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RAILWAY SAFETY DEVICE.
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RAILWAY SAFETY DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SAMUEL G. DAVIS, a citizen of the United States of America, residing at Horatio, in the county of Sevier, and State of Arkansas, have invented new and useful Improvements in Railway Safety Devices, of which the following is a specification.

The present invention relates to improvements in safety appliances for railway cars and has particular application to appliances of this character which are connected with the train line air pipe of the brake mechanism to reduce the pressure of the train line air in the event of the cars leaving the track whereby to apply the brakes to the wheels to eliminate the danger of the cars turning turtle and causing the loss of life and limb.

The invention has for its prime object to provide a device of this character which shall be connected with the train line air pipe and arranged immediately above the rails of the track structure whereby, in the event of the car trucks leaving the tracks, the device or appliance may operate to cause a reduction of the train line air to effect an application of the brakes to the car wheels to bring the train to a standstill before any serious damage or injury has been done.

A further object of the invention is the provision of an appliance of this class which shall include a frangible element arranged in open communication with the train line air pipe and connected thereto and positioned immediately above the rails of the track structure preferably intermediate the wheels of the truck and designed to lie in a plane transverse the rails so that the same may be broken, upon the truck leaving the tracks, to effect the reduction of the train line air whereby to automatically apply the brakes to the car wheels and bring the train to a standstill.

With the above and other objects in view, which shall appear as the description progresses, the invention consists in the construction, combination and arrangement of parts hereinafter set forth in and falling within the scope of the appended claims.

In the accompanying drawings forming a part of this specification and in which I have illustrated what I now consider to be the preferred form of the invention; Figure 1 is a fragmentary transverse sectional view of a car, equipped with the present inven-

tion, Fig. 2 is an end elevation of the invention, the same being removed from the car.

Similar reference characters designate like parts throughout the several views.

Referring more particularly to the accompanying drawings, a car is designated at A and as shown is equipped with the present invention and designed to travel upon the rails of the track structure.

The appliance in the present instance includes a fluid conveying pipe 1 connected at one end through the medium of a T-coupling 2 with the train line air pipe 3 suspended from the bottom of the car in suitable hangers. The pipe 1 is preferably arranged at an angle to the vertical and has connected to its lower end a flexible air hose 4, the pipe 1 immediately adjacent its connection with the air hose being provided with an angle cock or cutoff valve 5 designed to cut off communication between the pipe 1 and air hose when desired. The free end of the air hose 4 is clamped upon one end of a section of piping 6 terminating in an elbow 7 and having communication with a vertically arranged pipe 8 positioned intermediate the wheels of the truck and in vertical alinement with one of the track rails. Encircling the pipe 8 intermediate its length is a collar 9 carrying a horizontally arranged fastening plate 10 adapted to be bolted to the lower beam of the car truck. The collar 9 is provided with set screws 11 designed to engage the pipe 8 to hold the latter in position.

Arranged in open communication with the pipe 8 and connected to the lower end of the latter is a frangible element 12 which includes a pair of oppositely disposed angularly arranged tubes or pipe sections 13 connected to the lower end of the pipe 8 through the medium of an inverted Y-coupling 14. The outer or free ends of the tubes 13 are provided with elbows 15 terminating in a horizontal plane and adapted to receive a frangible tube 16, such as glass. This tube is preferably arranged immediately above the rails of the track structure and transverse thereto so that, in the event of the truck leaving the track the tube 16 may be broken to reduce the pressure of the train line air in the pipe 3 whereby an application of the brakes to the wheels will follow, thus bringing the car to a standstill before any serious damage or injury has resulted.

In some instances it may be found desirable to adjust the frangible element relatively to the rails and to accomplish this result, the set screws 11 may be operated to disengage the pipe 8 to permit the latter to be moved relatively to the collar 9 to bring about the desired adjustment between the rails and the frangible element. Upon the proper adjustment of the frangible element being found, the set screws 11 are operated to bind against the pipe 8 to retain the frangible element in its adjusted position.

To prevent breaking of the frangible element by obstructions in the track rails, the said element is substantially inclosed by a guard or protector 17, which preferably comprises a net of wirework or the like formed with a centrally arranged opening 18 designed to rest upon the coupling 14 and supported upon the pipe sections 13, the guard terminating short of the bottom of the tube 16 in order that the breaking of the latter will not be interfered with upon the same engaging the tracks in the derailment of the trucks.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and

that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described my invention, what I claim and desire to secure by Letters-Patent is:

1. In a safety appliance for railway cars, the combination with a train line air pipe, of a frangible element arranged in communication with said pipe and adapted to be broken in the derailment of the car to reduce the pressure of the train line air whereby the brakes will be applied to the wheels, means for adjustably supporting said frangible element, and a guard designed to substantially inclose said frangible element to prevent accidental fracturing or mutilation thereof.

2. In a safety appliance for railway cars, the combination with a train line air pipe, of a frangible element arranged in communication with said pipe and adapted to be broken in the derailment of the car to reduce the pressure of the train line air whereby the brakes will be applied to the wheels, means for supporting said frangible element, and a guard composed of wire network designed to substantially inclose said frangible element to prevent accidental fracturing or mutilation thereof.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL G. DAVIS.

Witnesses:

A. F. COWDEN,
D. L. COWDEN.