No. 710,976. Patented Oct. 14, 1902.

W. J. HOLLAND.

SWINGING GATE.

(Application filed Mar. 29, 1902.)

(No Model.) 2 Sheets—Sheet 1.

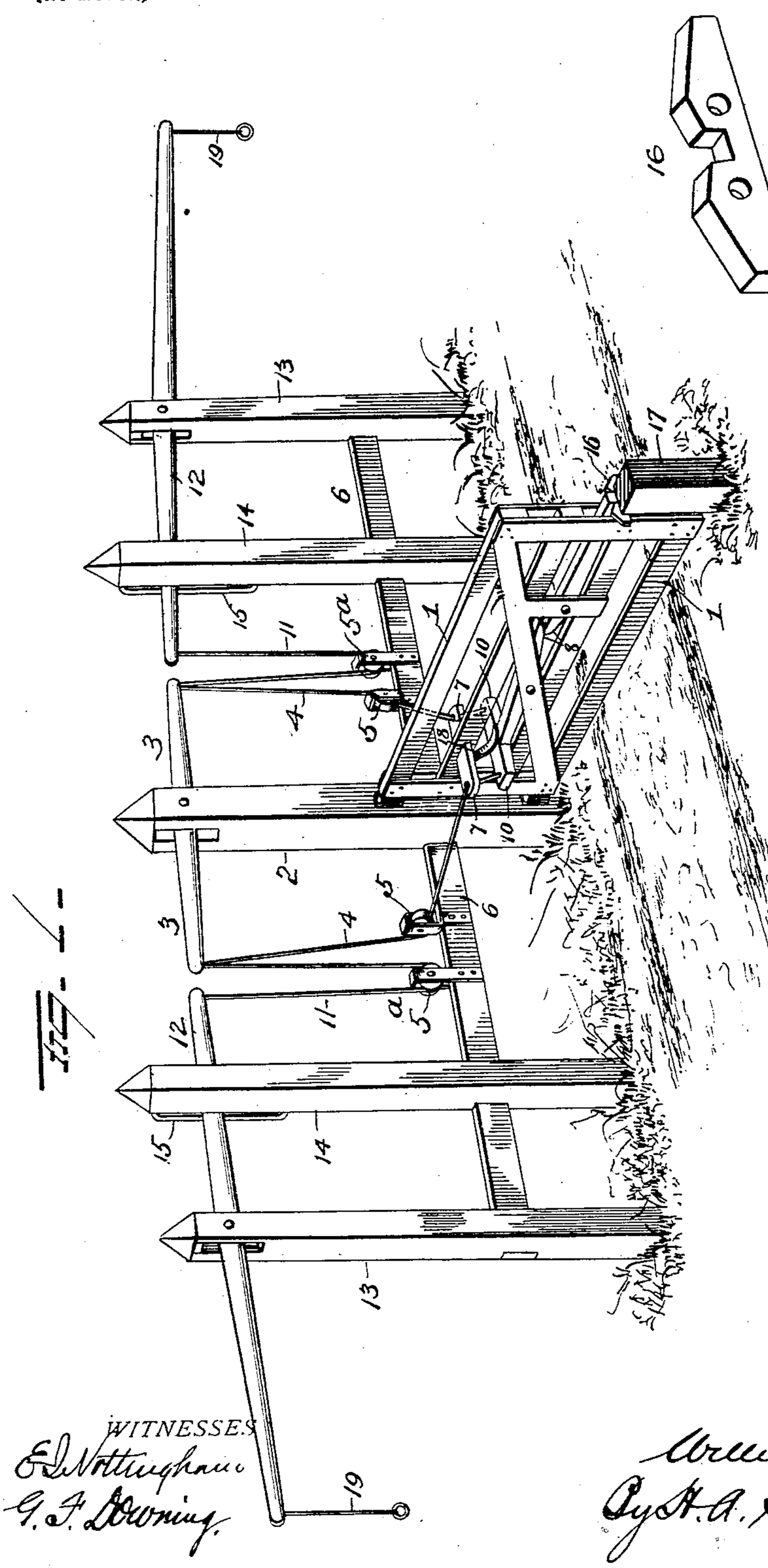

Fig. 1.

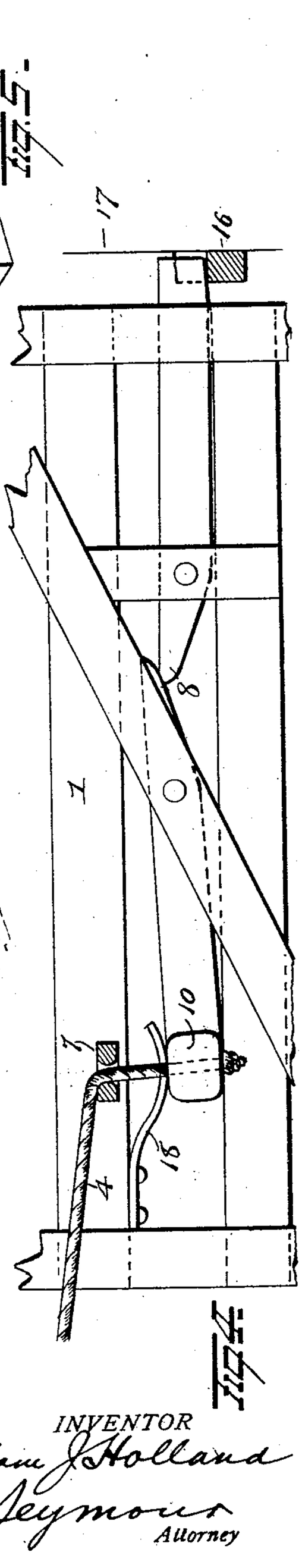

Fig. 2.

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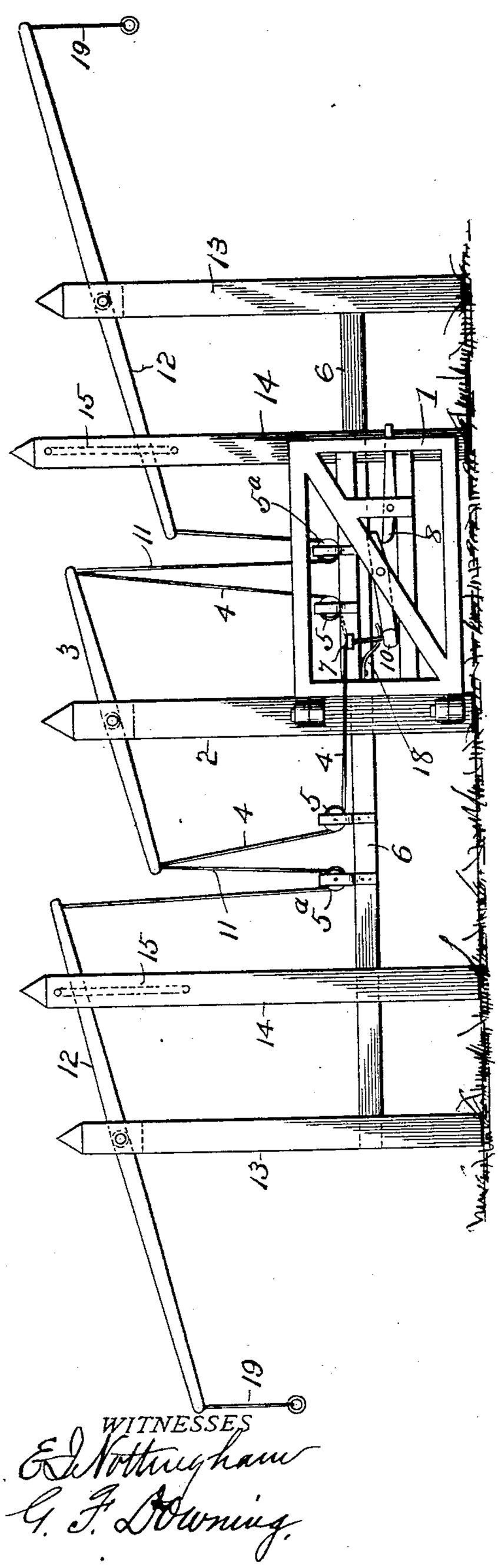

FIG. 2.

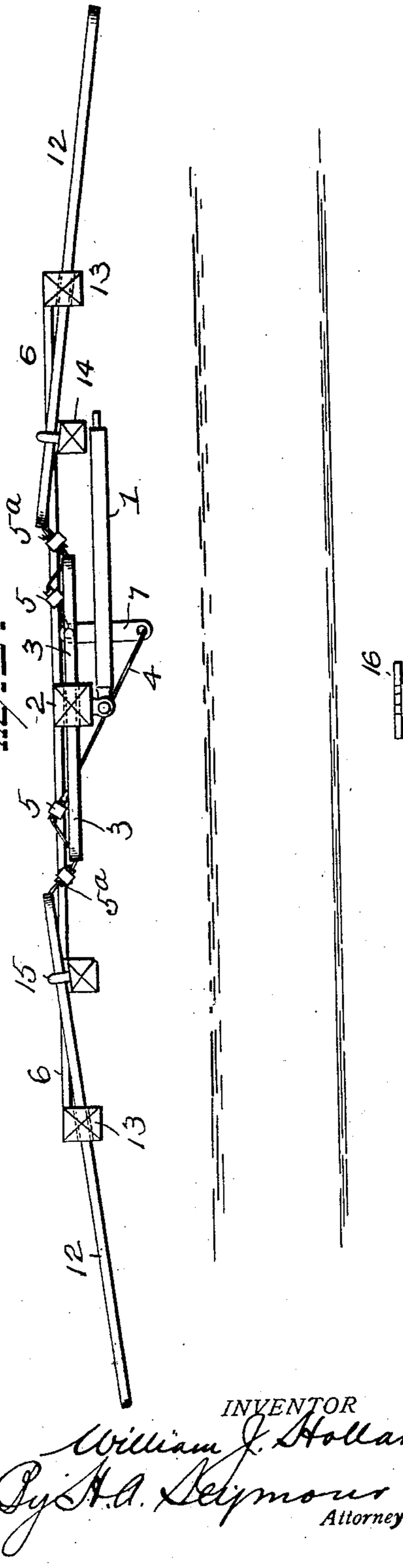

FIG. 3.

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WILLIAM J. HOLLAND, OF ERA, TEXAS.

SWINGING GATE.

SPECIFICATION forming part of Letters Patent No. 710,976, dated October 14, 1902.

Application filed March 29, 1902. Serial No. 100,584. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. HOLLAND, of Era, in the county of Cooke and State of Texas, have invented certain new and useful Improvements in Swinging Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in swinging gates, the object of the invention being to produce a swinging gate which shall be simple in construction, cheap to manufacture, durable in use, and which shall be effectual in all respects in the performance of its functions.

With these ends in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improved swinging gate. Fig. 2 is a view in elevation of same, the gate being shown in its open position. Fig. 3 is a plan view. Fig. 4 is a detail view, and Fig. 5 is an enlarged view of the latch-keeper.

1 represents a gate hinged to the post 2, and 3 is a walking-beam pivoted centrally in the bifurcated end of said post in a plane above the top of the gate and projecting an equal distance on each side of the post. The ends of this walking-beam 3 are each connected to the gate by ropes, cords, or other flexible means 4 4 and also with the gravity-latch, so that when the walking-beam is tilted the latch is first disconnected from its keeper and the gate then swung to an open position. These ropes, cords, or other flexible means 4 4 pass downwardly from each end of walking-beam 3 and through the pulley-blocks 5 5, carried by the horizontal beam 6, thence through holes 22, formed in and adjacent to the ends of cross-bar 7, or, if desired, over pulleys mounted in said holes, and finally are secured to the cross or transverse member 10 of gravity-latch 8, which latter section of the latch is located directly beneath cross-bar 7. By thus connecting the ends of walking-beam 3 with gate 1 and latch 8 it will be apparent that as soon as pressure is applied to one end of said walking-beam the opposite end thereof will begin to ascend, and as soon as the weighted or transverse section 10 of the gravity-latch has been lifted sufficiently to unlatch the gate from its keeper the former will begin to swing to an open position. The ends of walking-beam 3 are also connected by ropes, cords, or other flexible means 11 11 with the inner or adjacent ends of actuating-levers 12 12. The actuating-levers are pivotally mounted in the bifurcated upper end of the posts 13 13, disposed on either side of post 2.

Between posts 2 and 13 and on each side of the gate is located an intermediate post 14, which serves as a stop for the gate and limits its outward movement. These posts 14 project above posts 2 and 13 and are each provided on their rear faces with a U-shaped loop 15, within which the short arm of the adjacent actuating-lever 12 is confined, and while it is apparent that the latter is free to move in a vertical direction it will be seen that any tendency on the part of said lever to wabble, due to lateral pressure at its opposite end, is absolutely prevented.

The gravity-latch 8 is made in two sections. The one having the transverse or weighted end 10 is pivotally connected to the frame of the gate at a point near its forward end, the bottom face adjacent to said last-mentioned end being slightly beveled or inclined, so as to permit it to freely engage the adjacent upper end of the other section of said latch. This latter section is also pivotally connected near its inner end to the frame of the gate and is cut away at said end, so as to permit of its being depressed when pressure is exerted thereon by the projecting end of the other member of the latch. The outer end of this forward section of the latch projects beyond the gate sufficiently to engage the keeper 16, carried by the post 17. While the predominance of weight in rear of the fulcrum of the rear member of the latch will ordinarily cause the rear end of said member to drop when released and permit the forward member of the latch to engage the keeper, still if the parts of the latch are made of light material it may be found of advantage to employ a spring 18 to insure the full descent of the rear of the rear member and the sure and accurate

engagement of the forward member of the latch with the keeper.

To open the gate, it is simply necessary to pull down on either of the actuating-levers or handles or pulls attached thereto, and as soon as the inner end of the lever being operated upon begins to rise the end of walking-beam 3, to which it is connected, will begin to decend, while its opposite end will begin its ascent, and as soon as the tension on the cord on the far side of the gate is sufficient to lift the weighted end of gravity-latch 8 or overcome the action of spring 18 exerting pressure thereon, as the case might be, the free end of said latch will have been elevated out of its keeper and the gate will then be free to swing to its open position, which is accomplished by simply continuing the pull upon the actuating-lever or the handles suspended therefrom. The gate is closed by exerting pressure downwardly on the opposite actuating-lever.

By providing the gate with a cross-bar projecting from both sides thereof, as shown, and engaged near its ends by the actuating-ropes 4 4 it will be seen that when the gate is in its open position the point of application of the power to the gate is removed to a plane outside thereof, thus increasing the leverage and causing the gate to act with less power than would be the case were the ropes connected directly with the gate proper.

Each of the actuating-levers is provided with a depending handle or grip 19, so as to bring the actuating-levers within easy reach of persons traveling on foot.

It is evident that changes in the construction and relative arrangement of the several parts might be made without avoiding my invention, and hence I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described; but,

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

1. The combination with a gate carrying a gravity-latch, of a walking-beam adjacent to the hinged end of the gate, flexible devices connecting the ends of the walking-beam to the latch and opposite sides of the gate, two actuating-levers and flexible devices connecting the inner end of each lever with the adjacent end of the walking-beam, substantially as set forth.

2. The combination with a gate carrying a gravity-latch, of a walking-beam adjacent to the hinged end of the gate, pulleys disposed between the walking-beam and gate, flexible devices passing through said pulleys and connecting the ends of the walking-beam to the latch and opposite sides of the gate, two actuating-levers and flexible devices connecting the inner ends of each lever with the adjacent end of the walking-beam, said flexible devices passing through pulleys disposed below the said actuating-levers and walking-beam, substantially as set forth.

3. The combination with two posts spaced apart, a gate-post located between the first-mentioned posts and a horizontal rail extending from one end to the other of the series of posts and secured to each of them, of a gate hinged to the gate-post, a latch carried by the gate, a keeper for the reception of said latch to hold the gate closed, levers pivotally attached to the two first-mentioned posts, pulleys on the horizontal rail at respective sides of the gate-post and flexible devices attached at one end to said levers, passing about said pulleys and attached at their other ends to the latch and guides for said flexible devices projecting laterally from the gate over the attachment of said flexible devices to the latch.

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

WILLIAM J. HOLLAND.

Witnesses:
G. F. DOWNING,
R. S. FERGUSON.