No. 705,395. Patented July 22, 1902.

W. FULLER.

GATE.

(Application filed Nov. 25, 1901.)

(No Model.) 2 Sheets—Sheet 1.

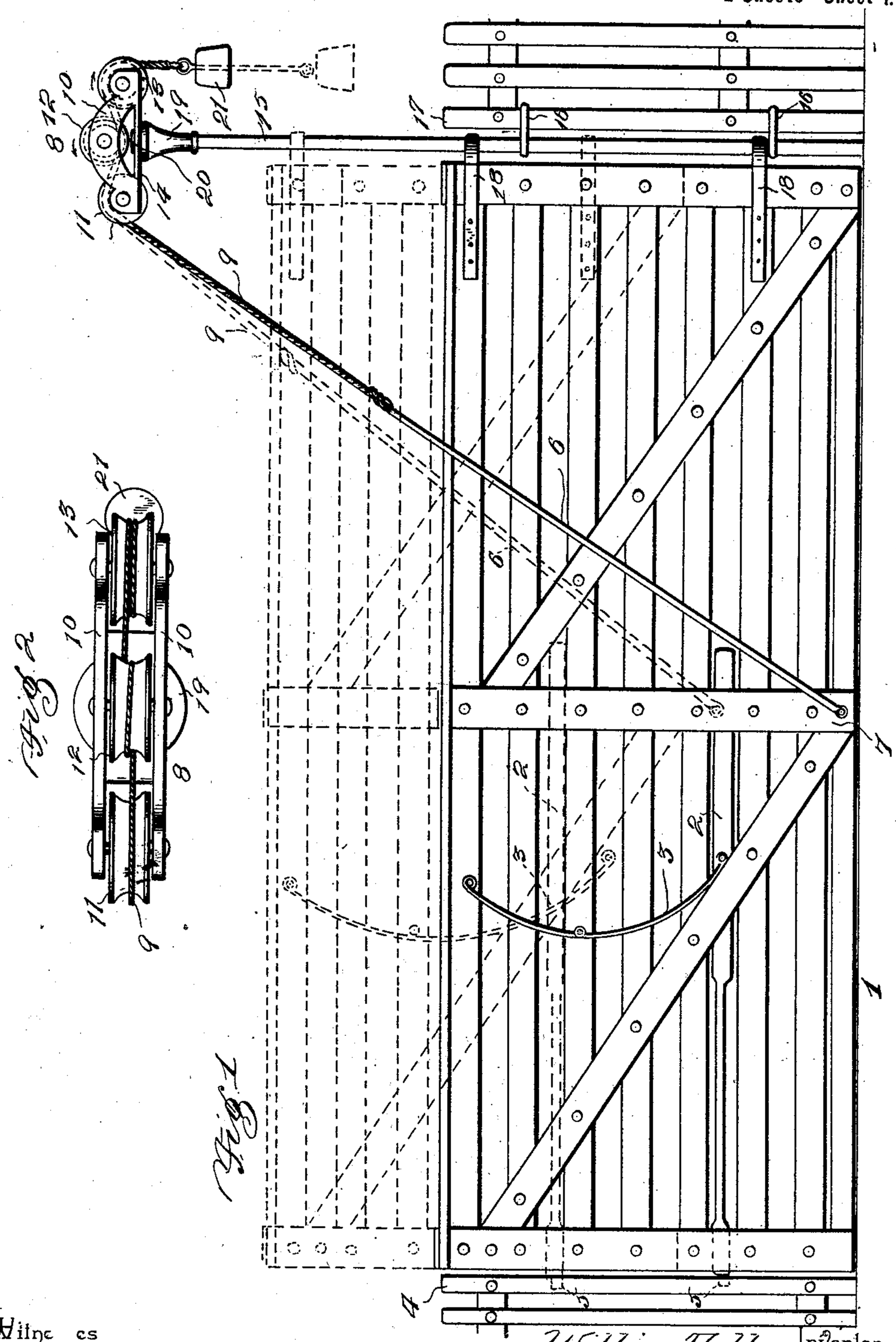

Fig. 1.

Fig. 2.

Witnesses
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R. A. Everett.

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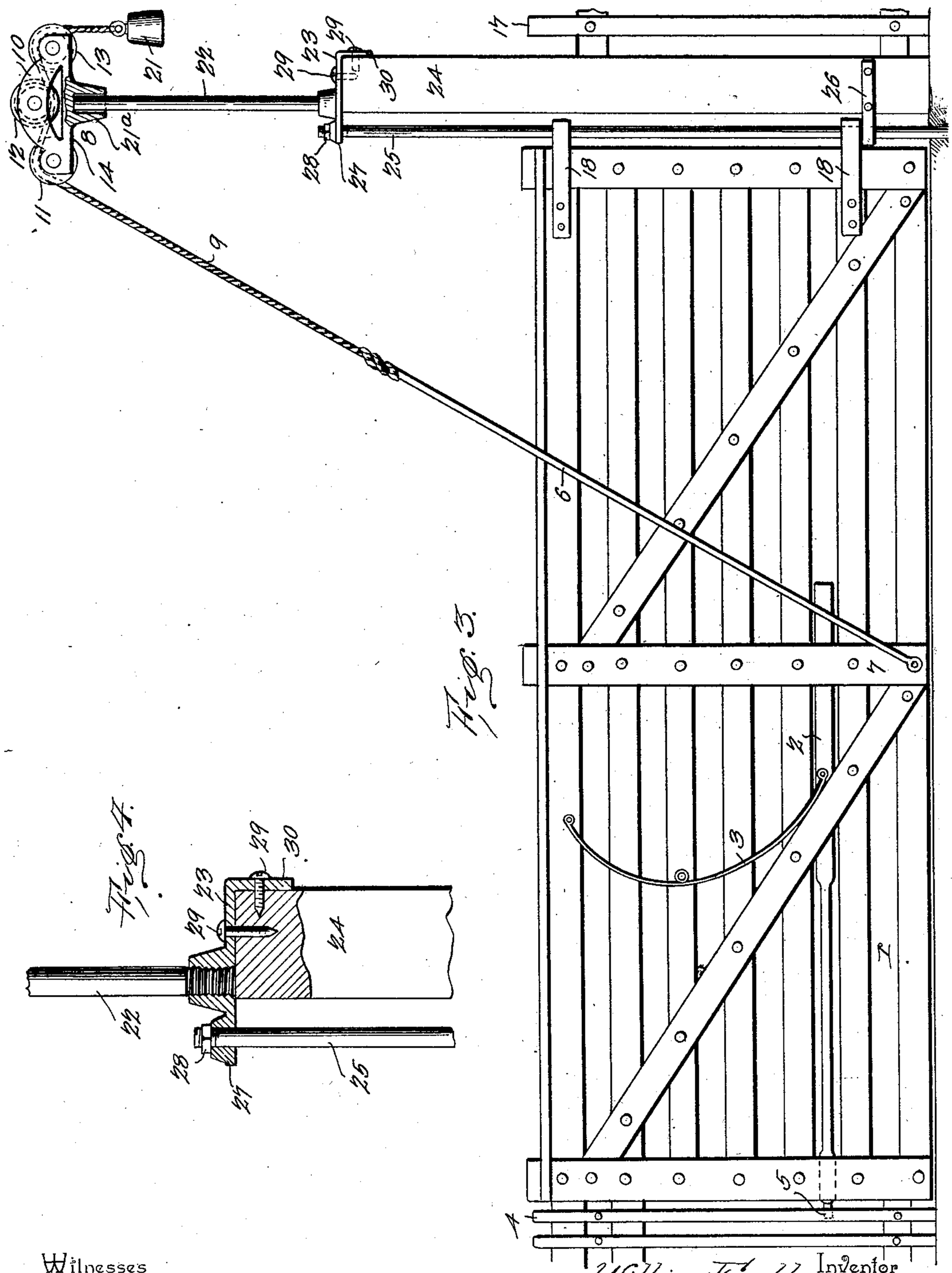

Fig. 1.

Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM FULLER, OF NEWVILLE, INDIANA.

GATE.

SPECIFICATION forming part of Letters Patent No. 705,395, dated July 22, 1902.

Application filed November 25, 1901. Serial No. 83,626. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FULLER, a subject of the King of Great Britain, residing at Newville, in the county of Dekalb and State of Indiana, have invented a new and useful Gate, of which the following is a specification.

This invention relates to gates.

The object of the invention is to provide a gate which shall be capable of ready vertical adjustment and held balanced in any desired plane for easy swinging movement and in which the number of parts employed in its construction shall be of such simple character and so assembled and operated as to reduce danger of damage or breakage in use to a minimum.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a gate, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there are illustrated two forms of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the scope of the invention, and in these drawings—

Figure 1 is a view in side elevation of the gate characterized by this invention, the lowered dropped position being shown in full lines and the raised position in dotted lines. Fig. 2 is a view in plan of the sheave-bearing head. Fig. 3 is a view similar to Fig. 2, partly in section, showing a modified form of fence-post. Fig. 4 is a fragmentary detail view in section, showing the detachable gate-support to be associated with an ordinary post.

Referring to the drawings, and particularly to Figs. 1 and 2 thereof, 1 designates generally a gate, which may be constructed in any preferred manner and provided with a latch 2, normally projected by a leaf-spring 3, the end post 4, with which the latch coacts, being provided in this instance with two recesses 5 to be engaged by the latch to hold the gate locked in two positions, as shown, it being understood that, if desired, additional recesses may be employed for holding the gate at intermediate adjustments, and as this will be perfectly obvious detailed illustration is deemed unnecessary.

The mechanism for holding the gate balanced in elevated position comprises a pivoted bail or yoke 6, the lower ends of which straddle the gate and are shown as secured adjacent to the bottom of the center panel-post 7 of the gate, a swiveled sheave-bearing head 8 and a weight-bearing flexible connection 9 passing around the sheaves and connected at one end to the bail. The head 8 is composed of two arms or plates 10, in this instance arched, between which are pivoted the sheaves 11, 12, and 13, the arms being connected by a base-plate 14, having a swiveled connection for movement in a horizontal plane on a post 15, the lower end of which is sunk in the ground to the desired depth, and its intermediate portion is braced by eyebolts 16, secured to the post in any suitable manner and to the end post 17 of the fence-section adjacent to the gate, the gate being held assembled with the post 15 in this instance by strap-hinges 18, although any other preferred form of hinge may be employed that will be found to answer the same purpose. The post 15 is herein shown as an iron rod or bar having a head 19, which is engaged by a pin 20, passing through the base-plate 14 of the head; but it is to be understood that, if preferred, a wooden post may be employed in lieu of one made of metal. The flexible connection 9, which in this instance is a rope, although it may be a chain, carries at its free end a weight or counterpoise 21, which, together with the frictional resistance presented by the arrangement of the flexible connection 9 about the sheaves, will exactly balance the gate, so that to raise or lower the same will require but the output of a slight amount of energy, or, otherwise stated, the coactive relation between the friction devices and the flexible connection is such that with a counterpoise of less weight than the gate the latter may be held at any desired adjustment. The manner in which the rope is associated with the sheaves is as follows: Beginning with the yoke the rope is passed over the sheave 11, thence under and once around the sheave 12 in the direction of the arrow, (shown in Fig. 1,) and thence over and twice around the sheave 13 in the direction of the arrow, and

by this disposition of the rope with relation to the sheaves an effective frictional lock is presented which, together with the weight of the counterpoise, will operate to hold the gate poised as desired.

The form of gate shown in Fig. 3 is the same as that shown in Fig. 1, and the head 14 is constructed in the same manner as that shown in the embodiment of the invention already described, the only difference being that instead of associating the head 14 with the post by the use of the pin 20 the plate 14 of the head is provided with an orificed boss 21^a, into which projects the upper end of the head-support 22, the same being preferably constructed of tubular metal, the lower end of which is threaded into a cap-plate 23, rigidly secured on the top of a post 24, sunk in the ground adjacent to the gate. As before stated, in the form of embodiment of the invention shown in Fig. 3 there is a difference in the construction of the gate-post, or, rather, the gate-supporting post, the same being composed wholly of metal and associated with the post 24 in such manner as that should the latter post rot away or become otherwise unfit for use the gate-supporting post proper may readily be disconnected therefrom and reassociated with a new post 24. The gate-supporting post comprises a bar 25 of metal, which may be either tubular or solid, the lower end of which is sunk in the ground and is held associated with the post 24 by a strap 26, the latter serving also as a stop upon which the lower hinge 18 of the gate rests, thereby to limit its downward movement, the upper hinge embracing the bar 25 in such manner as to be readily slidable thereon. The upper end of the bar 25 projects through an orificed projection 27, constituting a portion of the cap-plate 23, and is held asssmbled therewith by a nut 28, turned on its upper end. The cap-plate may be of a size to cover the upper end of the post, and thus protect it from the elements, and is held assembled therewith by screws or bolts 29, the plate being provided with a downward-extending rear portion 30, bearing against the post and operating to prevent any tendency on the part of the head-support 22 to be sprung from a vertical line by the weight of the gate.

It will be seen from the foregoing description that while the gate-hanger of this invention is exceedingly simple of construction it will be thoroughly efficient in use and that the device as a whole may be combined with an ordinary gate at but slight cost and without requiring a particular construction of gate or supporting-post therefor.

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

1. The combination with a vertically-movable gate, and a post arranged adjacent thereto and supporting a head bearing friction devices, of a weight-bearing flexible connection associated with the gate and engaging the said devices in reversely-disposed loops the coactive relation between the friction devices and the flexible connection being such that with a counterpoise of less weight than the gate, the latter may be held at any desired vertical adjustment.

2. The combination with a vertically-adjustable gate, and a post arranged adjacent thereto and supporting a horizontally-movable head bearing a plurality of rotatable friction devices, of a weight-bearing flexible connection associated with the gate and engaging by reversely-disposed loops with the said devices.

3. The combination with a gate, and a post arranged adjacent thereto and supporting a horizontally-movable head bearing a plurality of rotatable friction devices, of a bail pivotally connected to the gate, and a weight-bearing flexible connection associated with the bail and engaging by reversely-disposed loops with the said devices.

4. The combination with a gate, and a post arranged adjacent thereto and supporting a head bearing a plurality of sheaves, of a bail pivotally connected to the gate, and a weight-bearing flexible connection secured to the bail and passed in reversely-disposed loops around the sheaves.

5. The combination with a gate, and a post arranged adjacent thereto and supporting a swiveled head bearing a plurality of sheaves, of a bail pivotally connected to the lower portion of the gate near the center thereof, and a weight-bearing flexible connection secured to the bail and passed in reversely-disposed loops around the sheaves.

6. The combination with a gate, of a post, a head carried by the upper portion thereof and adapted for movement in a horizontal plane about a vertical axis, a plurality of sheaves carried by the head, a pivoted bail carried by the gate, and a weight-bearing flexible connection secured to the bail and passed in reversely-disposed loops around the sheaves.

7. The combination with a post, of a cap-plate supporting an upright, a head carried by the upper portion of the upright and movable thereon in a horizontal plane, said head bearing a plurality of rotatable friction devices, a gate-support disposed in parallel relation to the post and rigidly secured to the cap-plate, a gate mounted for sliding movement on the said support, a pivoted bail carried by the gate, and a weight-bearing flexible connection secured to the bail and passed in reversely-disposed loops around the friction devices.

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

WILLIAM FULLER.

Witnesses:
AMOS C. FELL,
W. I. KISER.