(No Model.)

A. RAPP.

LIFE GUARD FOR STREET CARS.

No. 358,366. Patented Feb. 22, 1887.

Fig. 1.

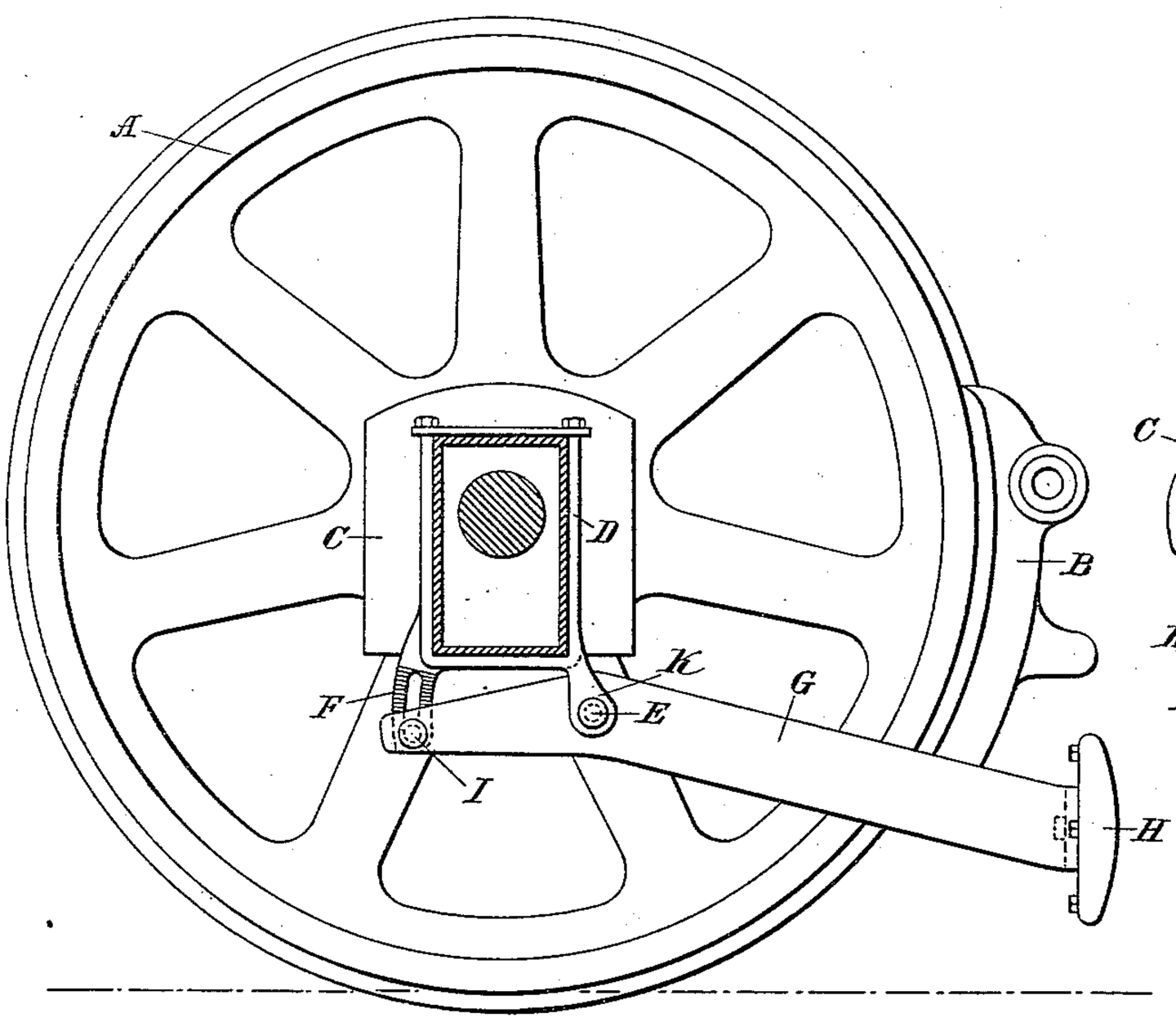


Fig. 2.

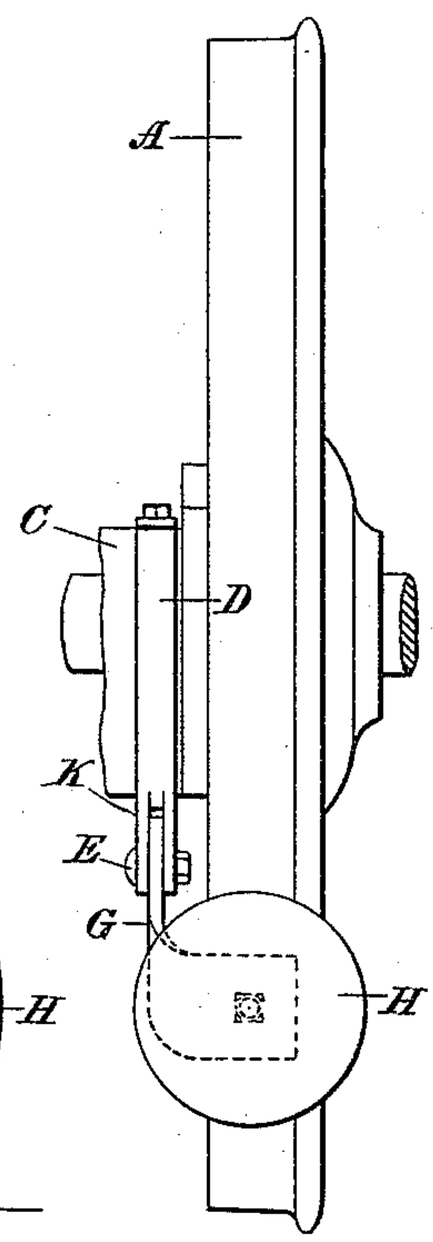


Fig. 3.

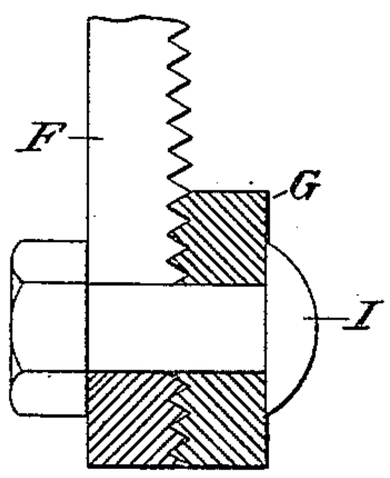
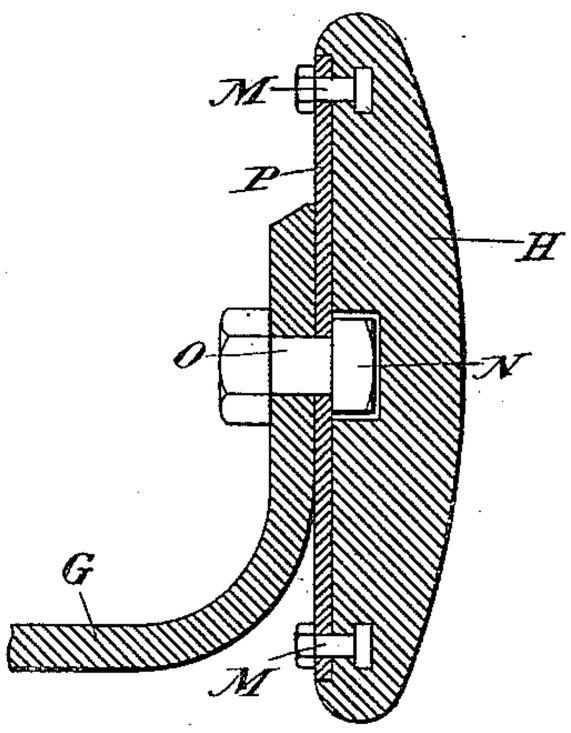


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LIFE-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 358,366, dated February 22, 1887.

Application filed February 12, 1886. Renewed January 22, 1887. Serial No. 225,178. (No model.)

To all whom it may concern:

Be it known that I, AUGUST RAPP, a citizen of the United States, residing at the village of Pullman, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Adjustably-Attached Life-Guards for Street-Cars, of which the following is a specification.

Life-guards are necessarily attached to the axle-box of a car, in order that their distance from the track may not be affected by the movements of the body of the car upon its springs, as would be the case were they otherwise mounted.

It is found necessary to provide some means for readily adjusting the distance of the guard from the track, and various devices have been proposed for this purpose, consisting, chiefly, in an adjustable mounting of the shoe or buffer upon the arm extending from the axle-box. These adjustable devices have been complicated, and therefore likely to get out of order, and also have not, in use, been found reliable to retain permanently the position of the shoe where set.

My invention consists in the devising of an adjustable attachment of the guard-carrying arm to the axle-box itself, and of an exceedingly simple arrangement of parts for that purpose, which is cheap, efficient, and very readily adjusted.

My invention consists, further, in certain details of construction, hereinafter fully described, and pointed out in the claims.

In the drawings annexed, which form a part of this specification, Figure 1 is a side elevation of the wheel and axle-box to which my improved life-guard attachments have been applied. Fig. 2 is an edge view of the same. Figs. 3 and 4 are details on a larger scale, showing, respectively, the means of adjusting the position of the guard-arm and the manner in which the buffer or guard is attached to the arm.

The forged yoke D embraces the axle-box of the wheel A, and, having its two limbs connected by a link at the top, is provided with two projecting ears, F and K, the ear K being double, as shown in Fig. 2, and carrying a bolt, E, on which is pivoted the lever G, which carries at one end the buffer H. The other end of the lever G is provided with the bolt I, which passes through a slot in the second projecting ear, F. The contiguous surfaces of the lever G and the ear F are saw-toothed, as shown in Fig. 3, so as to correspond with each other. When set in any position with reference to each other and secured by tightening the nut of bolt I, the corresponding adjustment of the buffer H with reference to the track will be permanently effected. I do not confine myself, however, to this particular device for changing the position and adjustment of the lever G, as substitutes and equivalents for the ear F and the bolt I, operating as described, might readily be devised, the essence of my invention lying in transferring the adjustment from the point of attachment of the buffer to the lever to the point of attachment of the lever to the axle-box.

The buffer H is of any desired material, preferably of rubber, and has set or cast into it the bolts M M, and also the recess N, for receiving the head of bolt O. When the buffer is to be attached to the lever-arm G, the plate P, through which the bolt O has previously been inserted, is first applied to the buffer by means of bolts M M, and then the bolt O is passed through the hole in the arm G and secured by its nut. The arm G is bent, as shown in Fig. 4, so as to bring the buffer in front of the wheel. The brake-shoe B is shown in Fig. 1, but omitted from Fig. 2.

I am aware that it has been proposed to attach an arm carrying a buffer to an axle-box in such a way that it can be vertically adjusted. I do not claim this construction, my invention consisting in a device for giving the arm carrying the buffer an angular motion by means of a pivot at one point and an adjustable connection at another point of the arm.

I am also aware that it has been proposed to use a buffer of spring metal having a certain amount of elasticity. Any form of metal buffer which could be practically used would have such rigidity and solidity as to be dangerous to life should it come in contact with a person thrown upon the track. I do not claim such a construction, and this feature of my invention consists in the application of non-metallic elastic substances, such as rubber in its various forms, to this use.

I claim—

1. A life-guard lever-arm pivoted to the axle-box at one point and adjustably connected with the axle-box at a second point, substantially as described and shown.

2. The combination of a life-guard lever-arm pivoted at one point to the axle-box with a slotted arm projecting from the axle-box, said slotted arm and lever-arm having their contiguous faces saw-toothed, and a bolt passing through the said slot and adjustably connecting the two arms.

3. The combination of the axle-box of a car with yoke-piece D, provided with projections F and K and lever-arm G, said lever-arm being pivoted to one of said projections and adjustably connected with the other.

4. In a guard for street-cars, the combination of buffer H, having a central recess, plate P attached thereto, and bolt O, the head of the bolt lying in the recess of the buffer, said bolt holding the buffer to the buffer-arm, substantially as described and shown.

5. In a guard for a street-car, the combination of the buffer H, the plate P, and the bolts M, said bolts being cast or otherwise fixed in the body of the buffer, substantially as described and shown.

6. The combination of the guard-arm G and the buffer H, of rubber or other non-metallic elastic material, attached thereto, substantially as and for the purpose set forth.

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