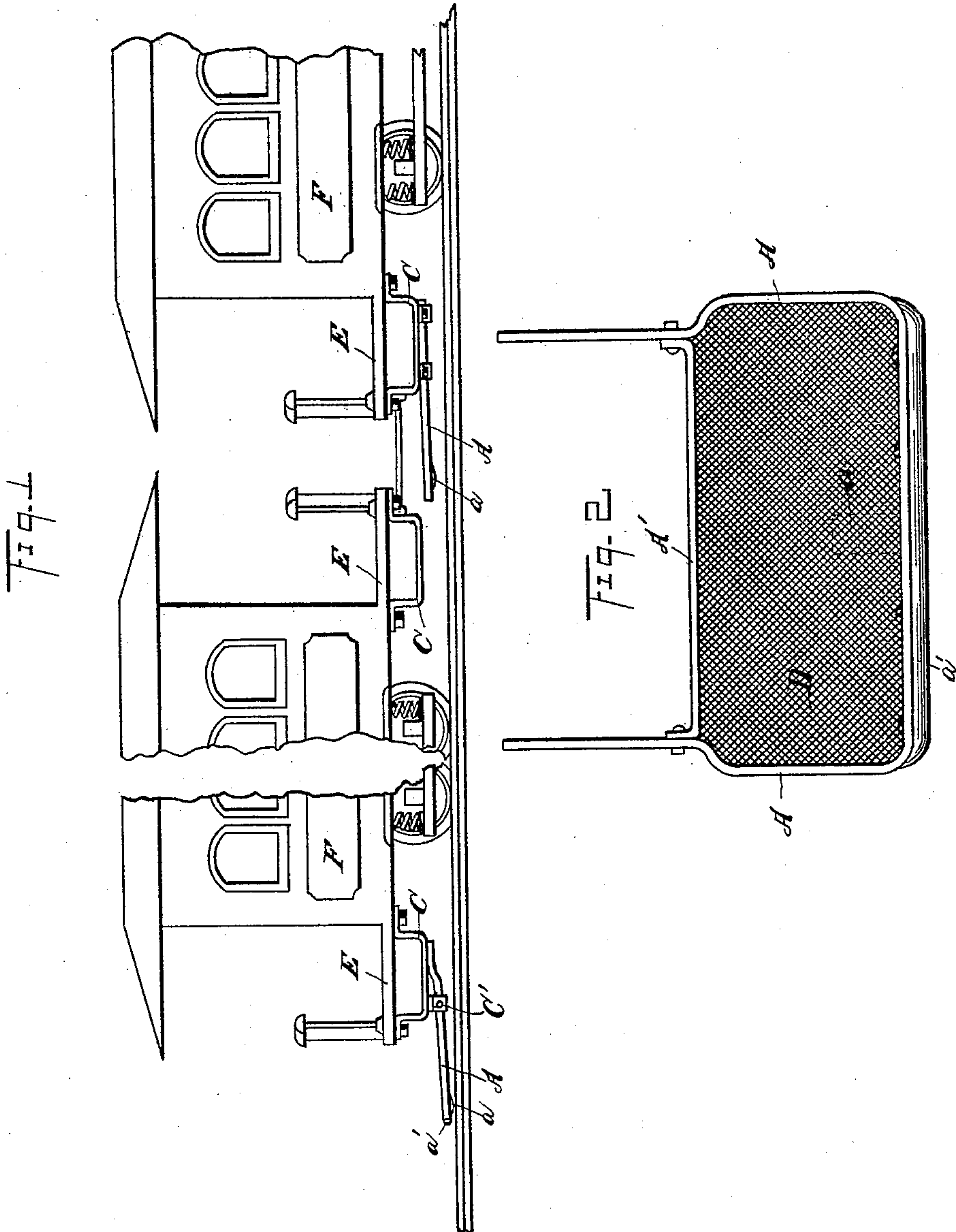


(No Model.)

T. L. JOHNSON.  
LIFE GUARD.

No. 454,214.

Patented June 16, 1891.



Witnesses.

Will B. Sage

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# UNITED STATES PATENT OFFICE.

TOM L. JOHNSON, OF CLEVELAND, OHIO.

## LIFE-GUARD.

SPECIFICATION forming part of Letters Patent No. 454,214, dated June 16, 1891.

Application filed January 10, 1890. Serial No. 336,547. (No model.)

*To all whom it may concern:*

Be it known that I, TOM L. JOHNSON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Life-Guards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in so-called "life-guards," and is designed more especially for electric and cable roads; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

Heretofore a life-guard for street-cars consisted, usually, of some fixture depending from the car, usually at or near the forward end of the car, or at least in front of the forward car-wheel. If a person was thrown down in front of the car, such life-guard was supposed to rescue him in his sprawling helpless condition and prevent his being run over by the car by means of pushing and tumbling him along the pavement, and the cuts, bruises, and possibly broken limbs incident to such rough usage would indeed be better than, or rather would not be so bad as, being mangled by the car-wheels. To prevent such accidents I have devised an improved life-guard in the form of a platform projecting from the ends of the car over the track, and on which a person may fall and be carried along without injury until the car can be stopped or until the party has so far recovered his wits as to be able to help himself.

In the accompanying drawings, Figure 1 is a side elevation, portions being broken away to reduce the size of the drawings. Fig. 2 is a plan.

As my improved life-guard is intended to rescue the fallen by carrying rather than tumbling them, so long as it is adapted to perform such service the construction thereof may be varied indefinitely, according to circumstances. The life-guard should combine strength with lightness, should be of such material as will not be injured by exposure to the weather, and should be of such construction that water, snow, or mud will not accumulate thereon, and, last, it should have such flat and yielding or pliable surface as

not to bruise a person falling thereon, and so that the person will not be liable to fall off of the life-guard. A preferable construction is shown in the drawings, and may be as follows: A flat bar of metal A is set edgewise and bent approximately U-shaped, as shown, and provided with cross-bar A', and to this frame-work is attached a wire screen D, the meshes of which are so small as to preclude the possibility of even a child's hand being thrust through the meshes. This skeleton platform or life-guard should extend, perhaps, three feet (more or less) beyond the car, and should be somewhat broader than the car-tracks, and, if operating in advance of the motor or grip car, should be located as near the pavement as is practicable, say three or four inches (more or less) from the pavement.

The car-steps C are usually of metal, and being sufficiently strong for the purpose, as a matter of convenience I attach brackets C' to the under side of the steps, to which brackets are pivoted bars A near the forward end of the steps, the bar rearward of the pivot extending along and engaging the under side of the steps, by means of which the life-guard is maintained in approximately a horizontal position, but may tilt upward. With the life-guard located so near the pavement, as aforesaid, a violent rocking of the car endwise might cause the free end of the life-guard to collide with the pavement. Hence the pivotal feature, and some provision should be made to prevent the life-guard from catching on the pavement. If the pavement is tolerably smooth, the rounding of the forward lower edge of the life-guard would be sufficient. If the pavement be rough, a shoe or runner *a* had better be attached to the free end of the life-guard, about midway thereof laterally, such shoe comprising, preferably, a flat plate of steel sloping back under the life-guard, as shown. The free end of this shoe or runner should be turned up, as shown, so that it will not catch on the pavement in case the car runs backward. In the normal position of car and life-guard this shoe or runner is not supposed to engage the pavement. The forward edge of the life-guard should be rounded, so as not to bruise a person's ankle, and to this end I attach a half-round strip of wood *a'*. A rubber hose of large size would an-



swer the purpose if secured in place of the wooden strips. Electric-motor cars and grip-cars usually have one or more cars in tow, and the most of these accidents occur not by  
 5 persons falling in front of the cars, but by their falling in between the cars, and this may happen in various ways—for instance, in attempting to get onto or off of the cars while the latter are in motion, or attempting to pass  
 10 from one car to the other, or in stepping back to avoid a passing car or vehicle. It is therefore of more importance to have the life-guard between the cars than in front of the cars. Therefore the cars being in tow should  
 15 each be provided with a life-guard, the forward end of which should extend near to the line of the platform of the car in advance. It is evident that the life-guard that operates between the cars need not operate so  
 20 close to the pavement as the life-guard in advance of the cars.

The life-guard between the cars serves as a step by means of which a person may safely pass from one car to another, and hence is a  
 25 great convenience, at least for the conductors of the cars.

Many roads are provided with loops or turntables, so that the cars always run the same end foremost; but where the cars run either  
 30 end foremost the motor or grip car should be provided with a life-guard at either end thereof, and if these are located low down, as aforesaid, and the life-guards on the other cars are more elevated, in case a motor or grip car  
 35 were coupled with a car having a life-guard, the life-guard of the motor or grip car could run under the other life-guard. If, as suggested, the life-guards of the cars being towed are elevated so far above the pavement that  
 40 there is no danger of the life-guard coming in contact with the pavement, such life-guards need not have a pivotal attachment, but could

be bolted or clamped fast, and in such case would require no shoe or runner.

E represents the car-platforms, and F the  
 45 body of the car, and these, of course, may be of any variety desired.

What I claim is—

1. The combination, in a street-car, of a life-guard consisting of a substantially U-  
 50 shaped frame and a wire screen stretched across the frame from side to side, substantially as set forth.

2. The combination, in a street-car, of a life-guard consisting of a substantially U-  
 55 shaped frame, a cross-bar secured thereto, and a wire screen stretched across the space formed between the frame and cross-bar, substantially as set forth.

3. The combination, in a street-car, of a  
 60 life-guard pivotally connected with and projecting from the end of the car approximately in a horizontal plane, such life-guard consisting, essentially, of a bar bent substantially  
 into U shape, a cross-bar secured thereto, a  
 65 screen stretched across the space inclosed by the bars, and a shoe or runner adapted to engage the pavement and slide thereon with the depression of the free end of the life-guard,  
 70 substantially as set forth.

4. The combination, with a street-car, of a life-guard projecting from the end of a car  
 75 approximately in a horizontal plane, such life-guard being adapted to cover the car-track between coupled cars, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 23d  
 day of November, 1889.

TOM L. JOHNSON.

Witnesses:

C. H. DORER,  
 H. J. DAVIES.