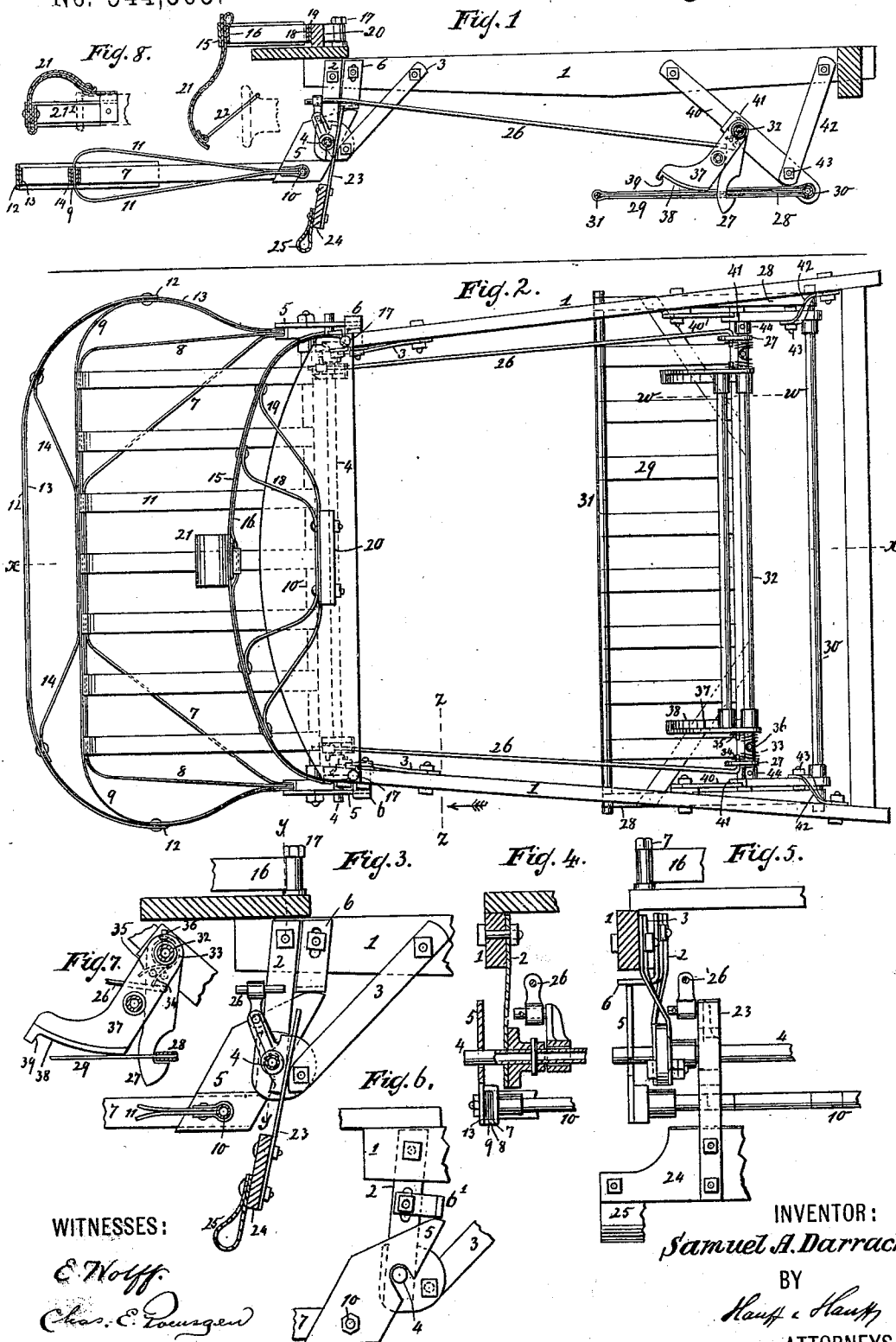


(No Model.)

S. A. DARRACH.
CAR FENDER.

No. 544,565.

Patented Aug. 13, 1895.



UNITED STATES PATENT OFFICE.

SAMUEL A. DARRACH, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE
DARRACH CAR FENDER COMPANY, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 544,565, dated August 13, 1895.

Application filed April 25, 1895. Serial No. 547,147. (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 simplify the construction of car-fenders while providing a device by which a person or body will be protected against hard blows or shocks, and the invention resides in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a section of the fender along $x x$, Fig. 2. Fig. 2 is a plan view of the fender. Fig. 3 is a detail view, enlarged, of parts of Fig. 1. Fig. 4 is a section along $y y$, Fig. 3. Fig. 5 is a section along $z z$, Fig. 2. Fig. 6 is a detail view of a modified pivot portion of a fender. Fig. 7 is a detail view of a catch and lock for the drop-guard. Fig. 8 shows a modification of the traction-bar cover.

The platform-timbers or draw-timbers 1 have secured thereto hangers 2 and 3. The platform proper being removed, the parts beneath are exposed, as seen in Fig. 2. The hangers 2 and 3 support a pivot 4 on which are mounted the pivot portions 5 of the fender, said pivot portions being readily formed as plates, bearing or abutting against stops 6. By having the stops 6 secured by slotted connection to timbers 1, as seen in Fig. 3, said stops can be adjusted to hold the fender in properly-extended position. In place of securing stops 6 to timbers 1, such a stop can be secured to a hanger, as seen, for example, in Fig. 6, where stop 6' is secured to hanger 2.

The fender comprises a number of frame-pieces 7, 8, and 9 made to extend back from the forward portion of the fender, said frame-pieces having their end portions clamped or jointed to one another at opposite sides at the rear of the fender, so that said rear or pivot portions will be strong enough to endure considerable strain.

The rear of the fender is provided with a tie-rod 10. The springs 11 are shown each as a double spring, or they might be properly called

"elliptical" or "approximately elliptical" springs. Such elliptical springs are readily formed by securing spring-strips intermediate their ends to the forward portion of the fender-frame and carrying the free ends of each spring-strip back to be secured to tie-rod 10. The fall of a person or body on springs 11 will cause the upper portions of such springs to be compressed onto the underlying portions or branches of said springs, so that the fall is gradually eased or broken. It is, of course, desirable that a person standing in the way should not be struck by the rigid fender-frame 7, 8, and 9, as thereby such person might have an ankle broken or be otherwise injured, and the fender is therefore shown with a yielding striking portion comprising a strip 12 of soft material, such as canvas, having a spring-backing 13, such as a flexible metal strip, the striking portion 12 13 being held distended by a flexible strip or springs 14. A person falling onto the fender should, of course, be protected against violent contact with the dashboard or bumper portion. The bumper-protector, comprising the soft strip 15 with spring-backing 16, is shown secured at its end portions to suitable side posts or bolts 17 and held distended by brace-springs 18 and 19, secured to block 20 or to the dashboard and made to engage intermediate portions of the spring-band 16.

The bumper-protector 15 16 is provided with a pad or cover 21 for the traction-bar, said pad being connected to the bar by a bail 22, preventing said cover from shifting relatively to one another, or, in other words, keeping the cover fixed to the bar. The cover 21 may comprise only a front portion, as in Figs. 1 and 2, or it may be given other forms, as, for example, the cage-form shown in Fig. 8, obtained by providing the cover 21 with side strips 21'.

On pivot 4 is mounted a trip comprising the arms 23, carrying the cross-piece 24, with the soft pad or striking portion 25. A prostrate body rolling under the fender and contacting with the trip will swing the latter on pivot 4, so as to cause the links 26 to withdraw or move the catch 27 to releasing position to allow the drop-guard 28 29, mounted

on pivot 30, to drop its springs or portion 29 to the ground, so that the body scooped up by the lowered drop-guard will be prevented from coming under the wheels. The springs 29 being independent of one another can contact their free ends severally with the ground or pavement irrespective of any curvature or irregularity in the latter. The free ends of the springs 29 are connected by a flexible cord or connection 31.

The catch 27 swings on the pivot or fixed rod 32, about which is seated a coiled spring 33, having one of its free ends 34 engaged to a stud on catch 27, so as to normally move or hold the catch in engaging position. The other free end 35 of this spring 33 engages the lock presently referred to. This spring is braced intermediate its end portions to a stud 36 of the pivot-rod 32, the portions of the spring 33 on opposite sides of the stud being oppositely coiled or reversed, so that the free ends 34 and 35 of this spring will both tend to spring in the same direction.

On pivot 32 swings a lock 37 for holding the drop-guard when down against lifting. When the drop-guard swings down the free end of lock 37 likewise swings down, being aided in the downward swing by the pressure of the spring portion 35. The free end of the lock 37 is rounded, as at 38, so as to form an engaging face which will make a locking-contact with the drop-guard at its various points of descent and hold the drop-guard depressed when coming to a stop at a higher or lower point by reason of irregularities in the ground. The shoulder 39 of the lock acts as a stop to prevent the spring 33 35 imparting an excessive movement to the lock. The hangers 40 are each shown with a reinforcing-piece 41, and the hangers 42 are each secured by bolts or fastenings 43 to a reinforced hanger 40 and to the reinforcement 41. The reinforcements 41 each carry bosses or seats 44, Fig. 2, for securing or fixing the pivot 32, which terminates clear of the hangers. The pivot 30 is passed through the reinforced hangers 40 and reinforcements 41, the projecting or free ends of pivot 30 serving to support the drop-guard 28.

Each of the pivot portions 5 of the fender is placed or fixed at an angle to the fender-frame 7 8 9, so that when the free end of the fender is swung up the lower part of each pivot portion 5 will swing forward, thereby tending to carry the fender forward of the bumper-protector 15 16 to allow the fender to be folded or swung up close or quite close to the dashboard. The pivot portions 5 are shown with slots extending downward and backward, so that the portions 5 can hook onto pivot 4, and when the fender is in operating position the contact of pivot portions 5 with stops 6 will prevent the pivot portions 5 jumping or jarring off the pivot 4. Should it be desired to remove the fender, the free or striking portion of the latter is somewhat raised to clear pivot portions 5 from contact

with stops 6, whereupon the pivot portions 5 can be readily slipped off or unhooked from pivot 4, so as to be transported to the other end of the car for service or to be laid aside if seen fit. These pivot portions 5 being, as already noted, formed by plates and being made to bear with their edges against stops 6 are capable of sustaining considerable weight or strain on the fender.

The catch 27 and lock 37 are shown in pairs; but one catch and lock could be made to answer, a pair, however, being thought preferable. With regard to the underlying portions of springs 11, it may be noted that a body rolling under the fender and coming into contact with said underlying spring portions is prevented from being scraped or injured by rigid parts of the fender.

By making the canvas or soft strip 12 somewhat wider than the spring-backing 13, so that the edges of the soft strip project beyond the edges of the spring-backing, said soft-strip edges will be bent over by the contact of a body falling on or rolling under the fender, thus preventing cutting or injury by the edges of the spring-back 13. The traction-bar cover or hood being soft or elastic will be an efficient protector, and should be attached or connected to the traction-bar, so as to shift or move with said bar if the latter should change its position.

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

1. A fender having its receiving part composed of elliptic springs said springs being each formed of a single spring strip looped at about its center and having said looped part secured at the front or striking part of the fender and having its free ends secured at the rear of the fender substantially as described.

2. A fender having its pivot portion provided with a bearing plate, and an adjustable stop for the bearing plate, said plate being placed edgewise to the stop substantially as described.

3. A fender having its pivot portion provided with a bearing plate, said bearing plate having a rearwardly and downwardly extending slot or opening for connecting or hooking the pivot portion to its support substantially as described.

4. A bumper protector for a car platform comprising a flexible or spring band secured to the platform, and brace springs secured to the platform and made to engage intermediate portions of the spring band substantially as described.

5. A bumper protector for a car platform comprising a flexible or spring band secured to the platform, and brace springs secured to the platform and made to engage intermediate portions of the spring band, said bumper protector being provided with a pad or cover for the traction bar substantially as described.

6. A drop guard combined with a catch for

holding the drop guard elevated, a lock for holding the drop guard depressed, a fixed pivot on which the catch and lock are independently mounted, and a spring coiled about
5 said pivot and having its intermediate portion fixed to said pivot and its free end or outer portions engaged respectively to the catch and lock substantially as described.

7. A car platform provided with hanger
10 pairs, one hanger of each pair being provided with a reinforcement, said reinforced hanger and reinforcement being both engaged by the other hanger, a pivot passed through said reinforced hanger and reinforcement, a drop
15 guard mounted on said pivot, a second pivot carried by said reinforcements and made to terminate clear of the hangers, and a catch and lock for the drop guard mounted on said second pivot substantially as described.

20 8. A fender comprising a number of frame pieces made to extend back from the forward part of the fender, said frame pieces having

their end portions clamped or joined to one another at opposite sides at the rear of the fender substantially as described.

25 9. A drop guard and a catch and lock for the drop guard, combined with a common pivot for the catch and lock and a spring secured intermediate its ends to said pivot and having its opposite portions oppositely coiled
30 about the pivot and respectively engaged to the catch and lock substantially as described.

10. As a new article of manufacture a soft or elastic traction bar cover fixed to said bar so as to be carried by and to move with said
35 bar, substantially 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.