

No. 632,288.

Patented Sept. 5, 1899.

J. M. TANNER.

GATE.

(Application filed Apr. 26, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

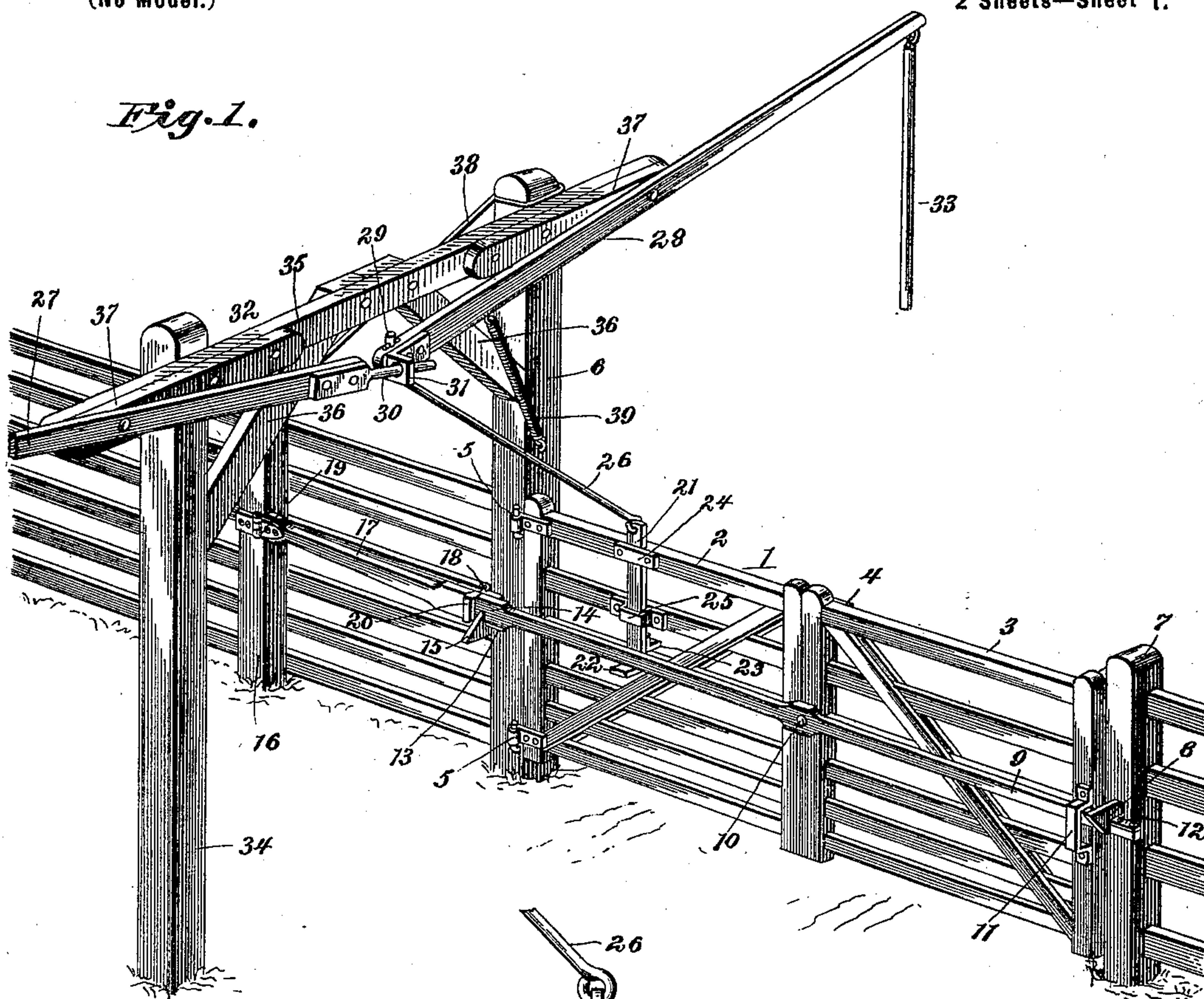
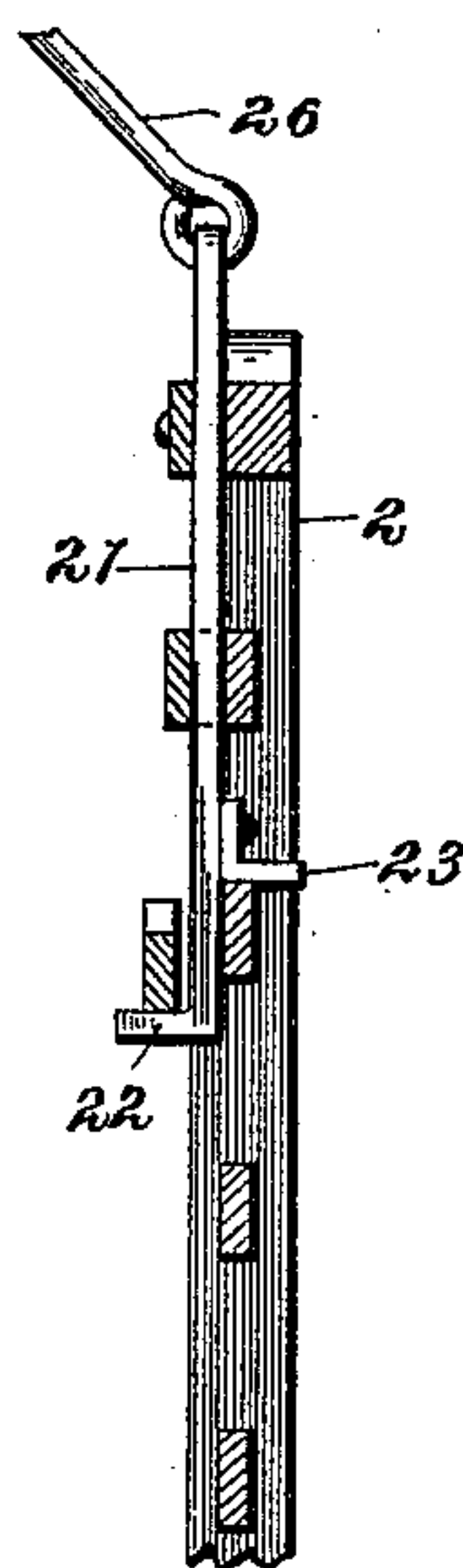


Fig. 4.



Witnesses

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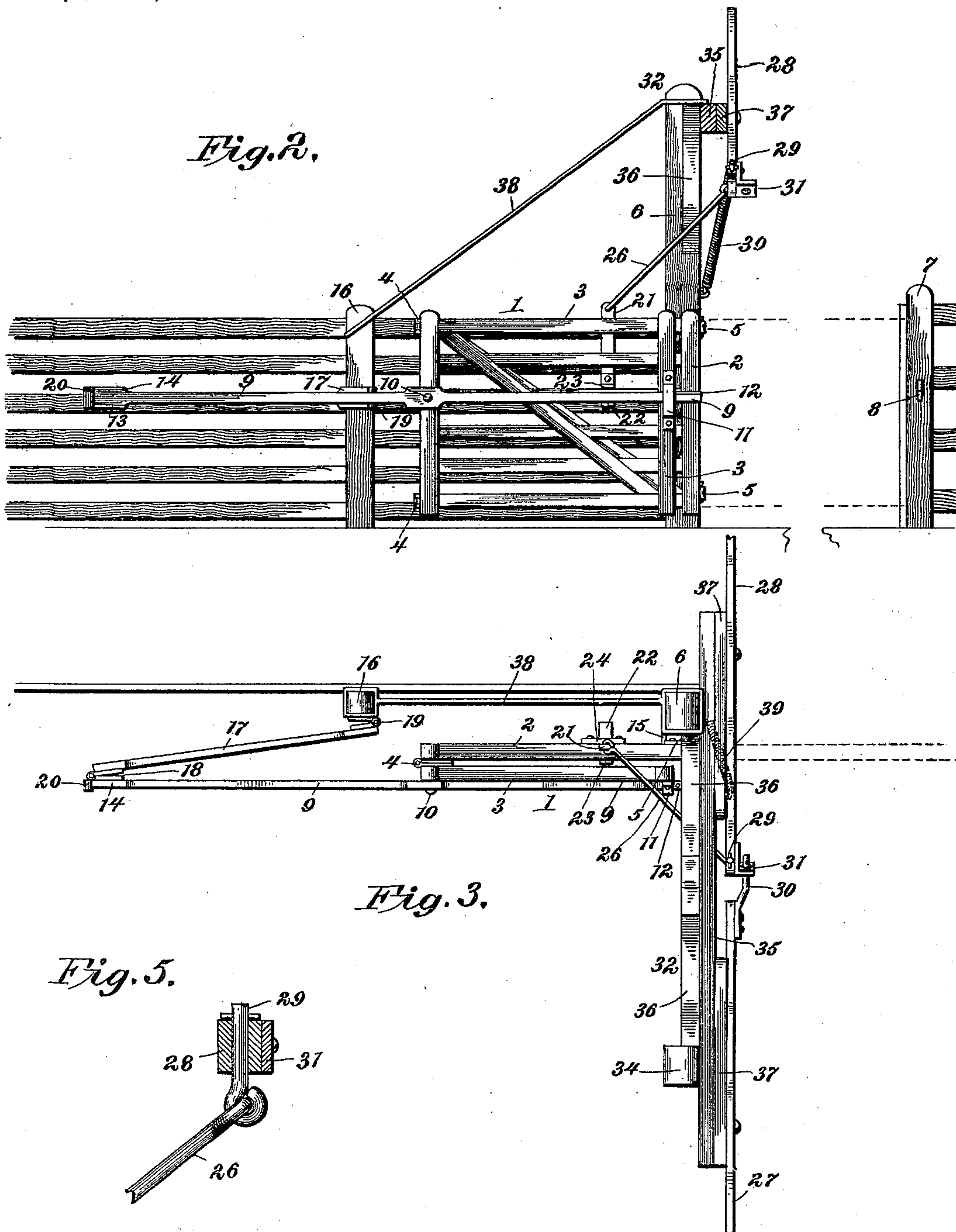
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UNITED STATES PATENT OFFICE.

JAMES MADISON TANNER, OF HERRICK, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 632,288, dated September 5, 1899.

Application filed April 26, 1899. Serial No. 714,561. (No model.)

To all whom it may concern:

Be it known that I, JAMES MADISON TANNER, a citizen of the United States, residing at Herrick, in the county of Shelby and State of Illinois, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

The object of the present invention is to improve the construction of swinging gates and to provide a simple and comparatively inexpensive one adapted to be readily opened and closed at a distance from it by a person on horseback or within a vehicle.

A further object of the invention is to provide a gate of this character which will in opening fold against a fence, so that a gate of considerable length may be conveniently operated.

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 closed. Fig. 2 is an elevation, partly in section, showing the gate open. Fig. 3 is a plan view of the same. Fig. 4 is a vertical sectional view of a portion of the gate, illustrating the manner of mounting the sliding latch-operating bar. Fig. 5 is a detail sectional view of one of the operating devices.

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

1 designates a swinging gate composed of inner and outer leaves or sections 2 and 3. These are connected together at one of the faces of the gate by hinges 4, and the hinges 5, which connect the gate with a post or upright 6, are located at the other side of the said gate, whereby the latter in opening is adapted to break or fold backward to arrange it compactly, as illustrated in Fig. 3 of the drawings. The outer leaf or section 3 of the gate closes against a latch-post 7, provided at its inner face with a vertical strip or cleat, against which the gate abuts.

The latch-post is provided with an inverted

keeper 8, which is engaged by a latch-bar 9, pivotally mounted between its ends on the inner end of the outer leaf or section 3 by means of a bolt 10 or other suitable fastening device and extending longitudinally of the gate beyond both ends thereof, as clearly illustrated in Fig. 1 of the accompanying drawings. The outer end of the latch-bar is arranged in a vertical guide or loop 11 and is provided at its upper face with a wear-plate 12, and the rear end of the latch-bar is enlarged and provided at its lower edge with a wear-plate 13. The enlarged end 14 of the latch-bar engages a keeper 15, secured to the hinge post or upright and provided at its upper edge with a recess to receive the latch-bar. The upright and inverted keepers are beveled at their outer ends and are adapted to engage the latch-bar automatically as the gate closes.

The rear end of the latch-bar is connected with a post or support 16 by means of a horizontal swinging bar 17, hinged to the latch-bar and to the said post or support 16 and adapted as the gate opens to cause the leaves or sections thereof to fold and to straighten or distend the same as the gate closes. The hinge 18, which connects the bar 17 with the latch-bar, is arranged at the inner face thereof, and the hinge 19, which is arranged at the other end of the bar 17, is located at the outer face thereof. A cushion 20, consisting of a piece of rubber or other suitable material, is interposed between the adjacent ends of the latch-bar and the swinging bar 17 and is compressed when the gate is closed, whereby when the latch-bar is swung vertically out of engagement with the inner and outer keepers the compressible device or cushion will expand and swing the bar 18 and the latch-bar outward horizontally, thereby starting the gate on its opening movement.

The inner end or arm of the latch-bar is lifted to disengage it from the keeper of the hinge and latch posts by means of a vertically-movable bar 21, mounted in suitable guides and provided at its lower portion with oppositely-disposed lugs 22 and 23. The lug 22, which is located at the lower extremity of the vertically-movable bar 21, extends beneath and is adapted to engage the lower edge of the latch-bar, and the other lug 23,

which is located at a point between the ends of the bar 21, extends between the adjacent horizontal rails of the gate and is adapted to limit the downward movement of the bar 21 when the gate is opened. The vertical movable bar is mounted in suitable guides 24 and 25. The upper guide is formed by recessing the top bar of the gate-section 2 and securing a plate across the recess, and the lower guide consists of a loop or stirrup bolted or otherwise secured to the second horizontal rail or bar of the gate.

The upper end of the vertical movable bar 21 is provided with an eye which is linked into an eye of the lower end of an inclined rod 26, which has its upper end connected with one of a pair of operating-levers 27 and 28. The operating-lever 28, to which the inclined rod is connected, is provided with a swiveled eyebolt 29, into which is linked an eye of the upper end of the rod 26. The upper end of the eyebolt is provided with a perforation for the reception of a key; but any other suitable means may be employed for fastening it in a bore or opening of the operating-lever. The inner end of the operating-lever 27 is provided with a finger or projection 30, which extends through a perforated ear or projection 31 of an L-shaped bracket secured to the inner end of the other operating-lever. By this construction the operating-levers are coupled, and when their inner ends swing upward they are adapted to draw the gate toward them, whereby the latter is started in its opening and closing movements. The swiveled eyebolt is adapted to rotate in the perforation of the operating-lever 28 as the gate opens and closes.

The operating-levers are fulcrumed between their ends on a supporting-frame 32 and are provided at their outer ends with depending handles 33 to enable them to be readily grasped. The supporting-frame comprises a hinge post or upright and a post or upright 34, located a sufficient distance from the hinge post or upright to permit the gate to pass between them, and it is connected with the hinge-post by a horizontal beam 35, arranged at the top of the supporting-frame. The horizontal top bar or beam 35 is braced by inclined bars 36 and is provided at its ends with horizontal cleats 37, upon which the operating-levers are fulcrumed, the cleats serving to space the operating-levers from the top bar or beam. The hinge post or upright is supported by an inclined brace 38, extending from its upper end to the post or support 16 and adapted to prevent the gate from sagging.

The gate is swung in either direction by pulling down on the outer arm of either operating-lever. This downward movement of the operating-lever is sufficient to swing the gate beyond the center, and after the connecting-rod passes a perpendicular position the inner ends of the operating-levers will be swung downward by a coiled spring 39, se-

cured to the hinge post or upright and to the operating-lever 28 at a point near the inner end of the latter.

The invention has the following advantages: The gate, which is simple and comparatively inexpensive in construction, is adapted to be readily opened and closed at a distance from either side of it without necessitating a person's dismounting or leaving a vehicle, and as it is constructed of two leaves or sections it may be made and successfully operated in great lengths. The outer section or leaf of the gate is shorter than the inner section, so that when the gate is open the latch will not project into the gateway, and when the gate is closed the latch is prevented from coming in contact with the latch-post by the vertical bar of the latter, against which the gate abuts. The latch-bar, which extends the entire length of the gate, interlocks with a pair of keepers and is firmly locked in its closed position. The compressible device, which is interposed between the abutting ends of the latch-bar and the swinging horizontal bar, expands as soon as the former is disengaged from the keepers and causes both of the bars to swing outward, thereby starting the gate on its opening movement. The hinges at the end of the horizontally-swinging bar have sufficient play to permit the pivoted latch-bar to oscillate vertically to engage with and disengage itself from the keepers.

Changes in the form, proportion, size, and the minor details of construction within the scope 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 composed of two leaves or sections hinged together, a latch-bar extending longitudinally of the gate and pivotally mounted on the outer section thereof and projecting beyond both ends of the gate, a horizontally-swinging bar hinged to the inner end of the latch-bar and to a suitable support, a keeper arranged to be engaged by the latch-bar, and operating mechanism for swinging the gate and for disengaging the latch-bar from the keeper, substantially as described.

2. The combination of a swinging gate composed of two sections or leaves hinged together, a longitudinal latch-bar extending beyond both ends of the gate and pivotally mounted on the outer leaf or section, the reversely-arranged keepers located at the ends of the gate and adapted to be engaged by the latch-bar when the gate is closed, a swinging bar connected with the inner end of the latch-bar, and operating mechanism connected with the gate and adapted to disengage the latch-bar from the keepers, substantially as described.

3. The combination of a swinging gate composed of two leaves or sections, a latch-bar

- pivotally mounted on the outer leaf or section and projecting beyond both ends of the gate, a horizontally-swinging bar connected with the inner end of the latch-bar, a vertically-movable device mounted on the gate and arranged to engage the latch-bar, and operating mechanism connected with the vertically-movable device, substantially as described.
- 10 4. The combination of a swinging gate composed of two sections, a longitudinal latch-bar pivotally mounted on the outer section of the gate, a horizontally-movable bar connected with the inner end of the latch-bar, a
- 15 keeper, and a compressible device interposed between the adjacent ends of said bars and adapted to throw the same outward when the latch-bar is disengaged from the keeper, substantially as described.
- 20 5. The combination of a swinging gate composed of two leaves or sections, a latch-bar fulcrumed on the outer leaf or section, a horizontally-movable bar connected with the inner end of the latch-bar, a vertically-movable
- 25 device mounted on the gate and arranged to engage the latch-bar, operating-levers connected with the vertically-movable device, and a spring for actuating the operating-levers in one direction, substantially as described.
- 30 6. The combination of a swinging gate composed of two leaves or sections hinged together, a longitudinal latch-bar pivotally mounted on one of the leaves or sections, a vertically-movable bar slidingly mounted on
- 35 the gate, and having one end arranged to engage the latch-bar, means for limiting the movement of the vertical bar, operating-le-

vers connected with the vertical bar, and a spring for swinging the operating-levers in one direction, substantially as described. 40

7. The combination of a swinging gate composed of two leaves or sections, a longitudinal latch-bar pivotally mounted on one of the leaves or sections and projecting beyond both ends of the gate, a vertically-movable bar 45 mounted on the gate and arranged to engage the latch-bar, an operating-lever provided with a swiveled eyebolt, and a rod connected with the eyebolt and with the vertically-movable bar, substantially as described. 50

8. The combination of a swinging gate composed of two leaves or sections hinged together, the outer leaf or section being shorter than the inner one, and a latch-bar carried by the outer leaf or section, whereby when 55 the gate is open it will not project into the gateway, substantially as described.

9. The combination of a swinging gate hinged at its inner end and composed of two leaves or sections, a latch-bar pivotally 60 mounted between its ends on the outer leaf or section and extending longitudinally of the gate, a horizontally-swinging bar connected with the inner end of the latch-bar, and means for operating the latch-bar, substantially as 65 described.

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

JAMES MADISON TANNER.

Witnesses:

N. B. OWINGS,

T. E. MYERS.