E. J. MASTERSON.

SAFETY RAILWAY APPLIANCE.

APPLICATION FILED SEPT. 2, 1913.

1,100,316.

Patented June 16, 1914.

2 SHEETS—SHEET 1.

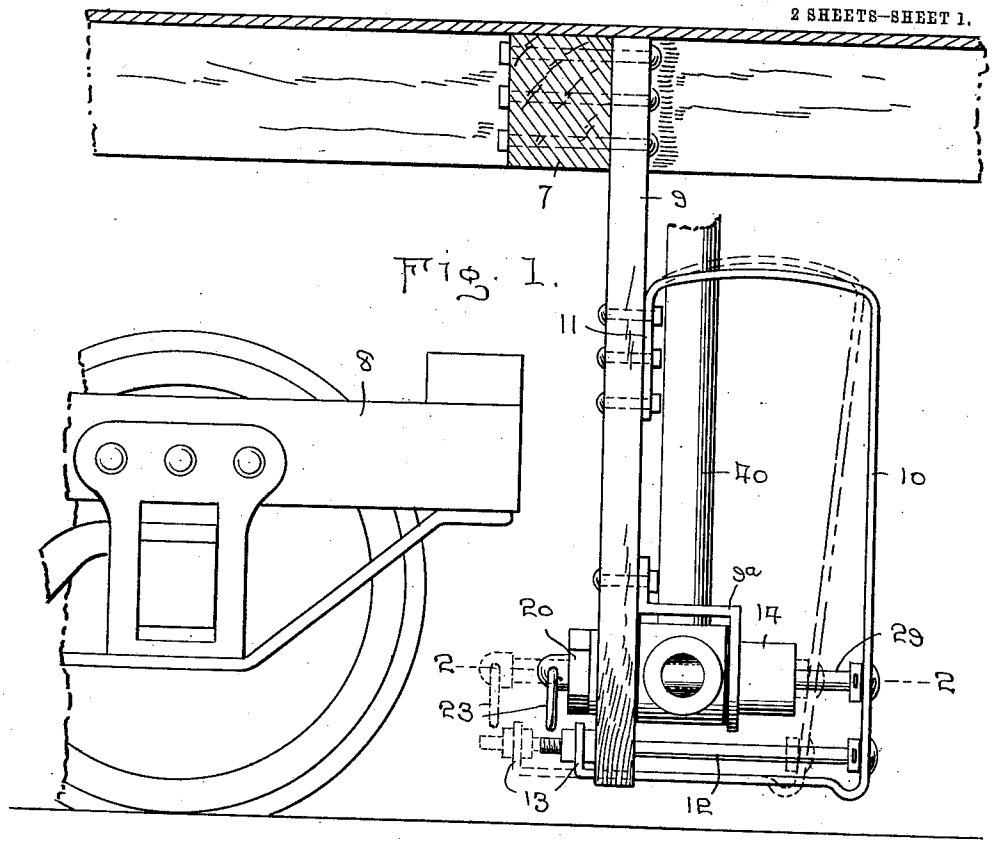


Fig. 1.

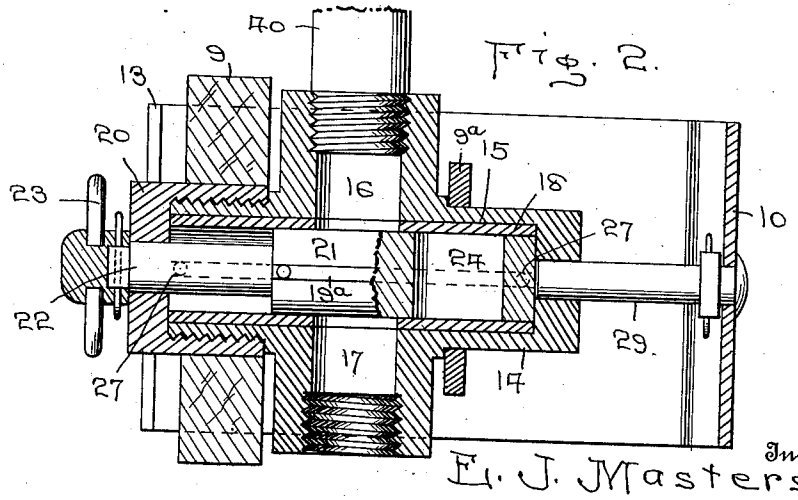


Fig. 2.

Witnesses

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Fig. 6.

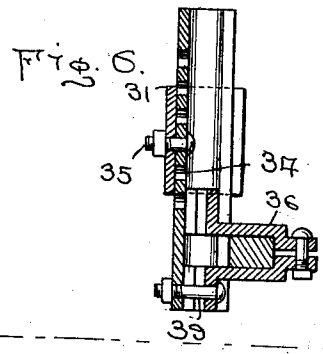


Fig. 3.

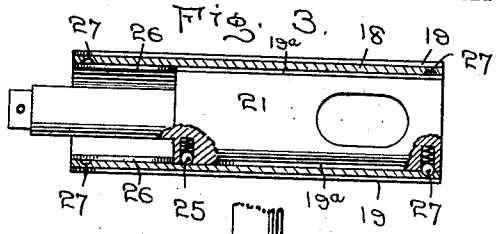


Fig. 4.

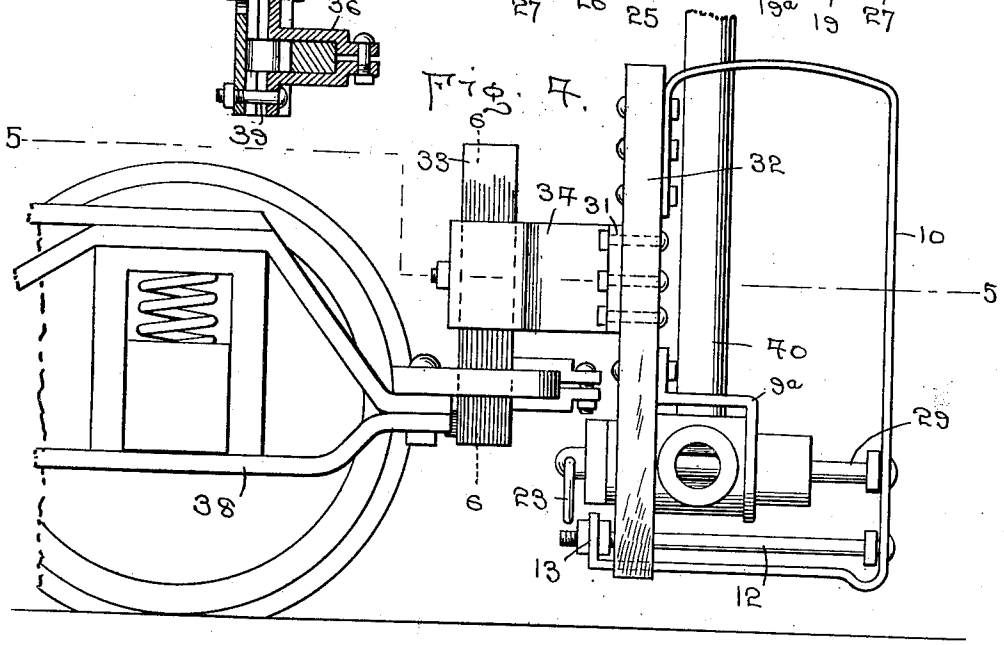
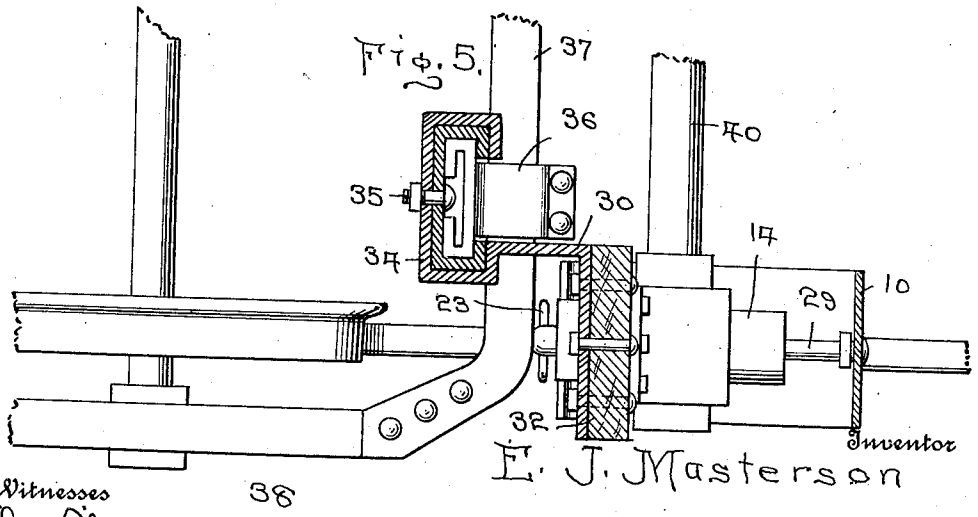


Fig. 5.



Witnesses

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SAFETY RAILWAY APPLIANCE.

1,100,316. Specification of Letters Patent. **Patented June 16, 1914.**

Application filed September 2, 1913. Serial No. 787,636.

To all whom it may concern:

Be it known that I, EDWARD J. MASTERSON, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Safety Railway Appliances; 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.

The object of this invention is to provide a wheel fender for railway trains operably connected with air brake release valves adapted to open the latter to permit the brakes to set when the fender strikes an obstruction. Another object of the invention is to provide a novel form of slide valve and movement retarding means therefor.

Another object is to provide a device of this character which shall be inexpensive to manufacture and easily attachable to the present types of steam and electric rolling stock equipped with air brakes.

In the accompanying drawing wherein is shown an approved embodiment of the invention, Figure 1, represents a side elevation of the fender and valve connected thereto, showing that portion of a car required to show the application of my invention thereto. Fig. 2, represents a sectional view on the line 2—2 of Fig. 1. Fig. 3, represents a sectional view through the valve, taken at right angles to Fig. 2. Fig. 4, represents a side elevation of the fender and valve and a portion of a railway car, showing a modified form of attaching means for the invention. Fig. 5, represents a sectional view on the line 5—5 of Fig. 4. Fig. 6, represents a sectional view on the line 6—6 of Fig. 1.

Referring to the drawing in detail wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 7 indicates one of the transverse beams of the frame structure of steam railway car suitably supported above the truck 8 and said car may be of any type such as passenger, freight, or cattle. The supporting beam 9 is rigidly bolted to a cross beam 7 in front of each of the wheels of the truck 8 and carries upon its lower portion a substantially rectangular shaped guard or fender 10. The upper end of the fender is turned downwardly at 11 and securely bolted to the supporting beam 9 therefor, while the lower end is slidable beneath the lower extremity of the supporting beam 9 and suitably guided by a bolt 12 attached at one end to the vertical portion of the fender 10, positioned through the beam 9, and is bolted at its opposite end to the upturned end 13 of the fender. It will be understood that the fender 10 is formed of resilient material in order that it will yield when struck and assume the position shown in dotted lines in Fig. 1.

The body 14 of a valve is suitably secured to supporting beam 9 adjacent the lower end of the latter and is provided with a central chamber 15, and a transverse passage intersecting chamber 15 forming passages 16 and 17 on the opposite sides thereof. A shell 18 is snugly fitted within the chamber 15 and provided with openings registered with the passages 16 and 17 also provided with longitudinal ribs 19, adapted for engagement within suitable grooves formed in the wall of the chamber 15 so as to prevent the shell from turning within the body portion. A cap 20 is screwed upon the open end of the body 14, and against the end of the shell 18 for holding the latter in position. A valve 21 is slidably mounted within the shell 18 and carries a stem 22 positioned through the cap 20 and a suitable handle 23, is attached to the outer end of the stem 22. The valve 21 is prevented from turning within the shell 18 by longitudinal ribs 19^a, working in suitable grooves 26 formed in said shell. A suitable number of spring pressed balls 25 working within the grooves 26 are adapted to be seated in notches 27 formed in the outer ends of the outer walls of the grooves 26, so as to prevent the valve 21 from being casually moved by the movement and vibrations of the car or engine to which it is attached.

A suitable hanger 9^a is attached to the supporting beam 9 and is apertured in its downwardly extending end to receive and rigidly support the end of the valve body 14. A suitable opening is formed through the end of the body 14 for receiving the plunger 29 which is securely bolted at its outer extremity to the vertical portion of the fender 10 whereby when said fender is displaced by contact with any object, the plunger 29 will be moved inwardly through the end of the body 14, and move the valve 14 longitudinally so as to register the opening 24 with the passages 16 and 17.

Referring to the Figs. 4, 5, and 6, where-

in is shown a modified form of support for the fender and valve above described, 30 indicates a bracket rigidly attached at 31, to a beam 32 carrying the fender 10, and is suitably shaped so as to nearly inclose a vertical bar 33 and is adapted to receive a bolt 35 which also extends through the bracket 30 for adjustably securing the latter. A two part bracket 36 is clamped about one of the cross pieces 37, of the truck 38 and is securely bolted at 39 to the vertical bar 33 for supporting the latter.

The form of support for the fender 10 shown in Fig. 1 is particularly adapted for attachment to steam railway cars, whereas the form of support shown in Figs. 4 to 6 is particularly adapted for attachment to electric railway or street cars. Either of the forms of support herein shown may be attached to either the right or left hand side of the truck while the construction of the fender and the coöperating valve is the same for either form. Both of the passages 16 and 17 are screw threaded and one is adapted to be connected to the main air pipe of the air brake system by a pipe connection 40.

When the fender 10 strikes an obstruction it will yield and assume the position shown in dotted lines in Fig. 1 and consequently move the plunger 29 and valve 21 so as to connect the passages 16 and 17 through the opening 24 in the valve thus permitting the air in the main pipe to escape and reducing the air pressure in said main pipe consequently allowing the brake mechanism to operate and set the brakes.

The balls 25 engage within the notches 27 which prevent the valve 21 from casually opening and will hold the latter open until the handle 23 is manually actuated to close it.

What I claim is:

1. In a device of the character described, a supporting beam, a resilient fender secured at one end to said beam, extending in spaced relation to the latter and having its opposite end movably engaged against the lower end of said beam, a valve, and operable connections between said valve and said fender.

2. In a device of the character described, a supporting beam, a resilient fender secured at one end to said beam and extending outwardly and downwardly under the latter, a valve, and a connection between said fender and said valve adapted to open the latter when said fender is actuated.

3. In a device of the character described, a supporting beam, a resilient fender secured at one end to said beam, extending downwardly in spaced relation to the latter and having its opposite ends normally engaging against the lower end of said beam, means for guiding the lower end of said fender, a valve, and an operable connection between said valve and said fender.

4. In a device of the character described, a supporting beam, a resilient fender secured at one end to said beam, extending in spaced relation to the latter and having its opposite end movably engaged against the lower end of said beam, a guide rod secured at opposite ends between portions of said fender and slidably engaged through said beam, a valve and an operable connection between said fender and said valve.

5. In combination, a support, a sliding valve, a resilient fender secured at one end to said support, extending downwardly and outwardly and under the latter, and operating means between said fender and said valve.

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

EDWARD J. MASTERSON.

Witnesses:

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C. A. NEALE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."