

No. 630,552.

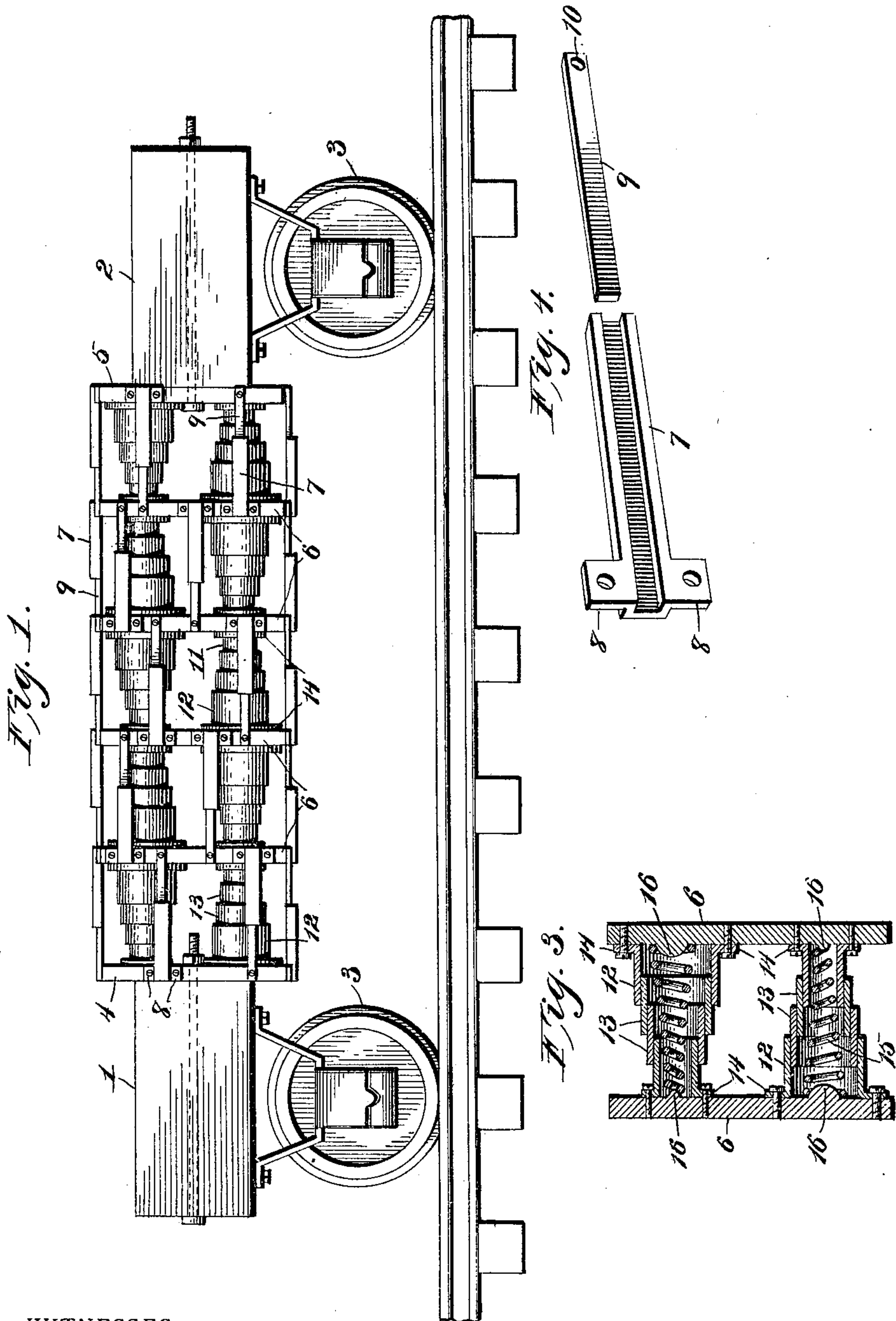
Patented Aug. 8, 1899.

J. NASH.
RAILWAY CAR.

(Application filed June 5, 1899.)

No Model.)

2 Sheets—Sheet 1.



WITNESSES

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INVENTOR

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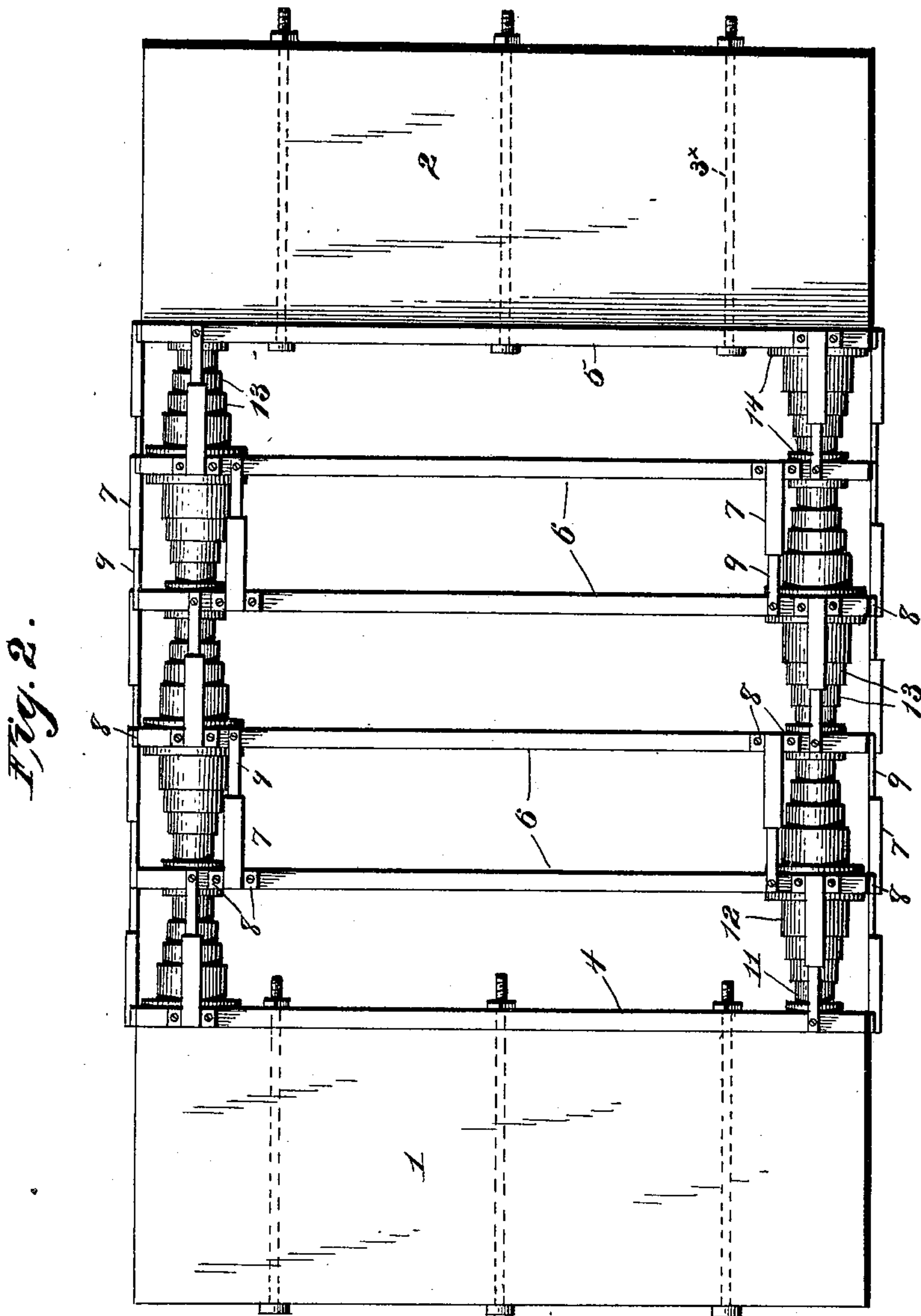
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UNITED STATES PATENT OFFICE.

JOHN NASH, OF MATTAPAN, MASSACHUSETTS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 630,552, dated August 8, 1899.

Application filed June 5, 1899. Serial No. 719,470. (No model.)

To all whom it may concern:

Be it known that I, JOHN NASH, a citizen of the United States, residing at Mattapan, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Railway-Cars; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to railway-cars, and more particularly to a car or truck adapted for use as a buffer in the event of a collision between trains.

The primary object of the invention is to provide a buffer-car which will contract longitudinally under the force of a colliding car or train and take up the shock and jar and prevent damage and loss of life.

The characteristic features of the invention will be fully described hereinafter and defined in the appended claims in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a buffer-car embodying the invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section through two of the transverse parallel cross-bars of the car and the telescopic connections arranged between them, and Fig. 4 is a detail perspective view of one of the telescopic bars connecting the cross-bars.

The reference-numerals 1 and 2 designate the end platform of the car, supported in any suitable manner upon the wheel 3. Secured to the inner side of each of the platforms 1 and 2 by bolts 3^x is a vertically-disposed cross-bar, (designated by the numerals 4 and 5, respectively.) Between these cross-bars 4 and 5 are arranged any desired number of supplemental cross-bars 6, all of which preferably extend across the full width of the car and are parallel with one another and with the cross-bars 4 and 5. The ends of these several parallel cross-bars are connected by a series of telescopic bars, one of which is shown detached in Fig. 4. Each of said bars consists of a grooved or channeled section 7, formed at one end with oppositely-projecting

perforated lugs 8 and a tongue-section 9, having a bolt-hole 10 at one end, while its opposite end enters and is adapted to freely slide within the channel or groove of the section 7. The location and relative arrangement of these telescopic bars is best shown in Fig. 1. While any desired number of these connecting-bars may be employed to connect two adjacent cross-bars, I prefer to use two connecting-bars at each side of the car between every two adjacent cross-bars, as shown, and to alternate the sections 7 and 9, as shown in Fig. 1, so that the section 7 of the upper connecting-bar will be secured to one cross-bar and the section 9 thereof to the next adjacent bar, while the sections 7 and 9 of the lower parallel connecting-bar will be reversely arranged. I also preferably so arrange the connecting-bars that each parallel pair of said bars will be out of horizontal alinement with the next adjacent pair. By this relative location of the connecting-bars an equalized and balanced telescopic movement of the bars is effected.

Between the parallel cross-bars are arranged a number of telescopic tubular connections each comprising a plurality of sleeves 11, 12, and 13. The end sleeves 11 and 12 are each provided with an annular flange 14, formed with bolt-holes for their attachment to the cross-bars, and within each of the tubular connections made up of the telescoping sleeves is arranged a stiff coil-spring 15, the ends of which are supported upon bosses 16, projecting from the cross-bars.

While the invention contemplates the use of any suitable number of these tubular telescoping connections, I prefer to employ two between the ends of each pair of cross-bars, arranged, as shown in Fig. 1, one above the other in reversed positions—that is to say, the sleeves 11 and 12 of each pair of connections will be alternately arranged end for end.

The operation and utility of the invention will be readily understood. It is designed to employ two of the improved cars with a train, one in front and one in rear thereof, and it will be apparent that in case of a collision at either end of the train the telescopic connections will receive the force of the colliding contact and yield to take up the jar, thus protecting the train from damage. The springs

15 cause the cross-bars to resume their normal position after the compressing strain on the springs is relieved.

5 I would have it understood that the invention is not restricted to the precise arrangement and details of construction of the connections shown and that hence all such changes or modifications in details may be made as may properly fall within the scope
10 of the following claims.

I claim—

1. In a buffer-car, the combination with end
platforms, of a plurality of cross-bars, located
15 between the platforms, telescoping bars connecting the ends of said cross-bars, and tubular telescopic connections between the cross-bars, each comprising a plurality of sleeves,
and a spring within said sleeves.

2. In a buffer-car, the combination with end
20 platforms, of a cross-bar secured to the inner side of each platform; a series of parallel cross-bars arranged between the platform-bars; telescoping bars connecting the ends of

said cross-bars; and telescoping tubular connections between the cross-bars, each comprising a plurality of telescoping sleeves, the
25 end sleeves being secured to the adjacent cross-bars, and a coil-spring inclosed by said sleeves.

3. In a buffer-car, the combination with end
30 platforms, of cross-bars secured to said platforms; parallel cross-bars located between said platform cross-bars; telescopic bars connecting the ends of the cross-bars; and tubular telescopic connections between the cross-bars, each comprising a plurality of sleeves,
35 and a coil-spring inclosed by said sleeves, the ends of said springs being supported by bosses projecting from the cross-bars.

In testimony whereof I affix my signature
40 in presence of two witnesses.

JOHN NASH.

Witnesses:

LOUIS D. HEINRICHS,
GRACE D. WITTER.