

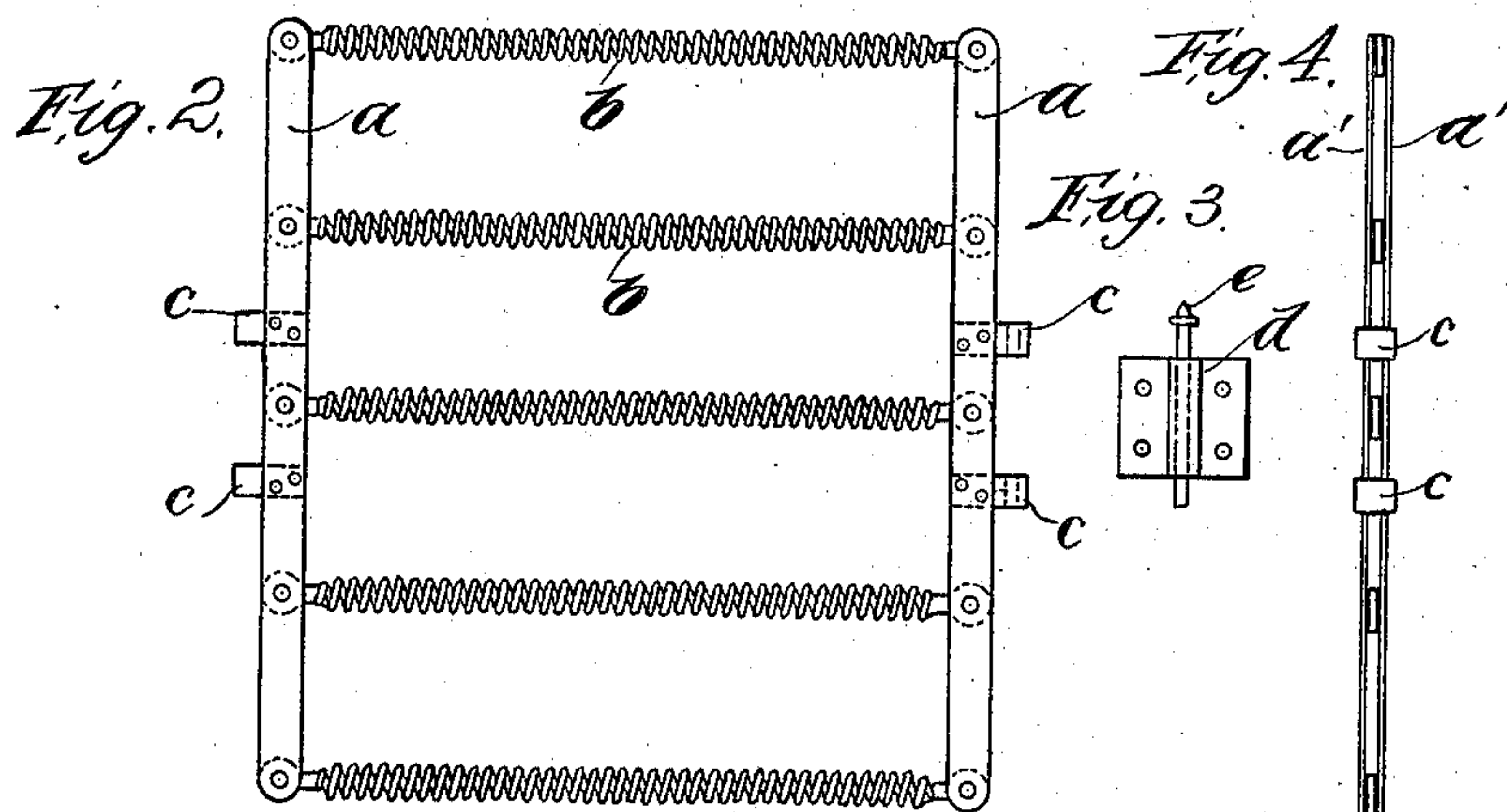
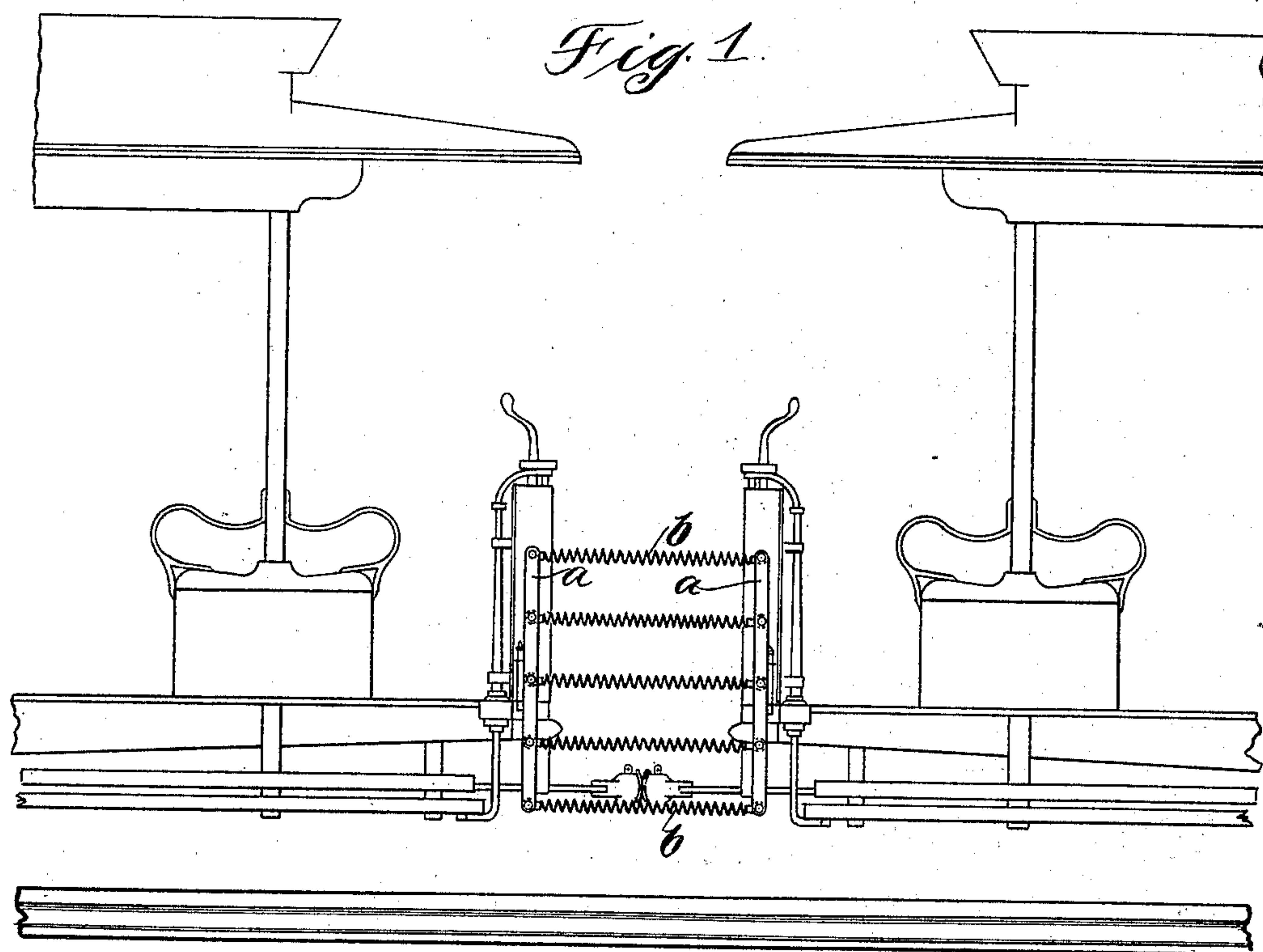
No. 625,807.

Patented May 30, 1899.

J. M. ROACH.  
VEHICLE GUARD.

(Application filed Nov. 14, 1898.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN M. ROACH, OF CHICAGO, ILLINOIS.

## VEHICLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 625,807, dated May 30, 1899.

Application filed November 14, 1898. Serial No. 696,386. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN M. ROACH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Vehicle-Guards, (Case No. 1,) of which the following is a full, clear, concise, and exact description.

My invention relates to vehicle-guards for protecting passengers from injury, and particularly to that class of guards employed between cars of a train for the purpose of preventing people from falling between the cars. Guards that have heretofore been employed for this purpose have generally been constructed of latticed bars forming a folding structure, the bars being usually joined as are the members of lazy-tongs. Usually two guards are located between the ends of adjacent cars, being generally placed in line with the sides of the cars, the guards expanding and contracting as the train rounds curves. The folding guards heretofore used are objectionable for many reasons. They are heavy, are capable of little flexure from the planes they normally occupy, and their construction is such that they are liable to pinch and injure any one touching them as they are folded and unfolded.

As is well known, guards have not heretofore been placed between cars of trains traveling upon surface roads, due mainly to the character of the guards heretofore constructed, which do not readily accommodate themselves to the very short curves which surface trains have to round, for the reason that the guards are incapable of flexure from the plane they normally occupy and for other reasons which are apparent.

My invention has for its object the construction of a guard especially adapted for use between cars of trains traveling upon surface roads, my improved guard being of simple construction, durable, of light weight, and one which will not be liable to inflict injury.

Generally speaking, my invention consists in the combination, with the adjoining platforms of two adjacent cars, of a plurality of flexible connections or links mounted upon the platforms at or near the adjacent upright side margins of the dashboards thereon to

protect the space between the dashboards. In the preferred embodiment the links of flexible material are elastic and each is individually stretched between the dashboards independently of the others, a group of these links thus spanning the space between the adjacent dashboards constituting the preferred embodiment of the invention. The elastic connections are preferably in the form of coiled springs placed parallel with the foot-rails and platforms of the cars. Struts are preferably secured to the dashboards, the coiled springs being attached to and strung between the struts, pivotal or swinging connections between the struts and springs being preferably provided to prevent the springs from being subjected to any undue strain at the points of attachment thereof with the struts. The struts and the dashboards are preferably provided with eyes, the eyes upon the struts being capable of alinement with the eyes upon the dashboards, pins being provided for insertion within the eyes to secure the guards in place between the cars.

In boarding moving trains passengers often grasp the rear hand-rail of a car, frequently being thrust against the guards between the cars. Where guards having practically-unyielding faces are employed, the passenger may lose his hold upon the hand-rail and fall to the ground with a portion of his body between the cars. My improved guard in its preferred embodiment being elastic will yield when the body strikes it and by reason of its resiliency will thrust the body outward and well away from the train.

I will explain my invention more particularly by reference to the accompanying drawings, illustrating the preferred embodiment thereof.

In the drawings, Figure 1 is an elevation of the adjacent ends of two cars, the guard being secured in place between the same. Fig. 2 is an elevation of a guard. Fig. 3 shows an eye adapted for attachment to a dashboard. Fig. 4 is a side view of the guard shown in Fig. 2.

Like letters indicate like parts throughout the different views.

In practicing my invention I preferably employ two struts *a a*, which are preferably united by elastic connections or members,



preferably in the form of coiled springs *b b* and which preferably occupy vertical positions. The coiled springs are preferably placed parallel to each other, the ends of each spring  
 5 being preferably pivotally or flexibly attached to the struts. Each strut is composed of two portions *a' a'*, between which the ends of the springs *b b* are pivotally secured. The struts are adapted for attachment to the dash-  
 10 boards of the adjacent cars, the struts being provided with eyes *c*, adapted to be placed in alinement with eyes *d*, mounted upon the dashboards, the guards being secured in position by passing pins *e* through the alined  
 15 eyes.

As other means may be employed for mounting the guards upon the dashboards and platforms or stretching the same between the dashboards, I do not wish to be limited to  
 20 the precise arrangement shown.

The many advantages in my improved guard will be readily apparent. By means of the elastic connections uniting the struts many of the pivotal connections heretofore  
 25 required in guards are dispensed with. The springs by their elasticity readily accommodate themselves to the varying distances between the struts, the springs being preferably adapted to sag when the struts closely  
 30 approach each other. While I have interposed struts between the springs and the dashboards for the purpose of connecting the springs between the cars, I do not wish to be limited to this construction, as other means  
 35 may be employed for securing the springs in position. By employing struts I am enabled to attach springs between the cars below the car-sills, the struts serving as a means of attachment instead of a fixed portion of the  
 40 cars, so that the body of the passenger cannot possibly be thrown or fall between the cars.

While I have herein shown and particularly described the preferred embodiment of my  
 45 invention, I do not wish to be limited to the particular features of construction shown, as modifications may readily be made without departing from the spirit of my invention; but,

Having thus described my invention, I  
 50 claim as new and desire to secure by Letters Patent—

1. The combination with the adjoining platforms of two adjacent cars, of dashboards provided upon said platforms, and a plurality of  
 55 coiled springs mounted each independently of and separately from the others at their ends upon the adjoining cars at or near the adjacent upright side margins of the dashboards, to protect the space between the dashboards,  
 60 substantially as described.

2. The combination with the adjoining plat-

forms of two adjacent cars, said platforms being provided with dashboards, of struts mounted upon the platforms at or near the adjacent upright side margins of the dashboards, and  
 65 coiled springs attached at their ends to said struts, to protect the space between the dashboards, substantially as described.

3. The combination with the adjoining platforms of two adjacent cars, said platforms  
 70 being provided with dashboards, of a plurality of coiled springs mounted at their ends upon the platforms at or near the adjacent upright side margins of the dashboards, to guard the space between the dashboards, sub-  
 75 stantially as described.

4. The combination with the adjoining platforms of two adjacent cars, said platforms being provided with dashboards, of a plu-  
 80 rality of elastic links mounted upon the platforms at or near the adjacent upright side margins of the dashboards to guard the space between the dashboards, each link being separate from the remaining link or links and forming an independent protection between  
 85 the dashboards, substantially as described.

5. The combination with the adjoining platforms of two adjacent cars, said platforms being provided with dashboards, of a plu-  
 90 rality of elastic links mounted upon the platforms at or near the adjacent upright side margins of the dashboards, to guard the space between the dashboards, substantially as described.

6. The combination with the adjoining plat-  
 95 forms of two adjacent cars, said platforms being provided with dashboards, of a plurality of flexible links mounted upon the platforms at or near the adjacent upright side margins of the dashboards, each link forming  
 100 an independent connection between the dashboards to protect the space between the dashboards, substantially as described.

7. The combination with the adjoining plat-  
 105 forms of two adjacent cars, of dashboards provided upon said platforms, and a plurality of coiled springs at or near the adjacent upright side margins of the dashboards spanning the space between the dashboards, substantially  
 110 as described.

8. The combination with the adjoining plat-  
 115 forms of two adjacent cars, of dashboards provided upon said platforms, and a coiled spring at or near the adjacent upright side margins of the dashboards spanning the space between the dashboards, substantially as described.

In witness whereof I hereunto subscribe my name this 2d day of November, A. D. 1898.

JOHN M. ROACH.

Witnesses:

FRED. TOPHAM,

GEORGE L. CRAGG.