

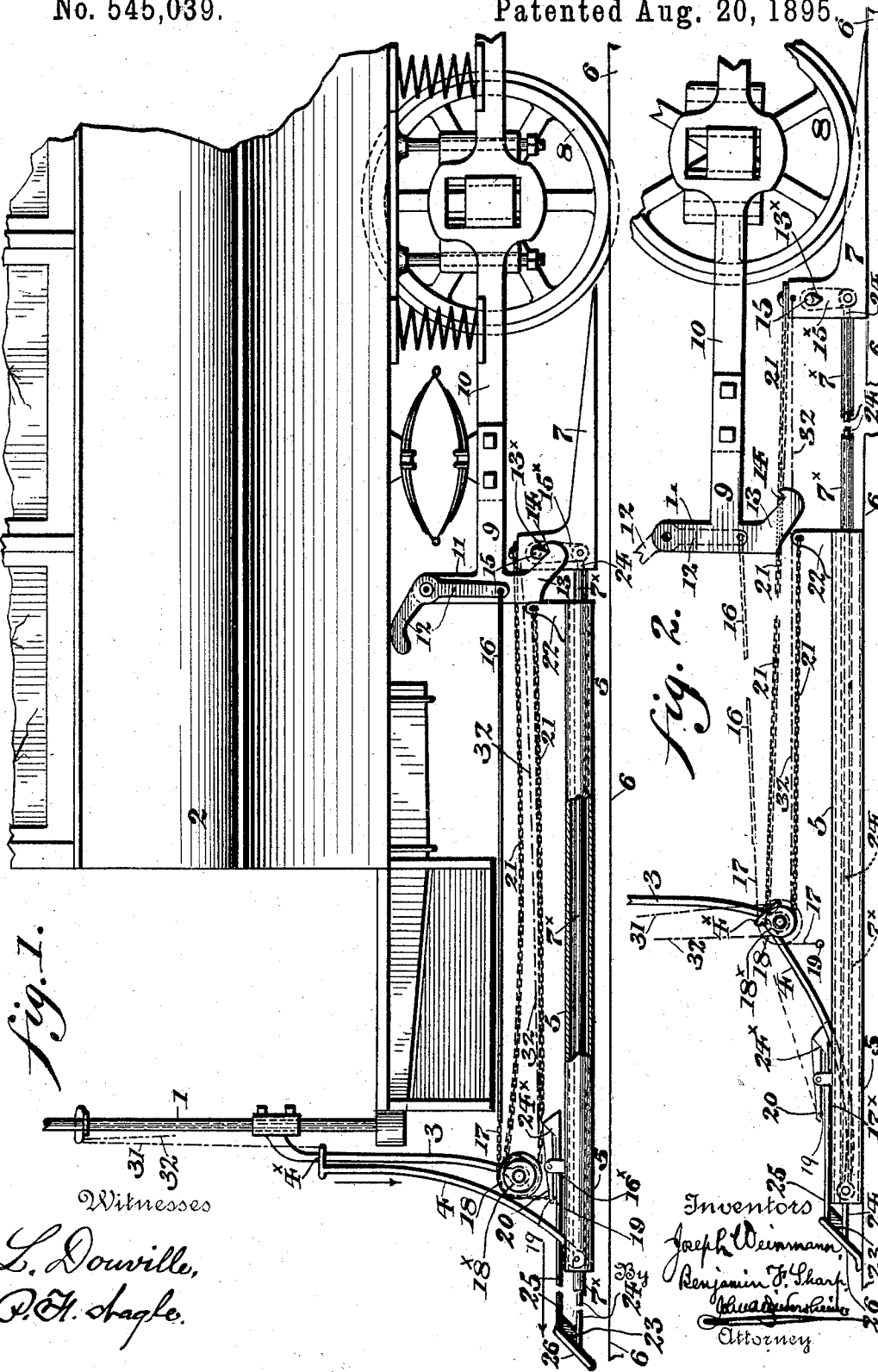
(No Model.)

J. WEINMANN & B. F. SHARP.

LIFE SAVING GUARD AND FENDER FOR TROLLEY CARS, &c.

No. 545,039.

Patented Aug. 20, 1895.



UNITED STATES PATENT OFFICE.

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LIFE-SAVING GUARD AND FENDER FOR TROLLEY-CARS, &c.

SPECIFICATION forming part of Letters Patent No. 545,039, dated August 20, 1895.

Application filed December 24, 1894. Serial No. 532,900. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH WEINMANN and BENJAMIN F. SHARP, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Car-Fenders, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists of a novel construction of car-fender, in which provision is made for preventing the person or thing struck from getting under the front or side portion of the car, means being also provided for automatically bringing said car to a sudden stop when an object is struck by the interposition of suitable shoes between the wheels and track, said shoes being normally held above said track but being caused to fall thereon by the backward movement of a suitable trigger which is actuated when an object is struck.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a front elevation of a car-fender embodying our invention and a portion of a car to which the same is applicable, the fender being shown in inoperative position. Fig. 2 represents a similar view showing the parts in operative position.

Similar numerals of reference indicate corresponding parts in both figures.

Referring to the drawings, 1 designates the dasher of a car 2, to a suitable portion of which are secured the rods 3, which form a guide for the frame 4 which moves freely on said rods 3, said frame having the hooks 4^x on its upper portion which engage said rods 3 and are covered with any suitable strong flexible material, as rubber, or woven wire, &c. The lower portion of said frame 4 is hinged or otherwise movably attached to the front end of the tubular frames 5, there being a frame 5 at each side of the car above each track 6.

The principal movable parts of the fender on each side of the track will now be described, and since they are alike, a description of one side will suffice for both.

7 designates a movable shoe, which is supported in front of the car-wheel 8, and is attached to a tube or rod 7^x, which telescopes into the tube 5 or is adjustable relative thereto in any suitable manner.

9 designates a frame, which is suitably attached to the truck-frame 10, said frame having an upwardly-extending arm 11, to which is movably secured the tension-lever 12 and also a depending arm 13, which has the notch 14 therein, in which latter rests a projection 13^x on the pin 15, said pin passing freely through the shoe 7 and being attached to the lever 15^x, said shoe being thus supported above the rail by the engagement of said pin and notch.

16 designates a rod, which has one end attached to an end of the tension-lever 12, the other end of said lever contacting with a suitable portion of the car, while the other end of said rod has attached thereto a short section of chain 17, which passes over the roller or wheel 18, which latter is suitably journaled in the lower portion of the rod 3, the extremity of the chain being attached to the cross-bar 19, which is in contact with the nose 20^x of the latch 20, which is pivotally mounted in ears on the frame 5 and is held in position, as will be explained, whereby it will be seen that the front ends of said frames 5 are supported above the rails by means of the tension-lever 12, the lower end of which is drawn back and holds said frames normally at the proper distance above the track when the body of the car presses on the top of said lever 12.

21 designates a chain or other connection, which has one end fastened to the shoe 7, said chain extending forwardly over the wheel 18^x adjacent the wheel 18, thence backwardly to the rear end of the tube 5 and having its other end suitably attached to a lug 22 thereon.

23 designates a trigger, which extends transversely of the line of movement of the car across the front of the tube-frames 5 and has a long arm 24, which extends through the tubes 5 and 7^x and is adapted to move the lever 15^x, to which its notch-pin 15 is attached, whereby the projection 13^x on the pin 15 will be moved out of the notch 14, the shoe 7 will be released and, being unsupported, falls.

25 designates a short arm, which is also attached to the trigger 23 and is pivotally connected to the triangular piece 24^x, which engages the spring-latch 20, so as to hold the same against the cross-bar 19.

The trigger 23 has a suitable rubber facing 26 attached thereto, said trigger and facing being inclined, as shown, so that they will

tend to pass under and raise up any object lying on or between the tracks.

The operation is as follows: When an object is struck, the trigger 23 will be forced back and the piece 24^x will be moved from engagement with the latch 20, the weight of the fender forcing the latch into the position seen in Fig. 3, whereupon the nose 20^x leaves the cross-bar 19 and the front portion of the device will be unsupported, as is evident, the notch-pin 15 will be rocked by means of the intermediate connections, and the frames 5 and shoes 7 being now both unsupported will fall, the front wheels will simultaneously run up on the shoes 7, which are interposed between them and the tracks, a pull will be exerted upon the chain 21, which, by reason of its attachment to the lug 22 on the tube 5, will draw the latter forward, at the same time causing the frame 4 to slide downwardly under the object struck and to assume more nearly a horizontal position, as seen in Fig. 2, the hooks 4^x being now near the ends of the rods 3 the object struck being thus caught up on said frame and prevented from serious injury, while at substantially the same instant the wheels ride up on the shoes, thus bringing the car to a sudden stop.

The tubes 5, chains 21, and rods 16, which are on each side of the car, as stated, form longitudinally-extending side guards, which prevent any object from rolling sidewardly under the car after being struck, and the shoes prevent any portion of the body or limbs of the person struck from getting under the wheels, as is evident.

The device can be readily reset by the motorman by means of chains or other connections 31 and 32.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a car fender, a tubular frame having a support at its front end, a shoe connected a tube telescoping in said frame, a frame connected with a truck of the car, a rocking pin in said shoe having a projection engaging in a notch in said latter mentioned frame, and a trigger with an arm passing through said shoe tube and connected with a lever attached to said pin, substantially as described.

2. A tubular frame supported at its front end by means of a detachable catch, and a cross bar, a frame connected with a truck of a car, a shoe having a tube telescoping in said tubular frame and provided with a pin supported on said truck frame, a trigger with an arm extending through said shoe tube and connected with a lever for disengaging said pin from said truck frame, and means connected with said trigger for detaching said catch from said cross bar, said parts being combined substantially as described.

3. The rods 3, the frame guided on said rods, the tubular frames 5 hinged at their

front ends to said frame 4, rollers 18 journaled in said rods 3, the frame 9 connected with a car truck, the tension levers 12 pivoted to said frame 9, the rods 16 pivotally connected with said lever and having the chains 17 connected therewith and passing over said rollers, the cross rod 19 connected with said chains, catches connected with said frames 5 and engaging said cross rod 19, shoes normally held on said frame 9, and having tubes telescoping in said frames 5, a trigger, with means for disengaging said shoes from said frames, and means for disengaging said catches from said cross rod, said parts being combined substantially as described.

4. In a car fender, a trigger, a frame movably attached to the front of the car, a shoe, means for supporting the same normally above the rails, and telescoping tubes intermediate said trigger, frame and shoe, whereby when an object is struck, the two latter move downwardly, substantially as described.

5. In a car fender, a tubular frame having its front end supported by a detachable catch and a frame pivotally connected at its lower end with said front end and having its upper end guided on rods connected with a car, said upper ends having hooks which engage said rods, said parts being combined substantially as described.

6. In a car fender and brake, a tubular frame having its front end supported by a detachable catch on a bar supported from the car, a shoe normally supported on an attachment of a car truck and having a tube telescoping in said tubular frame, a trigger with an arm having means to release said supporting catch and an arm passing through said shoe tube and provided with means for releasing said shoe from said truck, said parts being combined substantially as described.

7. In a car fender, the rods 3 having the rollers 18 and 18^x journaled therein, the tension lever 12 pivotally mounted, the tubes 5 and 7^x, the rod 24 passing through the same, the lever 15^x actuated by said rod, the pin 15, the shoe 7 in which said pin is mounted, the chain 21 passing around the pulley 18^x, and attached to said shoe and tube 5, the cross bar 19, the connection therefrom to the tension lever, the trigger 23, a supporting device for the front of the tubes and connections from the trigger for tripping the same, substantially as described.

8. In a car fender, a frame having a notch therein, a shoe 7, a pin 15 rotatable in said shoe and having a projecting portion 13^x adapted to rest in said notch, a lever 15^x attached to said pin, and means for actuating said lever, substantially as described.

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Witnesses:

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