

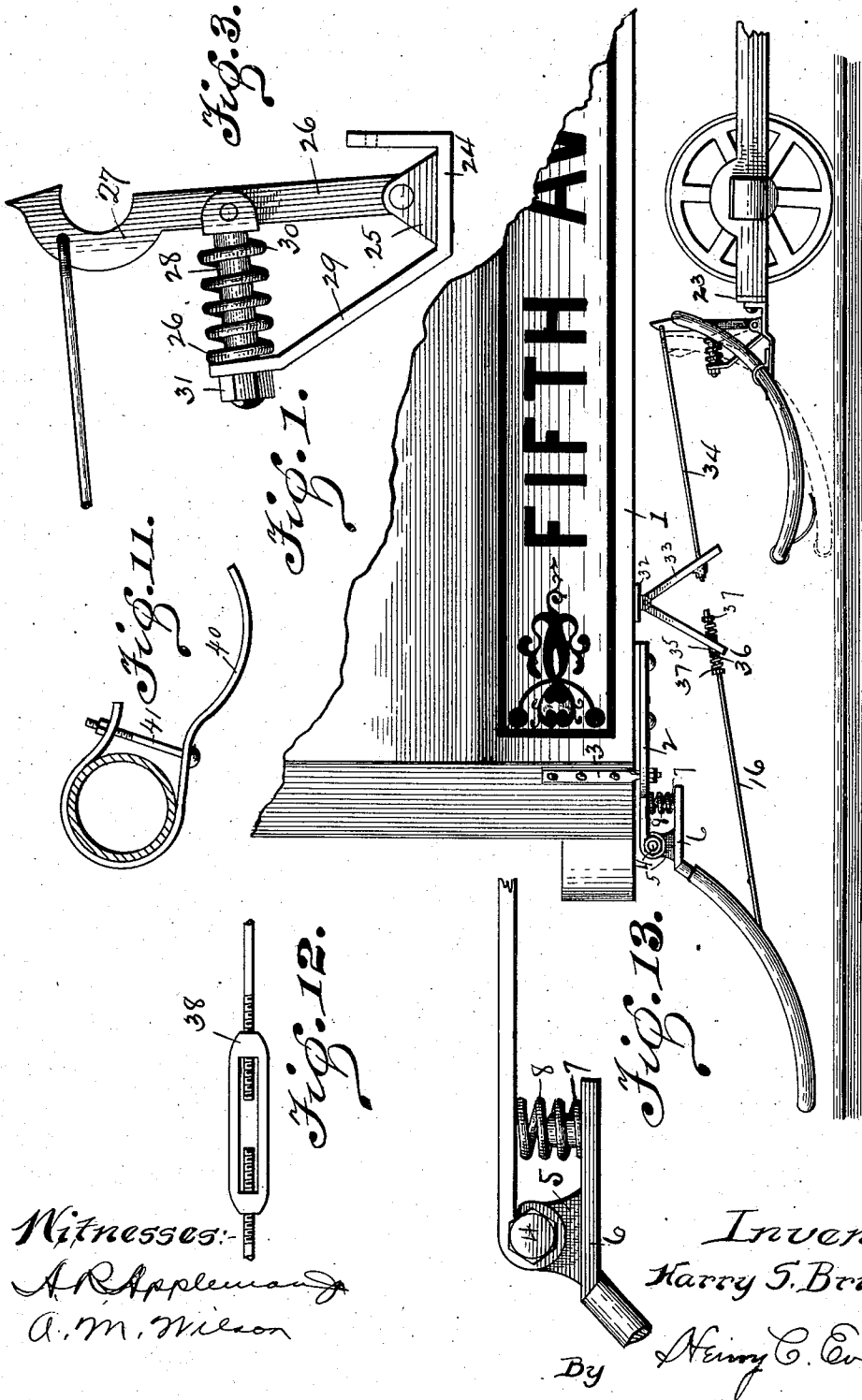
(No Model.)

2 Sheets—Sheet 1.

H. S. BRICKELL.
CAR FENDER.

No. 576,946.

Patented Feb. 9, 1897.



Witnesses:

A. R. Appleman
A. M. Wilson

Inventor:
Harry S. Brickell.

By Henry C. Ewert Atty

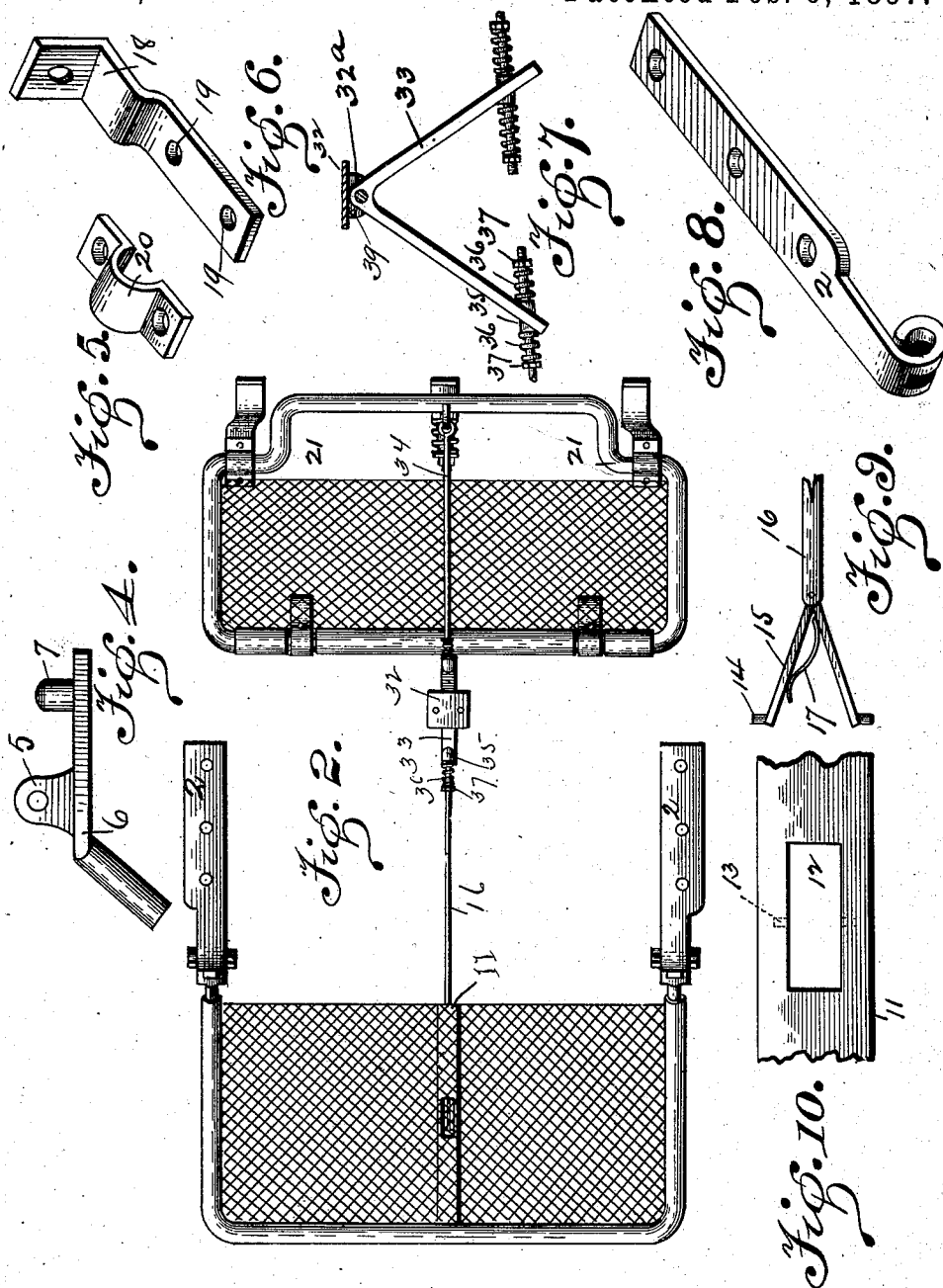
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UNITED STATES PATENT OFFICE.

HARRY S. BRICKELL, OF PITTSBURG, PENNSYLVANIA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 576,946, dated February 9, 1897.

Application filed April 8, 1896. Serial No. 586,715. (No model.)

To all whom it may concern:

Be it known that I, HARRY S. BRICKELL, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in car-fenders, and has for its object to provide a means whereby the wheel-fender will be automatically lowered with the raising of the front fender and effectually prevent any person or object that may have passed the front fender from coming in contact with the wheels.

15 A further object of the invention is to construct a combined front and wheel fender, as above described, that will be simple in its construction, strong, durable, effectual in its operation, and comparatively inexpensive to manufacture; furthermore, that can be easily applied to either cable or electric cars or for use on lines where the cars are not turned at the end of the line.

20 With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts, to be hereinafter more specifically described, and particularly pointed out in the claims.

25 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar parts throughout the several views, in which—

30 Figure 1 is a side elevation of a portion of a car, showing my improved fender in position. Fig. 2 is a top plan view of the fender. Fig. 3 is a side elevation of the supporting-brace and lock of the rear fender. Fig. 4 is a side elevation of the supporting-plates of the front fender. Figs. 5 and 6 are detail perspective views of the caps and supporting-bracket of the rear fender. Fig. 7 is a side elevation of the inverted-V-shaped hanger and attachments. Fig. 8 is a detail perspective view of the supporting-bracket of front fender. Fig. 9 is a detail view of the connecting end of the operating-rod. Fig. 10 is

a detail view of a portion of the connecting-brace, showing portion to which connecting and operating rod is attached. Fig. 11 is a detail side view of the sliding spring attached to the wheel-fender, showing frame in section. Fig. 12 is a detail view of the adjusting turnbuckle. Fig. 13 is a side elevation of the supporting-plates and securing-bracket on the front fender.

35 In the drawings, 1 represents the car-body, to which are rigidly secured the brackets 2 2 for supporting the front fender. In order to relieve the strain on the front of these brackets as far as possible, I have provided a supporting-brace 3, rigidly secured to the side of the car-body and provided with a rounded lower end engaging in the supporting-bracket 2 of the fender, and is provided with a nut for retaining in position. These supporting-brackets are provided with a curved outer extremity with a slot therein, forming jaws and eyelet, adapted to receive a bolt 4, passing through the lugs 5, provided on the plunger 6, for securing to the supporting-brackets 2. On this supporting-plate 6 is provided a pin 7, adapted to retain a coil-spring 8, resting against the supporting-plates and the bracket.

40 The plungers 6 6 engage in the side portions 9 9 of the fender-frame, which is preferably formed of one piece of tubing having the side portions slightly curved, and a netting 10, composed of any suitable material, is provided for this frame on both the front and rear fender. At or near the center of the front fender is provided a brace 11, having an oblong slot 12, extending in alinement therewith. At the sides of this slot 12 holes 13 13 are provided in the brace 11, which are adapted to receive the pins 14 14 of the pivoted hanger 15, provided in the front end of the connecting-rod 16. This hanger 15 is V-shaped in form, pinned at the connecting end to the rod, and is provided with a spring 17, secured to one of the arms and pressing against the other to keep the pins 14 in engagement in the holes 13. By this construction it will be seen that the front fender can be readily detached from the rod 16 and its connections. To the frame of the truck is secured a bracket 18, having apertures 19 19, adapted to receive bolts or rivets for securing the cap 20 to the bracket. These caps engage

the frame portion of the rear fender, which is formed with a curved portion 21 and rear portion 22. At or near the center of the cross-piece 23 of the truck-frame is secured a stand 24, having jaws 25, in which is pivotally secured an upwardly-extending brace 26, provided at the upper end with a semi-circular portion 27, forming a seat for the rear bar 22 of the fender-frame. A bolt 28 is pivotally attached to the brace 26, having its outer end supported by an arm or brace 29 of the stand 24, and a coil-spring 30 is provided on the bolt 28 between the arm or brace 29 and brace 26, the bolt 28 being retained in its position by a nut 31.

To the underneath side of the car-body is secured a plate 32, having a lug 32^a, to which is pivotally attached the hanger 33, which is in the form of an inverted V, and each of the arms is apertured near its lower extremity to receive the connecting-rods 16 and 34. Washers 35 35, formed with inclined faces to correspond with the positions of the hangers, abut against the same on the rod, and coil-springs 36 36 are arranged on the rods between the washers 35 35 and nuts 37 37, secured on the rod at each side of the hanger-arms. The front rod 16 is connected, as shown, to the brace 11 and to the front arm of the hanger 33, and the rear rod 34 to the rear end of the hanger and to the brace 26. This hanger 33 supports the rods 34 and 16, which are adjusted by the nuts 37, and in Fig. 12 of the drawings I have shown a turnbuckle 38, which may be employed for connecting the two rods and dispense with the hanger. A pin 39 is provided on the lug of the plate 32 to regulate the forward movement of the front arm 33. Curved springs 40 40 are secured to the front bar of the rear fender, one at each side, which is shown in detail in Fig. 11, fastened by a bolt 41.

The operation of my improved fender will be readily apparent from the views of the same that I have shown in the drawings.

Presuming that the parts have all been secured in their respective positions, as shown and described, and that the front fender comes in contact with a person or object on the track, should this fender strike the object in such a manner as to allow the fender to pass under the same it will be readily picked up out of the way of harm and prevent it from passing to the rear fender, but should the front fender pass over the object or person the raising of the front fender by the object passing under same will pull the connecting-rod 16, connected to the hanger, which in turn pulls the connecting-rod 34 forward and allows the rear fender to drop to the track, catching the object or person and preventing injury by coming in contact with the wheels. As the rear fender drops to the track the curved springs 40, provided thereon, will engage the flange of the rails and support the fender flush with the top of the rails, and also serve to relieve the jar that would

otherwise be caused on the rear fender by its drop to the track.

By this construction of a fender it will be noted that it will be absolutely impossible for a person when struck by the fender to come in contact with the wheels of the car, as even should the front fender fail to catch the person it will necessarily be raised to pass the obstruction, and the raising of the front fender will automatically lower the rear fender to the track and prevent the wheels of the car coming in contact with the person. It will also be noted that the construction of the fender is very simple, there being no weak or delicate parts liable to get out of order and making the fender cheap and comparatively inexpensive to manufacture. It will also be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A car-fender consisting of the frame portion having a net composed of any suitable material, braces secured to the car-body and formed with a curved-end supporting-plate pivoted to the braces engaging in the side portions of the frame, said supporting-plate having a coiled spring arranged between the same and the brace and a connecting-rod having a pivoted V-shaped end secured in the center brace of the fender and the hanger, to which the rear end of the rod is secured and a rear scoop, secured to the truck-frame, substantially as shown and described.

2. In a car-fender, the combination of the front fender supported by braces secured to the car-body, a connecting-rod having forked pivoted ends having pins engaging in apertures in the center brace of the fender, a hanger and a spring arranged between the forks and the rear end of the rod connected to the hanger, substantially as shown and described.

3. In a car-fender a rear wheel-guard consisting of the frame portion provided with a netting, said frame portion being supported by brackets secured to the truck-frame and a cap secured to said brackets, a locking-brace secured to the truck-frame and engaging the rear bar of the frame, said locking-brace provided with a bolt attached thereto, and supported by an arm and a coil-spring arranged on said bolt, all parts being arranged and operating, substantially as shown and described.

4. A car-fender consisting of a front and rear fender, rods secured to the front fender and to a locking-brace of the rear fender, the two rods being connected by an inverted-V-shaped hanger secured to the car-body, said rods being provided with springs on each side of the hanger-arms, substantially as shown and described.

5. A car-fender consisting of a front and rear fender, connected together to work auto-

5 matically, the connecting-rod of the front fender provided with arms pivotally attached to the rod and provided with pins adapted to engage in holes in the brace of the front fender, said arms being held in the engaging position by a spring, the rear rod being connected to the locking-brace of the rear fender and both rods connected to an inverted-V-shaped hanger secured to the car-body, and

coil-springs arranged on the rods at either side of the arms of the hanger, substantially as shown and described.

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

HARRY S. BRICKELL.

Witnesses:

H. E. SEIBERT,

H. C. EVERT.