

No. 725,446.

PATENTED APR. 14, 1903.

J. H. HULINGS.

CAR FENDER.

APPLICATION FILED MAY 28, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

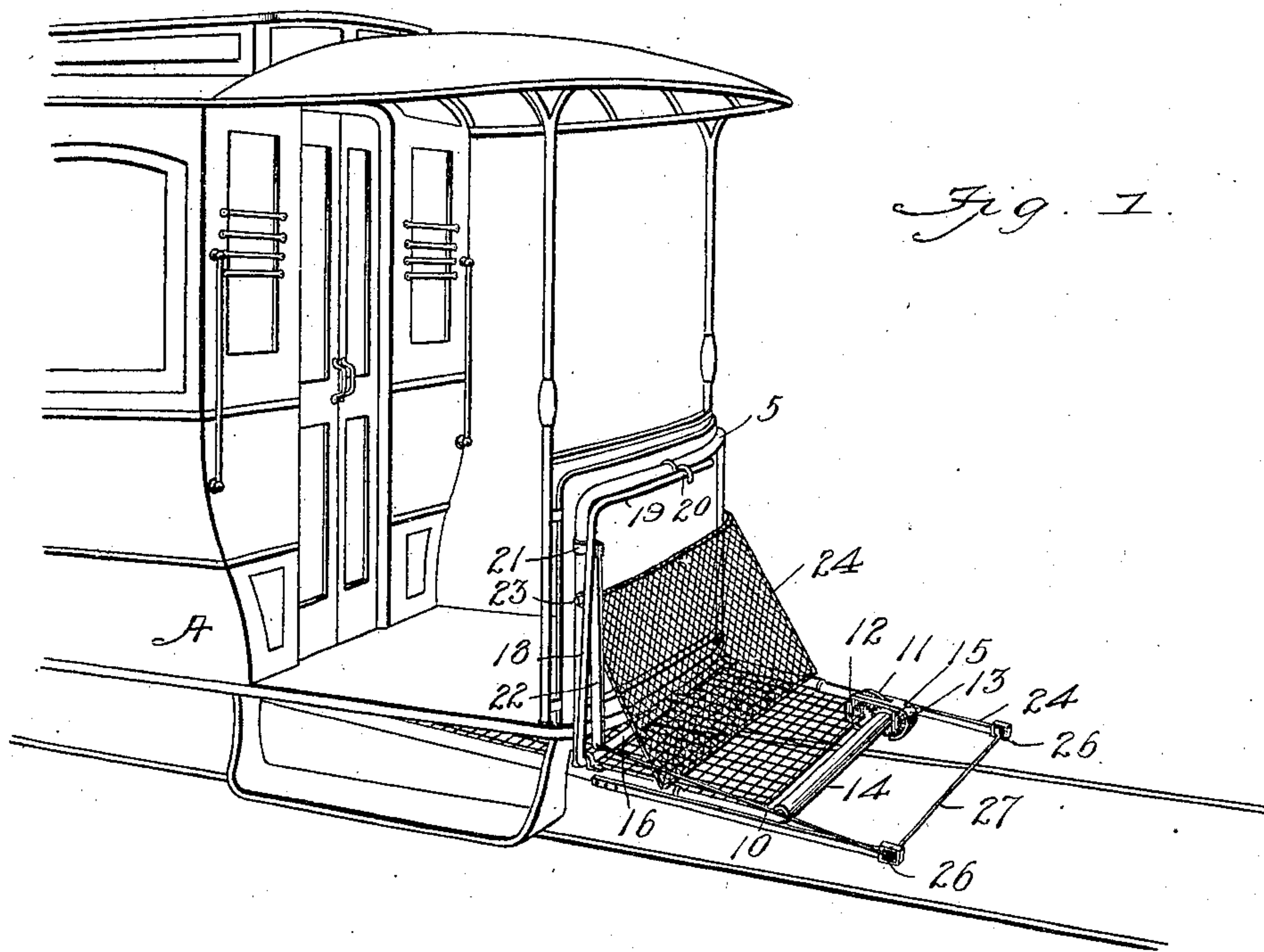
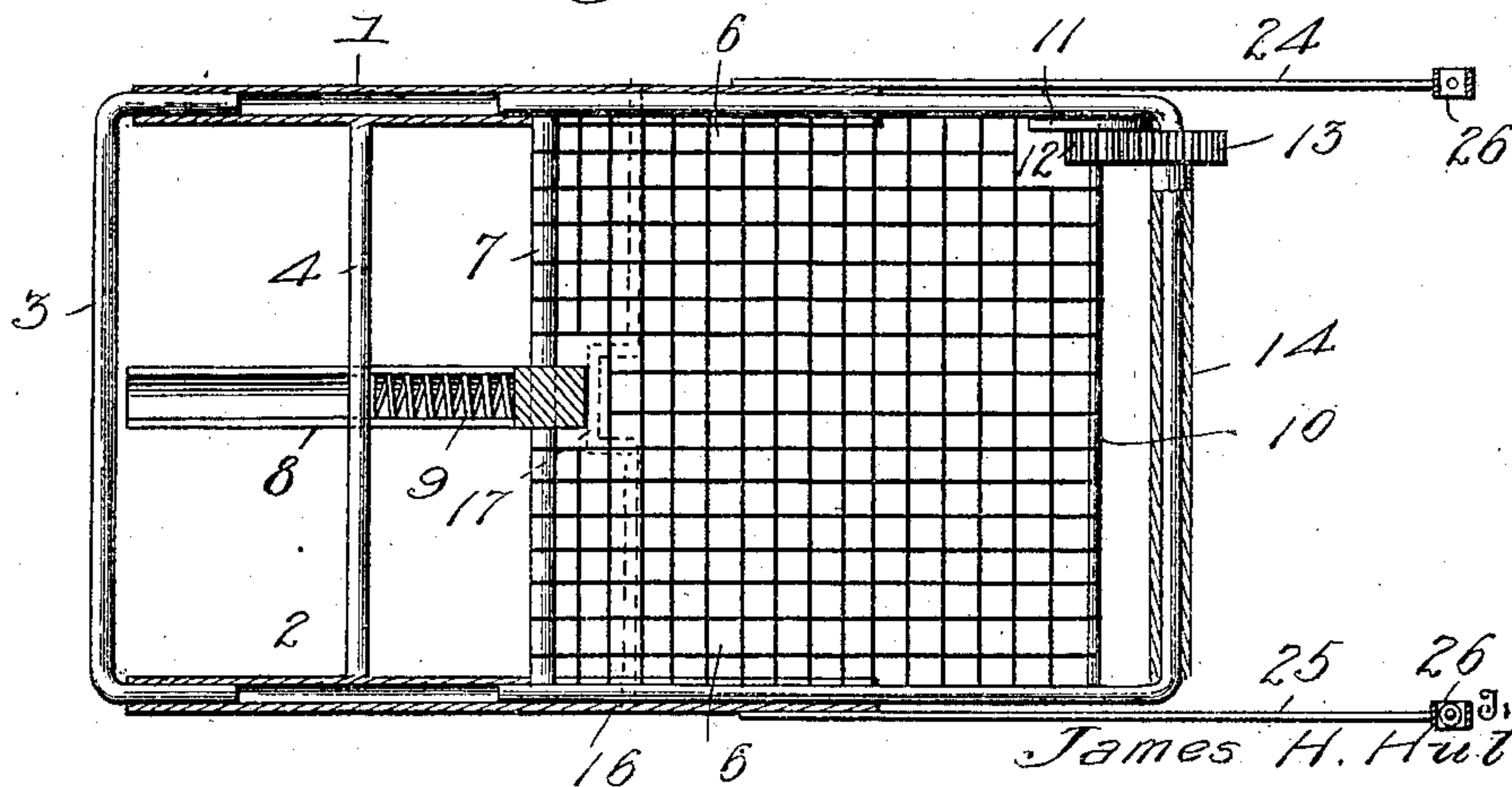


Fig. 4.



Witnesses

Wm. Koersch.
A. G. Heylman.

By

Victor J. Evans

Attorney

No. 725,446.

PATENTED APR. 14, 1903.

J. H. HULINGS.
CAR FENDER.

APPLICATION FILED MAY 28, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

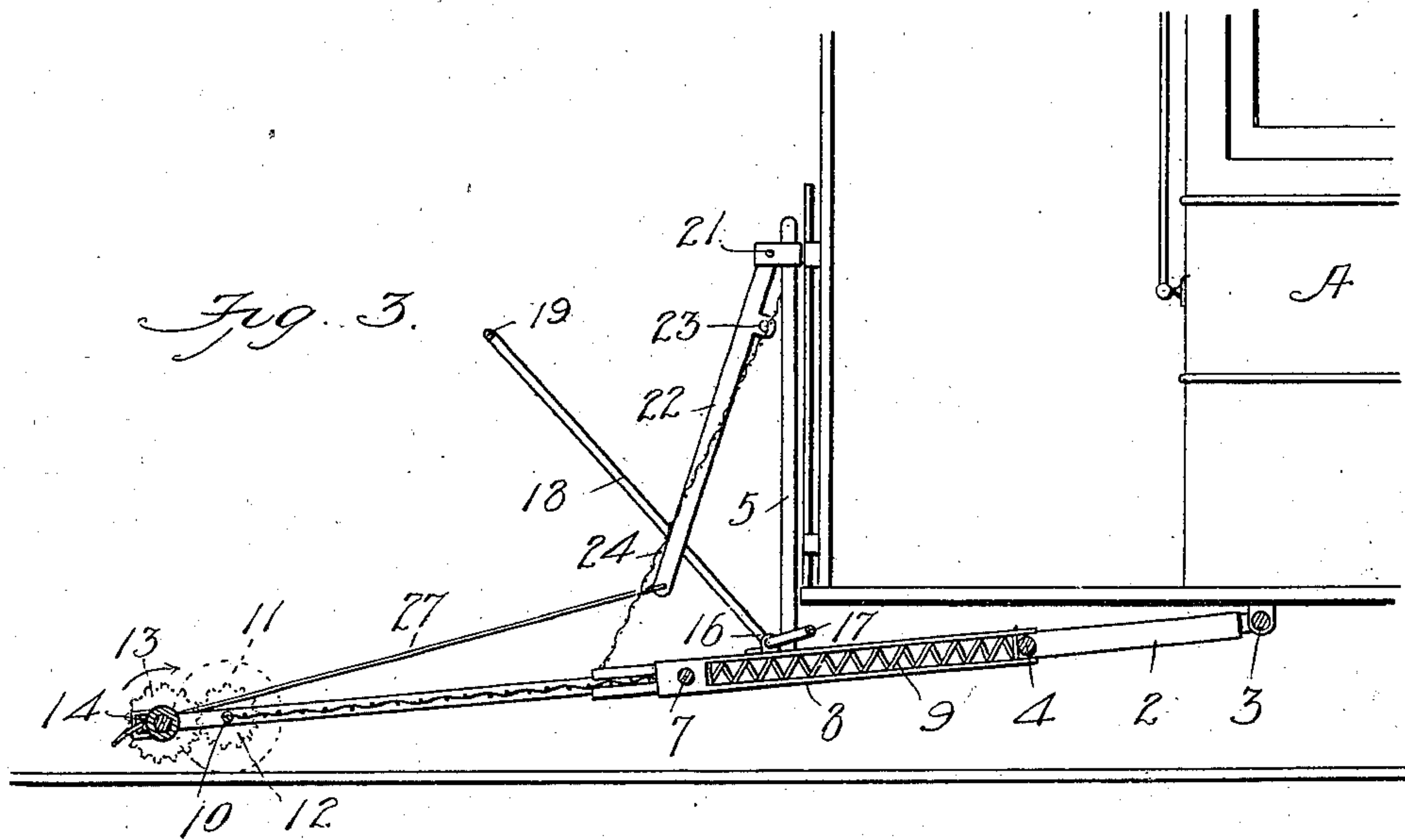
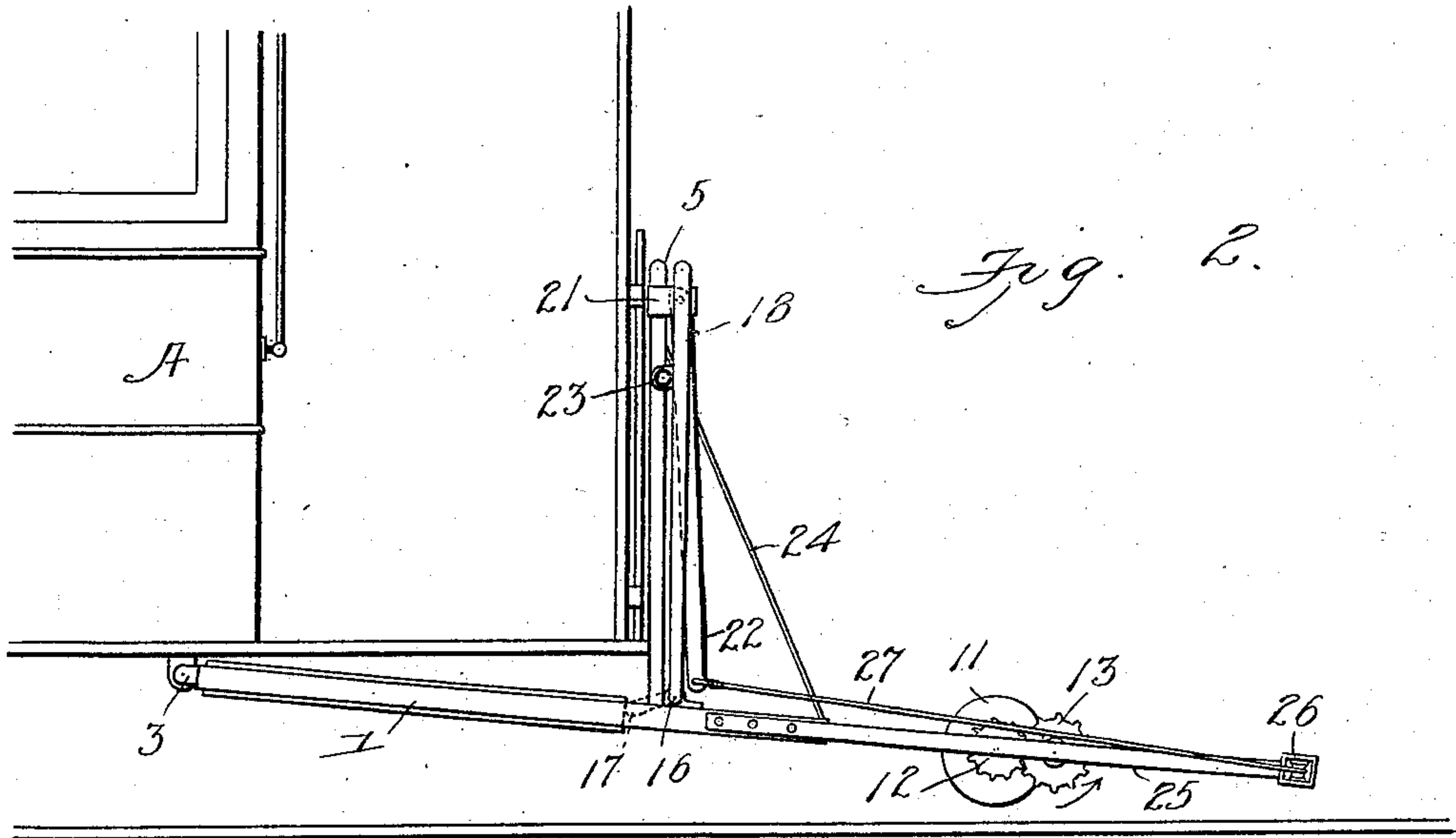


Fig. 5.

Witnesses
Am. North
A. G. Heylman.

18.
17.
16.

Inventor
James H. Hulings,

By *Victor J. Evans*
Attorney

UNITED STATES PATENT OFFICE.

JAMES H. HULINGS, OF PARSONS, WEST VIRGINIA, ASSIGNOR TO WILLIAM O. MCNEELEY, OF HENDRICKS, WEST VIRGINIA, AND WILLIAM G. CONLEY AND JEFF LIPSCOMB, OF PARSONS, WEST VIRGINIA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 725,446, dated April 14, 1903.

Application filed May 28, 1902. Serial No. 109,377. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. HULINGS, a citizen of the United States, residing at Parsons, in the county of Tucker and State of West Virginia, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention has relation to improvements in car-fenders adapted for use on street-cars and similar lines of transit; and the object is to provide a mechanism or device adapted to be mounted at the front of the car and in the path of the road-bed ready to meet an obstruction and on the exigency to be extended automatically to receive an object struck.

Another object is to so construct the fender that riding over or drawing under an object or person will be prevented.

A further object is to so arrange the fender that a person will receive the preliminary encounter in advance of the main portion of the fender-frame and be knocked or thrown back onto the network of the fender.

With these objects in view my invention consists in the novel construction of parts and their assemblage in operative combination, as will be hereinafter fully specified and the novelty of the invention particularly pointed out and distinctly claimed.

I have fully and clearly illustrated the invention in the accompanying drawings, forming a part of this specification, and wherein—

Figure 1 is a perspective view of the end portion of a car equipped with my improved fender. Fig. 2 is a view in side elevation, showing the telescoping frame as drawn back to the position it is normally carried in free from the track. Fig. 3 is a view in side elevation, partly in central longitudinal section and showing the fender moved forward and extended to its full extent. Fig. 4 is a plan view, partly in section, of the fender-frames. Fig. 5 is a perspective view of the trip and locking-lever which holds the telescoping frame in retracted position.

In the drawings similar reference notations designate like elements and parts appearing in the several illustrations.

Referring to the drawings, A designates a car of any suitable construction adapted to carry a fender. To the timbers of the platform or to any suitable support provided

thereunder are firmly secured parallel tubes 1 2, which extend the required distance under the car and project beyond the end thereof. 55 The rear ends of these side tubes are united by a strong cross-bar 3, having its ends turned at right angles and fitted in the base of the side tubes, as shown in Fig. 4 of the drawings. The side pipes or tubes are further united and 60 braced by a cross-bar 4, arranged at a point to make it a support for a tube or sleeve which carries the spring which throws the fender-frame forward and also serves as an abutment for the inner end of the spring. 65 To the side pipes 1 2 at a point just in advance of the dashboard of the car is mounted a bail-shaped frame 5, having the lower ends of its vertical arms rigidly fixed to the side tubes 1 2 and the body securely fastened to 70 the front of the car and dashboard by any suitable fastenings. The side tubes 1 2 are arranged and supported at an incline sufficient to bring the front end of the fender when extended in position with the carrying- 75 roller bearing on the rail or bed of the track. The side tubes are formed with slots 6 in advance of the cross-bar 4, wherein the ends of the rear cross-bar of the fender slide. The fender-frame is rectangular in shape and 80 has its side bars arranged in the stationary side tubes 1 2 to telescope therein. On the rear cross-bar 7 of the fender is mounted the outer end of a sleeve 8, slotted lengthwise to fit over the cross-bar 4. In the sleeve 8 is 85 placed an expansive spring 9, one end of which is lodged against the outer end of the sleeve, and the other end rests against the cross-bar 4 of the stationary frame. It will be perceived that when the fender is drawn back the spring 90 9 is compressed and that when the fender is released the force of the spring will at once be exerted and push the telescoping section of the fender forward. Adjacent to the front end of the fender is journaled a shaft 10, on 95 one end of which is mounted a disk or roller 11, which when the fender is extended rides on the rail or road-bed and is rotated by the contact, and at the same time the end of the fender is carried closely to but free from the 100 surface. On the shaft 10 is a pinion 12, which meshes with a pinion 13, mounted on a rotatable sleeve 14, loosely arranged on the end cross-bar of the fender, as shown in the draw-

ings. A suitable housing 15 covers the pinions to prevent contact therewith.

At the base of the frame 5 is pivotally mounted a trip-rod 16, formed with an angular trip piece or portion 17 to engage the end of the sleeve 8 when the fender is drawn back. The trip-rod is formed with a vertical extension 18, provided with a horizontally-disposed arm 19, which when the trip is lodged against the end of the sleeve 8 is held in position by a hook 20 on the top bar of the frame 5, as shown in Fig. 1 of the drawings. To one of the vertical side pieces of the frame 5 is rigidly secured a bracket 21, wherein is hung a depending arm 22, provided with a laterally-extending stud or pin 23, placed in the path of the vertical extension 18 of the trip-rod 16. To the outer sides of the side tubes, adjacent to their outer ends, are rigidly secured forwardly-extending rods 24 25, formed with suitable housings on their free ends, wherein are journaled on vertical shafts grooved pulleys or sheaves 26, on which is arranged a cord or cable 27, one end of which is secured at a convenient stationary point on the fender and from thence carried over the sheaves across the track and extended to the lower end of the depending arm 22, to which it is secured. This cord or cable is held normally stretched and tight by the action of the vertical extension 18, contacting with the lug 23 on the depending arm 22 and swinging the arm back, and thus stretching or tightening the cable across the track. A back net 24 is secured across the stationary frame to prevent the object from injury in that direction.

The operation of the fender may be stated as follows: The elements or parts being in the position indicated in Figs. 1 and 2, with the movable section of the fender drawn back and held by the trip-rod and the cable well in front of the end of the fender, these positions show the parts as carried ready for action when an exigency occurs for their use. Now when an object or person encounters the stretched cable extending across the track the force of the contact jerks the depending arm outward, so that it releases the trip from the sleeve, and the force of the spring shoots the movable part of the fender outward and catches the victim on its net. The roller 14 rotates with its under face moving in the direction of the arrow, so that it will resist and prevent anything from being drawn under the fender.

I desire it to be understood that I do not restrict myself to the precise details of construction shown so long as changes may be embodied in the scope of the invention, particularly in the matter of the spring or springs to throw the movable section of the fender outward, because this may be accomplished by springs differently arranged to act for this purpose.

Having described my invention, what I claim is—

1. In a car-fender, tubular side supports,

a fender having its side bars telescoping the tubular supports, a slotted rearwardly-extending sleeve on the fender, an expanding spring in the sleeve, a trip to hold the fender in retracted position, a shaft journaled across the front end of the fender, a roller on the shaft, a pinion mounted on the shaft, a rotary sleeve mounted on the front cross-bar of the fender, and a pinion on the sleeve in mesh with the first-named pinion.

2. In a car-fender, tubular side supports, a fender having its side bars telescoping the side supports, a slotted rearwardly-extending sleeve on the fender, an expanding spring in the sleeve, a trip to hold the fender in retracted position, a shaft journaled across the front end of the fender, a roller on the shaft, a pinion on the shaft, a rotatable sleeve on the front bar of the fender, a pinion thereon in mesh with the pinion on the shaft, and means to automatically release the trip from engagement.

3. In a car-fender, the combination with a fender and means to move the fender forward, of a shaft journaled across the front end of the fender, a supporting-roller on the shaft, a pinion on the shaft adjacent to the roller, a rotatable sleeve on the front cross-bar of the fender, and a pinion on the sleeve in mesh with the pinion on the shaft, whereby the sleeve is rotated to prevent an object from getting under the fender.

4. In a car-fender, the combination with the fender adapted to be moved forwardly from a retracted position, of side arms projected beyond the end of the fender, sheaves journaled on the outer ends of said arms, a cable mounted on the sheaves across the track and having one end secured to a stationary point, a depending arm having the end of the cable secured thereto, means to hold the arm to stretch the cable, and means to move the fender forward.

5. A car-fender, comprising a stationary frame secured under the car and having tubular side bars, a rectangular fender-frame arranged with its side bars to slide in the tubular supports, a sleeve projecting from the inner end of the fender-frame, a spring arranged in the sleeve, a trip to hold the fender in retracted position against the force of the spring and formed with a vertical extension and horizontal handle, a depending arm hung to the vertical extension of the trip, side bars projected forward from the stationary frame, pulleys journaled in the outer ends of said side bars, a cable having one end anchored to the stationary frame and arranged on the pulleys across the track and its other end secured to the free lower end of the depending arm, for the purpose set forth.

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

JAMES H. HULINGS

Witnesses:

J. D. VICTOR,

A. D. W. STRICKLER.