(No Model.)

T. M. RUSSELL.

GATE.

No. 389,823. Patented Sept. 18, 1888.

Fig. 1.

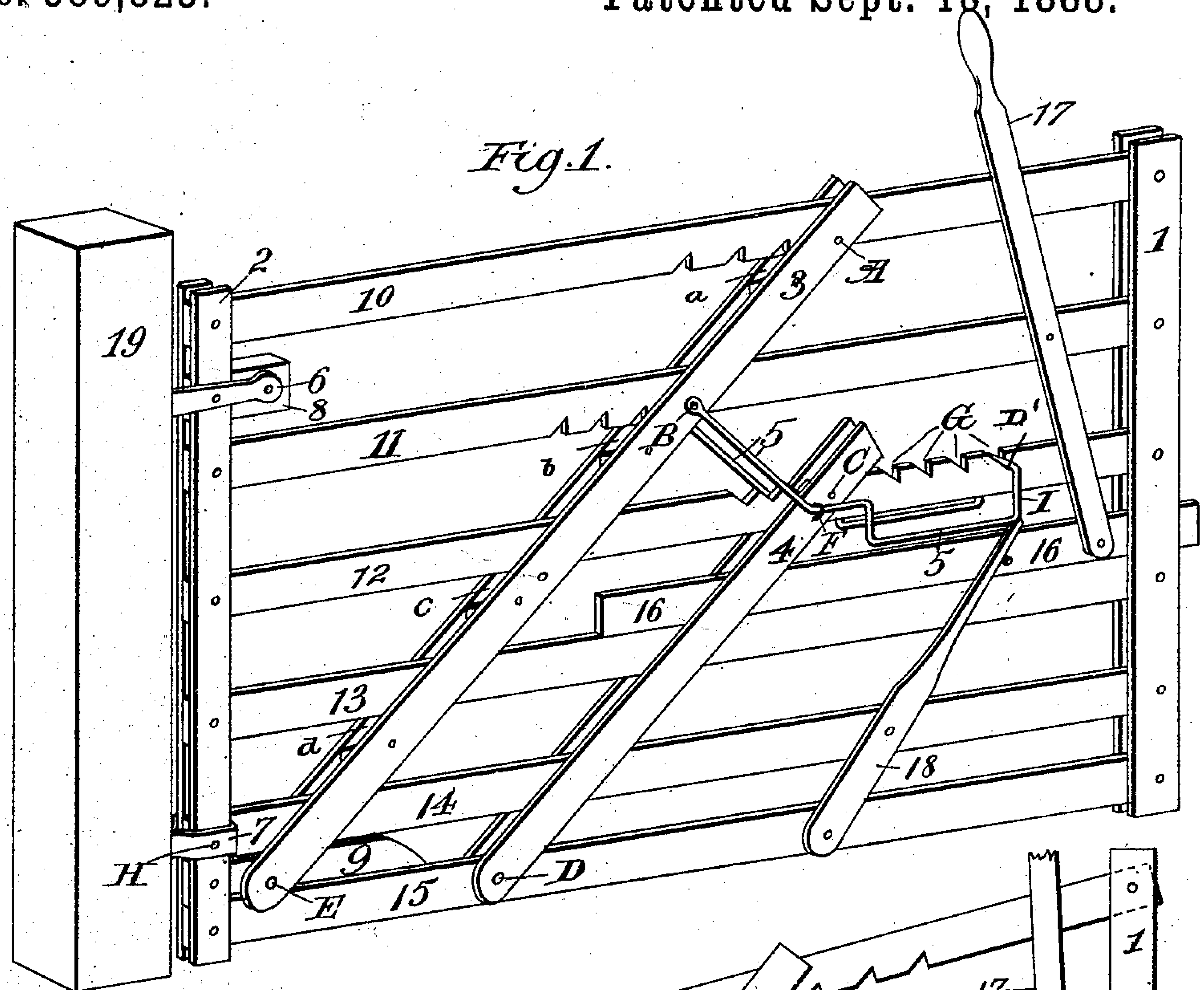
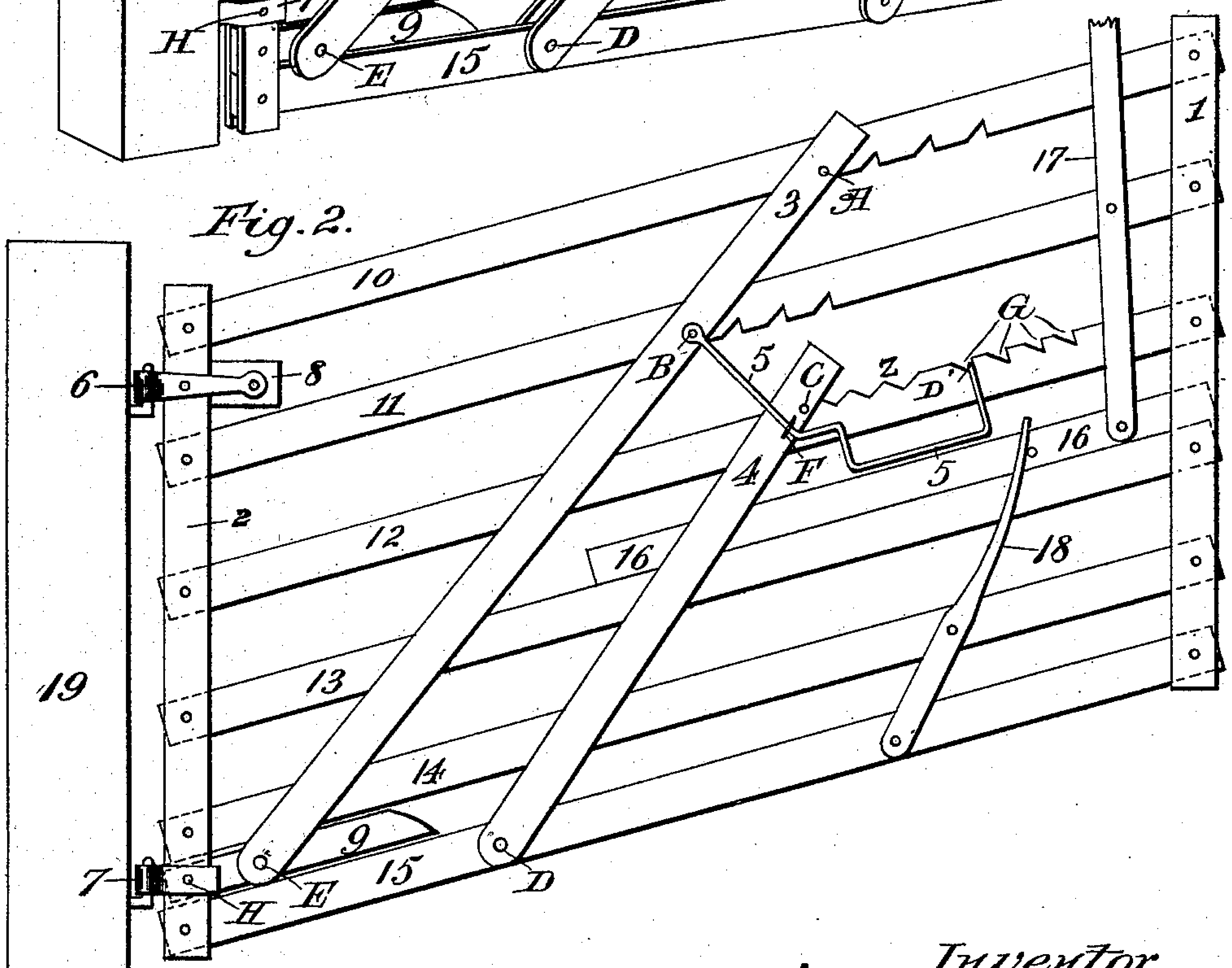


Fig. 2.



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THOMAS M. RUSSELL, OF MINEOLA, MISSOURI.

GATE.

SPECIFICATION forming part of Letters Patent No. 389,823, dated September 18, 1888.

Application filed May 11, 1888. Serial No. 273,547. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. RUSSELL, a citizen of the United States, residing at Mineola, in the county of Montgomery and State of Missouri, have invented certain new and useful Improvements in Gates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in gates; and the novelty consists in the peculiar combination and arrangement of the various parts, as will be hereinafter more fully set forth, and particularly pointed out in the claims.

The object of my invention is to provide a gate which can be operated to open or close a passage or roadway by raising or lowering the same, or by causing the gate to be swung in the proper direction upon its hinges.

The invention will be fully understood from the following description and claims, when taken in connection with the annexed drawings, in which—

Figure 1 is a perspective view of my improved gate, showing it as it would appear when in a locked position; and Fig. 2 is a side elevation of the same, showing the gate raised or elevated.

Referring by letters and figures to the said drawings, 1 and 2 designate the vertical end rails of a gate, between which are suitably secured the horizontal rails 10, 11, 12, 13, 14, and 15. It should be here observed that these latter are pivotally secured between the said rails 1 2, which construction adapts the various rails and braces of the gate to shut up or close snugly against each other, and thus allow a passage or roadway to be opened.

3 designates two parallel diagonal brace-rails, which are pivoted at their lower ends by a pivot-pin, E, to a block, 9, the latter being secured between the two lower horizontal rails, 14 15, of the gate. The upper ends of the rails 3 are connected by a cross-pin, A, which is adapted to engage a series of notches or serrations formed in the lower edge of the top gate-rail, 10. These rails 3 are further provided, a short distance below, with a similar cross-pin, B, which engages similar notches in the lower edge of the next horizontal rail, 11.

4 indicates two diagonal brace-rails of less length than the rails 3, but connected in a similar manner by a pivot-pin, D, to the lower horizontal gate-rail 15. The upper ends of these diagonal braces or rails 4 are connected by a cross-pin, C, adapted to engage a series of notches or serrations formed in the upper edge of the horizontal rail 12.

I indicates an operating device, which I will term a "guide-lever." This device may be formed of any suitable material and constructed in any desired manner, but preferably as shown in the drawings, in which it consists of a single piece of stout wire bent in the middle to form a cross-pin, D′, which is adapted to engage a second series of notches or serrations (marked G) formed in the upper edge of the horizontal gate-rail 12. The free ends of the wire, after being thus bent, are carried downwardly a sufficient distance, and then horizontally, as at 5, thence upwardly, and again horizontally, at which horizontal portion they are secured to the diagonal brace-rails 4 by staples F. From this point the ends of the wire are extended upwardly in a diagonal line, and are secured at their outer ends to the diagonal brace-rails 3 by the cross-pin B, as shown. By having notches in the under edge of the upper rails of the gate and notches G in the upper edge of the rail 12, which incline in a direction opposite to that of the said notches in the upper rails, it is obvious that when the guide-lever is engaging the notches of the rail 12 the cross-pins of the rails 3 will be held in the notches of the rails 10 and 11, and in this position the cross-pin C of the rails 4 will be held in notches Z of the said bar 12. The notches Z in the bar 12 are of a different form from the other notches illustrated, they having both walls at about the same angle of inclination, so that the cross-pin C may ride free from one to the other.

16 is the latch-bar, which is adapted to rest upon the gate-rail 13 and work between the vertical end rails 1 of the gate and the brace-rails 4.

18 designates a spring bar or lever, which is

secured at its lower end by bolts or otherwise to the two lower rails, 14 15, of the gate. The upper end of this spring-lever is adapted to engage with a lug or pin that projects laterally from the proper side of the latch-bar 16, near the forward end thereof, and thereby, through the medium of the spring-bar and the hand-lever 17, the said latch-bar is moved longitudinally to secure or unlatch the gate.

19 is the post, to which the gate is attached by means of suitable hinges, 6 7, the hinge 6 being secured at its inner end by bolts to the vertical end rail 2 of the gate and a suitable block, 8, adjacent thereto. The lower hinge, 7, is secured to the gate by a bolt or pin, H, connecting the said hinge with the vertical end rail 2.

It is obvious that the gate may be held in a closed position by the free end of the latch-bar engaging an opening or slot formed in the gate-post.

The operation of my invention is as follows: The gate when locked and in a normal position presents the appearance shown in Fig. 1 of the drawings, with the free end of the latch-bar projected into an opening in the gate-post by means of spring-bar 18. When it is desired to open the gate by swinging it on its hinges, it is only necessary to grasp the hand-lever 17 and move the latter forward, as shown in Fig. 2, when the gate will immediately swing open by reason of the free end of the latch-bar leaving the opening in the gate-post.

It is obvious that when the gate is to be closed the same is swung to with sufficient force to cause the adjacent end of the latch-bar to pass the edges of the gate-post and enter the opening in the same, where it will be restrained from all backward movement by the spring-bar 18.

The gate may be raised by elevating the forward end of the same, which action causes the cross-pins or bolts A, B, C, and D to leave the forward notches and travel backward. When the elevation is ended, the said pins occupy other notches, and, as it will be seen that the rear walls of said notches are inclined and their forward walls are vertical, the gate will be securely held in an elevated position.

a, *b*, *c*, and *d* are blocks, that are adapted to be placed beneath the longitudinal rails 10, 11, 12, 13, 14, and 15 of the gate. These blocks are somewhat thicker than the said longitudinal rails of the gate to permit the said rails to slide freely between the diagonal brace-bars 3 when the gate is being elevated or lowered. These blocks may be suitably secured between the brace-bars 3 by bolts or otherwise.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a hinged post, of a gate composed of pivoted longitudinal rails, the two upper ones having notches in their under edges, which are inclined in the same direction, and one of the intermediate rails having notches in its upper edge inclined in an opposite direction to those in the upper rails, diagonal brace-rails 4, pivoted at their lower ends to the lower rail of the gate, the guide-lever I, formed as shown, and connected with the brace-rails 3 and 4, the said guide-lever being adapted to enter the notches in the rail 12, and the brace-rails 3, having cross-pins to enter the notches of the upper rails, substantially as specified.

2. The combination, with the vertical rails 1 2, of the longitudinal rails pivoted at opposite ends thereto, the upper rail having notches in its under side, the intermediate rail, 12, having notches G and Z in its upper side, the diagonal brace-rails 3 and 4, carrying cross-pins to engage the notches, as shown, and the guide-lever I, having a cross-pin, D′, adapted to enter the notches G of the rail 12, the said guide-lever being connected with the brace-rails 3 and 4, substantially as specified.

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

THOMAS M. RUSSELL.

Witnesses:

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