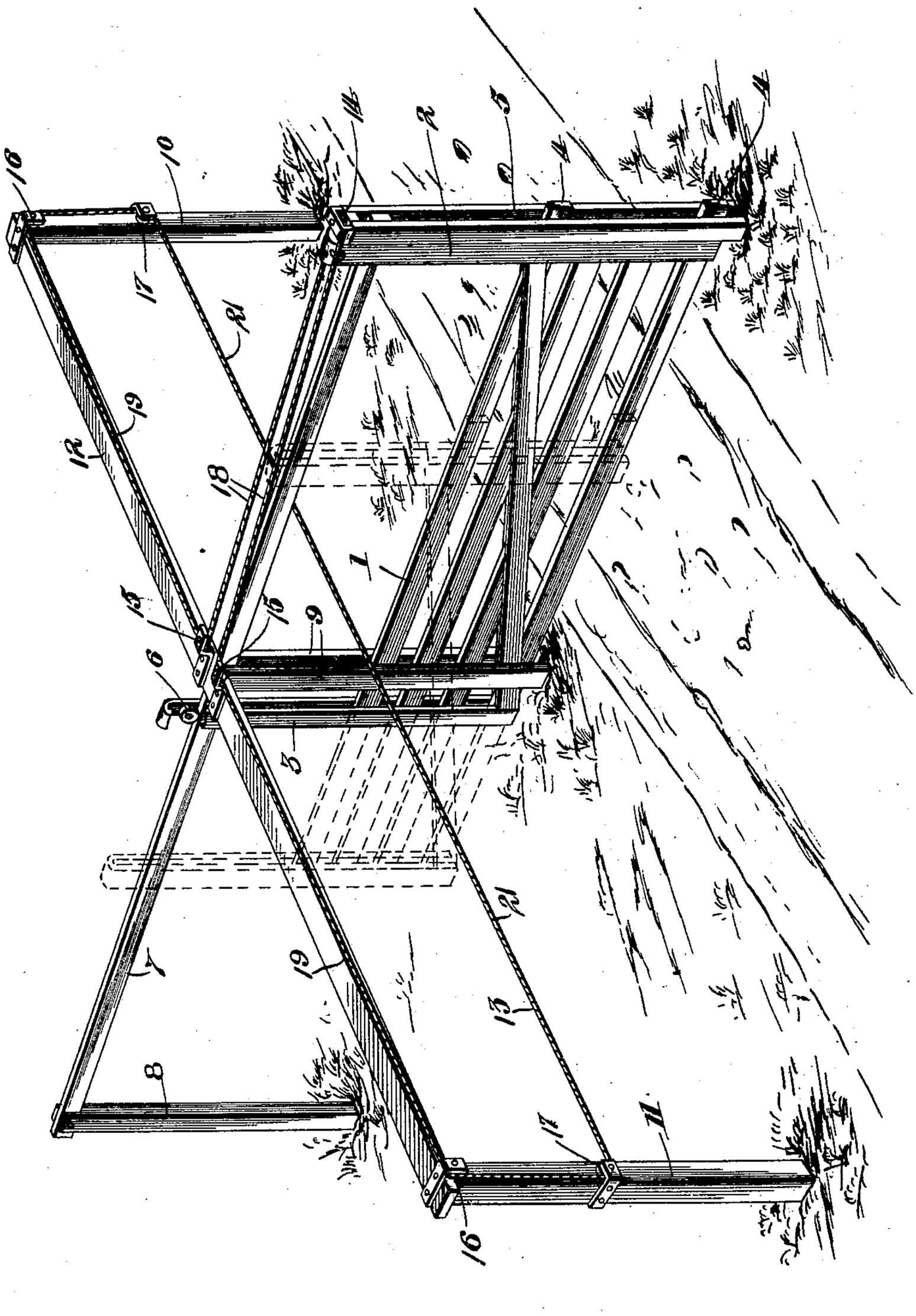
No. 673,007. Patented Apr. 30, 1901.

H. C. MAXWELL & J. C. GRANGER.

GATE.

(Application filed Nov. 29, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

HENRY C. MAXWELL AND JULIAN C. GRANGER, OF TANEY, IDAHO.

GATE.

SPECIFICATION forming part of Letters Patent No. 673,007, dated April 30, 1901.

Application filed November 29, 1899. Serial No. 738,744. (No model.)

To all whom it may concern:

Be it known that we, HENRY C. MAXWELL and JULIAN C. GRANGER, citizens of the United States, residing at Taney, in the county of Lutah and State of Idaho, have invented a new and useful Gate, of which the following is a specification.

This invention relates to sliding gates, and has for one object to provide certain new and useful improvements in the manner of mounting and operating the gate, so that the latter may be conveniently and readily opened and closed without dismounting from a vehicle or from horseback.

A further object is to provide a substantial and compact frame structure for supporting the gate and carrying the operating means and also to dispense with the usual operating-levers, which frequently scare horses.

To these ends the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawing, and particularly pointed out in the appended claim, it being understood that changes in the form, size, proportion, and minor details of construction may be made within the terms of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

The drawing embodies a perspective view of a gate constructed and arranged in accordance with the present invention

Referring to the accompanying drawing, the numeral 1 designates the gate, which is preferably formed of longitudinal rails, connected by the front and rear end bars 2 and 3, respectively. The ends of the upper and lower rails project at the forward end of the gate to form latch-bars 4, which are adapted to engage with a post 5, so as to lock the gate in closed position. This post 5 is formed of opposite spaced longitudinal members, and the latch-bars 4 are received between the said members when the gate is moved longitudinally into engagement with the post.

Each end bar of the gate is composed of opposite members, which embrace the ends of the rails, and are thereby spaced apart. The rear end of the gate is suspended from an elevated track 7 by a roller 6, which is arranged between the rear bars 3, near the upper ends of the latter. This track extends at right angles across the roadway and is supported at its forward end by means of the post 5 and at its rear end by means of a suitable post 8, and said track is of a length to permit of the gate being moved entirely clear of the roadway. Furthermore, the track is received between the members of the end bars 2 and 3, whereby the gate is held upon the track and prevented from becoming disengaged therefrom. Midway of the ends of the track there are provided spaced posts 9, which receive the gate and also form a guide for preventing lateral movement of the lower side of the gate. It will be understood that some portion of the gate is always confined between the spaced posts 9 and is thereby maintained in its proper relative position for engagement of the latch-bars 4 with the post 5.

Alined with the spaced posts 9 and disposed at substantially right angles to the track are the opposite posts 10 and 11, and supported upon the upper ends thereof is a transverse brace 12, which is also fastened to the intermediate spaced posts 9.

The means for operating the gate comprise an endless flexible connection 13, of rope or wire, connected to the forward end of the gate and guided through suitable pulleys provided upon the frame structure. Located upon the upper end of the post 5 is a horizontally-disposed pulley 14, and mounted upon the brace 12, adjacent to and at opposite sides of the track, is a pair of horizontally-disposed pulleys 15. Each transverse post 10 and 11 is provided with upper and lower pulleys 16 and 17, which are alined vertically upon the front side of the post and also disposed to work in a vertical position. The upper pulleys 16 are alined horizontally with the pair of pulleys 15, so that the operating connection may work freely therebetween. The endless operating-cable consists of a main loop extending longitudinally of the roadway and a transverse loop disposed across the roadway at the top of the gate. The main rectangular loop is formed by the upper and lower pulleys 16 and 17, and it has its upper flight arranged at the brace 12, while its lower flight is located about midway the length of the outer posts and is adapted to be grasped at any point between the same to open and close

the gate. Beginning with the lower pulleys 17, upon the transverse posts 10 and 11, respectively, the flexible operating connection passes from said pulleys upwardly over the upper pulleys 16, thence inwardly and around the respective pulleys 15, and then longitudinally above the track to and around the pulley 14, provided upon the post 5. Thus it will be seen that the operating connection is divided into the substantially parallel members 18, which extend from the outer end of the gate to the pair of pulleys at the inner end thereof, the oppositely-extending transverse members 19, extending from the pair of pulleys 15 to the respective pulleys 16, the vertical members 20, extending downward from the pulleys 16 to the pulleys 17, and the lower long horizontal actuating portion 21, which extends between the lower pulleys 17 and transversely across the upper edge of the gate, so that should the portion 21 become slack the upper edge of the gate will support the rope and prevent it from being caught in any part of the frame or sagging out of reach of a person in a vehicle. By pulling in either direction upon the long actuating portion 21 of the flexible operating connection the entire length of the latter will be operated to slide the gate one way or the other.

It will be noted that the parallel portions 18 of the flexible operating connection receive the upper end of the end bar 2 and form a guide for the gate.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

The combination of the front and rear posts 5 and 8, the horizontal track connecting the same, the outer posts 10 and 11 located at opposite sides of and spaced from the track, the intermediate posts 9 secured at their upper ends to the track at the center thereof, the horizontal brace 12 arranged at right angles to the track and centrally secured to the same and extending therefrom to the outer posts, the pulley 14 arranged at the top of the front posts 5, the gate suspended from the track and provided with rollers arranged on the latter and located in advance and in rear of the brace 12, the central pulleys 15 arranged at the center of the brace and spaced apart, the vertically-alined pulleys 16 and 17 mounted on the outer posts 10 and 11, and the endless flexible operating-cable consisting of a main longitudinal loop arranged on the upper and lower pulleys 16 and 17 and having its upper flight arranged contiguous to and disposed longitudinally of the brace 12, the lower flight of the main loop being located at a point below the tops of the outer posts and adapted to be grasped at any point between the latter, and the transverse loop extending directly from the upper flight of the main loop and arranged on the pulleys 14 and 15 and connected with the bar 3 of the gate, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

H. C. MAXWELL.
JULIAN C. GRANGER.

Witnesses:
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