

(No Model.)

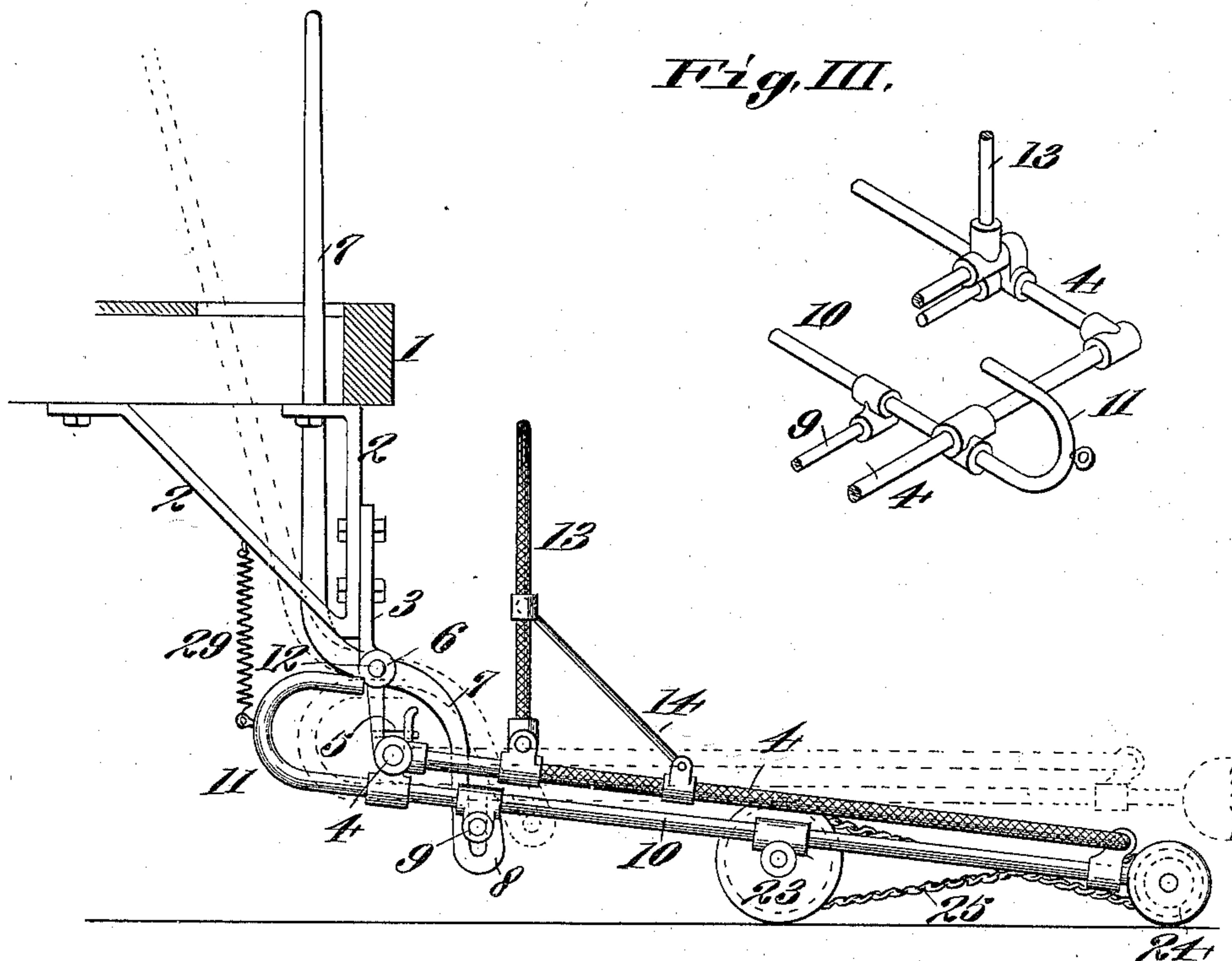
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W. CLAYTON.  
VEHICLE FENDER.

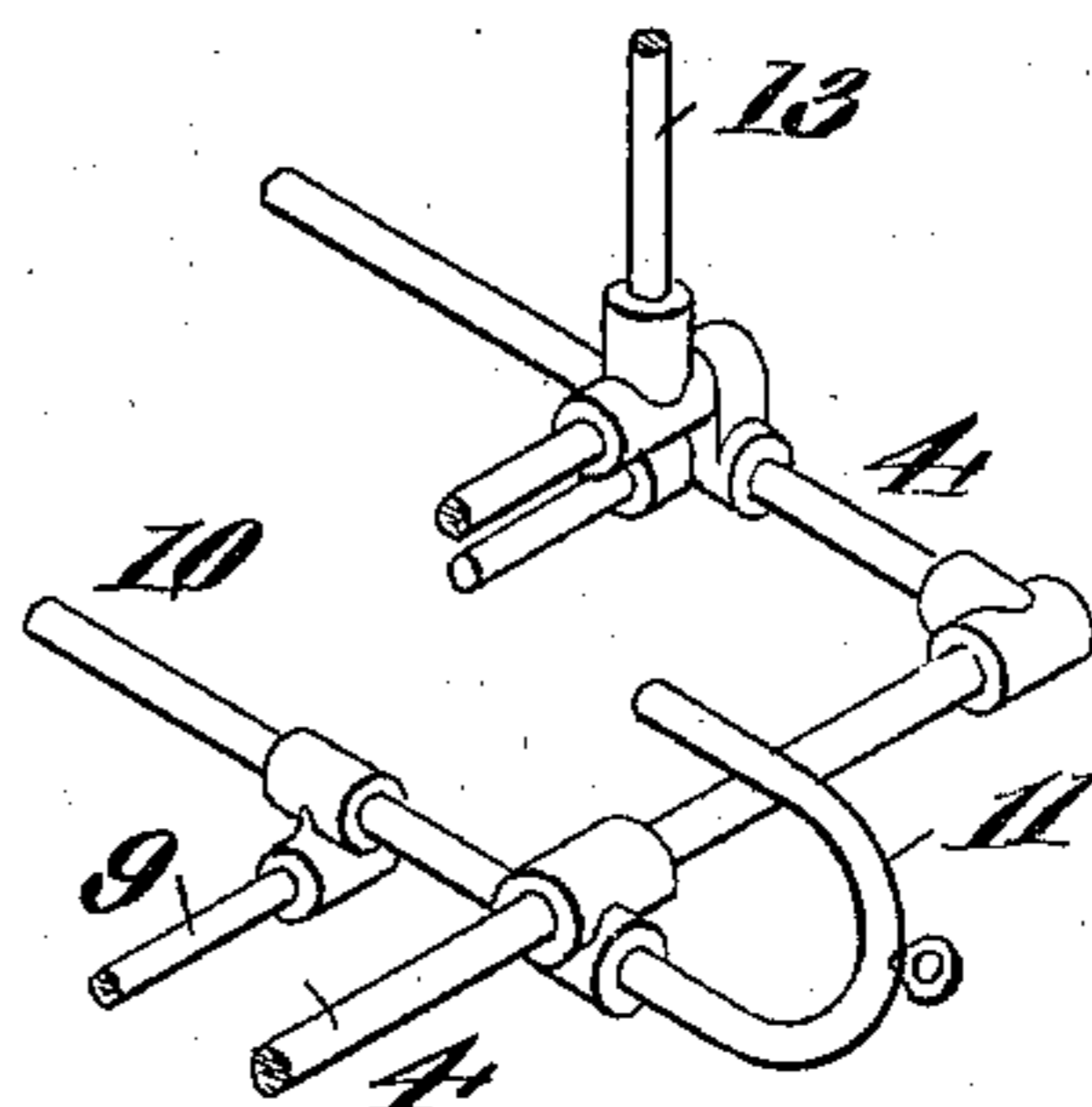
No. 598,769.

Patented Feb. 8, 1898.

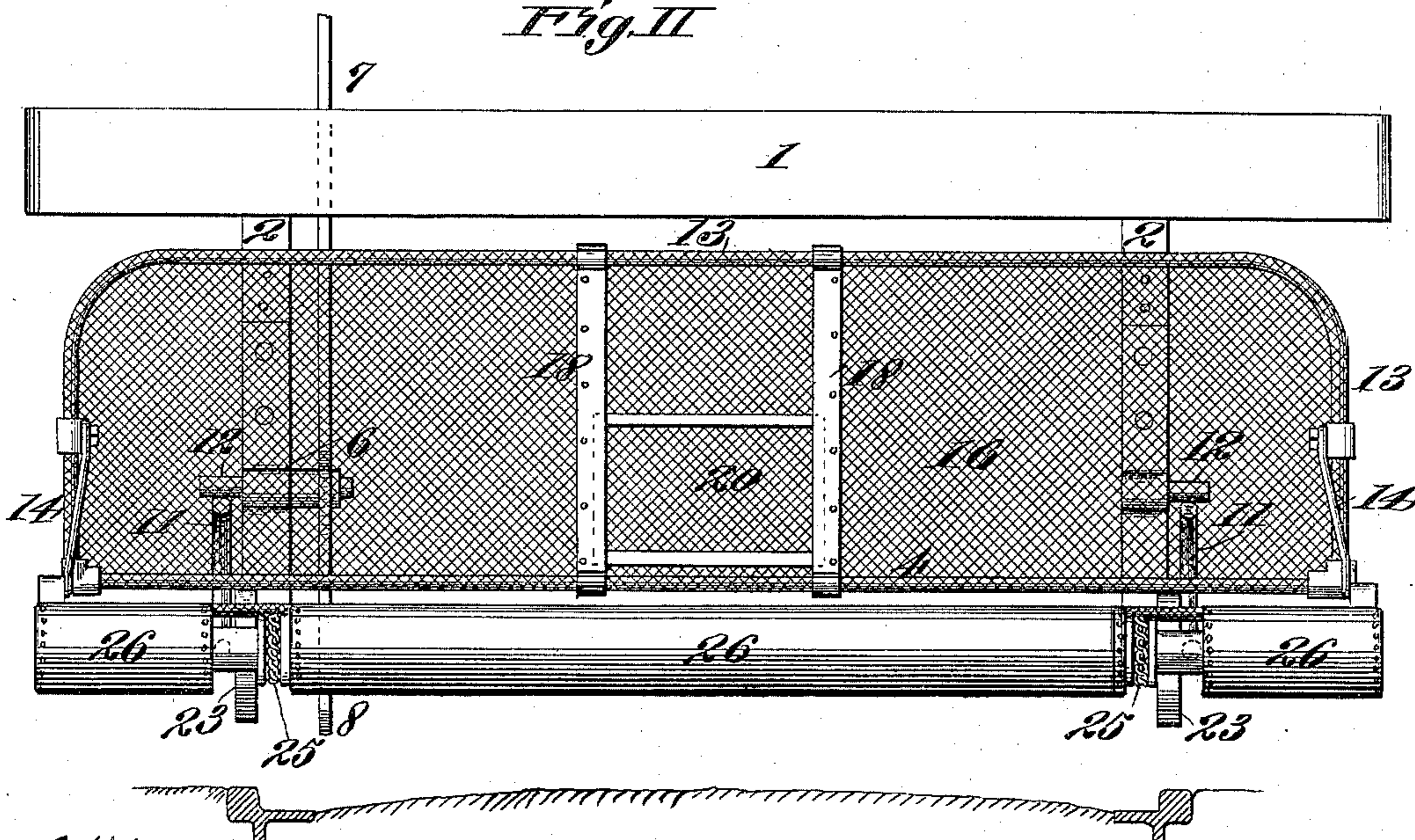
*Fig. I.*



*Fig. III.*



*Fig. II.*



Attest,

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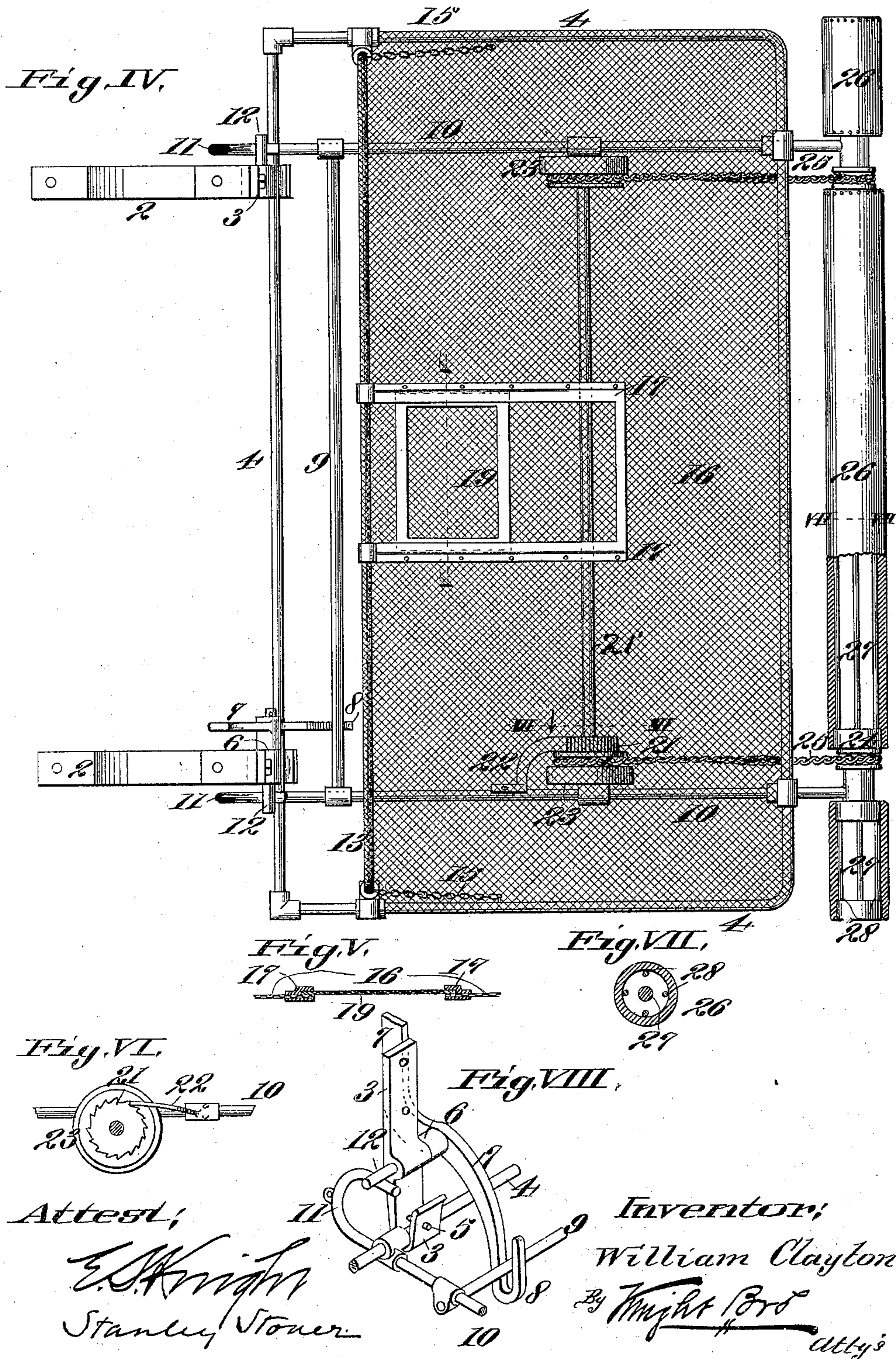
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# UNITED STATES PATENT OFFICE.

WILLIAM CLAYTON, OF ST. LOUIS, MISSOURI.

## VEHICLE-FENDER.

SPECIFICATION forming part of Letters Patent No. 598,769, dated February 8, 1898.

Application filed May 15, 1897. Serial No. 636,617. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM CLAYTON, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have  
5 invented a certain new and useful Improvement in Vehicle-Fenders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

10 The object of my invention is to provide a fender for street-cars, adapted to be operated either by the motorman or automatically by an obstruction on the track, and which is provided with a pneumatic roller carried in the  
15 front of said fender.

The invention possesses features of novelty hereinafter described and claimed.

My invention relates to certain improvements hereinafter pointed out and claimed.

20 Figure I shows a side elevation of my device. Fig. II shows a front elevation, looking directly at the front of the car. Fig. III is a detail perspective view showing the frame of the fender and the trip-hook which controls  
25 the position of the parts. Fig. IV illustrates a top plan view of the fender. Fig. V is a section taken along the line V V of Fig. IV. Fig. VI is a side view of a ratchet and wheel, taken along the line VI VI of Fig. IV. Fig. VII  
30 is a cross-section of the pneumatic roller, taken along the line VII VII of Fig. IV. Fig. VIII is a perspective view of the trip-hook, hanger, and lever by which a motorman controls the device.

35 Referring to the drawings, 1 is the front sill of the car-platform. 2 is a hanger suspended therefrom. 3 is a bracket and hook rigidly attached to the said hanger.

40 4 is the frame of the main fender, whose rear bar sets in the hooks 3 and is secured therein by means of the pin 5. Pivoted in the bracket 3 at 6 is a lever 7, which extends up through the platform to a point convenient to the motorman and whose lower end  
45 terminates in a hook 8, adapted to engage a bar 9. This bar 9 is rigidly attached to side bars 10, which terminate in the rear in hooks 11, adapted to engage under pins 12, carried on the bracket 3.

50 13 is a vertical frame pivotally attached to the frame 4 and held in position either by a brace-rod 14, Fig. I, or a chain 15, Fig. IV.

16 is the material stretched in the frames 4 and 13, which is of netting or any other suitable construction. It is preferably pliable  
55 and yielding.

17 and 18 are frames to cut-outs in the net, which are supplied with trap-doors 19 and 20, said trap-doors admitting of an opening for  
60 the draw-head of the car when the fender is swung up out of position, as when in the sheds, to economize space, or when on the rear of the car, and consequently not in use.

21 are ratchet-wheels carried on a shaft 21', said shaft being supported by the bar 10. 65 This bar 10 also carries a check 22, which admits of the said ratchet-wheel 21 turning in but one direction. Rigid with the ratchet is a wheel 23, adapted to ride on the car-track.

24 is a wheel connected with 23 by means  
70 of a chain 25, which is crossed for the purpose of imparting reverse motion thereto.

26 is a pneumatic roller or guard carried on the forward end of the bar-frame 10. It is formed with a hollow inflatable casing capable of being inflated with air. 27 is its central shaft, and 28 are braces for the casing,  
75 extending parallel with the shaft and forming a skeleton frame that acts as a distender for the inflatable casing.

80 The device is operated as follows: The parts are normally in the position shown by dotted lines in Fig. I. It will be observed that the pneumatic roller 26 is elevated therein to a considerable distance above the track  
85 and that the hook 11 engages under the pin 12. (See Figs. I, IV, and VIII.) The tension of the spring 29 serves to aid in maintaining this position. Now if there is an obstruction on the track which will strike the  
90 pneumatic roller 26, or if the device be operated by the motorman by means of the lever 7, it will be seen that the parts are thrown into position shown by solid lines in Fig. I. The side bars 10 are made to retreat, said  
95 bars riding through the supports that attach them to the main frame. Thus the hook 11 is carried far enough back to disengage itself from under the pin 12, the elevated position of the roller, as shown in dotted lines, Fig. 1,  
100 is lost, and the fender drops to the track, so that the wheels 23 ride along the said track, the said wheel 23 causing the chain 25 to revolve and the said chain being crossed pro-

duces reverse motion in the pneumatic roller 26, which causes the same to ride forward and upward from the ground. This has a tendency to throw any obstruction which  
 5 may be on the track up into the net of the fender. The lever 7 being pivoted at 6 and the hook 8, the opposite end of which engages under the fixed bar 9, will likewise cause the fender to drop to the track. It  
 10 will thus be seen that the device can either be voluntarily operated by the action of the motorman or automatically operated by the presence of an obstruction on the track. The ratchet-wheel 21, with its check 22, permits  
 15 the wheel 23 to turn in but one direction, which causes the forward and upward motion of the pneumatic roller 26 to be its only possible motion.

The whole device is carried on the two  
 20 hangers 2, and when the vehicle is not in use or when it is stored and economy of space is desired the fender may be raised to a vertical position by revolving the same upon the pivot 6. In this case it is necessary to open  
 25 the trap-doors 19 and 20, so that the draw-head may project therethrough, and it is also necessary to fold the vertical fender portion 13 down against the portion 16. This is made possible by having the joint thereof a mov-  
 30 able one and either taking out the rod 14 or using a chain 15.

The ribs 28, which are placed inside of the pneumatic roller 26, serve the purpose of keeping the same distended in the event of a puncture or other disability.

The device as described is capable of being

attached to either end of a car-body, making the same practically reversible, as the same set of hangers may be used therefor.

While I have spoken of the fender as being 40 particularly adapted for use on street-cars, I do not limit myself to this use, as it is possible to attach it to numerous other vehicles.

I claim as my invention and desire to secure by Letters Patent in an improvement in 45 vehicle-fenders—

1. The combination of a fender-frame, a pneumatic roller carried at the front of said fender-frame, a second frame attached thereto and adapted to support said pneumatic 50 roller, and a trip mechanism attached to said second frame adapted to drop the same upon impingement with an obstacle; said two frames pivoting on a common center but movable with reference to each other, substantially as described. 55

2. The combination consisting of a fender-frame, hangers suspended from the vehicle and in which said fender-frame pivots, a trip mechanism adapted to hold said frame elevated, means for disengaging said trip mechanism, consisting of a second frame movably 60 attached to said first frame, a pneumatic roller carried on the front of said fender-frame, and a means of imparting backward rotation 65 to said pneumatic roller when said trip mechanism is disengaged, substantially as described.

WILLIAM CLAYTON.

In presence of—

E. S. KNIGHT,  
 N. FINLEY.