

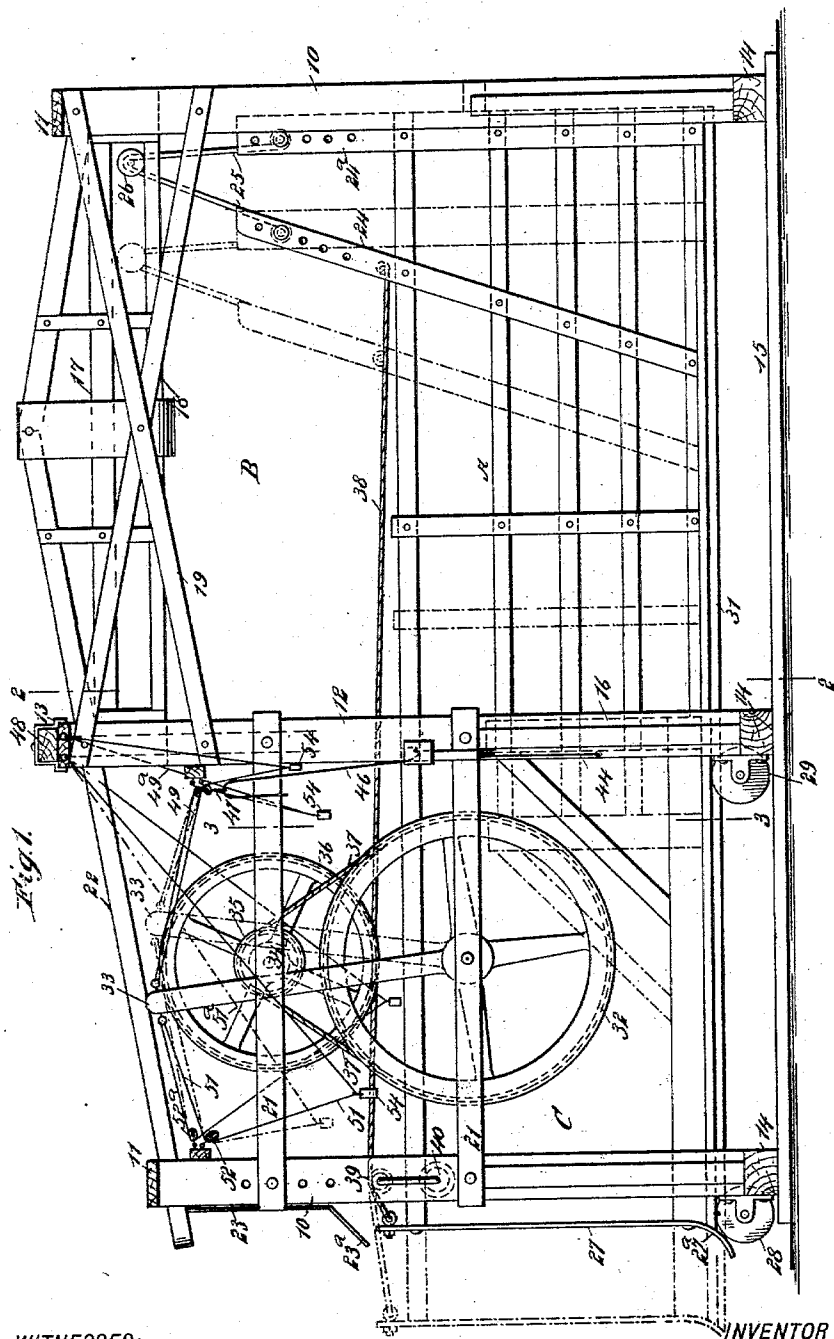
(No Model.)

2 Sheets—Sheet 1.

H. P. TALBOT.
GATE.

No. 548,478.

Patented Oct. 22, 1895.



WITNESSES:

J. Muesblath
J. P. Acker

INVENTOR

H. P. Talbot
BY *Munn & Co*
ATTORNEYS.

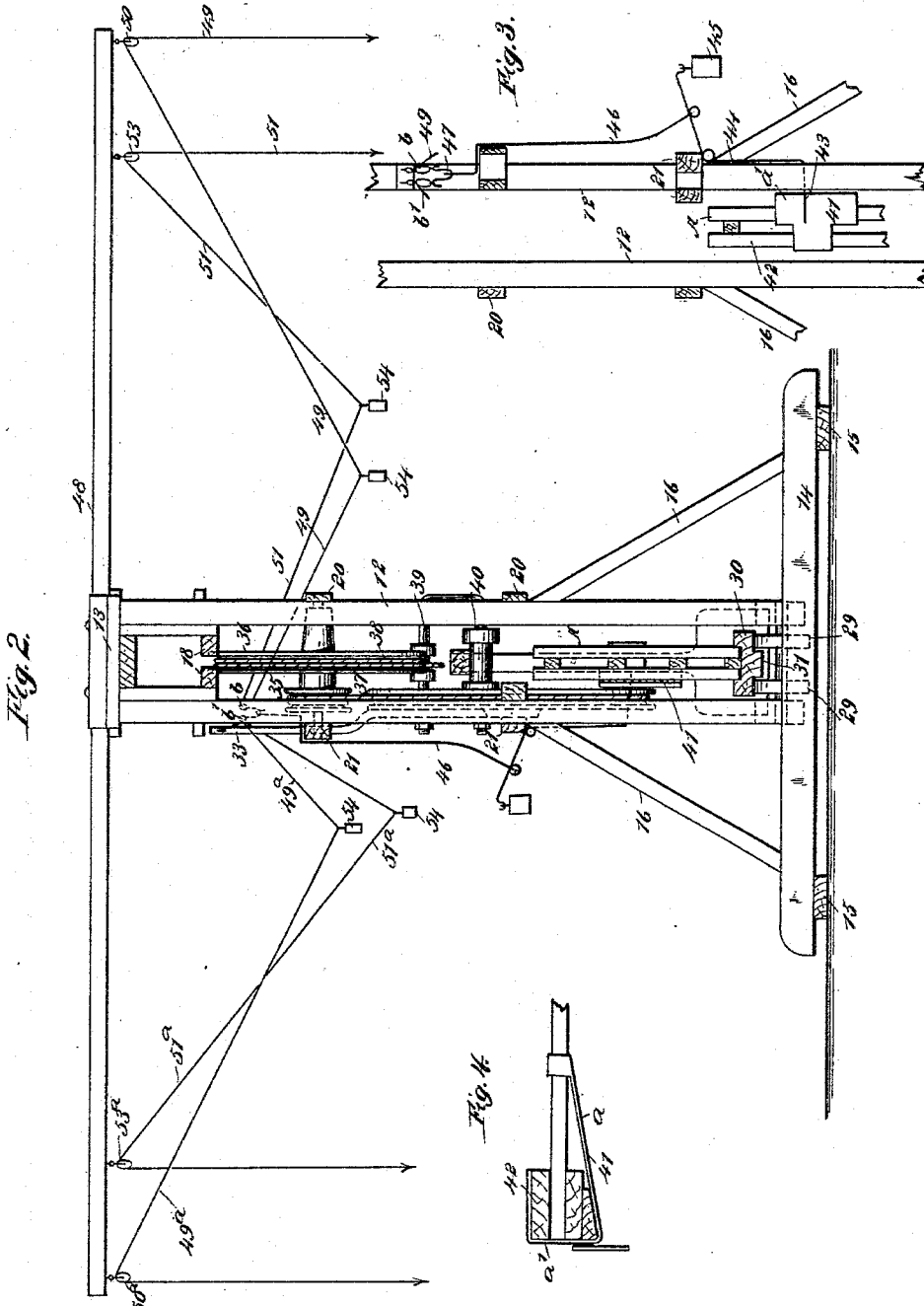
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UNITED STATES PATENT OFFICE.

HENRY P. TALBOT, OF HARRISBURG, OREGON.

GATE.

SPECIFICATION forming part of Letters Patent No. 548,478, dated October 22, 1895.

Application filed April 16, 1895. Serial No. 545,865. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. TALBOT, of Harrisburg, in the county of Linn and State of Oregon, have invented a new and useful
5 Improvement in Gates, of which the following is a full, clear, and exact description.

My invention relates to an improvement in gates, and especially to an improvement in gates for farm-yards, stock-yards, and like
10 places; and it has for its object to construct a gate which will not be affected to any appreciable extent by the elements, and which will be strong, yet light and economic, and which may be opened and closed without a
15 person dismounting from a wagon or from horseback, and which may likewise be operated as conveniently from the ground.

The invention consists in the novel construction and combination of the several
20 parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference
25 indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved gate, the vertical supports for the frame being in longitudinal section. Fig. 2 is a transverse vertical section taken substantially on the line 2 2 of Fig. 1. Fig. 3 is a similar section taken on the line 3 3 of Fig. 1; and Fig. 4 is a detail horizontal section through that
30 portion of the gate at which the bearing-plate for the latch is located, the said bearing-plate being shown in plan view.

In carrying out the invention the frame in which the gate A is adapted to slide horizontally consists of spaced end standards 10,
40 each pair of standards being connected at the top by means of a cap 11, and an intermediate pair of standards 12, likewise connected at the top by a cap 13. These standards are secured to mud-sills 14, and if the character of the
45 ground demands the mud-sills are connected at or near their outer ends by longitudinal beams 15, and braces 16 are projected upward from the mud-sills to an engagement with the standards. The spaces between the several
50 pairs of standards are in longitudinal alignment, and within these spaces the gate A, which may be of any approved construc-

tion, is held to slide. The gate way B is that portion contained between one pair of end standards and the intermediate pair 12, the
55 gate closing in this particular pair of end standards, and the space between the opposing end standards and the intermediate standards 12 may be termed the "pocket" C, in which the forward portion of the gate is contained
60 when the gate is open.

What may be termed the "forward end standards" 10, defining the gateway B, are connected with the intermediate standards 12 at the top by a truss structure 17, the said truss
65 structure being made to support two spaced rails 18, (shown best in Fig. 2,) and in addition to the said truss structure cross-braces 19 are usually employed at the upper portion of these two sets of standards.

The pocket end standards 10 and the intermediate end standards are connected at one side of the frame by single longitudinal beams 20, (shown in Fig. 2,) and at the opposite side of the frame these standards are connected
75 by parallel spaced longitudinal beams 21. The pocket C is protected from the elements by an inclined cover 22, extending from the intermediate pair of standards to the end bar of the pocket standards, being passed
80 through the spaces between said standards and secured to the caps thereof. This cover-beam 22 is given a downward inclination in order to shed the water, and extends outward beyond the rear face of the rear pocket stand-
85 ards, and side covers may be, and preferably are, extended down to close the pocket C. The upper portion of the space between the end pocket standards is closed upon the outer sides of the said standards by a plate 23,
90 which may be, and preferably is, removable and is provided with an outwardly and downwardly inclined shed 23^a at its bottom end.

The gate A is provided at its forward end with uprights 24 and 24^a, extending some distance above the top of the gate, the said uprights being preferably made to converge at their upper ends, and the lower portion of a bifurcated hanger 25 is adjustably secured to these two uprights, being passed upward
95 through the space between the overhead tracks 18, and the upper portion of the hanger 25 is provided with rollers 26, adapted to travel on the said tracks. Thus it will be ob-

served that the forward portion of the gate cannot be moved laterally, but is free to have end movement, and the space between the uprights 24 and 24^a and tracks 18 is sufficient to permit of the vertical adjustment of the gate in the event snow should drift and freeze beneath it. The hanger 25 is adjusted, and consequently the front of the gate, by producing a series of apertures in the uprights 24 and 24^a, to either of which the hanger may be carried and the adjustment at the rear of the gate is made by adjusting supports at that point.

At the rear end of the gate a shield 27 is secured, having a downwardly and outwardly inclined shed 27^a at its lower end, and this shed is adapted to protect rollers 28, adjustably journaled at the bottom portion of the pocket standards 10, as shown in Fig. 2, the rollers being adjusted preferably through the medium of lag-screws, and a second set of rollers 29 is journaled in a similar manner at the base of the intermediate standards 12. These rollers are adapted to support the bottom portion of the gate, and the bottom sill 30 of said gate, as shown in Fig. 2, is provided with a central longitudinal rib 31, adapted to travel between the sets of guide-rollers 28 and 29 and prevent the gate from being moved laterally at any point in its length, while that portion of the bottom sill extending over the rollers will protect them from the weather.

A wheel 32 is journaled between the lower set of longitudinal tie-beams 21, and the said wheel at the upper portion thereof is provided with a lever 33, extending beyond its periphery and upward through the space between the upper set of longitudinal tie-beams 21. Between the upper set of longitudinal tie-beams 21 and the opposite single tie-beam 20 a shaft 34 is journaled, having secured thereon a peripherally-grooved pulley 35 and a peripherally-grooved wheel 36, smaller than the wheel 32, the pulley being practically over the larger wheel, as illustrated in Fig. 2. The larger wheel 32 is likewise peripherally grooved, and a cable 37 is carried once around this wheel, being secured at the bottom portion thereof or at a point opposite the lever, and the said cable is carried two or more times around the pulley 35, whereby when the large wheel is revolved by operating the lever 33 the cable 37 will impart rotary movement to the shaft 34, and thereby revolve the upper wheel 36. A cable 38 is secured at its forward end to the upper portion of the upright 24, and this cable is carried along the top of the gate and is passed two or more times around the upper wheel 36, the rear end of the cable being passed over a grooved roller 39, journaled between the rear or pocket standards 10, as shown in Figs. 1 and 2, and the rear portion of the upper bar of the gate is made to slide upon the lower grooved roller 40, located beneath the roller 39, guiding the gate-cable. Both rollers are mounted upon a U-spindle 39^a, adjustable in the rear standard. Under

this construction it is evident that if the large wheel, which may be called a "drum-wheel," is rotated in direction of the front of the gate the shaft 34 will be rotated so as to turn the upper gate-controlling wheel 36 in direction of the rear, and that the gate will be carried bodily in that direction and the gateway opened, and that when the lever is reversed the gate will be closed.

At a point between the intermediate standards 12 a wear-plate 41 is secured to an upright 42 of the gate, as shown in the detail Fig. 4. This wear-plate presents a bearing surface to the rear end of the gate proper wide enough to admit of adjustment of the gate, and its outer face is inclined in direction of the front of the gate, the inclined surface being designated as *a* and the bearing or wearing surface as *a'*. When the gate has been fully closed, the locking member 43 of an angle-latch 44 will be passed through the opening in the intermediate standard opposite the inclined face of the wear-plate and will engage with the bearing face *a'* of said plate, preventing the gate from being opened. The angle-latch 44 is pivoted upon the said intermediate standard, and its horizontal member is provided with an attached weight 45, which normally maintains the locking member 43 of the latch in the position just described, and shown in Figs. 3 and 4. When the horizontal member of the latch is raised upward, the locking member of the latch will be withdrawn from locking engagement with the gate, and this is effected through the medium of a connecting-rod 46, which is attached to the said horizontal member of the latch and extends upward to an engagement with an angle or U arm 47, placed at the rear of the intermediate standard to which the latch is secured, as shown best in Fig. 3, and the members of this arm 47, which may be termed a "trip-arm," are connected with pulleys designated, respectively, as *b* and *b'*, the said pulleys being loosely attached to the aforesaid intermediate standard in order that they will normally hang in a pendent position.

The gate is operated in the following manner: A cross-bar 48 is secured upon the central standards 12, being preferably clipped or otherwise attached to the cap thereof, and the said cross-bar extends beyond each side of the aforesaid central standards. As heretofore stated, the gate is operated by the movements of a lever 33, attached to the wheel 32, and in order that persons approaching the gate on horseback or in vehicles may open and close said gate without dismounting a cable 49 is attached to the lever 33, and is led forwardly therefrom over the pulley *b*, connected with the latch at what may be termed the "right-hand side" of the gate, and from the said pulley the cable is led over a second pulley 50, secured at the right-hand extremity of the aforesaid cross-bar 48, as shown in Fig. 2, and by drawing downwardly upon this cable the lever 33 is carried toward the front

and at the same time the pulley B is raised, and therefore the latch 44, through its connecting-rod 46, is carried outward from engagement with the gate and the gate is then free to move backward to its open position, and on the same side of the gate a second cable 51 is secured to the rear portion of the aforesaid wheel-lever 33 and is led rearward over a pulley 52, secured upon the end pocket standard 10, and from this pulley the cable is led over a second pulley 53 at the right-hand side of the gate and attached to the cross beam or bar 48, and by drawing upon this latter cable 51 the gate will be closed, since by carrying the wheel 32, to which the lever 33 is attached rearwardly, the gate is forced to its closed position. These cables are duplicated upon the opposite side of the gate and are designated in the drawings as 49^a and 51^a, the cable 49^a being passed over the pulley b', connected with the latch, and over a pulley 50^a, connected with the left-hand end of the cross-bar 48, and the cable 51^a is passed over the rear portion of the wheel-lever 33 over a pulley 52^a at the left-hand side of the gate, and from thence over a pulley 53^a on the cross-bar 48. Each of the cables is provided with a weight 54, adapted to take up the slack thereof.

It will be understood that cables may be attached to the wheel-lever 33 and passed over the pulleys b and b', connected with the latch, and led down to the ground at the side of the gate to be manipulated by pedestrians. Furthermore, I desire it to be distinctly understood that when the gates are to be used in stock-yards where wild cattle are confined the manipulating-cable of all the gates used may be carried to a manipulating-tower and so arranged that the cables from all the gates may be operated from said tower without the assistance of the herdsmen of the cattle.

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

1. The combination, with a supporting frame and a gate held to slide therein, of an operating wheel journaled in the frame and provided with an attached lever, a second wheel and attached pulley likewise journaled in the frame, a cable passed around the operating wheel and around the said pulley, a cable secured to the front and rear portion of the gate and passed around the wheel connected with the pulley, and means, substantially as described, for operating the lever of the operating wheel from either side of the gate in direction of either end of the frame, as and for the purpose specified.

2. In a gate, the combination, with a supporting frame and a gate held to slide endwise therein, of an operating wheel journaled in the frame, a smaller wheel journaled above the operating wheel, a cable passed around the operating wheel, being secured thereto at a point in its circumference and likewise wound around the said pulley, a cable ex-

tending substantially from the forward to the rear portion of the gate and wound around the upper wheel, a lever attached to the operating wheel, a latch adapted to lock the gate in its closed position, and cables located at each side of the gate, connected with the said wheel lever and with the latch, adapted to open the latch simultaneously with opening the gate, and a second set of cables attached to the wheel lever and adapted to draw said lever in a reverse direction to the first set of cables, to close the gate, as and for the purpose specified.

3. In a gate, the combination, with a supporting frame, a gate having sliding movement therein and provided with upper and lower roller bearings, of an operating wheel journaled in the frame and provided with an attached lever, a smaller wheel journaled above the operating wheel and provided with an attached pulley, a cable extending around the operating wheel, being attached thereto, and likewise being passed around the aforesaid pulley, a cable secured to the gate and passed around the upper and smaller wheel, a counterbalance latch adapted to be normally in the closed position and to hold the gate closed, cables attached to the forward end of the said lever and adapted when drawn taut to raise the said latch, and reversing cables connected with the reverse side of the wheel lever for the purpose of closing the gate, as and for the purpose specified.

4. In a gate, the combination, with a supporting frame, a gate held to slide therein, having hanger pulleys and provided with tracks upon which said pulleys travel, pulleys located beneath the gate, the gate being provided at its lower end with tracks engaging with said pulleys, and a guide to pass between them, of a lever-controlled wheel mounted in the said frame, a second wheel and attached pulley located above the lever-controlled wheel, a cable passed around the lever wheel, attached thereto and likewise passed around the aforesaid pulley, a cable connected with the gate and passed around the upper wheel, a latch held normally in closed position, cables attached to the lever of the lever-controlled wheel and adapted when tightened to disconnect the latch from the gate, and cables likewise attached to the reverse side of the lever and adapted to reverse the direction of rotation of the wheel to which the lever is secured and to close the gate, as and for the purpose specified.

5. The combination, with a supporting frame, friction wheels located at the base of the said frame, tracks located at the upper portion of the frame, a gate having hangers adapted to travel on the said tracks and provided with guides adapted to travel on the said lower wheels, the gate being provided with a wear plate having one of its sides inclined, a latch carried by the frame and adapted for engagement with the said wear plate, and means for normally holding the latch in a position to

contact with the said plate, of a lever-controlled wheel, a cable passed around the said wheel and secured thereto, a smaller wheel mounted above the lever-controlled wheel and
5 provided with an attached pulley around which the cable of the lever-controlled wheel is passed, a cable attached to the gate and passed around the upper wheel, and manipulating cables attached to the forward and rear
10 portions of the lever connected with the lever-controlled wheel, the forward cables being adapted to carry the latch out of engagement with the gate when tightened and to open the gate, and the rear cables being adapted to reverse the said lever and close the gate, as and
15 for the purpose specified.

HENRY P. TALBOT.

Witnesses:

W. W. BRIGGS,

B. R. NOTT.