

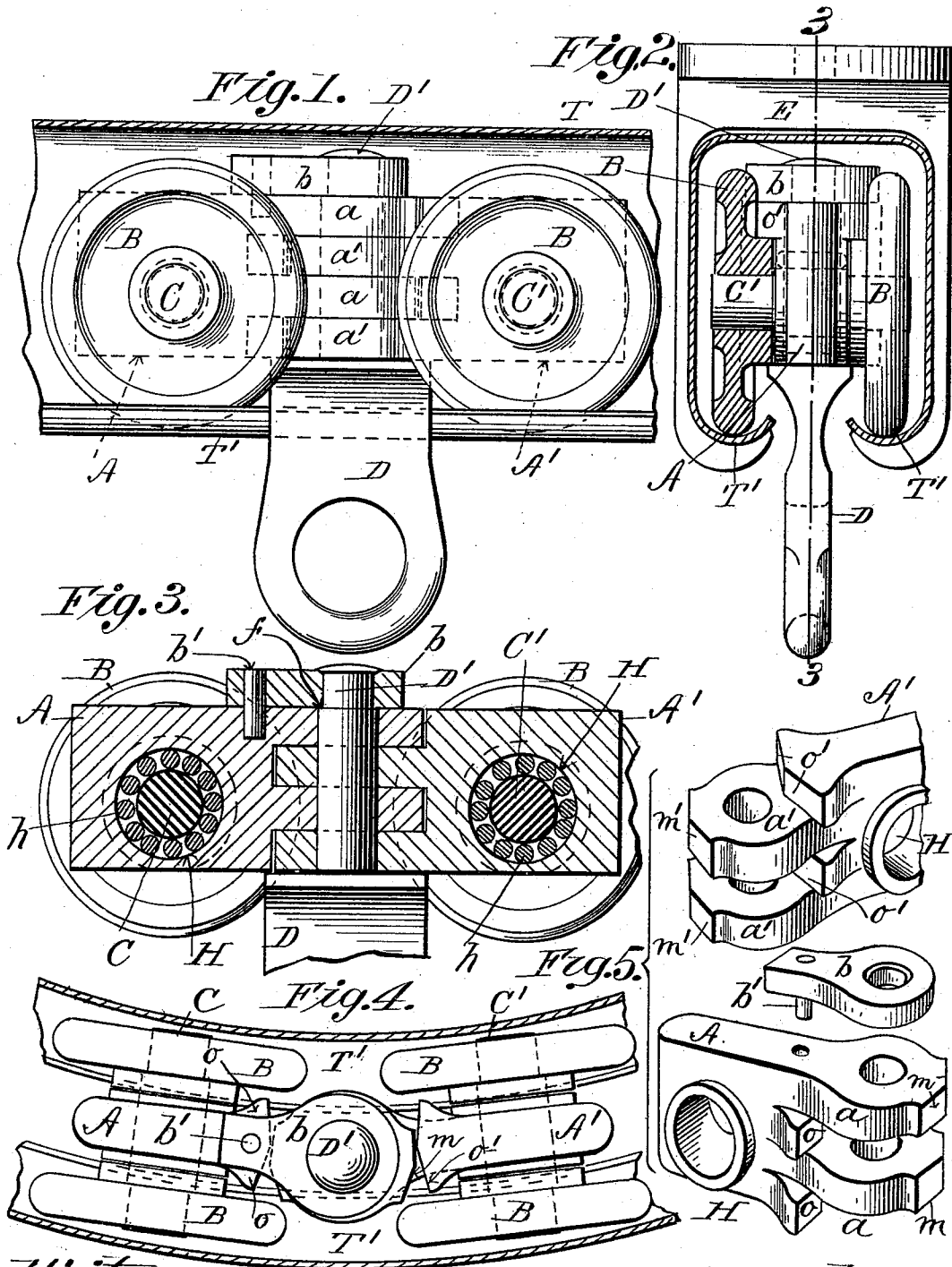
No. 616,813.

Patented Dec. 27, 1898.

W. J. SUMNER.
TROLLEY CARRIER.

(Application filed Feb. 9, 1898.)

(No Model.)



Witnesses:

J. D. Gayfield
Alfred Birnie

Inventor,
William J. Sumner,
by *Chapman & Co.*
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM J. SUMNER, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR TO
THE COBURN TROLLEY TRACK MANUFACTURING COMPANY, OF
SAME PLACE.

TROLLEY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 616,813, dated December 27, 1898.

Application filed February 9, 1898. Serial No. 669,626. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. SUMNER, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Trolley-Carriers, of which the following is a specification.

This invention relates to trolley-carriers, and has for its object the improvement in the construction of the frame of the trolley-carrier, whereby it automatically adapts itself to the curvature of the track, a further improvement consisting in the provision of means whereby the extent of the lateral movements of the ends of said trolley-carrier frame may be limited.

The invention consists in the construction substantially as hereinafter described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 shows a trolley-carrier in side elevation in its proper position relative to the track on which it may run, the latter being shown in longitudinal section. Fig. 2 is a cross-section through a trolley-track and shows a trolley-carrier therein in end elevation embodying my invention and one of whose wheels is shown in vertical section and also showing in elevation a bracket. Fig. 3 is a longitudinal section through the trolley-carrier frame on line 3, Fig. 2. Fig. 4 is a plan view of a trolley-carrier in position on a curved track, which track is shown in section. Fig. 5 is a perspective view of the frame parts of said carrier and of a plate to which the pintle of the hinge is riveted.

Referring to the drawings, A and A' represent the two parts of the carrier-frame, which are hinged together at a point substantially midway between the opposite ends thereof, whereby said parts A and A' may have a lateral movement in a plane parallel with the plane of movement of said carrier on its support, and which support is represented in the drawings in the form of a tubular trolley-track of well-known construction, and in connection with which this trolley-carrier is usually employed. Heretofore it has been customary to provide rigid frames for the trolley-carriers, and in consequence the pas-

sage of said carriers around a curve in said track caused unequal wear in portions of said track on said curves, owing to the abrading action of the peripheries of the wheels B against the sides thereof, which action was due to the fact that in passing around said curves the axles of said carriers were unable to assume a true radial position relative to the center of said curve. To overcome this defect and to permit the use of curves in the track of smaller radius than is possible with a rigid carrier-frame, I construct the carrier-frame of two parts hinged together, whereby the said carrier may adapt itself to the curvature of the track on which it runs. The said parts A and A', constituting the carrier-frame, may be hinged together in any suitable manner at the point stated, and a good form of said hinge-joint is shown in the drawings and consists in forming on the part A of the carrier-frame and integral therewith the hub parts *a a*, and on the part A' of said carrier-frame the hub parts *a' a'*, said parts *a a* and *a' a'* intermeshing, as shown in Figs. 1 and 2, said parts in their intermeshing position being provided with a perforation for the reception of the pintle D', forming part of or secured to the downhanging arm D, to which may be secured a ladder or door or other object to be moved. At a point substantially level with the top of the frame of the carrier there is formed on said pintle D' a shoulder *f* by turning down the end of the said pintle from that point outward to a smaller diameter, and a plate or washer *b*, provided with a hole therein for the reception of said turned-down end of the pintle, is then placed on said frame, as shown in the drawings, and the end of the pintle is then upset with a hammer and the two parts A and A' of said frame secured together. The said plate *b* is thus secured to the top of the pintle D' between said upset end of said pintle and the shoulder *f* thereon, leaving the said frame parts free to turn on the pintle without binding. The said parts *a a* and *a' a'* are made strong and fitted closely together, to the end that a heavy weight suspended on the arm D will not cause said hinge parts to bind, and thus defeat the purpose of the invention by preventing the free

lateral movements of the frame parts when the carrier is passing around a curve in the track.

For the purpose of limiting the lateral movements of the parts A and A' of the carrier-frame the hub parts *a a* and *a' a'* on said frame parts are provided with the shoulders *m* and *m'*. On the hub parts *a* are the shoulders *m*, and on the hub parts *a'* are the shoulders *m'*. Said shoulders lie one on each side of the longitudinal center of said hub parts and on that portion of said parts lying contiguous to the opposite half of the frame when said parts A and A' of the frame are operatively secured together by the pintle D'. On that part of each of the frame parts A and A' which lies opposite the said shoulders *m* and *m'* when the two parts of said frame are secured together are formed the shoulders *o o* and *o' o'*, the shoulders *o o* being formed on the part A of the carrier-frame and the shoulders *o' o'* being formed on the part A' of the carrier-frame, and the angle of the flat face of each of said oppositely-located shoulders being the same relative to a central longitudinal line drawn through said frame parts, to the end that when said shoulders abut against one another at the limit of the lateral movement of said parts the planes of their faces will substantially coincide. It is clear that the abutments on the contiguous portions of the parts A and A' of the carrier-frame in the hinge-joint may be made in various forms and still come within the scope of this invention. At points equidistant from the center of said pintle D' are the axle-openings H in each of the parts A and A' of the carrier-frame, the axes of said openings lying at right angles to the said pintle. In said axle-openings are supported the axles C C', each provided with

the wheels B B, secured thereto, whose peripheries are rounded to conform substantially to the trough-like groove in which they run, formed by the inturned edges T' of the track. Said track is supported in brackets E (see Fig. 2) of the usual form suspended from the ceiling. Said axles C C' are supported in said openings H on the rolls *h*, whereby the easy running of said carrier in said track is assured.

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

1. In a trolley-carrier, a frame consisting of two parts, suitable trolley-wheels, bearings therefor in one end of each of said frame parts, a flexible joint uniting the other ends of said frame parts in a plane at right angles to the axes of said wheels, and an arm depending from the axis of said joint, substantially as described.

2. In a trolley-carrier, a frame consisting of two parts united by a flexible joint intermediate of its extremities, abutments adjacent to said joint on each of said parts for limiting the movements thereof, and suitable trolley-wheels supported on each of said frame parts, substantially as described.

3. In a trolley-carrier, a frame consisting of two parts A, A', intermeshing hub-like parts *a, a*, and *a', a'*, on said frame parts, a pintle D', pivotally uniting said hub-like parts, a depending arm D on said pintle, and suitably-supported wheels on each of said frame parts, substantially as described.

WILLIAM J. SUMNER.

Witnesses:

H. A. CHAPIN,
K. I. CLEMONS.