B. F. MILLER.

LOADING AND UNLOADING APPARATUS.

APPLICATION FILED NOV. 13, 1908.

935,042.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 1.

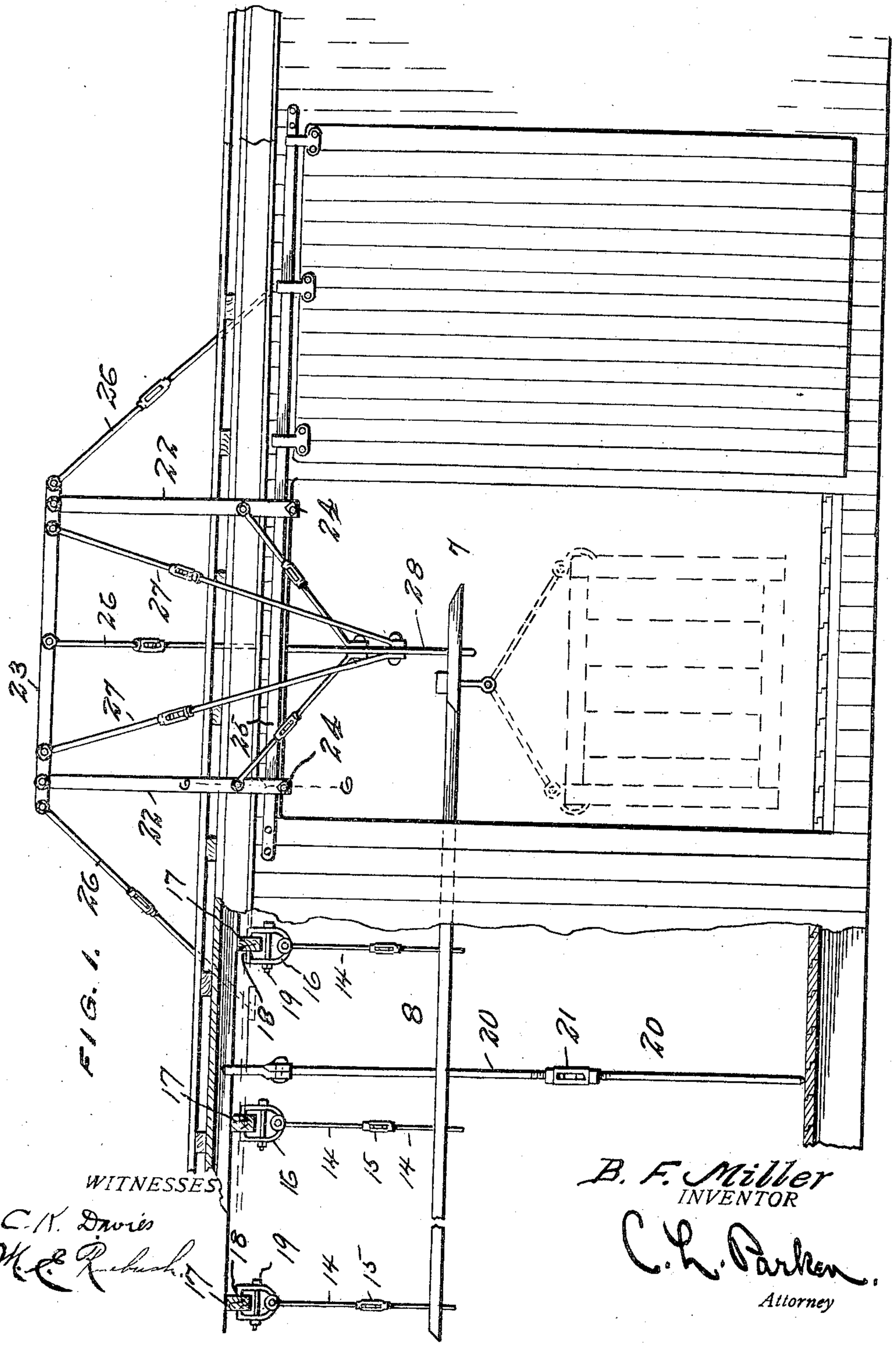

FIG. 1.

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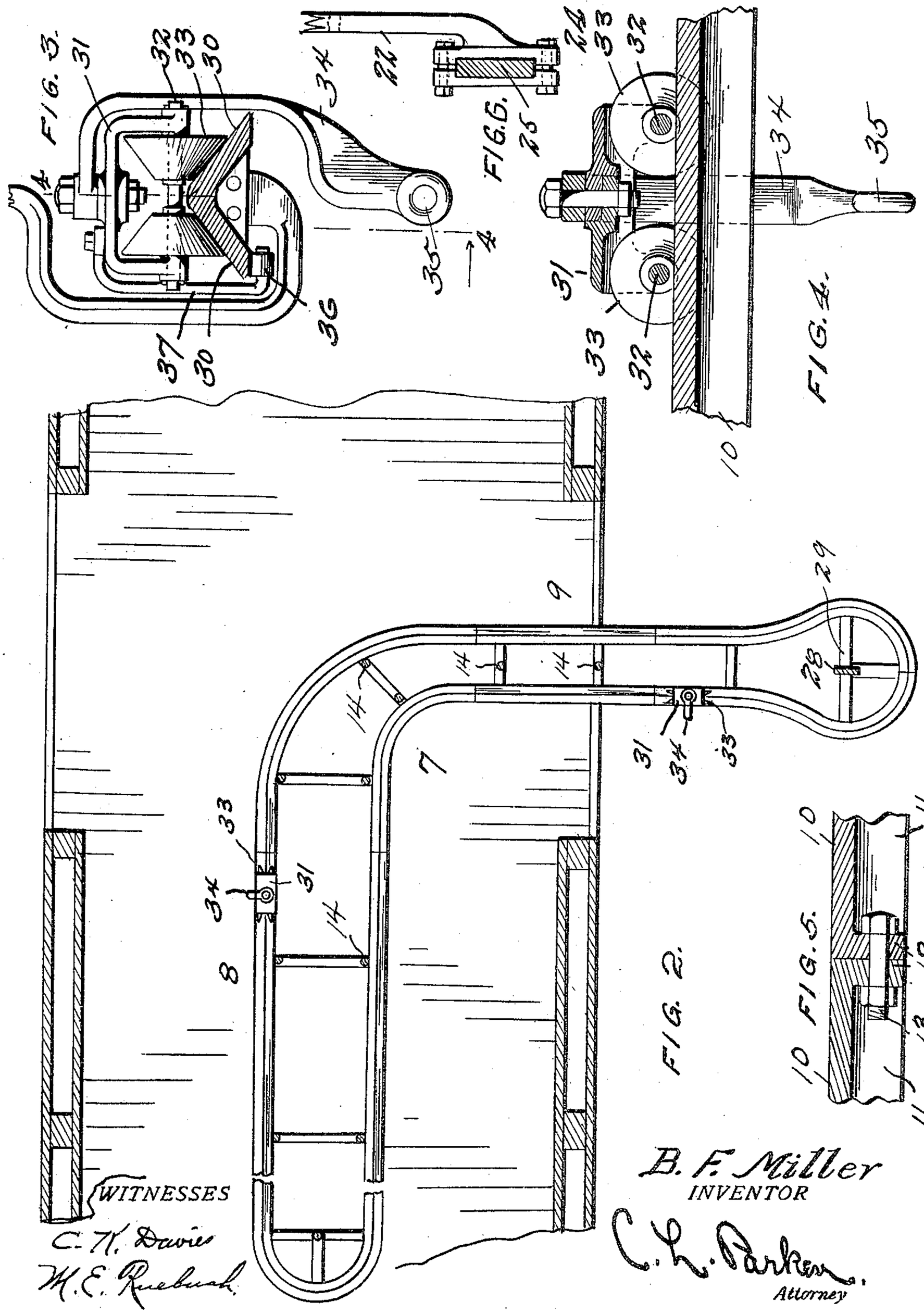

WITNESSES

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BENJAMIN F. MILLER, OF FORT SHERIDAN, ILLINOIS.

LOADING AND UNLOADING APPARATUS.

935,042. Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed November 13, 1908. Serial No. 462,459.

To all whom it may concern:

Be it known that I, BENJAMIN F. MILLER, citizen of United States, residing at Fort Sheridan, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Loading and Unloading Apparatus, of which the following is a specification.

The present invention relates to means for loading and unloading cars, vessels, and other analogous vehicles or carriers.

The primary object of the invention is to provide novel and simple apparatus of the above character, which can be readily applied to and detached from, the carrier or vehicle, is readily adjustable so as to properly operate under the varying conditions encountered, and constitutes efficient means for rapidly conveying articles or material into and out of cars or the like, so that the same can be rapidly loaded or unloaded.

An embodiment of the invention, that is at present considered the preferable one, is illustrated in the accompanying drawings, and is described in the following specification.

It will be evident, from an inspection of the claims, hereto appended, that the invention is not limited solely to the structure disclosed.

In the drawings, Figure 1 is a side elevation of a car with a portion thereof broken away, showing the apparatus in place. Fig. 2 is a horizontal sectional view through the car, illustrating the track in top plan. Fig. 3 is a detail cross sectional view through the track on an enlarged scale. Fig. 4 is a detail sectional view on the line 4—4 of Fig. 3. Fig. 5 is a detail sectional view through one of the track joints, and, Fig. 6 is a detail sectional view on the line 6—6 of Fig. 1.

In the form of construction disclosed, an endless track 7 is employed, comprising angularly disposed portions 8 and 9, the portion 8 being so arranged that it can be placed longitudinally within a car or analogous vehicle or carrier, with the portion 9 projecting from the door way. This track, as shown, preferably consists of sections or rails 10, that are substantially triangular in cross section, being provided with channels 11 in their under sides, and having transverse webs 12 at their ends. These sections are joined together end to end, by bolts 13, which pass through the webs 12, and have portions located in the channels.

The track is detachably suspended within the car by means of hangers, each hanger consisting of rod sections 14, connected by turn buckles 15, the lower rod sections as shown more particularly in Fig. 3, extending beneath the track, and secured thereto. Fastened to the upper ends of the upper sections are clamps comprising pivotally connected jaws 16, that are arranged to embrace the roof beams 17, of the car, and have spurs 18 that embed themselves therein. The jaws of each hanger are connected by a bolt 19 which serves to draw the jaws toward each other, as will be evident. The particular shape of the jaws is immaterial, and may be altered to a considerable extent.

In order to strengthen the roof where articles of considerable weight are to be handled, a brace standard 20 may be employed, the lower end of which rests upon the floor of the car, the upper end engaging the roof. The standard is composed of sections connected by a turn buckle 21.

In order to effectively support the projecting portion of the track, a frame is employed consisting of standards 22, connected by a cross bar 23. The standards are provided with clamps or clips 24 at their lower ends, which are adapted to embrace and be secured to the door track 25 of the car. This frame is suitably braced by extensible guy rods 26, and the cross bar 23 of said frame has extensible hanger rods 27 connected thereto, which hanger rods are secured to a vertical bar 28 that is in turn fastened to the projecting portion of the track as illustrated at 29 in Fig. 2.

Because of the construction of the track as already described, it will be noted by reference to Fig. 3 that there are two angularly disposed upper faces 30 forming treads for the carriers, a plurality of these carriers being preferably employed. Each carrier consists of a bracket 31, having depending arms through which is passed an axle 32, and journaled on this axle are oppositely disposed cone wheels 33, that run upon the tread faces 30. A hanger bracket 34, carried by the bracket 31 is provided with a lower terminal eye 35, in which the article engaging means can be secured, as indicated in dotted lines in Fig. 1. In order to prevent the carriers running off the track, a guard roller 36, may be employed, journaled on a depending arm 37, and operating against the under side of the track.

It will be obvious that this structure can be readily placed in a car and removed therefrom. Moreover, the track can be leveled or set at an inclination as desired, because of the extensible hangers. It can be made in different shapes inasmuch as it is composed of sections, the configurations of which can be varied as desired. When in position, it will be evident that articles or material of considerable bulk and weight can be conveniently and expeditiously handled, and the outgoing carriers will not interfere with those moving inwardly, inasmuch as they operate on separate tracks.

Having fully described my invention, I claim:

1. In a loading and unloading apparatus of the character described, the combination with an overhead track, of relatively adjustable clamp jaws, pivotally connected to one another and secured to the track, and provided with spurs to engage the roof beams of a car, and a bolt connecting the jaws for drawing them toward each other.

2. In a loading and unloading apparatus of the character described, the combination with a track, comprising sections that are substantially triangular in cross section, and have transverse webs at their ends, of means passing through the webs for detachably securing the sections end to end, and hangers connected to the track and including clamps for detachably suspending the same from the roof beams of a car.

3. In a loading and unloading apparatus of the character described, the combination with a track, substantially triangular in cross section, having angularly disposed upper faces, of a carrier including oppositely disposed cone wheels that operate on said faces, and hangers extending below and joined to the under side of the track, said hangers including relatively adjustable clamping jaws.

4. In a loading and unloading apparatus of the character described, the combination with a track, of means for suspending the same within a car with a portion projecting through the door way of the car, of means for supporting the projecting portion, said latter means including bars connected to the track and clamps that detachably engage portions of the car.

5. In a loading and unloading apparatus of the character described, the combination with a track, of means for suspending the same within a car with a portion projecting therefrom, a supporting frame connected to the projecting portion of the track, and clamps carried by the frame and attachable to the door track of the car.

6. In a loading and unloading apparatus of the character described, the combination with a track of extensible hangers connected thereto, and comprising relatively movable sections, turn buckles connecting the sections, and clamping jaws mounted on certain of the sections and attachable to the roof beams of the car.

7. In a loading and unloading apparatus of the character described, the combination with an endless track, comprising angularly disposed portions, one of which is arranged to be placed longitudinally within a car with the other portion projecting from the door way thereof, of extensible hangers connected to the track and including beam engaging clamping jaws, a supporting frame attachable to the door track of the car, extensible hangers connecting the frame and projecting portions of the track, and a plurality of carriers movably mounted on the track.

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

BENJAMIN F. MILLER.

Witnesses:
P. J. R. KIEHL,
JOS. M. REILLEY.