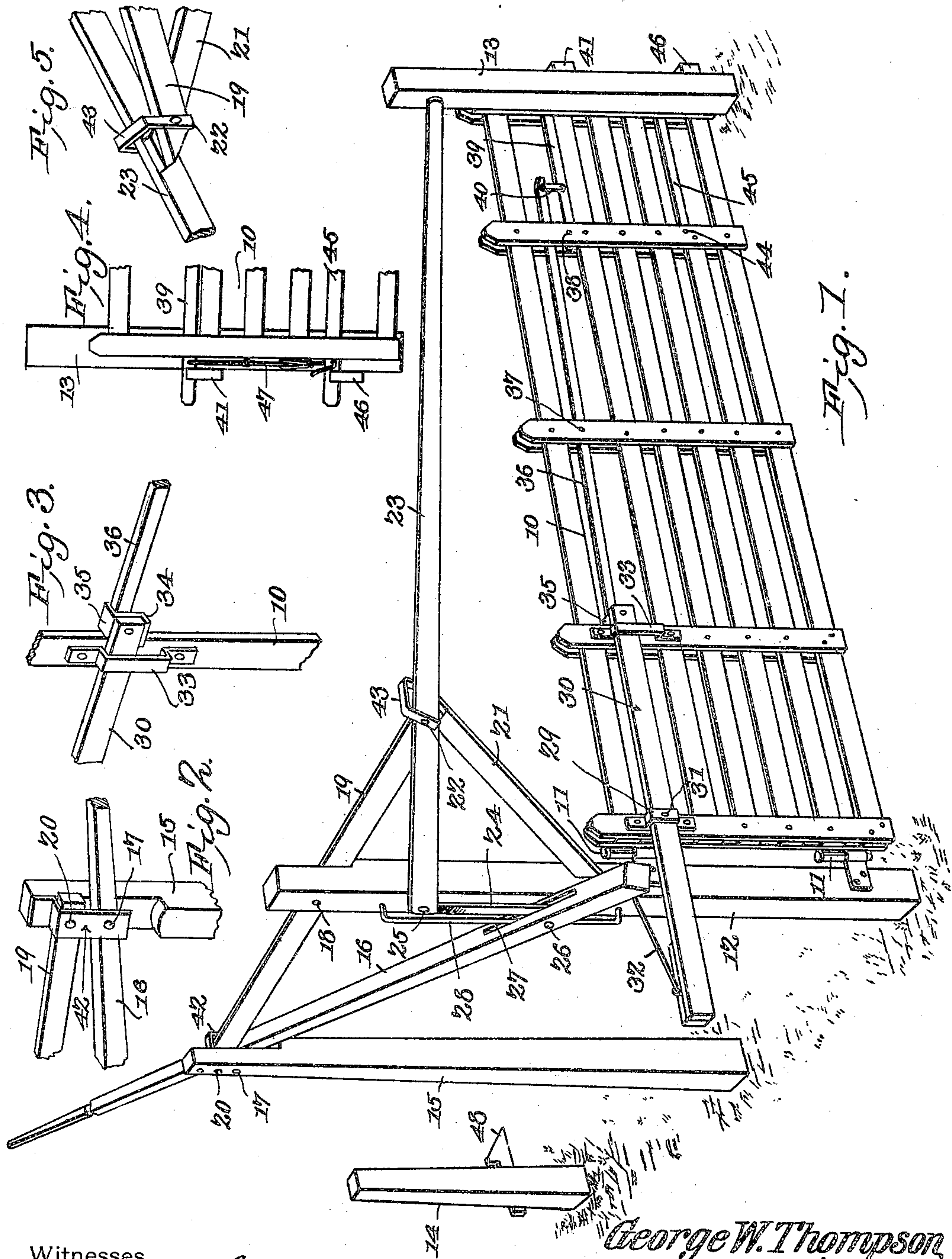


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G. W. THOMPSON.
GATE.

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UNITED STATES PATENT OFFICE.

GEORGE W. THOMPSON, OF CANTON, ILLINOIS.

GATE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE W. THOMPSON, a citizen of the United States, residing at Canton, in the county of Fulton and State of Illinois, have invented a new and useful Gate, of which the following is a specification.

This invention relates to gates, more particularly to the class of gates arranged to be opened and closed by a rider from horseback or from the seat of a vehicle, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention within the scope of the appended claims.

Figure 1 is a perspective of the improved gate and its operating mechanism. Fig. 2 is a perspective detail of the coupling between the weighted operating-lever and the supporting post and brace. Fig. 3 is a perspective detail of the coupling between the main and intermediate latch-lever. Fig. 4 is a detail of the latch-post and the latch end of the gate. Fig. 5 is a perspective of the coupling between the braces and secondary operating-lever.

The improved devices may be applied to gates of various sizes, and for the purpose of illustration a conventional gate structure is shown as a whole at 10 and hinged at 11 to a post 12 in the ordinary manner and arranged to swing at its free end against a latch-post 13 when closed and against a stop-post 14 when open.

Spaced from the hinge-post 12 is another post 15, to the upper end of which a relatively long lever 16 is pivoted at 17, this lever for the purposes of this description being referred to as the primary operating-lever and is extended past the post 12 and enlarged to increase its weight, as hereinafter explained. The hinge-post 12 is extended upwardly, and

secured transversely of the hinge-post, as by a bolt 18, is a brace member 19, substantially horizontal and with one end bolted or otherwise secured at 20 to the post 15 above the lever 16 and the other end of the brace extended beyond the opposite side of the post 12 and supported therefrom by a diagonal brace 21 and a bolt 22. Pivoted to the bolt 22 is a lever 23, which for the purpose of this description is referred to as the "secondary" operating-lever, with one end extended toward the hinge-post 12 and the other end extended for a relatively long distance and in the opposite direction from the primary lever 16. The shorter end of the lever 23 is coupled to the weighted end of the lever 16 by a link 24, pivoted at 25 26, respectively, to the levers, the lower end of the link fitting in an elongated slot 27 in the lever 16, and the post 12 is provided with a longitudinal guide-rod 28, secured at the ends to the post and extending through the slot 27 and serving as a guide to maintain the levers in position relative to the post and cause them to move in a vertical plane when operated.

Attached to the post 15 is a guard strap or bracket 42, extended downwardly over the adjacent ends of the brace 19 and the lever 16 and serving the twofold purpose of a strap to assist in holding the brace to the post and of a support to the outer end of the pivot-bolt 17 of the lever.

Bearing over the brace members 19 and 21 and the lever 23, where the bolt 22 couples them together, is a U-shaped tie-strap 43, which materially increases the strength of the joint between the parts.

Attached to the gate 10 at the hinge end is a keeper 29, through which a lever-arm 30 extends and is pivoted therein and to the gate at 31. The lever-arm extends at one end beyond the post 12 for a considerable distance and is coupled to the inner end of the weighted lever 16 by a rod 32, while the other end of the lever-arm extends inwardly over the gate and beneath a guide-keeper 33. Attached to the inner end of the lever-arm 30 is a clip 34, bolted or otherwise attached thereto and with one end extending laterally, as at 35, and bearing over one end of another or intermediate lever 36, pivoted at 37 to the gate structure. Pivoted at 38 to the gate is a latch-bar 39, coupled at one end to the adjacent end of the lever member 36 by a link 40 and with the other end extended for engaging a keeper or socket 41 on the post 13

when the gate is closed, as shown in Fig. 4. The link 40 is located between the pivot 38 and the free end of the latch-bar and relatively near the pivot end of the latch-bar, so that the weight of the latter is utilized to maintain it normally in its lower or operative position and likewise maintain the intermediate lever member 36 with its inner end normally in engagement with the clip end 35, while the weighted end of the lever 16 maintains the outer end of the lever-arm 30 in depressed position and the inner or clip end in elevated position. Pivoted at 44 to the gate 10 is a secondary latch-bar 45, extending at the free end for engagement with a keeper or socket 46 on the post 13, similar to and spaced from the socket member 41. The latch-bars 39 and 45 are alike and coupled at their free ends by a link 47, so that they operate simultaneously. By this means the gate is supported at two points and all danger of displacement by pressure imparted to the lower or upper part obviated.

With a structure thus arranged the operation is as follows: A person approaching the gate from either side draws downward upon the free end of the lever 16 or 23, as the case may be, elevating the weighted end of the lever 16, and correspondingly elevating the extended end of the lever-arm 30 and depressing the inner end and causing the arm 35 of the clip to depress one end of the lever 36 and elevate the other end, and simultaneously release the latch-levers 39 45 from the sockets 41 46. In the meantime the depression of the inner end of the lever-arm 30 has been stopped by the lower end of the keeper 33, so that the continued movement of the levers 16 23 will swing the gate upon its hinges 11, the momentum acquired by the gate in swinging open being sufficient to carry the latch-bar 46 into engagement with a keeper or socket 48 on the post 14 to hold the gate in open position. As the operator passes the end of the farther lever 16 or 23, as the case may be, a pull thereon will reverse the action and cause the gate to be closed, as will be obvious.

The construction is simple, strong, and durable, inexpensive to manufacture, and operates efficiently for the purposes described.

Having thus described the invention, what is claimed is—

1. The combination with a post, of a gate hinged to swing therefrom, a lever-arm pivoted to said gate and extending rearwardly of the hinge end of the same, a latch mechanism connected for operation to the inner end of said lever-arm, an operating-lever pivoted to swing vertically adjacent to said post and provided with a longitudinal slot, a rod connecting the inner end of said operating-lever with the protruding end of said lever-arm, and a guide member connected to said post and extending through said longitudinal slot.

2. The combination with a post, of a gate

hinged to swing therefrom, a lever-arm pivoted to said gate and extending rearwardly of the hinge end of the same, a latch mechanism connected for operation to the inner end of said lever-arm, a primary lever swinging vertically and extended in one direction from said post and provided with a longitudinal slot, a secondary lever swinging vertically and extending in the opposite direction from said primary lever, a link pivoted at one end in said slot and pivoted at the other end to said secondary lever, a rod connecting said primary lever and said lever-arm, and a guide member connected to said post and extending through said slot.

3. The combination of a post having a gate hinged to swing therefrom, a post spaced from said hinge-post, a brace member extending transversely of said hinge-post and secured at one end to said spaced post, an operating-lever pivoted to said spaced post adjacent to said transverse brace member and provided with a longitudinal slot, a keeper connected to said spaced post and extending over said transverse brace member and engaging the pivot of said lever, a lever-arm pivoted to said gate and extending beyond the hinge end of the same, a latch mechanism connected for operation to said lever-arm, a rod connecting the inner end of said operating-lever with the protruding end of said lever-arm, and a guide member connected to said hinge-post and extending through said slot.

4. The combination of a post having a gate hinged to swing therefrom, a post spaced from said hinge-post, a brace member extending transversely of said hinge-post and secured at one end to said spaced post, a diagonal brace connected at one end by a bolt to the other end of said transverse brace and with its other end connected to the hinge-post, a primary operating-lever pivoted to said spaced post adjacent to said transverse brace member and provided with a longitudinal slot, a keeper connected to said spaced post and extending over said transverse brace member and engaging the pivot of said primary lever, a secondary operating-lever pivoted to the bolt which unites said transverse and diagonal braces, a clip-bearing over said braces and secondary lever and coupled thereto by said uniting-bolt, a link connecting the adjacent ends of said operating-levers, a lever-arm pivoted to said gate and extending beyond the hinge end of the same, a latch mechanism operative by the action of said lever-arm, a rod connecting the inner end of said primary operating-lever with the protruding end of said lever-arm, and a guide member connected to said hinge-post and extending through said slot.

5. The combination with a post of a gate hinged to swing therefrom, an operating-lever pivoted to swing vertically adjacent to

said post, a lever-arm pivoted to said gate and with one end extending rearwardly of the same and with the other end provided with a laterally-extending clip, a rod connecting the adjacent ends of said operating-lever and lever-arm, a latch-lever pivoted to said gate and with one end protruding for engagement with a socket on the latch-post, and an intermediate lever pivoted to the gate with one end extending beneath said later-

ally-extending clip of the lever-arm and a link coupling the other end of the intermediate lever to the latch-lever.

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

GEORGE W. THOMPSON.

Witnesses:

BOLLIVER NEWTON,
DANIEL GALVIN.