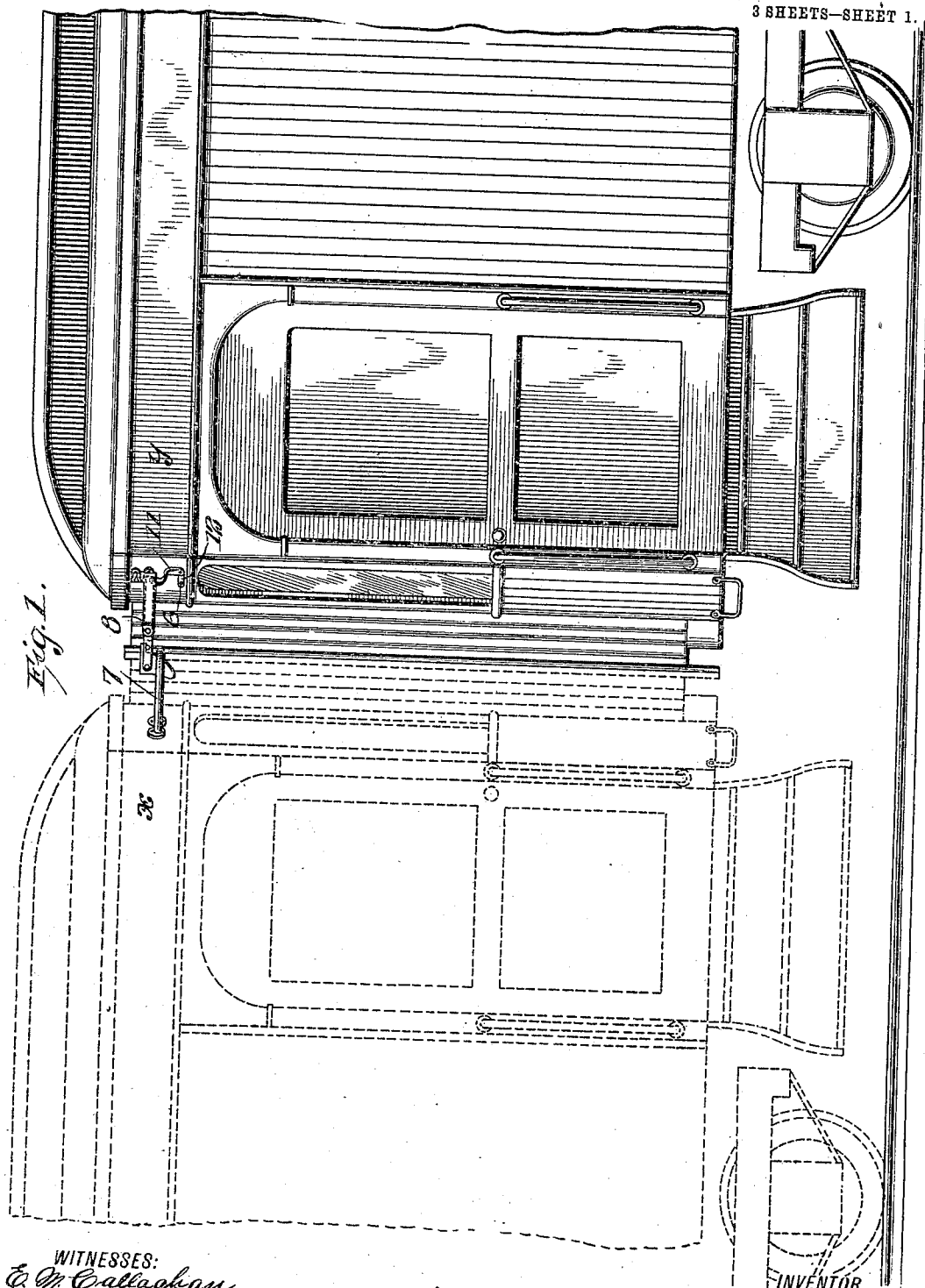


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F. T. FILLION.
SAFETY GATE FOR RAILWAY CARS.
APPLICATION FILED NOV. 2, 1909.

Patented June 7, 1910.

3 SHEETS—SHEET 1.



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Fig. 2.

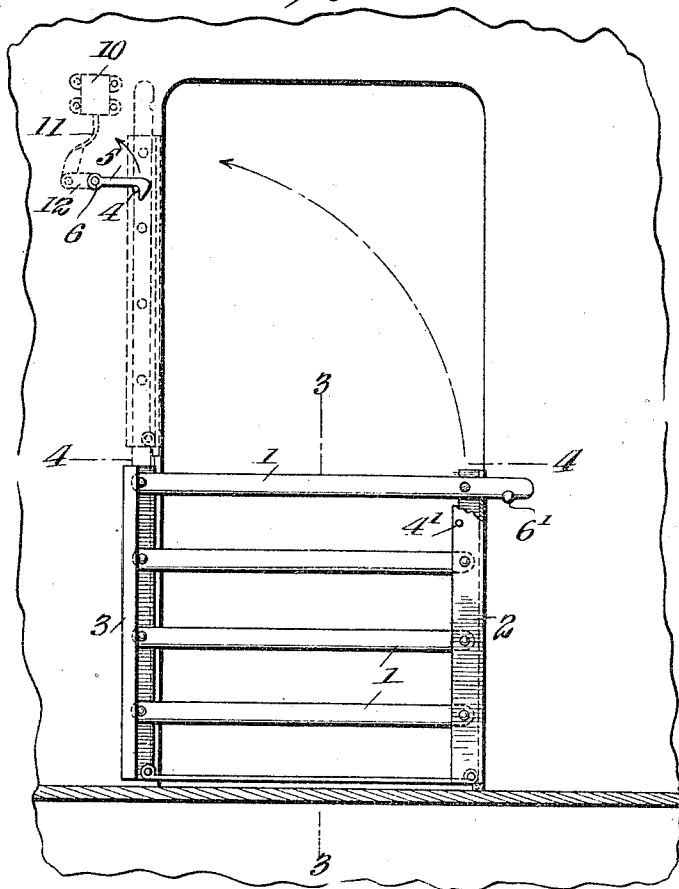
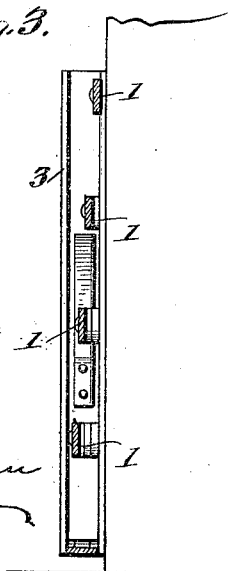
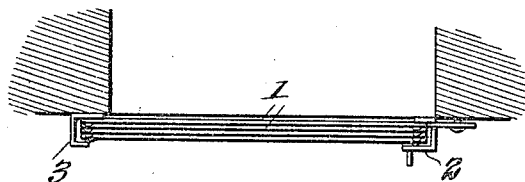


Fig. 3.



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Fig. 4.



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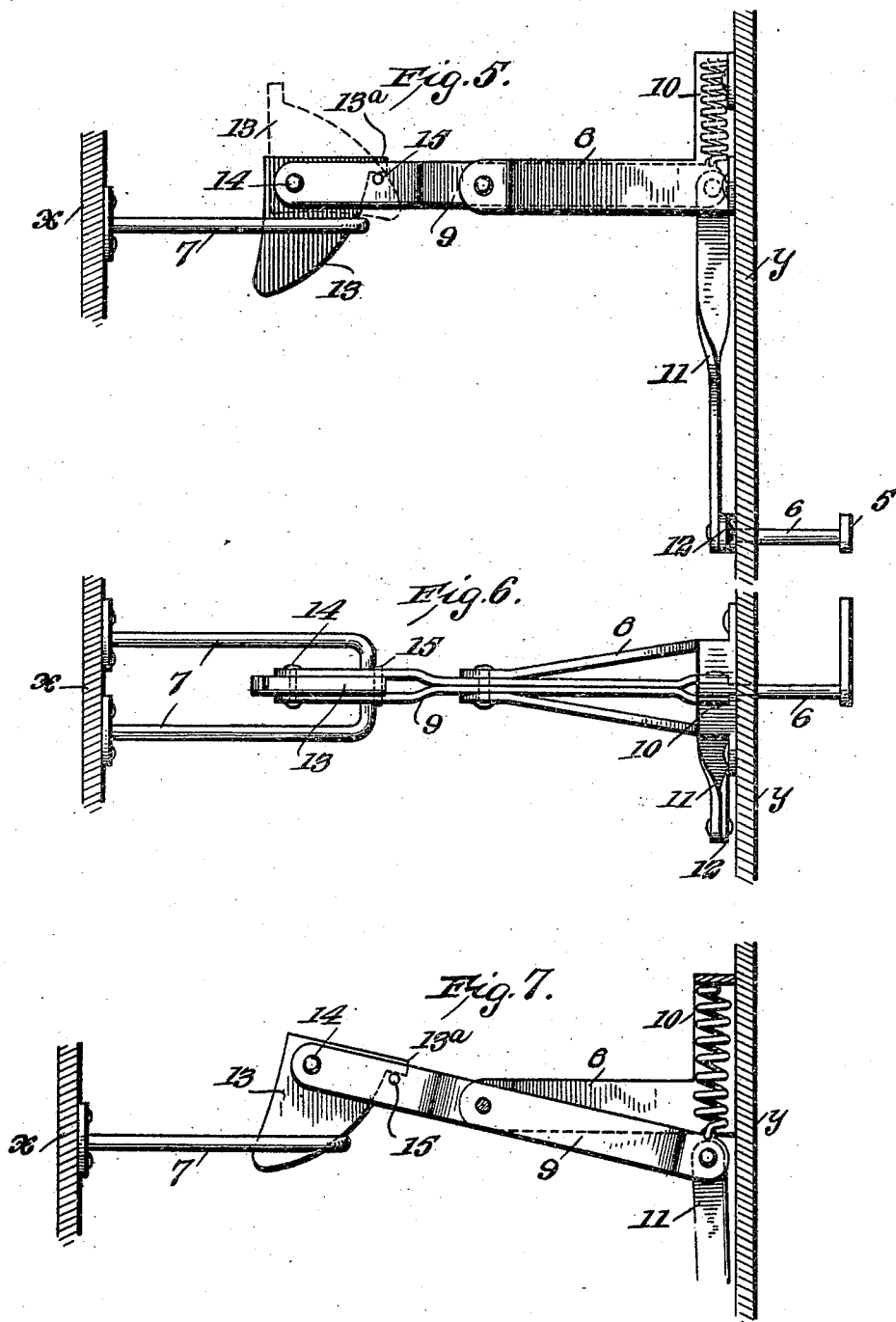
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UNITED STATES PATENT OFFICE.

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SAFETY-GATE FOR RAILWAY-CARS.

960,871.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed November 2, 1909. Serial No. 525,971.

To all whom it may concern:

Be it known that I, FRED T. FILLION, a citizen of the United States, and a resident of North Platte, in the county of Lincoln and State of Nebraska, have invented certain Improvements in Safety-Gates for Railway-Cars, of which the following is a specification.

My invention is a safety gate used on the ends of railway passenger cars and serving to prevent passengers or other persons from falling or being thrown off the platform of the car in case the latter becomes suddenly uncoupled from an adjacent one.

The gate is so constructed that it is held suspended or folded vertically, out of the way, when cars are coupled, but is automatically released, and falls into position across the end of the car platform, when the train is broken, that is to say, when the car to which the gate is attached is parted or uncoupled from the next one.

The invention is particularly applicable for vestibule cars but may be employed on others.

The details of construction, arrangement, and operation of the gate and parts connected therewith are as hereinafter described, and illustrated in the accompanying drawings in which—

Figure 1 is a side elevation of adjacent ends of vestibule cars coupled together and provided with my improved gate attachment. Fig. 2 is an end view of a portion of one of the cars with my improved gate thrown down or in lowered position. Fig. 3 is a vertical section on the line 3—3 of Fig. 2. Fig. 4 is a horizontal section on the line 4—4 of Fig. 2. Fig. 5 is mainly a side elevation of means connected with the gate for automatically operating the same. Fig. 6 is a plan view of the parts shown in Fig. 5. Fig. 7 is a side view illustrating the operation of devices shown in Figs. 5 and 6, when the adjacent cars to which they are applied are parted or uncoupled.

In Fig. 1, *x* and *y* indicate two cars provided with vestibule attachments which are shown in contact as when the cars are coupled together.

In Figs. 2 and 4, the gate proper, which is applied to each of the vestibuled ends of the cars *x* and *y*, is shown in a horizontal position, that is to say, in the position in which it closes the passageway through a vestibule. The gate is composed of a series

of horizontal bars 1 and two vertical bars 2 and 3, the bar 2 being pivoted to the ends of the horizontal bars and the latter in turn pivoted to the bar 3 which is fixed in position on the end of the car. The gate may be swung up in the direction of the curved arrow, Fig. 2, until it occupies a vertical position, as shown by dotted lines in Fig. 2, its parts being thus folded, as will be understood by reference to Fig. 4. A pin or stud 4' projects from the upper portion of the gate bar 2, and, when the gate is raised, this stud engages a latch or hook 5 which forms a fixed attachment of a short crank or rock shaft 6, that is journaled in the frame of the car. It is obvious that if the latch 5 be raised, the gate will be released and will fall by gravity to the position indicated by full lines in Fig. 2, in which its elongated top bar engages a catch 6', whereby the gate is locked in position for closing the vestibule passage.

The means for automatically tripping the latch and thus disengaging the gate will now be described.

As shown in Fig. 1—see also Figs. 5, 6, and 7—a metal loop 7 is attached to the car end *x* and projects horizontally therefrom. To the opposite car *y* there is rigidly attached a two-arm bracket 8 which projects horizontally, and in its outer end is pivoted a lever 9 whose inner end is normally supported by a spring 10 and is pivotally connected with a bar 11 that extends down to and is pivoted to the horizontal arm 12 of the rock shaft 6 of which the latch 5 also forms an attachment. The spring tends to hold the lever 9 in horizontal position, indicated in Figs. 5 and 6, but when thrown into the inclined position indicated in Fig. 7, the bar or rod 11 is thereby forced down, whereby the latch 5 is tilted on its pivot and disengaged from the gate so that the latter is released. This operation takes place when the two cars are parted either intentionally or accidentally, and is effected by means of a trip 13 which is pivoted at 14 in the outer end of the bifurcated lever 9. It is provided with a projection or shoulder 13^a that rests normally upon a cross-pin 15 of the lever 9. Thus, the trip 13 is held normally in the position indicated by full lines in Figs. 5 and 7. When two cars provided with the before-described attachments come together, the loop 7 strikes against the lower portion of the trip 13 and thereby turns it

on its pivot and forces it up to the position shown by dotted lines in Fig. 5, and the trip then drops back into the loop, as shown by full lines, Figs. 5 and 6. When the two cars are parted, the rear curved, or forwardly inclined, side of the trip 13 rides up on the free end of the loop 7, as indicated in Fig. 7, and the leverage thus applied forces the bar or rod 11 downward and causes release of the gate, as before described. In brief, the pivoted trip 13 permits automatic engagement of two cars in consequence of being swung upward on its pivot, but effects automatic release of the gate when the two cars are uncoupled and parted, since the trip 13 is then prevented from turning on its pivot and caused to ride up on the loop 7.

It is to be understood that, in practice, the end of each car is provided on one side with the metal loop 7, and on the other with the opposite attachment consisting of the bracket 8, lever 9, and trip 13. Thus, there is a double attachment to the end of each car which insures two locking engagements when cars come together.

The parts just referred to are shown arranged above the windows in the ends of the cars, but it is obvious they might be arranged at a lower point without affecting the operation. In brief, the location of the engaging and releasing devices vertically is immaterial so long as they can be operatively connected with the gate for holding and releasing the same as described.

While my invention is preferably used on or applied to vestibuled cars, it is obvious that it may be applied to others without material change in any feature.

What I claim is:—

1. The combination, with a car, of a gate pivoted to swing vertically across the passageway at the end of the car, a movable device engaging the gate and serving to hold it normally elevated, means attached to the end of the car and operatively connected with said device and adapted to operate the same and release the gate when cars are separated, substantially as described.

2. The combination, with two cars, of a gate pivoted to one of them and adapted to swing vertically across the passageway at the end of the car, a device for holding the gate normally elevated but adapted to release the

same so that it may fall to the horizontal and closing position, and means for automatically operating said device to effect such release, the same consisting of devices attached to opposite car ends and adapted to automatically engage when the cars come together and to release the gate when the cars are parted, substantially as described.

3. The combination, with opposite cars, of a gate pivoted to one of them and adapted to swing vertically so as to close the passageway when adjusted horizontally, a rocking latch for holding the gate normally elevated, and means for operating said latch, the same consisting of a lever pivoted in a fixed support, a rod connecting it with the latch, and means for tilting the lever and thus operating the latch when the cars are parted, substantially as described.

4. The combination, with two cars, of a gate pivoted to one of them and adapted to swing vertically and to close the passageway when in a horizontal position, a latch for holding the gate in the elevated position, and means for operating the latch to release the gate, the same consisting of a lever pivoted in a fixed support, a rod connecting the inner end of the lever with the latch, a trip on the outer end of the lever, and a device on the opposite car adapted to engage said trip and thus tilt the lever when the cars are parted, whereby the gate is simultaneously released, substantially as described.

5. The combination, with opposite cars and a gate for closing the passageway of one of them, of means for releasing the gate from the elevated position, the same consisting of a lever pivoted in a fixed support, a spring tending to hold the lever normally horizontal, a trip supported on the outer end of the lever, and a loop attached to the opposite car and adapted to engage the trip, the latter being pivoted and adapted to swing upward when engaging the loop on the front side and remaining fixed in position when the loop engages the rear side, whereby the trip is caused to slide upward and out of the loop when the cars are parted, whereby the latch is operated simultaneously to release the gate, substantially as described.

FRED T. FILLION.

Witnesses to signature:

O. H. BACON,

EDD P. REBHAUSER.