

(No Model.)

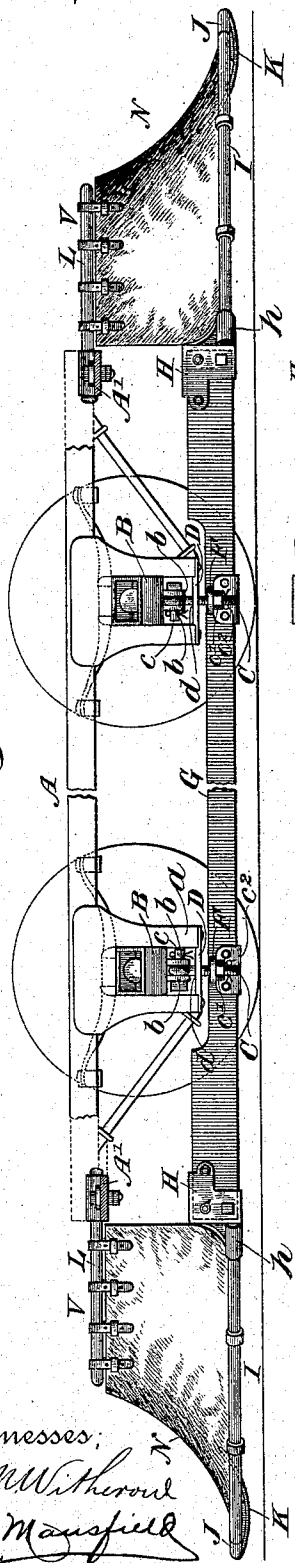
3 Sheets—Sheet 1.

J. TAYLOR.
CAR FENDER.

No. 533,381.

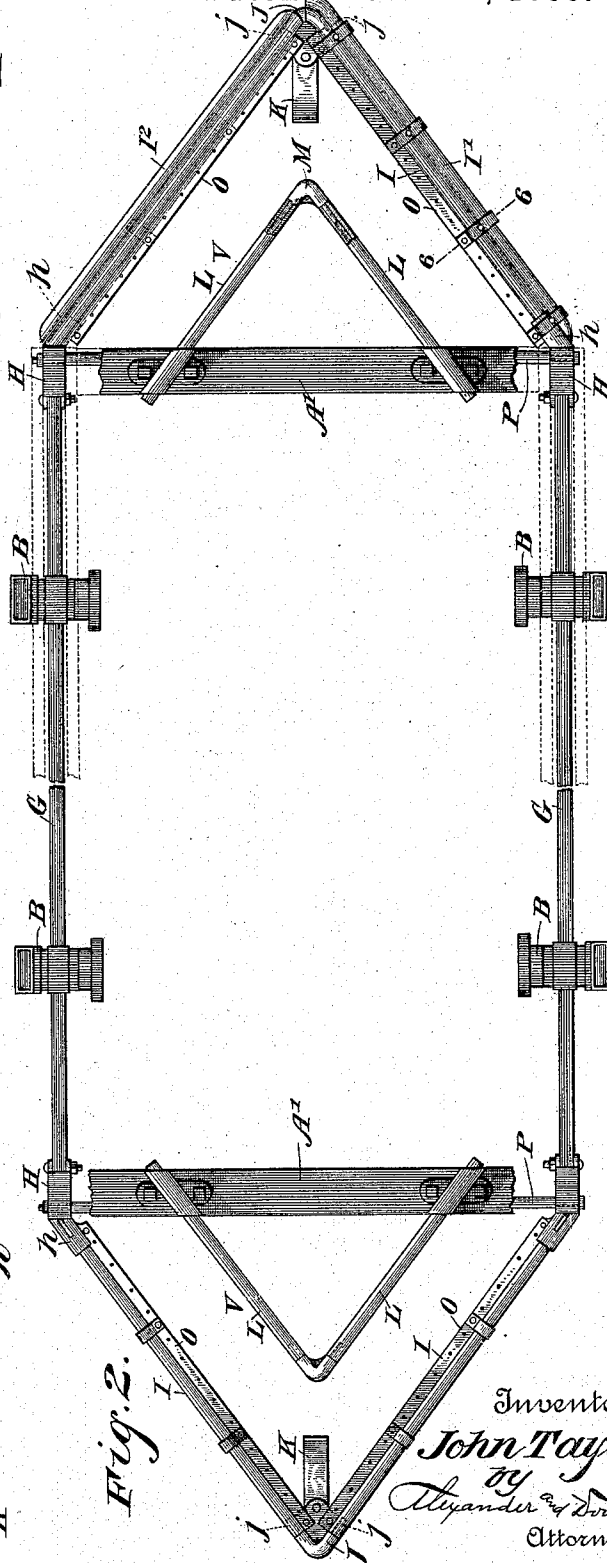
Patented Jan. 29, 1895.

Fig. 1.



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Fig. 2.



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(No Model.)

3 Sheets—Sheet 2.

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CAR FENDER.

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Fig. 3.

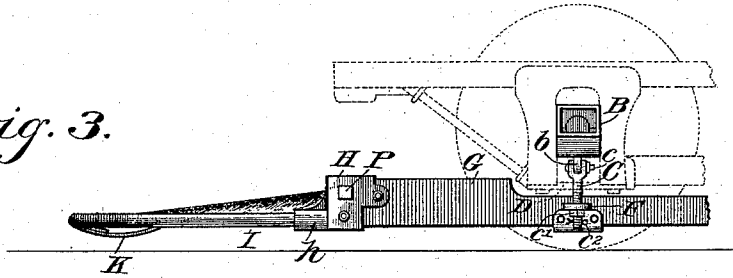


Fig. 4.

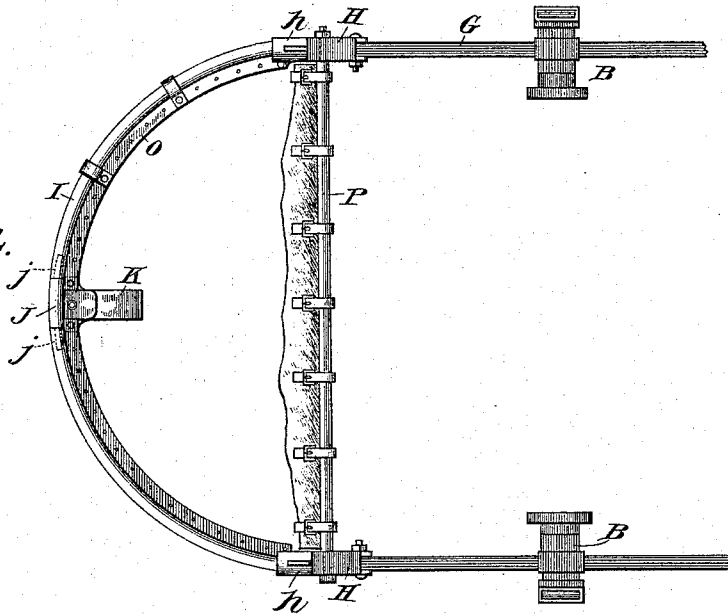


Fig. 5.

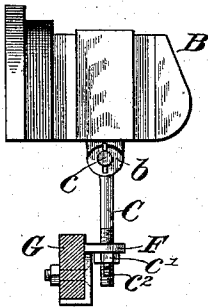


Fig. 6.

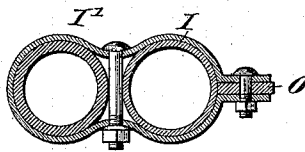
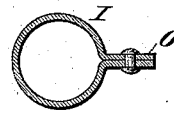


Fig. 7.



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3 Sheets—Sheet 3.

J. TAYLOR.
CAR FENDER.

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Fig. 8.

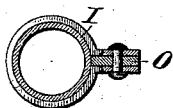


Fig. 9.

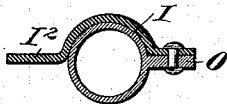


Fig. 10.

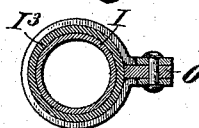


Fig. 11.

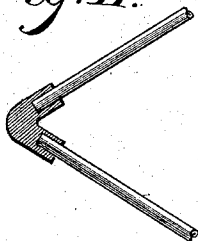


Fig. 12.

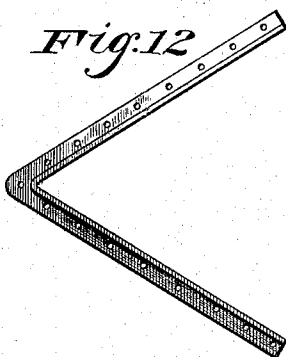


Fig. 12a



Fig. 13.

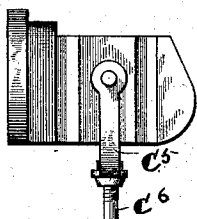


Fig. 13a

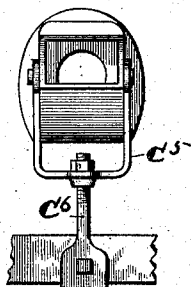


Fig. 14.

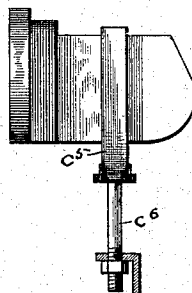


Fig. 14a

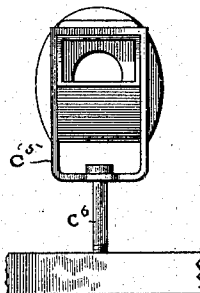


Fig. 15.

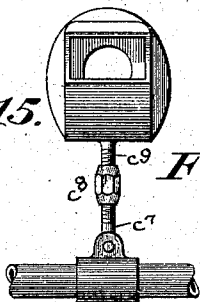


Fig. 16.

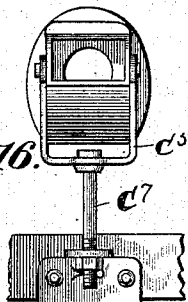
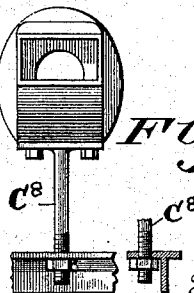


Fig. 17.



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UNITED STATES PATENT OFFICE.

JOHN TAYLOR, OF TROY, NEW YORK.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 533,381, dated January 29, 1895.

Application filed October 5, 1894. Serial No. 525,008. (No model.)

To all whom it may concern:

Be it known that I, JOHN TAYLOR, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful
5 Improvements in Car - Fenders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon,
10 which form part of this specification.

This invention is an improvement in fenders for street railway cars. It comprises both side and end fenders, the latter being supported on the former, and the side fenders being
15 adjustably attached to the journal boxes of the truck, so that the fenders will be always carried a certain distance from the rail and not be affected by lateral or longitudinal oscillation of the car body, or the variations in
20 the car springs due to difference in loads thereon. It also has means for vertically adjusting the fenders in relation to the track, which is an important feature, as during the summer season the fenders can be run much closer to
25 the track than in winter when the streets are covered with snow, slush, &c.

The invention consists in the novel construction of the fenders, their adjustable mountings, and other details of construction and
30 combinations of parts hereinafter described and summarized in the claims.

In the accompanying drawings: Figure 1 is a side elevation of a car truck with the preferred form of my improved fenders attached thereto. Fig. 2 is a top plan view of the fender shown in Fig. 1 detached from the truck, which is partly shown by dotted lines. Fig. 3 is a detail side elevation of a modified construction of the fender, indicating the truck-
40 frame by dotted lines. Fig. 4 is a top plan view of Fig. 3. Fig. 5 is a detached view of the journal boxes shown in Fig. 1 and the attached fender-hanger. Fig. 6 is a detail enlarged transverse section on line 6—6 Fig. 2 showing the flexible tube or cushion attached to bottom of end fender. Fig. 7 shows how the bottom tube and flange of end fenders may be made of one strip of metal. Fig. 8 shows flange secured to pipe by clip. Fig. 9 shows
45 a flexible piece clipped to flange and projecting over and in front of the pipe. Fig. 10 shows the pipe covered with hose and the flange

clipped to it. Fig. 11 is a detail showing a modified form of the front casting. Figs. 12 and 12^a are top and sectional views of modified form of top frame. Figs. 13 and 13^a are front and side views of a modified form of fender hanger. Figs. 14 and 14^a are front and sectional views of another arrangement of hanger. Fig. 15 is yet another form of vertically adjustable hanger. Fig. 16 is a modified form of vertically adjustable and laterally swinging hanger. Fig. 17 illustrates another adjustable hanger.

Referring to the drawings by letters: A 65 designates a truck frame; B, the journal boxes which have depending perforated ear or ears *b*, on their undersides, to which are pivotally secured, by bolts *c*, the upper ends of hangers C, which depend through openings *d*, in the straps D that are fastened to the pedestals *a*, below the journal boxes. These hangers being pivoted to the boxes will maintain a substantially vertical position notwithstanding the vibration of the pedestals. The
70 lower ends of the hangers C are threaded and pass through eyes *f* on clip-plate F secured to the side fenders G, the hangers being secured to the clip-plate by nuts *c'*, and the nuts may be prevented from jarring off the hangers by keys *c''* if desired. By adjusting nuts *c* the clip-plates F, and the attached fenders are raised or lowered. The side fenders G may be of wood, or metal, and in the latter case they may be tubular, or angular in cross
85 section. In order to give more surface I prefer to use wood bars arranged edgewise as shown in Fig. 1, and to the ends of said bars are secured castings H which are slotted to receive the ends of bars, and are provided
90 with forwardly extending sockets *h* into which fit the ends of tubes I, forming the lower frame of the end fenders. The adjoining tubes I converge and are united at their outer ends to a V-shaped casting J, which has ten-
95 ons *j* to enter the ends of the pipes, as shown in Fig. 2, thereby making a rigid A-shaped fender at each end of the car. Curved shoes K are attached to castings J to prevent the point of fender digging into the ground or
100 catching on obstructions upon the track.

Above each end fender is a frame V which as shown in Figs. 1 and 2 is composed of side tubes L, L, united at their meeting ends to a

casting M very similar to casting J, and fastened at their rear divergent ends to the top transverse bar A' of the truck frame as shown.

The V-shaped apron N is secured at its inner edges to tubes L, and at its outer edges to tubes I. This completes the end fender. This apron may be made of any desired flexible material, is preferably made of canvas, and it is secured in any desired manner to the tubes I, L. Being flexible it will allow the upper frame to move or oscillate with the truck frame, without affecting the lower frame tubes I, L, which are suspended indirectly but securely from the journal boxes. I prefer canvas because it is cheap. When thoroughly painted it can be readily cleansed by a hose. On account of its pliability it allows the truck frame to freely act on the springs. It can be quickly attached or removed if necessary. If a person should fall or be lying on the track the ends of this fender would have a tendency to roll him over into it, or push him to one side without danger of any part of his body becoming entangled in or breaking through the apron as is the case with netting.

The upper frame could be attached to the car body instead of to the truck frame if desired.

For convenience in fastening the aprons, I attach or form a flange O to the lower frame or tubes I, L, as shown, either by clips, or forming it integral with the tubes. The castings J, M, might have sockets to receive the end of pipes as shown in Fig. 11, as an equivalent of the construction shown in Fig. 1.

Instead of attaching the apron to the upper frame J, its rear edge might be secured to the rod, bar, or pipe P (see Figs. 3 and 4) which lies transversely of and between the castings H, H, and holds the side fenders in proper relative position.

The pipes I, I, might be curved as indicated in Fig. 4.

The lower tubes I, I, may be provided with a pneumatic tube or flexible cushion I', as shown in Figs. 2 and 6 or with a cushioning strip I² as shown in Figs. 2 and 9, and may be incased in hose as shown in Fig. 10 at I². In practice the tubes I with their flange O may be formed of one strip of metal bent as shown in cross section Fig. 7.

If desired the frame V may be formed of a single tube bent into desired shape, or, as shown in Figs. 12 and 12^a it may be formed of angle iron, or in other desired manner, its construction, except where specifically set forth in some of the claims, not being an essential feature of the invention.

When made of metal the end-fender frames might be formed of one piece also, as well as the top frames, and I do not limit myself to the specific construction of end-fender frames or other parts except where such construction is specifically referred to in the claims.

As shown in Figs. 13 and 13^a, the hanger consists of a loop c⁵ and bolt c⁶, the side

fender being suspended from the journal box by means of a bolt C⁵ fastened to the fender at its lower end, while its threaded end passes through an opening in a U-shaped loop c⁵ which is suspended from lugs on the sides of the journal box. In Fig. 16 the construction is substantially the same, only the bolt c⁷ is inverted and its threaded end passed through an opening in a plate attached to fender bar. In Figs. 14 and 14^a the U-shaped loop is replaced by a rectangular loop c⁵ which is hung on the box direct, and the threaded end of bolt C⁶ is passed through an opening in the side fender, which is shown made of angle iron. In each of these modifications the lateral swing of the fenders, and the independent vertical adjustment of the fender beneath each box, is provided for.

In Fig. 15 a threaded bolt c⁷ rising from a tubular side-fender bar, is connected by a turn buckle nut c⁸ to a bolt c⁹ hung from the journal box. In Fig. 17 the bolt, C⁶ connected to the fender bar as in Fig. 14, has its upper end T-headed and fastened to under side of journal box direct. These latter constructions provide for independent vertical adjustment of the fender below or at each journal box, or point of suspension.

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

1. The combination of the journal boxes, and the vertically adjustable side and end fenders rigidly connected together, with the independently vertically adjustable hangers suspending the fenders from and beneath the journal boxes, substantially as described.

2. The combination of the journal boxes, and the hangers pivotally hung therefrom, so as to swing laterally of the truck; with the side fenders adjustably attached to said hangers, and the end fenders rigidly connected to the side fenders, substantially as described.

3. The combination of the side and end fender-frames suspended from the journal boxes, with the top fender frames beneath the car body supported independently of the lower fender frames, and the apron connected to adjoining top and end fender-frames, substantially as described.

4. The combination of the journal boxes having lugs, the hangers pivotally connected to said lugs so as to swing transversely of the truck frame and beneath the journal boxes, and the fender-bars supported by said hangers, substantially as described.

5. The combination of the journal boxes having lugs, the hangers pivotally connected to said lugs so as to swing transversely of the truck frame and beneath the journal boxes, and the fender-bars supported by said hangers; with the lower end-fender frames attached to said bars, the upper end fender frames below the car body supported independently of the lower frames, and the apron connected to said upper and lower end frames, substantially as specified.

6. The combination of the truck frame, the frames fastened to the end bars thereof, and the journal boxes; with the hangers suspended from said boxes, the side fender bars attached to said hangers, the castings on the ends of said bars, the end fender frames attached to said castings, the shoes, and the flexible aprons connected to said end fender frames and to the adjoining superimposed frames, all substantially as described.

7. The combination of the side fender bars suspended from the journal boxes, the castings attached to the ends of said bars, the tubes attached at their rear ends to said castings, and the casting uniting the front ends of said tubes, substantially as described.

8. The combination of the side fender bars suspended from the journal boxes, the castings attached to the ends of said bars, the tubes attached at their rear end to said castings, and the castings uniting the front ends of said tubes, the upper frame composed of tubes fastened at their ends to a suitable support above and independently of the lower fender bars, and the apron connected to the adjoining upper and lower tubes, substantially as described.

9. The combination of the side fenders, the end fenders attached thereto, consisting of the flanged tubes I, I, and union casting J,

and the apron attached to the flanges, substantially as described.

10. The combination of the side fenders suspended from the journal boxes, the casting H on the ends of said fenders, the tubes I, I, attached to said castings, the casting J connecting the front ends of said tubes, the transverse bar P, and the apron substantially as described.

11. The combination in a car fender of the side fender bars the adjustable hangers suspending said bars from the journal boxes, the castings attached to the front ends of said bars, the flanged tubes connected to said castings, the casting connecting the front ends of said tubes, and the cushion fastened to said tubes; with the V-shaped frame suspended from the car body above the tubes, and the flexible apron connected to said tubes and frame, all constructed and arranged to operate, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN TAYLOR.

Witnesses:

WILLIAM F. GURLEY,
JOHN RATIGAN.