

Oct. 6, 1953

P. E. GLAZE
RAILWAY CAR SHAKER

2,654,490

Filed May 27, 1950

2 Sheets-Sheet 1

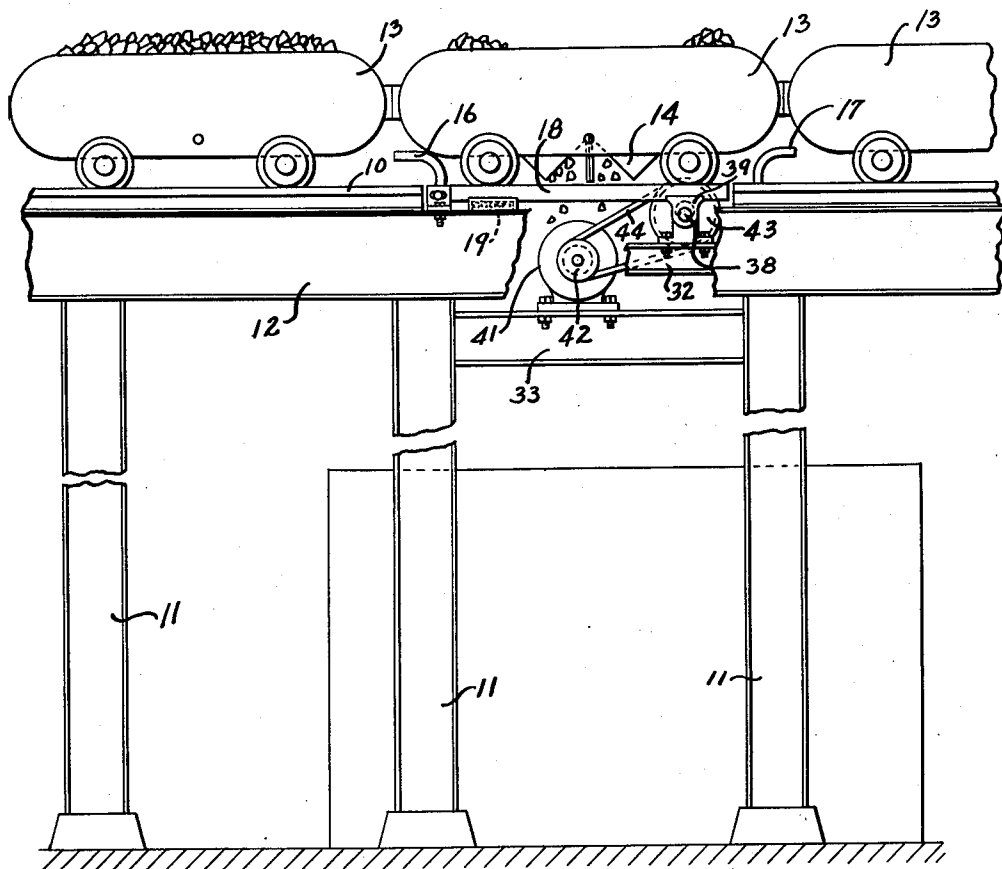


Fig. 1

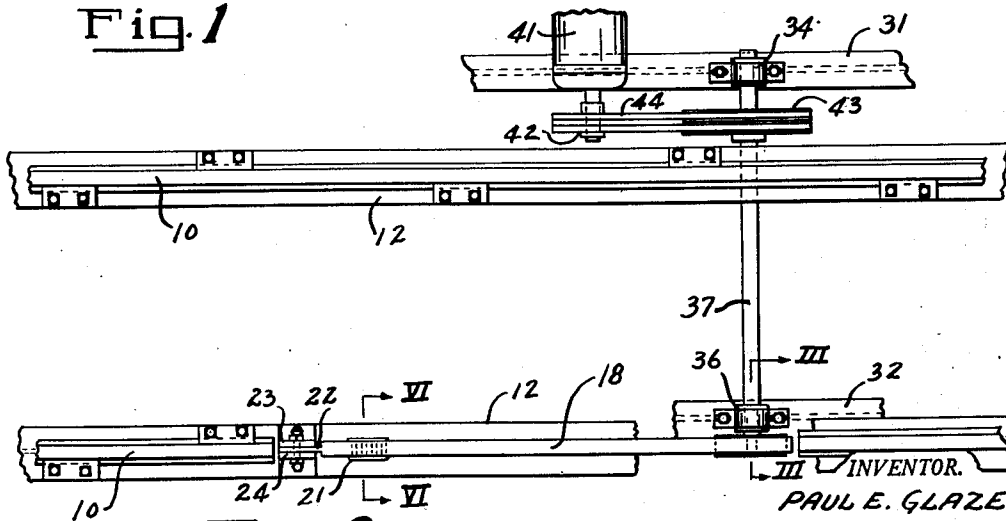


Fig. 2

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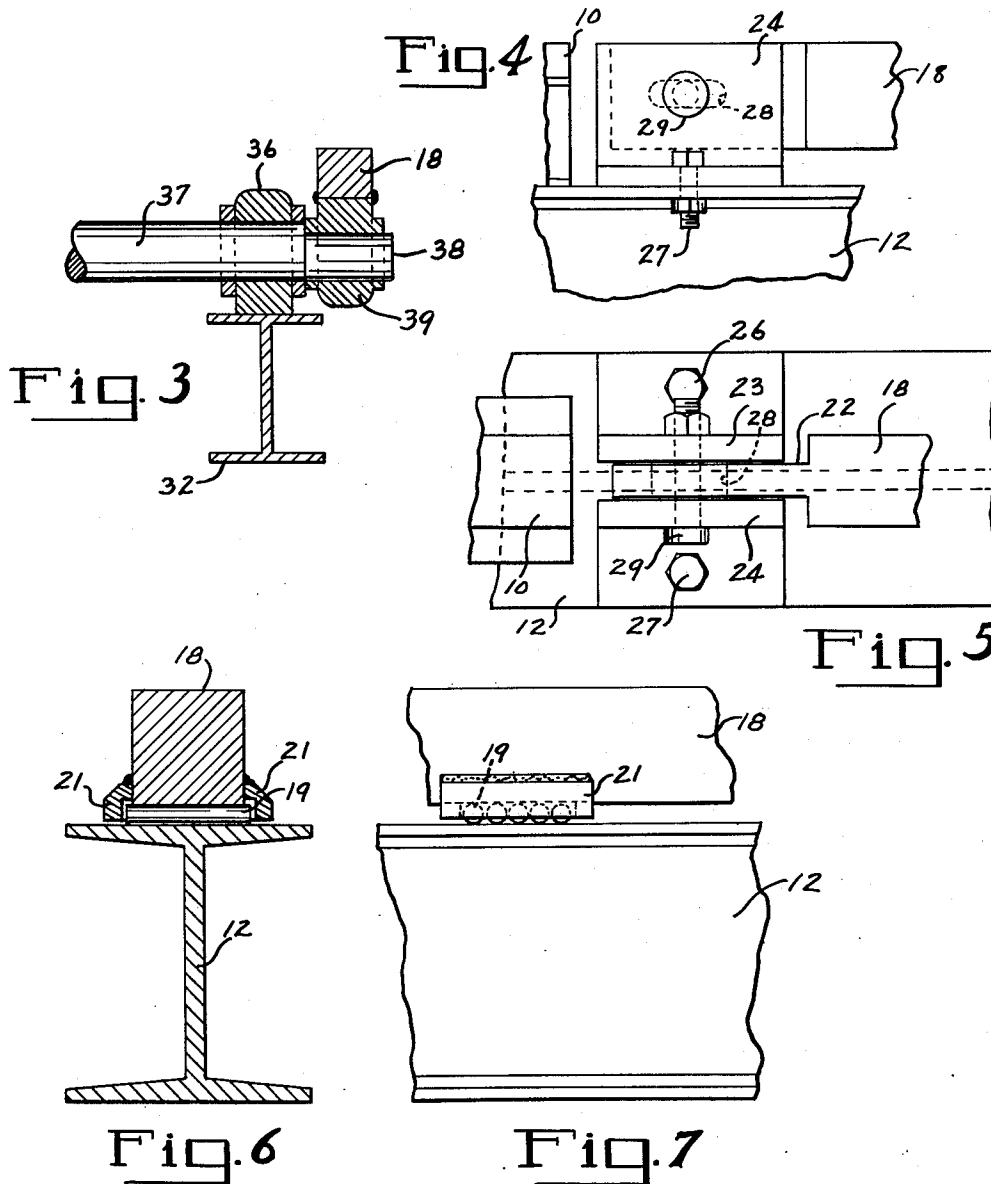
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2,654,490

RAILWAY CAR SHAKER

Paul E. Glaze, Gorgas, Ala., assignor of one-fourth to Milton H. Fies, one-fourth to Harry M. Johnstone, and one-fourth to James W. Shealy

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2 Claims. (Cl. 214—64.2)

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My invention relates to railway car shakers, particularly to means for shaking bottom dump railway cars to discharge the contents thereof, and has for an object the provision of a car shaker by means of which the contents of the car may be dumped while either stationary or while moving along a railway track.

A further object of my invention is to provide a railway track with a movable rail section, together with means to impart oscillatory motion to the section, whereby to vibrate cars resting thereon.

A still further object of my invention is to provide means for dumping the contents of bottom dump railway cars, including an elevated railway track having a movable rail section, together with means to vibrate the section.

My invention is especially adapted for use in discharging the contents of mine cars of the bottom dump type, which are well known in the art to which my invention relates. In practice, an elevated track is usually constructed or a hopper is provided beneath the track over which the cars pass and beneath which the contents are dumped. Heretofore, it has been the custom to beat on the sides of the cars or jerk them back and forth with the motor which hauls them. Such methods damage the cars and greatly increase the cost of maintaining them, as well as delays their unloading.

In accordance with my invention, I provide the track with a movable rail section and impart oscillatory motion to one end of the rail section by means of a driven crank, or other suitable means while guiding the opposite, or free end of the rail section to restrict lateral motion thereof. I thus provide apparatus which effectively vibrates the cars and discharges their contents quickly with less damage to the cars and less delay to the unloading.

Apparatus embodying features of my invention is illustrated in the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a side elevation, partly diagrammatic, showing my invention installed in an elevated railway track;

Fig. 2 is a plan view of the track with parts broken away;

Fig. 3 is a sectional view, drawn to a larger scale, and taken along the line III—III of Fig. 2;

Fig. 4 is a detail side elevation of one end of the movable rail section;

Fig. 5 is a plan view of the part shown in Fig. 4;

Fig. 6 is a detail sectional view taken along

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the line VI—VI of Fig. 2 and drawn to a larger scale; and,

Fig. 7 is a side elevation of the part shown in Fig. 6.

Referring now to the drawings for a better understanding of my invention, I show at 10 an elevated railroad track, supported on pillars 11 and longitudinal I beams 12. Running on the track 10 are mine cars 13 having bottom dump doors 14, indicated diagrammatically. The doors 14 may be opened by engagement with a member 16 extending up from the track 10 and closed by engagement with a second member 17 after the contents have been discharged. The means for opening and closing the doors 14 is indicated diagrammatically for the reason that it is well known in the art and forms no part of my present invention.

Mounted in, and forming a part of the track 10, is a movable rail section 18. The section 18 may be of any suitable shape in cross section, but as shown in the drawings is rectangular. The approaching end, of the section 18 is supported upon a plurality of rollers 19 which rest on the upper surface of the subjacent longitudinal I beam 12 adjacent the end of the section and are held against shifting by means of keepers 21 secured to the sides of the section. The adjacent end of the section 18 is reduced in width, as shown at 22, and passes between lateral guides 23 and 24 which are secured by means of bolts 26 and 27 to the I beam 12. The reduced end 22 is provided with an elongated hole 28 therein, and a bolt 29 extends through the guides 23 and 24 and through the hole 28, thus permitting the end of the rail section to move to and fro a limited distance between the guides 23 and 24.

Extending alongside the I beams 12 are a pair of auxiliary beams 31 and 32 and mounted below the beam 31 is a third auxiliary beam 33. Mounted on the beams 31 and 32 are bearings 34 and 36 for a transverse shaft 37. Formed on the outer end of the shaft 37 is an eccentric crank 38 upon which is mounted a bearing 39, to which the adjacent, or leaving end of the rail section 18 is secured. The shaft 37 is driven by means of an electric motor 41 through pulleys 42 and 43 and belt 44. The motor 41 is mounted on, and supported by, the auxiliary beam 33.

From the foregoing description, the operation of my improved apparatus will be readily understood. As the loaded cars 13 pass along the track 10, they first engage the member 16, opening the doors 14. As the car is passed along the track

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over the movable rail section 18, rotary motion of the shaft 37 imparts oscillatory motion to the leaving end of the rail section 18 through the crank 38 which imparts a shaking motion to the car 13 and the contents are discharged through the open dump doors 14. In event the contents of a car hang and are slow to discharge, a car may be stopped while on the movable section 18, until the contents are all discharged. It will thus be apparent that I have devised an improved car shaking apparatus which is simple of design and operation, and which is effective to impart a shaking motion to cars thereon.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims. It will also be apparent that the shaking means shown and described may be used in multiple, instead of the single means shown.

What I claim is:

1. In a car shaker for bottom dump railway cars, a railway track including a rail section over which the cars pass, said rail section being mounted for movement about a pivotal axis at one end thereof, a roller support for the pivotally mounted end of the rail section, stationary guide means forming a part of the pivotal mounting, the rail section having a limited motion of translation longitudinally of the trackway in the stationary guide means, a motor driven rotary shaft extending transversely of the other end of

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the section, an eccentric on the shaft, and a bearing member on the eccentric supporting the other end of the section.

2. In car shaking apparatus for bottom dump railway cars, an elevated railway track supported on longitudinal I beams and having included therein a movable rail section over which the cars run, said section being pivotally connected at one end to one of the I beams by means of vertically extending laterally spaced guides secured to the said I beam for receiving therebetween the end of the movable rail section, there being an opening through each of said guides and a laterally extending elongated opening through said movable rail section permitting limited longitudinal movement of said section, a bolt passing through said openings, a roller support for the section adjacent the guide means, and means to impart oscillatory motion to the other end of the section.

PAUL E. GLAZE.

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