J. M. MOORHOUSE.

CAR FENDER.

APPLICATION FILED JUNE 2, 1910.

975,780.

Patented Nov. 15, 1910.

3 SHEETS—SHEET 1.

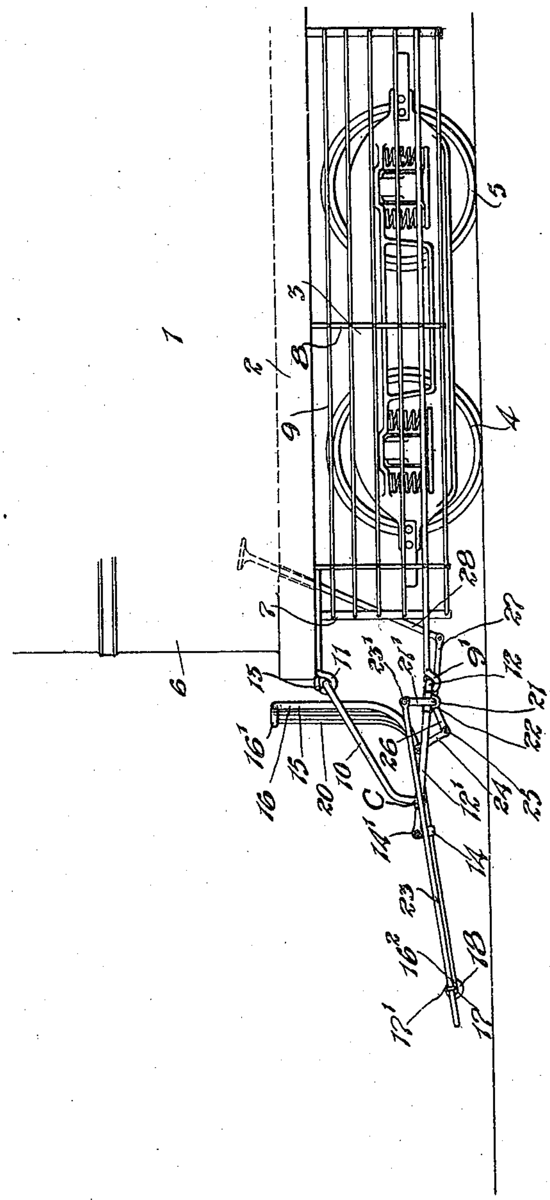

FIG. I

WITNESSES

INVENTOR

J. M. MOORHOUSE

By

Atty

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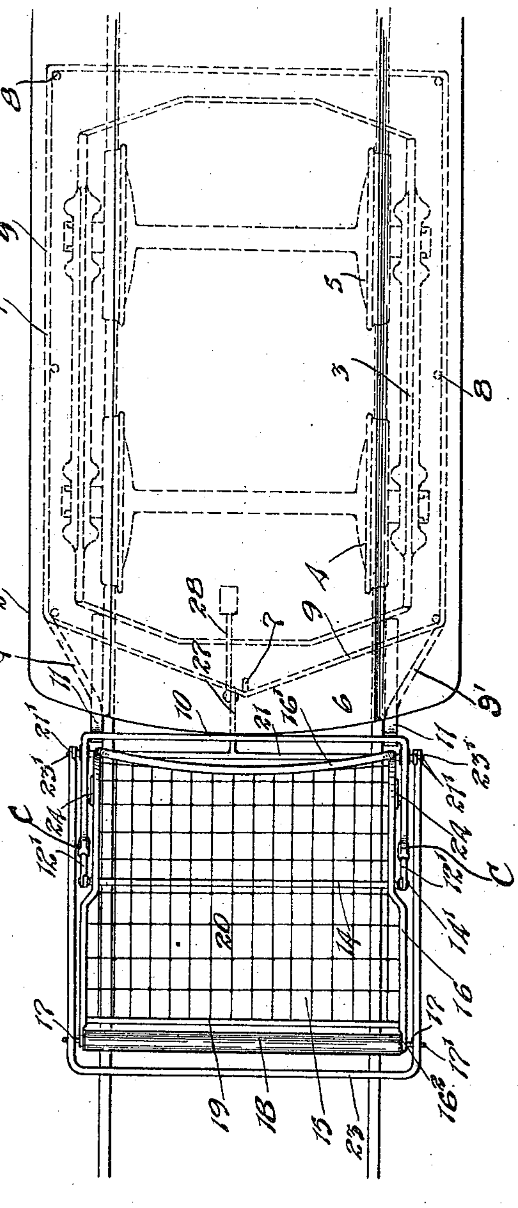

FIG. 2

WITNESSES

Jas. M. Lapley

[illegible]

INVENTOR

J.M. MOORHOUSE

By [illegible] Atty

THE NORRIS PETERS CO., WASHINGTON, D. C.

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3 SHEETS—SHEET 3.

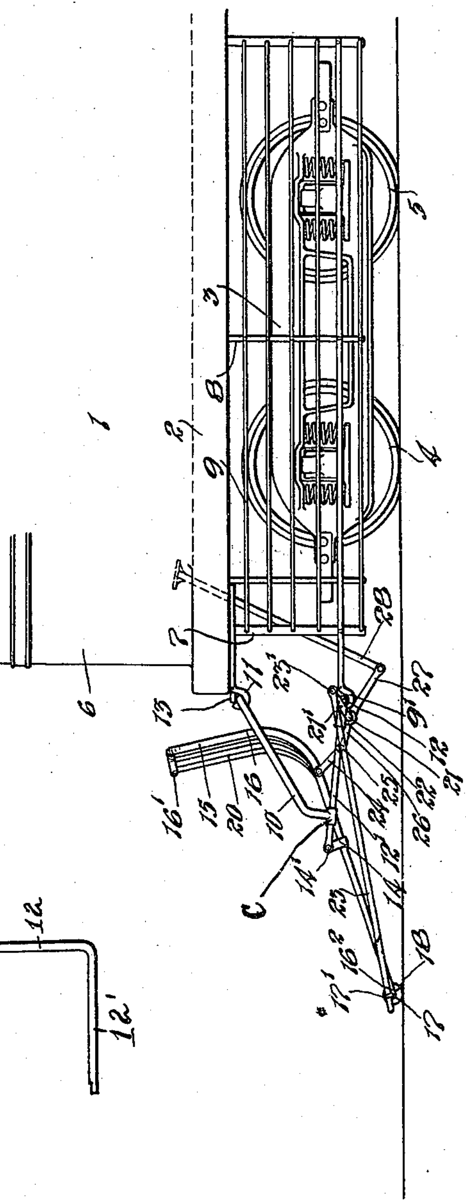

FIG. 3

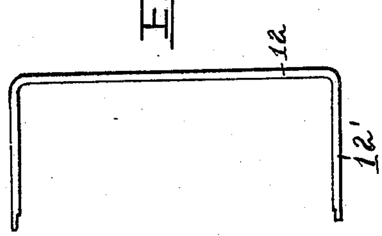

FIG. 4

WITNESSES

INVENTOR

J. M. MOORHOUSE

By

ATTY

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN MILFORD MOORHOUSE, OF WINNIPEG, MANITOBA, CANADA.

CAR-FENDER.

975,780. Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed June 2, 1910. Serial No. 564,645.

To all whom it may concern:

Be it known that I, JOHN MILFORD MOORHOUSE, of the city of Winnipeg, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to car fenders, particularly adapted for street cars, and the object of the invention is to provide a simply constructed, easily applied car fender which is particularly positive in its action and is automatically operated by the engagement with an object on the track.

A further object is to provide a means in combination with the fender whereby the motor-man within the car can operate it so that it will drop to the track in event of him seeing the object prior to the fender engaging it.

A still further object is to provide an inclosing means for the car trucks to prevent objects from passing beneath the wheels at the sides or ends.

It consists essentially in the arrangement and construction of parts hereinafter more particularly described and pointed out in the appended claims.

Figure 1 is a side elevation of a portion of a car showing my fender applied and in the raised or normal position. Fig. 2 is a plan view of the same and Fig. 3 is a side elevation of the fender as it appears after it has been dropped to the rails. Fig. 4 is a detail view of the rod 12.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 represents the body of a car of which 2 indicates the supporting beams and 3 the car trucks carried by the usual wheels 4 and 5, it being understood that the vestibule is located at 6 as is customary.

7 is a forward central post extending downwardly from the beams 2, posts 8 being located on the car to the sides of the truck so as to be free of the wheels at all times. The posts are connected by protecting bars 9 which are arranged vertically and passed completely around the trucks so as to inclose them. The lowest of the bars is placed so that a person cannot pass beneath it and become mangled in the car wheels.

10 is a supporting rod passing across the front of the car and supported by hooked bars 11 firmly secured to the under side of the beams 2. The ends of the supporting rod pass forwardly and downwardly and are connected at the point C to the forwardly extending ends 12′ of a second supporting rod 12 which is carried by the hooked ends 9′ of one pair of the bars 9 hereinbefore referred to. Latches 13 are supplied on the hooked members to prevent the rods from escaping. The extending ends 12′ of the rod 12 carry a swinging bail 14 which has its ends upwardly directed and pivotally secured to the rod by pins 14′.

15 is the fender proper which is formed from a bar 16 having a portion thereof 16′ passing across the front of the car and the ends directed downwardly and then turned forwardly terminating at 16^2 where they receive a spindle 17 on which is rotatably mounted a roller 18. A cross bar 19 passes between the ends of the rod 16 and the fender is supplied with a suitable lacing 20 as is usual.

21 is a crank shaft rotatably secured to the rod 12 by straps 22, said shaft having upwardly extending ends 21′, forwardly extending arms 26 and a rearwardly extending arm 27; 23 is a feeler bar supported forwardly by the upturned ends 17′ of the spindle 17 and connected rearwardly at 23′ to the crank ends 21′ of the crank shaft. It is to be noticed that the body of the feeler bar passes across the fender considerably forward of the roller. The fender proper rests on the swinging bail 14 and is held in position by links 24 pinned to the sides thereof and passing downwardly and rearwardly where they are pivotally connected at 25 to the arms 26 passing forwardly from the crank shaft 21, it being understood that the arms swing with the shaft at all times. The arm 27 extending rearwardly from the crank shaft 21 is secured to the lower end of a foot lever 28 passing upwardly into the car vestibule.

The operation of the device is as follows:—An obstruction on the track will be struck by the feeler bar and force the bar backwardly. This causes the ends 21′ of the crank shaft to also swing backwardly so that the arms 26 are swung upwardly. The links 24 connected to the arms tip the fender 23 so that the front end is brought to the track, the roller engaging with the rails. In event of the motor-man within the car seeing the object prior to the feeler bar engaging it, it is only necessary for the motor-man

to press the foot-lever so as to swing the arm 27 downwardly. This operates the arms 26 and the links 24 in the same manner as already described and causes the fender to drop to the track.

What I claim as my invention is:

1. In a car fender the combination with a car, of a set of forwardly extending and united supporting rods detachably secured to the car, a swingable bail pivotally carried by one of the rods, a tiltable fender resting on the swingable bail and automatic means for tilting the fender, as and for the purpose specified.

2. In a car fender, the combination with a car, of a set of supporting rods passing forwardly therefrom and which are united, said rods being releasably secured to the car, a swingable bail pivotally secured to the extending ends of one of the rods, a tiltable fender resting on the bail, a suitably supported feeler bar having a portion thereof extending forwardly of the fender, and means actuated by the feeler bar for tilting the fender, as and for the purpose specified.

3. In a car fender the combination with a car, of an upper and a lower rod connected together and detachably secured to the car and having their ends extending forwardly, a swingable bail having its ends directed upwardly and pivotally secured to the extending ends of the lower rod, a fender resting on the bail, a feeler bar supported forwardly by the fender and means secured to the rear ends of the feeler bar adapted to tilt the fender when the feeler bar is moved rearwardly, as and for the purpose specified.

4. In a car fender the combination with a car, of an upper and a lower supporting rod connected together and releasably secured to the car, said rods having their ends extending forwardly, a swingable bail having upwardly directed ends pivotally secured to the extending ends of the lower rod, a fender resting on the said bail and carrying a roller at its forward edge, a crank shaft carried by the lower rod, a feeler bar passing forwardly of the fender and supported thereby, the ends of said bar being pivotally secured to the crank shaft, and means connecting the crank shaft with the fender to tilt the same when the feeler bar is moved backwardly, as and for the purpose specified.

5. In a car fender the combination with a car, of an upper and lower rod connected together and releasably secured to the car and having their ends extending forwardly, a swingable bail having upwardly directed ends pivotally secured to the extending ends of the lower rod, a fender resting on the swingable bail and carrying forwardly a roller, a rotatable crank shaft secured to the lower rod and having its crank ends upwardly directed, a feeler bar extending forwardly of the fender and supported thereby, said feeler bar having its ends pivotally secured to the crank ends of the crank shaft, arms extending forwardly from the crank shaft and links pivotally secured to the arms and to the sides of the fender, as and for the purpose specified.

6. In a car fender the combination with a car, an upper and a lower supporting rod detachably secured to the car, and extending forwardly where they are united, a swinging bail pivotally secured to the lower rod, a tiltable fender resting on the bail, a crank shaft rotatably secured to the lower rod, arms extending from the crank shaft and links uniting the arms and fender, of an arm extending rearwardly from the crank shaft and a foot lever secured to the arm and passing upwardly within the car, as and for the purpose specified.

Signed at Winnipeg, in the Province of Manitoba, this 10th day of May, 1910.

JOHN MILFORD MOORHOUSE.

In the presence of—

G. S. ROXBURGH,

J. K. ELKIN.