No. 706,984. Patented Aug. 12, 1902.

A. MILLER.

LIFTING GATE.

(Application filed Feb. 12, 1902.)

(No Model.)

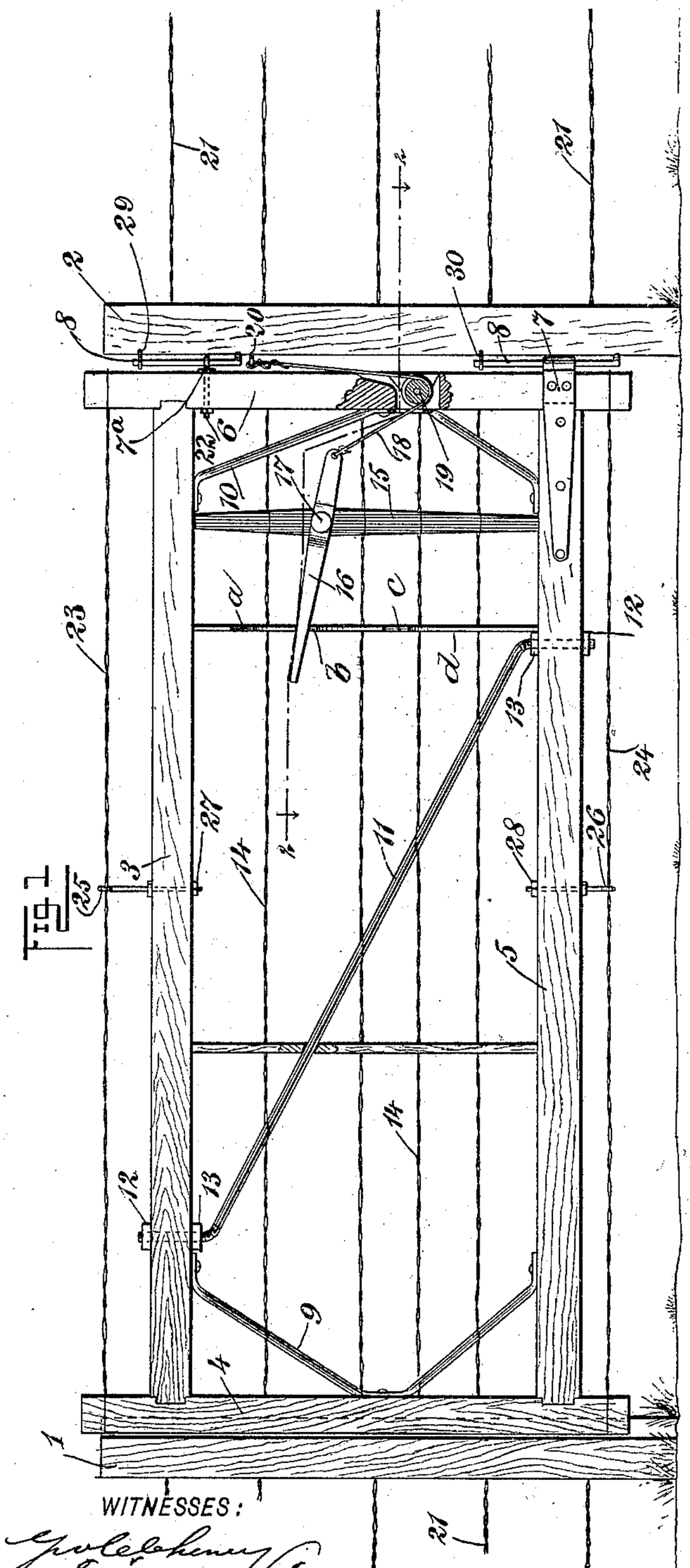

FIG. 1.

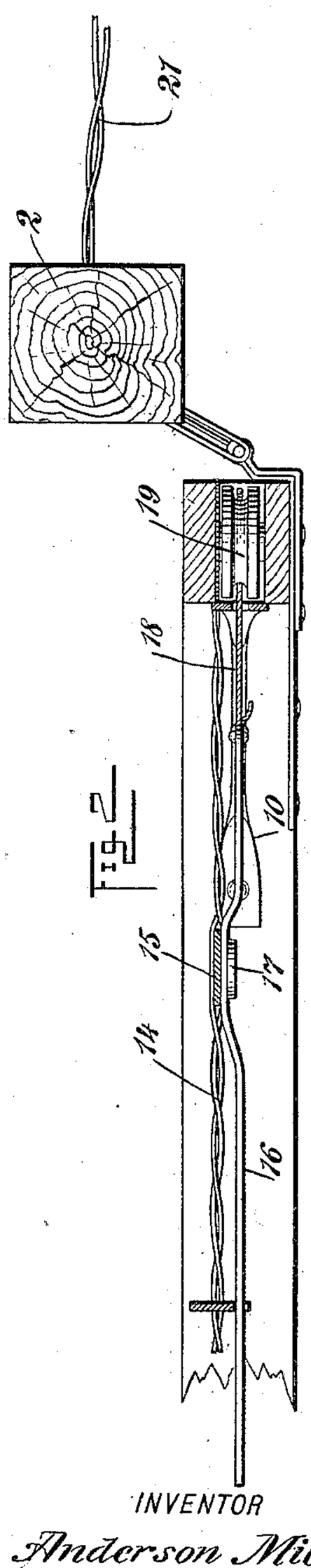

FIG. 2.

WITNESSES:

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LIFTING GATE.

SPECIFICATION forming part of Letters Patent No. 706,984, dated August 12, 1902.

Application filed February 12, 1902. Serial No. 93,670. (No model.)

To all whom it may concern:

Be it known that I, ANDERSON MILLER, a citizen of the United States, and a resident of Shelbyville, in the county of Shelby and State of Indiana, have invented new and useful Improvements in Lifting Gates, of which the following is a full, clear, and exact description.

My invention relates to a lifting gate of the type actuated by a hand-lever.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a front elevation of the gate, showing certain details in section; and Fig. 2 is a horizontal fragmentary section on the line 2 2 of Fig. 1 and slightly enlarged.

Vertical posts 1 and 2 are mounted in the usual manner by planting their lower ends in the earth. A rectangular frame consisting of members 3, 4, 5, and 6 is provided with hinge members 7 7ª, and these hinge members are fitted upon the rods 8 8, so as to enable the gate to move vertically and also to swing.

Braces 9 and 10 of the shape indicated are secured to the side members 4 and 6 and to the top and bottom members 3 and 5. These braces constitute rigid connections disposed diagonally of the corners of the gate. A longitudinal brace-rod 11, provided with nuts 12 13, engages, respectively, the top and bottom members 3 and 5 of the frame. This longitudinal member passes diagonally from the top member to the bottom member, its arrangement being such that when the free end of the gate sags slightly it sustains a compression strain. I find this form of brace to be very efficient.

The wire sections 14 are preferably secured to the several bracing members above mentioned. A vertical rod 15 connects the top and bottom members, and upon this rod a hand-lever 16 is mounted by means of a pivot 17. A flexible cord or equivalent member 18 engages the lever, as shown, and partially encircles the revoluble pulley 19 and is secured also to the staple 20 in the post 2. The rod 15 acts to some extent as an additional brace.

To lock the lever 16 in position, and thereby hold the gate elevated after it has been raised by said lever and cord, the free end of the lever is caused to engage one of the notches *a*, *b*, or *c* of the vertical bar *d* of the gate, as shown in Fig. 1.

To the posts 1 and 2 are secured the wires 21, constituting a fence, in the usual manner. It will be noted that the brace-rod 10 is rigidly secured upon the member 6 at a point immediately adjacent to the revoluble pulley 19. This is because the strain thrown upon the pulley is to be borne as far as possible by the brace-rod. The ends of the brace-rod 10 are secured to the upper and lower members at points immediately adjacent to the top and bottom ends of the rod 15. The object of this arrangement is to brace the structure at the ends of this rod, where considerable strain is encountered. The hinge member 7ª consists of an eyebolt and may be secured at any desired distance from the top of member 6. The nut 22 screws upon this bolt. The guard-wires 23 24 at the top and bottom of the gate are threaded through the eyebolts 25 26, these bolts being secured by nuts 27 28.

The operation of my device is as follows: The gate being in the position indicated in Fig. 1, the handle of the lever 16 is depressed, thus pulling upon the cord 18, which partially encircles the pulley 19 just described, causing the gate to be raised vertically upward. This upward movement of the gate may be utilized for various purposes, such as disengaging the gate from a fastening or for carrying it off an obstruction. The constant lifting and lowering of the gate tends to cause the free end thereof (shown at the left of Fig. 1) to sag, and the braces described are to prevent such sagging. If the gate be raised or lowered suddenly, a considerable part of the shock is sustained upon each of the braces and always in the general direction of the length thereof.

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

1. A lifting gate comprising a post, a frame hinged thereto and free to move vertically, said frame comprising top, bottom and side members, a rod connecting said top and bottom members and serving to brace the same, a lever pivoted upon said rod, angle-braces secured to said top and bottom members at

points adjacent to the ends of said rod and engaging one of said side members at a point intermediate of the ends thereof, a revoluble pulley mortised within said side member immediately adjacent to said post, and a flexible member engaging said lever and said post and partially encircling said pulley.

2. A lifting gate comprising a post, a rectangular frame hinged thereto and free to move vertically, said frame comprising top, bottom and side members, braces disposed diagonally of the corners of said frame, a longitudinal compression member secured to the top and bottom members and extending diagonally of the center of said frame, a rod connecting the top and bottom members and serving to brace the same, a lever mounted upon said rod, a pulley mortised within said side member and free to revolve, and a flexible member secured to said lever and to said post and partially encircling said pulley.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDERSON MILLER.

Witnesses:

J. B. McFADDEN,

E. H. D. YOUNG.