No. 811,851. PATENTED FEB. 6, 1906.

J. W. KING.

LATERALLY MOVABLE DUMPING VEHICLE.

APPLICATION FILED MAY 17, 1905.

2 SHEETS—SHEET 1.

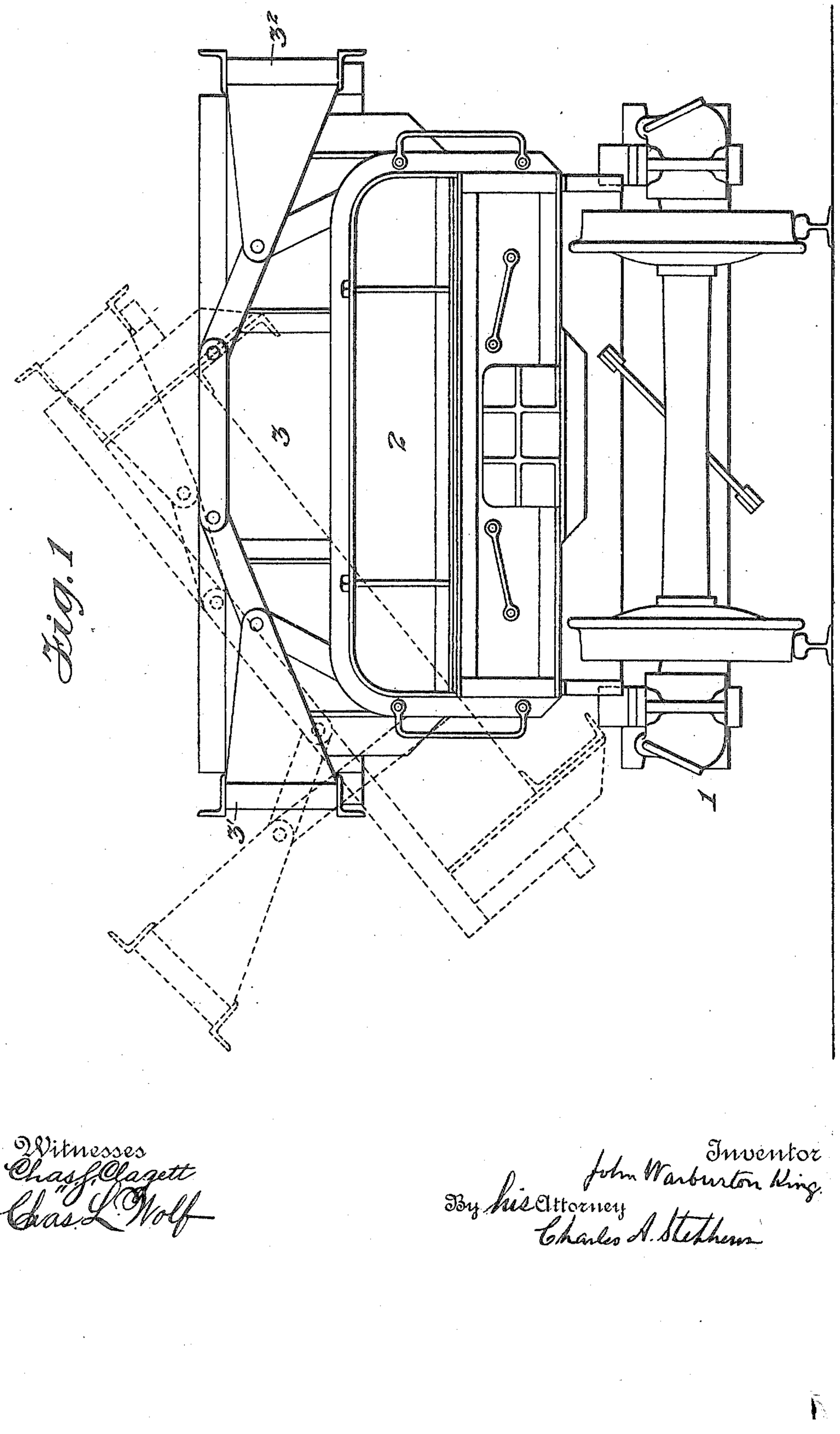

Fig. 1.

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Inventor
John Warburton King.
By his Attorney
Charles A. Stetheim

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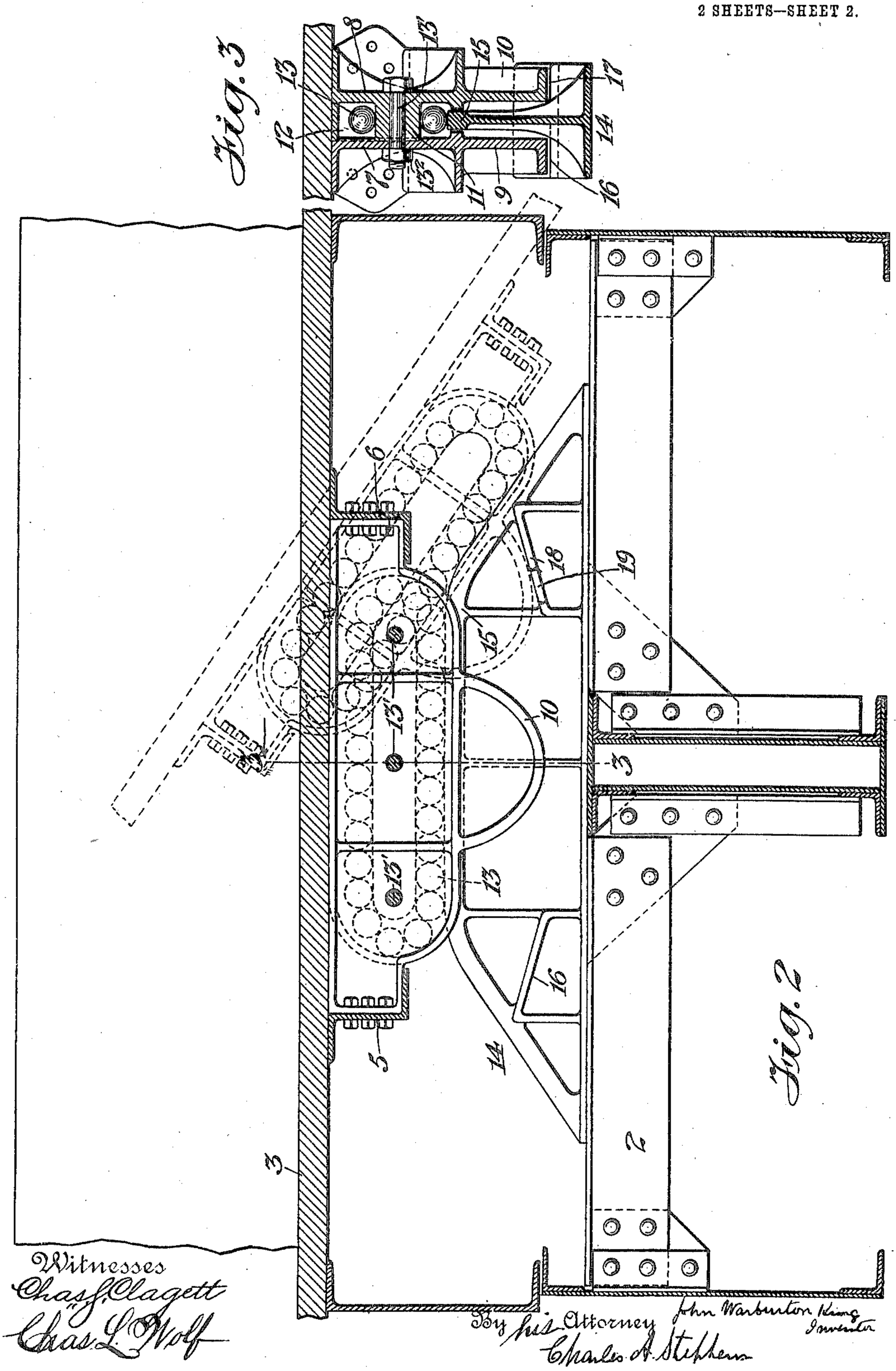

Fig. 2

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Fig. 3

UNITED STATES PATENT OFFICE.

JOHN WARBURTON KING, OF NEW YORK, N. Y., ASSIGNOR TO LAWSON BOAT AND CAR COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

LATERALLY-MOVABLE DUMPING-VEHICLE.

No. 811,851. Specification of Letters Patent. Patented Feb. 6, 1906.

Application filed May 17, 1905. Serial No. 260,841.

To all whom it may concern:

Be it known that I, JOHN WARBURTON KING, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Laterally-Movable Dumping-Vehicles, of which the following is a specification.

My invention relates to improvements in laterally-movable dumping-vehicles, particularly to laterally-movable dumping-cars.

It has for its object the provision of means for maintaining the center of gravity of the box in its entire turning movement over the point of support, whereby a box of the maximum weight may be dumped and returned by the minimum amount of power.

It has for a further object to provide a device of the character set forth embodying advantages in point of perfect operation, strength, durability, and simplicity and inexpensiveness of construction.

In the drawings, Figure 1 is an end view of a car. Fig. 2 is a fragmentary vertical sectional view of the underframe and box of a car, showing my improvement applied; and Fig. 3, a fragmentary sectional view taken on the line 3 3 of Fig. 1.

In all the figures of the drawings illustrating my invention like reference characters designate corresponding parts.

Referring to the drawings, 1 designates the truck at one end of the car, 2 the underframe, and 3 the box, having side doors 3′ and 3^2, all of which parts, being of well-known construction and forming no part of my improvements, need not be described in detail.

A plurality of transversely-extending raceways 4, of which only one is shown, are suspended from the box of the car on longitudinally-extending Z-bars 5 and 6, and each raceway consists of two parallel plates 7 and 8, the plate 7 having an integral downwardly-extending rounded projection 9 and the plate 8 having an integral downwardly-extending rounded projection 10 like that of the other plate and a laterally-extending integral projection 11, contacting with the plate 7, so as to space the plates apart and form a continuous passage 12, open at the bottom and ends and having balls 13 therein, said plates being secured together by bolts 13′, having nuts 13^2 thereon.

A plurality of transversely-extending tracks 14, of which only one is shown, are supported on the underframe 2 of the car, and each consists of a central arched portion 15, projecting through the opening in the bottom and ends of the raceway into engagement with the balls 13 to form a track therefor and having on each side at one end integral inwardly-inclined bearings 16 and 17 and on each side at the other end integral inwardly-inclined bearings 18 and 19, the rounded projections 10, adapted to engage and rock on said bearings in the dumping and return movement of the box.

Other antifriction devices may be substituted for the balls 13.

By means of the supports on the underframe on which the downwardly-extending projections on the box rock while said box is completing its lateral movement it is given a simultaneous lateral and rotary movement.

I have not herein shown any means for moving the box laterally to dump or return it, as this does not form a part of my present invention; but any of the well-known means may be employed, preferably pneumatically-operated means.

The operation is as follows: Suitable power is exerted to cause the box to move laterally along the track 14—say to the right—until the rounded projections 9 and 10 strike the bearings 18 and 19, respectively, and rock thereon up the inclined surfaces, elevating and turning the body to the side in the position shown in dotted lines, Figs. 1 and 2, and allowing the contents to run out, after which power is exerted to cause the box to rock down the inclined surfaces of the bearings 18 and 19, turning and lowering the box and finally moving it along the track 14 to its normal position, as shown in full lines, Figs. 1 and 2.

I do not wish to be understood as limiting myself to the precise details and arrangements of parts shown and described, but reserve the right to all modifications within the scope of my invention.

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

1. In a vehicle, the combination with the underframe having a track and lateral bearings, of the laterally-movable box provided

with antifriction means engaging said track and downwardly-extending projections adapted to engage and rock on said bearings while the box is completing its lateral movement and thereby impart simultaneous rotary movement thereto, substantially as described.

2. In a vehicle, the combination with the underframe having a track and lateral inclined bearings, of the laterally-movable box provided with antifriction means engaging said track and downwardly-extending projections adapted to engage and rock on said bearings while the box is completing its lateral movement and thereby impart simultaneous rotary movement thereto, substantially as described.

3. In a vehicle, the combination with the underframe having a track and lateral bearings, of the laterally-movable box provided with downwardly-extending rounded projections adapted to engage and rock on said bearings while the box is completing its lateral movement thereby imparting simultaneous rotary movement thereto, substantially as described.

4. In a vehicle, the combination with the underframe having a track and inclined lateral bearings, of the laterally-movable box provided with antifriction means engaging said track and downwardly-extending rounded projections adapted to engage and rock on said bearings while the box is completing its lateral movement thereby imparting simultaneous rotary movement thereto, substantially as described.

5. In a vehicle, the combination with the underframe having a track and lateral bearings, of the laterally-movable box provided with antifriction means engaging said track and downwardly-extending rounded projections adapted to engage and rock on said bearings while the box is completing its lateral movement thereby imparting simultaneous rotary movement thereto, substantially as described.

6. In a vehicle, the combination with the underframe having a track and lateral bearings, of the laterally-movable box provided with a raceway, antifriction devices therein engaging said track and downwardly-extending projections adapted to engage and rock on said bearings while the box is completing its lateral movement thereby imparting simultaneous rotary movement thereto, substantially as described.

7. In a vehicle, the combination with the underframe having a track and lateral inclined bearings, of the laterally-movable box provided with a raceway, antifriction devices therein engaging said track and downwardly-extending rounded projections adapted to engage and rock on said bearings while the box is completing its lateral movement, thereby imparting simultaneous rotary movement thereto, substantially as described.

8. In a vehicle, the combination with the laterally-movable box provided with downwardly-extending projections and a raceway having a continuous passage open at the bottom, antifriction devices therein, of the underframe having a track projecting through the opening in the raceway into engagement with said antifriction devices and lateral bearings engaged by said projections while the box is completing its lateral movement thereby imparting simultaneous rotary movement to said box, substantially as described.

Signed at New York, in the county of New York and State of New York, this 16th day of May, A. D. 1905.

JOHN WARBURTON KING.

Witnesses:
CHAS. L. WOLF,
M. BENDER.