

(No Model.)

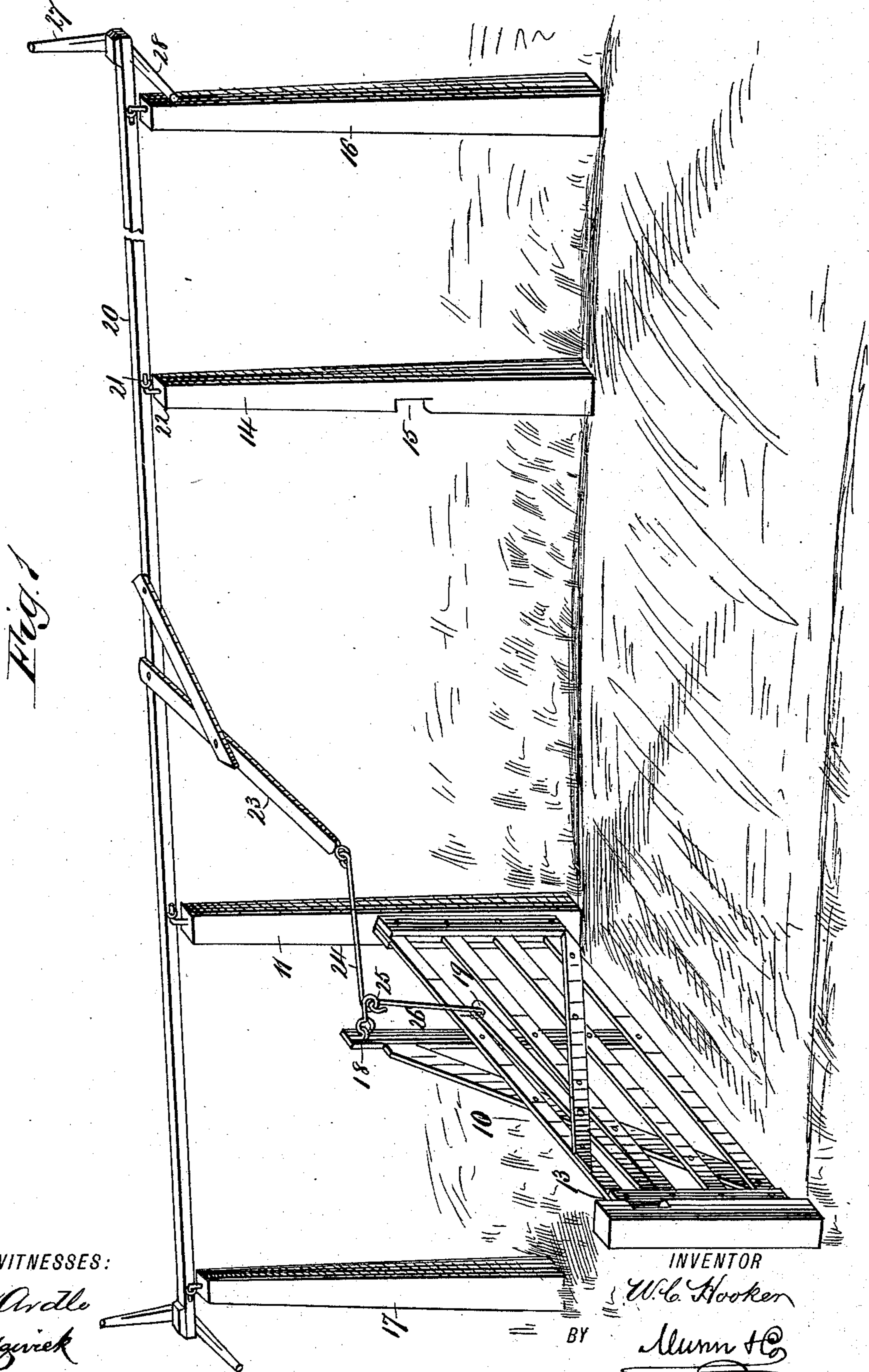
2 Sheets—Sheet 1.

W. C. HOOKER.

DEVICE FOR OPENING AND CLOSING SWING GATES.

No. 409,969.

Patented Aug. 27, 1889.



WITNESSES:

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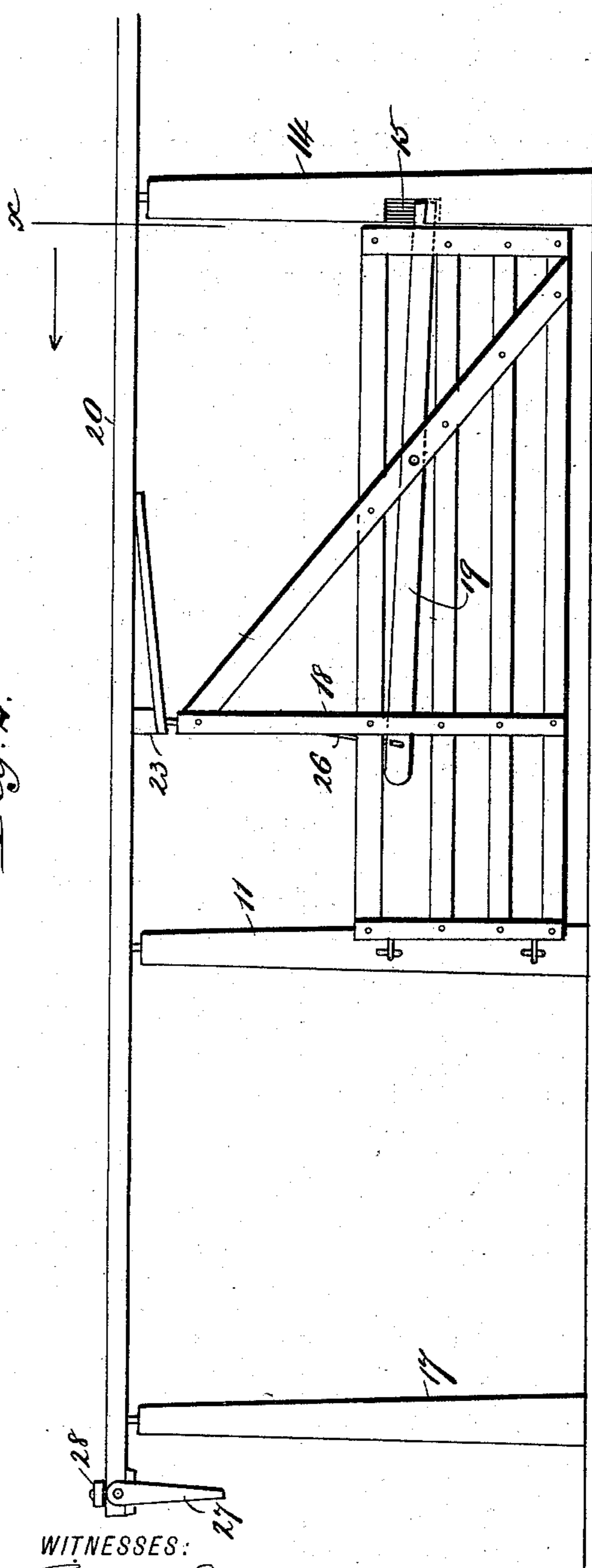
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Fig. 2.



WITNESSES:

Francis McArdle
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Fig. 4.

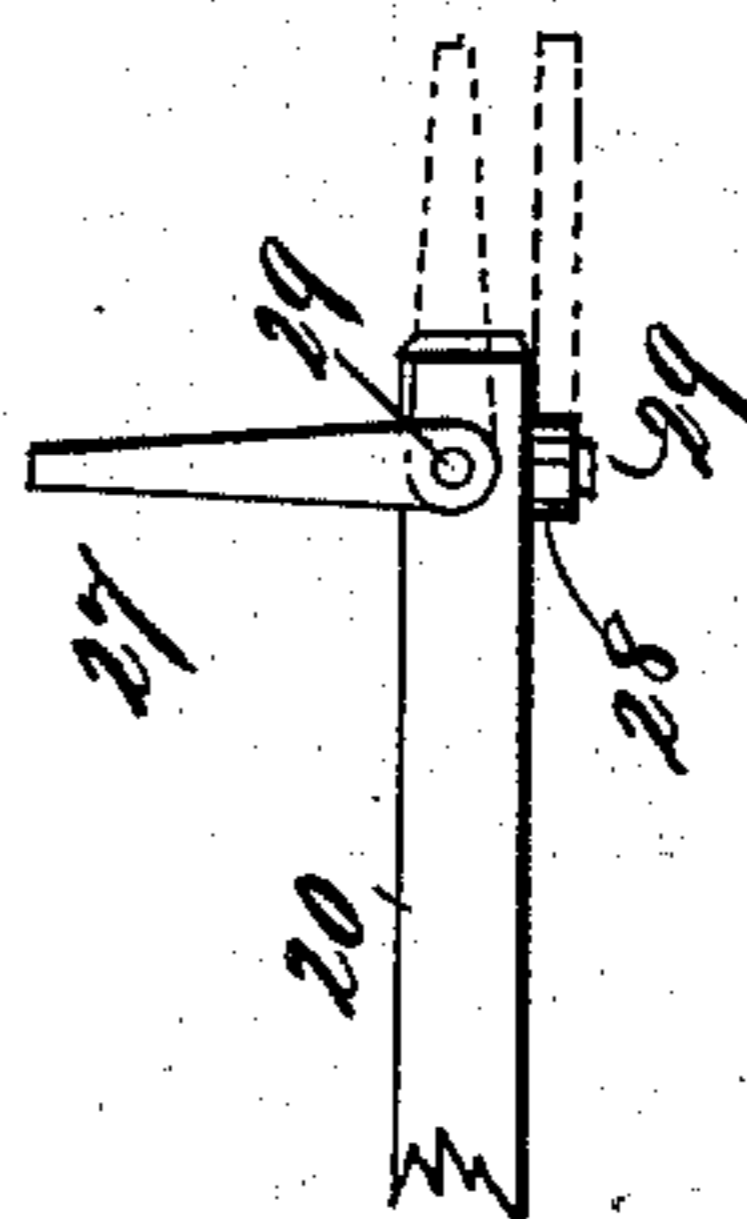
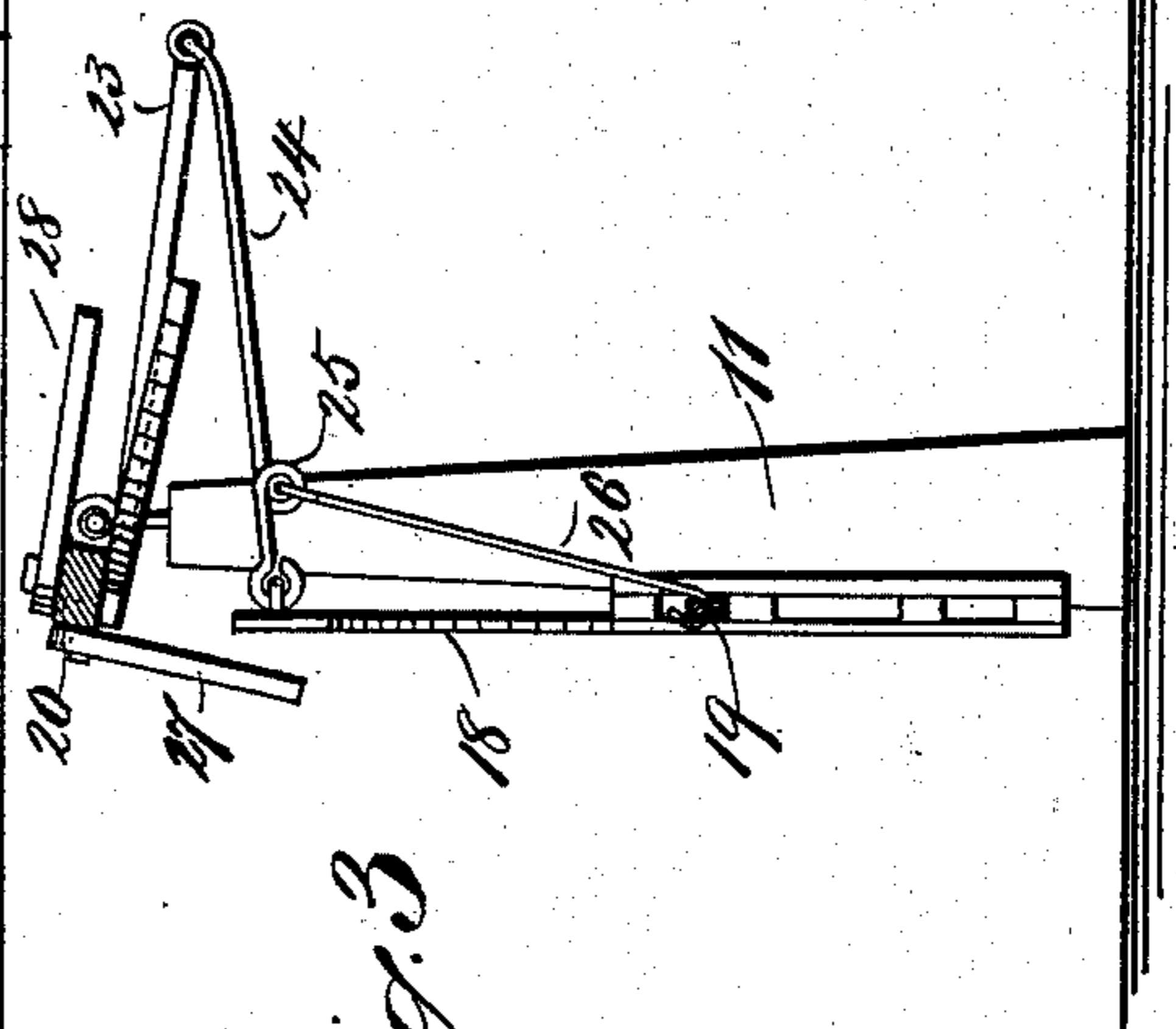


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM C. HOOKER, OF ABINGDON, ILLINOIS.

DEVICE FOR OPENING AND CLOSING SWING-GATES.

SPECIFICATION forming part of Letters Patent No. 409,969, dated August 27, 1889.

Application filed February 8, 1889. Serial No. 299,163. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HOOKER, of Abingdon, in the county of Knox and State of Illinois, have invented a new and useful
5 Device for Opening and Closing Swing-Gates, of which the following is a full, clear, and exact description.

My invention relates to a device for opening and closing swing-gates, and has for its
10 object to provide such a device of simple and durable construction and capable of expeditious attachment to any well-hung gate, and which may also be readily and conveniently manipulated from either side of the gate.

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

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

Figure 1 is a perspective view of the attachment, illustrating the gate to which the
25 said attachment is applied as closed. Fig. 2 is a side elevation illustrating the gate as opened. Fig. 3 is a transverse section on line *x x* of Fig. 2, looking in the direction of the arrow; and Fig. 4 is a detail view of one end
30 of the rock-shaft, illustrating the attachment thereto of the handles or levers.

In carrying out the invention the gate 10, which may be of any desired or approved construction, is swung upon a post 11, located
35 at one side of the roadway, and a post 12, at the opposite side of the roadway, is provided with a recess 13, adapted to receive the latch of the gate. The lower outer wall of the recess is beveled, as shown in Fig. 1, to permit
40 an easy entrance of the latch, and the base-wall of the recess is below the beveled side wall, as best shown in dotted lines in Fig. 2; whereby the latch, when in the recess, is prevented from leaving the same until lifted out.

45 Within the gate-line another post 14 is planted at the side of the road in alignment with the hinge-post 11, which post 14 is provided with a recess 15, similar to the recess in the latch-post, said recess 15 being produced in order to receive and retain the latch
50 of the gate when said gate is open, as illus-

trated in Fig. 2. To the right of the post 14, within the gate-line, another aligning post 16 is planted, and outside of the said gate-line a similar post 17 is stationed. The posts 11, 55 14, 16, and 17 are parallel and of equal height.

The gate 10 is provided with a vertical bar 18, located preferably to the rear of the center and extending above the upper rail, and a horizontal latch 19 is pivoted at or near the
60 center between the two upper bars, which latch is adapted to extend outward at one extremity beyond the front of the gate, the slot through which the said outer end of the latch passes being of sufficient length to permit of
65 vertical play.

Upon the posts 11, 14, 16, and 17 is hinged or pivoted a rock-shaft 20, consisting, preferably, of a bar or beam of suitable length, the connection being effected by securing eyes 21
70 to the side of the shaft contiguous to the gate when the latter is closed, through each of which eyes the horizontal member of an angle-pin 22 is passed, one pin being secured to each of the said posts, as best shown in Fig. 1. 75

Preferably between the posts 11 and 14 an arm 23 is secured to the upper side of the rock-shaft, which arm, extending in the direction of the gate at a right angle to the shaft, may be braced in any suitable or ap-
80 proved manner. The free end of the arm 23 is attached to the vertical gate-bar 18 by a link 24, the said link being pivotally connected with the said bar and arm.

Near the gate-bar 18 an eye 25 is preferably formed in the link, in which eye one end
85 of a rod 26 is secured, the other end of the rod being attached to the inner end of the latch.

Upon the extremities of the rock-shaft 20, 90 at the outer edges, two handles or levers 27 and 28 are attached, one of which levers extends normally upward in direction of the gate and the other lever or handle inward in the same direction. The said levers or han-
95 dles are attached by means of a single bolt 29 only, as best shown in Fig. 4, whereby they are pivoted to the rock-shaft and may be moved in any desired direction to clear any obstruction—such as a high load, for in-
:00 stance.

It will be observed that when the rock-shaft

is manipulated the first direction of the force applied to the gate by the downward movement of the arm 23 is almost directly at a right angle to the gate, and that the said arm 5 in drawing upon the gate to open it or pressing thereon through the link-connection to close it moves straight outward in the direction of the swing of the gate, thereby securing the greatest force at the outset and taking 10 all unnecessary strain from the hinges. It will be further observed that as the rock-shaft is pivoted or hinged centrally on the under side in the manipulation of the shaft to open or close the gate as it falls past the 15 center by gravity it acts as a counterpoise to the arm and link, thus compelling the arm to rise when the gate is opened or closed, and the weight of the counterpoise-shaft when turned in the direction of the gate to 20 open the same binds the said gate against the post 14 and compels the inner end of the latch, through the connecting-rod 26, to rise upward, whereby the outer end of the said latch is securely held in contact with the lower 25 wall of the recess 15. The same result is accomplished when the rock-shaft is thrown away from the gate, the latch in this latter event being securely latched in the recess 13 of the latch-post 12.

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

1. The combination, with a swing-gate, of a rock-shaft supported by posts at the rear of 35 the gate and hinged centrally on the under side to the said posts, an arm fixed to the rock-shaft, and a link-connection between the said

arm and the gate, substantially as described, whereby the rock-shaft as thrown past the center will assist in the movement of the gate, 40 as set forth.

2. The combination, with a swing-gate, of a rock-shaft supported by posts at the rear of the gate and hinged to the tops of the said posts, an arm fixed to the rock-shaft, a link 45 connecting the arm to the gate, and a rod connecting the said link to the inner end of the latch, substantially as herein shown and described.

3. The combination, with a swing-gate provided with a pivoted latch and a rock-shaft 50 supported by posts at the rear of the gate and hinged centrally at the under side to said posts, one of which posts is provided with a latch-recess, of an arm rigidly secured at one 55 end to the rock-shaft, a link connecting the said arm and the gate, and a rod uniting the inner side of the gate-latch and the said link, all combined for operation substantially as shown and described. 60

4. The combination, with a swing-gate, of a rock-shaft having a fixed arm, a link-connection between the said arm and the gate, and two handles or levers pivoted to each end of the said rock-shaft at right angles to each 65 other, substantially as shown and described, whereby the said handles may be moved in any desired direction in order to clear an obstruction, as set forth.

WILLIAM C. HOOKER.

Witnesses:

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O. S. ELLSWORTH.