(No Model.)

G. H. BAHRS.

PILOT OR WHEEL GUARD FOR STREET CARS.

No. 409,901. Patented Aug. 27, 1889.

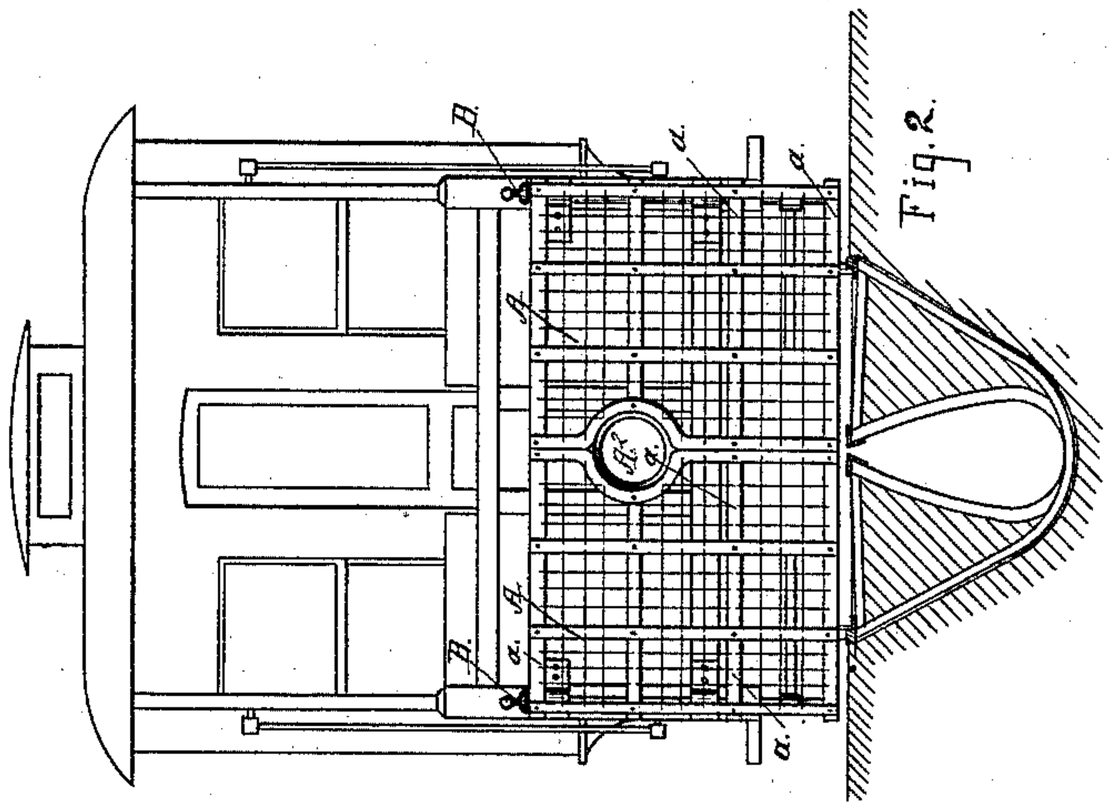

Fig. 2.

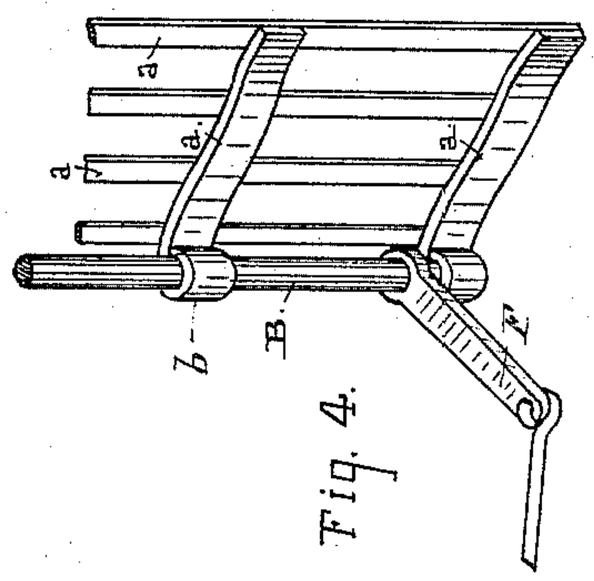

Fig. 4.

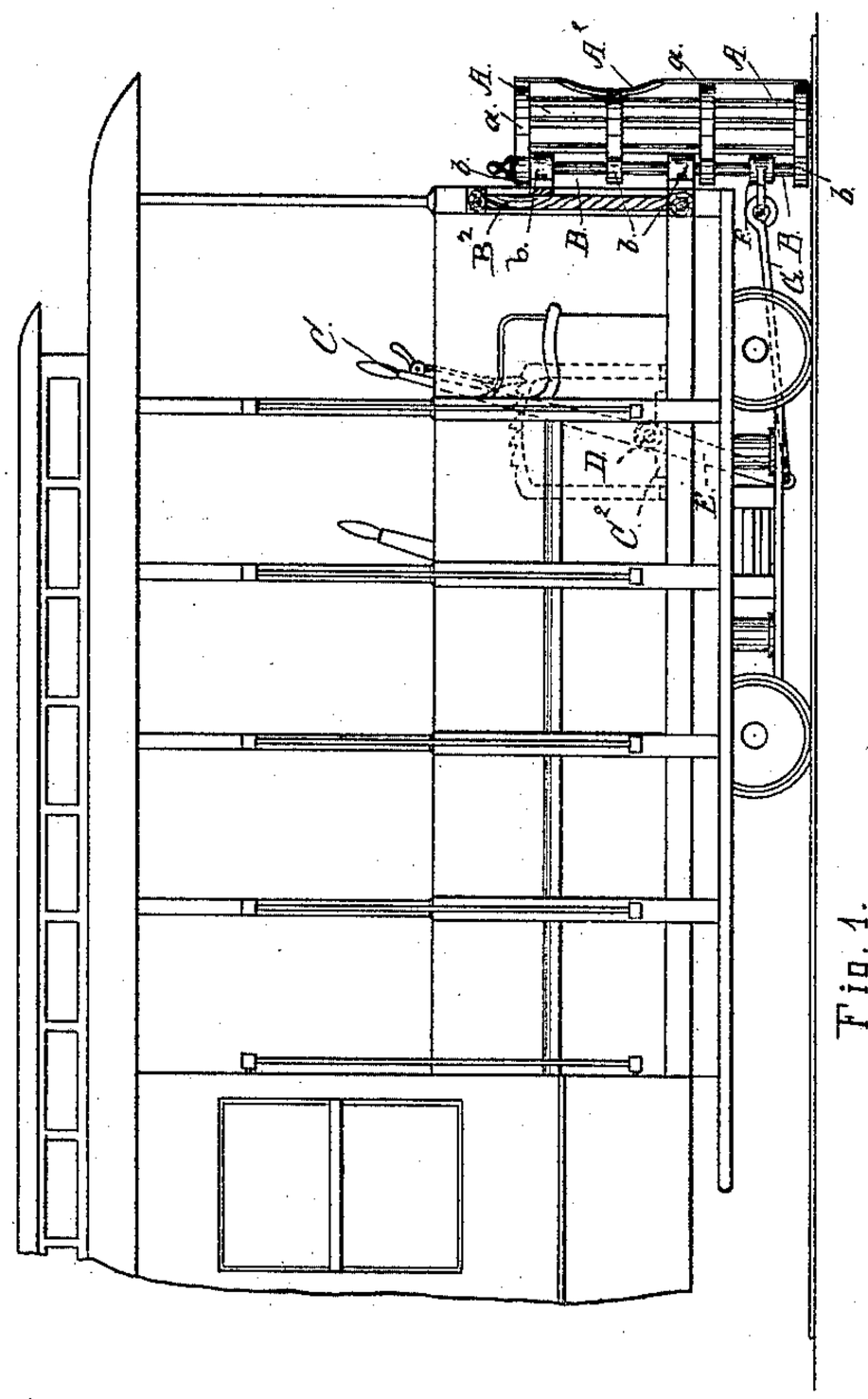

Fig. 1.

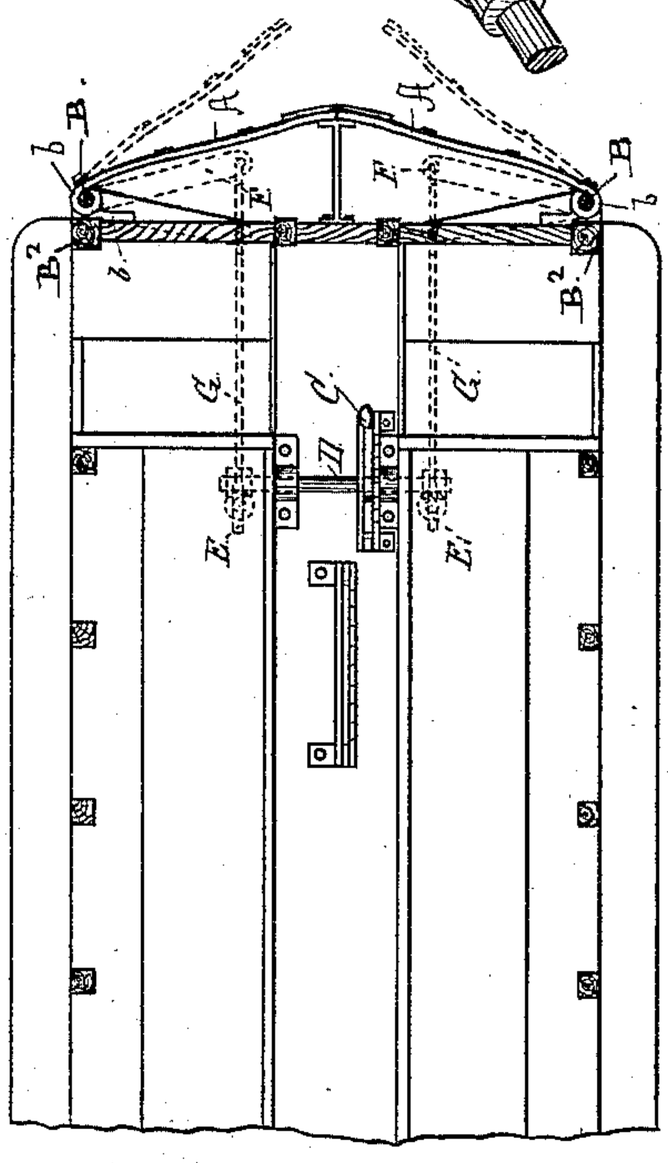

Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE H. BAHRS, OF SAN FRANCISCO, CALIFORNIA.

PILOT OR WHEEL-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 409,901, dated August 27, 1889.

Application filed April 24, 1889. Serial No. 308,486. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BAHRS, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented certain new and useful Improvements in Pilots or Wheel-Guards for Street-Cars, of which the following is a specification.

My invention relates to improvements in wheel-guards for the front of railway-cars on endless-cable roads and other lines where the propelling-power may be electricity or steam-dummies or motor-cars of different kinds; and it consists in certain novel construction and combination of parts, as hereinafter fully described, producing a safety device for attachment to the front of a street-car where the propelling-power is carried on the car, or is an endless traction-cable to which the car is connected by gripping apparatus in the usual manner.

The nature of my said improvements and the manner in which I construct, produce, and apply the same will be clearly understood from the following description and the drawings that accompany and form part of this specification.

Figure 1 is a side elevation of the front end of a cable-railway car of the kind in which the car and the dummy are one structure, with my invention applied to the front end. Fig. 2 is a front view of Fig. 1. Fig. 3 is a plan of the car-body and the safety-guard. Fig. 4 is a perspective view, on a larger scale, showing the parts in detail.

This improved guard consists, essentially, of two light skeleton frames attached by hinges at the outer edges to the dash-board or railing across the front of the car in upright position and in such manner that they meet and close together at the inner edges directly in front, having movement on the hinges to close and open outward like a double gate or wicket.

By means of suitable rods and levers the two hinged frames are connected to a hand-lever on the car, which is placed in position within reach of the gripman or engineer, and is so arranged for operation that its movement in one direction will throw the hinged frames outward and in the opposite direction will close them across the front of the car.

A A are the two frames or gates, and *b b* their points of attachment along the outer edges to the uprights B^2 B^2 on the car.

C is the hand-lever, pivoted at D in bearings C^2 on the car-body and working through a slot in the floor. The pivot D is a rock-shaft having bearings in boxes C^2 on the floor, and carrying on each end, beyond the bearing, a downwardly-extending arm E, to which is connected by a rod G the arm or lever F on the hinged frame A on that side of the car. The two frames are connected in this manner to the arms of the rock-shaft.

The construction of these fenders will be clearly understood from Figs. 1, 2, and 4 of the drawings. The flat bars or straps *a a* form a light open frame, on which wire-netting may be fixed to make smaller interstices, if desired, and the outside rods B set through knuckles *b b*, screwed to the upright posts on the front of the car, in which the rods turn like the pintle of a hinge. The opening A^2 is produced by bending the outer bars of the frames, as shown in Fig. 2, and is provided for the purpose of clearing the head-light where it is located on the front of the car. Applied to a car or a dummy in this manner the two hinged parts A A meet together at the middle and stand at a slight angle backward from this middle line out to the points of attachment at *b b*. In this position they present angular surfaces of suitable height above the roadway, and at their lower edges run as closely as is practicable to the surface. When an obstruction is met, or in case of a person falling in front of the car, the hinged fenders A are opened and thrown out simultaneously and with a quick movement by means of the hand-lever, so that they stand at a more acute angle across the track, and thereby deflect the obstacle laterally and clear of the car to one side or the other.

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

1. A pilot or wheel-guard for the front of a car, consisting of the hinged frames A A, attached at the outer edges to uprights B B on

the car by hinges to open outwardly and to close together across the front of the car, and an operating-lever C on the car, having suitable connection with said frames to throw them outward and move them in the opposite direction or toward each other, as hereinbefore described, for operation as set forth.

2. In a safety-pilot or wheel-guard for the front of a car or dummy, the combination of hinged frames or wickets A A, attached by hinges at the outer edges to open and close in opposite directions across the front of the car, the hand-lever C, rock-shaft D, lever-arms E E F F, and connecting-rods G G, applied to operate as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

GEORGE H. BAHRS. [L. S.]

Witnesses:
J. E. FORD,
L. MEININGER.