

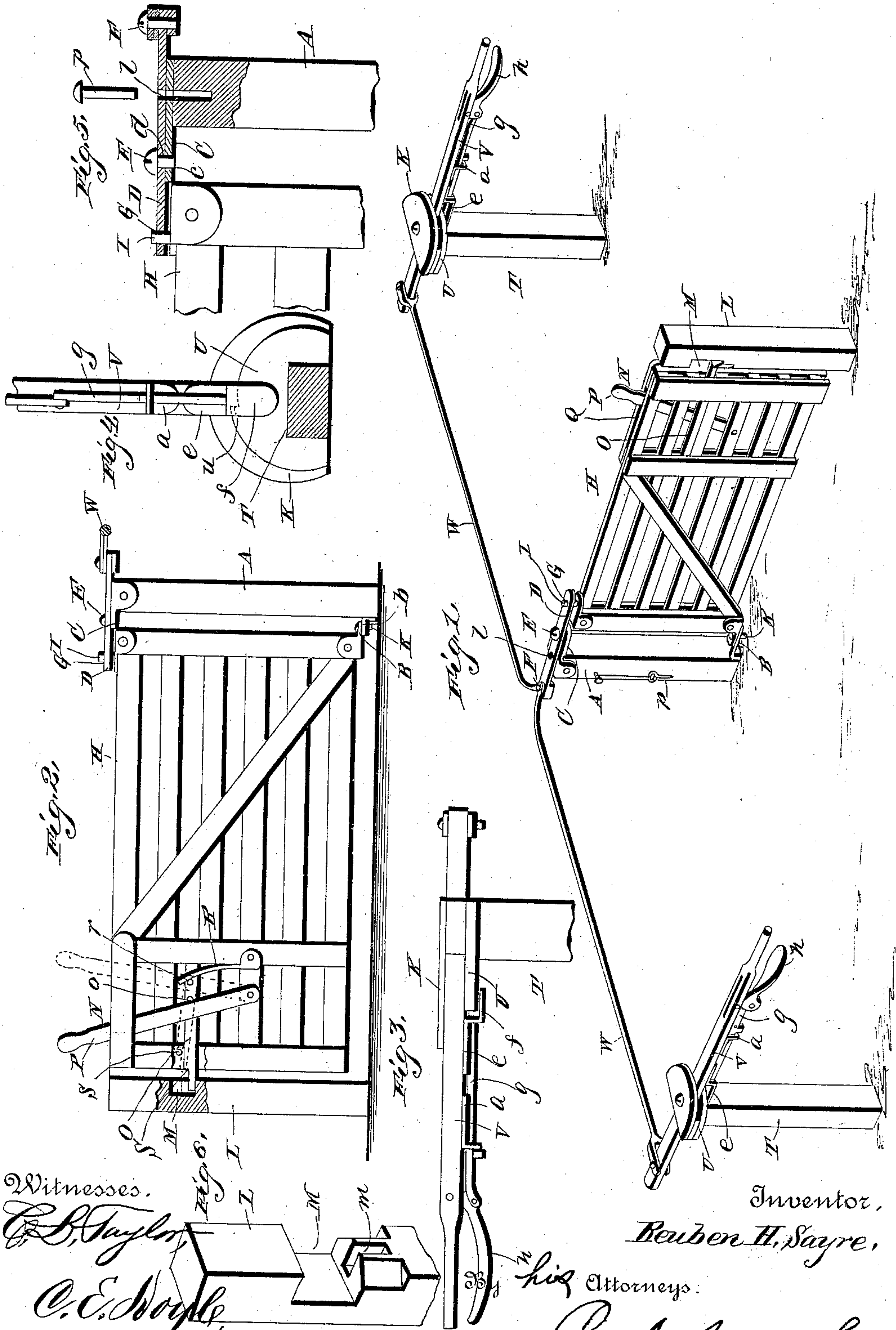
(No Model.)

R. H. SAYRE.

GATE.

No. 382,906.

Patented May 15, 1888.



UNITED STATES PATENT OFFICE.

REUBEN H. SAYRE, OF NEW MARTINSVILLE, ASSIGNOR OF TWO-THIRDS
TO THOMAS W. CARROLL AND JOHN W. CARROLL, OF KEYSER, WEST
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GATE.

SPECIFICATION forming part of Letters Patent No. 382,906, dated May 15, 1888.

Application filed January 17, 1888. Serial No. 261,019. (No model.)

To all whom it may concern:

Be it known that I, REUBEN H. SAYRE, a citizen of the United States, residing at New Martinsville, in the county of Wetzell and State of West Virginia, have invented a new and useful Improvement in Gates, of which the following is a specification.

My invention relates to improvement in gates; and it has for its object to provide improved means whereby a person approaching the gate in a wagon or on horseback may readily open it without dismounting and may close the same in a similar manner after passing through. I accomplish this object in the herein-described invention, which consists in a certain novel construction and arrangement of devices, hereinafter more fully described in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of the gate. Fig. 2 is a side view partly in section. Fig. 3 is a similar view of one of the operating-levers and its supporting-standard. Fig. 4 is a bottom plan view of the same. Fig. 5 is a detail view of the plate C. Fig. 6 is a detail view of the upper portion of the latch-post.

Referring by letter to the drawings, A designates the hinge-post, which is provided at its lower end with a horizontal plate, B, having a bearing, *b*, therein, and at its upper end with a horizontal plate, C, having a tapped aperture, *c*, therein. A lever, D, having a central bearing, *d*, is mounted on the bolt E, which is arranged in the aperture *c*, and the lever is further provided with a vertical spindle, F, on its outer end and a bearing, G, in its inner end.

H designates the gate, of any ordinary or preferred construction, which is provided at its rear end with the vertical spindle I and the depending spindle K, which are mounted, respectively, in the bearings G and *b*. Owing to the fact that the bearing G extends farther inward than the bearing *b*, it will be seen that the gate will normally remain in a closed position, as shown in Fig. 1.

L represents the latch-post, which is provided in its inner side with a notch, M, having at its lower end a catch, *m*. The free end of the gate is provided with a latch, N, which consists of the horizontally-sliding bolt O,

adapted to engage in the catch *m* at its outer end, and having a stud, *o*, on the side, a lever, P, mounted at its lower end on the gate, operating at its upper end in a longitudinal slot, Q, and bearing against the stud *o*, and the spring R, which is secured to the gate and bears at its free end against a stud, *r*, near the rear end of the bolt. It will be seen that this spring normally holds the bolt in engagement with the catch *m*. The outer end of the bolt is provided with a shoulder, S, and a transverse pin, *s*, is arranged in the gate just above the bolt in such a position that when the latter is retracted, if it is raised slightly, the shoulder engages the said pin and the bolt is held in the retracted position. (Shown in dotted lines in Fig. 2.)

T T represent vertical standards, which are arranged on opposite sides of the gate at suitable distances therefrom and aligned with the hinge-post A, and the said standards are provided at their upper ends with the rounded horizontal plates U U. On these plates are mounted the operating-levers V V, which are connected at their outer ends to the outer end of the lever D by means of the rods W W. The adjacent ends of these rods are mounted on the vertical spindle F, hereinbefore mentioned.

The inner edges of the plates U U are provided with shoulders *u u*, which are adapted to be engaged by clutches attached to the under sides of the operating-levers. Keepers *a* and *e* are secured to the under sides of the operating-levers, and the keepers *e* are provided with guide-plates *f*, which project under the edges of the plates U U to guide the motion of the levers in the horizontal plane. Sliding bolts *g* are mounted in the said keepers and are connected at their inner ends to the handles *h h*. These handles are eccentrically mounted on the operating levers, and are so connected to the ends of the sliding bolts that when the free ends of the handles are depressed the outer ends of the bolts are in engagement with the shoulders on the plates U, and when the ends of the handles are raised the bolts are drawn out of engagement with the shoulders. This is in effect a gravity-clutch, as it will be seen that the weight of

the free end of the handle automatically operates the bolt. A spring may be connected to the handle or the bolt to aid the force of gravity, or as a substitute for the same, if desired.

It will be seen that the shoulders on the plates U are so arranged that neither of the operating-levers can be swung toward the gate without disengaging the clutch; but the said levers could be swung away from the gate were it not for the fact that both operating-levers move in the same direction at the same time. When one is moved, the other is similarly moved. Hence, when the attempt is made to draw one of the levers away from the grate, (and thus swing the latter toward the operator,) the clutch on the other lever, being in engagement with the shoulder *u*, prevents such movement. Thus the gate cannot be swung toward the operator and can only be operated after the clutch on the lever adjacent to the operator is disengaged.

Gates of this character are often arranged so that they can be opened in either direction from either side, and therefore careless persons are liable to open them toward their team, and thus frighten the horses. Mistakes of this kind cannot happen with this gate.

The operation by which the gate swings open when the operating-lever is moved will be readily understood without a detailed description herein. The bearing at the top of the gate is simply moved away from the operator, thereby inclining the rear end of the gate and causing it to swing until its free end reaches the lowest point. The operation of inclining the rear end of the gate also raises the free end, and thus lifts the latch out of the catch in the post. The shouldered plates U are covered by the caps *k*, which thus protect them from an accumulation of snow and ice, which would render the levers inoperative. The clutches are also arranged on the lower sides of the levers to protect them from the weather. An aperture, *l*, is formed in the lever to align with a socket, *n*, in the upper end of the post A, and a pin, *p*, is adapted to be engaged in the said aligned aperture and socket when it is desired to prevent the gate from being operated by the means herein described. The lever D is thus locked rigidly in position. To open the gate now the latch is retracted by hand, and the gate operates in the ordinary way, but it will close automatically.

I claim—

1. The combination of the gate, the lever D, the standards erected to the sides of the gate, the lever V, mounted on said standards, connecting-rods between the levers V and D, and clutches carried by the levers V and engaging the standards, as set forth.

2. The combination of the gate, mechanism for tilting and swinging the same, the latch-post, the spring-actuated bolt having the shoulder S, and the pins *s* above the bolt and engaged by the shoulder S, substantially as specified.

3. The combination, with the hinge-post and the gate hinged at its bottom thereto, of the lever D, mounted on the upper end of the post and connected pivotally at its inner end to the top of the gate, the standards T T, the shouldered plates on their upper ends, and the operating-levers mounted on the plates and connected to the lever D, the said operating-levers being provided with clutches to engage shoulders on the said plates, substantially as and for the purpose specified.

4. The combination, with the lever D, mounted on a suitable post, and the gate hinged to the post and connected to the inner end of the lever, of the shouldered plates U U, suitably supported at convenient distances on opposite sides of the gate, the operating-levers mounted on the plates and connected at their outer ends to the outer end of the lever D, and the clutches mounted on the levers and comprising the bolts *g*, which are adapted to engage the shoulders on the plates U, and the handles mounted on the operating-levers and connected to the said bolts, substantially as and for the purpose specified.

5. The combination, with the lever D, mounted on a suitable post, and the gate hinged to the post and connected to the inner end of the lever, of the plates U U, having shoulders *u u* thereon, the operating-levers connected at their outer ends to the lever D, the guide-plates *f*, attached to the operating-levers and engaging under the edges of the plates U U, and the clutches mounted on the operating-levers and comprising the bolts *g g*, sliding in suitable keepers, *a* and *e*, and the handles connected to the bolts and adapted, when released, to drop at their free ends and project the bolts into engagement with the said shoulders *u*, substantially as and for the purpose specified.

6. The combination, with the gate hinged to a suitable post and connected to the end of a lever, D, of the plates U U, having shoulders *u u* thereon, the operating-levers mounted on the plates and provided with automatic clutches to engage the said shoulders, and the caps arranged over the plates, substantially as and for the purpose specified.

7. The combination of the post having a socket in its upper end, the lever D, mounted on the post and having an aperture adapted to align with the said socket, the gate hinged to the post and connected at its top to the inner end of the lever D, operating-levers connected to the outer end of the said lever D, and the pin *p*, adapted to be inserted in the aligned aperture and socket to lock the lever D against movement, substantially as and for the purpose specified.

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

REUBEN H. SAYRE.

Witnesses:

FRANK D. YOUNG,
EDWARD DULANY.