No. 819,284. PATENTED MAY 1, 1906.

J. S. JOHNSON.

GATE LATCH.

APPLICATION FILED JAN. 2, 1906.

Fig. 1.

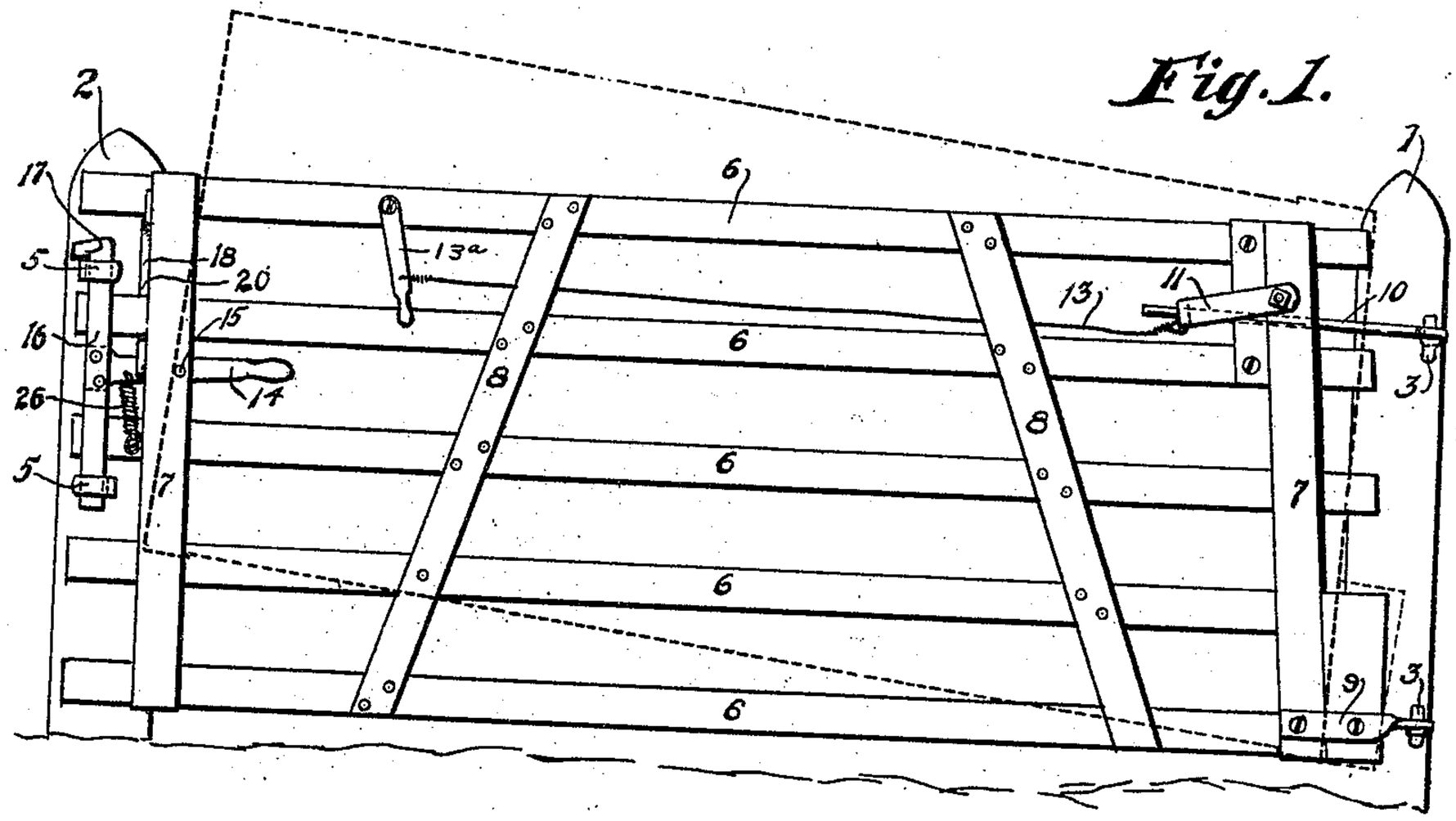


Fig. 2.

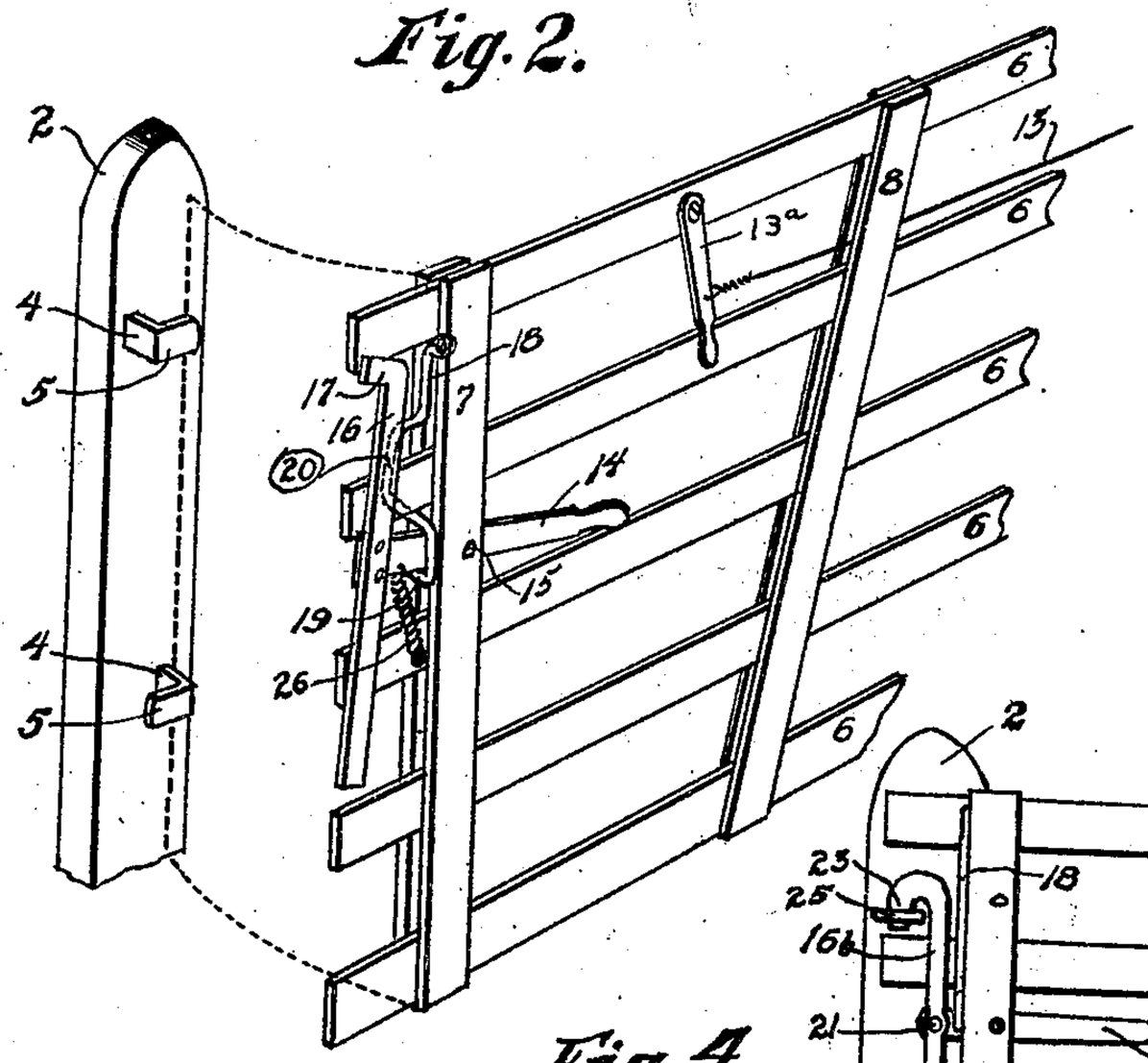


Fig. 3.

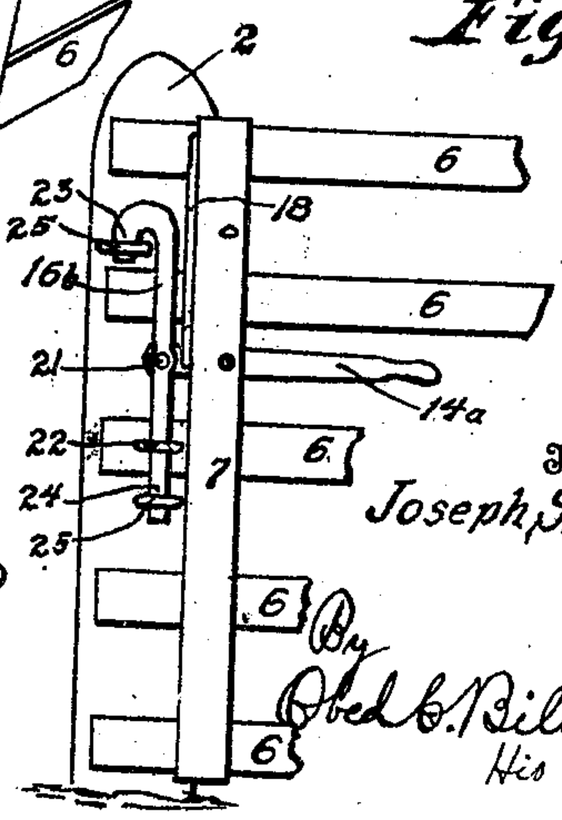
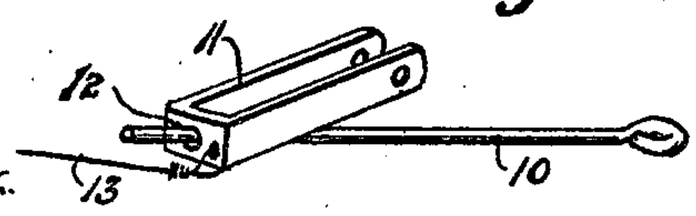


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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GATE-LATCH.

No. 819,284. Specification of Letters Patent. Patented May 1, 1906.

Application filed January 2, 1906. Serial No. 294,107.

To all whom it may concern:

Be it known that I, JOSEPH S. JOHNSON, a citizen of the United States, residing at Lodi, in the county of Medina and State of Ohio, have invented new and useful Improvements in Gate-Latches, of which the following is a specification.

The invention relates to improvements in farm-gate latches.

The paramount object of the invention is to provide a generally improved gate-latch of this class which will be exceedingly simple in construction, cheap of manufacture, and efficient in use and which will be better adapted to its intended purposes than any other device of the same class with which I am acquainted.

Another object is to provide means for automatically locking and reliably securing the gate in its closed position, so that the same cannot become casually opened, as by the wind or by stock rubbing against it, and a simple and convenient means for enabling the gate to be easily disengaged from its locked position and opened or closed, as desired.

With these ends in view the invention consists in the novel construction, arrangement, and combination of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings forming a part of this specification, Figure 1 is a side elevation of my improved gate in its complete operative closed position; Fig. 2, a perspective view of the free end of the same, showing a more detailed view of the locking device; Fig. 3, a view of a modified form of locking device; Fig. 4, a detached perspective view of the friction-clutch and hinge-rod for enabling the free end of the gate to be raised or elevated and automatically locking and securing it in any position to which it may be adjusted.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

Referring to the drawings, it will be seen that the improved gate is mounted on and interposed between the usual posts 1 and 2, erected at any desired point where the gate is to be mounted in its operative position, the former being provided with the usual hinge hooks or members 3, and the latter or keeper-post 2 being provided with two keepers 4, having laterally-extending arms or heads 5, the upper one of which extends inwardly and the lower outwardly, and which are adapted to be engaged by a vertically-arranged keeper-bar, to be hereinafter described.

Referring now to the gate proper, it will be seen that it consists of the usual horizontal bars 6, secured at their ends by means of the usual end or vertical members 7 and all the horizontal bars 6 further braced and secured by means of the usual bracing or sustaining members 8.

The gate is hingedly mounted and secured to the post 1 by means of a hinge-strap 9 and a hinge-rod 10, adapted to take over the hinge hooks or members 3.

In order to provide means for raising and lowering the free end of the gate and automatically locking and securing the same in any desired position to which it may be adjusted, the hinge end of the gate has its usual hinge member or bar 7 set in and inclined from the post 1 and is provided with a pivotally-mounted friction clutch member 11, extending forwardly, provided with an opening 12, adapted to take over and slide upon and grip the hinge-rod 10 when the free end of the gate is raised and lowered for adjusting. The friction clutch member 11 is adapted to automatically grip the hinge-rod 10 at any point to which it may be moved when the free end of the gate is elevated, thereby automatically sustaining the gate in any elevated position desired. The clutch member 11 is released by means of a wire 13, secured thereto and extending forwardly toward the free end of the gate and secured to a small depending operating-lever 13^a, pivoted to one of the horizontal bars 6.

When the free end of the gate is elevated to the position desired, the weight of the gate and relative position of the parts will cause the opening 12 of the free end of the friction clutch member 11 to automatically bind and grip the hinge-rod 10, whereby the same is sustained in its elevated position. When it is desired to release the clutch member, the depending operating-lever 13^a, secured to the wire 13, is moved toward the free end of the gate, whereby the free ends of the clutch member 11 and hinge-rod 10 will be elevated to a position bringing them substantially in

alinement with each other and held in that position, so that the clutch member will not engage the hinge-rod, but slide upon the same until the free end of the gate is lowered to the position desired.

The locking mechanism, secured to the free end of the gate, consists of a horizontally-arranged operating-lever 14, pivotally mounted between the vertical members 7 by means of a pivot-pin 15, and carrying upon its outer end a vertically-arranged keeper-bar 16, provided at its upper end with an outwardly-extending short arm 17, adapted to rest upon the upper portion of the upper keeper 4 when in its locked position in engagement therewith, thus relieving the post 1 of lateral strain by the hanging of the gate.

In order to provide means for automatically engaging and holding the locking mechanism above described in unlocked position, as shown in Fig. 2, and also for automatically releasing the same to engage the keepers 4 when the gate is closed, a peculiarly-shaped depending gravity-pawl 18 is pivotally secured at its upper end to the edge of the vertical member 7, secured to the free end of the gate, and said gravity-pawl is provided at its lower end with a hooked portion 19, adapted to automatically engage and take under the horizontally-arranged operating-lever 14 when moved to unlocked position, as shown in Fig. 2 of the drawings. Said gravity-pawl 18 is further provided with an outwardly-extending curved portion 20, (see Fig. 2,) which when the gate is moved to its closed position is adapted to engage with the front face of the keeper-post 2 and force the hooked portion 19 out of engagement with the operating-lever 14, whereby the same will fall and the vertically-arranged keeper-bar 16 carried thereby will snap into engagement with the keepers 4.

A coil-spring 26 may be secured to the operating-lever, if found necessary or desirable, for giving the same a more quick and positive action. In Fig. 3 is shown a modified form of locking mechanism, in which the operating-lever 14^a is provided with a vertically-arranged keeper-bar 16^b, pivoted on the end thereof by means of a pivot-pin 21, and said keeper-bar is held in vertical position at all times by means of a guide-bracket 22, and the upper end of the keeper-bar is provided with a hooked portion 23, and said hooked portion 23 and the lower portion 24 are adapted to take into and engage staples or loops 25 when the locking mechanism is released by the gravity-pawl 18.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood.

The mechanism for raising and lowering the free end of the gate and automatically locking and securing the same in any desired position to which it may be adjusted, which is shown and described but not claimed herein, is made the subject-matter of another application for Letters Patent, filed February 16, 1906, Serial No. 301,353.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principles or sacrificing any of the advantages of this invention.

Having thus described my invention without having attempted to set forth all the forms in which it may be made or all the modes of its use, I declare that what I claim, and desire to secure by Letters Patent, is—

1. A locking mechanism for gates, consisting of a pivotally-mounted operating-lever secured at the free end of the gate, a vertically-arranged keeper-bar carried by said operating-lever, keepers adapted to be engaged by said keeper-bar, and a pivotally-mounted depending gravity-pawl adapted to engage and release said operating-lever when the gate is opened and closed, respectively.

2. In a gate, a locking mechanism, consisting of a pivotally-mounted operating-lever secured at the free end of the gate, a vertically-arranged keeper-bar secured thereto, keepers adapted to be engaged by said keeper-bar, and a pivotally-mounted depending gravity-pawl provided at its lower end with a hooked portion adapted to engage said operating-lever, and an outwardly-extending curved portion adapted to engage the front face of the keeper-post when the gate is closed whereby to release the hooked portion from said operating-lever.

3. In a gate, a locking mechanism, consisting of a horizontally-arranged operating-lever pivotally mounted and secured to the free end of the gate, a vertically-arranged keeper-bar secured thereto, keepers adapted to be engaged by said keeper-bar, and a pivotally-mounted depending gravity-pawl provided with a hooked portion adapted to engage said operating-lever, and a curved portion adapted to engage the front face of the keeper-post when the gate is closed whereby to release the hooked portion from said operating-lever.

4. In a locking mechanism for gates, the combination with a pivotally-mounted operating-lever secured at the free end of the gate, and a vertically-arranged keeper-bar secured thereto; of a pivotally-mounted depending gravity-pawl, provided at its lower end with a hooked portion adapted to engage said operating-lever, and a curved portion formed therewith and adapted to engage the front face of the keeper-post when the gate is closed whereby to release the hooked portion from said operating-lever.

5. In a locking mechanism for gates, the combination with a pivotally-mounted horizontally-arranged operating-lever suitably

secured and provided with a keeper-bar; of a pivotally-mounted depending gravity-pawl provided with a hooked portion adapted to engage the operating-lever, and a curved portion adapted to engage the keeper-post when the gate is closed.

6. In a locking mechanism for gates, the combination with a pivotally-mounted operating-lever provided with means for locking the gate in its closed position; of a depending gravity-pawl provided with a hooked portion adapted to engage the said operating-lever and a curved portion adapted to engage the keeper-post when the gate is closed.

In testimony whereof I have affixed my signature in presence of two subscribing witnesses.

JOSEPH S. JOHNSON.

Witnesses:
JOSIAH JACOBY,
CLARENCE HAHN.