

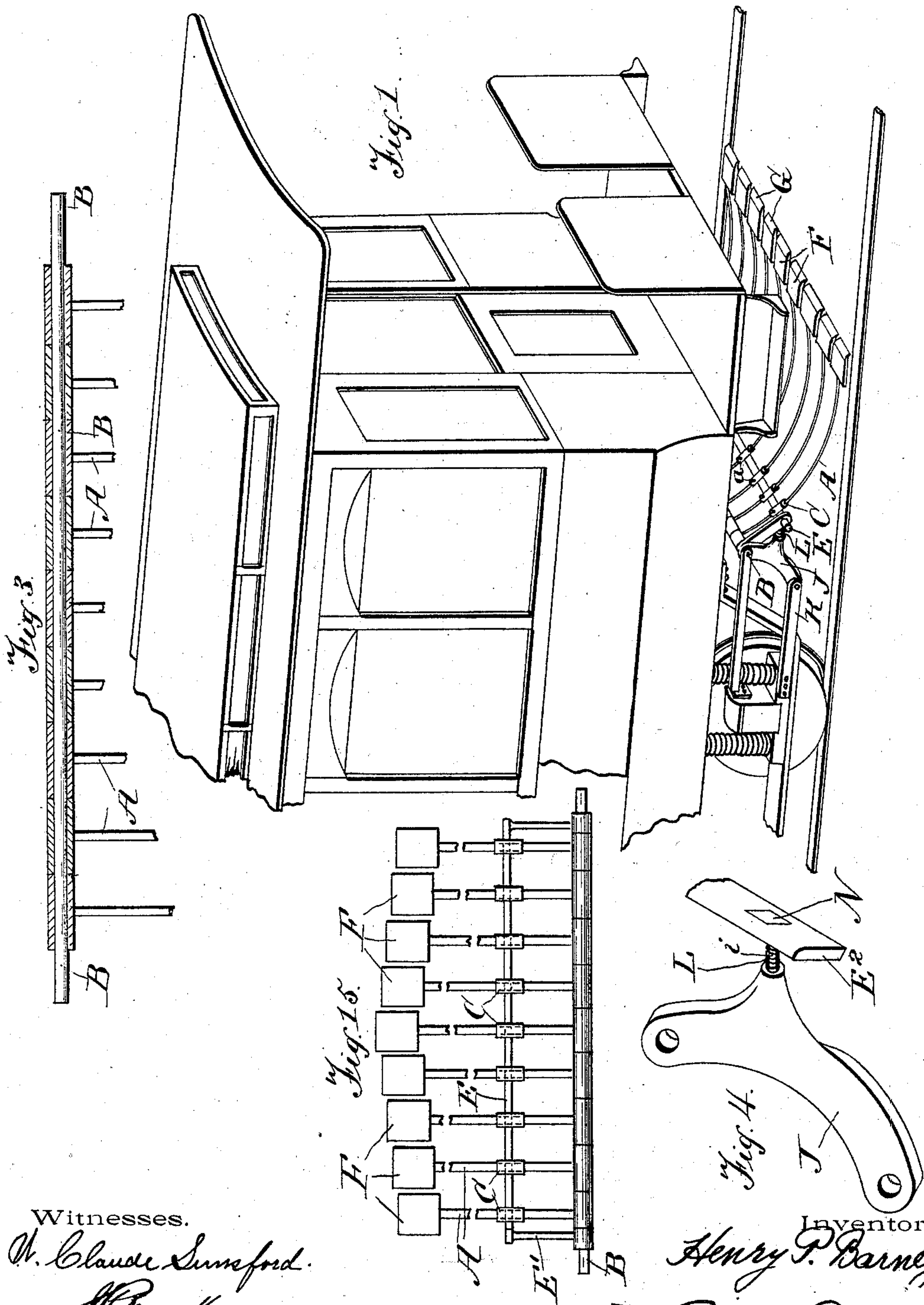
(No Model.)

2 Sheets—Sheet 1.

H. P. BARNEY.  
AUTOMATIC CAR FENDER.

No. 533,425.

Patented Feb. 5, 1895.



Witnesses.  
W. Claude Sumford.  
H. P. Barney.

Inventor.  
Henry P. Barney  
By C. J. Delo  
Attorney.

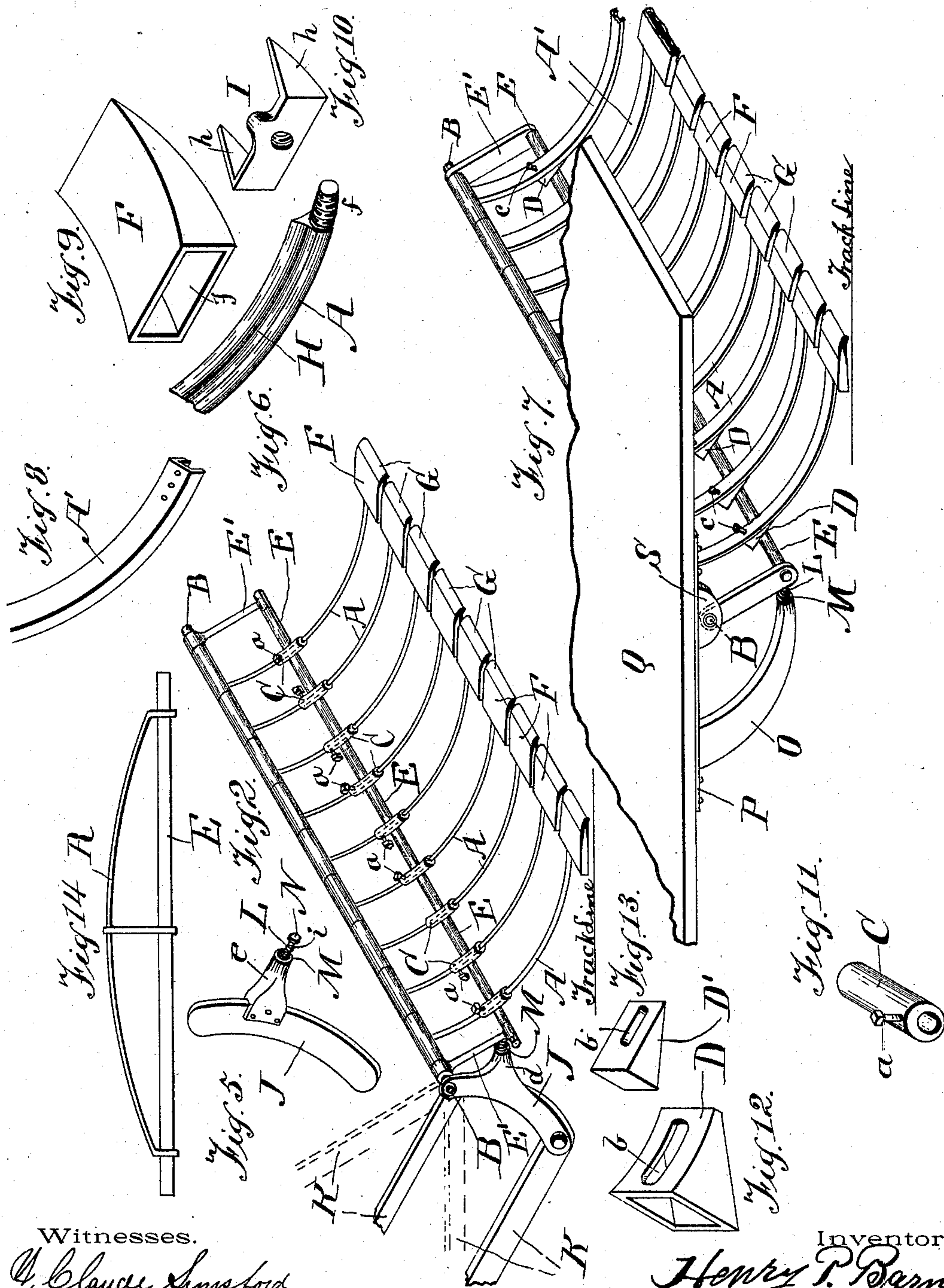
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A. Claude Sanford  
J. Barney

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Henry P. Barney  
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C. J. DeL. t.  
Attorney.



# UNITED STATES PATENT OFFICE.

HENRY P. BARNEY, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO  
THE CARR & BARNEY MANUFACTURING COMPANY, OF VIRGINIA.

## AUTOMATIC CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 533,425, dated February 5, 1895.

Application filed November 9, 1894. Serial No. 528,310. (No model.)

### *To all whom it may concern:*

Be it known that I, HENRY P. BARNEY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Automatic Car-Fenders, of which the following is a specification.

This invention relates to car fenders, and particularly to pick up fenders, and the object of the invention is to provide a fender which will ride over fixed objects, and pick up movable objects.

A further object of the invention is to provide an automatic fender, which will pick up movable objects and ride over fixed objects, without the help of an operator, to cause the fender to operate or to set its fingers in normal position.

A further object of the invention is to provide a fender having independently pivoted fingers hanging in normal or pick up position very close to the track, and each finger to have independent means of adjustment.

A further object of the invention is to provide a cushioned hanger pivoted with the fingers, to form an elastic back stop for the latter.

A still further object of the invention is to provide a connection or means of attaching the fender to any desired part of any car truck or bed.

A still further object of the invention is to provide an improved finger shoe adapted to be fixed to fingers of any character.

The invention consists in the novel construction and arrangement of parts, as will be hereinafter more fully described and set up in the claims.

In the accompanying drawings forming part of this application, Figure 1 is a perspective view of the front part of a street car with my fender employed. Fig. 2 is a perspective view of the fender, showing the arms for attaching it to a car, partly broken away, and left in position to be attached as desired. Fig. 3 is an enlarged section of the journal portion of the fingers on the shaft, with the latter in elevation. Fig. 4 is an enlarged perspective view of one of the brackets, showing a modified form of the finger back stop or supporting shaft. Fig. 5 shows a modification of this bracket. Fig. 6 is a perspective

view of the front portion of one of the fingers shown in Fig. 2, provided with a partial covering of rubber. Fig. 7 shows a modified form of fingers, and bracket attached to the car bed. Fig. 8 is a perspective view of the front portion of one of the fingers shown in Fig. 7. Fig. 9 is a perspective view of one of the shoes. Fig. 10 shows the nut for coupling the shoes to the fingers of Fig. 2. Fig. 11 shows the cam sleeve for adjusting the fingers of Fig. 2. Fig. 12 is the block for adjusting the fingers of Fig. 7 and Fig. 13 is a modification of this block, in solid form. Fig. 14 is an inverted front view of the hanger shaft, provided with a brace rod. Fig. 15 is a top view, partly broken away, showing the fingers graduated in length from the center of the fender.

The same letters of reference denote the same parts throughout the several figures of the drawings.

The fingers A, are each loosely pivoted independently of each other on the shaft B. They are preferably made of stout wire, and bent into proper shape, or they may be made as A', of light angle iron.

The fingers A, are each provided with a cam sleeve C, having a set screw *a*, so that the fingers may be adjusted independently, and their ends carrying the shoes F, be brought to the desired distance from the track.

The shoes F have an elastic tip G, of rubber or other suitable material, which overhangs the front edge of the shoe slightly, so that when the shoes strike an object, the tips will come in contact with it first, and avoid its mutilation or disfiguration.

The fingers A, are preferably covered or partially so with rubber H, or similar material to form a safe landing surface for an object picked up.

The shoes are connected to the fingers A, which have their forward ends screw threaded at *f*, (see Fig. 6) by means of the shoe nut I, having ears or flanges *h*, which fit in the opening *g*, in the shoe, and are secured to the side of the latter by rivets or bolts, while the modified form of fingers A', are secured direct to the shoes, by simply riveting or bolting the parts together.

The fingers A', are adjusted the same as



fingers A, by means of either of the blocks D, and D', the former being hollow and having a slot *b*, through which a bolt *c*, is passed; while the latter is solid and the slot *b'*, extends clear through it.

The hanger shaft or rod E, is loosely hung from the shaft B, by the hanger arms E'. The shaft B, is pivoted in the brackets J, to which are pivoted the arms K, for attaching the fender to a car. These arms can be turned on their pivots upon the brackets J, (as shown in dotted lines Fig. 2,) to be secured to any convenient part of a car, but preferably to the car truck, as shown.

The brackets J, are provided with a cushion, preferably in the form of a spiral spring L, housed in a cavity M; of the projection *d*, or as shown in the modification, Fig. 5, this cavity may be formed in a separate piece *e*, secured to the bracket. Working in this cavity, and controlled by the spring L, is a pin *i*, having a head N, against which the hanger shaft E, rests. Thus the hanger is cushioned into an elastic back stop for the fingers, since they rest with their adjusting cam sleeves C, or the blocks D, or D', directly upon the hanger shaft.

O, denotes the modified form of bracket, having a plate, P, for securing it to the car floor Q; and provided with a journal bearing S, for the shaft B.

R, denotes a brace rod with which the hanger shaft E, may be provided, should the latter be light enough to require it.

Referring to Fig. 4, the back stop or finger supporting bar E<sup>2</sup>, is attached directly to the spring controlled pin *i* and accomplishes the same result as the hanger shaft back stop or support E.

In the modification shown by Fig. 15, the fingers are graduated in length from the central finger, so that the fingers upon each side of the said central finger are slightly shorter than the next finger nearest the central finger. This arrangement is deemed essential, for by it an object may be caused to move by one finger without touching the other fingers, or an object may be moved or turned by one or two longer fingers, and picked up by the remaining fingers.

It is not essential of what character of material the parts of my fender are constructed, light weight and durability being most important.

It will be observed that my fender is entirely self acting, not requiring the attention of an operator, or the service of any mechanism for operating it.

It will also be observed that one or more fingers can ride over an object, while the remaining fingers are left in position to pick up another object and carry it safely. It will be further observed that the oscillation of a car can not effect the position of the fender elevation to the track, as my improved means

of hanging it, except as shown in Fig. 7 will cause the fender to adjust itself in proper position regardless of such oscillation.

I do not wish to be understood as limiting myself to any particular means of cushioning the hanger, to the brackets, either in one or more pieces, nor to any particular shape or form of fingers and shoes, but reserve to myself the right to change the construction, form and material of the said parts, as I may find best suited for the purpose for which they are intended, without departing from the spirit of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A car fender comprising a series of fingers independently journaled, and an independent movable back stop supporting the fingers in normal position, as set forth.

2. A car fender comprising a series of independently journaled fingers, and a movable cushioned back stop connected with the car independent of the fingers, and supporting the latter in normal position.

3. A car fender comprising a series of fingers independently journaled upon the same shaft, and a movable cushioned back stop supporting the fingers independent of the latter, and of the finger shaft, as set forth.

4. A car fender comprising a series of fingers independently journaled upon the same shaft, the latter having a journal connection with the car, and a movable cushioned back stop connected to the car independent of the fingers, and supporting the latter below said shaft, as set forth.

5. The combination with a fingered car fender, of the shoes, and the flanged nut connecting the fingers with the shoes, as set forth.

6. The combination with a car fender having independently journaled fingers, of means for adjusting each finger independently, substantially as and for the purpose set forth.

7. The combination with a car fender having a series of independently journaled fingers, an independent movable back stop hung from the journal point of the fingers, the brackets connecting the fender with the car, and the cushions located between the brackets and the back stop, substantially as set forth.

8. The combination with the fender fingers, and means for hanging them to the car truck, of the independent back stop for the fingers, means engaging the fingers and back stop for adjusting the fingers independently, and the springs forming a cushion for the back stop, substantially as set forth.

9. The combination with a car fender, of the brackets having arms pivoted thereto, the latter adapted to be secured to a car truck and suspend the brackets independent of the car, as set forth.

10. The combination with a car fender of



the brackets, the arms pivoted to the brackets, and the spring or cushion projecting from the brackets in opposite direction to the arms, as set forth.

5 11. The combination with a fingered car fender, of a hollow or shell-like shoe having an open and a closed end, said shoe secured to the end of each finger as set forth.

10 12. The combination with a car fender of a shoe having an opening in the rear end, wedge shaped parallel sides, and top and bottom tapering in converging curves to a point forming the front end, as set forth.

15 13. A car fender, comprising a series of independently journaled fingers of increased

length from each end of the fender to the middle of the fender, as set forth.

14. The combination in a car fender, of the brackets connecting the fender with the car truck independent of the car, and a series of 20 graduated fingers independently journaled between the brackets, substantially as set forth.

In witness whereof I hereunto set my hand in the presence of two witnesses.

HENRY P. BARNEY.

Witnesses:

O. M. BALL,

W. C. SUNSFORD.