

J. T. ANDREW.
RAILWAY SAFETY DEVICE.
APPLICATION FILED JAN. 3, 1911.

987,094.

Patented Mar. 14, 1911.

Fig. 1.

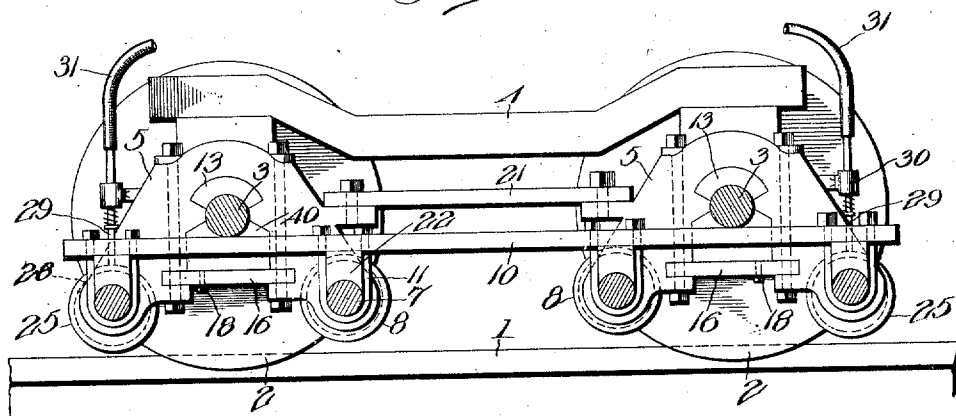


Fig. 2.

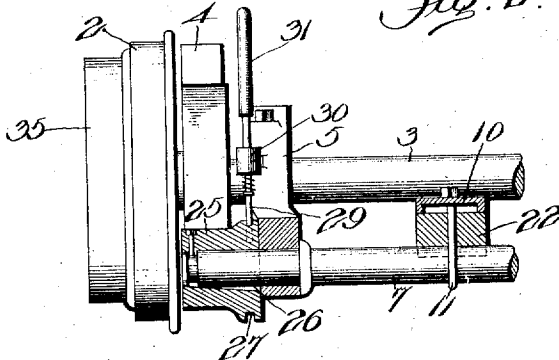
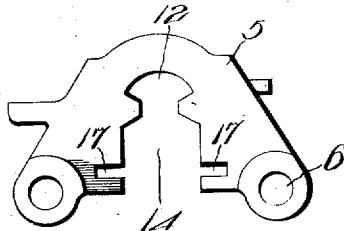


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES T. ANDREW, OF MONTGOMERY, ALABAMA.

RAILWAY SAFETY DEVICE.

987,094.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Original application filed November 18, 1910, Serial No. 595,095. Divided and this application filed January 3, 1911. Serial No. 600,622.

To all whom it may concern:

Be it known that I, JAMES T. ANDREW, a citizen of the United States, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Railway Safety Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railway safety devices, and has for its object to improve the invention disclosed in my prior Patent #941,222, issued November 23, 1909, and is a division of my application #593,095, November 18, 1910, railway safety appliances.

To this end, the invention consists in the novel details of construction and combinations of parts more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification, in which like numerals refer to like parts in all the views:—Figure 1 is a longitudinal sectional view of the truck of a locomotive, with my improvements attached thereto; Fig. 2 is a sectional detail view of certain of the portions shown in Fig. 1; and, Fig. 3 is an elevational view of a hanger for the safety rollers detached from the truck.

1 indicates the track, 2 the wheels of a locomotive, 3 the axles and 4 one of the side bars of the truck. On the axles 3 I provide inside of the wheels 2 at each end hangers 5, preferably of the general shape shown in Fig. 3. These hangers are provided with orifices 6 through which pass the axles 7 of the safety rollers 8, which are located slightly above track 1, as shown. Extending from end to end of the truck underneath the axles 3, is a continuous beam 10, which is provided with U-shaped supporting brackets 11, passing down underneath and around the axle 7.

The hangers 5 are provided with cut-away places 12 to accommodate the brasses 13 and with cut-away places 14 to accommodate the lubricating portion of the journal box. Passing underneath the journal boxes are plates 16, fitting in slots 17 in the hangers, and which are secured in place by the bolts 18, as shown. Upon taking out the

bolts 18 and removing the plates 16, the hangers 5 can be readily removed from the axles 3.

Connecting the hangers 5 is a bar 21, which steadies and braces the same, and resists any twisting or distorting strains. Between the axles 7 and the beam 10 are a number of pressure blocks 22, which when the engine is derailed, and the strain is brought upon the rollers 8, serve to transmit the strain from the axles 7 to the beam 10, which in turn transmits said strain to the main axles 3 of the truck, as will be readily understood. In the same way this strain is transmitted through the plates 16 and box 40 to the axles 3, as will be clear from Fig. 1.

The extreme forward and rear safety rollers 25 are provided with a conical bore 26, as illustrated in Fig. 2, and also with a circumferential groove 27, in which fits a segment of a ring 28, Fig. 1, attached to the spring-pressed rod 29, controlling the air valve 30, and connected by the pipe 31 to the air-brake system.

The operation of my invention is as follows:—As clearly disclosed in my former patent above, when the engine leaves the track, the safety rollers 25 on one side of the truck receive the weight of the engine and truck on one rail, while wheels such as 35 on the other side of the engine receive the weight of said engine and truck on the other rail. In the present invention, however, when the forward or rear rollers 25 come in contact with the rail, the said rollers will be lifted, owing to their conical bore, and will thereupon raise the spring-pressed rod 29, to operate the air valve 30, and to automatically apply the brakes to the train. In all cases the weight which comes upon the safety rollers 8 and 25 is transmitted through the axles 7 to the longitudinal beams 10, which in turn transmit the strain to the main axles 3 of the truck. A portion of this strain is also transmitted through the plates 16 and box 40 to the main axles 3, as above indicated.

It is obvious that those skilled in the art may vary the details of construction and the arrangement of parts without departing from the spirit of my invention, and, therefore, I do not wish to be limited to such features as disclosed, except as may be required by the claims.

What I claim is:—

1. In a railway safety appliance provided with a train air pipe the combination of a safety wheel having a tapered bore; a safety axle on which said wheel is mounted; and connections between said wheel and pipe adapted to be operated when said safety wheel is raised, substantially as described.

2. In a railway safety appliance provided with a train air pipe the combination of a safety wheel having a tapered bore; a safety axle on which said wheel is mounted; a hanger through which said axle passes; and connections comprising a fluid controlling valve between said wheel and pipe adapted to be operated when said safety wheel is raised, substantially as described.

3. In a railway safety appliance the combination of a truck provided with a main axle; a hanger supported from said axle; a safety axle passing through said hanger; a safety wheel provided with a tapered bore and a grooved circumference mounted on said safety axle; a spring controlled rod having a member fitting the groove in said safety wheel; and a fluid controlling valve adapted to be operated by said rod, substantially as described.

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

JAMES T. ANDREW.

Witnesses:

W. H. HUBBIRD,
CHELLY B. BAUPIN.