

UNITED STATES PATENT OFFICE.

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CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 548,967, dated October 29, 1895.

Application filed February 7, 1895. Serial No. 537,626. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. DARRACH, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

The object of this invention is to effect certain improvements in car-fenders of the kind which take up persons on the fender and also prevent persons who may have fallen or slipped under the fender from being injured by the car-body or the car-wheels.

To accomplish this object my invention consists in the features of construction and the combination or arrangement of parts herein-after described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of the fender sectioned along *xx*, Fig. 2. Fig. 2 is a plan view of the fender. Fig. 3 is a section along *yy*, Fig. 2. Fig. 4 is a section along *zz*, Fig. 2. Fig. 5 is a detail view of a trip. Fig. 6 is a detail view of a gage. Fig. 7 shows a modification.

In the drawings, the letter A indicates a car-platform or the sills or supporting-beams of the platform. The hangers D are secured to the sills, and are strengthened by braces E. The hangers D are oppositely located, one such hanger with its brace being connected to each sill. As the sills are at times inclined with respect to one another, or, perhaps, irregularly placed, it is of advantage to have each hanger with its brace attachable independently of the other hanger and brace, so that the hangers can be properly set or secured with respect to one another.

The fender is shown comprising cross-bars I P, carrying springs or a spring-seat K, and lateral guards or springs O. The springs K have at their front or striking part a spring-strip N, with a soft strip 10, of canvas or the like, held distended by springs 13, so that a person will receive a soft blow and fall when struck and be caught by the fender. The cross-bar I has chains H, which when engaged to the hooks G on the car-platform will hold up the upper part or the bar I of the fender. The cross-bar P has braces Q, the forked parts 14 of

which slip over lugs or pivots R, projecting from hangers D. The chains or flexible connections H, with the joint 14 R, allow the front N of the fender to swing readily upward in case a body falls upon the track instead of being caught by the fender, the rollers 11 on bar P allowing the front of the fender to ride easily when passing over a prostrate body. By unhooking the chains H from hooks G and slipping forks 14 off pivots R the fender is detached and can be readily taken to the other end of the car or laid aside.

In case the fender passes over a body such body, when struck by the trip or release 15, will actuate the latter, so as to free the drop-guard Z, which latter then dropping its free end *c* to the ground or track, as seen in broken lines in Fig. 1, will scoop up the body or prevent the latter being injured by the car-wheels. This trip 15 consists of a plank or plate extending crosswise to the car and carried by the arms *h* of levers *h i*, having their fulcrum *k* supported by hangers D. To lever-arms *i* at 16 are jointed arms 17, to which are connected the links *l*, jointed at *m* to catches *n*, adapted to engage the drop-guard Z for holding the latter elevated. When the trip 15 strikes a body, said trip, with lever-arms *h*, is swung backward, the arms *i* in consequence swinging forward and drawing on links *l* to move the catches *n* to their releasing position, whereupon the guard Z drops.

When the trip 15 has been swung up to the position shown in Fig. 5, the free ends of lever-arms *i* have been swung below fulcrum *k*, or past the dead-center, so that the strain of spring *q*, Fig. 1, on catches *n* and links *l* will hold the trip 15 elevated, as seen in Fig. 5, until the free end of the trip is pushed or forced back to its lowered position. (Shown in Fig. 1.) In the position of parts shown in Fig. 1 in full lines the springs *q* hold the catches *n* in engaging position to keep up the drop-guard Z.

The rod or fulcrum *t* on which the catches *n* swing is also provided with levers *e s*, the lever-arms *s* being connected by rod *r*. The spring 12, Fig. 2, acting on rod *r*, tends to swing the lever-arms *e* downward, so that when the drop-guard Z is down the lever-arms *e* rest in a vertical or substantially vertical position

over the drop-guard to lock the latter in depressed position. To raise the drop-guard, it is then necessary to first swing arms *e* up against the action of spring 12.

5 The drop-guard Z swings on pivot or rod *o*. The rods *o t* are supported by braces *p*, connected to hangers 18 and 19. These hangers 18 and 19 being attachable independently of one another can be readily secured, as required, for bringing the pivot *o* with drop-guard Z in proper position relatively to the track. The proper adjustment of the pivot *o* can be readily effected by a gage, comprising side pieces 20, adapted to sit or fit snugly between the rails. The side pieces 20 have a cross-piece 21, carrying uprights 22, provided with seats or slots 23. When the side pieces 20 are placed between the rails and the pivot *o*, laid in the slots 23, said pivot will be at right angles to the rails, and the hangers 18 and 19 can then be readily secured in position to keep said pivot *o* in the desired adjustment. When the pivot *o* is secured to the car, the gage 20 22 can be withdrawn.

25 As the fender K Q is independent of the trip 15 and drop-guard Z, any movement or oscillation or removal of the fender will not affect the trip and drop-guard. The trip 15 being placed under the car-platform is not liable to be accidentally moved or tampered with, and the lower edge or portion of said trip can be brought low enough to the ground to prevent even a small body like a child from passing beneath said trip, while leaving room for the oscillation of the car without the lower end of the trip striking the ground. As the trip 15 is nearer the center of the car than the outer edge of the fender, the extent of oscillation of the trip is comparatively less.

40 The blow or impact of the trip may be eased by cushioning its edge, a strip 24, of rubber packing or the like, when doubled and secured along the front lower edge of the trip so as to suitably project, forming a cushion or pad for deadening the shock.

45 It may be desirable to attach the trip and drop-guard to the truck instead of to the car-body, as a truck set firmly on the wheels does not oscillate or move up and down like a spring-supported car-body. By connecting to the truck 25 arms A', Fig. 7, the hangers D E can be supported by said arms instead of by the sills A, and the hangers 18' and 19' can be made to support the pivots or fulcrums *o t*.

55 What I claim as new, and desire to secure by Letters Patent, is—

1. A car platform provided with a fender having a fork connection made to swing on and to slip onto and off the front or free edge portion of the platform, a drop guard pivoted back of the front or free edge of the platform and made to project forward from said pivot, and a trip for said guard, said fender being mounted independently of the trip and guard, substantially as described.

2. A car platform provided with a fender made to extend upward in front of the plat-

form above the level thereof, said platform having a pivot below the same, and hooks or attachments above the same, and said fender 70 having its lower portion swinging on said pivot and its upper portion provided with chains or flexible connections made to engage said hooks or attachments, said platform being provided with a drop-guard and a trip for 75 the guard, said trip and guard being mounted independently of the fender, substantially as described.

3. A car-platform provided with a fender made to extend upward in front of the plat- 80 form above the level thereof, said platform having a pivot below the same and hooks or attachments above the same, and said fender having its lower portion provided with forks for detachably engaging and swinging on the 85 pivot, and having its upper portion provided with chains or flexible connections for detachably engaging said hooks or attachments, so as to leave the fender free to be removed as desired, said forks being located back of 90 the upwardly extending fender portion, so that the front or striking edge of the fender tends to dip or drop toward the ground, and said chains being made to hold up the free or striking edge of the fender from contact with 95 the ground substantially as described.

4. A drop guard, a detent for said guard, a spring for holding the detent in engaging position, a trip, and a link for releasing the detent, said trip being provided with an arm 100 engaging the link, said arm being adapted to be swung past the dead center and to be held by said spring on the releasing movement of the trip substantially as described.

5. A fender comprising cross bars I P, 105 springs K made to connect said bars and to extend unbroken between said bars, a yielding front or striking portion, and braces or fastenings for securing the fender substantially as described. 110

6. A fender comprising rigidly connected cross bars I P, springs K connected to and supported by said bars, a yielding front or striking portion, rollers mounted directly upon one of said cross bars, so as to be rigidly 115 supported and braces or fastenings for securing the fender substantially as described.

7. A fender comprising cross bars I P, springs K made to connect said bars, a yielding front or striking portion provided with a strip of canvas or soft material, a spring for holding the strip distended, and for holding said strip a certain distance in advance of the striking portion of the fender and braces or fastenings for securing the fender substan- 125 tially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL A. DARRACH.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.