W. HELBLING.

CAR FENDER.

APPLICATION FILED MAY 16, 1911.

1,017,668.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

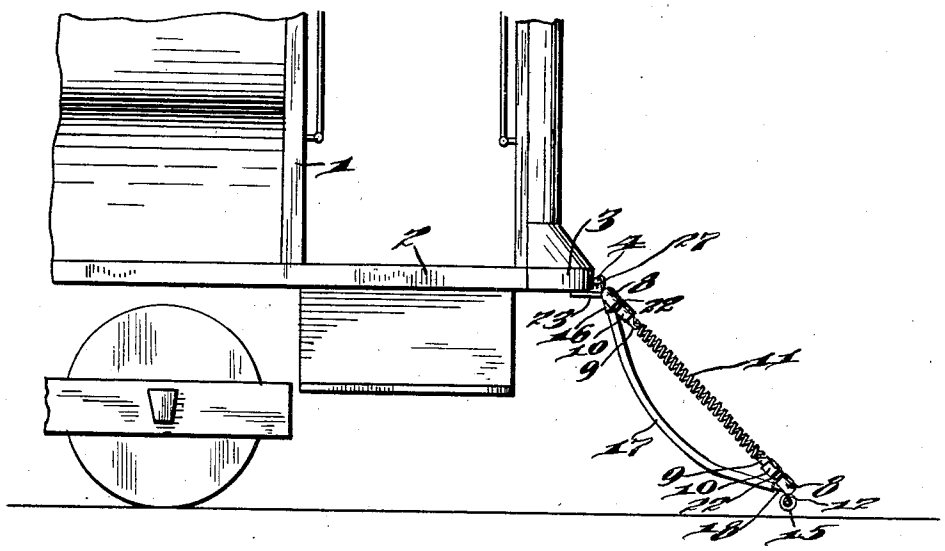
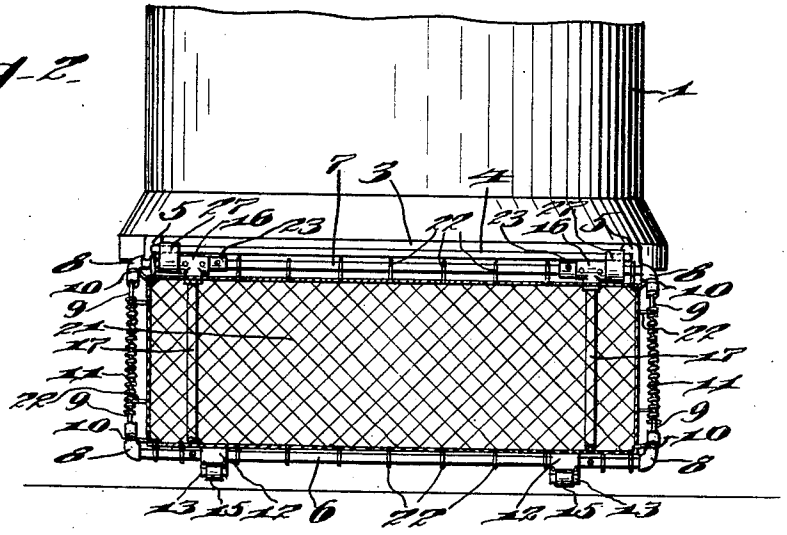


Fig. 2.



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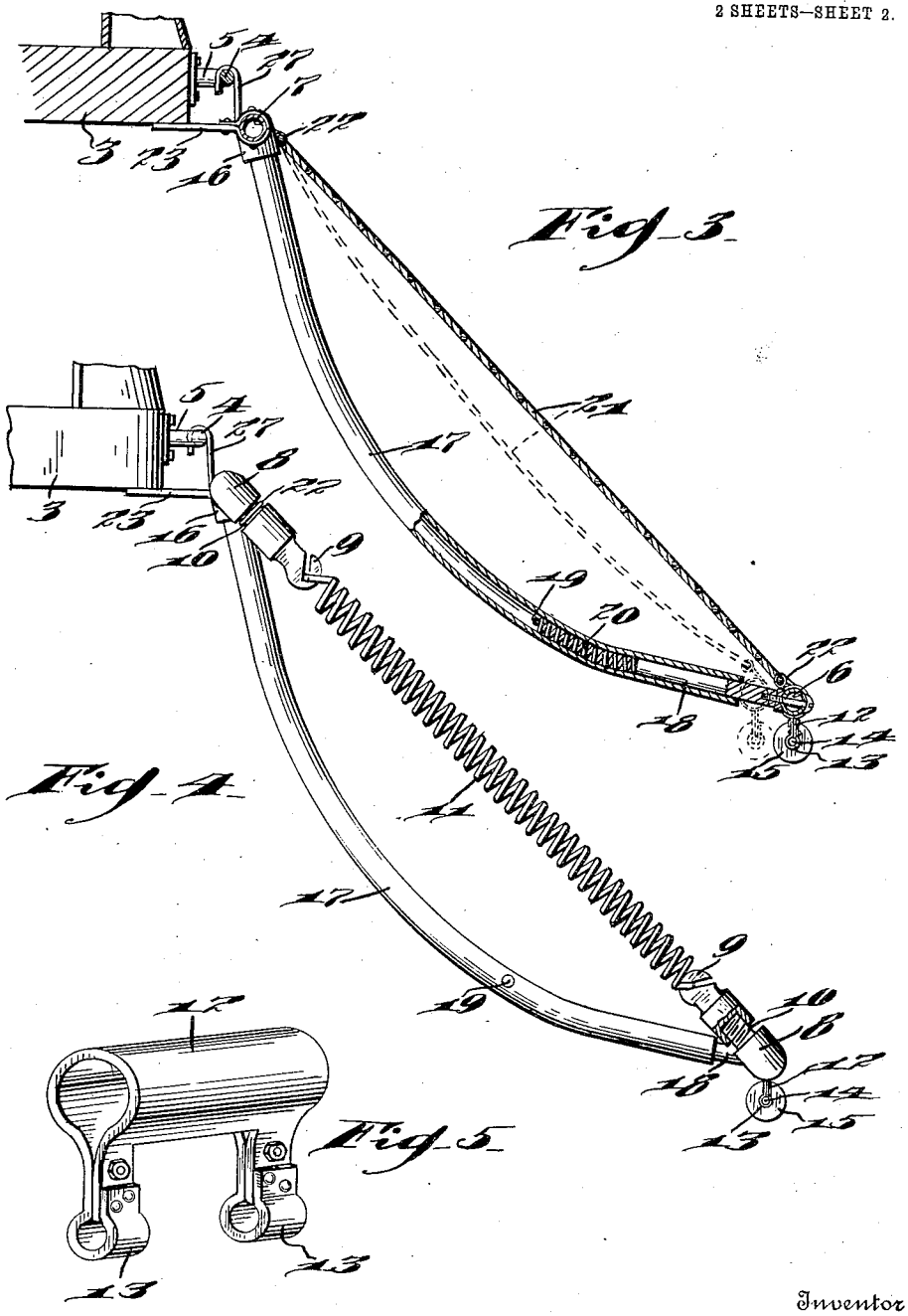

Fig. 3.

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM HELBLING, OF PHILADELPHIA, PENNSYLVANIA.

CAR-FENDER.

1,017,668. Specification of Letters Patent. Patented Feb. 20, 1912.

Application filed May 16, 1911. Serial No. 627,471.

To all whom it may concern:

Be it known that I, WILLIAM HELBLING, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to improvements in car fenders, the object of the invention being to provide a fender which may be readily attached to a car, and detached therefrom, and which will be so constructed as to cushion the shock of contact between the fender and a person or object.

A further object is to provide a fender having a netting supported between the front and rear bars of the fender, which is normally taut, and to construct the connecting mediums between said front and rear bars, whereby the front bar is permitted a rearward cushioned movement, so that the taut netting is allowed to form an elastic hammock-like receptacle for the reception of a person or object picked up by the fender.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a fragmentary view in side elevation illustrating my improved fender. Fig. 2, is a front view of Fig. 1, the car wheels being omitted for the sake of clearness. Fig. 3, is a view on an enlarged scale in vertical section showing one of the curved tubes 17 partly in elevation and partly in section. Fig. 4, is a view in side elevation of the fender, and Fig. 5, is an enlarged perspective view of one of the roller supporting brackets.

1, represents a car, and 2 a platform having the ordinary forwardly projecting timber 3 through which a transverse rod 4 is secured at its ends by means of brackets 5 which may be integral therewith as shown. The fender comprises parallel front and rear bars 6 and 7 respectively. These bars are preferably of tubing or piping having elbows 8 at their ends, and to all four of these elbows, hooks 9 are secured by means of threaded couplings 10, which screw into the tubular ends of hooks 9, and into the elbows 8. The pairs of hooks at both ends of the fender are connected by coiled springs 11, and the front bar 6 is provided with brackets 12 clamped on the bar, and providing bearings 13 for the trunnions 14 of rollers 15. Fig. 5 shows one of these brackets in perspective, showing how it is bent from a single sheet metal blank, and affording a strong mounting for the roller. T-couplings 16 serve to connect the curved tubes 17 with the rear bar 3. These tubes 17 curve downwardly, as clearly shown in Figs. 3 and 4, and in their forward ends they receive plungers 18, which are secured to the front bar 6. In tube 17, between cross pins 19 therein, and the inner ends of the plungers 18, coiled springs 20 are located and exert pressure so as to tend to force the bars 6 and 7 apart.

21, represents a netting, which is preferably a rope netting, but may be made of other material, and is connected by wires or other suitable devices 22, with the rods 6 and 7, elbows 8 and coiled springs 11, and as the netting is made to fit within the rectangular space formed by the said parts, the netting will be normally held taut. Hooks 27 are secured to the rear bar 7, and adapted to engage over the rod 4, and to limit the normal downward movement of the fender, spring arms 23 are secured to the rear bars 7, and project under the timber 3.

In operation, the parts are normally in the position shown in Figs. 1, 3, and 4. When a person or object is struck by the front bar 6, the contact will cause the front bar 6 to move rearwardly, such movement being against the springs 20, but assisted by the springs 11. This movement of the parts will cause the netting 21 to sag, forming a hammock-like receptacle for the person or object, and the weight of said person or object will maintain the netting in this form, so as to prevent the person or object rolling off of the fender after once being picked up. The extra weight on the fender will cause the fender to bear downwardly, but this weight will be supported by the rollers 15. As soon as the weight is lifted from the netting 21, the springs 20 will force the bar 6 forwardly as far as permitted by the netting 21, and the springs 11, said springs 20 and 11 serving to cushion the movement in either direction.

It will be noted that the fender can be

quickly attached to, or detached from the car, by simply moving the fender so as to engage or disengage the hooks 27 from the rod 4, and the fender is adapted for use with any car by simply providing a rod 4, as will be readily understood.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers and other springs connecting the ends of said bars, substantially as described.

2. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers, hooks on the ends of said bars, and coiled springs connected to said hooks and to said netting, substantially as described.

3. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers, hooks on the ends of said bars, and spring tongues secured to said rear bar and constructed to support the fender, substantially as described.

4. A car fender comprising front and rear bars, a flexible netting connecting said bars, curved tubes secured to the rear bar and projecting forwardly, plungers secured to the forward bars and positioned in said tubes, springs in said tubes exerting outward pressure on the plungers, hooks on the ends of said bars, coiled springs connected to said hooks and to said netting, and spring tongues secured to said rear bar and constructed to support the fender, substantially as described.

5. The combination with a car, and a transverse rod secured on the forward end of the car, of a fender comprising front and rear bars, telescoping devices connecting said bars, a flexible netting connecting said bars, springs in said telescoping devices exerting outward pressure on the forward bar, other springs connecting said bars and exerting a rearward pull on said forward bar, and spring tongues secured to the rear bar and positioned under and against the bottom of the car, substantially as described.

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

WILLIAM HELBLING.

Witnesses:
FRED J. HELBLING,
WM. W. MOORE.