

Dec. 7, 1926.

1,609,369

F. LAIRD

GATE

Filed Feb. 18, 1925

Fig. 1.

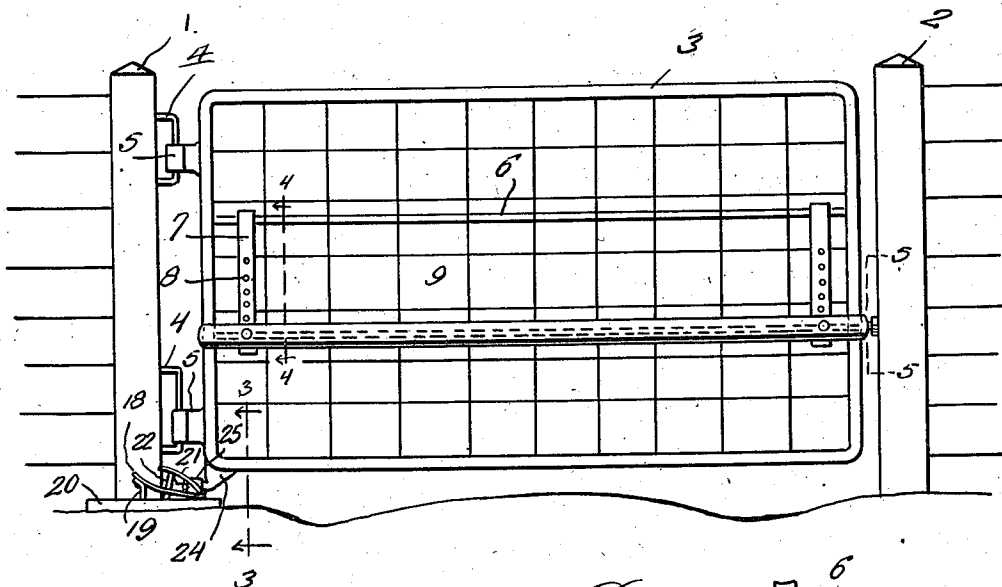


Fig. 2.

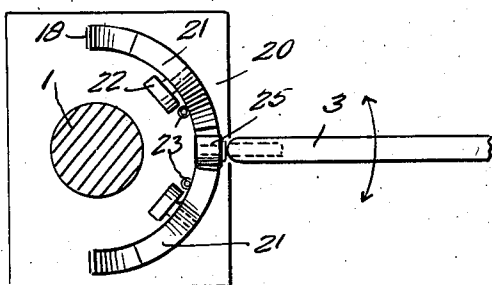


Fig. 4.

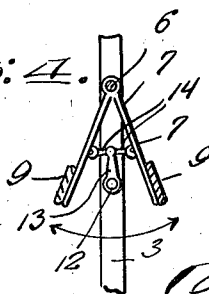


Fig. 5.

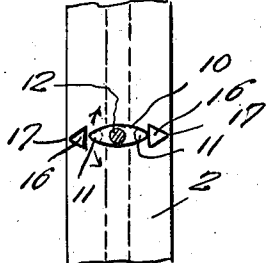
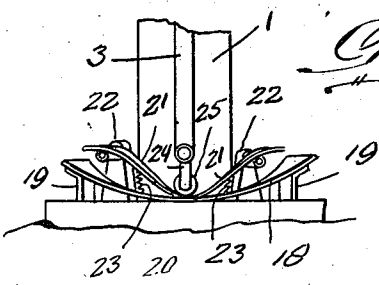


Fig. 3.



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GATE.

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The present invention appertains to a gate and aims to provide a device of this nature which may be swung to an open position by a vehicle such as an automobile, and after said vehicle has passed by, the gate will automatically return to a closed position.

An important object of the invention is to provide a structure which when opened is raised and has means associated therewith so that when the gate is fully opened it will gravitate and said means will urge it to a closed position.

Another important object of the invention is to provide a latch mechanism which may be unfastened by a vehicle abutting an operating member.

A still further important object of the invention is to provide a gate structure which is both simple and efficient, one which is thoroughly reliable in operation, inexpensive to construct, strong, durable, not liable to readily get out of order, and well adapted for the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawing:—

Figure 1 is an elevation of the gate embodying the features of my invention.

Figure 2 is a fragmentary horizontal section through one portion of the gate structure.

Figures 3, 4 and 5 are detail sections taken substantially on the lines 3—3, 4—4 and 5—5 respectively of Figure 1.

Referring to the drawing in detail it will be seen that posts 1 and 2 are spaced so as to receive the gate 3 therebetween. U-shaped members 4 are vertically spaced on the post 1 with their intermediate portions in vertical alignment and form one leaf of hinge structures, the other leaves being indicated at 5 and attached to the end of the gate 3. A rod 6 extends longitudinally of the gate between the top and bottom thereof and has rotatably mounted thereon a pair of inverted V-shaped brackets 7, the arms of which are provided with a plurality of openings 8 in order that bars 9 may be adjustably attached thereto by suitable fastening elements. An oblong latch member 10

is provided at its ends with lateral projections 11 and is mounted on a relatively short shaft 12 extending through the free end of the gate 3. At the inner end of this shaft there is provided a crank 13 having extensions disposed laterally of its end as at 14 for engaging the arms of the adjacent inverted V-shaped bracket 7. It will thus be seen that when a vehicle approaches the gate when said gate is in a closed position the bumper or front wheels of the vehicle will engage one of the bars 9 and swing the same toward the gate, at the same time swinging the crank 13 and rocking the shaft 12 and turning the latch member 10 so as to dispose its projections 11 out of alignment with triangular shaped stop members 16 provided on the inner face of the post 2. The apices of these triangular shaped stops 16 are disposed in opposite directions so that as the gate swings to a closed position the projections 11 will engage therewith and rise up or down the inclined surfaces of the stops 16 thus rocking the shaft 12 and allowing the gate to move to a completely closed position at which time the bars 9 will gravitate to their normal positions holding the oblong latch 10 so that its projections 11 are aligned with the stops 16.

Adjacent the bottom of the post 1 there is positioned an arcuate plate 18 which is curved upwardly from its center toward its ends, the ends being supported on suitable standards or the like 19 rising from the base 20 on which the intermediate portion of the plate 18 rests. Curved plates or tracks 21 are pivotally mounted intermediate their ends on standards 22 rising from the base 20 adjacent the ends of the plate 18 at the inner edge thereof. These plates or tracks 21 have their inner ends normally resting on the intermediate portion of the plate 18 in spaced relation to each other and are held in this normal position by means of springs 23. A bracket 24 extends from the lower corner at the hinged end of the gate and has journaled thereon a roller 25. When the gate is in a closed position, this roller 25 rests on the intermediate portion of the plate 18 between the inner ends of the tracks 21. When the gate is opened as previously outlined, it will be seen that this roller 25 will ride up on one of the tracks 21, thereby raising the gate on the hinge leaves 4. After the roller passes the fulcrum of the track on which it is riding, said track

will rock so that the gate will gravitate and swing to a complete open position until the roller engages the end of the plate 18. When in this position and the vehicle has passed completely through the gate way and is free, the track, having been rocked back to its normal position by its spring 23, the gate will further gravitate so the roller will roll down the plate 18 and swing the gate to a closed position, said roller going beneath the inner end of the track up which it had previously traveled and stopping in between the inner ends of the tracks.

It will be apparent from the above that this gate may be easily swung to an open position by a vehicle without any attention whatsoever on the part of the operator of the vehicle, and after said vehicle has passed completely through the gateway, the gate will automatically return to a fully closed position and be set for again being opened by another vehicle.

It will also be apparent that the gate is operable from either side. The present embodiment of the invention which I have described in detail by way of example embodies all the features and advantages enumerated as desirable in the statement of the invention and the above description and it is apparent that numerous changes in the details of construction, in the material, in the dimensions, and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the invention as hereinafter claimed or sacrificing any of its advantages.

Having thus described the invention, what I claim as new is:—

1. In combination, a post, a gate hinged

to the post so as to be capable of vertical movement in relation to the post, a roller supported on the gate, an arcuate plate inclined upwardly from its intermediate portion toward its ends, a pair of tracks pivoted above the plate intermediate their ends so that their inner ends are spaced from each other, means for normally resting the inner ends of the tracks on the plate, said roller being adapted to ride on said tracks as the gate is being opened and to tilt the tracks so as to return to its normal position on the plate and rest between the inner ends of the tracks.

2. In combination, a gate way, a gate hinged to swing horizontally in the gate way and capable of vertical movement, a normally inclined rockable track, a gate appurtenance movable on and past and also movable below and past said track, and means disposed below the rockable track and arranged to cooperate with the gate appurtenance to close the gate and position it for engagement with the movable track when again opened.

3. In combination, a gate way, a gate hinged to swing horizontally in the gate way and capable of vertical movement, spaced, normally inclined rockable tracks, a gate appurtenance movable upon and past and also movable below and past said tracks, and means disposed below the tracks and arranged to cooperate with said appurtenance to close the gate and position it for engagement with the movable track when again opened.

In testimony whereof I affix my signature.

FLOYD LAIRD.