

No. 651,911.

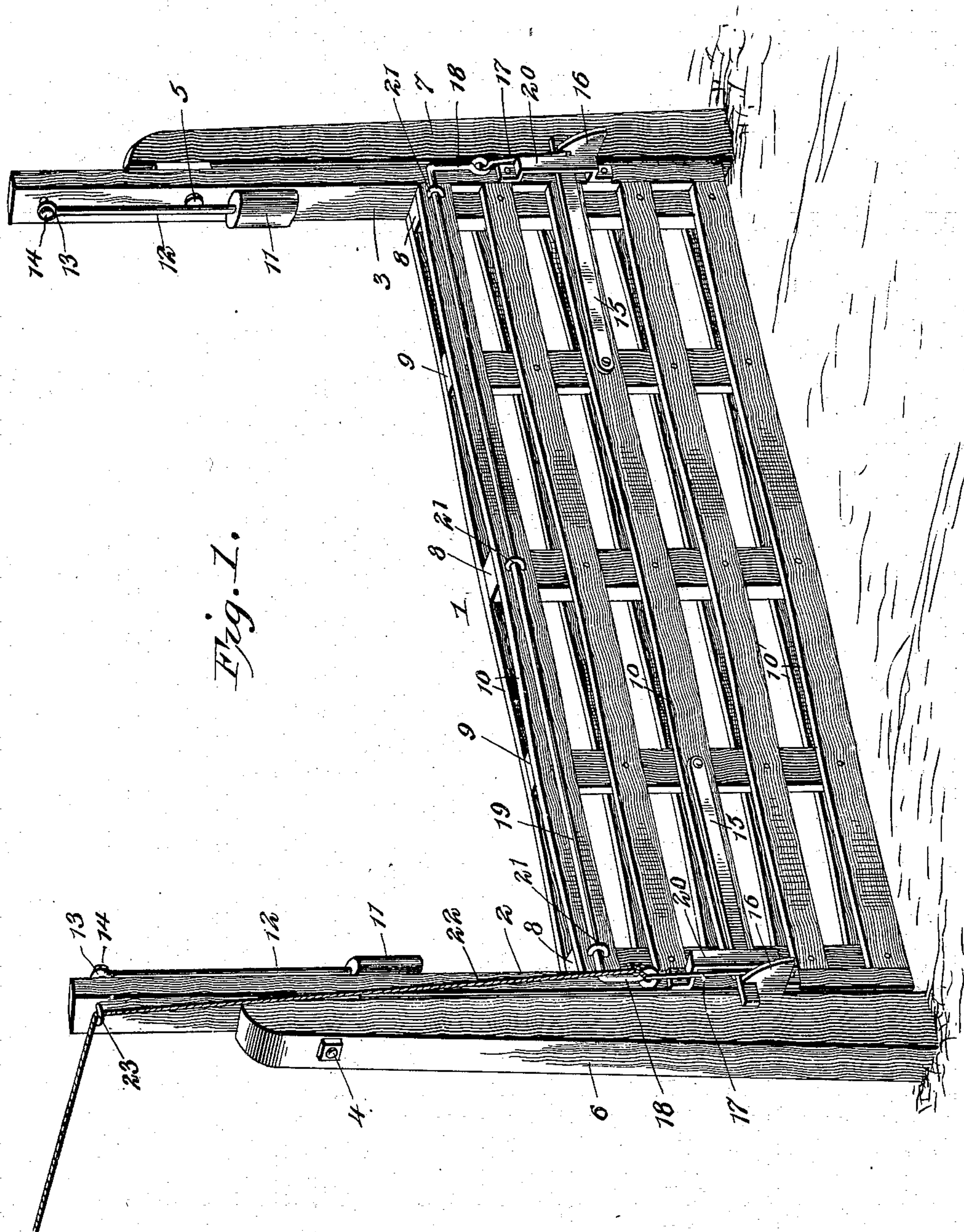
Patented June 19, 1900.

**A. WILLIAMS.
GATE.**

(Application filed Oct. 19, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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Howard D. Orr, By his Attorneys,

J. J. Riley

Albert Williams, Inventor,

Chas. Snow & Co.

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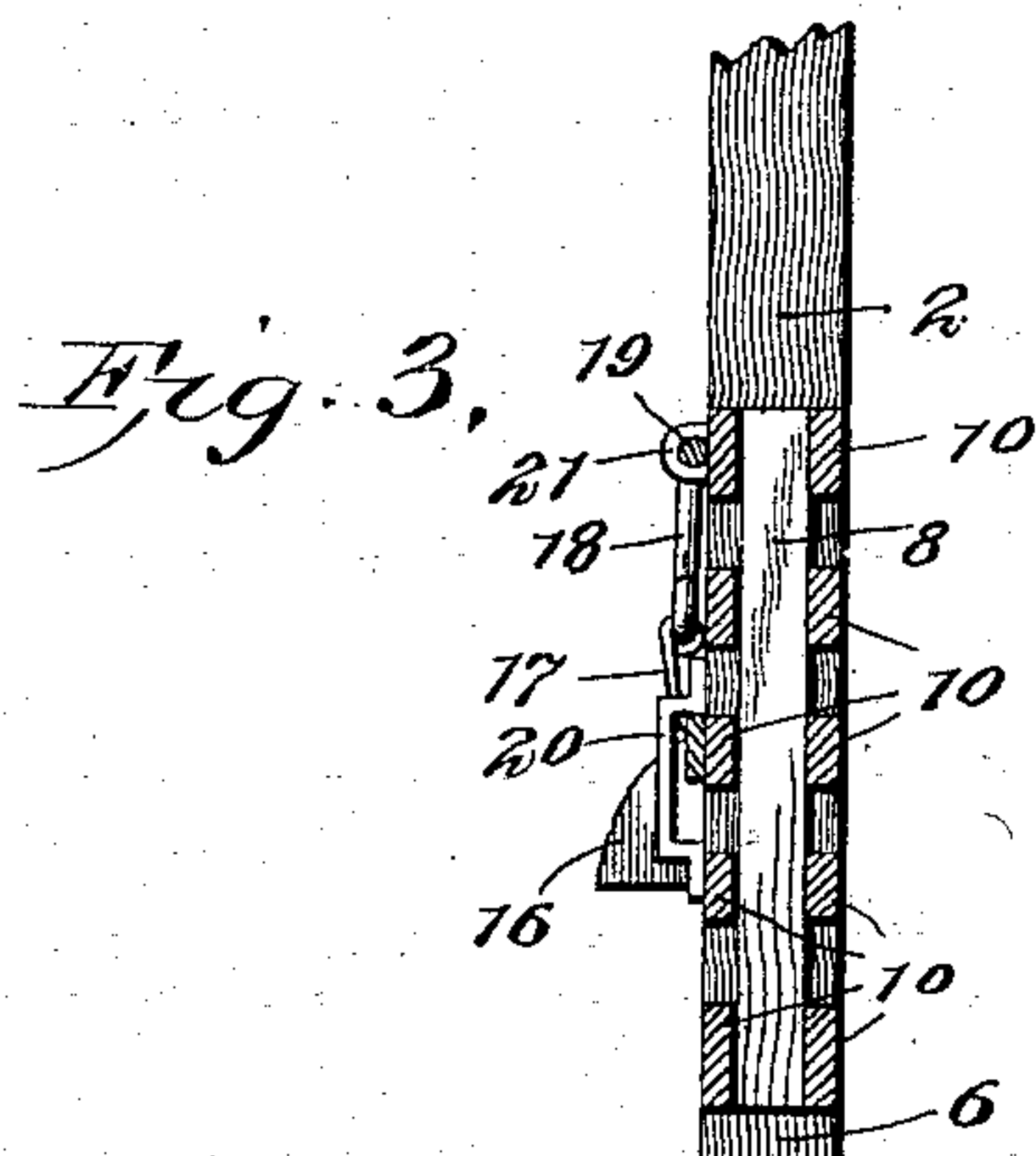
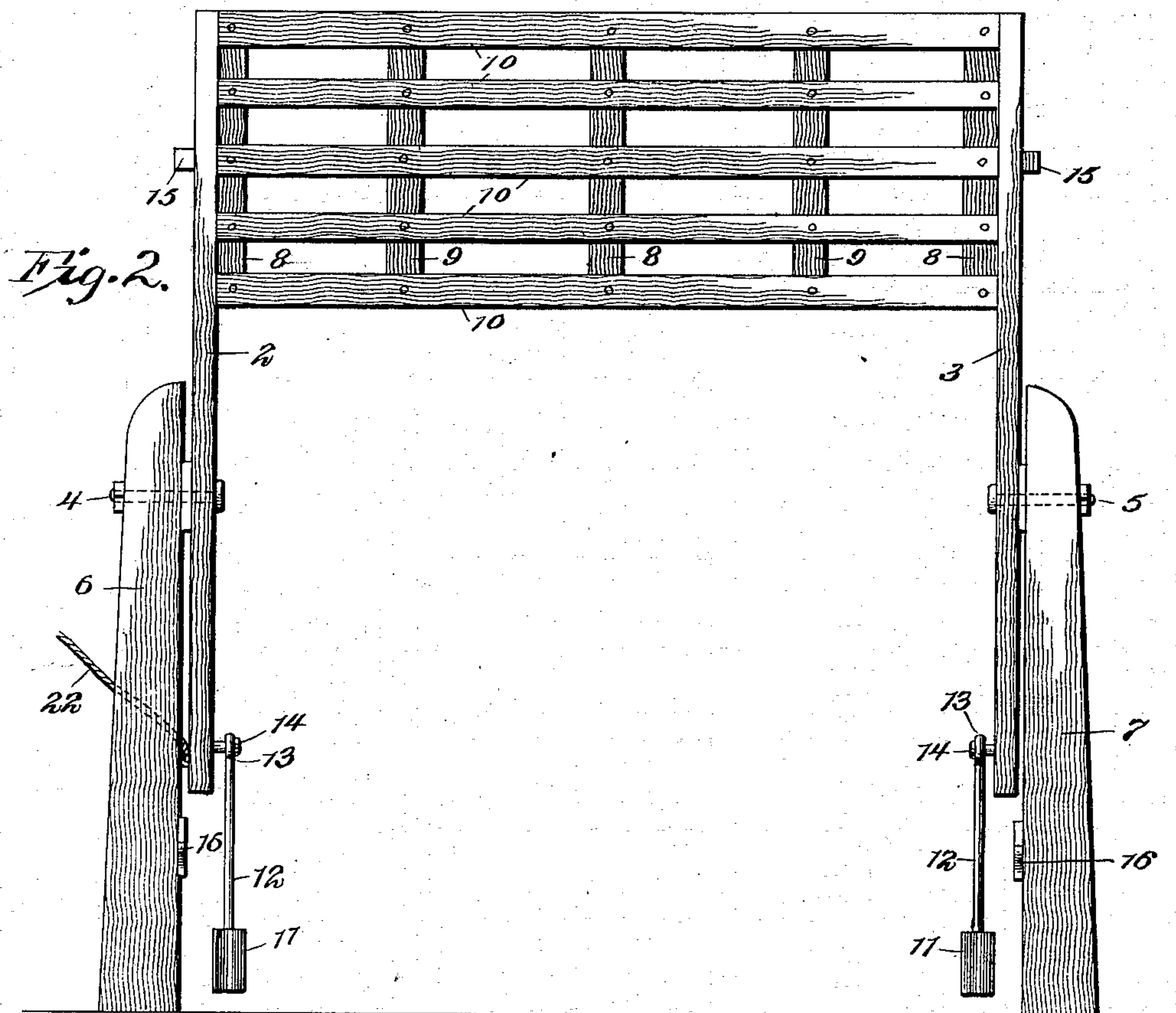
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UNITED STATES PATENT OFFICE.

ALBERT WILLIAMS, OF FREDONIA, IOWA.

GATE.

SPECIFICATION forming part of Letters Patent No. 651,911, dated June 19, 1900.

Application filed October 19, 1899. Serial No. 734,086. (No model.)

To all whom it may concern:

Be it known that I, ALBERT WILLIAMS, a citizen of the United States, residing at Fredonia, in the county of Louisa and State of Iowa, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

One object of the present invention is to improve the construction of revolving gates and to provide a simple, inexpensive, and efficient one of great strength and durability adapted to be readily operated and capable of positively closing after it has been swung downward beyond a horizontal position.

A further object of the invention is to enable the gate to be securely locked at each side when in its closed position and to arrange the operating-rope so that both latches will be simultaneously 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 a side elevation of the same, the gate being open. Fig. 3 is a vertical sectional view illustrating the arrangement of the locking mechanism.

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

1 designates a gate having vertical end bars 2 and 3, extended to form levers and pivoted by bolts 4 and 5 to posts 6 and 7, which are located at the ends of the gate, as clearly illustrated in Figs. 1 and 2 of the accompanying drawings.

The gate is composed of short vertical bars 8 and 9 and horizontal rails 10, arranged in pairs, as clearly shown in Fig. 1 of the drawings, and secured to the opposite faces of the vertical bars 8 and 9, which are alternately wide and narrow to bow the rails and form a truss-like structure, whereby the gate will have its strength and rigidity greatly increased.

The gate is swung upward in opening from the position shown in Fig. 1 to that illustrated in Fig. 2, and when open it is vertical

and is located a considerable distance above the pivots 4 and 5 in order to afford ample space for the passage of vehicles and at the same time enable comparatively-short posts 6 and 7 to be employed for this purpose.

The gate is counterbalanced to a greater or less extent, according to its position, by a pair of oscillating weights 11, provided with rods or stems 12, having eyes 13 at their upper ends and pivoted to the upper arm of the levers or bars 2 of the gate by bolts 14 or other suitable fastening devices. When the gate is closed, the weights lie between the bars 2 of the gate and are arranged below the pivots, so that the gate proper or lower portion of the revolving structure is heavier than the upper portion and will remain closed and will close positively and automatically when the gate in closing is swung downward below a horizontal position. When the gate is in a horizontal position and the weights are exerting their greatest power, the said gate is practically counterbalanced; but its momentum will carry it beyond such horizontal position and the weights are swung inward and exert less power, so that the gate will close. When the gate is open, the weights extend beyond the levers or bars 2 and fully counterbalance the gate, so that there is no liability of the same accidentally closing.

When the gate is closed, it is locked in such position by a pair of pivoted latch-bars 15, arranged at and extending beyond the ends of the gate and engaging keepers 16, secured to the inner faces of the posts 6 and 7 and provided at their upper edges with suitable recesses or shoulders. The latch-bars are connected by links 17 with arms 18 of a rock-shaft 19, and they are arranged within suitable guides or frames 20. The rock-shaft 19, which is arranged horizontally near the top of the gates is journaled in suitable bearings 21 and is adapted to be swung upward by an operating-rope 22, whereby the latch-bars will be disengaged from the keepers to unlock the gate. The lower end of the operating-rope 22 is secured to the adjacent arm 18 of the rock-shaft, and the said rope passes upward therefrom and extends through a suitable guide 23, arranged at the upper end of the adjacent bar or lever 2. The gate opens in one direction, and it will be apparent that when the op-

erating-rope is pulled upon both latches will be simultaneously operated and the gate will be swung upward to a perpendicular position above the posts 6 and 7. Any suitable stop 5 may be provided to limit the movement of the gate, and this stop is preferably provided at a suitable point on the operating-rope. When the gate is open, a similar pull on the operating-rope will close it.

10 It will be seen that the gate is simple and comparatively-inexpensive in construction, that it possesses great strength and durability, and that it is easily operated to open and close it. It will also be apparent that the 15 weights counterbalance the gate during the opening and closing of the same, that they hold the gate in its open position, and permit the gate to close positively and automatically. Furthermore, the gate is secured at each end 20 when closed, and both of the latches are simultaneously operated by the rope, which may be arranged in any direction that will give the desired pull. The rope may extend from the gate at right angles to the same a sufficient distance to enable the said gate to be 25 opened and closed, and the direction of the rope may be then changed to arrange it within convenient reach of persons on foot and in vehicles.

30 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.

35 What is claimed is—

I. In a device of the class described, the combination with suitable posts or supports, of a gate provided with vertical levers extend-

ing upward from it and pivoted between their ends to the posts or supports, said gate being 40 adapted to oscillate from a vertical position, below the pivots, to a vertical position above the pivots, and the swinging weights connected to the inner faces of the levers at a point 45 above the pivots, substantially as and for the purpose described.

2. In a device of the class described, the combination with posts or supports, of an oscillating gate mounted thereon, latches arranged at the ends of the gate, a rock-shaft 50 journaled on the gate and provided with arms connected with the said latches, whereby the latter will be simultaneously operated, and operating mechanism connected with the rock-shaft and adapted to open and close the 55 gate, substantially as described.

3. In a device of the class described, the combination with posts or supports, of a gate having end bars pivoted to the posts or supports, swinging weights connected with the 60 end bars at points above the pivots, latches mounted on the gate at the ends thereof, a rock-shaft journaled on the gate and provided with arms connected with the latches, and an operating-rope connected with one of the arms 65 of the rock-shaft and with the upper portion of one of the bars of the gate, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature 70 in the presence of two witnesses.

ALBERT WILLIAMS.

Witnesses:

T. M. PIERCE,
W. A. BUZARD.