

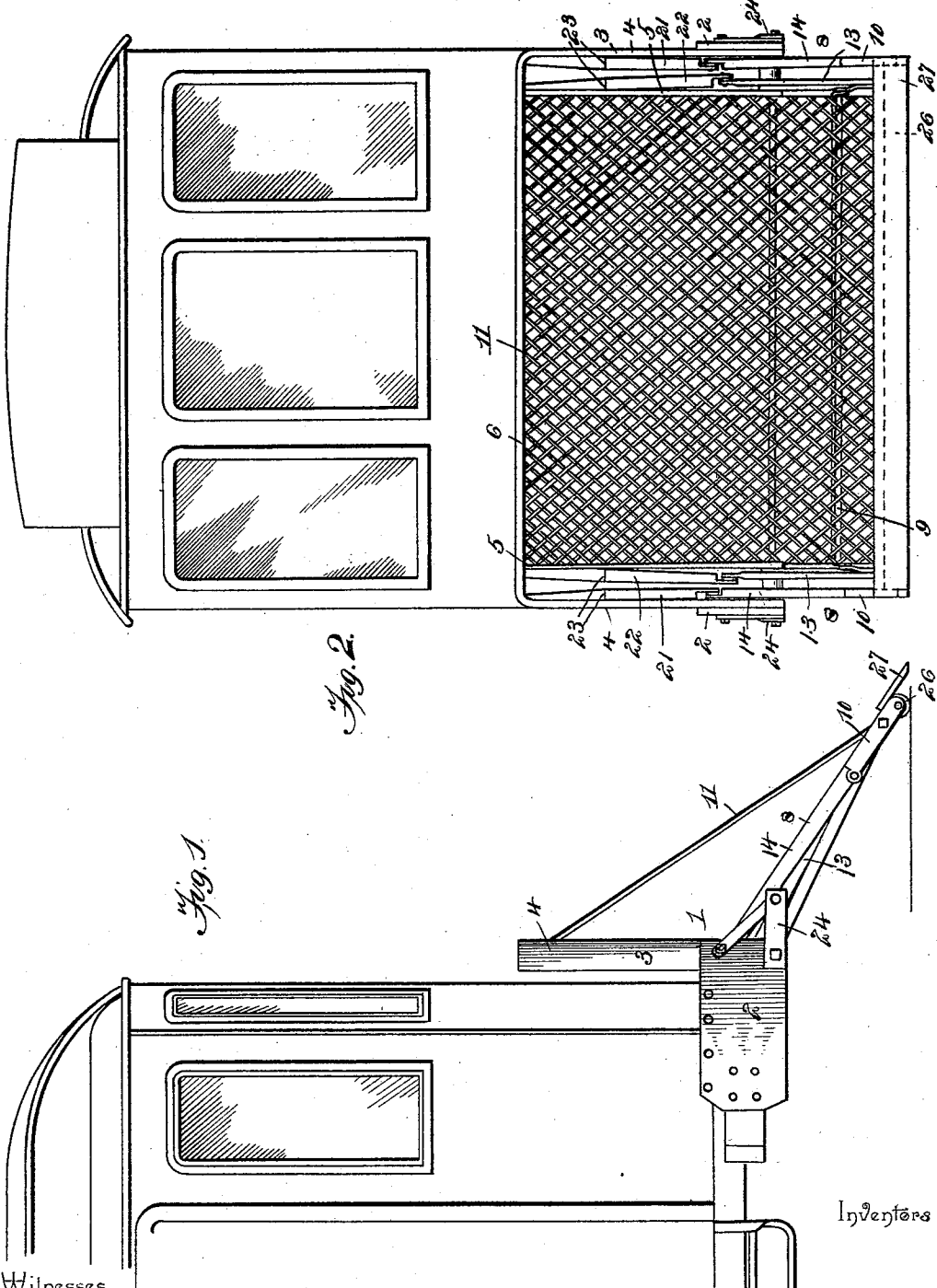
(No Model.)

2 Sheets—Sheet 1.

E. B. & F. S. TOWNE.
CAR FENDER.

No. 530.140.

Patented Dec. 4, 1894.



Witnesses

Blair C. Shaw
J. H. Riley

By their Attorneys.

Edgar B. Towne
Franklin S. Towne,
Attorneys.

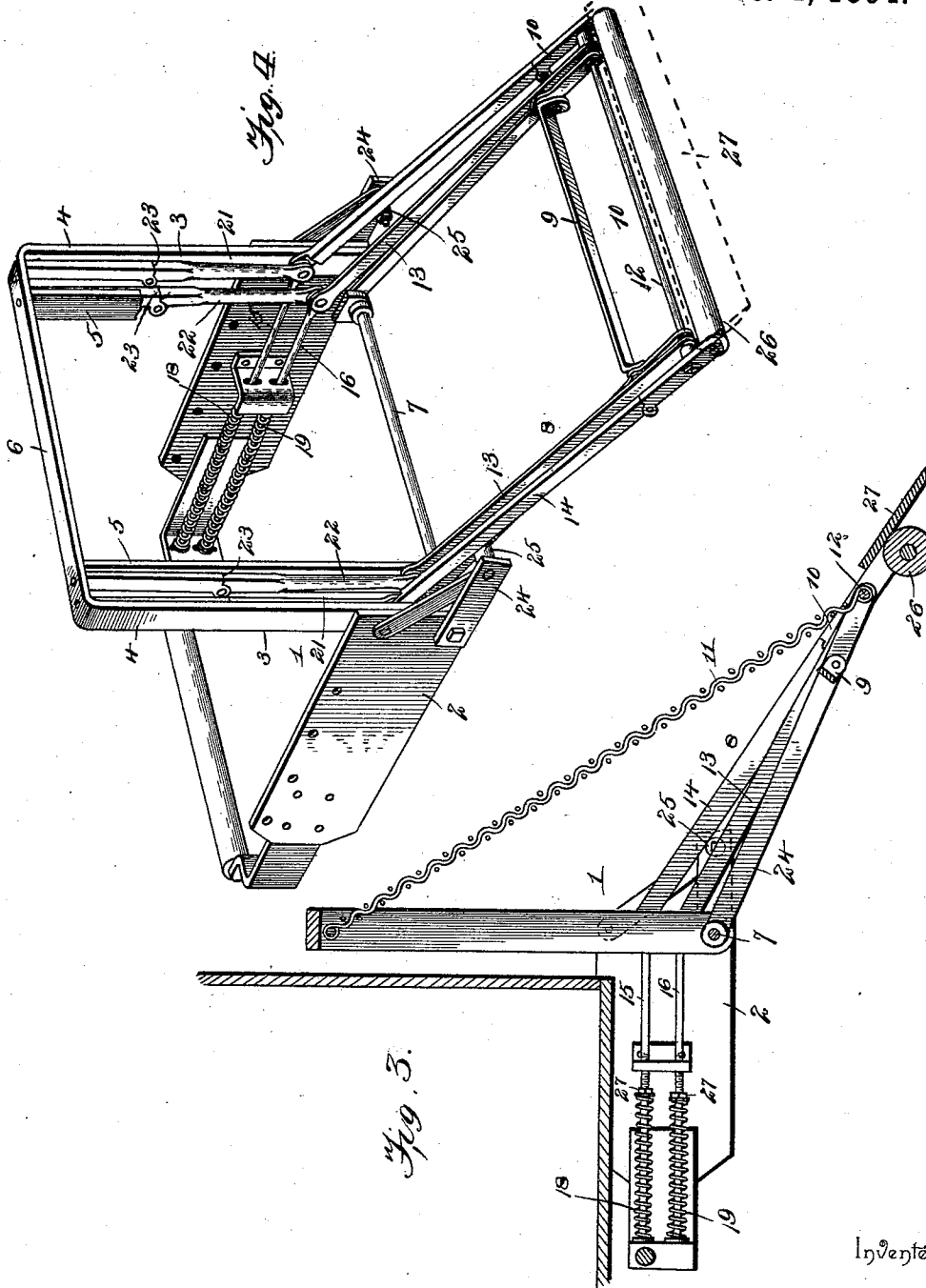
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Inventors

Witnesses

John C. Shaw
W. T. Riley

By their Attorneys,

Edgar B. Towne
Franklin S. Towne
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

EDGAR BUTLER TOWNE AND FRANKLIN S. TOWNE, OF KINGSTON, NEW YORK.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 530,140, dated December 4, 1894.

Application filed June 13, 1894. Serial No. 514,452. (No model.)

To all whom it may concern:

Be it known that we, EDGAR BUTLER TOWNE and FRANKLIN S. TOWNE, citizens of the United States, residing at Kingston, in the county of Ulster and State of New York, have invented a new and useful Car-Fender, of which the following is a specification.

The invention relates to improvements in car-fenders.

10 The object of the present invention is to improve the construction of car-fenders and to provide a simple and inexpensive one adapted to be readily applied to electric cars, cable cars, and similar street railways, and capable of readily catching a person and cushioning his fall, or the blow incident to the contact.

15 A further object of the invention is to provide a car-fender of this nature capable of hugging the rails closely and of readily passing over any small obstruction which may lie in its path.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings: Figure 1 is a side elevation of a portion of a car provided with a fender constructed in accordance with this invention. Fig. 2 is a front elevation of the same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a detail perspective view of the fender detached, the elastic netting being removed.

30 Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

35 1 designates a main frame, L-shaped in side elevation, and composed of a horizontal portion 2 designed to extend inward beneath a car, and a vertical portion 3, arranged on the front of the car. The main frame is designed to be detachably secured to the car by suitable fastening devices, in order to enable the car-fender to be readily removed from one car and applied to another. The vertical portion 3 of the main frame consists of parallel side bars 4 and 5, and a top cross-piece 6, which may, if desired, be formed integral with the outer side bars 5. At the angle of the

main frame, at the base of the vertical portion, is located a transverse pintle-rod 7, by means of which a forwardly-extending substantially rectangular frame 8 is hinged to the main frame. The forwardly-extending frame is composed of opposite side bars and a front cross-piece 9, and it is provided with a hinged extension 10, to which is attached the lower front end of an elastic netting 11. The elastic netting is constructed of suitable material, and is adapted to cushion the blow caused by the fender coming in contact with a person, to avoid injuring him.

40 The hinged extension of the frame 8 is composed of opposite side pieces which are pivoted to the forwardly-extending frame 8, and a transverse rod 12, arranged at the front ends of the sides of the hinged extension and forming a pintle or pivot for rigid and sectional or folding braces 13 and 14, arranged in pairs at each side of the forward-extending frame, and connected by rods 15 and 16, with cushioning springs 18 and 19, which also serve to cushion the fall of a person. The rigid braces 13 are arranged adjacent to the sides of the forwardly-extending frame, and have their inner ends pivotally connected to inner depending swinging bars 21 and 22, at which points the rods 15 and 16 are also pivoted. The inner and outer depending swinging bars 21 and 22 are arranged in pairs at each side of the vertical portion of the main frame. They are located in the spaces between the inner and outer side bars of the same, and they are hinged or pivoted to the said inner and outer bars of the vertical portion of the main frame by any suitable means, such as the form of joints shown. The joint 23 is provided with front shoulders to form a stop to limit the forward swinging of the depending bars, and it will be seen that these bars 21 and 22 are capable of swinging rearward only from their initial position, to bring the springs into play. The main frame is provided at its bottom with forwardly-projecting portions 24, having inwardly-extending laterally-disposed stops 25, which are located beneath the folding braces 14, to limit the downward movement of the inner portions thereof to maintain the forwardly-extending frame in its proper normal position.

The outer portions of the folding braces project beyond the transverse rod 12, and have journaled between them a transverse roller 26, arranged to run on the track, and a transverse rubber strip 27 is located in advance of the roller and serves to free the track of slight obstructions.

In event of the fender striking a stone or the like, the joint of the folding braces will break and the extension of the forwardly-extending frame will swing downward, lifting the forwardly-extending frame and permitting the fender to pass readily over such obstructions and as soon as it has passed over the obstruction the cushioning springs will instantly operate to return the parts to their normal position. In the aforesaid operation, the rigid braces 13 swing downward and move rearward against the action of the respective springs, and the inner depending bars also swing rearward to permit this operation. By this arrangement of braces an efficient cushion is provided, which is adapted to yield and which at the same time possesses sufficient strength to return the parts to their initial position, and also to cushion the fall of a person.

The spiral cushioning springs are disposed on the rear portions of the rods. They may be either compression or extension springs, as desired, but, as illustrated in the accompanying drawings, they are interposed between the rear portion of the main frame and adjustable nuts 27, mounted on threaded portions of the rods and capable of regulating the tension of these springs.

A person coming in contact with the fender will be received in the netting, and the blow incident to such contact will be cushioned by the upward swinging of the frame 8, which will cause the netting to yield to prevent injury to him; and the cushioning springs will limit the upward swinging of the forwardly-extending frame and will return the parts to their normal position when the weight is removed from the fender.

It will be seen that the car-fender is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, and that it is adapted to be readily applied to various kinds of street-railway cars.

We desire it to be understood that changes in the form, proportion, and the minor details of construction may be restored to without departing from the principle or sacrificing any of the advantages of this invention, such as changing the location of the springs, and the particular construction or form of the frame and like parts.

What we claim is—

1. In a car-fender, the combination of a main frame, a hinged frame connected therewith and arranged at the bottom thereof and extending forward therefrom and provided with a hinged extension, depending rearwardly-swinging bars arranged in pairs at

opposite sides of the main frame, the rigid braces arranged at each side of the hinged frame and connected with the extension thereof at their front ends and with two of the depending bars at their rear ends, the folding braces arranged adjacent to the rigid braces and connected at their rear ends to the other depending bars and at their front ends with the extension of the hinged frame, and springs connected with the braces for cushioning the same, substantially as described.

2. In a car-fender, the combination of a main frame provided at each side with depending rearwardly-swinging bars arranged in pairs, rods movably mounted on the main frame and connected with the depending bars, springs disposed on the rods and cushioning the rearward swinging of the said bars, a forwardly-extending hinged frame connected with the main frame, and a hinged extension of the last-mentioned frame connected with the rearwardly-swinging bars, substantially as and for the purpose described.

3. In a car-fender, the combination of a main frame provided at each side with depending rearwardly-swinging bars arranged in pairs, rods movably mounted on the main frame and connected with the depending bars, springs disposed on the rods and cushioning the rearward swinging of the said bars, a forwardly-extending frame hinged to the main frame and having at its outer end a hinged extension, and the rigid and folding braces arranged in pairs and connected at their front ends to the said extension and at their rear ends to the rearwardly-swinging bars, substantially as described.

4. In a car-fender, the combination of a main frame provided at each side with a pair of depending rearwardly-swinging bars, a forwardly-extending frame hinged at its inner end to the main frame and provided at its outer end with a hinged extension, the rigid and folding braces pivotally connected at their front ends to said extension and similarly connected at their rear ends to the depending bars, springs for cushioning the rearwardly-swinging bars, stops located beneath the folding braces and mounted on the main frame, and means for limiting the forward swinging of the depending bars, substantially as described.

5. In a car-fender, the combination of a main frame, a forwardly-extending frame hinged at its inner end to the main frame and provided at its outer end with a hinged extension, yielding braces connecting the extension with the main frame, a roller arranged in advance of the extension, a yielding netting connected at its lower end to the extension and at its upper end to the main frame, and a transverse strip located in advance of the roller, substantially as described.

6. In a car-fender, the combination of a main frame provided at each side with depending rearwardly-swinging bars arranged

in pairs, rods movably mounted on the main
frame and connected with the depending bars,
springs disposed on the rods and cushioning
the rearward swinging of said bars, adjust-
5 able nuts mounted on the rods for regulating
the tension of the springs, a forwardly-ex-
tending frame hinged to the main frame and
having at its outer end a hinged extension,
and the rigid and folding braces arranged in
10 pairs and connected at their front ends to the
said extensions and at their rear ends to the

rearwardly-swinging bars, substantially as
described.

In testimony that we claim the foregoing as
our own we have hereto affixed our signatures 15
in the presence of two witnesses.

EDGAR BUTLER TOWNE.
FRANKLIN S. TOWNE.

Witnesses:

GEORGE M. BRINK,
DAVID L. HANNAY.