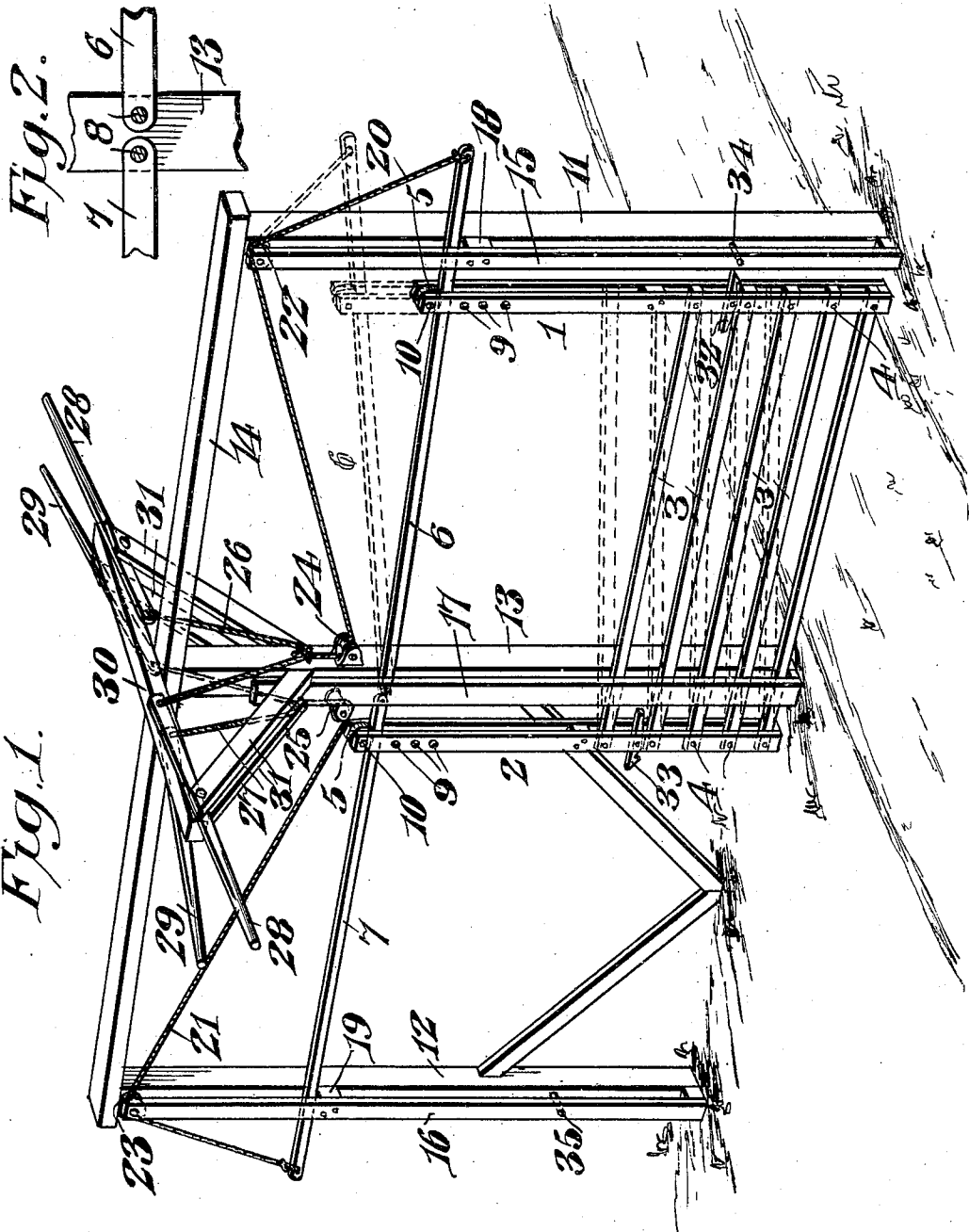


T. S. HARP.
GATE.
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Patented Sept. 14, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

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GATE.

934,070.

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To all whom it may concern:

Be it known that I, THADDEUS S. HARP, a citizen of the United States, residing at Rifle, in the county of Garfield and State of Colorado, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

10 The object of the present invention is to improve the construction of gravity-acting sliding gates, equipped with tiltable track bars, and to provide a simple and comparatively inexpensive gate of this character in which 15 the end bars will remain continually in a vertical position irrespective of the position of the tiltable rails and strike the abutments of the frame squarely, whereby twisting and straining of the gate is entirely eliminated.

20 Another object of the invention is to provide a gate of this character, adapted to be conveniently operated at a distance from either side of it by a person on horse back or in a vehicle without dismounting.

25 With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claim here- 30 to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing 35 any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of a gate, constructed in accordance with this invention. Fig. 2 is a detail view, 40 illustrating the arrangement of the inner ends of the tiltable track bars.

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

45 The gate proper comprises in its construction front and rear vertical end bars 1 and 2 and upper horizontal rails 3, pivotally secured at their terminals between the vertical end bars 1 and 2 by pivots 4. The end bars, which are arranged in pairs, are spaced 50 apart to receive the rails 3 and are equipped at their upper ends with rollers or wheels 5, arranged to run upon track bars 6 and 7, whereby the gate is suspended therefrom. The track bars, which are pivoted at their 55 inner ends by suitable fastening devices 8, are tiltable by the operating mechanism here-

inafter described, and when it is desired to open the gate, the front tiltable track bar is raised from a horizontal position, thereby carrying with it the gate, which, through 60 gravity, slides down the incline carried by the front track bar and opens. When the front track bar is raised, the end bars of the gate maintain a constant vertical position, but the rails 3 swing upward and assume an 65 inclined position, and through their pivotal connection with the end bars of the gate, permit either end of the same to be raised. By pivotally connecting the rails 3 with the end bars of the gate and permitting the latter to 70 remain in a perpendicular position, the end bars of the gate in both the opening and closing movement strike the abutting portions of the supporting frame squarely and avoid any twisting or straining of the gate. The up- 75 per portions of the front and rear end bars 1 and 2 of the gate are provided at intervals with perforations 9, adapted to receive the pivots 10 of the rollers or wheels 5 and enabling the gate to be adjusted vertically to 80 arrange it the desired distance above the ground so as to pass over snow and other obstructions.

The frame-work for supporting the gate includes front, rear and intermediate up- 85 rights 11, 12 and 13, connected by a horizontal top bar 14 and provided with spaced vertical strips 15, 16 and 17. The track bars 6 are pivoted between the intermediate upright 13 and the strip or bar 17, and 90 when the gate is opened or closed, they are supported in a horizontal position by front and rear spacing blocks 18 and 19. The rails 3 of the gate also pass between the intermediate upright 13 and the strip 17. The 95 track bars extend forwardly and rearwardly beyond the uprights 11 and 12, and their outer terminals are connected with ropes 20 and 21, extending upwardly to upper front and rear pulleys 22 and 23 and downwardly 100 and inwardly therefrom to intermediate or centrally arranged pulleys 24 and 25. The ropes 20 and 21 extend upward from the centrally arranged pulleys, and are provided with upwardly diverging branches 26 and 105 27, which are connected with two sets of operating levers 28 and 29. The operating levers are fulcrumed on a bar 30, arranged at right angles to the horizontal track bars 14 and extending from opposite sides of the 110 frame-work and supported by inclined braces 31. The operating levers are located at the

side faces of the bars 30 and in practice will extend a suitable distance from the opposite sides of the gate to enable them to be readily grasped by a person on horse back or in a vehicle. The levers 28, which are connected with the front rope 20, are adapted to be operated to open the gate, and the other levers 29 are connected with the branches of the rear rope 21 and are oscillated to raise the rear track bar 7 for closing the gate. Instead of rope any other suitable connection may be employed for connecting the levers with the tiltable track bars.

The gate is equipped at its ends with front and rear latches 32 and 33, pivoted between the front and rear end bars of the gate, and arranged to engage front and rear horizontally disposed pins 34 and 35, extending across the space between the bars 15 and 16 and the adjacent uprights 11 and 12 and forming keepers. The latches are provided with shoulders to engage the keepers and are beveled in advance of the engaging shoulders, so that they will be automatically lifted through contact with the keepers. When either end of the gate is lifted, the latch thereof is disengaged from the keeper and the gate is free to move down the incline formed by the pivotal track bars.

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

The combination with a supporting frame, of oppositely extending tiltable track bars

pivoted at their adjacent inner ends to the frame and normally arranged in a horizontal position and having their outer ends extended beyond the frame, a gate composed of end bars slidably suspended from the track bars and normally arranged in a vertical position, and horizontal rails pivoted to and connecting the end bars and adapted to assume an inclined position when either track bar is raised, whereby the end bars of the gate are permitted to maintain a vertical position at all times, operating levers arranged at the center of the upper portion of the frame and extending in opposite directions therefrom and operating in planes at right angles to the gate, inner and outer guides mounted on the frame and arranged at different elevations, the inner guides being located below the operating levers, and the outer guides being located above the outer portions of the track bars, and flexible connections secured to the outer ends of the track bars and extending upwardly therefrom to the outer guides and then downwardly and inwardly to the lower guides, said flexible connections being connected at their inner ends to the operating levers.

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

THADDEUS S. HARP.

Witnesses:

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K. D. HUTCHINGS.