

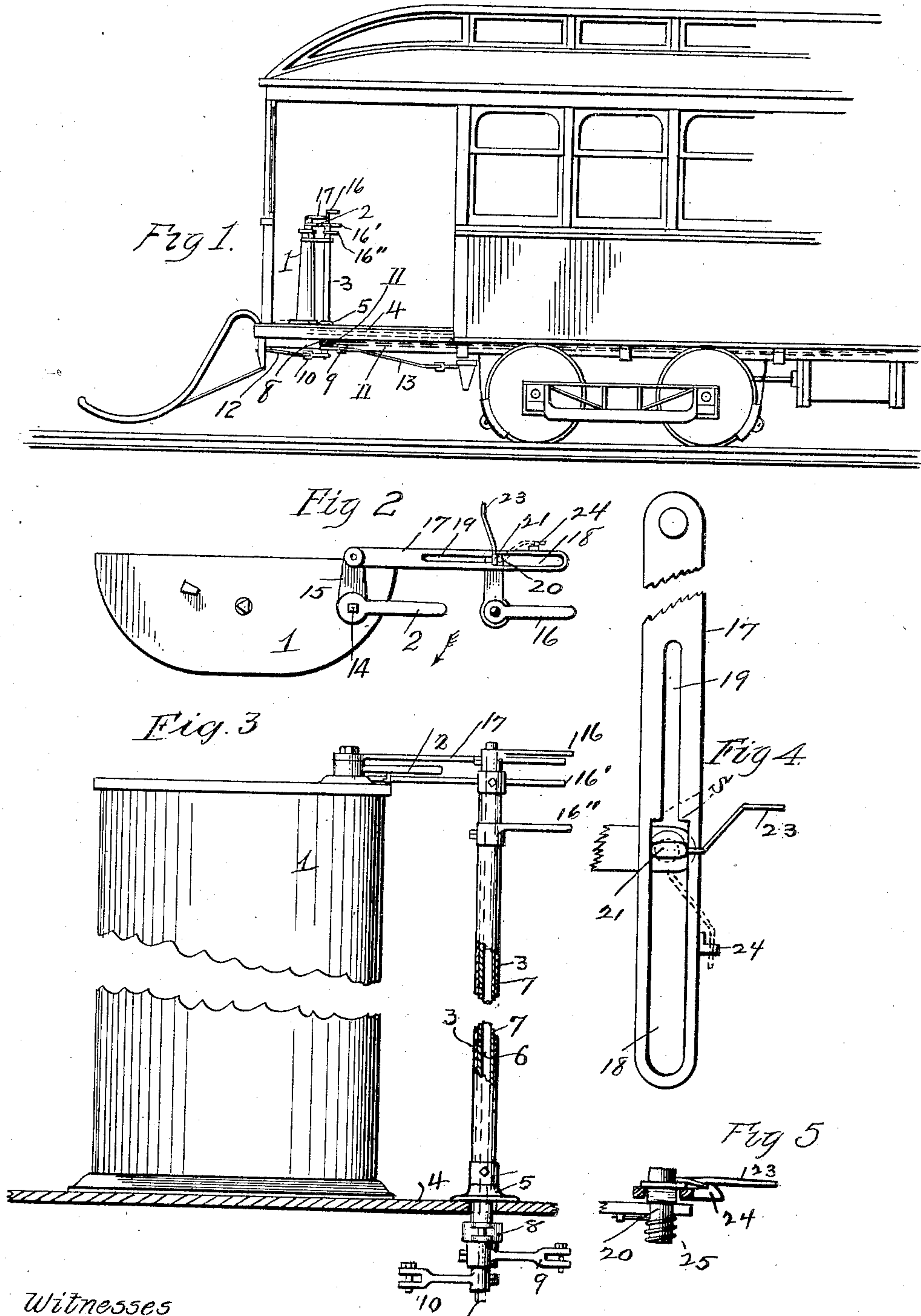
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A. J. GAIRING.

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DEVICE OPERATED BY CONTROLLER REVERSE LEVER FOR AUTOMATICALLY
OPERATING SAFETY APPLIANCES.

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Witnesses

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DEVICE OPERATED BY CONTROLLER REVERSE-LEVER FOR AUTOMATICALLY
OPERATING SAFETY APPLIANCES.

No. 839,219.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED J. GAIRING, a citizen of the United States, and resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Devices Operated by Controller Reverse-Levers for Automatically Operating Safety Appliances, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in safety appliances for electric traction railways, and the particular objects of the invention are to provide means operatively connected with the reverse lever of the controller, which will effect the opening of the sand box valve and conjointly the releasing of the fender, simultaneously with the movement of reversing lever of the controller. In this manner the speed of the car can be reduced by means of the increased friction upon the rails and the fender thrown as soon as the controller is operated to stop the car. The same device is also shown in connection with the emergency pneumatic brake mechanism so that the brakes, sand lever, and lever which releases the fender can be simultaneously operated when the controlling lever of the pneumatic brake is moved to stop the car. These devices can be separately operated if desired without movement of the controller or brake lever.

This device is more fully described hereinafter, illustrated in the accompanying drawings, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a street car showing the safety device applied to the lever of the pneumatic braking device, and connecting the lever with the sand valve and the releasing device for the fender. Fig. 2 is an enlarged plan view of the controller showing controller lever and connecting mechanism; Fig. 3 is an elevation of controller showing lever connections, a portion of the sleeve shaft being broken away to show the interior of shaft; Fig. 4 is an enlarged plan view of the trigger device which serves to rotate the guide pin in the slotted arm; Fig. 5 is a plan view of the top of the pneumatic head shown in Fig. 1.

In these views, 1 is the controller, 2 the

controller reverse lever, 3 a vertical sleeve or shaft upon the platform 4 of the car closely adjacent to the controller. This sleeve shaft is mounted to turn freely in the socket 5 upon the floor and within it is seen a second shaft 6 adapted to turn freely in the first named shaft. A third shaft 7 is shown within the second shaft. Upon the lower extremities of these shafts are shown arms 8, 9 and 10 respectively which connect with the levers 11, 12 and 13, leading to the emergency brake operating mechanism, and releasing lever of the fender, and to the valve of the sand box. The top of the controller lever is extended vertically at 14 and arms 15 are secured thereto. The operating mechanism for each shaft being the same as for all it will only be necessary to describe one set of levers, the others being practically duplicates thereof. 16, 16' 16'' are levers secured to the shafts by means of which they can be operated independently of the controller lever.

When operated by the controller a link 17 is seen pivoted at one end to the arm 15, on the controller reverse lever, and is provided with a slot which is wider at 18 at the outer end than at 19 at the inner end. In this slot is mounted the guide pin 20 which is provided with a flattened portion 21. The larger diameter of this flattened part is adapted to move in the wider portion 18 of the slot, and the narrow sides register with the narrow portion 19 of the slot. It will readily be seen from the plan view of this link Fig. 4, that when the controller lever is turned the link and pin 20 will be pushed forward so as to rotate the shaft to which the arm carrying the pin is attached and operate the safety mechanism connected therewith, and the flat side of the pin will rest against the shoulder S. It will be seen, however, that either arm upon the vertical shaft can be moved and the shaft can be turned without disturbing the reverse lever of the controller, since the pin 20 will slide in the wide part of the slot freely without moving the link 17.

In order to enable the operator to throw out the safety devices when operating the controller in case they are not needed, as when moving on switches, or at the barn, I provide the pin with an arm or rod 23 which will throw it a quarter around so that the narrow side will enter the narrow slot and the

movement of the link will not affect the arm upon the shaft. The rod 23 when thrown back is caught by a detent 24 upon the link 17 and held back until the link returns to its original position when the rod will slip out of the detent and a coiled spring 25 upon the pin will throw it around so as to present the broad side to the narrow opening, when of course the link will move it forward again as before. The rod 23 is readily thrown by the hand of the operator and all the connecting parts with the controller are easy of access and adjustment.

Having described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a safety device upon an electric traction car, of a "controller" and reverse lever therefor, and mechanism for operating said safety device by means of said reverse lever, consisting of a shaft mounted in the platform of said car, an arm thereon connected with said safety device, an arm upon the controller lever and adjacent arm upon the shaft, a link pivoted at one end of the arm upon the controller lever and provided with a slot at the other end, and a pin in the arm of the shaft adjacent to the controller arm and inserted in said slot, substantially as described.

2. The combination with a safety device upon an electric traction car, of a controller, and reverse lever therefor, a shaft mounted in the platform of said car, a socket therefor upon the floor of the car, an arm upon the lower extremity of said shaft, levers operatively connected with the said safety devices, and with said shaft, an arm upon the controller reverse lever, a lever upon said shaft by means of which it is operated independently of the controller lever, and means for operatively connecting said shaft and controller lever, comprising a link pivoted to the arm upon the controlling lever, said link provided with a slot having a wide and a narrow portion, a guide pin having a flattened portion, said guide pin movable in said slot, and mounted upon the operating arm of said shaft, and a shoulder in said link against which said pin normally rests, said wide portion of the slot permitting of free movement of said pin and arm of said shaft in the reverse direction.

3. The combination with a safety device upon an electric traction car, of a controller, and reverse lever therefor, a shaft mounted

in the platform of said car, a socket therefor upon the floor of the car, an arm upon the lower extremity of said shaft, levers operatively connected with the said safety devices, and with said shaft, an arm upon the controller reverse lever, a lever upon said shaft by means of which it is operated independently of the controller lever, and means for operatively connecting said shaft and controller lever, comprising a link pivoted to the arm upon the controlling lever, said link provided with a slot having a wide and a narrow portion, a guide pin having a flattened portion, said guide pin movable in said slot, and mounted upon the operating arm of said shaft, and a shoulder in said link against which said pin normally rests, said wide portion of the slot permitting of free movement of said pin and arm of said shaft in the reverse direction, and means for rotating said pin to bring the narrow side in line with said narrowest portion of said slot.

4. The combination with a safety device upon an electric traction car, of a controller, and reverse lever therefor, a shaft mounted in the platform of said car, a socket therefor upon the floor of the car, an arm upon the lower extremity of said shaft, levers operatively connected with the said safety devices, and with said shaft, an arm upon the controller reverse lever, a lever upon said shaft by means of which it is operated independently of the controller lever, and means for operatively connecting said shaft and controller lever, comprising a link pivoted to the arm upon the controlling lever, said link provided with a slot having a wide and a narrow portion, a guide pin having a flattened portion, said guide pin movable in said slot, and mounted upon the operating arm of said shaft, and a shoulder in said link against which said pin normally rests, said wide portion of the slot permitting of free movement of said pin and arm of said shaft in the reverse direction, means for rotating said pin to bring the narrow side in line with said narrowest portion of said slot, and automatic means for rotating the pin to bring it into its original position to present the broad side thereof to the narrow portion of the slot when the link is returned to its original position.

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Witnesses:

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