

J. J. KELLY.
STREET CAR FENDER.
APPLICATION FILED DEC. 15, 1910.

986,990.

Patented Mar. 14, 1911.
2 SHEETS—SHEET 1.

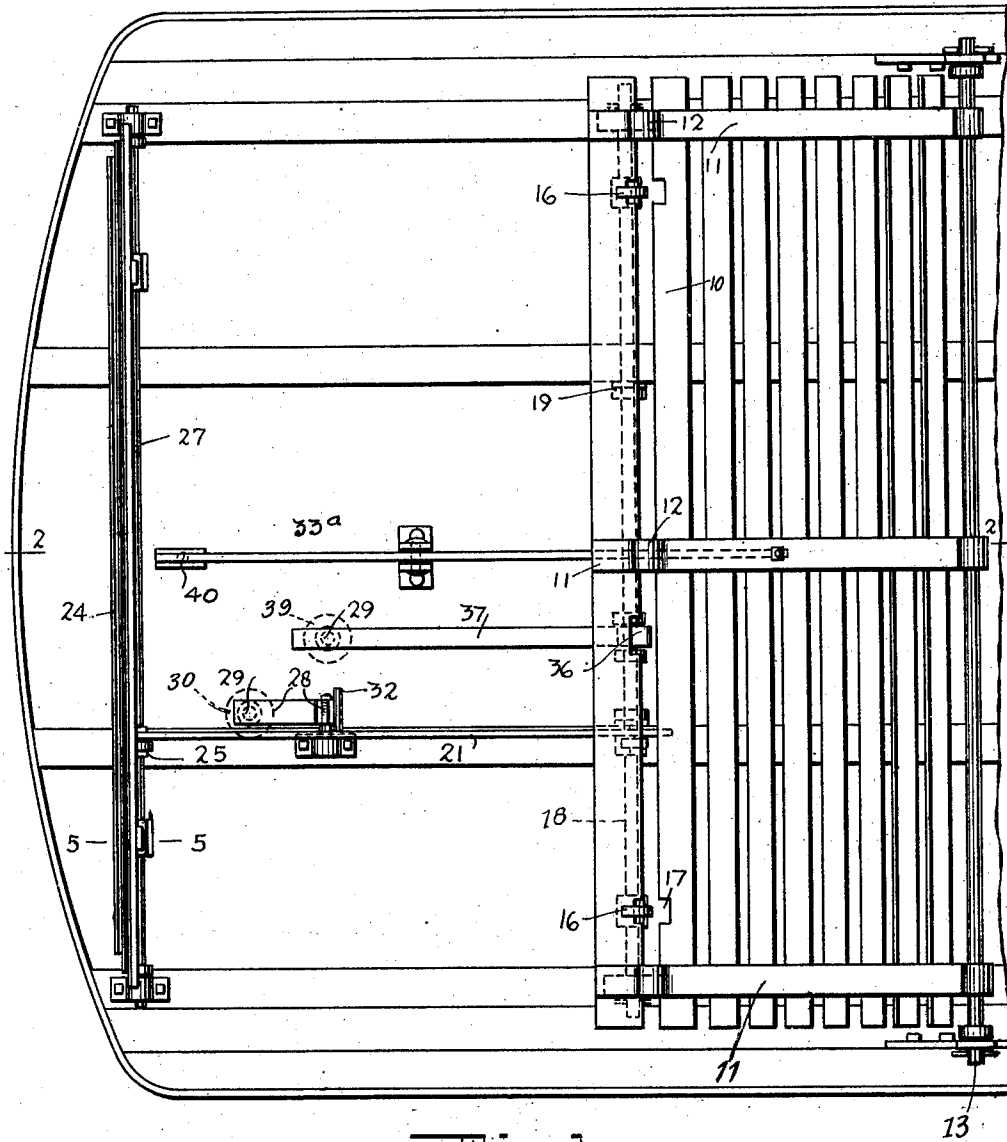


Fig. 1

WITNESSES
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2 SHEETS-SHEET 2.

Fig. 2

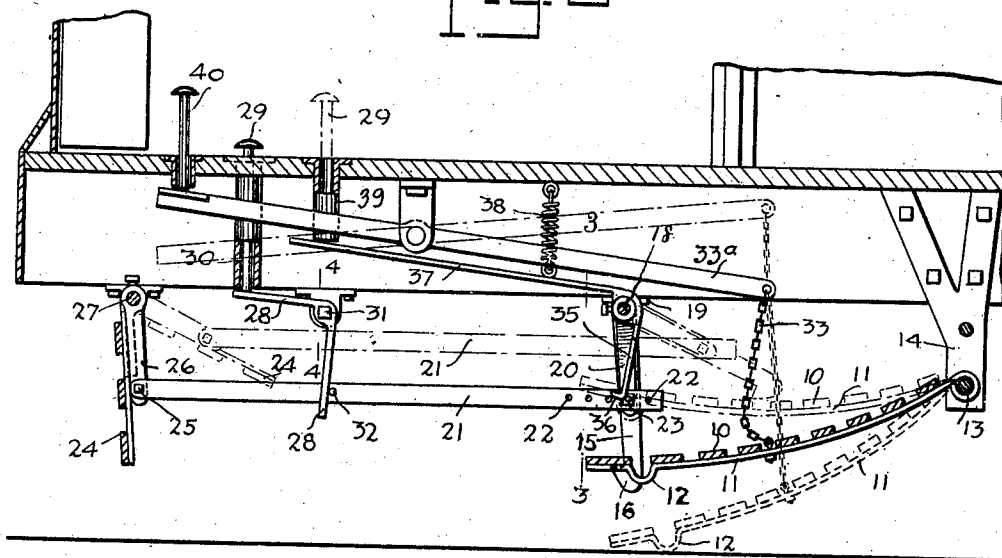


Fig. 3

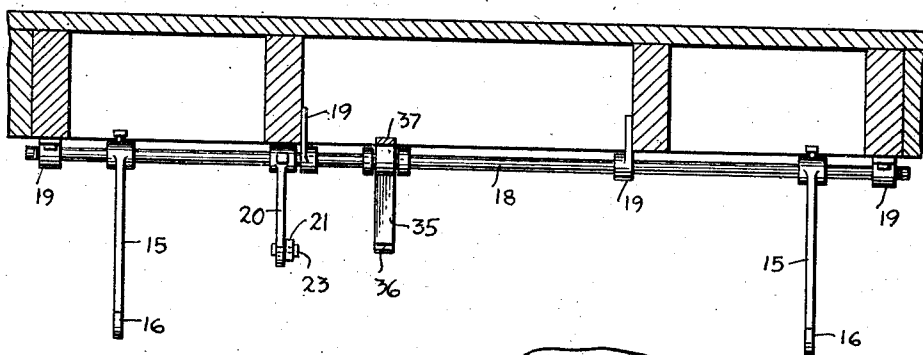


Fig. 4

WITNESSES
J. A. Murphy
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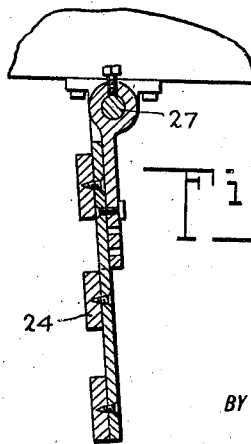


Fig. 5

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UNITED STATES PATENT OFFICE.

JOHN J. KELLY, OF NEW YORK, N. Y.

STREET-CAR FENDER.

986,990.

Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed December 15, 1910. Serial No. 597,407.

To all whom it may concern:

Be it known that I, JOHN J. KELLY, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Street-Car Fender, of which the following is a full, clear, and exact description.

The present invention relates to improvements in street car fenders and has for its particular object to provide a mechanism therefor, whereby the fender may be lifted to a position of safety, under certain conditions of operation of the street cars, and be released from such safety position to an operative or life-saving position.

With this object in view, the invention consists in providing means for lifting, and maintaining in lifted position, the fender above the height of the ordinary obstructions of the road and particularly above obstructions such as snow, which, unless avoided, operate to throw the fender to an operative position.

One embodiment of the present invention is illustrated in the accompanying drawings, wherein like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a plan view, as seen from beneath and as applied to a street car structure, of a fender constructed and arranged in accordance with the present invention; Fig. 2 is a longitudinal vertical section taken on the line 2—2 in Fig. 1; Fig. 3 is a vertical cross section of a car structure taken on the line 3—3 in Fig. 2, showing in elevation, the latch shaft and auxiliary latch connected therewith, the fender apron and operating mechanism therefor being omitted; Fig. 4 is a detailed view of the foot operated latch tripping lever for manually dropping the fender apron on an enlarged scale in vertical section taken on the line 4—4 of Fig. 2 for manually operating the fender apron releasing mechanism; Fig. 5 is a detailed view on an enlarged scale, shown in vertical section, taken on the line 5—5 in Fig. 1, of the bumper shield.

As seen in the accompanying drawings, a fender apron 10 is provided with back straps 11, near the lower end of each whereof a shoe 12 is formed on each of the said straps. The straps are fixedly mounted on a pivot shaft 13. The shaft 13 is pivotally mounted in drop brackets 14. The brackets 14 and

apron 10 are usually disposed at or near the ends of the cars and forward of the carrying wheels thereof. It is the purpose of the shoes 12—to ride upon the tracks of the road-bed in sliding relation, to support the weight of the body when received upon the apron.

The aprons are maintained in lifted position, as shown in Fig. 2 of drawings, by means of a latch 15. The head 16 of each of the latches 15 is adapted and extended between the slats of the apron 10, recesses 17 being provided therefor to permit swinging of the latch backward to clear the head 16 from the forward rail of the apron. The latches 15 are fixedly mounted upon a shaft 18. The shaft 18 is loosely mounted in brackets, the boxes 19 whereof are secured to the under structural members of the car body. Fixedly secured to the shaft 18 is an arm 20 depended, as shown in Fig. 2 of drawings, to receive in pivotal relation a connecting rod 21. The rod 21, is provided with a series of perforations 22 to receive the connecting bolt 23, to adjust the rod 21, to permit the shield 24 to be advanced or retracted to a normal hanging position as the needs of the case seem to dictate. The rod 21 is also pivotally mounted by means of the bolt 25 upon an arm 26 which is fixedly attached to the shaft 27 on which the shield 24 is suspended.

It will be seen that, with a construction arranged as described, whenever a body strikes upon the advancing shield 24 the shield is thrown backward, carrying the arm 21 backward until the latches 15 are thrown to clear the heads 16 from engagement with the fender apron 10. In this position, the fender apron is dropped upon the tracks of the bed so that the shoes 12 rest upon the top of said tracks. The obstructing body is caught up by the apron 10 of the fender and carried thereby.

It is to provide for manually operating the fenders to drop the apron 10 that there is provided a bell crank lever 28 which is manually operated by the motor-man or attendant pressing his foot upon the bolt 29. The bolt 29 is properly housed and guided in the socket 30 and rests upon a horizontal extension of the lever 28 forwardly of the pivotal bolt 31 therefor. It will be observed that when the bolt 29 is depressed, the depending arm of the lever 28 is forced toward the latches 15, pressing upon the pin

32, to move the rod 21 and parts connected therewith to dislodge the latches from holding engagement with the fender apron. By this construction and arrangement, the motor-man or attendant may at any instant place the fender in operative position, relieving the impact of the shield 24 and, in many instances, picking up a body too small to operate the shield 24.

10 Under usual conditions, the fender apron is elevated by depressing the free end of the lever 33^a, by depressing the foot plunger 40. At the other end of the lever is attached the chain 33, connecting the said lever and the said apron.

15 Under certain conditions of operation, a fender constructed as so far described, would meet with many difficulties due to the clogging or embanking of snow drifts in winter and obstructions accidentally placed in the road, as where the same crosses suburban or open country. It is to provide for lifting the fender above the normal position as shown in full lines of Fig. 2 of drawings to a high position as shown in dotted lines in the same figure and to maintain the said fender so lifted, that I have provided the auxiliary lever 35, the head 36 whereof will, under proper conditions, extend under the first rail of the apron to support the said apron. The lever 35 is fixedly mounted upon the shaft 18 and is provided with an elongated tail bar 37. The tail bar 37 is supported in raised position by the spiral spring 38, the ends whereof are anchored to the tail bar and to the floor of the car respectively. The uplift of the tail bar 37 is determined by the length of the socket 39.

40 It will be understood that when the fender apron is lifted to the high position referred to, the shield 24 and the connecting rod 21 are lifted to the position shown in dotted lines in Fig. 2 of drawings, in which position the shield 24 is raised to avoid any of the obstructions, to which reference was above made. When now the apron 10 is supported by the auxiliary lever 35 the dropping of the fender apron is effected manually by the motor-man or attendant depressing the bolt 29 upon the tail bar 36, thereby rocking the lever 36 to release the apron 10

and permitting the same to drop into operative position upon the track as shown by the lower dotted position of the fender in Fig. 2 of the drawings.

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

1. In a car fender embodying a fender apron, a supporting latch for said apron, and a shield adapted to swing toward said apron to drop said apron, an auxiliary supporting mechanism comprising a second latch disposed to support the said apron and said shield above their normal positions, and manually operated means for releasing said second latch.

2. In a car fender embodying a fender apron and a supporting latch mechanism for said apron including a pivoted latch and a shield adapted to swing toward said apron to drop the said apron, an auxiliary supporting mechanism comprising a second latch pivotally mounted on the car body and having a latch head disposed to engage the said apron to support the same above the normal supported position thereof; a lever connected with said latch for releasing the same from engagement with said fender, said lever being extended to an operative station convenient to the driving station of the car attendant; and yielding means for lifting the said lever.

3. In a car fender embodying a fender apron and a supporting latch mechanism for said apron including a pivoted latch and a shield adapted to swing toward said apron to drop the said apron, an auxiliary supporting mechanism comprising a second latch pivotally mounted on the body of the car; a plunger reciprocatively mounted in the body of the car at the driving station thereof; a transmission bar operatively connecting said plunger and said second latch; and a lifting spring for rocking said latch and lifting said plunger to normal position.

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

JOHN J. KELLY.

Witnesses:

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PHILIP D. ROLLHAUS.