

No. 819,967.

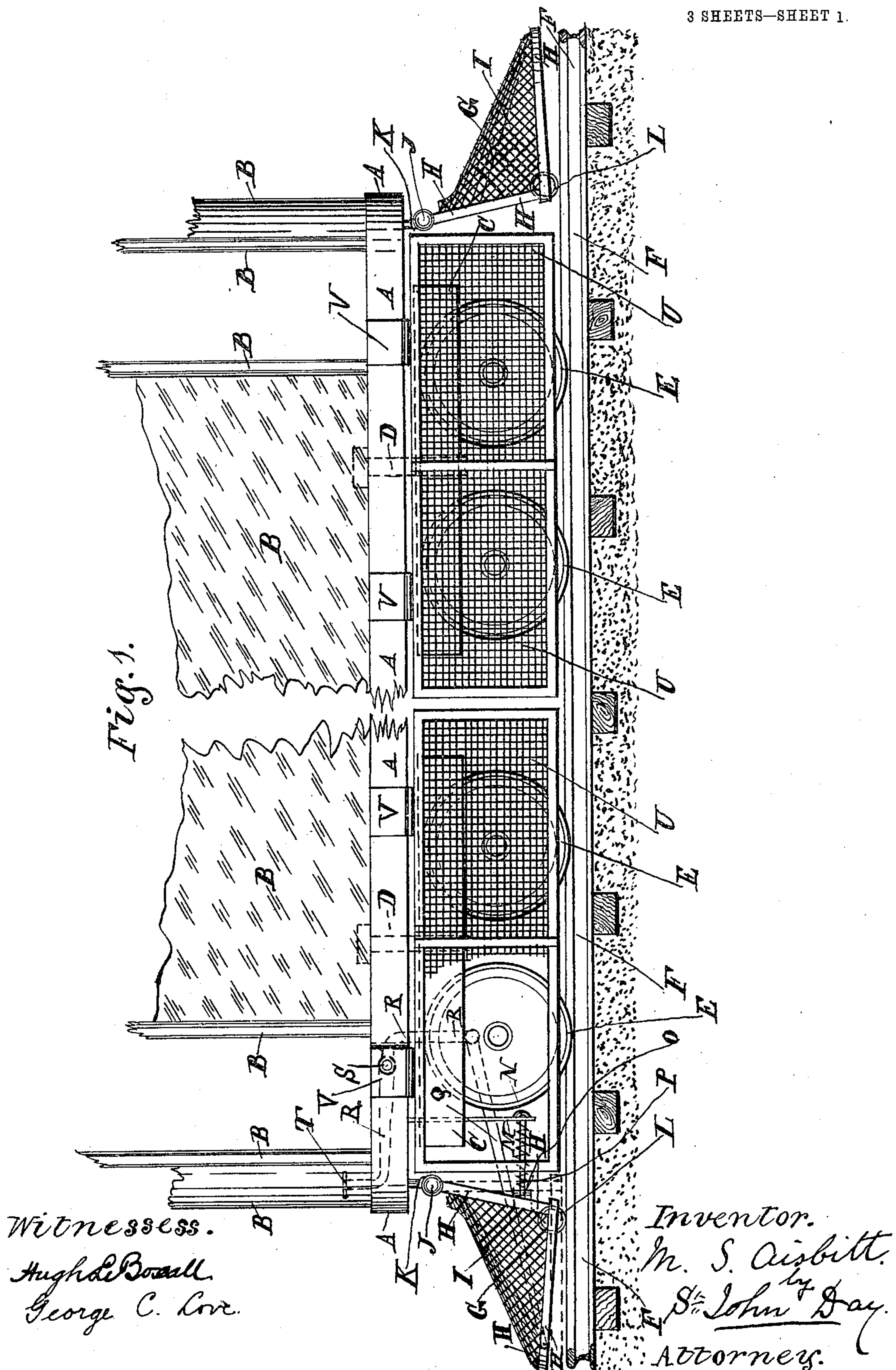
PATENTED MAY 8, 1906.

M. S. AISBITT.

FENDER ESPECIALLY ADAPTED FOR STREET RAILWAY CARS.

APPLICATION FILED OCT. 12, 1905.

3 SHEETS—SHEET 1.



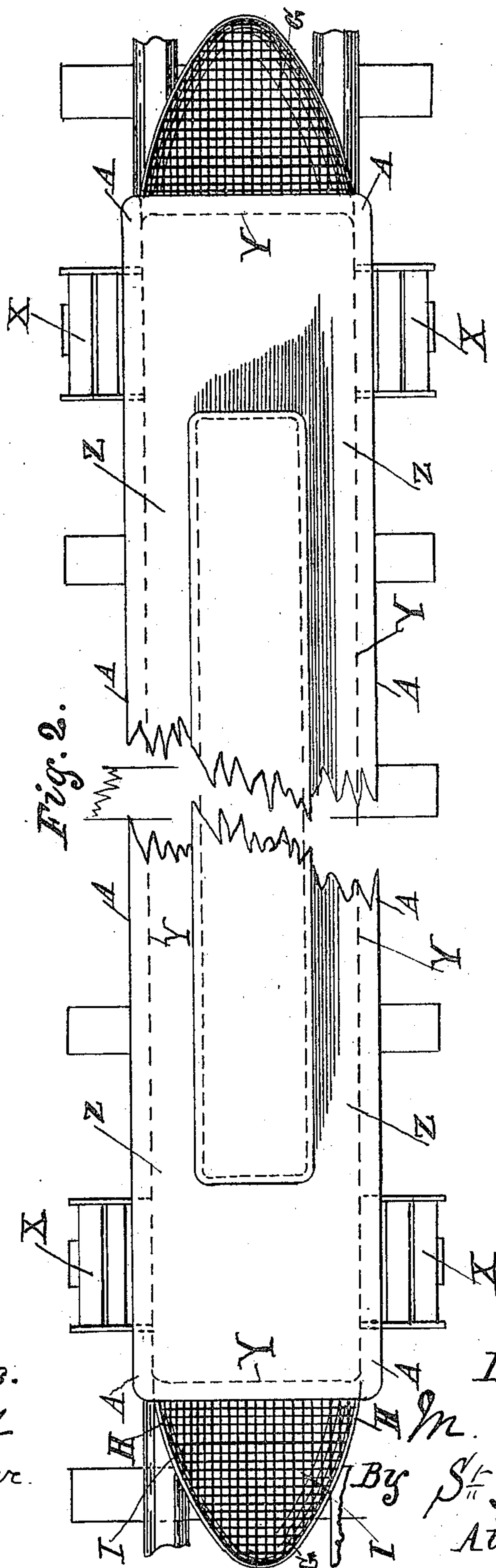
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3 SHEETS—SHEET 2.



Witnesses.
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Inventor.
M. S. Aisbitt.
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3 SHEETS—SHEET 3

Fig. 4.

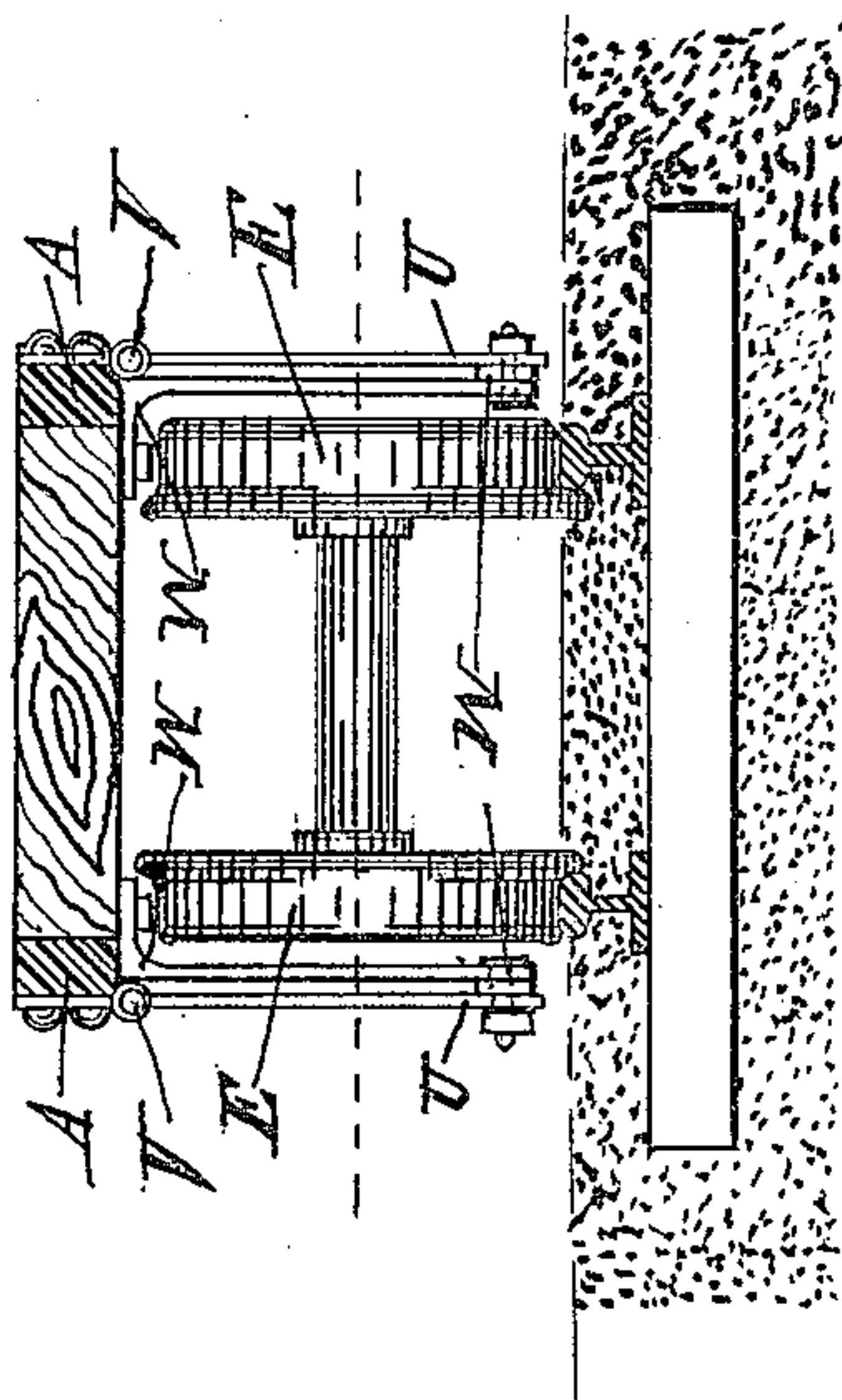
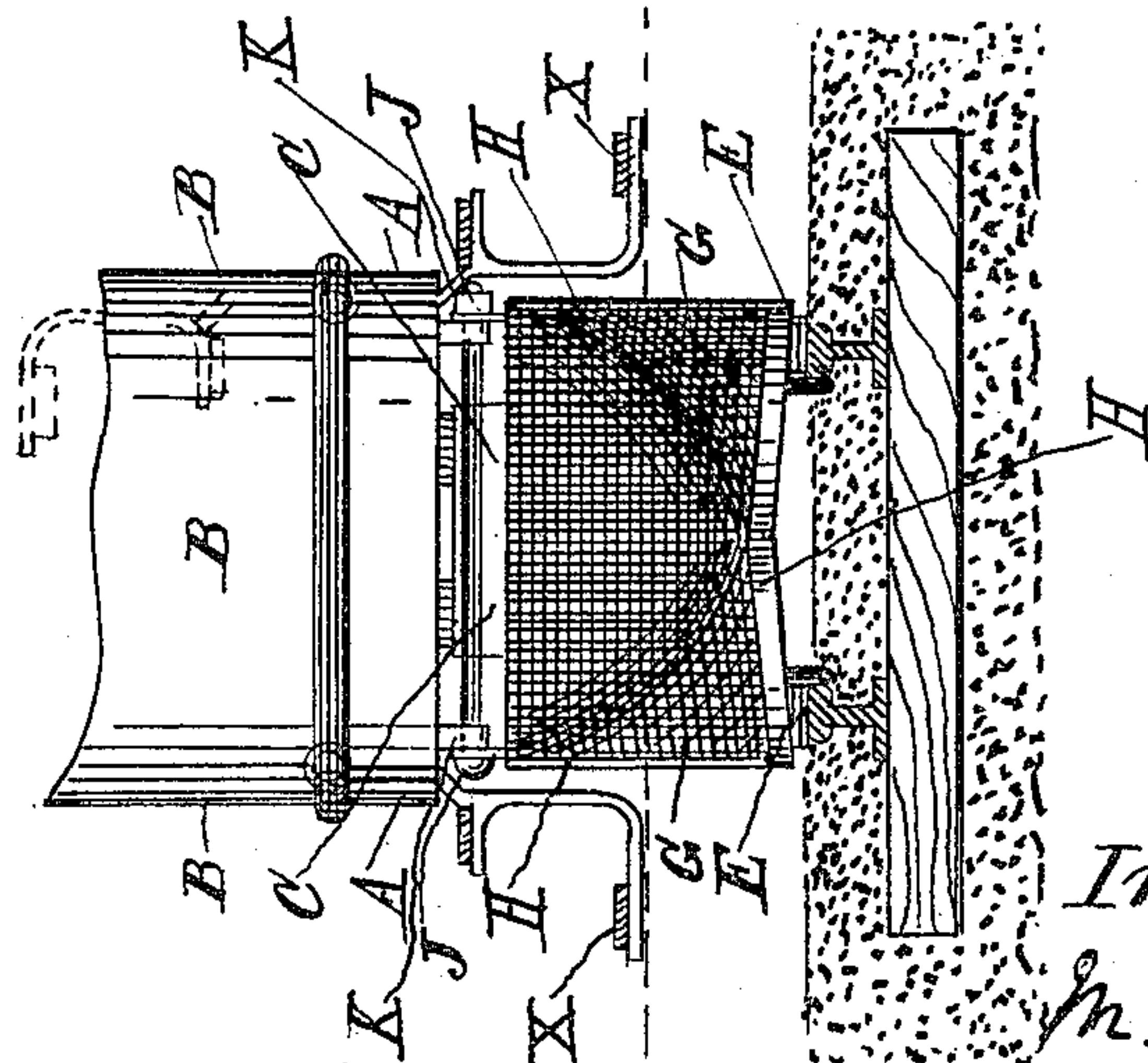


Fig. 5.



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UNITED STATES PATENT OFFICE.

MATTHEW S. AISBITT, OF LOS ANGELES, CALIFORNIA.

FENDER ESPECIALLY ADAPTED FOR STREET-RAILWAY CARS.

No. 819,967.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed October 12, 1905. Serial No. 283,331.

To all whom it may concern:

Be it known that I, MATTHEW S. AISBITT, of the city of Los Angeles, in the county of Los Angeles, in the State of California, have
5 invented a new or Improved Fender Especially Adapted for Street-Railway Cars, of which the following is a full, clear, and exact description or specification, reference being had to the three annexed sheets of drawings
10 and to the letters marked thereon.

My said invention, which relates to a new or improved fender more especially adapted for street-railway cars and the like, has for its object to prevent as much as possible injury to human beings who accidentally or
15 otherwise are in or upon a railway-track when a car or cars is or are traveling in the neighborhood of the track where a person or persons may be accidentally or otherwise
20 situated.

My improved fender at the end portions of the car is so constructed that it terminates in a rounded and inclined nose, so that on coming into contact with a person or persons the
25 effect of this rounded nose is to push the person or persons on either side of the center of the track to that part of the roadway outside the track, while the fender is so constructed that it is not possible for any part of it to
30 pass over the body of a person should that person be thrown down by collision in the act of crossing a track. The upper part of the fender is constructed of stiff wire, which constitutes a strong support for the body of a
35 person in the event of that person falling upon the fender. The end fenders are suspended pivotally from beneath the framing of the car, and in their normal position when working the nose of these fenders is sufficiently
40 lifted upward above the level of the rails to allow it to pass over any slight obstruction. The fender is provided with a pair of rollers corresponding to the gage of the railway, and its rear part is connected, by
45 means or a rod or link, to a treadle, which the driver or motorneer of the car presses downward when he sees a person or other large obstruction between the rails on which the car which he is driving is traveling. The pushing
50 down of this lever and treadle brings the nose of the fender close, or nearly so, to the rails, and the rollers at the rear part thereof then travel on the rails and give support to the fender to carry the load of the person who
55 may have been thrown down upon it or any

other large obstruction. One or more springs are situated between the fender and the support at the rear of the car for the purpose of maintaining the fender in its normal or slightly upraised position, and as soon as the
60 driver or motorneer raises his foot from off the aforesaid treadle this spring causes the fender to return to its normal position.

Under my present invention a fender of the kind hereinbefore referred to is placed at
65 the end of each car and at its rear part extends the whole width of the end of the car, thereby preventing a person or other obstruction from being thrown under the wheels of the car when traveling.
70

For the purpose of still more effectually guarding a person from being thrown under the wheels of a traveling car at each side of the car-frame and outside the wheels, and therefore outside the rails of the track on
75 which the car runs, other fenders vertically suspended from the lateral longitudinal members of the frame of the car are applied. These lateral members or vertical fenders are preferably connected to the longitudinal
80 frames of the car by hinges, so that they may be turned upward and outward whenever required for gaining access to the under part of the car or to the axle-boxes or, when trucks are used, to the two trucks, one at each end of
85 the car upon which it is supported.

Unlike all car-fenders hitherto in use which are usually, if not always, attached to the swiveling frames of the trucks, the fenders of my invention are attached both at the ends
90 and at the sides to the bottom of the car, and when trucks are used these trucks swivel between the fenders, according to the contour of the track.

With a view of avoiding as much as possible
95 any projections from the side of the car when traveling the steps at each end of the car by which passengers enter thereinto and egress therefrom are attached by hinges to the car-body, and these steps when the car is
100 running are turned upon their hinges upward and within the body of the car.

By means of my improved fenders, which surround the car and inclose the wheels thereof both at the ends and at the sides, and
105 conjunctively with the hinged steps hereinbefore referred to, the car is rendered as completely as is possible incapable of throwing down persons and is as capable as possible of moving
110 a person who may be thrown down out-

ward and beyond the side of the car onto the roadway at the side of the railway-track, so that the wheels of the car cannot pass over the body of a person accidentally thrown down.

Upon the annexed drawings, Figure 1 is an elevation with certain parts broken away of the lower frame of the street-railway car and pivoted end trucks with wheels upon which the car-body is carried, as is well understood. A portion only of the car-body is shown, the central part being broken away in order to provide room in the sheet of drawings for the better showing of the fenders and their operative connections constituting my present invention. A portion also of the lateral fender at the left-hand end of Fig. 1 is shown broken away in order to more distinctly illustrate the operative connections of the fender at the left-hand end of the car. Fig. 2 is a plan corresponding to Fig. 1. Fig. 3 is an end elevation of the car, showing my improved fenders attached thereto. Fig. 4 is a transverse section showing the side fenders.

In Fig. 1 the framing of the car is marked A, and portions of the upper part of the car-body are marked B. Beneath each end of the car-body is a swiveling truck C of such construction as is usually employed. Each such truck C is connected to the framing A of the car by a perch-bolt D, and it has bearing or rubbing pieces (not shown in the drawings, but which are well understood) whereby the trucks C bear, while swiveling under the framing A, when the car is traveling on a curved portion of a railway-track. Each truck C is provided with two pairs of wheels E, by which it is supported and travels on the rails F. The end fenders G consist of a metallic frame H, over and upon which the body of the fenders I, made of crossed wires, is fastened, as shown. The end fender-frames are each carried by pivots J in eyebolts K, respectively fastened into each end of the frame, as shown more particularly at Figs. 1 and 3. Carrying wheels or rollers L, Fig. 1, of gage corresponding to the gage of the track, are carried in the rear end of the end fender's frame in such manner that when these end fenders are depressed into the position shown in dotted lines at Fig. 1 these rollers engage with the track and run or travel thereon. It is here explained that the fender and its operative connections are shown completed only at the left-hand end of Fig. 1 of the drawings, it being understood that the operative connections for functioning the end fender at the right-hand end of Fig. 1 are similar to those now to be described with reference to the end fender at the left-hand end of Fig. 1. From the under part of the frame A and at each side thereof—that is to say, outside the truck C—there is fastened a stiff support or abutment M, through the hole in the lower part of which the shank of a bolt N

passes. The front end of the shank is fastened into a cross-bar O, connecting transversely the two lateral bars, connecting the sides of the frame H, and between the abutment M and the transverse bar O, a compressed spiral spring P is carried upon the shank of the bolt N, which with the end pressure of the spring P, maintains each end fender pressed slightly upward into the inclined positions shown at Fig. 1. For the purpose of enabling the driver or motoneer of the car to depress either end fender I into the position shown in dotted lines at Fig. 1 the fender is coupled by a central connected rod or tie Q to the lower end of the crank-arm R (shown in dotted lines) and carried upon a pivot S, (also shown in dotted lines.) The forward end of this crank-arm R is formed with a foot-rest or treadle T, which on being pressed downward by the foot of the driver or motoneer draws down the fender I into the position shown in dotted lines, and this function is performed by the driver or motoneer when he perceives a person or other obstruction on the track with which the car is likely to come into collision.

On referring to Figs. 2 and 3 of the drawings more especially it will be observed that the broader part of each fender I occupies the whole width of the frame of the car. For the purpose of additional safety the lateral vertical fenders U are suspended by hinges V from the side frames of the car, and they are prevented from being pushed inward by means of the fixed side frames W, (shown more especially in the transverse section, Fig. 4,) while the position of the steps X when folded up while traveling are also shown in dotted lines at Fig. 3.

In Fig. 2 the dotted lines Y indicate the exterior of the lateral and end frames, while the top part of the roof Z is shown projecting over the frame, as is well understood.

Having now described the nature of my said invention and the best system, mode, or manner in or under which the same is or may be used or carried into practical effect, I desire to observe in conclusion that what I consider to be novel and original, and therefore claim as the invention to be secured to me by Letters Patent, is as follows:

1. The new or improved fender for street-railway cars and their analogues, consisting of a frame pivotally suspended from the under part of the end portions of the framing of the car, and extending the entire width of the said frame, the body of said fender consisting of stiff wires crossing each other and having their ends fastened to the framing of each fender; each such fender having rollers of the gage of the track at their rear portions, abutments, bolts, and springs for maintaining the fenders in their upraised position, and the crank-arm, connecting-rod, and treadle, pivotally carried in the framing of the car, for

enabling the driver or motorneer to depress the end frames when required substantially as hereinbefore described.

2. The lateral fenders or shields consisting
5 of rectangular frames connected by hinges or their equivalents to the lateral frames of the car, and so that they may be lifted upward hingewise when access is required to the parts of the car and trucks beneath the body
10 of the car, and contained within the end and lateral fenders.

3. The combination of a street-railway or analogous car, the end fenders, the lateral
15 fenders, the suspension-pivots of the end fenders, the hinged connections of the lateral fenders, the abutments for the end fenders,

the bolts and springs connecting the abutments, end fenders and the crank-arm, the coupling-rod and treadle for operating the end fenders, the rollers or running wheels of 20 the end fenders, the whole operating together in the manner and for the purposes substantially as hereinbefore described.

In testimony whereof I, the said MATTHEW S. AISBITT, have hereunto set my hand and 25 seal in the presence of two subscribing witnesses.

MATTHEW S. AISBITT. [L. s.]

Witnesses:

ST. JOHN DAY,
J. D. CORY.