

J. SHUBER.

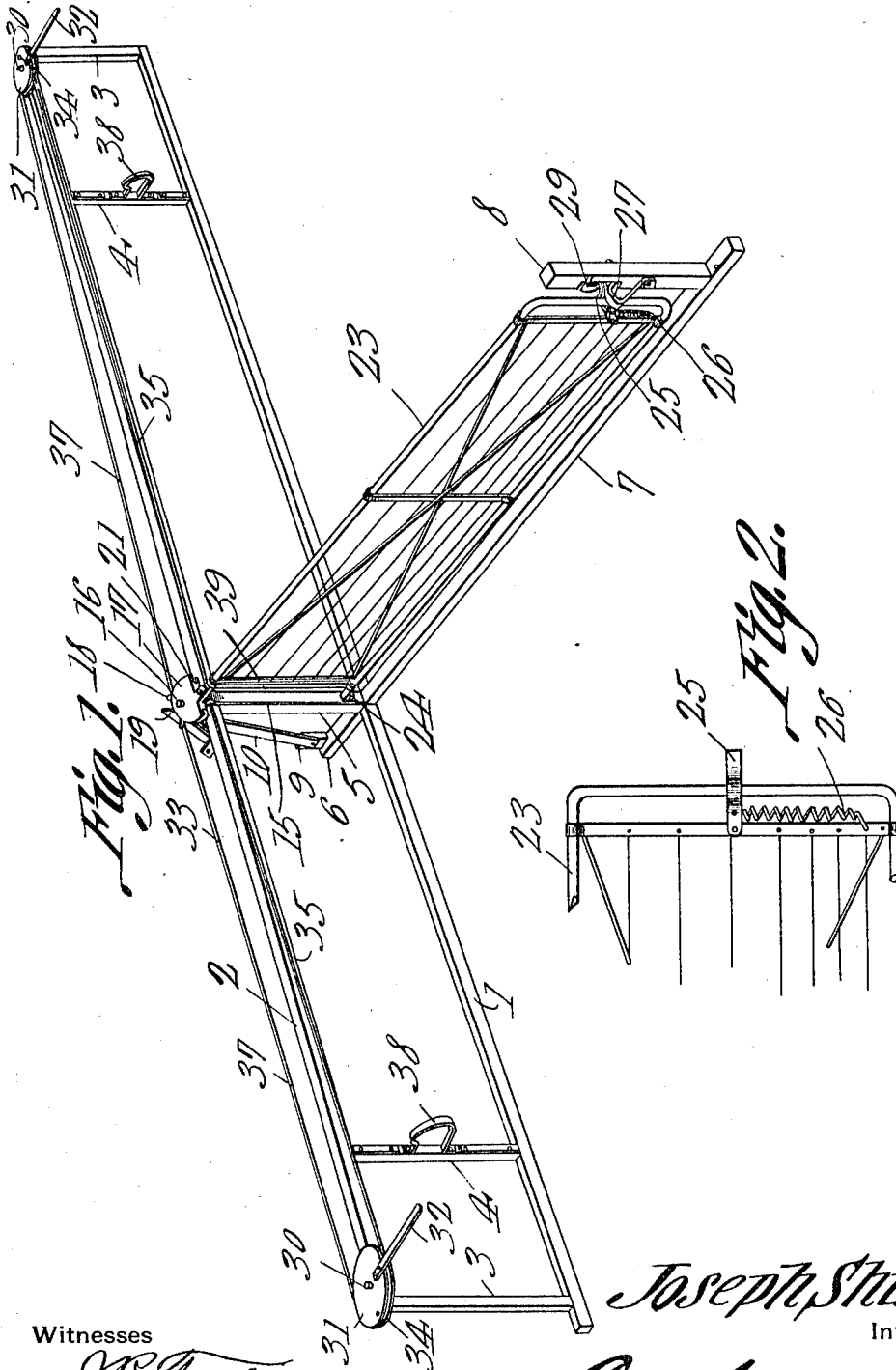
GATE.

APPLICATION FILED APR. 18, 1911.

1,001,464.

Patented Aug. 22, 1911.

2 SHEETS—SHEET 1.



Witnesses

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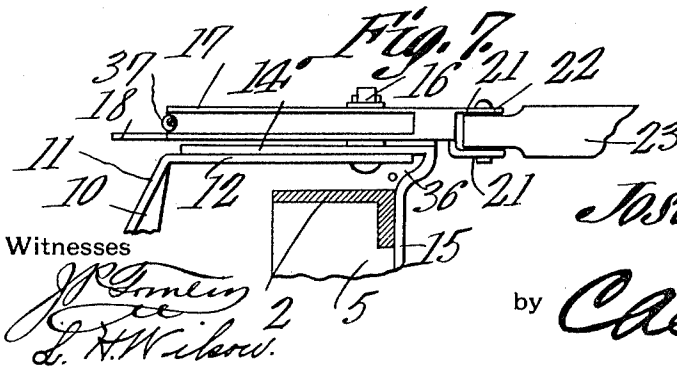
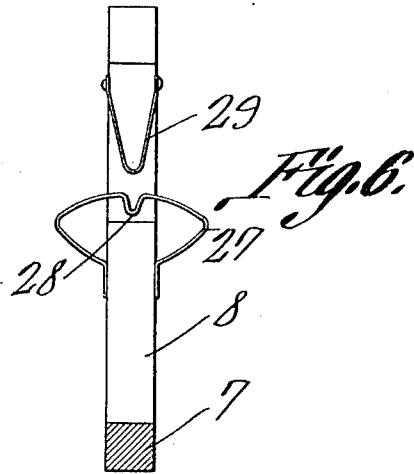
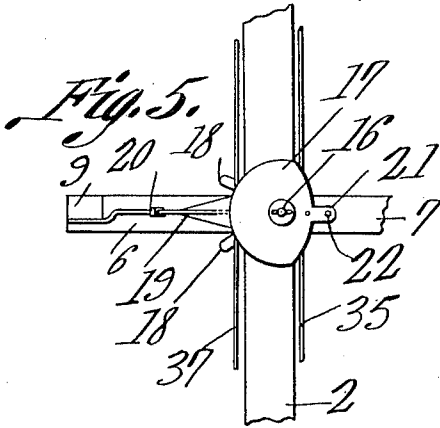
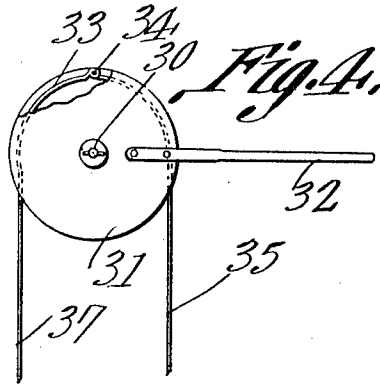
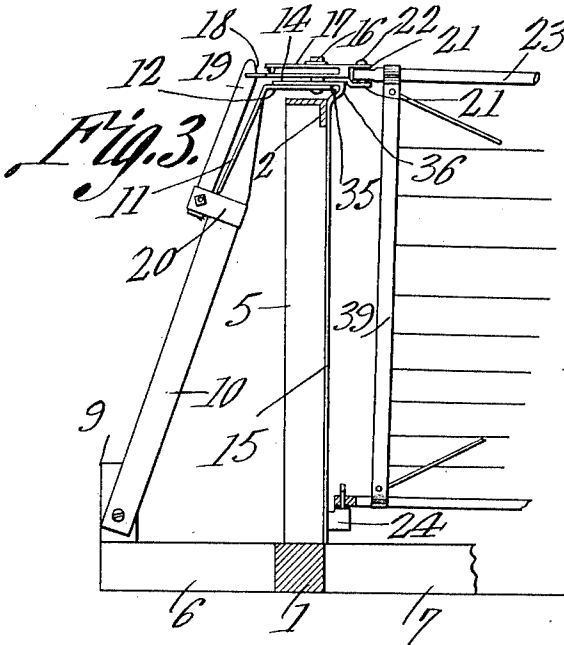
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2 SHEETS-SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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GATE.

1,001,464.

Specification of Letters Patent. Patented Aug. 22, 1911.

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To all whom it may concern:

Be it known that I, JOSEPH SHUBER, a citizen of the United States, residing at Manitowoc, in the county of Manitowoc and State of Wisconsin, have invented a new and useful Gate, of which the following is a specification.

It is the object of the present invention to provide a hand operated gate, which may be swung, at a distance from the gate, without dismounting from a vehicle.

A further object of the invention is to provide novel means for operating the gate, to swing the same into open and into closed position, and to provide novel means for holding the gate, both in open position and in closed position.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings,—Figure 1 shows the invention in perspective; Fig. 2 is a side elevation of the free end of the gate; Fig. 3 is a side elevation of the pivotally mounted end of the gate, together with the mechanism whereby the gate is supported and operated; Fig. 4 is a top plan of one of the sheaves, which are located at the ends of the supporting frame, to afford a means for swinging the gate; Fig. 5 is a top plan of the centrally disposed mechanism whereby the gate is swung and tilted; Fig. 6 is an elevation of the post with which the free end of the gate engages, the striking mechanism which is carried by said post, being shown in detail; and Fig. 7 is a detail enlarged from Fig. 3.

In carrying out the invention there is provided a suitable supporting structure, the same preferably comprising a base bar 1, and a top bar 2, the latter preferably being an angle member, as clearly appearing in Figs. 3 and 7. The top bar 2 is upheld above the base bar 1, by means of end posts 3, and by means of intermediate posts 4, located relatively near to the end posts 3, and by means of a main post 5, preferably located midway between the ends of the bars 1 and 2.

Projecting rearwardly from the base bar 1, opposite the main post 5, is a short sill 6, which, if desired, may be forwardly prolonged, across the roadway, as shown at 7, to form a support for a gate post 8; although obviously, the gate post 8 may be supported in any other manner, the prolongation of the sill 6, shown at 7, being a matter which may or may not be resorted to. Upstanding from the rear end of the sill 6, is a stub post 9. Fixed to and rising from the stub post 9, is an inclined brace 10, preferably fashioned from metal, and equipped, adjacent its upper end, with a laterally extended flange 11, angularly bent, to overhang the upper end of the main post 5. The extension 12 of the flange 11, which thus overhangs the top of the main post 5, is overlapped by a rearwardly prolonged extension 14, forming part of a plate 15, the plate 15 being secured to the forward face of the main post 5.

Mounted in the extensions 12 and 14, is a shaft 16, upon which is journaled for rotation, a horizontally disposed, segmental sheave 17. From the lower flange of the sheave 17, angularly disposed fingers 18 outstand. These fingers 18 are adapted to engage successively, with a spring tongue 19, secured, by means of a bracket 20, to the brace 10. The sheave 17 is provided with vertically alined ears 21, in its forward portion, and between these ears 21 is pivoted, as shown at 22, the upper rear corner of the gate 23. The lower rear corner of the gate 23 is pivotally mounted upon a gudgeon 24 carried by the main post 5, adjacent its lower end. At its outer, free end, the gate 23 is supplied with a pivotally mounted latch 25, the free, outstanding end of the latch 25 being normally maintained depressed, by means of a retractile spring 26, one end of which is secured to the latch 25, the other end of the spring being secured to the gate. As seen most clearly in Fig. 6, the gate post 8 carries a striking member 27, provided with a notch 28, adapted to receive the free end of the latch 25. Located above the striking member 27, and carried by the gate post 8, is a deflector 29, adapted to receive the free end of the latch 25, and to direct the same into proper engagement with the notch 28 in the striking member 27.

Upstanding from the top bar 2, adjacent the ends thereof, are pins 30, upon which

are journaled for rotation, sheaves 31, each sheave 31 being equipped with an outstanding operating lever 32. About the sheaves 31, a belt 33 is trained, the belt ordinarily being a chain or a wire. The belt 33 is secured to the sheaves 31, by means of pins 34, mounted in the sheaves, the belt being passed about these pins. The forward run 35 of the belt 33 passes freely through an off set 36, formed in the plate 15, adjacent the upper end of the plate. The rear run 37 of the belt 33 is wound about the sheave 17, and extends in opposite directions therefrom, toward the sheaves 31. Mounted upon the intermediate posts 4, are striking members 38, adapted to be received by the free end of the latch 25, when the gate 23 is swung into open position.

Presupposing that the gate 23 is in the closed position shown in Fig. 1, the operation to open the gate is as follows: If one of the operating levers 32 be manipulated, rotation will be imparted to the corresponding sheave 31, and the rear run 37 of the belt 33 will impart rotation to the sheave 17. It is to be noted that the rear bar 39 of the gate 23 stands at an inclination to the vertical, when the gate is in closed position. The first result of imparting a rotation to the sheave 17, will be to move the rear bar 39 of the gate, at its upper end, toward the upper end of the post 5, thus elevating the outer end of the gate, and lifting the latch 25 out of the notch 28 in the striking member 27. The gate will thus be set free for rotation. Continued movement of the operating lever 32, will incline the pivotal axis of the gate and tend to cause the gate to swing open until the latch 25 ultimately engages with one of the striking members 38 which are carried by the intermediate posts 4. In closing the gate, the gate is first tilted, until the latch 25 is withdrawn from engagement with the striking member 38, whereupon the gate will swing into closed position. In its closing movement, the latch 25 engages with the deflecting member 29, the free end of the gate 23 being uplifted by the rotation of the sheave 17. As soon as the operating lever 32 is released, the rear bar 39 of the gate will assume the inclined position shown in Fig. 3, the latch 25 dropping into the notch 28 of the striking member 27.

It is to be noted that as the gate swings to and fro, one of the fingers 18, depending upon the direction in which the gate is swung, will snap behind the spring tongue 19. Thus, when the gate is swung into an open position, the engagement between the particular finger and the spring tongue serves to maintain the gate in open position, even though the gate be not swung enough to interlock with the striking members 38, and in practice, the latch 25 will be interlocked with the striking members 38, only when it is desired to hold the gate open, for a considerable period of time, longer than is required merely for the passage of a vehicle.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a supporting structure; a gate pivoted in its lower portion of the supporting structure; a sheave journaled for rotation upon the supporting structure, the upper portion of the gate being pivotally connected with the sheave; a spring tongue secured to the supporting structure; spaced elements upon the sheave, with which the spring tongue is adapted to engage successively when the gate is swung in opposite directions; and means for rotating the sheave.

2. In a device of the class described, a supporting structure including a post; a plate applied to the forward face of the post, and having an extension adapted to overhang the upper end of the post; a brace fixed to and rising from the supporting structure, and having an extension adapted to overlap the extension of the plate; a shaft mounted in the extensions; a sheave journaled upon the shaft; a gate pivoted in its lower portion to the post, and in its upper portion pivoted to the sheave; a spring tongue secured to the brace; spaced elements upon the sheave, adapted to be engaged successively by the spring tongue; and means for operating the sheave.

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

JOSEPH SHUBER.

Witnesses:

JOHN CLELOUPEH,
JOHN POLIFKA.