(No Model.) 2 Sheets—Sheet 1.

J. K. YOUNG.

CAR FENDER.

No. 588,849. Patented Aug. 24, 1897.

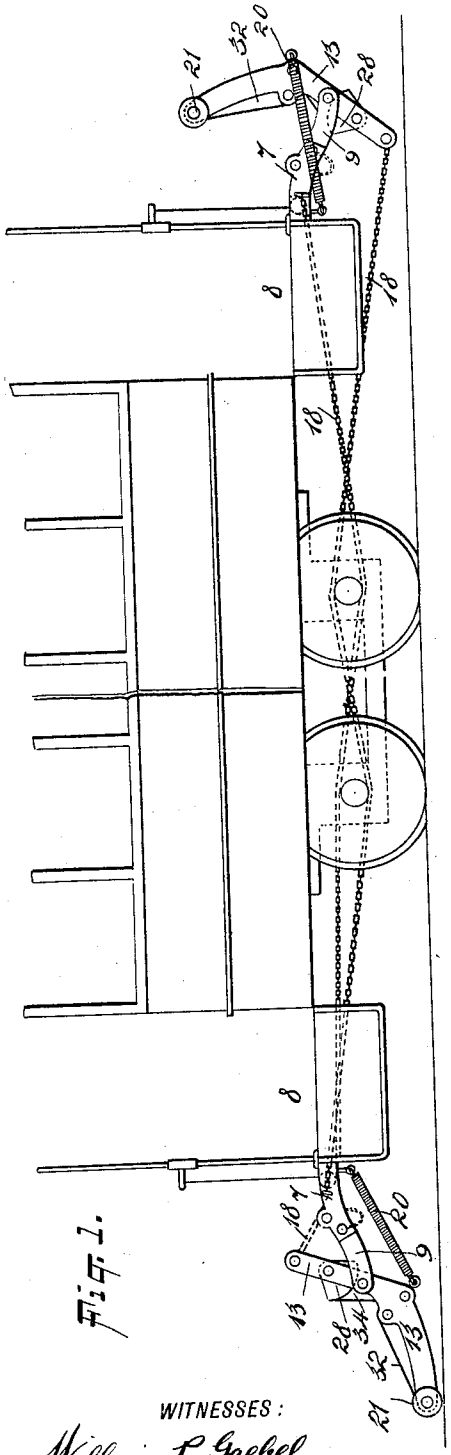


Fig. 1.

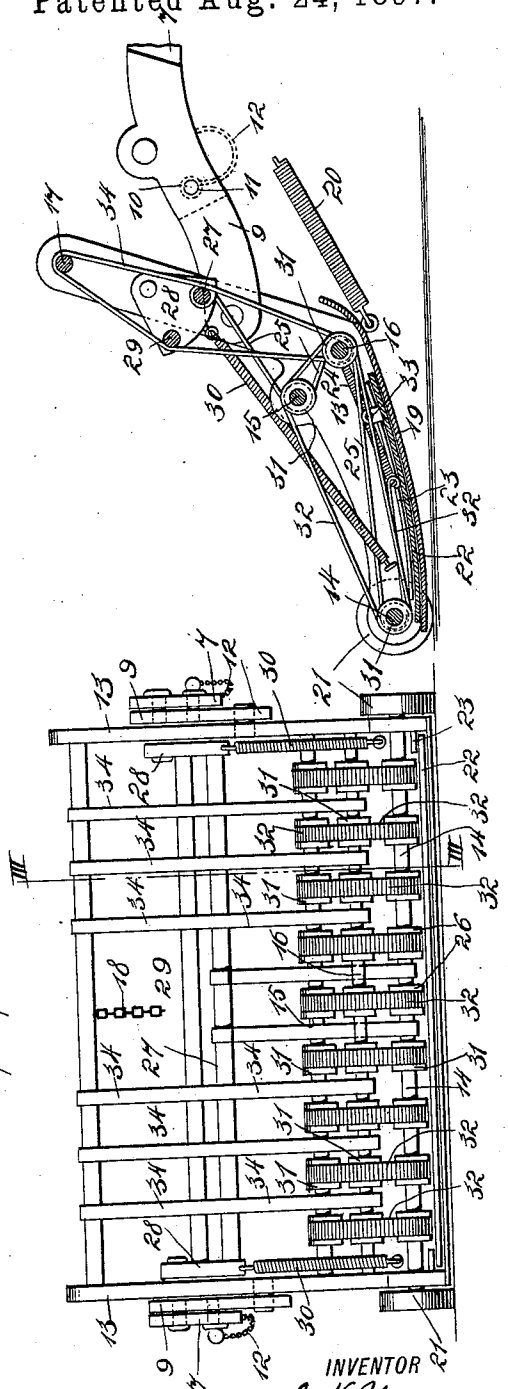


Fig. 3.

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

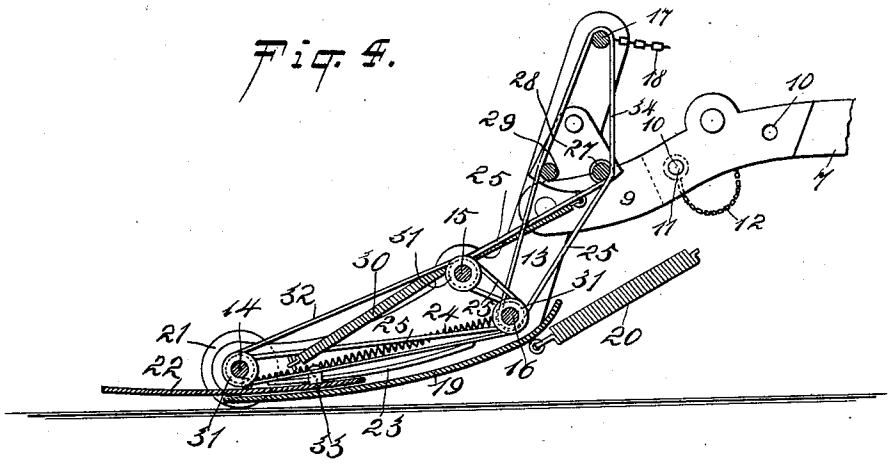


Fig. 5.

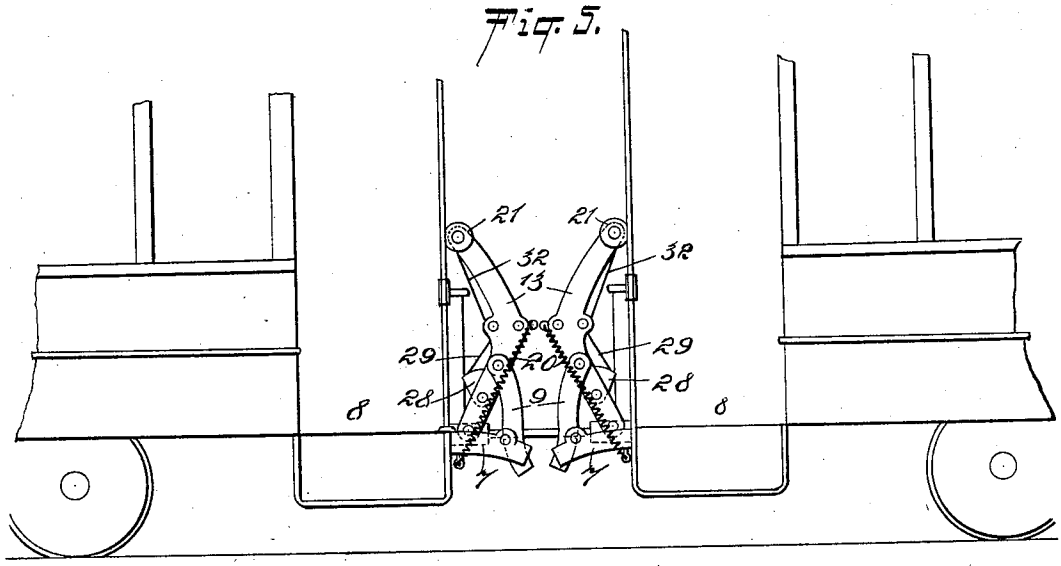
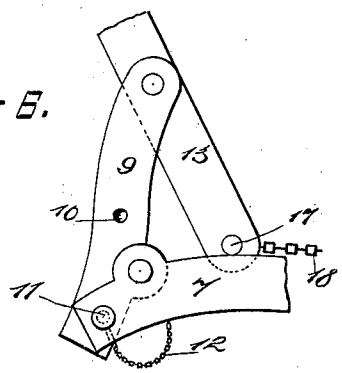


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES KEAY YOUNG, OF MERIDEN, CONNECTICUT.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 588,849, dated August 24, 1897.

Application filed February 6, 1897. Serial No. 622,342. (No model.)

To all whom it may concern:

Be it known that I, JAMES KEAY YOUNG, of Meriden, in the county of New Haven and State of Connecticut, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

The invention relates to car-fenders of that class in which a portion is provided to move forward when an object falls upon the fender, so that the object will be more securely held by the fender.

The invention will be fully described hereinafter and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a car provided with my improvement. Fig. 2 is a front elevation of the fender. Fig. 3 is a section taken through the fender on the line III III of Fig. 2. Fig. 4 is a similar view showing the parts in a different position. Fig. 5 is a view showing how the fenders may be folded when two cars are coupled together, and Fig. 6 is a detail view of the frame of the fender.

The form of my invention shown in the drawings has two arms 7 fixed to each side of each platform 8 of the car. The arms 7 are located at the outer ends of the platforms and have the plates 9 respectively pivoted thereto. Each plate 9 has two openings 10, in either of which the pins 11 may respectively fit. The pins 11 are one for each arm 7 and are connected thereto by chains 12. When the fenders are in operative positions, the plates 9 project downwardly and forwardly from the respective arms 7, as shown in Figs. 1, 3, and 4. When the fenders are folded vertically, as is necessary upon the coupling together of two cars, as shown in Fig. 5, the plates 9 extend upward approximately perpendicular and are held by the respective pins 11 entering the recess 10 at the rear ends of the plates 9. Pivoted to the free end of each plate 9 is a side plate 13 of the fender-frame proper, each fender-frame having two side plates 13, the plates being duplicates of each other and each having two portions disposed at an obtuse angle to each other. The plates 13 of each fender-frame are joined by four transverse shafts 14, 15, 16, and 17, which extend between the plates and are rigidly connected to each. Each end of the car is provided with a complete fender and its appurtenant parts, as shown in Fig. 1. Each shaft 17 has a chain 18 attached thereto, the chains respectively passing from each fender inward over the near axle, under the far axle, and then into connection with one of the arms 7 of the fender at the opposite end of the car. Fixed to the lower runs of the side plates 13 is a shield-plate 19, which extends between the side plates and serves to protect the parts above the shield-plate 19. Connected to the rear portion of the shield-plate 19 is a retractile spiral spring 20, the spring 20 of each fender extending inward toward the car and being connected to the outer portion of the adjacent platform 8. The springs 20 act oppositely to the chains 18 and serve normally to hold the fenders in the positions shown in Figs. 1, 3, and 4, at which times the wheels 21 on the outer end of the fender run along the rails of the track. By adjusting the chains 18 the fenders can be raised at any height above the track, so as to throw the wheels 21 out of operation.

Resting on the top of the shield-plate 19 is a sliding plate 22, the upper side edges of which are engaged by flanges 23, projecting horizontally from the inner sides of the plates 13. The flanges 23 serve to hold the sliding plate 22 from displacement. Connected to the upper side of the sliding plate 22 and extending rearward to the shaft 16 is a retractile spring 24, which tends to draw the plate 22 to the position shown in Fig. 3. Attached to the sliding plate 22 at the same point at which the spring 24 is connected are two bands or straps 25, which pass forwardly around the shaft 14, and thence rearward around the shaft 16, thence forward under and over the shaft 15, and thence rearward to a shaft 27, which is fixed at its ends to the respective quadrant-shaped plates 28. The plates 28 are respectively pivoted to the inner sides of the side plates 13 and are rigidly joined to each other by the shaft 27 and by a shaft 29, similar to the shaft 27 and located for-

wardly thereof. Two retractile spiral springs 30 are connected, respectively, to the side plates 13 and to the plates 28. These springs tend to draw the plates 28 forward to the positions shown in Figs. 1 and 3.

Mounted to turn on the shafts 14, 15, and 16 are a series of flanged sleeves or idler-pulleys 31, over which the endless bands 32 respectively run. These bands form a yielding bed, which will receive an object thrown upon the fender and hold the same without injury. Each band 32 is connected to the upper side of the sliding plate 22 by means of a lug or screw 33 or by any other fastening device, as may be desired. The normal position of the parts being that shown in Fig. 3, when the fender is forcibly projected against an object contact of the same with the bands 32 tends to move rearward the upper runs of said bands. This rearward movement of the upper runs of the bands forces the lower runs forward and carries with them the sliding plate 22, projecting the same to the position shown in Fig. 4, at which position the plate will be moved under such portions of the object as hang forward of the shaft 14, so as to support said portions from engagement with the track and prevent them from getting under the fender.

Running over the shafts 16 and 17 and embracing the shafts 27 and 29 are the endless bands 34, which, being normally in the position shown in Fig. 3, serve as a flexible or yielding back for the fender. When an object thrown upon the fender engages the bands 34, the bands will be pressed rearward to the position shown in Fig. 4, which will swing the plates 28 rearward and cause the connection 25 to be drawn rearward, which, owing to the disposition of the connection on the various shafts, projects the plate 22 forward. By these means I provide two auxiliary devices for projecting forwardly the plate 22. Movement of the straps 25 to throw upward the plate 22 will cause the bands 34 to move also, but the bands 34 may move independently of the straps 25 to throw the plate 22 forward. The two means make it possible for an object to fall upon the fender without causing the plate 22 to be projected forward.

In the practical use of the apparatus, assuming that the car in Fig. 1 is moving in the direction of the arrow shown in said figure, the forward fender should be down, as shown, and the rearward fender raised to inactive position. Assuming that two cars are to be coupled to each other, the fenders at the contiguous ends of the cars are not only raised on the pivots between the plates 9 and the plates 13, but on the pivots between the plates 9 and the arms 7, so that the fenders will lie closely against the dashboards of the platforms and permit the cars to be moved together, as is necessary when they are coupled with each other.

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

1. In a car-fender, the combination of a pivotally-mounted frame, a sliding plate mounted thereon, and means for operating the plate, such means being in connection with the plate and being moved by force imparted by an object falling on the fender, substantially as described.

2. A car-fender having a fender-frame, a sliding plate mounted thereon, and means for operating the plate, such means being in connection with the plate and being moved by force imparted by an object falling on the fender, substantially as described.

3. In a car-fender, the combination with a support, of two side plates pivoted thereon, a bottom or shield plate rigidly connected to the side plates, a sliding plate located above the bottom plate, and means carried by the side plates and in connection with the sliding plate, whereby as an object falls on the fender the sliding plate will be operated, substantially as described.

4. In a car-fender, the combination with a support, of two side plates pivotally mounted thereon, two shafts rigidly connected to the side plates, a band running over the shafts, and a sliding plate held by the side plates and connected to the band, substantially as described.

5. In a car-fender, the combination with a support, of a pivotally-mounted frame, a sliding plate on the frame, a shaft mounted to swing on the frame, and a connection between the shaft and the plate, whereby upon the movement of the shaft the plate is operated, substantially as described.

6. In a car-fender, the combination with a pivotally-mounted frame, a sliding plate carried thereon, a transversely-swinging shaft mounted on the frame, and a connection between the sliding plate and the transversely-swinging shaft, substantially as described.

7. A car-fender having two side plates, two rods rigidly connected to and passing transversely between the side plates, a bottom or shield plate held by the side plates, a sliding plate located above the bottom plate and beneath the shafts, a band running around the shafts and connected to the sliding plate, a transversely-swinging shaft mounted between the side plates, and a connection between said transversely-swinging shaft and the sliding plate, substantially as described.

8. In a car-fender, the combination with a support, of a frame pivotally mounted thereon, a bottom plate held by the frame, two shafts mounted on the frame, a band passing over the shafts, a sliding plate located above the bottom plate and connected with the band, a transversely-swinging shaft mounted on the frame, and a connection between the transversely-swinging shaft and the sliding plate, substantially as described.

9. In a car-fender, the combination of a frame, a transversely-swinging shaft mounted thereon, a sliding plate, a connection between the transversely-swinging shaft and the sliding plate, and a flexible band located adjacent to the swinging shaft and capable of moving the same, substantially as described.

10. In a car-fender, the combination of a frame, a sliding plate mounted thereon, two plates pivoted on the frame, two shafts rigidly connecting the plates, a flexible connection between one of the shafts and the sliding plate, and a band passing around the shafts of the pivoted plates and serving to engage said shafts to swing the same, substantially as described.

11. In a car-fender, the combination with two rigid supporting-arms, of two side plates respectively pivotally carried on the arms, two shafts passing transversely between the side plates and rigidly connected thereto, a bottom plate connected to and passing between the side plates, a sliding plate located above the bottom plate, a band running around the two shafts and connected to the sliding plate, a transversely-swinging shaft carried by the side plates, a connection between the transversely-swinging shaft and the sliding plate, and a band located adjacent to the transversely-swinging shaft and capable of engaging and of swinging the same, substantially as described.

12. The combination with a car, of car-fenders respectively pivoted to the ends of the car, a spring actuating each fender, and a flexible connection attached to each fender and run oppositely and connected with the car near the opposite ends thereof, substantially as described.

13. The combination with a car, of a car-fender pivoted thereto, a spring connected with the car-fender and with the car, and a flexible connection attached to the fender on the side of its pivot opposite to the spring and attached to the car, substantially as described.

14. The combination with a car, of two arms rigidly carried by the car, a plate pivotally connected to each arm, means for holding the plates in either of two positions with reference to the arms, a fender pivotally carried by the plates, a spring connected to the fender and to the car, and a chain connected to the fender and to the car, the chain and spring being located on opposite sides of the pivot of the fender, substantially as described.

15. The combination with a frame, of a sliding plate, and a belt running on the frame and connected to the plate, the belt being in position to be engaged by an object striking the fender and to be moved by the action of said object whereby to outwardly project the sliding plate.

16. In a car-fender, the combination with a frame of a member slidable thereon, and a band running on the frame and connected with the said sliding member, the band being capable of being engaged by an object thrown upon the fender and of moving under the influence of said object to impart movement to the sliding member.

17. In a car-fender, the combination with a frame, of a member supported and movable thereon, and means supported on the frame independently of the said movable member, such means being in connection with said member, and being capable of being engaged by an object thrown upon the fender whereby to transmit operative movement to said movable member by the force derived from the impact of said object.

18. The combination with a support, of an arm projecting outwardly therefrom, a plate pivotally connected to the arm and capable of extending in approximate alinement with the arm and outwardly from the said support, and a car-fender carried by the plate, the car-fender and plate being movable on the arm so that the plate and car-fender will stand upward from the arm.

19. In a car-fender, the combination with a frame, of a movable member mounted on said frame and capable of being projected outward upon the operation of the fender, and means carried on the frame against which means an object struck by the fender is thrown, such means being capable of receiving from the impact of the object operative movement and of transmitting such movement to the movable member so as to project the same by force derived from the impact of the object thrown on the fender.

JAMES KEAY YOUNG.

Witnesses:
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F. B. MOLLOY.