No. 690,674. Patented Jan. 7, 1902.

# J. H. SURTIN.

## CAR FENDER.

(Application filed Aug. 26, 1901.)

(No Model.)

Fig. I.

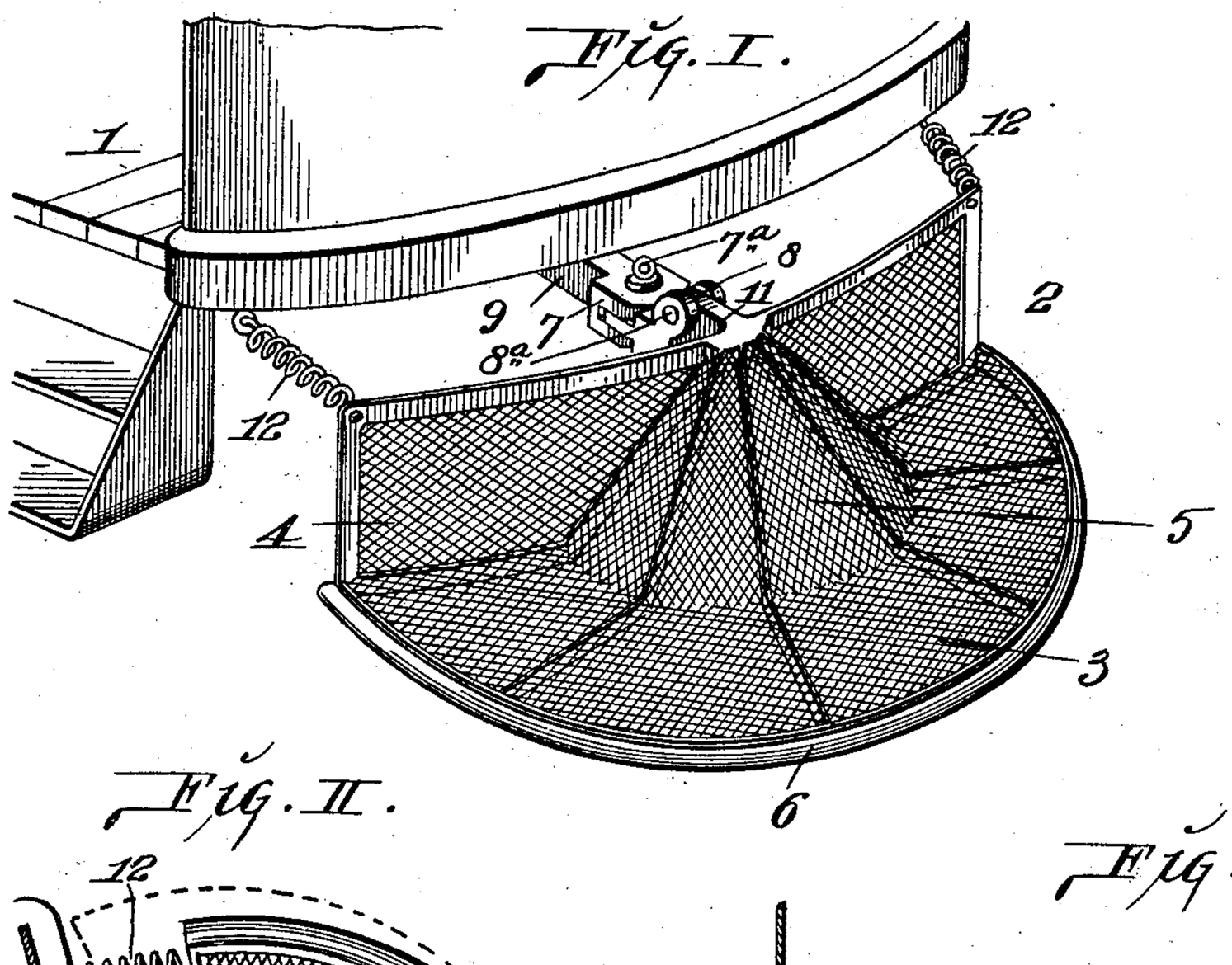



Fig. II.

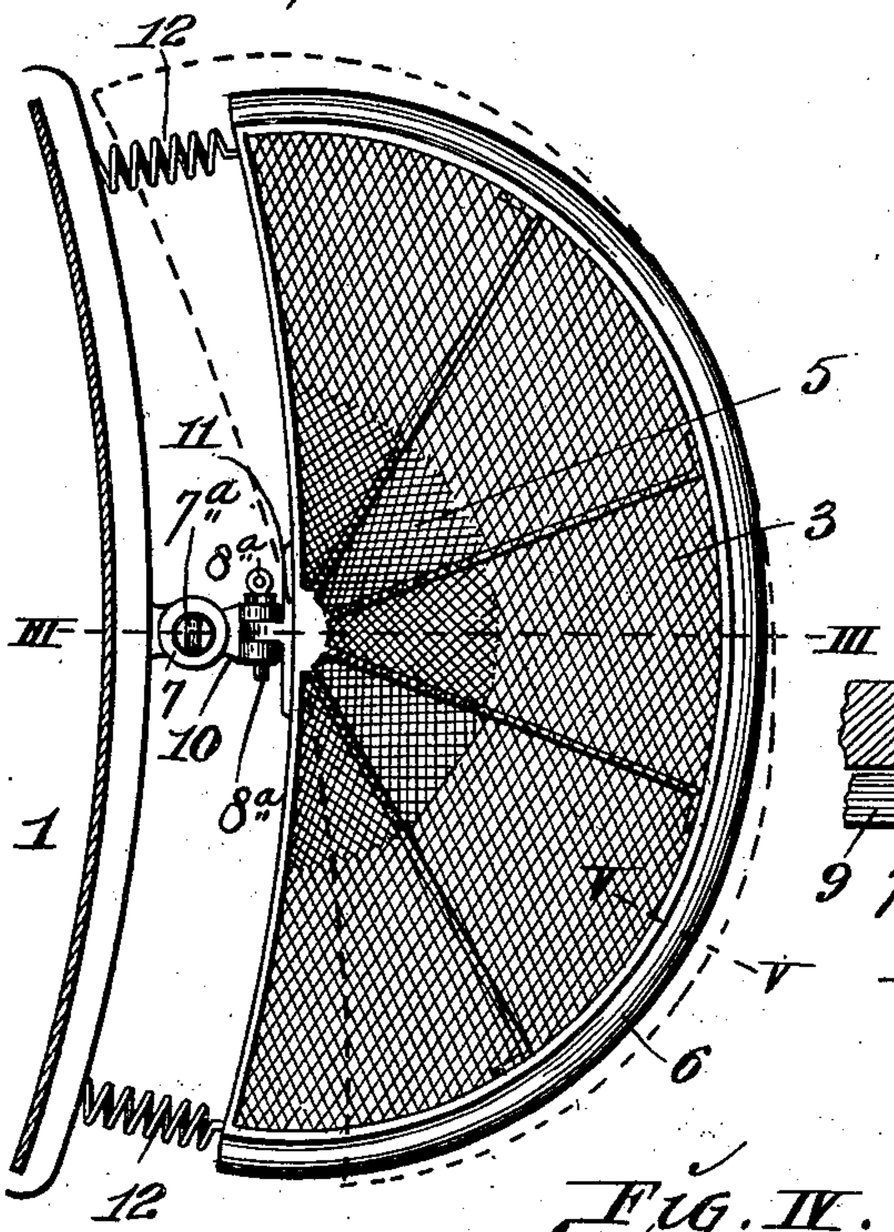



Fig. III.

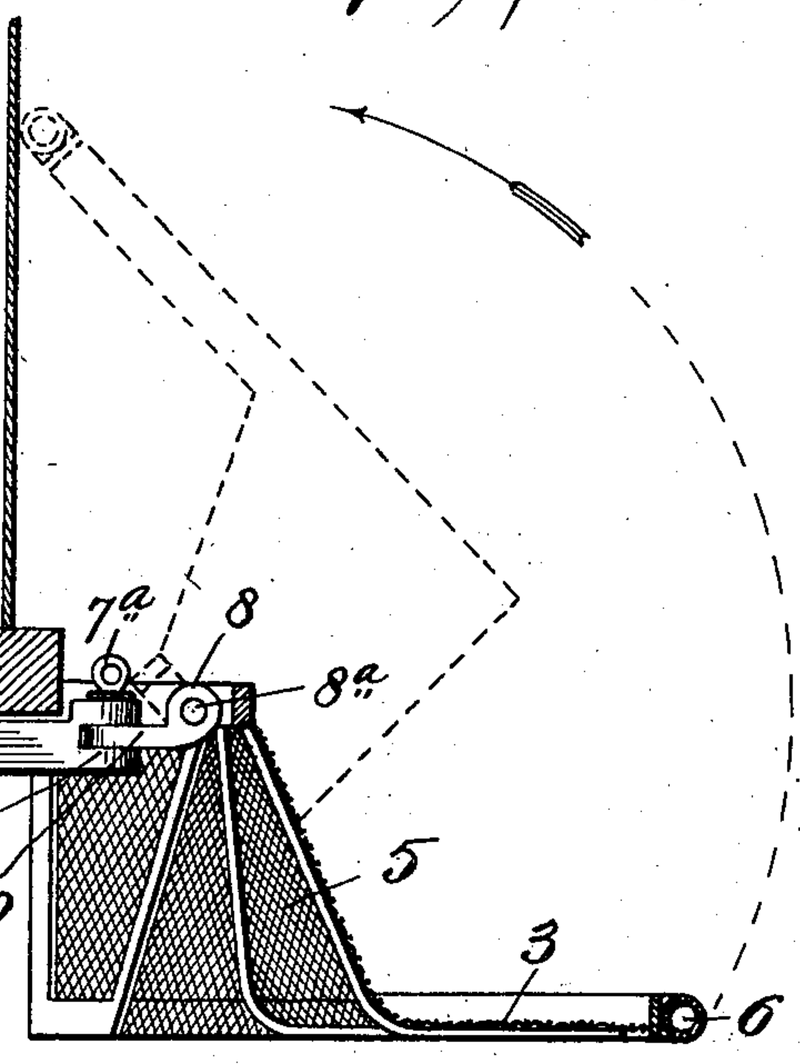



Fig. IV.

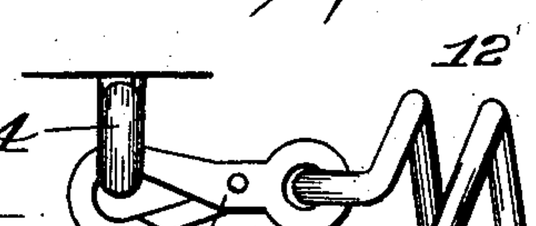
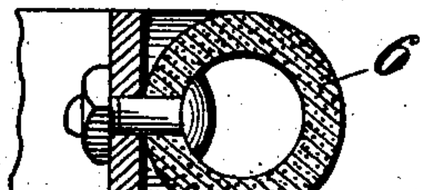



Fig. V.

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# UNITED STATES PATENT OFFICE.

JOHN H. SURTIN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO EDWARD BUTLER, JR., OF ST. LOUIS, MISSOURI.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 690,674, dated January 7, 1902.

Application filed August 26, 1901. Serial No. 73,215. (No model.)

*To all whom it may concern:*

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

My invention relates to a car-fender of simple and durable construction and which is so mounted that when it strikes an object it will turn horizontally on a vertical pivot, and thus act to throw the object to one side of the track and prevent its being run over by the car.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of my improved fender. Fig. II is a top or plan view. Fig. III is a vertical section taken on line III III, Fig. II. Fig. IV is a detail view illustrating the manner of securing the stay-springs to the car. Fig. V is an enlarged detail vertical section taken on line V V, Fig. II.

1 represents part of a car, and 2 the fender. The latter has a flat horizontal portion 3 and a vertical portion 4, the flat portion forming a good rest for an object that may be picked up by the fender and the vertical portion forming a guard to prevent the object from moving inwardly off the fender. The central part of the fender has an outwardly-swelled portion 5 to accommodate the draw-bar of the car and prevent its being struck by an object that may be picked up by the fender. The outer edge of the fender is composed of an elastic tube 6, bolted to the frame of the fender. (See Fig. V.)

The connection between the fender and the car embraces a vertical pivot or hinge 7 and a horizontal pivot or hinge 8. The mechanism I have shown for making this connection consists of a bar 9, secured to the under side of the platform of the car and to which a link 10 is hinged by a vertical pin $7^a$. The outer end of the link is hinged by a horizontal pin $8^a$ to a bracket 11, secured to the frame of the fender. It will thus be seen that the fender is free to swing horizontally on its hinge 8 (see the dotted line, Fig. II) when it strikes an object, and it thus acts to throw or deflect the object away from the track, so that it will not be run over by the car or be again struck by the fender, as would be the case if it were thrown straight ahead of the car.

12 represents springs that connect the ends of the fender with the platform of the car and which serve to hold the fender in line with the body of the car until an object is struck. The inner ends of the springs are provided with snaps 13, adapted to engage eyes 14, secured to the platform, so that the springs can be disconnected from the car and permit the fender to be changed to the other end of the car, if desired, by taking out the pin $7^a$.

If it is desired to move the fender up and out of the way, as shown by dotted lines, Fig. II, it may be done by swinging it up on its horizontal pivot until it comes against the dash.

I claim as my invention—

1. In combination with a car, a bar secured in the center to the under side of the platform, a link pivoted to said bar to swing in a horizontal plane, a fender hinged to said link to swing in a vertical plane and springs interposed and connecting each end of the fender and platform.

2. In combination with a car, a bar secured in the center to the under side of the platform, having a forked end, a link pivoted to swing horizontally in said forked end and having an upturned outer end, a bracket pivoted to said upturned end of the link to swing in a vertical plane, and a fender secured to said bracket, and coiled springs interposed and connecting each end of the fender and car-platform.

3. In combination with a car, a fender-frame comprising ribs extending downward from a common center at an angle to each other, then outward in a horizontal plane, a semicircular buffer-rim connecting the outer ends of said ribs.

4. In combination with a car, a fender secured to the car having a flat horizontal portion, a vertical portion and a central substantially conical-shaped portion disposed in the center and at the rear of the horizontal portion.

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In presence of—
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