E. L. GILLESPIE,

CAR GATE.

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919,711. Patented Apr. 27, 1909.

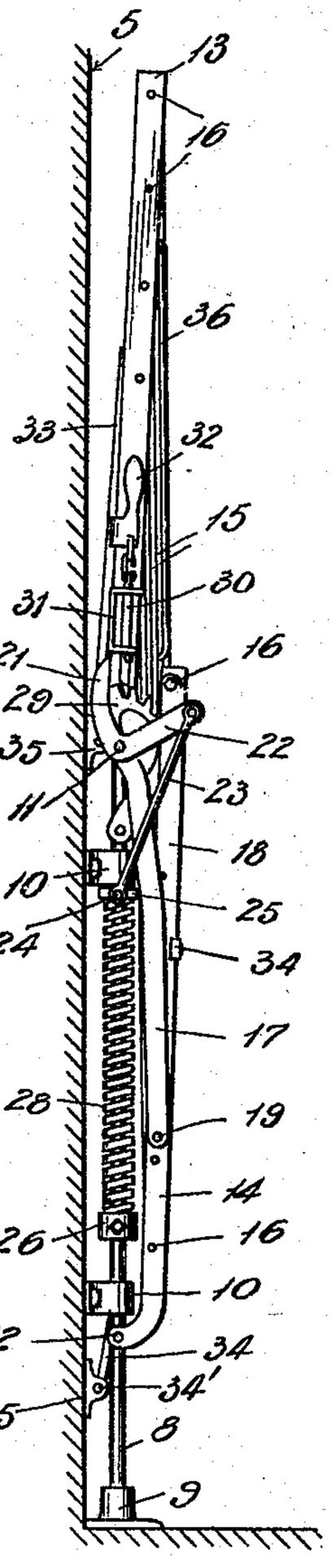
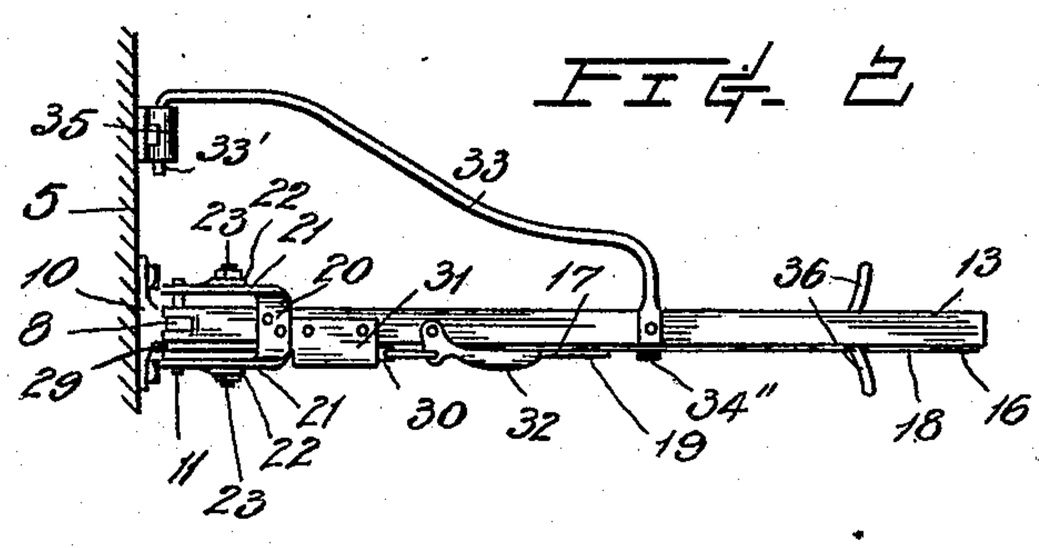


FIG. 3.



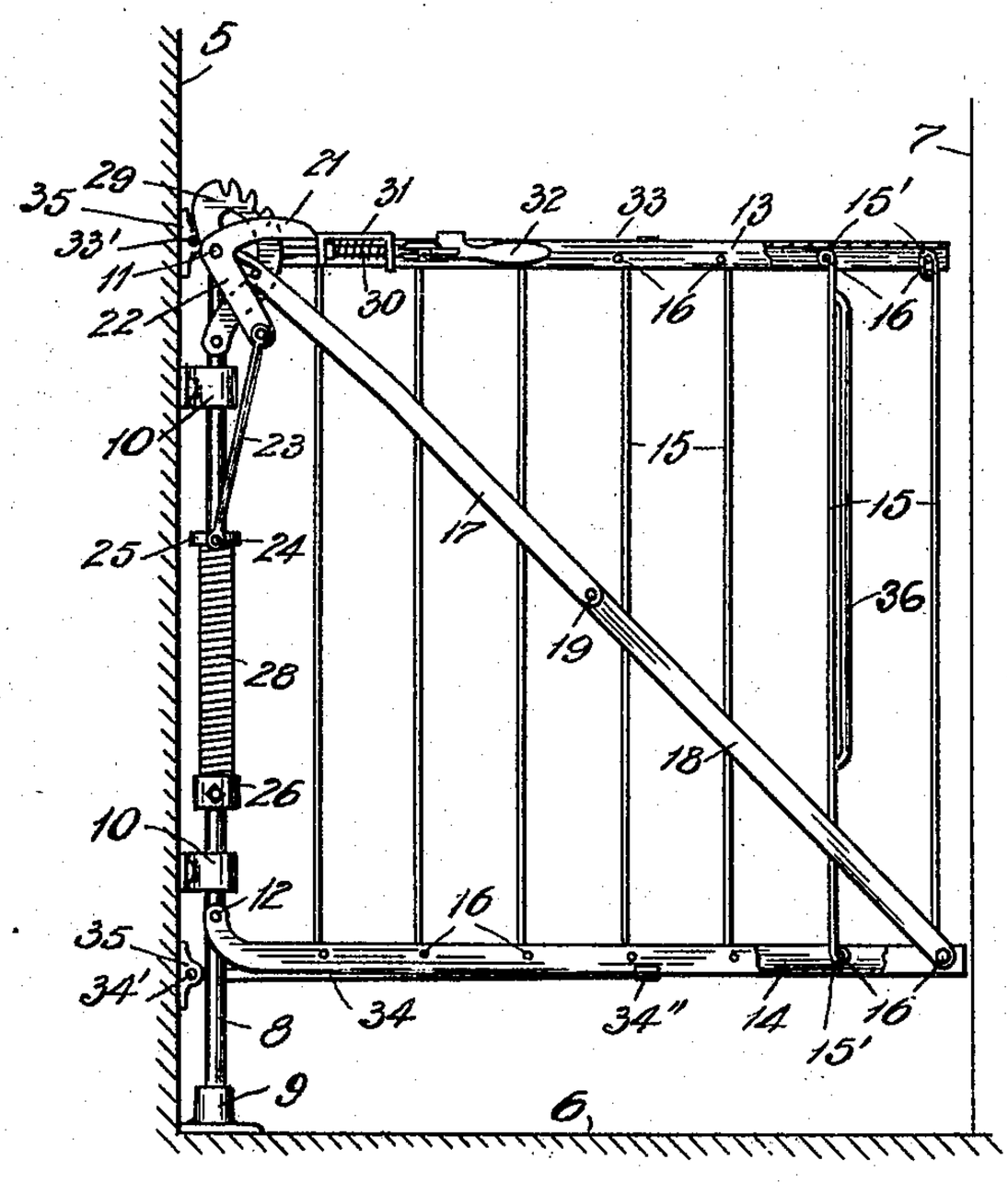


FIG. 1.

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CAR-GATE.

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To all whom it may concern:

Be it known that I, EDWARD L. GILLESPIE, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Car-Gates, of which the following is a specification.

The object of this invention is the provision of efficient and conveniently operated gate for use upon platforms of railway cars or in other services where a gate which is foldable into a compact condition is desired.

The invention consists in the novel construction of a gate and in the adaptation and combination of its parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical longitudinal view of a gate embodying my invention and illustrated in its operative condition; Fig. 2 is a plan view of the same; and Fig. 3 is a similar view to Fig. 1 with the gate shown in its elevated or inoperative condition.

The reference numeral 5 designates the end wall; 6, the platform, and 7 the front partition of a railway car. Disposed in proximity to the wall 5 is an upright post 8 which is seated in a floor-socket 9 and is further secured by wall sockets 10 which are fixedly connected with such wall. Pivotally connected with said post, as by pins 11 and 12, respectively, are top and bottom rails 13 and 14 which may advantageously be constructed of a U-shape in cross section. Connecting said rails and forming therewith a grating is a plurality of spaced bars 15 disposed in parallelism and having looped ends, as 15′, which are housed between the flanges of the respective bars and are pivotally connected therewith by pins 16. Connecting the pin 11 with a protruding end of the outermost of the pins 16 in the bottom rail is a strut formed of two parts 17 and 18 which are connected by a pin 19 so that the strut will be foldable with the raising of the gate. Rigidly secured to said top rail is a cross bar 20 connecting the arms 21 of a binary bell-crank which is fulcrumed to the pin 11 and has the other arms 22 which are disposed upon opposite sides of the gate connected by links 23 with horns, such as 24, of a collar 25 which is slidably mounted upon said post.

A set-collar 26 is provided upon the post and between which and the collar 25 is placed a helical spring 28 which serves to urge the collar 25 upwardly and acting through the links and bell-crank to complete the raising of the gate into the position in which it is illustrated in Fig. 3 when the outer end of the gate has been started upward by manual effort.

29 is a notched plate which is fixedly secured to the post and is arranged to co-act with a spring-pressed latch-bolt 30 for locking the gate in various elevated positions and to safe-guard the gate against being accidentally lowered should it be grasped by a person getting on or off the car. This bolt extends through the ears of an attachment 31 upon the gate-rail 13 and is for the purpose of lowering the gate when withdrawn from its engagement within any of the plate notches by suitable devices such as, for example, a connected hand-grip lever 32. To sustain the gate against lateral swinging without interfering with the upward swinging thereof, braces 33, 34 are respectively connected with the top and bottom rails of the gate and thence extend in substantially diagonal directions where they are provided with bent ends 33′ and 34′ which are journaled in bearing boxes 35 secured to the car wall 5.

The outer end of the brace 34 is extended beyond the rail 14 to which it is connected and has its extremity bent upward to provide a stop 34″ whose office is to engage with the strut part 18 and prevent the strut protruding outside of this rail when the gate is in its raised position. 36 represents rods connected with one of the bars 15 and protrude from each side of the gate frame to afford handles to be grasped in operating the gate without danger of the operator's fingers being pinched, as might occur should he take hold of one of the bars or rails in the raising or lowering of the gate.

The operation may be explained as follows: Assuming that the gate is in its lowermost or distended position as illustrated in Figs. 1 and 2, the collar 25 will be held downwardly by the crank arms 22 and links 23 to maintain the spring 28 in its contracted condition. To fold up the gate, a moderate upward force is exerted by the operator upon either of the rods 36, whereupon and assisted by the power of the spring the gate rails and bars are caused to be carried upward to occupy the relative positions in which they are shown in Fig. 3. In such change the strut part 18 is caught by the projecting part 34″ of the lower brace and the latch 30 passes freely to

the rearmost of the notches in the plate 29 wherein it is engaged to prevent the return movements of the gate parts and thus locks the gate clear of the passage which it is intended to close. To restore the gate to the closed position the latch-bolt, by manipulating the lever 32, is withdrawn from the abovementioned notch in the plate and so held back until the bolt has passed the other notches. Should the lever 32, however, through any cause, as in the rocking of the car, be loosened from the grasp of the operator then the latch-bolt would be freed to catch in any of the notches which is presented and the gate would be locked and maintained in such intercepted position against any force to which it is likely to be subjected.

The advantages of the invention reside principally in the provision of an easily operated gate which can be raised or lowered in effecting the opening or closing of the same, it occupies but little space, and is reliable in its action.

It will be evident that many features of my invention are applicable in gates which are used in other than railway car services, and I therefore include within the scope of my invention the use of such features as are of general utility, irrespective of the employment thereof, or in the same structure, of all the features of the invention. And it is to be understood that changes may be made in the form and construction of parts which will involve no departure from the scope of my invention.

What I claim as my invention, is—

1. In a gate, the combination of an upright post, top and bottom rails pivotally connected at one end of each with said post, bars arranged in parallelism and pivotally connected at their top and bottom ends with the respective rails, a bell crank fixedly secured to the said top rail, a notch plate secured to the post, a spring-pressed latch carried by said top rail and adapted to engage said plate and braces for preventing any lateral swing of the rails.

2. In a gate, the combination of an upright post, top and bottom rails pivotally connected at one end of each with said post, bars arranged in parallelism and pivotally connected at their top and bottom ends with the respective rails, a bell-crank fixedly secured to the said top rail, stationary and movable collars mounted upon said post, a spring interposed between said collars, and a link connecting said bell-crank with the movable collar.

3. In a gate, the combination of an upright post, top and bottom rails pivotally connected at one end of each with said post, bars arranged in parallelism and pivotally connected at their top and bottom ends with the respective rails, stationary and movable collars mounted upon said post, a spring interposed between said collars, a link connecting said bell-crank with the movable collar, a notch-plate secured to the post, and a spring-pressed latch carried by said top rail and adapted to engage said plate.

4. In a gate, the combination of an upright post, top and bottom rails pivotally connected at one end of each with said post, bars pivotally connected at their top and bottom ends with the respective rails, stationary and movable collars, mounted upon said post, a spring interposed between said collars, and mechanical connections between the movable collar and said top rail.

5. In a gate, the combination of an upright post, top and bottom rails pivotally connected at one end of each with said post, bars arranged in parallelism and pivotally connected at their top and bottom ends with the respective rails, a two-part foldable strut connecting the inner end of said top rail, with the outer end of said bottom rail, a bell-crank fixedly secured to the top rail, stationary and movable collars mounted upon said post, a spring interposed between said collars a link connecting said bell-crank with the movable collar, a notch-plate secured to the post, a spring-pressed latch carried by said top rail and adapted to engage said plate, and braces for preventing any lateral swing of the rails.

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Witnesses:

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