(No Model.)

H. P. WEALE.

CAR FENDER.

No. 528,048. Patented Oct. 23, 1894.

Fig: 1.

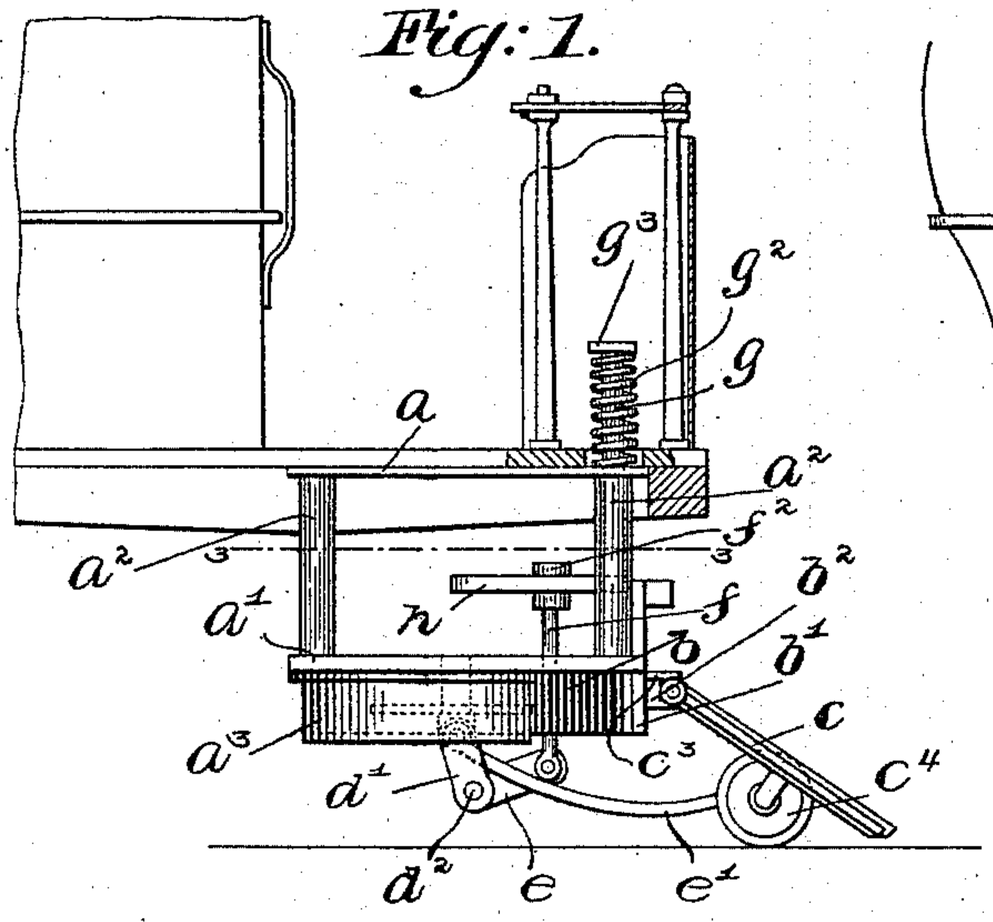


Fig: 2.

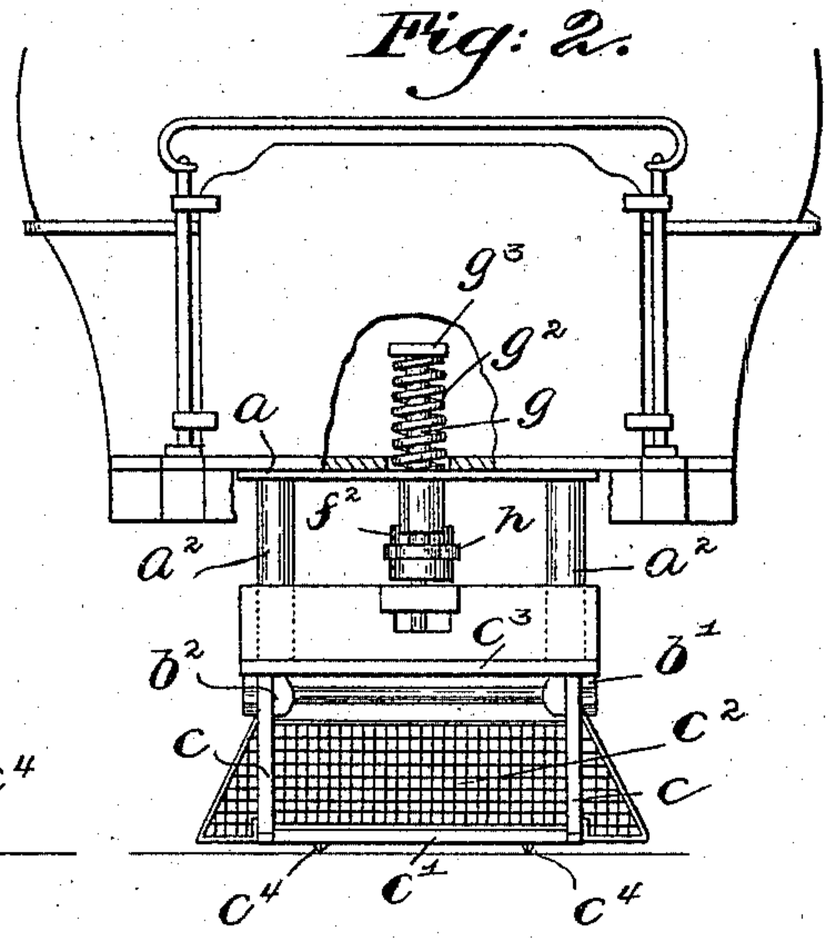


Fig: 3.

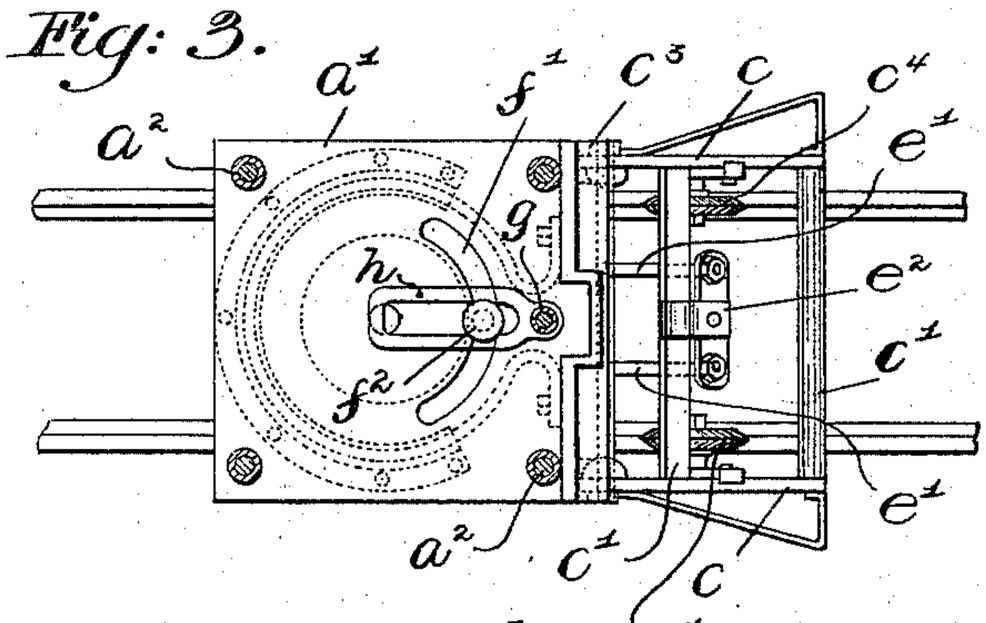


Fig: 4.

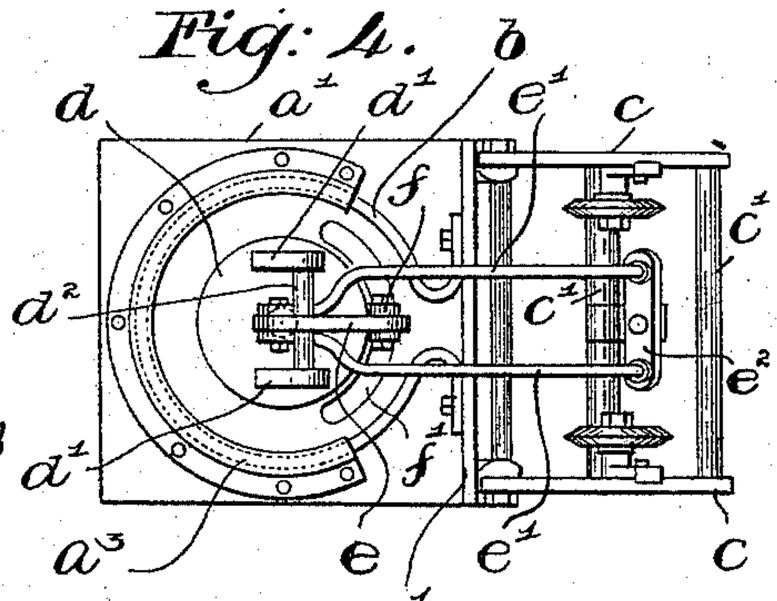


Fig: 5.

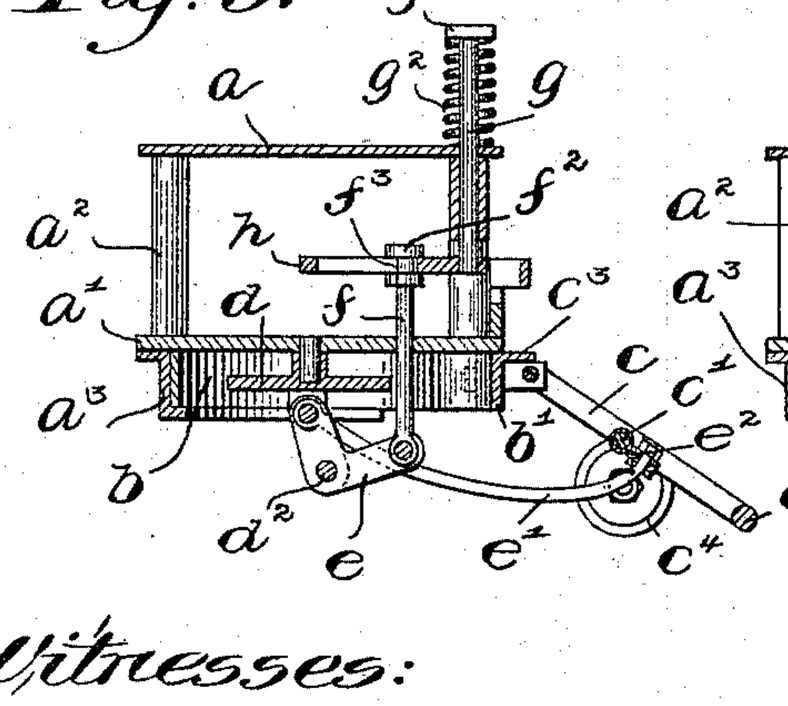
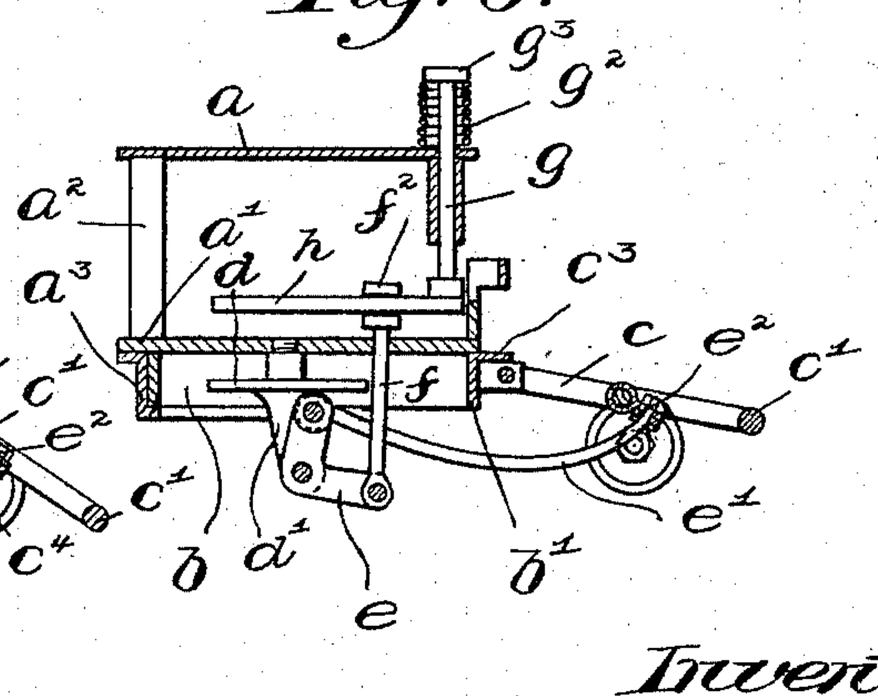


Fig: 6.



Witnesses:
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L. P. Davis

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by Wright, Brown & Crosby
Attys.

UNITED STATES PATENT OFFICE.

HENRY P. WEALE, OF BOSTON, ASSIGNOR OF TWO-THIRDS TO GEORGE L. RICHARDS AND HENRY E. TURNER, OF MALDEN, MASSACHUSETTS.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 528,048, dated October 23, 1894.

Application filed April 27, 1894. Serial No. 509,230. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. WEALE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to life guards or fenders for street-cars, the object being to provide a device of this character which is adapted for passing around curves in the track and still maintaining its position over the road-bed, and is also capable of being raised and lowered at the will of the driver or motorman.

To the above end the invention consists in certain novel arrangements, constructions and combinations of parts, which are recited in the appended claims.

The accompanying drawings which form part of this specification illustrate a construction embodying the invention.

Figure 1 shows a side elevation of the apparatus with a portion of the car in section. Fig. 2 shows a front elevation of the apparatus. Fig. 3 shows a section on line 3—3 of Fig. 1. Fig. 4 shows a bottom plan view of the apparatus. Fig. 5 shows a central vertical section of the apparatus with the fender lowered. Fig. 6 shows a similar view to Fig. 5 with the fender represented as raised.

In carrying out my invention in the manner here illustrated a supporting frame-work is fastened on the under side of the front portion of the car-platform, said frame comprising top and bottom plates, a, and, a', and corner posts, a^2. On the under side of the bottom plate, a', is a pendent annular flange or skirt, a^3, having an internal horizontal shoulder at the lower edge and constituting a bearing for an annular band or ring, b, to turn in horizontally. The said band or ring is extended forward forming arms which support a transverse bar, b', having ears, b^2, on the front side.

A fender composed of side bars, c, cross-bars, c', and netting, c^2, has its side-bars pivoted to the ears, b^2, so as to make said fender capable of swinging vertically. Its upward movement is limited by a horizontal flange, c^3, on the bar, b'. The fender carries rollers, c^4, which are designed to travel on the track rails and follow the same at all times when the fender is lowered. It is to be noted that the fender is free to follow the curve of the track by reason of the freedom of its support to swing laterally.

The connections whereby the fender is raised and lowered are arranged as follows: A horizontal disk, d, is pivoted to the lower plate, a', of the supporting frame concentrically with the ring, b, and said disk carries pendent ears, d', which support a rod, d^2. A bell-crank lever, e, is pivoted on said rod, and one of its arms is connected with the fender by a pitman composed of two rods, e', which at their forward ends are fastened to a cross-head, e^2, swiveled to a cross-bar of the fender. A rod, f, connected with the other arm of the bell-crank lever extends up through an arc-shaped slot, f', in the plate, a', and carries a head, f^2, having an annular groove, f^3. An operating rod, g, fits through a bearing on the plate, a, and has affixed to its lower end a horizontal arm h, slotted longitudinally and embracing the head, f^2, whose groove it engages. The said rod, g, is vertically movable in its bearing and is sustained by a spiral spring, g^2, and it may also turn in said bearing. The rod, g, has a flat head, g^3, on its upper end upon which the motorman presses with his foot to elevate the fender.

It will be observed that by permitting the rod, g, to turn in its bearing and connecting it with the devices on the horizontally swinging fender-support through the medium of a slotted arm, the oscillations of said fender-support do not affect the operativeness of the connections for raising and lowering the fender.

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

1. A life-guard apparatus for street-cars comprising in its construction a support swiveled to the car so as to swing in a horizontal plane, a fender pivoted to said support so as to swing in a vertical plane, a vertically movable operating piece on the car, and suitable connections between said operating piece and the fender and carried by the swiveled support, said connections having provisions for producing upward movement of the fender

by depression of the operating piece, and for permitting horizontal swinging of the swiveled support while the operating piece remains stationarily located on the car.

2. A life-guard apparatus for street-cars comprising in its construction a support on the car pivoted to swing in a horizontal plane, a fender pivoted to said support forward of the latter's center of oscillation so as to swing vertically, and means for moving said fender up and down comprising a vertically sliding and rotatable rod stationarily located on the car and having a slotted arm, and devices carried by the horizontally swinging support including a rod engaging said slotted arm.

3. A life-guard apparatus for street-cars comprising in its construction a support on the car pivoted to swing in a horizontal plane, a fender pivoted to said support forward of the latter's center of oscillation so as to swing vertically, and means for moving said fender up and down comprising a bell-crank lever pivoted to bearings below the center of oscillation of the said support and carried thereby, a rod connecting one arm of said lever with the fender, a rod connected with the other arm of said lever and extending vertically, and a vertically sliding and rotatable rod on the car having a slotted arm embracing the vertically extending rod on the horizontally swinging support.

4. A life-guard apparatus for street-cars the same comprising in its construction an annular support arranged to oscillate in a correspondingly formed bearing on the car and having a cross-bar at the front, a fender pivoted to the said bar so as to swing vertically, a disk pivoted concentrically with the annular support, a bell-crank lever on said disk, a pitman connecting one arm of said lever with the fender, stationarily located operating member on the car and suitable connections between the same and the other arm of the bell-crank lever.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 18th day of April, A. D. 1894.

HENRY P. WEALE.

Witnesses:
C. F. BROWN,
F. P. DAVIS.