(No Model.)

J. B. MIESSE.

GATE.

No. 589,134. Patented Aug. 31, 1897.

Fig. 1.

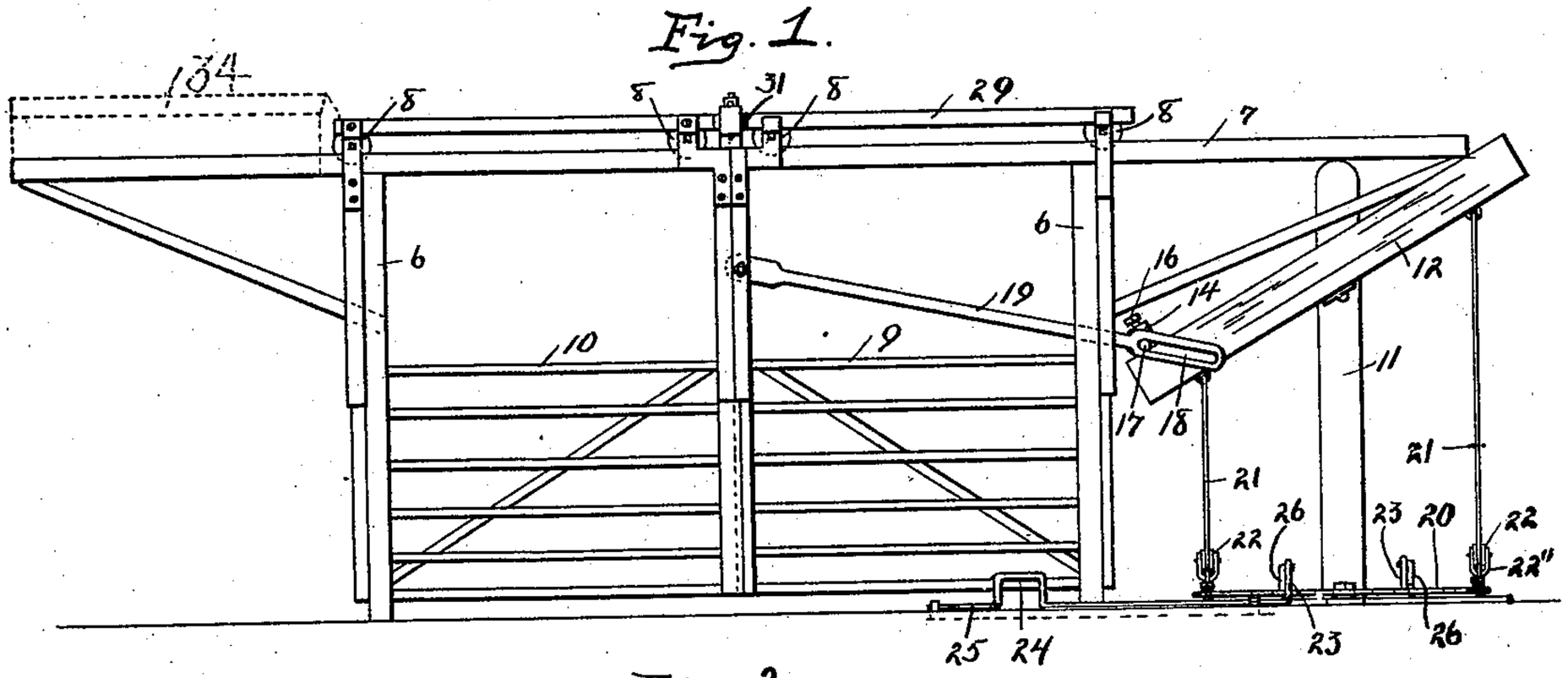


Fig. 2.

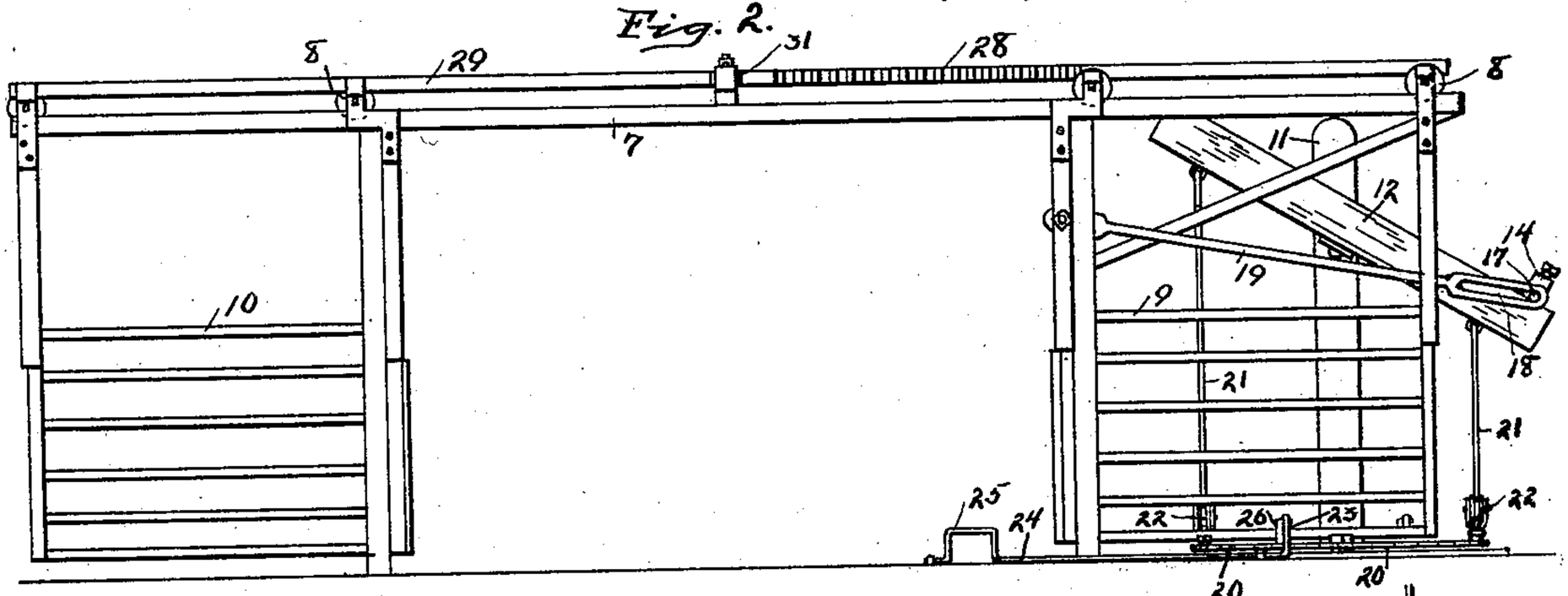


Fig. 3.

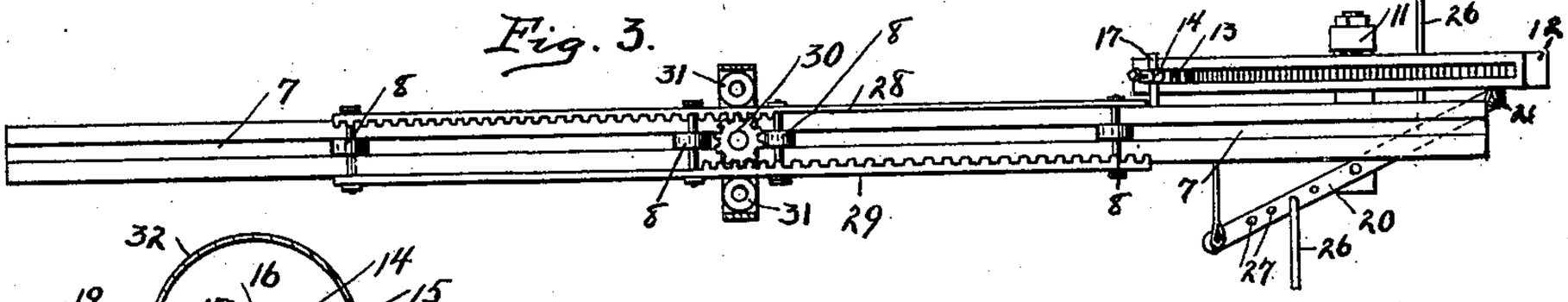
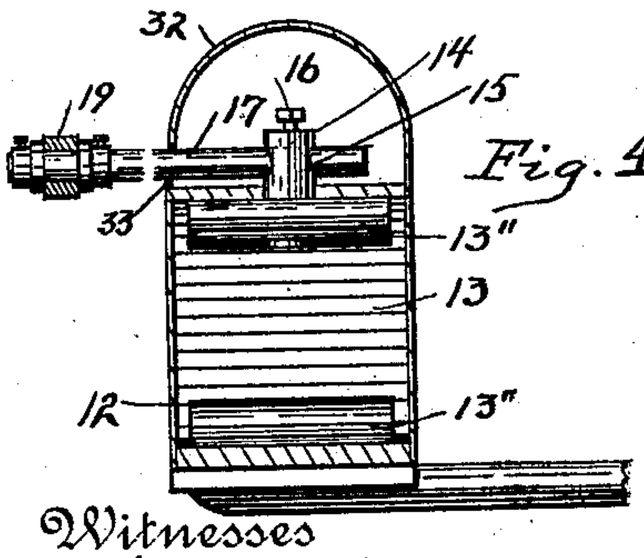
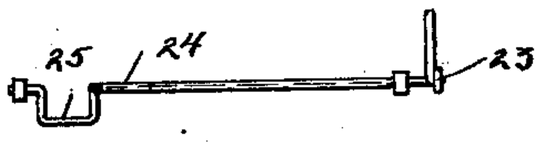


Fig. 4.





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GATE.

SPECIFICATION forming part of Letters Patent No. 589,134, dated August 31, 1897.

Application filed May 24, 1897. Serial No. 637,842. (No model.)

To all whom it may concern:

Be it known that I, JACOB B. MIESSE, a citizen of the United States, residing at Noblesville, in the county of Hamilton and State of Indiana, have invented a new and useful Gate, of which the following is a specification.

My invention relates to an improvement in automatic sliding gates.

The object of my invention is to provide mechanism by means of which a sliding gate may be automatically opened or closed by the passage of a vehicle along the roadway leading through such gate.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation showing the gate closed. Fig. 2 is a side elevation showing the gate open. Fig. 3 is a plan of Fig. 1. Fig. 4 is a sectional detail of the pivoted guide and the sliding weight mounted therein.

In the drawings, 6 indicates the gate-posts, to the upper ends of which is secured a transverse track 7. Posts 6 consist, preferably, of two sections, between which the gate may move, but single posts may be used, if desired. Mounted beneath track 7 and suspended therefrom by means of rollers 8 are two gate-sections 9 and 10, the arrangement being such that the said gate-sections may be moved along said track across the roadway. Mounted to one side of the road, near one of the posts 6, is a post 11. Pivoted upon post 11, so as to swing in a plane substantially parallel with the plane of the gate, is a guide 12, within which is mounted a sliding weight 13, provided with suitable rollers 13′. Extending upward from weight 12 is a shank 14, through which an opening 15 is formed substantially at right angles to the path of movement of the weight. Mounted in opening 15 and secured therein by means of a set-screw 16 is an arm 17, the outer end of which lies within a slot 18, formed in the outer or free end of an arm 19, the opposite end of which is pivoted to the gate-section 9. Pivoted near post 11, so as to swing in a substantially horizontal plane, is a lever 20, to each end of which is secured a cord 21. Each of cords 21 is passed beneath a pulley 22, which is carried by a yoke 22″, pivoted so as to swing in a substantially horizontal plane, and the ends of said cords are secured to guide 12, one to each side of the pivot thereof.

Mounted at each side of the gate, at some distance along the roadway therefrom, is an operating-lever 23 of the usual well-known form, the said lever being provided with a pair of arms 24 and 25, which are adapted to be engaged by the wheels of vehicles. Secured to lever 23 is a link 26, the opposite end of which is pivoted to one arm of lever 20, the throw of said lever being regulated by placing the end of said link within any one of a series of holes 27, placed at different distances from the center of the lever. In order to cause the two gate-sections to move simultaneously in opposite directions, I secure to the upper end of section 9 a rack-bar 28, and to section 10 is secured a similar rack-bar 29, the said rack-bars lying parallel with each other and the teeth thereof engaging opposite sides of a small pinion 30. By this means any movement of section 9 causes, through the rack-bars and pinion, a corresponding opposite movement of section 10. The rack-bars 28 and 29 are held in engagement with pinion 30 by means of small idlers 31. In order to protect the interior of guide 12 from rain, snow, &c., I mount over the upper part thereof a hood 32, beneath which shank 14 of the sliding weight moves, a slot 33 being formed through one side of said hood to permit the passage of arm 17. The hood 32 is shown in detail in Fig. 4, but has been omitted from the other figures for the sake of clearness. It is advisable to protect track 7 and the parts operating thereon, and for this purpose I provide a roof 34. (Indicated in dotted lines in Fig. 1.)

The operation is as follows: Supposing the gate to be closed, the various parts will be in the position shown in Fig. 1. The wheels of one side of a vehicle passing along the roadway toward the gate will come in contact with arm 24 of one of levers 23 and force the said lever forward and downward. This movement of lever 23 causes a swinging movement of lever 20, which, through cords 21, causes guide 12 to swing upon its pivot, thus raising weight 13 above the pivot of the guide. Weight 13 then slides downward along guide 12, carrying with it arm 19 and gate-section

9, to which it is pivoted. The outward movement of section 9 causes, through rack-bar 28, pinion 30, and rack-bar 29, a corresponding outward movement of gate-section 10. The vehicle then passes through and comes into engagement with arm 25 of the other lever 23. This causes guide 12 to return to its original position, when weight 13 again slides downward along the guide and returns the various parts to the original position.

It will be noticed that in either position of the gate weight 13 holds arm 17 in engagement with one end or the other of slot 18 of arm 19, so that the said weight operates to prevent the accidental opening or closing of the gate.

I claim as my invention—

1. The combination with a gate, of a pivoted guide, a weight mounted so as to slide along said guide, an arm pivoted to the gate, an arm carried by the weight and adapted to engage said first-mentioned arm, and means for swinging the guide.

2. The combination with a gate, of a pivoted guide, a weight mounted so as to slide along said guide, intermediate connecting mechanism between said weight and gate whereby a downward movement of the weight along the guide will cause a movement of the gate, an operating-lever 23 mounted in the roadway, and intermediate connecting mechanism between said lever and the pivoted guide whereby the operation of said lever will cause a swinging movement of the guide.

3. The combination with a gate, of a pivoted guide, a weight mounted so as to move along said guide, an arm carried by said weight, an arm pivoted to the gate and adapted to engage said first-mentioned arm, an operating-lever 23 mounted in the roadway, lever 20, cords 21 connecting the ends of said lever with opposite ends of the pivoted guide, and a link connecting levers 23 and 20, all combined and arranged to coöperate substantially as and for the purpose set forth.

4. The combination with a pair of sliding gate-sections, of a pivoted guide, a weight mounted so as to slide thereon, intermediate connecting mechanism between said weight and one of the gate-sections, means for swinging the pivoted guide, and intermediate connecting mechanism between the two gate-sections whereby a movement of one of said sections will cause a similar opposite movement of the other section.

5. The combination with a pair of sliding gate-sections, of a pivoted guide, a weight mounted so as to move along said guide, intermediate connecting mechanism between said weight and one of the gate-sections, means for swinging the pivoted guide, a rack-bar carried by each of the gate-sections, and a pinion engaging both of said rack-bars, all combined and arranged to coöperate substantially as and for the purpose set forth.

6. The combination with a pair of sliding gate-sections, of a pivoted guide, a weight mounted so as to slide thereon and provided with suitable rollers, an arm carried by one of the gate-sections and adapted to engage the weight, a rack-bar carried by each gate-section, a pinion engaging both rack-bars, lever 23 mounted in the roadway, lever 20, cords 21, and link 26, all combined and arranged to coöperate substantially as and for the purpose set forth.

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