

E. KRANCHER.
SAFETY GATE.
APPLICATION FILED JULY 20, 1909.

957,065.

Patented May 3, 1910.

2 SHEETS—SHEET 1.

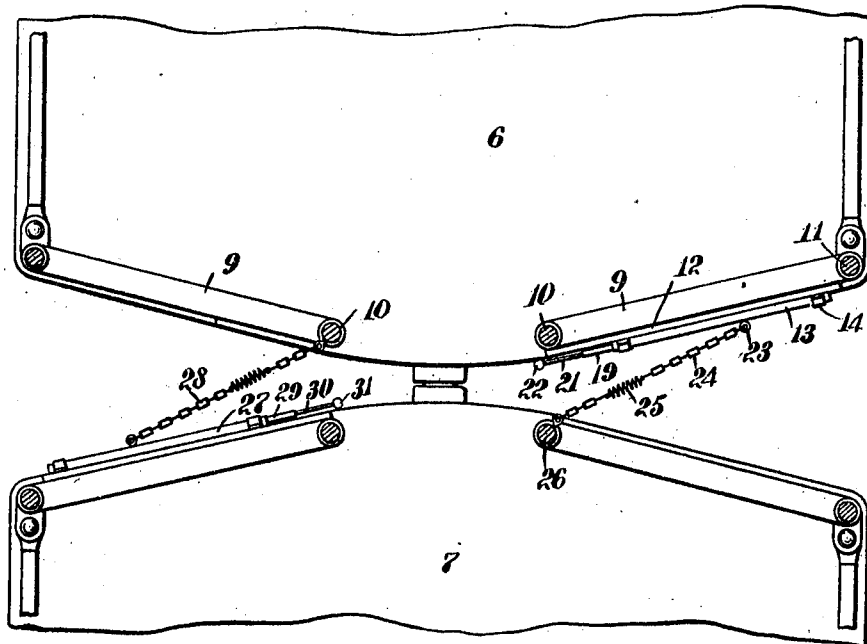


FIG. 1.

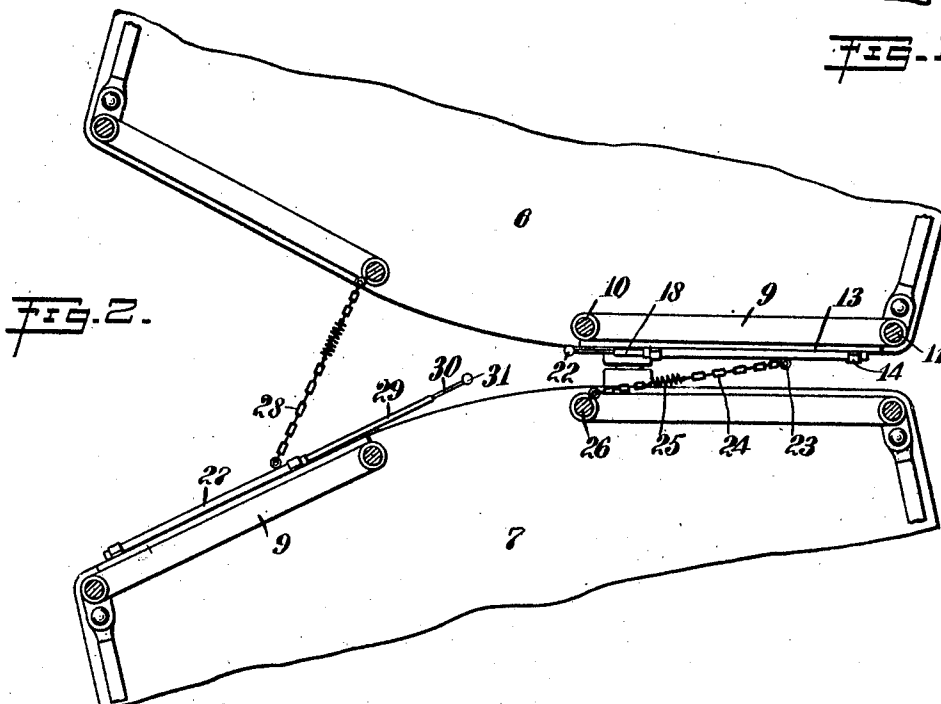


FIG. 2.

WITNESSES

G. Robert Thomas
Walton Harrison

INVENTOR

Edward Krancher

BY

Mumfrees

ATTORNEYS

E. KRANCHER.
SAFETY GATE.
APPLICATION FILED JULY 20, 1909.

957,065.

Patented May 3, 1910.

2 SHEETS—SHEET 2.

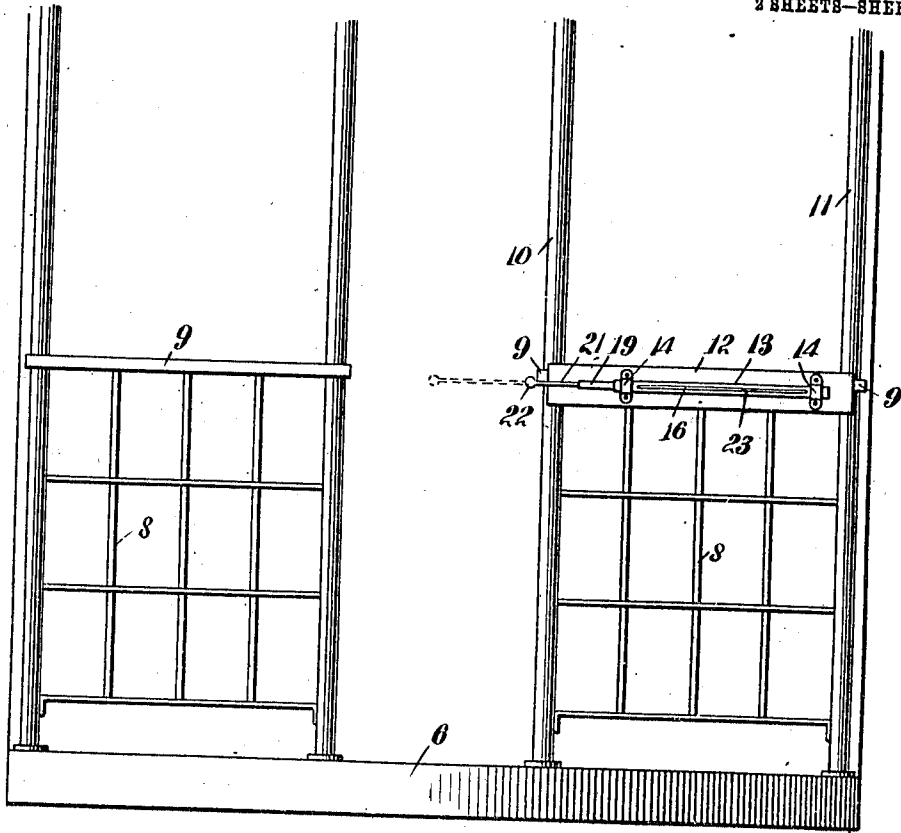


FIG. 3.

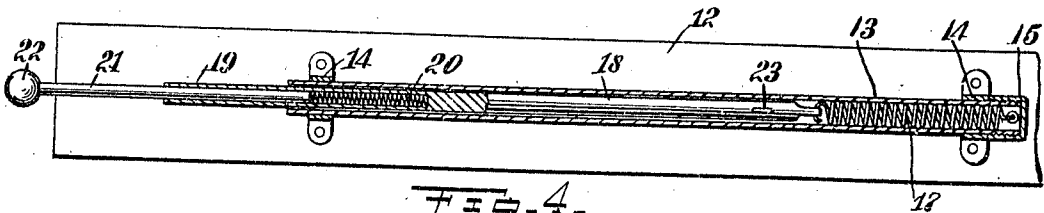


FIG. 4.

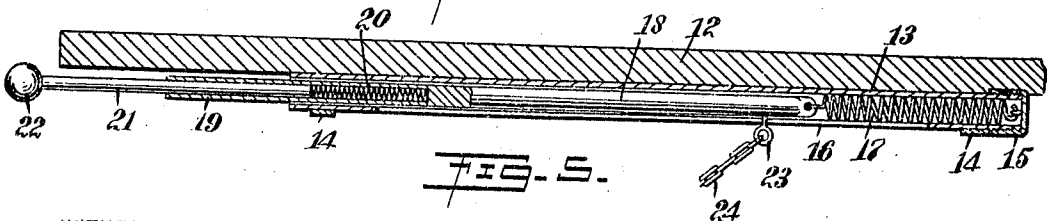


FIG. 5.

WITNESSES

G. Robert Thomas
Walton Harrison

INVENTOR

Edward Krancher

BY

Mumolo
ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD KRANCHER, OF NEW YORK, N. Y.

SAFETY-GATE.

957,065.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed July 20, 1909. Serial No. 508,620.

To all whom it may concern:

Be it known that I, EDWARD KRANCHER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Safety-Gate, of which the following is a full, clear, and exact description.

My invention relates to safety gates, suitable more especially for use upon cars and similar railway vehicles, my more particular purpose being to prevent persons from passing from one car to another while the train is rounding a curve, or at least to warn such persons of this danger.

More specifically stated, my invention comprehends a gate movably mounted upon the end of a car and adapted to close or partially close the passageway from this car to another, the gate being actuated by mechanism which is controllable by the relative positions of the two cars as the train passes around a curve.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a fragmentary view partly in plan and partly in section, showing the adjacent platforms of two consecutive cars, the gates carried by these platforms and the chains and associated parts for moving these gates, said chains and associated parts reaching from the gate on one car to a railing fixture on the other car; Fig. 2 is a view similar to Fig. 1, but showing the cars as occupying the positions which they assume in passing around a curve; Fig. 3 is an elevation of a car platform provided with railings and carrying my improved safety gate; and Fig. 4 is a vertical longitudinal section through the gate showing the spring bolt and parts associated with it; and Fig. 5 is a vertical horizontal section through the gate shown in Fig. 4.

At 6, 7 are platforms of two consecutive cars each of which is provided with pickets 8 and railings 9, and also with posts 10, 11. Mounted upon a railing 9 and supported by aid of the posts 10, 11 is a panel 12 which supports a tubular casing 13 secured thereupon by aid of straps 14 disposed adjacent to its ends. The tubular casing 13 is provided at one of its ends with a closure cap 15. The tubular casing is further provided

with a slot 16 extending in the general direction of its length. Inside of the tubular casing 13 is a spiral spring 17 which is connected with the closure cap 15.

At 18 is a bolt having generally the form of a cylindrical rod and connected with the spring 17. The spring 17 is a tensile spring, its tension being such as to normally retract the bolt 18 to the right according to Figs. 4 and 5. The bolt 18 is provided with a tubular portion 19 containing a spiral spring 20 and engaging this spiral spring is a sliding rod 21 which extends into the tubular portion 19 and is provided with a ball 22 at its outer or free end.

Mounted upon the bolt 18 is an eye 23 which extends outwardly through the slot 16. A chain 24 is connected with the eye 23. This chain includes a spring 25 which is so arranged as to form, for some purposes, practically a link in the chain, the purpose of the spring being to render the chain more resilient. The chain 24 is connected with a post 26 upon the opposite car 7. The car 7 is provided with mechanism duplicating that found on car 6. For instance, the bolt casing 27, the chain 28, the bolt 29, and the sliding rod 30 with its ball 31, are of the same form as the analogous parts above described with reference to the car 6.

The parts are so arranged that each gate is mounted upon a car and the chain associated with such gate is extended across to the opposite car, as will be seen from Figs. 1 and 2. With the parts thus in position, if the cars 6, 7 swing into the position indicated in Fig. 2, as they will do when the train is passing a "right-hand" curve, the bolt 29 is thrown to the right. If, however, the train be passing around a "left-hand" curve, the bolt 29 will not move from its normal position; whereas, the bolt 18 will be thrust outwardly toward the left. In either case, one of the bolts is extended from its normal position so that the bolt at its outer or free end reaches the approximate center of the passage which it guards, as will be understood from Fig. 2.

The operation of my device is as follows: The parts being fitted up and connected as above described, and as shown in Figs. 1 and 2, the train starts upon its journey. Whenever a passenger starts to move from one car to another, the relative position of the bolt and the gate either prevents him from leaving the car upon which he is

standing, or else gives him warning. If a person desires to pass from one car to another, he is not absolutely prohibited from so doing, even when a train is passing a dangerous curve. He may grasp the knob 31 or 22, as the case may be, and push the bolt back into the case in which it belongs, and thus may make his way from one car to the other. In this event, however, the gate has served to give him warning. If the railway curve is very sharp, so that the cars form a considerable angle to each other (see Fig. 2) and begin to exert more or less strain upon the chain (28 or 24) the resilience of the spring forming a part of the chain enables the chain to stretch slightly and thus avoid damage to the gate or any part associated with it. Moreover, the resilience thus given the chain is of assistance in enabling the operator to push the bolt back a little way if the yielding of the spring 20 is not sufficient to allow adequate backward movement of the knob. If a person happens to be passing from one car to another and the gate chances to be moved while this is taking place, it is possible that one of the knobs may press directly against him. In this event no harm is done, for the reason that the spring 20 is made of such tension as to yield readily, though the action of the bolt 18 is positive.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A device of the character described, comprising an inclosing member, a bolt mounted therein and movable relatively thereto, means for mounting said inclosing

member upon a car or the like, means for actuating said bolt, a rod carried by said bolt and movable relatively to the latter, and a spring disposed intermediate said rod and said bolt.

2. The combination of a casing, means for mounting the same upon a car or the like, a bolt slidably mounted within said casing, and a chain connected with said bolt and provided with means whereby it may be secured to some other car or the like, said chain including a spring for giving it resilience.

3. The combination of a panel to be supported upon a car, a casing mounted upon said panel, a bolt slidably mounted within said casing, a rod carried by said bolt, a spring connection from said rod to said bolt for cushioning movements of said rod relatively to said bolt, a spring for retracting said bolt, and mechanism controllable from another car for actuating said bolt.

4. The combination of a plurality of cars, a gate slidably mounted upon one of said cars and having generally the form of a longitudinal bolt, a rod movable relatively to said bolt, a spring disposed intermediate said rod and said bolt, and a connection from said bolt to another of said cars for the purpose of actuating said bolt.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD KRANCHER.

Witnesses:

F. A. HOSTEN,
JOHN P. DAVIS.