

G. C. WORTMAN.

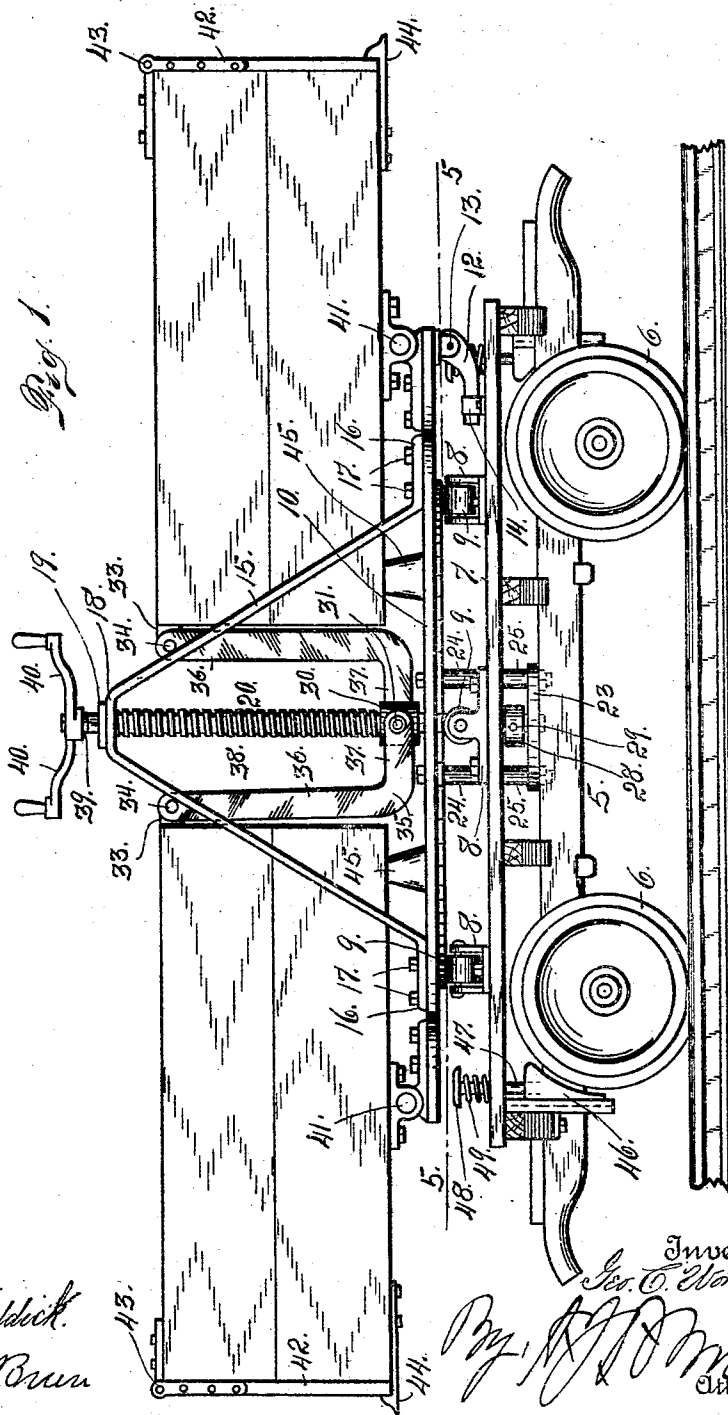
DUMPING PUSH CAR.

APPLICATION FILED AUG. 16, 1907.

Patented Dec. 29, 1908.

5 SHEETS—SHEET 1.

908,435.



Witnesses  
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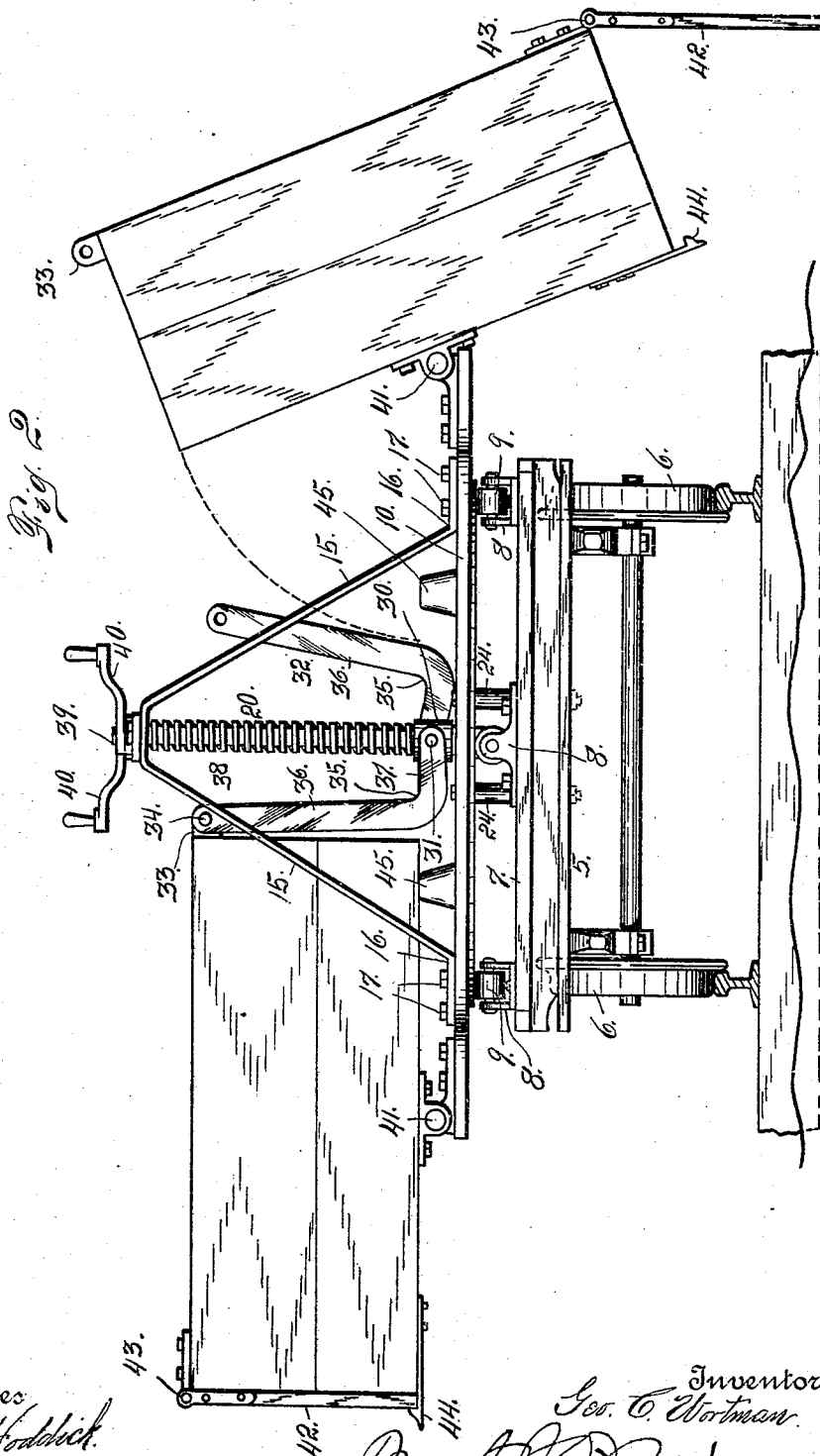
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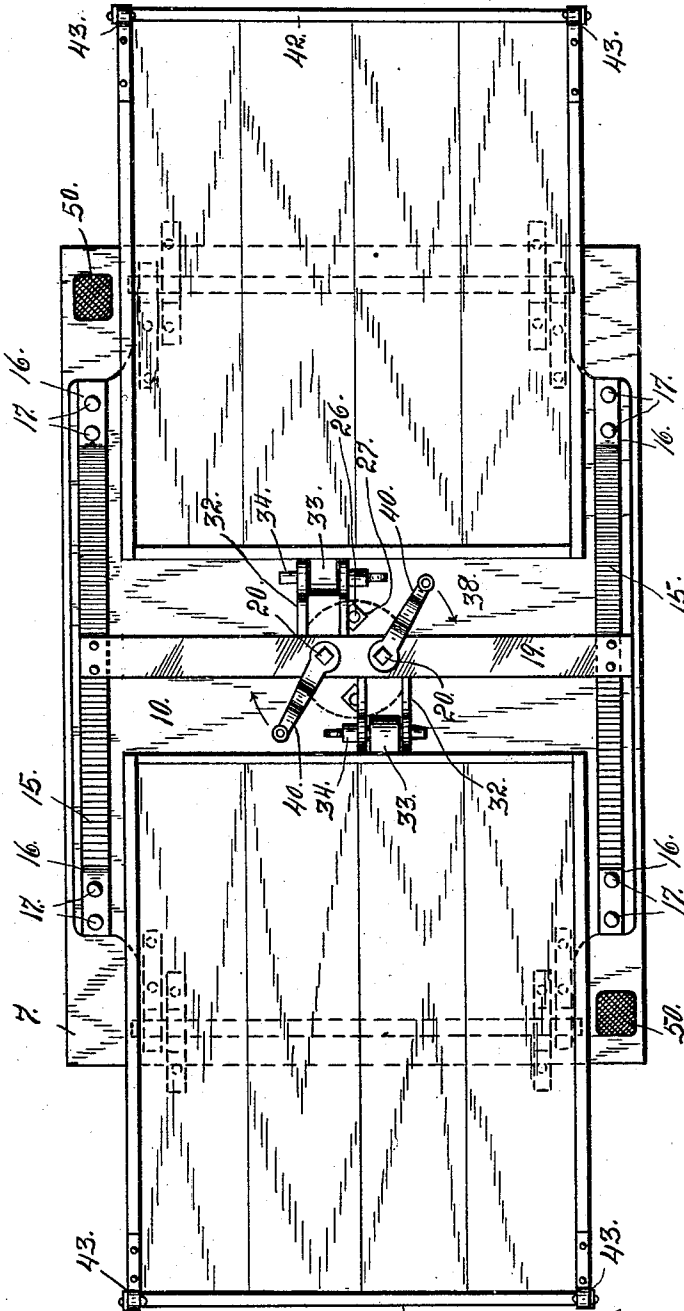
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6 SHEETS—SHEET 3.

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Fig. 3.



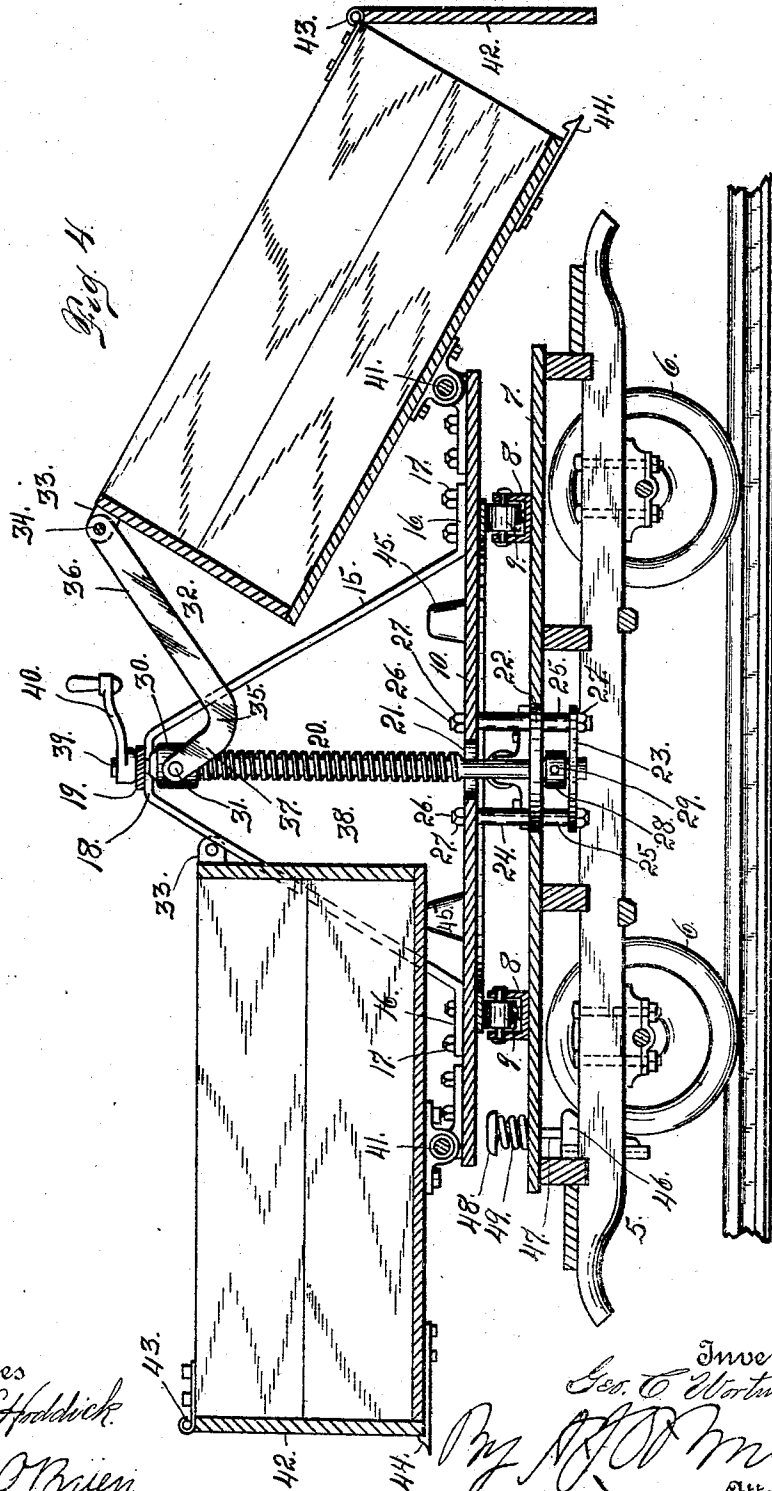
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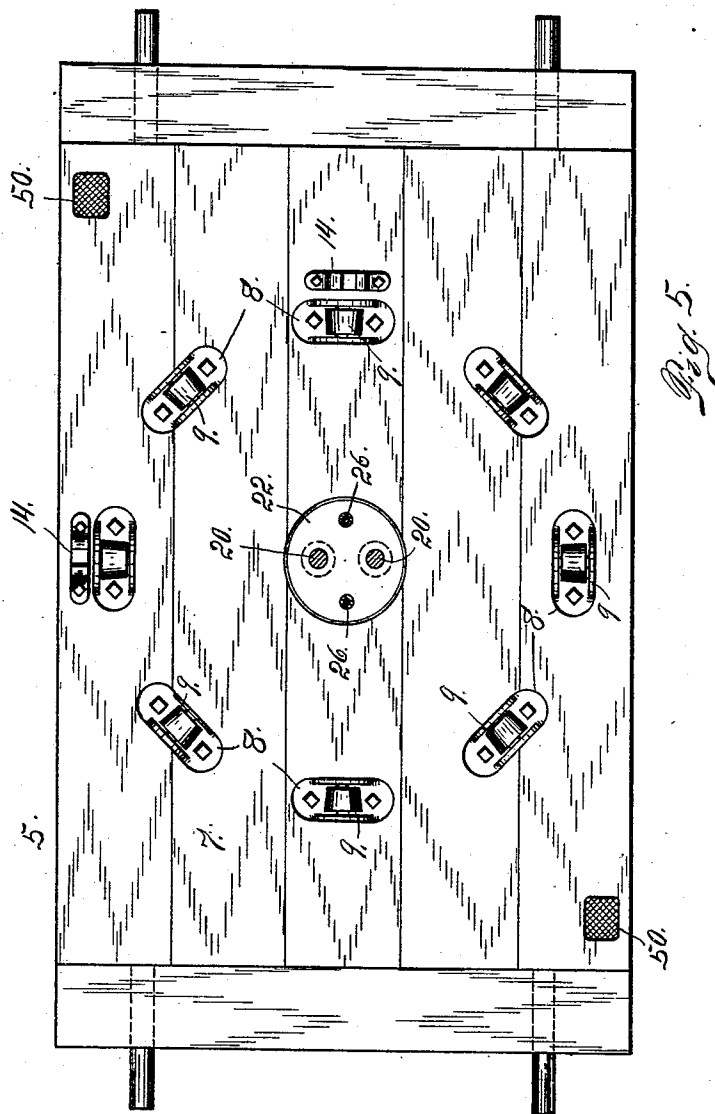
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6 SHEETS—SHEET 5.



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# UNITED STATES PATENT OFFICE.

GEORGE C. WORTMAN, OF WORTMAN, COLORADO.

## DUMPING PUSH-CAR.

No. 908,435.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed August 16, 1907. Serial No. 388,757.

*To all whom it may concern:*

Be it known that I, GEORGE C. WORTMAN, a citizen of the United States, residing at Wortman, in the county of Lake and State of Colorado, have invented certain new and useful Improvements in Dumping Push-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 letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in push cars provided with dumping bodies. In the specific construction shown in the drawing, these dumping bodies are pivotally mounted upon a rotatable platform, whereby the latter may be adjusted to permit the dumping of the car bodies either at the end or sides of the car, that is to say either upon the track or at the side thereof as may be desired.

In my improved construction, each dumping body is connected by means of a link with a nut engaging a vertical screw shaft suitably journaled whereby as the shaft is rotated, the nut is caused to travel either up or down thereon according as it is desired to tilt the car body for dumping purposes, or return it to its normal position after the dumping operation.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a side elevation of a push car equipped with my improvements. Fig. 2 is an end view of a car showing the platform shifted to permit the car bodies to dump on opposite sides of the track. In this view one of the car bodies is shown in the dumping position, the pin connecting it with the link having been removed. Fig. 3 is a top plan view of the construction arranged as shown in Fig. 1. Fig. 4 is a vertical longitudinal section taken through the car. Fig. 5 is a top plan view of the platform of the car, parts being shown in section on the line 5—5 Fig. 1.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the frame work of a car mounted on wheels 6. On this frame work is mounted a stationary platform 7 equipped with brackets 8 in which are journaled rollers 9 which form an antifrictional support for the rotary platform 10. Any desired number of these rollers may be employed (see Fig. 5). The rotary platform is provided with a locking dog 12 pivoted to the platform as shown at 13 and adapted to engage a recessed lug 14 fast on the stationary platform 7, to lock the rotary platform in a stationary position. There are two of the recessed lugs 14, one so located as to lock the platform in position to permit the longitudinal tilting of the car bodies, whereby they are caused to dump upon the track; and the other in position to permit the transverse tilting of the car bodies whereby they are caused to dump on opposite sides of the track. The relative location of the lugs 14 is shown in Fig. 5.

Upon the rotary platform 10, at the opposite sides thereof are located two supports 15 whose extremities 16 are bent to engage the platform and secured thereto by bolts 17 or other suitable fastening devices. These supports above the platform are shaped approximately like the letter A. The top of each support is flattened as shown at 18, and connecting the two supports at the top is a transverse bar 19, in which are journaled two screw shafts 20 passed through an opening 21 in the rotary platform and journaled in two disks 22 and 23, the disk 23 being located in a central opening formed in the stationary platform. The disk 22 is separated from the rotary platform by spacing sleeves 24, and from the disk 23 by spacing sleeves 25, the said sleeves 24 and 25 being mounted on bolts 26 which pass through the platform 10, and connecting the two disks 22 and 23, being secured in place at the top and bottom by nuts 27. Each screw shaft 20 is provided between the disks 22 and 23 with a collar 28, secured in place thereon by a set screw 29.

Between the top of the rotary platform and the cross bar 19, the shafts 20 are provided with screw threads and upon the threaded portion of each shaft is mounted a nut 30 provided with trunnions 31 on opposite sides. Pivotaly connected with these trunnions are angle-shaped links 32 whose opposite extremities are connected with an

apertured lug 33 fast on the car body by means of a removable coupling pin 34. Hence in this construction each car body is connected with the corresponding nut 30 on the screw shaft, by a pair of links 32, each link being bent at 35 whereby when the nut 30 is in its lowermost position on the screw shaft, each link has a vertical portion 36 and a horizontal portion 37. The length of the horizontal portion, is approximately the distance of the inner extremity of each car body, from the transverse center of the rotary platform when the car bodies are in their normal or upright position. By virtue of these bends in the links, a considerable space 38 is left between the inner extremities of the two car bodies, thus allowing a person to stand upon the platform between the two car bodies, while manipulating the screw shafts for the purpose of tilting the car bodies to the dumping position and returning them again to their normal or upright position. The upper extremity of each screw shaft is shaped to receive the angular socket 39 of a hand crank 40. This hand crank is utilized in turning the screw shaft for the purposes heretofore stated.

Each car body is hinged upon the platform as shown at 41, the hinging axis extending transversely of the car body and occupying approximately a central position. The position of the hinging axis may of course be varied as circumstances may require.

As shown in the drawing the outer extremity of each car body is provided with a door 42 hinged at the top as shown at 43 and normally locked in the closed position by a spring hook 44. Any suitable construction of car body and door mechanism may, however, be employed. The inner portion of each car body, when in the upright or normal position, rests upon a short support 45, fast on the rotary platform, and of suitable height to cause the car to stop in the horizontal position, when returning it from the tilting or dumping position by the manipulation of the screw shaft as heretofore described.

On each side of the car is located a brake shoe 46 provided with a pin 47 passing up through the stationary platform 7 and terminating in a head 48. Between this head and the platform is located a coil spring 49 which normally supports the brake in the position free from the upper part of the car wheel. If it is desired to apply the brake to the car, it is only necessary to step upon the head 48, when the shoe will be forced downwardly into contact with the tread of the car, in proportion to the degree of pressure exerted. The top of the head 48 of each brake shoe is preferably roughened or milled as shown at 50 (see Fig. 3) to prevent the

foot of the operator from slipping therefrom while operating the brake.

From the foregoing description the use and operation of my improved dumping push car will be readily understood. Assuming that the parts are in the position shown in Figs. 1 and 3 of the drawing, if it is desired to tilt either car body to the dumping position, by the use of its screw shaft 20, the latter will be rotated in a direction to cause the traveling nut 30 to move upwardly on the screw shaft. But when this nut has reached its upward limit of movement, the car body will be tilted to occupy approximately an angle of forty five degrees. In order to rotate the screw shaft, the hand crank 40 is slipped on the upper extremity thereof. The operator may then turn the screw shaft until the car is suitably tilted for dumping purposes by the upward movement of the nut 30. The door 42 of the car body may if desired be unlocked before the tilting operation begins.

If it is desired to dump the car instantly, or practically so, the coupling pin 34 may be removed whereby the lug 33 of the car body is disconnected from the links which connect the same with the nut of the screw shaft. Then a slight upward pull or lift on the inner extremity of the car body will cause the latter to tilt to the position shown in Fig. 2, after which it may be easily returned to its upright or normal position and again connected with the links.

When it is desired to shift the platform to allow the car bodies to be transversely tilted with reference to the direction of the car's travel or the length of the track, it is only necessary to disengage the dog 12 from the recessed lug 14 (see Fig. 1). The platform may then be turned to cause the two car bodies to occupy a transverse position or a position at right angles to that shown in Fig. 1. The car bodies may then be dumped in the same manner as heretofore explained. It will be understood that when the platform 10 is rotated, the two disks 22 and 23 are also rotated.

Having thus described my invention, what I claim is:

1. In a push car, the combination with a platform, of a car body tiltably mounted thereon, a vertically disposed screw shaft suitably journaled, a nut mounted on the screw shaft, and a link connection between the nut and the car body, said connection being located above the platform, whereby as the shaft is rotated to cause the nut to travel thereon, the car body is actuated, substantially as described.

2. The combination with the car support, of a car body tiltably mounted thereon, a vertically disposed screw shaft suitably journaled on the car, a nut mounted on the threaded portion of the shaft, and a suitable

connection between the nut and the car body, said connection being located above said support, whereby as the nut is caused to travel on the shaft, the car body is actuated, substantially as described.

3. The combination with the framework of a car, of a car body tiltably mounted thereon, a screw shaft journaled in the framework, a nut mounted on the said shaft, and a link connected with the nut at one extremity and with the car body at the opposite extremity, above the bottom of the said body, whereby, as the shaft is rotated, the car body is actuated for the purpose set forth.

4. The combination with the framework of a car, of a car body tiltably mounted thereon, a vertically disposed screw shaft journaled in the framework, a nut mounted on the said shaft, a link connected with the nut at one extremity and with the car body at the other extremity, above the bottom of the said body, whereby, as the shaft is rotated, the car body is actuated for the purpose set forth.

5. The combination with the framework of a car, of a car body tiltably mounted thereon, upright supports mounted on the framework, a transverse bar connecting these supports, a screw shaft journaled in the said bar, a nut mounted on the said shaft, and a link connected at one extremity with the nut and at the other extremity with the car body above the bottom of the latter, substantially as described.

6. The combination with the frame work of a car, of a screw shaft journaled therein, a nut mounted on the shaft, a car body tiltably mounted on the platform, and a pair of links connecting the nut with the car body at points above the bottom of the latter, substantially as described.

7. The combination with the framework of a car, of two car bodies tiltably mounted thereon, screw shafts journaled in the framework, a nut mounted on each screw shaft, a link connecting each nut with one of the car bodies above the bottom of the said bodies, whereby as the shafts are rotated and the nuts are caused to travel thereon, the car bodies will be actuated substantially as described.

8. The combination with the platform of a car, of two car bodies tiltably mounted thereon and arranged end to end, a space being left on the platform between the inner extremities of the two car bodies, screw shafts suitably journaled and occupying a position in the said space, and a suitable connection between the screw shafts and the respective

car bodies at points above the bottom of the latter, whereby as the shafts are turned the car bodies will be actuated, substantially as described.

9. The combination with the frame work of a car equipped with a rotary platform, of a car body tiltably mounted on the platform, an upright screw shaft suitably journaled, and a suitable connection between the screw shaft and the car body above the bottom of the latter, whereby as the shaft is rotated, the car body will be actuated for the purpose set forth.

10. The combination with the frame work of a car equipped with a rotary platform, of two screw shafts passing through an opening formed in the rotary platform, a disk located below the platform in which the two shafts are journaled, the disk being free to turn with the rotary platform, car bodies tiltably mounted on the rotary platform, and a connection between each screw shaft and one of the car bodies, whereby as the shaft is rotated the car bodies are actuated, for the purpose set forth.

11. The combination with the frame work of a car, provided with a stationary platform and a rotary platform, a car body tiltably mounted on the rotary platform, suitable means located above the platforms for tilting the car body, including a vertically disposed screw shaft journaled in the frame work and protruding above the platforms, a locking dog pivotally mounted on the rotary platform, and adapted to engage recessed lugs mounted on the stationary platform, whereby the rotary platform may be locked against rotation when in a predetermined position, substantially as described.

12. The combination with the frame work of a car provided with a rotary platform, two screw shafts suitably journaled in an upright position, two car bodies tiltably mounted on the rotary platform and occupying end to end positions, a space being left between the inner extremities of the car bodies in which the screw shafts are located, a nut mounted on each screw shaft, and a double link connection between each nut and one of the car bodies, whereby as the screw shafts are rotated the car bodies are actuated, substantially as described.

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

GEORGE C. WORTMAN.

Witnesses:

DENA NELSON,  
EBERT O'BRIEN.