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G. C. THOMAS.

TROLLEY.

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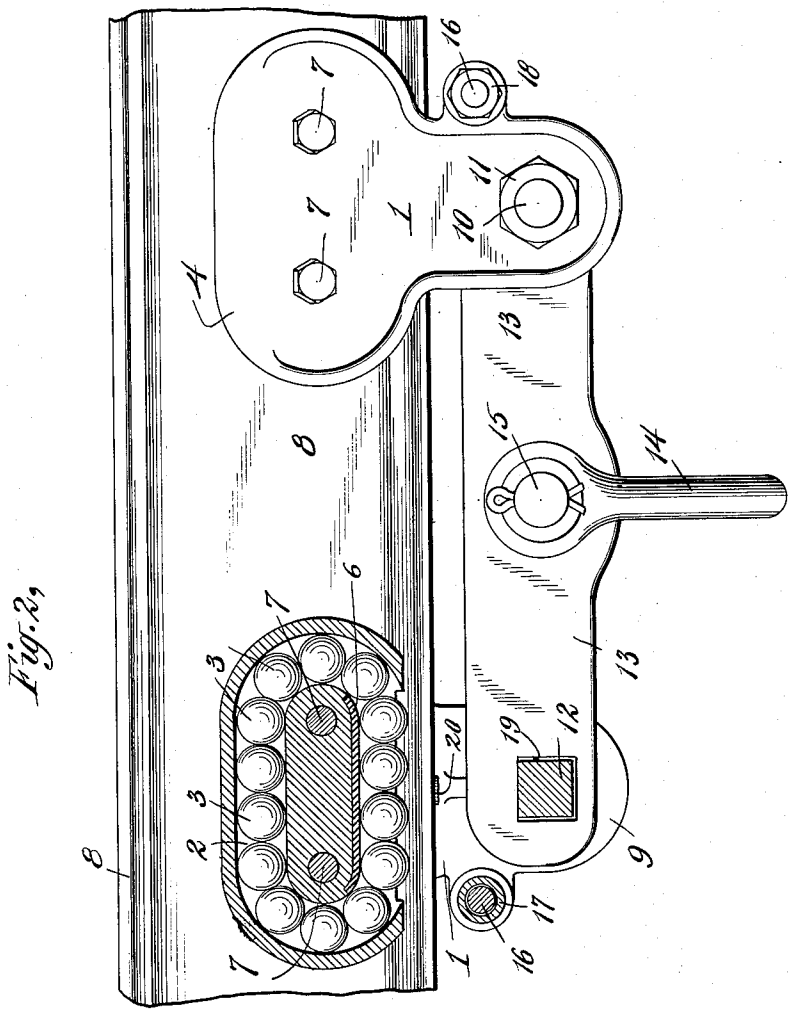


Fig. 2.

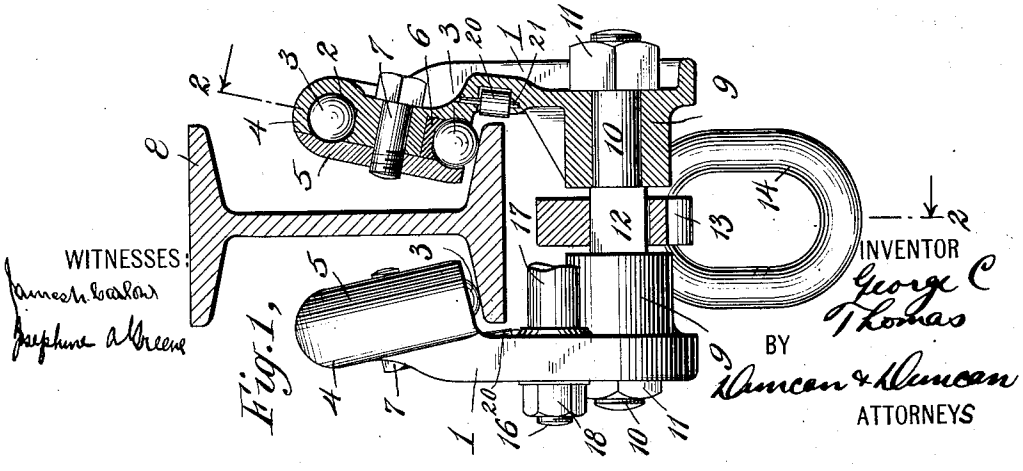


Fig. 1.

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TROLLEY.

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To all whom it may concern:

Be it known that I, GEORGE C. THOMAS, a citizen of the United States, and a resident of New York city, in the county of Kings and State of New York, have invented certain new and useful Improvements in Trolleys, of which the following is a specification, taken in connection with the accompanying drawings, which form part of the same.

This invention relates to trolleys, and relates to such trolleys as are adapted for use in connection with an elevated track of I-beam form, for instance.

In the accompanying drawings, showing an illustrative embodiment of this invention, Figure 1 is an end view, partly in section; and Fig. 2 is a side view, parts being shown in section along the line 2 2 of Fig. 1.

In the illustrative form shown in the drawings a rigid frame is formed by rigidly securing the two casings 4 together by the bearing-rod 12, which, as indicated, may have its extensions 10 bolted securely in bearing-lugs 9 on the depending portions 1 of the casings by the nuts 11. A tubular spacer 17 may also be secured in position between these two casings by the bolt 16 and nuts 18, so as to form a brace. Each casing 4 is preferably provided with an angularly-disposed ball-race 2, the plane of this race being so arranged as to be substantially perpendicular to the contact-face of the track with which the trolley coöperates, a suitable track 8 of I-beam form being indicated in the drawings. The ball-race preferably has a straight lower portion, so that the bearing-balls 3 coöperate throughout a considerable distance with the track, and this lower part of the race also preferably has a suitable facing 6 secured thereto, this facing being of hardened steel or other suitable bearing material to minimize friction and wear. A suitable cap 5 is secured in position on the casing 4 by bolts 7 or other desired fastening means, so that the balls or other antifrictional members used are loosely retained in position within the casing. Suitable laterally-arranged guide-rolls may be used in each frame, if desired, so as to prevent cramping when the trolley passes around curves. As indicated, the antifrictional rolls 20 are pivoted by the pins 21 in suitable cavities in the casings, so as to coöperate with the track. The rigid trolley-frame thus formed engages the track and moves along it with very slight friction, and one or more of these frames, as desired, may be used as a single trolley.

It is desirable in most cases to use a plurality of trolley-frames or supporting members engaging the track and to loosely connect these members with a yoke, which allows a slight swiveling movement between the parts and which carries the load of merchandise or the like which the trolley is used to transport. Preferably two similar frames are used together, and the frames may be connected by a yoke 13, provided at either end with openings 19 to accommodate the bearing-bars and arranged to allow a considerable swiveling movement between these two parts, so as to allow the trolley to operate freely around curves and to accommodate itself to such irregularities in the track as may be found in practice. The hanger 14, in the form of a closed ring or otherwise, may be loosely pivoted to the yoke by a shackle-bolt 15 or in any other desired way.

Having described this invention in connection with an illustrative embodiment of the same, to the details of which I do not desire to be limited, what I claim as new, and what I desire to secure by Letters Patent, is set forth in the appended claims.

1. In trolleys, rigid frames comprising casings each casing having an inwardly-projecting bearing-lug on its depending lower portion, a bearing-bar having a substantially flat upper surface rigidly secured in said lugs to connect said casings and forming a substantially axially-located bearing-surface, each casing having an angularly-disposed ball-race with a substantially straight lower portion, a facing for said lower portion, balls in said race and a yoke having openings at either end to loosely engage said bearing-bars.

2. In trolleys, rigid frames comprising two casings having inwardly-projecting lugs, a bearing-bar rigidly secured in said lugs, a brace between said lugs, each casing having an angularly-disposed ball-race having a substantially straight lower portion, a facing for said lower portion of said race, balls in said race, a cap removably secured on said casing to hold said balls loosely in position, a yoke having openings loosely engaging each of said bearing-bars to swivelingly connect said frames and a hanger loosely connected to said yoke.

3. In trolleys, two rigid frames provided

with a plurality of casings, each casing having an angularly-disposed ball-race with a substantially straight lower portion, a bearing-bar rigidly connecting said casings and a yoke loosely engaging said bearing-bars to swivelingly connect said frames.

4. In trolleys, two rigid frames, each frame comprising a plurality of casings, each casing having a ball-race with a substantially straight lower portion, balls in said race to coöperate with a track and a yoke loosely connecting said frames.

5. In trolleys, two frames comprising casings, each casing being formed with a ball-race having a substantially straight lower portion, balls in said race to coöperate with a track and a yoke to loosely connect said frames.

6. In trolleys, two rigid frames, each frame comprising a plurality of casings provided with laterally-arranged guide-rolls, each casing having a ball-race with a substantially straight lower portion, balls in said race to coöperate with a track and a yoke loosely connecting said frames.

7. In trolleys, rigid frames comprising two casings having inwardly-projecting lugs, a bearing-bar rigidly secured in said lugs, a brace between said lugs, each casing having an angularly-disposed ball-race having a substantially straight lower portion, a facing for said lower portion of said race, balls in said race, a cap removably secured on said casing to hold said balls loosely in position, antifrictional guide-rolls arranged in said frames, a yoke having openings loosely engaging each of said bearing-bars to swivelingly connect said frames and a hanger loosely connected to said yoke.

8. In trolleys, a rigid trolley-frame, comprising casings, each casing having an inwardly-projecting lug on its depending lower portion, a bar rigidly secured in said lugs to connect said casings and forming a substantially axially-located suspending member, each casing having an angularly-disposed race with a substantially straight lower portion, and antifrictional members in said race.

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