

L. A. GIBSON.

GATE.

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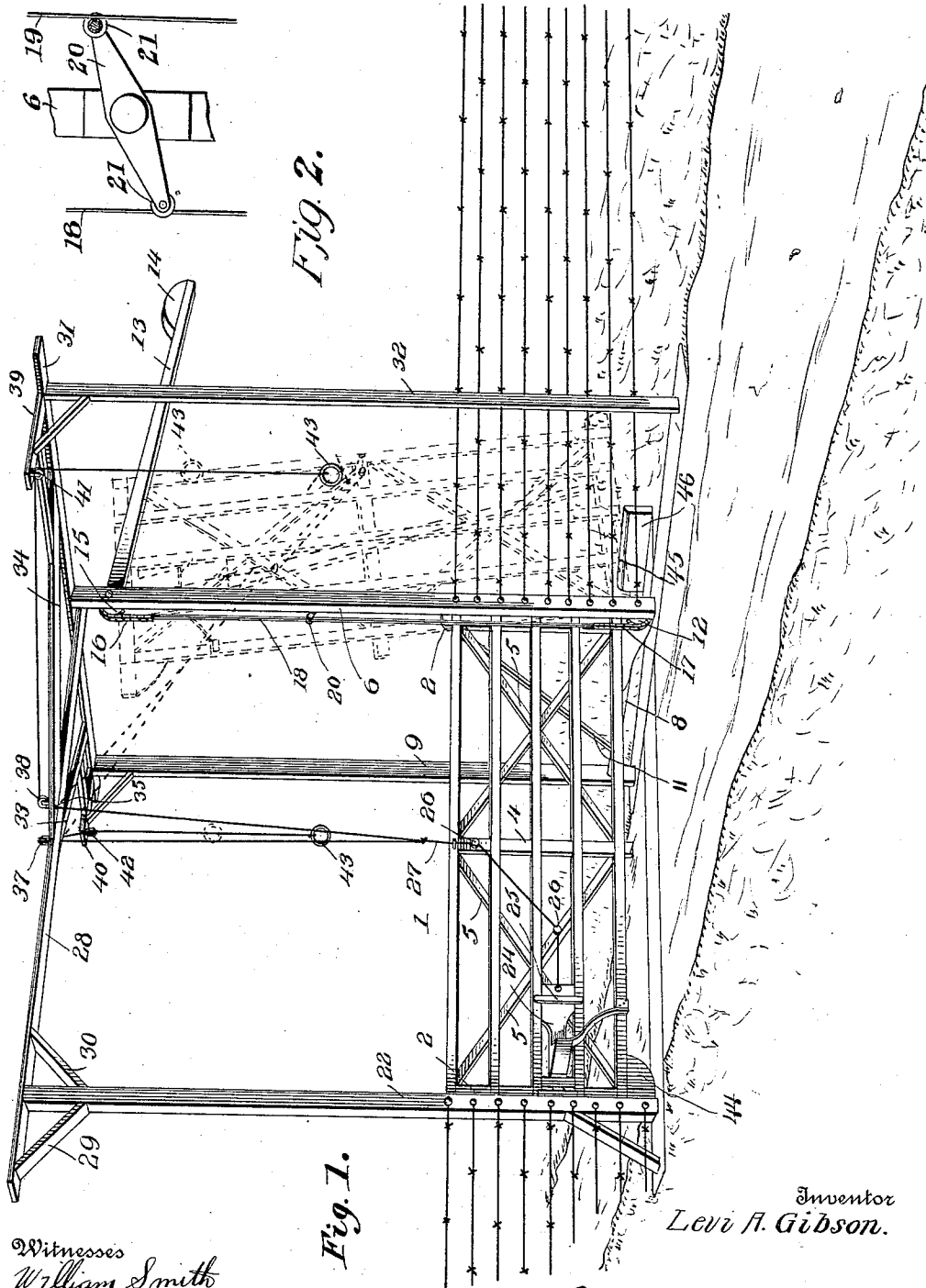


Fig. 2.

Fig. 1.

Witnesses

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To all whom it may concern:

Be it known that I, LEVI A. GIBSON, a citizen of the United States, residing at Prineville, in the county of Crook and State of Oregon, have invented new and useful Improvements in Gates, of which the following is a specification.

This invention relates to improvements in farm gates of the vertically swinging type adapted to be opened and closed from either side of the gateway by a person in a vehicle, the object being to provide a gate of this character which will be practically automatic in operation, simple in construction and having no parts liable to get out of order, broken or interfered with by ice and snow.

With the above objects in view and others which will appear as the description progresses, the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the improved gate, the dotted lines representing the gate in its raised position. Fig. 2 is a detail view of the band tightener.

In the accompanying drawings, the numeral 1 designates the gate. The gate proper may be constructed in any desired manner, but in the present instance the same comprises vertical end posts 2 and longitudinally extending bars 3. The gate is also provided with a central post 4 and between the central and end posts are reinforcing cross braces 5.

The numeral 6 designates the supporting post for the gate. This post 6 has its lower extremity provided with a suitable opening, the same adapted to serve as a bearing for one end of the axle 8 of the gate 1. The axle 8 is adapted to extend transversely of the gate, and one of the extending portions is formed with a reduced extension which engages within the opening or bearing provided by the post 6. The opposite end of the axle is also reduced and is adapted to engage within a suitable opening or bearing provided upon one of the side posts designated by the numeral 9.

The main body of the axle 8 may be constructed of wood or any other desired material and connecting the central post and the inner end post 2 of the gate are the brace members 10 and 11 which have their opposite ends connected with the axle 8. The

portion of the axle 8 adjacent the post 6 is provided with a sprocket wheel 12 and the upper extremity of the said post has pivotally connected thereto a rearwardly extending counter-balancing arm 13, the extremity of which being provided with a suitable weight 14, and this weight is equal to the weight of the gate forward of its pivotal connection. The inner end of the arm or that pivotally connected with the post 6 is provided with a sprocket wheel 15 which is arranged directly above the sprocket 12. Both of the sprockets 12 and 15 are adapted to receive short sprocket chains 16 and 17 and the said chains are connected through the medium of metallic bands 18 and 19.

The numeral 20 designates the band tightener. This member 20 is adjustably connected with the post 6 and is arranged at an angle thereto. The central portion of the tightener is formed with an adjusting screw upon which the said tightener may be swung to bring its opposite ends into contact with the bands 18 and 19, and thus adjust the tension between the bands in their relation to the sprockets. The opposite ends of the rectangular tightener 20 is provided with antifrictional rollers 21, and these rollers are adapted to contact with the bands.

A gate post designed by the numeral 22 is provided with a latch opening 23 and this opening is adapted to receive the normally projecting non-frictional end of a spring-pressed latch 24 carried by the gate.

The latch is slidably mounted between two of the bars 4 of the gate and the said gate is provided with a stop member 25 for limiting the rearward movement of the latch. The gate 1 is provided with a plurality of spaced pulleys 26, and these pulleys are adapted to receive a suitable flexible element, such as a cord or cable 27 which is attached to the latch for operating the same. The gate post 22 and the gate supporting post 6 are connected through the medium of a suitable beam 28, the same being sustained upon the post 22 through the medium of oppositely arranged angular brace members 29 and 30 and the opposite end of the said beam is connected with the post 6 through the medium of a longitudinally extending beam 31. This beam has one of its extremities connected with the side post 9 that is provided with the bear-

ing for the axle 8 of the gate and the opposite extremity of the beam 31 is connected with a second post 32, the latter being arranged a suitable distance away from the gate and the gate supporting post 6.

The numerals 33 and 34 designate suitable arms which are connected with the beams 31 and 28, and these arms are each formed with openings 35 and 36 which are arranged adjacent suitable posts 37 and 38.

The cable 27 is, above the uppermost pulley or staple 26, divided and both of the strands of the divided cable are passed through the openings in the members 37 and 38 and then over the pulleys provided thereon. The side posts are each provided with suitable brackets 39 and 40, the same being reinforced through the medium of suitable angular supports and the outer extremities of each of these brackets are provided with suitable pulleys 41 and 42 over which the opposite ends of the divided cable are adapted to pass. Each of the cables passing over the said pulleys have their free ends provided with weighted rings 43 and these rings are of a sufficient weight to retain the cables taut without danger of the said cables operating the latch of the said gate. The lower and outer extremity of the gate 1 is formed with a suitable weight 44, and this weight is adapted to keep the gate perfectly balanced as it nears its perpendicular in its ascent and to act in conjunction with the weight of the arm 13 so that the gate will be sure in its descent, and at the same time will not forcibly contact the ground when the same is lowered as the latch will engage the latch opening before the end of the gate contacts it. The pivoted end of the gate is provided with a contact member 45, the latter being constructed of any suitable material and adapted to act as a buffer when the gate is in the raised position illus-

trated in Fig. 1 of the drawings. The buffer is adapted to contact the inclined upper face of a transversely arranged member 46. This member is so arranged that the gate when open does not quite assume the perpendicular and whereby pressure upon either of the cables will readily swing the gate to its closed position with but a minimum amount of exertion on the part of the operator.

The simplicity of the device as well as the advantages thereof will be perfectly apparent to those skilled in the art to which the invention appertains and while I have illustrated and described the preferred embodiment of the improvement as it now appears to me, changes in the minor details of construction may be made if desired.

Having thus fully described the invention, what I claim as new, is:—

1. A tilting gate, a shaft pivotally supporting said gate, a gear wheel secured to said shaft, a second shaft disposed above the first shaft, a counter-balancing arm secured to the second shaft, a gear wheel secured to the second shaft and a chain connecting the first and second gear wheels together.

2. A tilting gate, a shaft supporting the gate, a support, a shaft journaled in the support, a gear wheel on the first shaft, a gear wheel on the second shaft, a chain section passing over the first gear wheel, a chain section passing over the second gear wheel, a pair of bands connecting the chain sections together, and means for moving the bands relatively to tighten the chain sections around said gear wheels.

In testimony whereof I affix my signature in presence of two witnesses.

LEVI A. GIBSON. [L. s.]

Witnesses:

A. R. BOWMAN,
M. E. BRINK.