

A. J. THORNLEY.
CAR FENDER.

APPLICATION FILED JUNE 7, 1909.

964,887.

Patented July 19, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

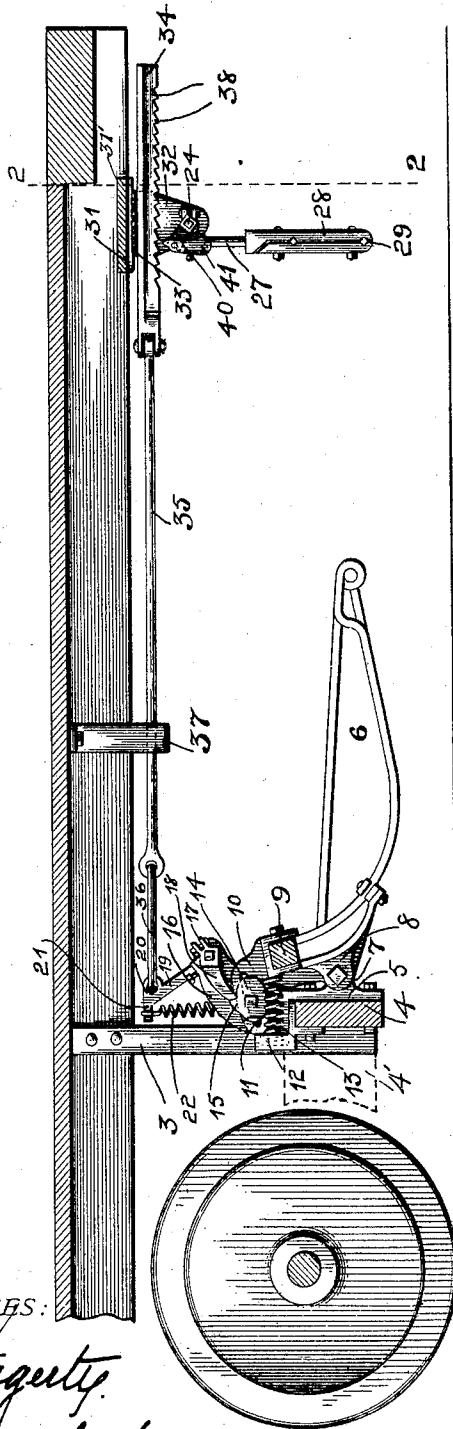


Fig. 3.

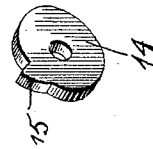
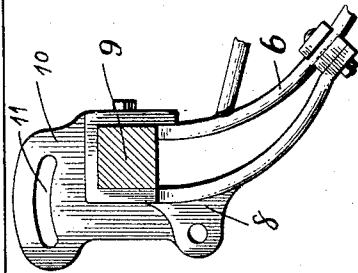


Fig. 4.



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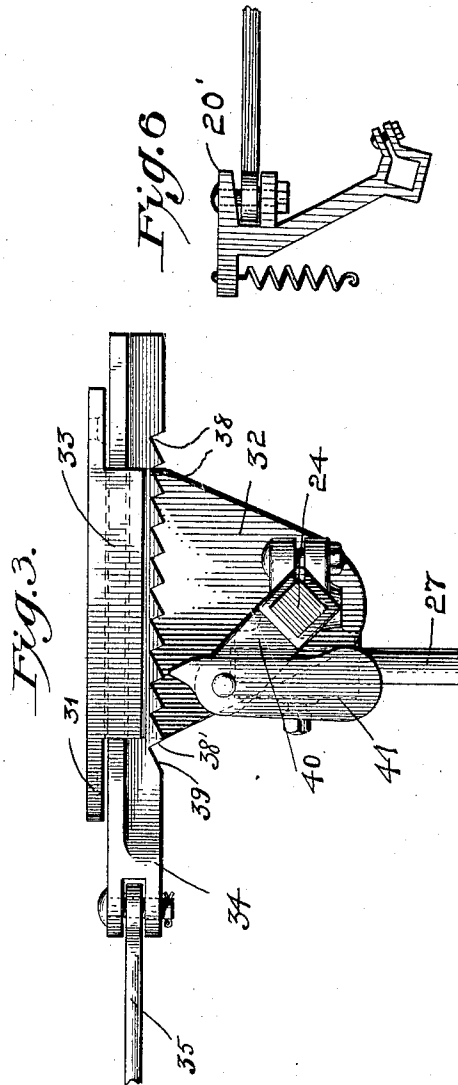
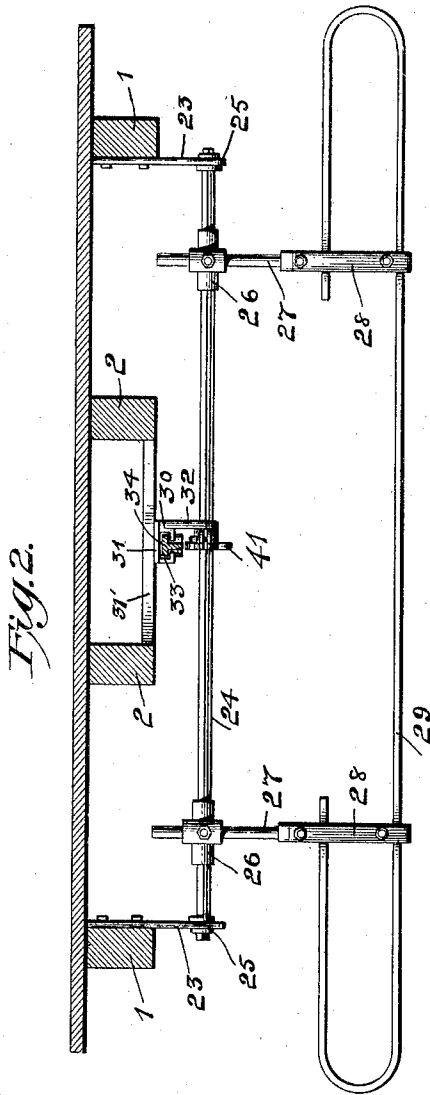
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ALBERT J. THORNLEY, OF PAWTUCKET, RHODE ISLAND, ASSIGNOR TO CONSOLIDATED CAR FENDER COMPANY, OF PROVIDENCE, RHODE ISLAND, A CORPORATION OF RHODE ISLAND.

CAR-FENDER.

964,887.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed June 7, 1909. Serial No. 500,612.

To all whom it may concern:

Be it known that I, ALBERT J. THORNLEY, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Car-Fenders, of which the following is a specification.

This invention relates to the class of car fenders, and more particularly to those devices which are secured below the car just forward of the front truck or to the truck itself and are released or dropped by strike mechanism located near the extreme front of the car as is illustrated and described in the application filed by me on the 29th day of April, 1909, Serial No. 492,816.

The object of this invention is to improve the general construction and operation of the fenders of this class, attention being particularly directed toward the mechanism for actuating the release of the fenders.

A further object of this invention is to provide a release or trip mechanism which is operable with equal efficiency on straight tracks or curves.

With other objects, as will hereinafter appear, in view, my invention will be described with reference to the accompanying drawings, which form a part of this specification, and in which,

Figure 1 is a vertical sectional elevation through the car showing the fender attached therebelow, Fig. 2 is a vertical sectional view taken on the line 2 2 of Fig. 1 looking in the direction of the arrow, Fig. 3 is a detail side view of the trip mechanism, Fig. 4 is a detail view of the upper end of the fender, Fig. 5 is a perspective view of the toothed member by means of which the fender is held in the raised position, and Fig. 6 is a detail view showing a modified form of connection used in the release mechanism.

With particular reference to the drawings in which like numerals indicate like parts, 1 indicates the outside beams of the car body and 2 the intermediate beams or stringers parallel thereto. When the fender is used on short cars the depending hangers 3 are secured by bolts or otherwise to the beams 2 and carry bolted or otherwise fastened to their lower ends the cross beam 4. When used on long cars in which the trucks are free to swivel on the car body the hangers 3 are dispensed with and the beam 4 is secured directly to the forward extension of

the trucks 4' indicated in broken lines in Fig. 1. Secured to the cross beam 4 by means of bolts are the brackets 5 to which the fender 6 is pivotally secured, said brackets 5 having forwardly projecting bearings 60 7 to which are bolted or otherwise journaled the brackets 8 which are secured to the rod 9 and comprise the hanging members of the fender 6. Said brackets substantially inclose said rod 9 and are bolted thereto, and 65 are provided with upright extensions or wings 10 which extend upwardly and rearwardly from the fender and are provided with a curved slot 11 whose function will hereinafter appear. The cross bar also supports, either as separate elements or as a part of the brackets 5, the boxings 12 in which are seated the ends of the coiled springs 13, the opposite ends of which bear against the fender at the upper edges of the brackets 8; 14 is a disk or block which has 75 provided on its periphery a lug or tooth 15 and has a central aperture by means of which it is adjustably bolted in said slot 11 of the vertical wings 10, said tooth being adapted 80 to be engaged by release mechanism of the fender.

The brackets 5 are provided at their upper ends with wings or extensions 16 which project upwardly and forwardly to overhang and extend adjacent the wings 10 carried by the fender brackets. Said wings 16 carry at their upper projecting ends, a transverse shaft 17, bearings being provided therefor to permit rotation thereof. Said shaft 90 17 is square at its ends and carries collared thereon the pawls 18 which are formed with split collars and clamped upon said shafts 17 by means of tightening bolts. Said pawls 18 extend downwardly and rearwardly and engage behind the teeth 15, carried by said fender brackets 8, when the fender is raised, and are adapted to release said teeth and consequently the fender when the shaft 17 is rotated clockwise to raise said pawls 18. 100

Midway of its length the shaft 17 is provided with an arm 19, said arm being collared thereon and bolted or clamped to secure it rigidly in position. Said arm 19 is formed to extend upwardly and rearwardly from said shaft 17, and has at its upper end a ring-bearing 20 and a rearwardly extending finger 21. In Fig. 6 is shown an arm in which a slotted connection 20' is shown which may be used instead of the ring-bearing 110

ing 20 shown in Fig. 1. Secured by one of its ends to said finger 21, is a coil spring 22 whose opposite end is secured to the cross beam 4 in any suitable manner. Said spring 22 exerts a tension on said arm to maintain the pawls 18 in their depressed position behind the teeth 15.

The trip or release mechanism is mounted in front of the fender a sufficient distance away therefrom to permit a perfect drop of the fender before an object would be struck thereby. Depending from the outside beams 1 of the car body are the hangers 23 in the lower ends of which are journaled the ends of a shaft 24 for rotation therein as by bearings 25. Said shaft 24 carries rigidly secured thereto the sockets 26 which have vertical slideways in which are adjustably mounted the vertical rods 27. Said rods 27 carry on their lower ends the clamps 28 in which are secured the ends and intermediate portion of a trip bar 29. Said trip bar comprises a longitudinal metallic bar having its ends bent upwardly and rearwardly in U-shape and is adjusted, in practice, to hang far enough above the ground or trackway to obstruct the passage of obstacles below the car. Said shaft 24 has a third bearing in a depending bracket 30, which comprises a base plate 31, and a vertical bearing plate 32. Said bracket 30 is mounted upon a supporting plank 31', the latter being securely mounted transversely on the beams 2. Said bracket has formed on the under side of the base plate 31 a slideway 33 in which a T-bar 34 is horizontally slidable. Said T-bar extends lengthwise of the car and is connected to the aforesaid arm 19 carried by the shaft 17 by means of the rod 35 and link 36 by means of link joints, the former being supported on a hanger 37 secured to the car body. The sliding T-bar 34 is provided on its lower or depending edge with a series of teeth 38 which are formed to have short substantially vertical forward faces 38' and long slanting rear faces 39. Rigidly mounted on the shaft 24, adjacent the bracket 30 is a short upwardly and rearwardly extending arm 40, which has pivotally secured to its upper end a weighted lever or gravity pawl 41, said gravity pawl having its upper end conformed to the shape of the teeth 38, above described. By this arrangement the pawl 41 is always suspended a short space below the teeth 38, and is gravitationally positioned to be capable of engagement therewith when carried upward.

From the above it is evident, that as the trip bar 29 with its clamp 28 is swung rearwardly as by an obstruction on the track, the gravity pawl 41 will be carried into engagement with the teeth 38, and upon continued movement of said pawl, the T-bar 34 will be carried forward in its slideway, with consequent movement of the arm 19

through their intermediate connections. This movement of the arm 19 rotates said shaft 17 to raise the pawls 18, thereby dropping the fender 6.

It is evident that in the above described mechanism certain changes may be made in details of construction without departure from the scope of my invention.

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

1. A wheel car fender, comprising, in combination, a fender, means for pivotally supporting said fender below a car, a shaft carried by said supporting means, means carried by said shaft and releasably holding said fender above the ground, a trip mounted for oscillation below the car, a channeled slide-way located above said trip, a slidable member fitted in said slide-way and movable above said trip, and flexibly connected to said fender holding means, and means carried by said trip and adapted to be drawn into momentary engagement with said slidable member at different points on its length to release said fender.

2. A wheel car fender, comprising in combination, a fender, brackets for pivotally mounting the fender below the car, springs carried by said brackets and bearing against said fender to exert a normal downward pressure, a shaft mounted in said brackets, pawls carried by said shaft, and engaging said fender to elevate it above the ground, a trip mounted for oscillation below the car, a slidable member mounted above said trip and independent thereof, rod connections between said fender and slidable member, and means secured to said trip and adapted to momentarily engage said sliding member to release said fender.

3. A wheel car fender, comprising, in combination, a fender, brackets for pivotally mounting the fender below the car, springs carried by said brackets and bearing against said fender to exert a normal downward pressure, a shaft mounted in said brackets, pawls carried by said shaft, and engaging said fender to elevate it above the ground, a trip mounted for oscillation below the car, a slidable member mounted above said trip and independent thereof, rod connections between said fender and slidable member, and means secured to said trip and adapted to momentarily engage said sliding member to release said fender, said releasing means comprising a pivoted pawl carried by said trip and adapted to be thrown into engagement with said slidable member to carry it forward to trip said fender.

4. A wheel car fender, comprising in combination, a fender, brackets for pivotally supporting said fender below the car, a shaft mounted in said brackets, pawls carried by said shaft and engaging said fender

to elevate it above the ground, a trip mounted for oscillation below the car, a slidable member mounted below said car and adjacent said trip, teeth formed on said
5 slidable member on its underside, a weighted pawl carried by said trip and adapted to engage said teeth to slide said member when the trip is oscillated.

5. A wheel car fender, comprising, in
10 combination, a fender, means for pivotally supporting said fender below a car, a shaft carried by said supporting means, means carried by said shaft and releasably holding said fender above the ground, a trip mounted
15 for oscillation below the car, a slidable mem-

ber mounted above said trip, flexible connections between said member and said shaft, and means for momentarily connecting said trip and said slidable member to release said fender, said slidable member being formed to present different ones of its longitudinal points above said trip according to the position of the car.

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

ALBERT J. THORNLEY.

Witnesses:

ADA E. HAGERTY,
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