

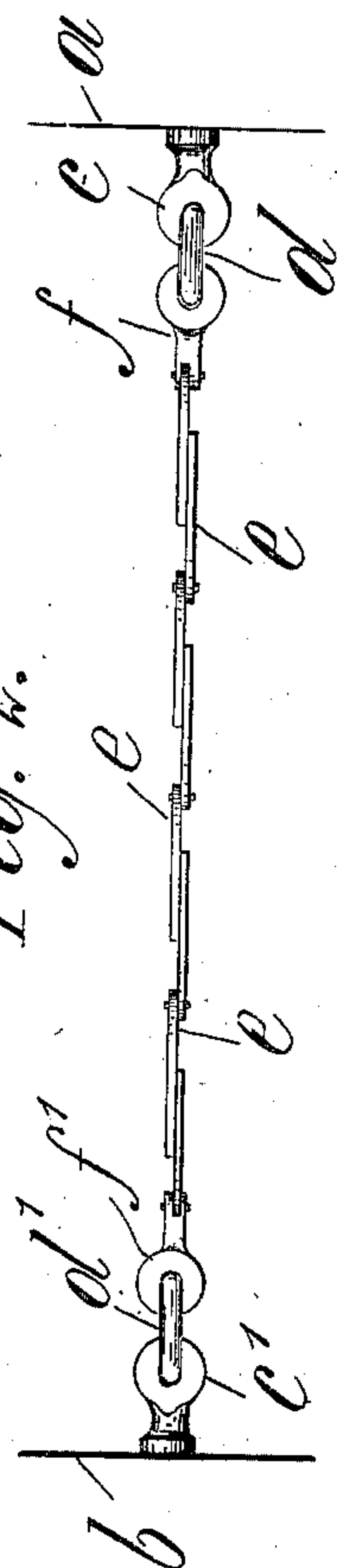
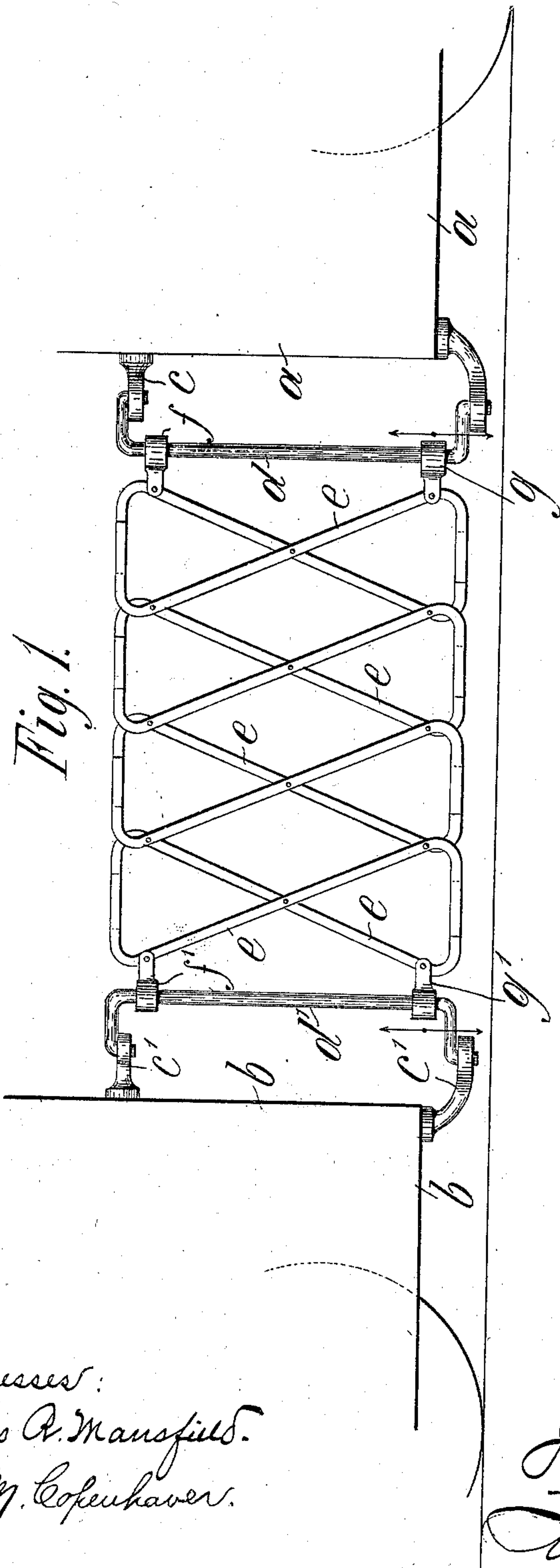
No. 709,145.

Patented Sept. 16, 1902.

J. EISENMANN.  
GUARD DEVICE FOR COUPLED CARS.

(Application filed Jan. 14, 1902.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JACOB EISENMANN, OF FRANKFORT-ON-THE-MAIN, GERMANY.

## GUARD DEVICE FOR COUPLED CARS.

SPECIFICATION forming part of Letters Patent No. 709,145, dated September 16, 1902.

Application filed January 14, 1902. Serial No. 89,763. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB EISENMANN, a subject of the King of Prussia, residing at 54 Uhlandstrasse, Frankfort-on-the-Main, Prussia, Germany, have invented certain new and useful Improvements in Guard Devices for Coupled Cars, of which the following is a specification.

This invention is an improvement in guards for tram-cars, intended to prevent persons stepping or falling between two coupled cars; and it consists in the novel construction and arrangement of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation showing the guard in position, and Fig. 2 is a plan view thereof.

Secured to the back of the rear platform  $a$  of the first or driving car on the tramway are two eyes  $c c$ , which correspond exactly with similar eyes  $c' c'$  on the front of the forward platform on the second or connected car  $b$ . In these eyes are supported posts  $d d'$ , having their ends bent back at right angles and then down to engage the eyes to permit the parts to swing laterally thereon. These posts  $d d'$  carry the guard proper, composed of a lazy-tongs  $e$  or lattice-work, which is connected to each of the posts  $d d'$  by means of hinged eyes, of which the upper ones,  $f f'$ , are fastened to the posts; but the lower ones,  $g g'$ , are free to slide upon the posts  $d d'$ , as the arrow indicates; but the lower edge of the lazy-tongs will always be a safe distance above the surface of the track. The lazy-tongs will prevent any one passing between the cars. In order to prevent any one having his body gripped by the members of the lazy-tongs in closing, the members  $e$  are formed as shown in Fig. 1, approximately Z shape, so that in a manner the lazy-tongs or lattice-work seems closed on all sides. The ends of adjoining members of the tongs overlap, and as the tongs expand or contract these overlapping ends move relatively to each other to accommodate and permit the various changes in in-

clination of the main body of the members occasioned by expansion and contraction of the tongs.

In the operation of my invention after the front and rear cars are coupled together the lattice is fixed at both ends to the stationary eyes  $c c'$ . The displacement of the two cars in relation to each other on pulling results in stretching out and curving the lattice member  $e$ . On going around a curve, upon which the lattice tends to take up the same curvature, a compound movement takes place made up of a slight bending of the lattice rendered possible by the fact that the lattice members are made of hoop-iron, a motion of the members  $e$ , a traversing of the eyes  $g g'$ , and frequently turning of the posts  $d d'$ . The bow-shaped ends of the lazy-tongs members are drawn out without gaping or approach each other without reaching to the turning-posts, for which purpose the members are made of proper length. Upon uncoupling the cars the lattice is simply removed, with the posts  $d d'$ , out of the corresponding eyes.

Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. A guard for the space between two adjoining cars, comprising a lazy-tongs, having its members bent into Z shape, and posts to which the opposite ends of the lazy-tongs are connected, and supporting devices on the ends of cars to which said posts are detachably secured, substantially as described.

2. The combination with eyes attached to ends of adjoining cars, the removable posts having their ends bent at right angles and then down to engage the eyes, and a lazy-tongs connected to and between said posts, for the purpose and substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

JACOB EISENMANN.

Witnesses:

BERNHARD KAISER,  
GEORGE H. MURPHY.