No. 649,926. Patented May 22, 1900.

J. B. FLAHERTY.

AUTOMATIC STREET CAR FENDER.

(Application filed Jan. 15, 1900.)

(No Model.)

Fig. 1

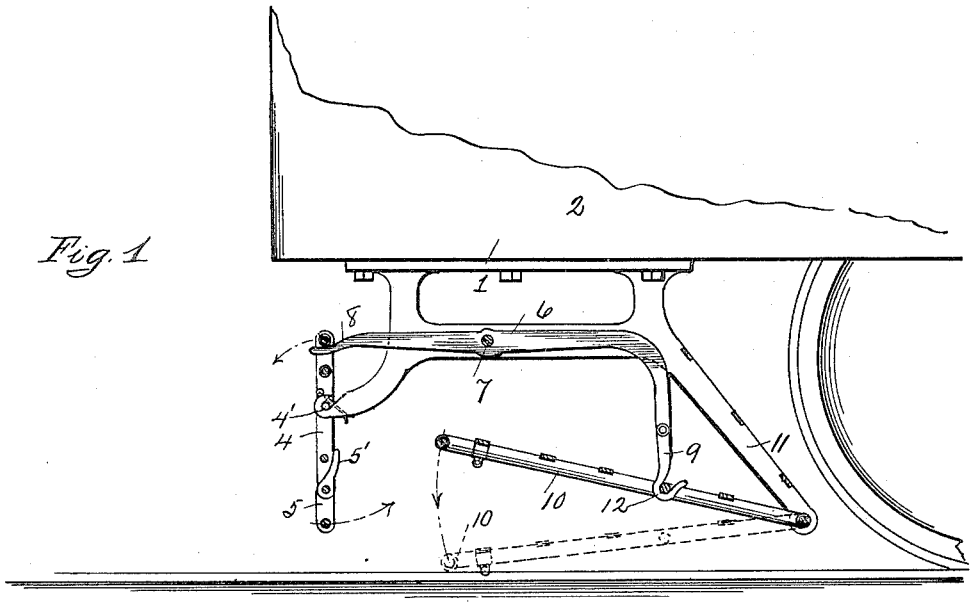


Fig. 2

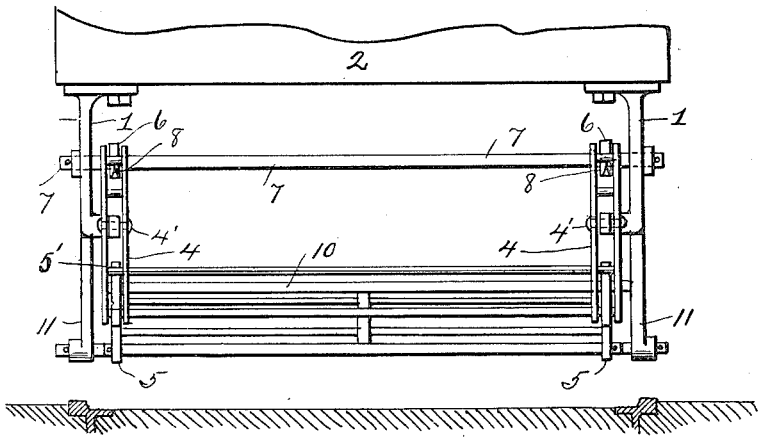
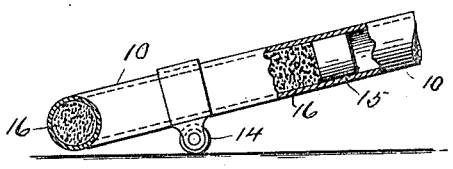


Fig. 3



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By O. D. Lewis Atty.

UNITED STATES PATENT OFFICE.

JOHN B. FLAHERTY, OF PITTSBURG, PENNSYLVANIA.

AUTOMATIC STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 649,926, dated May 22, 1900.

Application filed January 15, 1900. Serial No. 1,427. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. FLAHERTY, a citizen of the United States of America, residing at No. 2562 Fifth avenue, Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Street-Car Fenders; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved fender for street-railway and other cars; and it consists in the certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a side sectional elevation of my improved car-fender, which is constructed and arranged in accordance with my invention. Fig. 2 is a front elevation of the same. Fig. 3 is an enlarged detailed sectional elevation of a portion of the front end of the fender, showing the means for weighting the same.

To put my invention into practice and thereby provide a fender for cars that will automatically drop to pick up any obstruction upon the track while the car is in motion, I provide a pair of brackets or hangers 1 and attach the same at the front and beneath the floor of the car 2. Mounted upon the forward ends of these brackets 1 by means of a shaft 4′ is a frame 4, suspended in a vertical position and having a hinged portion 5 at the base, composed of horizontal bars across the front a short distance above the level of the track. This hinged portion is free to swing forward and is prevented from backward movement about its journals by upwardly-projecting dogs 5′ coming in contact with one of the bars of the swinging frame 4. Journaled upon a shaft 7, mounted in the brackets 1, are two substantially L-shaped levers 6, the forward ends 8 of which engage with pins 13, arranged in the top of the frame 4 and the rear ends of which are bent downwardly and provided with hooks 9, which are hinged thereto in a suitable manner. Mounted upon rearwardly-projecting arms 11, formed integral with the brackets 1, is a drop-fender 10, consisting of a rectangular frame formed of tubes having a number of cross-bars or slats attached thereto, and the rear end of the said frame is hinged to the said arms 11 at a point a short distance above the track. The forward end of this fender 10 may be elevated to the position shown in Fig. 1 of the drawings and held in that position by engaging the hooks 9 with a cross-bar 12, forming a part of the fender. The forward portion of the drop-fender 10 is constructed of tubing and is filled with sand 16, held in position by a suitable number of plugs 15, arranged in the interior of the tubes a short distance back. Attached to the drop-fender 10 are two shoes 14, which are adapted to ride upon the rails when the fender is down, as shown in dotted lines in Fig. 1.

In operation the fender occupies the position shown in full lines in Fig. 1 of the drawings, and in the forward motion of the car the swinging frame 4 5 will be brought in contact with any object or obstruction on the track and the same moved backward about its pivotal point, thereby disengaging the pins 13 to free the forward ends of the levers 6 and permit the fender 10 to drop by gravity to the position shown in dotted lines. This altered position of the fender 10, the forward end of which is resting upon the track, will cause the fender to pick up the obstruction and prevent the same from passing beneath the car, and by reason of the fender being weighted at its forward end the same will be prevented from rebounding.

If it is desired, the fender may be dropped by the motorman from the platform of the car by means of a simple trip-lever (not shown) of any suitable construction.

It is obvious that various slight modifications and changes may be made in the details of construction without departing from the spirit of the invention.

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

1. The combination consisting of the fender 10, hinged at the rear to suitable brackets, the levers 6, provided with hooks to engage the fender and hold the same suspended, the swinging frame 4 arranged at the front of the car and adapted to engage with the forward ends of the said levers, the said frame being suspended in a vertical position, and provided

with a hinged lower section 5, all arranged and combined for service, substantially as and for the purpose set forth.

2. In a car-fender, the combination with the car, of a pair of brackets or hangers secured to the underneath face of the car-platform, and provided at their rear ends with downwardly-extending arms 11, a shaft 7 mounted in said brackets, a pair of levers 6 mounted upon said shaft with their rear ends extending downwardly and provided with hooks, a swinging frame supported upon the forward ends of said brackets and held normally in the vertical position by the forward ends of said levers 6, and a drop-fender 10 pivotally supported at its rear end from the downwardly-extending arms 11 of the brackets and held normally suspended by the hooks carried by the levers 6 with its forward end elevated above the rear end, substantially as described.

3. In a car-fender, the combination with a pair of hangers supported from the car-platform; of a drop-fender pivotally supported at its rear end from said hangers and comprising a tubular frame having a filling of sand or like material in its forward end, with plugs arranged in the tubes for holding said filling material in position in the forward end of the drop-fender, as and for the purpose described.

4. In a car-fender, a pair of hangers supported from the car-platform, a drop-fender pivotally supported at its rear end from said hangers and comprising a tubular frame having a filling of sand or like material in its forward end, and plugs arranged in the tubular frame for holding the filling material in the forward end thereof, combined with means for holding said drop-fender normally suspended with its forward end elevated above the rear end, substantially as herein shown and described.

5. In a car-fender, the combination, of a pair of hangers secured to the car-body and provided at their rear ends with downwardly-extending arms, a drop-fender pivotally supported at its rear end from said arms and comprising a tubular frame with a series of cross-bars, a filling of material within the forward end of said tubular frame for weighting the same, means for holding said filling in position, a pair of levers supported from said hangers, pivoted hooks on the rear ends of said levers to engage the drop-fender and hold the same normally suspended with its forward end elevated above the rear end, shafts carried by the forward ends of said hangers, a swinging frame mounted on said shafts and held normally in the vertical position by engagement with the forward ends of said levers, and a hinged lower portion carried by said swinging frame, as and for the purpose described.

6. The combination with a pair of supporting-hangers attached to the car-body and provided with rearwardly-extending arms; of a drop-fender pivoted to the lower ends of said arms, a shaft journaled in said hangers, a pair of L-shaped levers mounted on said shaft, pivoted hooks carried by the rear ends of said levers for engagement with the drop-fender to hold the latter normally suspended with its forward end elevated above the rear end, shafts 4′ mounted in the forward ends of said hangers, a swinging frame mounted on said shafts and held normally in the vertical position by engagement with the forward ends of the L-shaped levers, a hinged lower portion carried by the swinging frame, and dogs carried by said hinged portion to limit the movement thereof, as and for the purpose described.

7. In combination, a pair of hangers having rearwardly-projecting arms, a drop-fender pivotally supported at its rear end from said arms, a shaft journaled in the hangers transversely thereto, a pair of L-shaped levers mounted on said shaft, pivoted hooks carried by the rear ends of said levers and adapted to engage the drop-fender to hold the same normally suspended with its forward end elevated above its rear end, shafts mounted in the forward ends of said hangers, and a swinging frame mounted on said shafts, said frame held normally in the vertical position by engagement with the forward ends of the L-shaped levers and adapted when operated to release the hooks of the L-shaped levers from engagement with the drop-fender to permit the forward end of said fender to fall into engagement with the track, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN B. FLAHERTY.

Witnesses:
JOHN GROETZINGER,
H. E. BECSER.