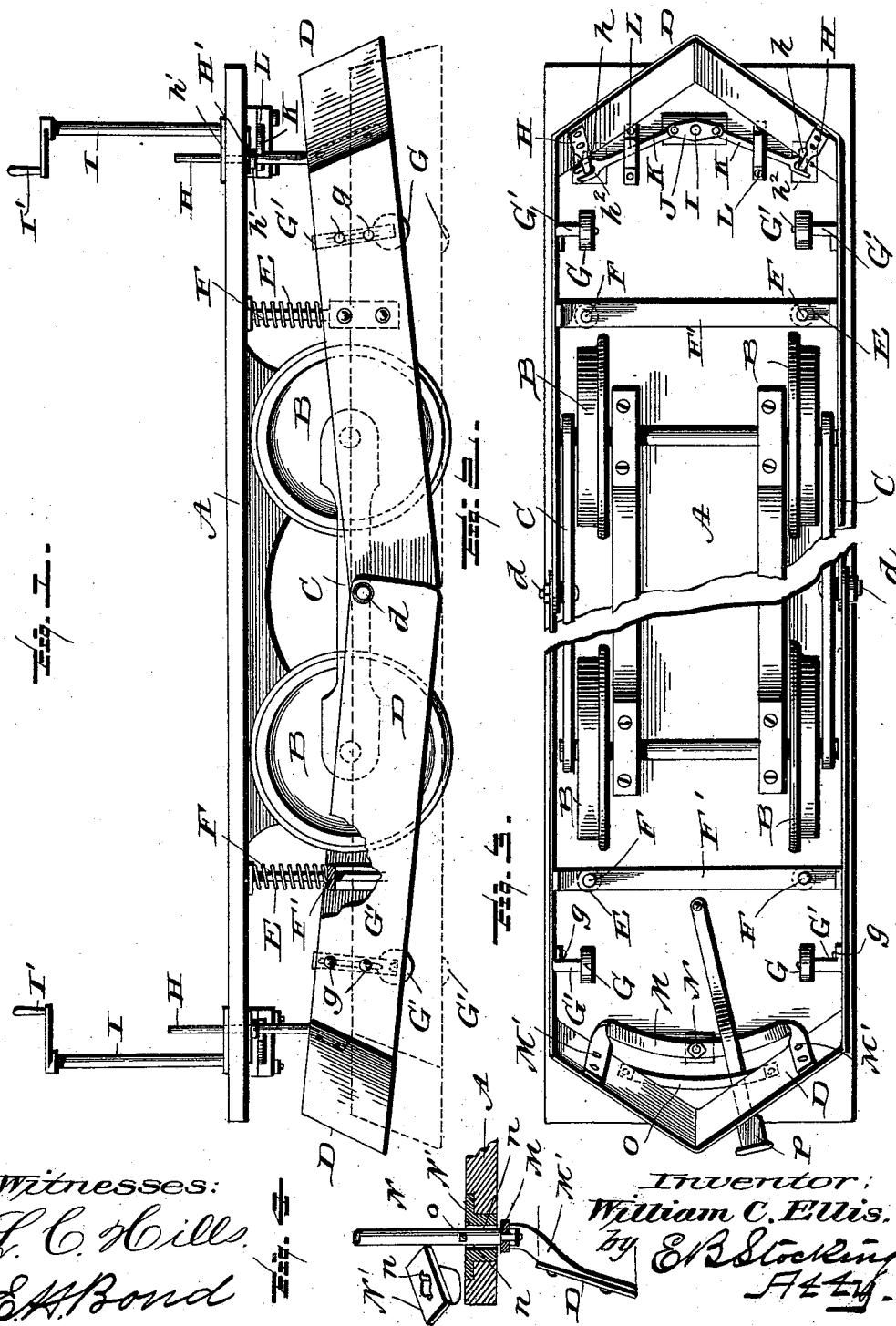


(No Model.)

W. C. ELLIS.
CAR FENDER.

No. 539,676.

Patented May 21, 1895.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM C. ELLIS, OF MEMPHIS, TENNESSEE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 539,676, dated May 21, 1895.

Application filed August 17, 1894. Serial No. 520,584. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. ELLIS, a citizen of the United States, residing at Memphis, in the county of Shelby, State of Tennessee, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in car fenders and it has for its objects among others to provide a simple and cheap fender mounted for movement vertically independently of the car and so as not to be affected by the roll or pitch and jolts of the car, being yieldingly held so as to automatically keep its place on the track and adapted to be readily raised or lowered by the person running the car. Normally the fender is elevated from the track so as to allow of the requisite vibrations of the car, but is lowered when occasion may require to throw off an obstruction or to prevent persons from being injured by getting under the car or wheels. Various means may be provided for releasing the fender and for raising the same and holding it in its uppermost position. I have shown two such forms in the present instance.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation with a portion broken away and parts in section, showing my improvements. Fig. 2 is a bottom plan. Fig. 3 is a similar view showing a different mechanism for actuating the fender. Fig. 4 is a detail which will be more particularly hereinafter referred to.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the truck mounted to run upon the wheels B; the truck and all its appurtenances except as hereinafter specified being of any well known or preferred form. The axles are shown as having their ends which extend beyond their bearings

connected by the plates or bars C which serve as supports for the pivots of the fender as will now be described.

D is the fender. It is formed preferably of sheet metal, in one or more pieces, with the front end oppositely beveled as shown best in Figs. 2 and 3, there being one at each end of the car so as to serve in whichever way the car may be running. It is pivoted at its inner end as at *d* to the plates or bars C, and when the two fenders are provided they are pivoted upon the same pivot as seen in Fig. 1.

The fender is designed to be normally held elevated as shown by full lines in Fig. 1, by suitable means some of the forms of which will be hereinafter set forth, and when down as shown by dotted lines in said Fig. 1 it has a yielding movement vertically through the medium of the springs E which are placed around the rods or pins F held to a cross bar F' on the fender, and the fender is provided upon opposite sides with the rollers or wheels G which are adapted to travel upon the rails when the fender is down and are carried by the arms G' which are vertically slotted as seen best in Fig. 1 and are guided by the pins or their equivalents *g* on the sides of the fender so as to be vertically adjustable as will be readily understood, these pins being screwthreaded and provided with nuts upon their ends by the loosening of which the arms may be adjusted to the proper height and there secured by the tightening of the nuts. When the fender is up the springs are somewhat compressed and as soon as the fender is released the springs force the same down into the position in which it is shown by the dotted lines in Fig. 1 and yet permit of the necessary vertical play of the fender in passing over rough roads or in rolling and pitching resulting from fast running.

The fender may be held in its elevated position by various means which will serve also to release the same when desired. In Fig. 2 is shown one form. In this form H are rods which are secured to the fender near the front end thereof as shown and which pass upward loosely through openings *h* in the bottom of the car, which openings are sufficiently elongated to allow of the necessary curved movement of the rods and said openings are preferably protected above and below by the

plates h' and h^2 as shown, which of course have corresponding openings. These rods below the bottom of the car are provided with the collars or lateral projections H' . I is a vertical shaft provided with a crank handle 5 I' which shaft passes upward through the floor of the car or truck to within convenient reach of the person running the car, and its lower end is secured to a plate or lever J 10 which thus works on the said rod or shaft I as a pivot, and to each end of this plate or lever is pivotally connected a bar or arm K the other end of which is forked or bifurcated as shown in Fig. 2 to embrace the rods H and 15 which arms are mounted to slide through suitable guides L secured to the under side of the floor of the car as shown best in Fig. 2. In practice the fender is raised and then the handle I' is turned to rotate the shaft I so as to throw the forked ends of the arms K under the collars or projections H' on the rods H which will thus hold the fender in its elevated position against the tension of the springs E. When it is desired to lower the 25 fender all that it is necessary to do is to turn the handle and shaft so as to withdraw the forked ends of the sliding arms from under the collars or projections H' when the force of the springs will throw the fender down into the position in which it is shown by the dotted lines in Fig. 1. 30

In Fig. 3 is shown another form of operating means, in which M is a horizontal bar or plate having the vertical portions M' which 35 are secured to the inclined portions of the fender as shown and to this plate or bar is rotatably connected the shaft N which passes up through an opening in the floor of the car which opening is provided with a bushing N' 40 having an opening for the passage of the shaft

and having the diametrically-opposite slots n leading therefrom as seen best in Fig. 4 to permit of the passage of the lugs or projections o on the shaft when the same are coincident with the said slots. O is a bar on the 45 under side of the floor of the car to support the coupling bar P as seen in Fig. 3. Normally the fender is in its elevated position and the shaft is turned so that its lugs will be otherwise than coincident with the slots of the 50 bushing which lugs will then rest upon the top of the bushing and hold the fender against the action of the springs. When it is desired to lower the fender all that it is necessary to do is to turn the shaft so that the lugs there- 55 on will come coincident with the slots of the bushing when the springs will force the fender down into the position shown by dotted lines in Fig. 1.

Modifications in detail may be resorted to 60 without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is—

1. The combination with the car and the plates connecting the axles thereof, of the 65 fenders pivotally mounted on a pivot common to both and held in said plates, as set forth.

2. The combination with a pivoted fender, of a pivoted plate rotatably mounted, forked arms connected with said plate, and rods con- 70 nected with the fender and having projections beneath which the forked arms are adapted to engage, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. ELLIS.

Witnesses:

THOS. L. JACKSON,
DANIEL HALL.