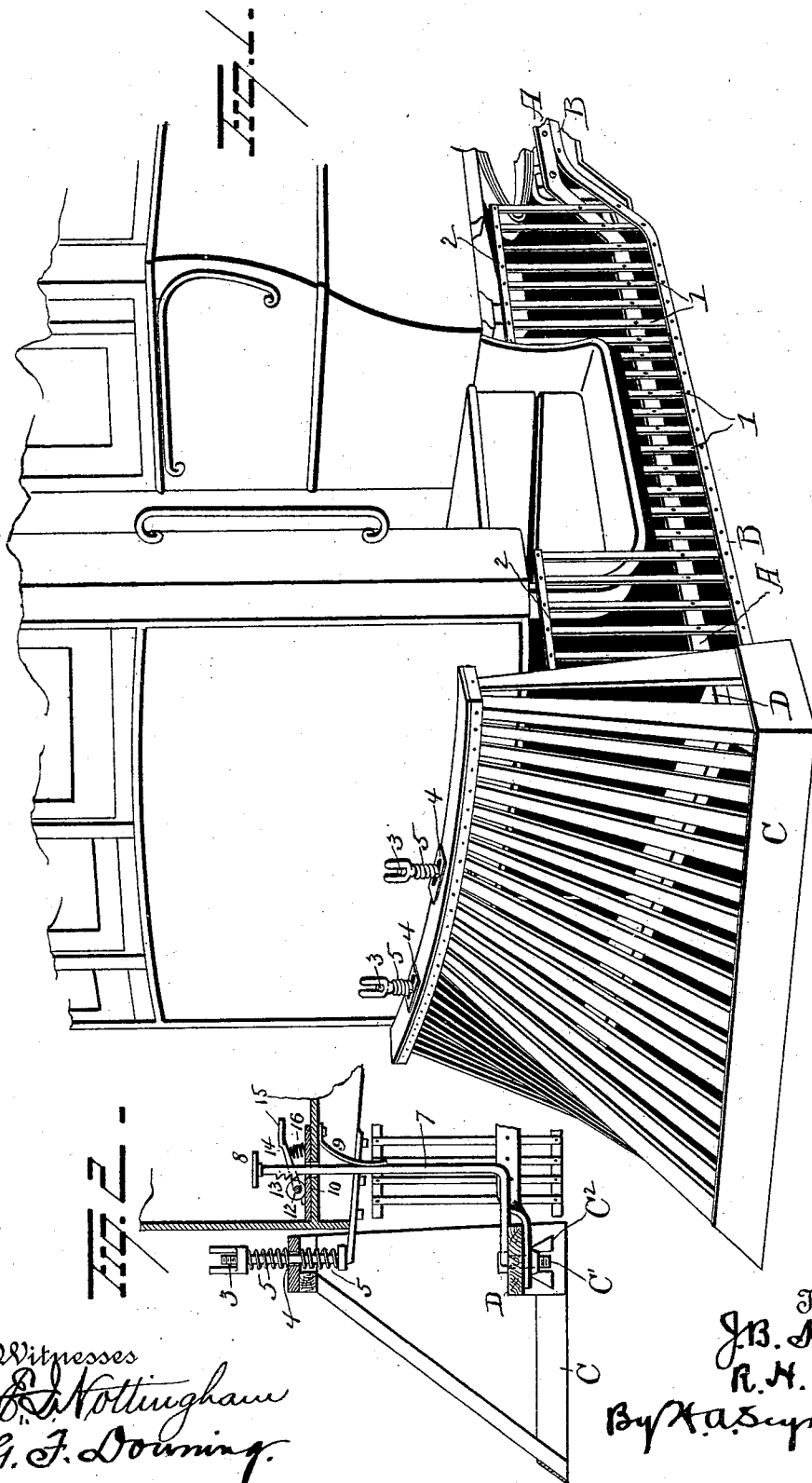


(No Model.)

J. B. KRAUSE & R. H. CROSBY.
FENDER FOR CARS OR LOCOMOTIVES.

No. 521,503.

Patented June 19, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES B. KRAUSE AND ROBERT H. CROSBY, OF WILLIAMSPORT,
PENNSYLVANIA.

FENDER FOR CARS OR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 521,503, dated June 19, 1894.

Application filed January 5, 1894. Serial No. 495,853. (No model.)

To all whom it may concern:

Be it known that we, JAMES B. KRAUSE and ROBERT H. CROSBY, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Fenders for Cars or Locomotives; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in fenders for cars and locomotives, the primary object being to provide a fender which will maintain a constant relation as nearly as possible to the rails of the track under all conditions, irrespective of the bobbing up and down of the car body.

A further object is to provide a fender which can be lowered at a moment's notice from its normal position, to a point in contact with or in proximity to the rails, and a still further object is to provide a fender of such construction that the forward end may be readily detached at any time from the rest of the fender.

With these ends in view our invention consists in certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings Figure 1 is a view in perspective of an improved fender. Fig. 2 is a sectional view.

A and B represent a pair of truss rods. The rod A is secured at its inner end to the truck of the car or locomotive and extends forward from this point to the end of the car. The truss rod B also extends forward from the truck and terminates preferably at the outer end of the car just as the other one does. Vertical rods 1, 1, are secured to these truss rods and these together with the truss-rods constitute the fender and form a perfect lattice work around the end of the car. The vertical rods reach to or nearly to the car body as shown in Fig. 1, except at the step, at which point they reach nearly to the step so that in short a fence or lattice work is formed from the truck forward around the space at the entire end of the wheels and be-

tween the car body and the track bed. The vertical rods being rigidly secured to the truss rods, they combine all of them to make a strong and rigid fender, and at the same time owing to its length, which will yield more or less vertically when occasion requires as will be mentioned hereinafter. The upper ends of the vertical rods are preferably connected together by rods or bars 2, 2, as shown in Fig. 1.

A pilot or cow catcher C is removably connected to the forward end of the fender proper as shown, preferably by means of bolts C' which have removable thumb nuts C² thereon. This pilot is substantially similar in all essential particulars, to the ordinary locomotive cow catcher and it is made removable so as to form no obstruction to the coupling of the car to another one. The upper end of the cow-catcher has a vertical sliding connection with the end of the car through the vertical rods 3, 3. These rods are secured at their lower ends to the end of the car and pass loosely through elongated holes 4, 4, in the cow-catcher made to receive them. Small spiral springs 5, 5, are placed on these rods above and below the cow-catcher and thumb nuts are turned on the upper ends of the rods. These thumb nuts are removable when it is desired that the cow-catcher should be removed and they may be screwed up or down as occasion may require so as to give the car body more or less room to vibrate.

From the cross-bar D, a rod 7 extends upward through the floor of the car where it is provided at its upper end with a tread 8 upon which the motorman places his foot when it is desired, in case of an emergency to lower the cow-catcher or pilot from its normal position the truss-rods A and B being of sufficient length from the point of attachment to the free end to admit of this. This rod 7 is provided with ratchet teeth, and a spring 9 forces this rod forward so that the teeth thereon are normally held in engagement with the edge of the plate 10 which acts as a rigid pawl, the spring yielding sufficiently to permit the teeth to slide on the pawl. A rock shaft 12 has an eccentric 13 thereon adapted to force the rod 7 backward out of engagement with the pawl whereby to allow it to rise and resume its

normal position due to the spring action of truss-rods A and B which results from the length from their point of support to their free ends. This shaft 12 is provided with a lever 14 with a tread 15 on the outer end and a spring 16 normally holds the spring elevated.

In this fender we have devised an improvement which will insure safety to the public and thus avoid danger to pedestrians and practically do away with interminable law suits.

The fender is light, strong and actual use has demonstrated its practicability. Moreover it is readily attachable and detachable and can be applied to any style of truck at small cost.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of our invention and hence we do not wish to limit ourselves to the exact construction herein set forth, but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with the truck of a car or locomotive, of a fender comprising truss rods and vertical rods rigidly secured thereto, said truss rods secured at their rear or inner ends to the truck whereby the entire weight of the fender is supported at this point, substantially as set forth.

2. The combination with a fender comprising truss rods and vertical or cross-rods rigidly

secured to the truss rods whereby the several rods are trussed and braced and the entire weight of the fender is sustained upon the truck, of a rod extending upward into the car from the fender where it may be depressed by the motorman to lower the fender, substantially as set forth.

3. The combination with a fender comprising truss rods, and vertical cross rods secured to the truss rods, and a cow catcher or pilot located at the outer end and forming a part of the fender, and means connected with the car with which the cow catcher has yielding sliding connection, for preventing lateral movement of the cow-catcher or pilot, substantially as set forth.

4. The combination with a pilot or cow-catcher, a ratchet toothed rod extending upward therefrom, a pawl, and a spring for normally holding the rod and pawl in engagement with each other, of a rock shaft, means for rocking the latter, and a cam or eccentric on this shaft in position to engage the rod whereby to force it away from the pawl whereby it is permitted to rise and resume its normally elevated position, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

JAMES B. KRAUSE.
ROBERT H. CROSBY.

Witnesses:

JOS. B. CHAMPION,
W. W. CHAMPION.