

J. W. KING.
DUMPING VEHICLE.
APPLICATION FILED MAR. 26, 1907.

908,869.

Patented Jan. 5, 1909.

2 SHEETS—SHEET 1.

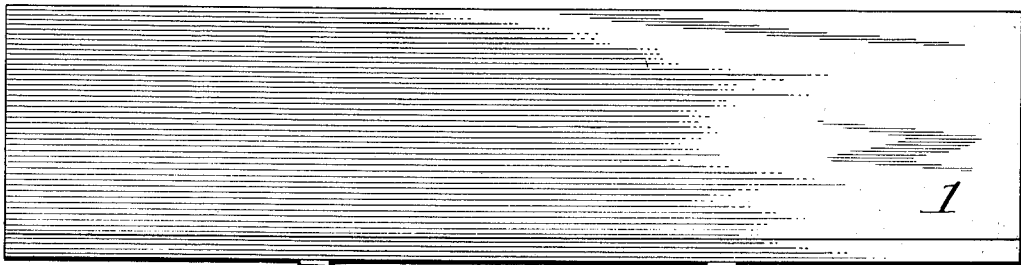


Fig. 1.

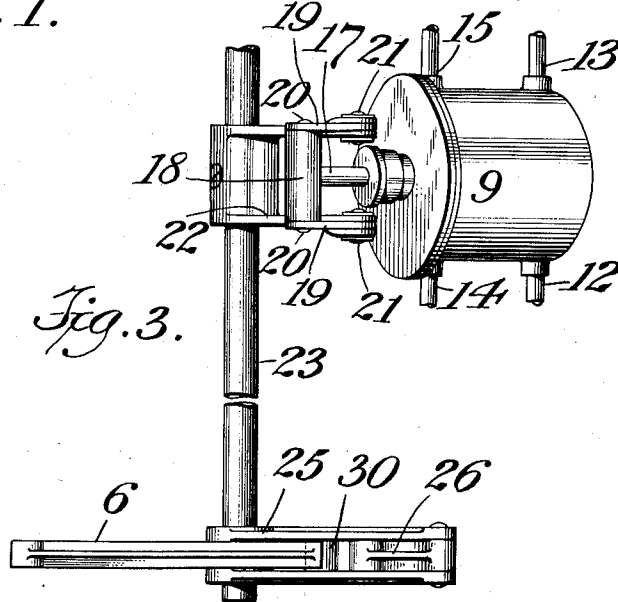


Fig. 3.

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Inventor

By *his Attorney*
Charles A. Stephens

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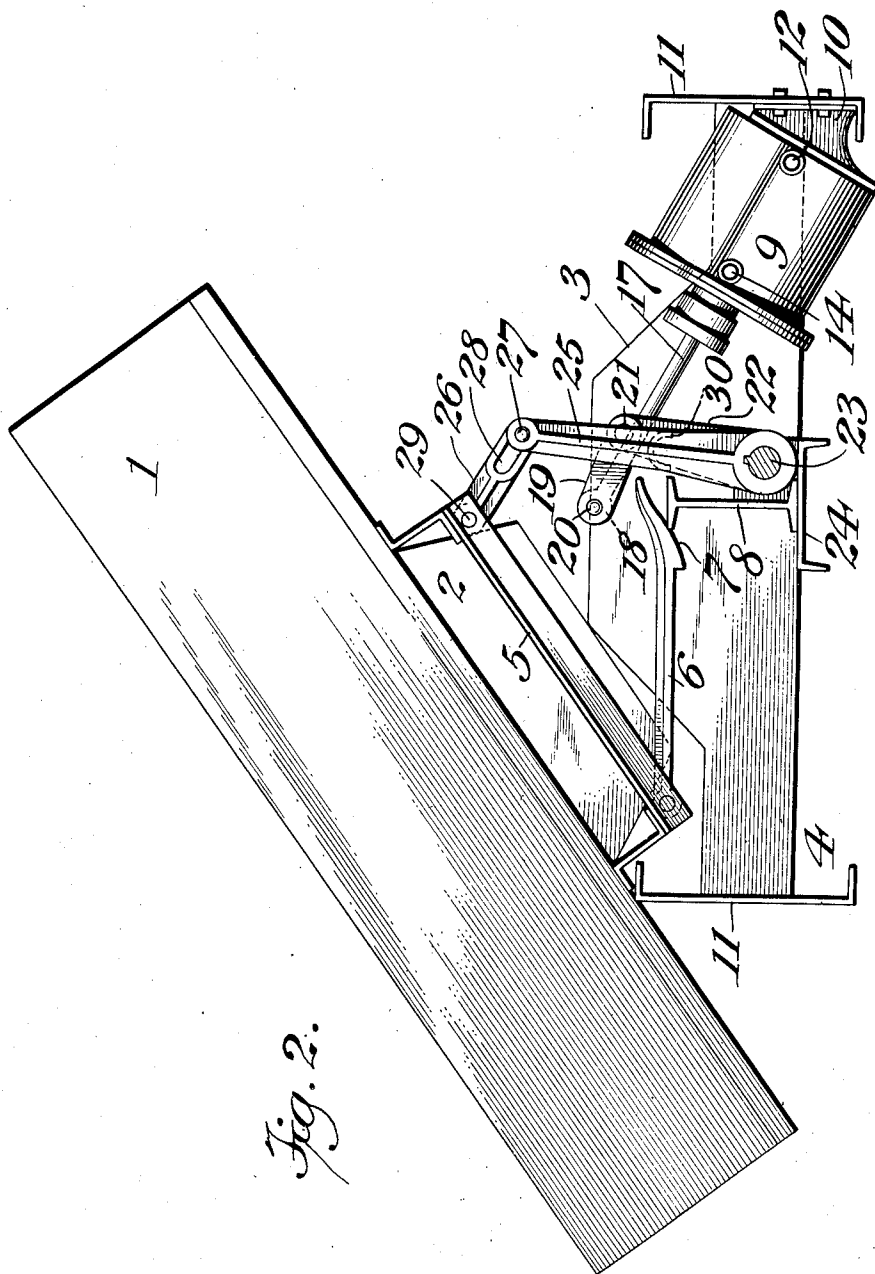


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN W. KING, OF NEW YORK, N. Y.

DUMPING-VEHICLE.

No. 908,869.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed March 26, 1907. Serial No. 364,585.

To all whom it may concern:

Be it known that I, JOHN W. 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 Dumping Vehicles, of which the following is a specification.

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

It has for its object to provide means for first positively sliding the body of the vehicle horizontally and allowing it to be dumped at the end of its horizontal movement by the momentum imparted to it in its sliding movement, without further movement of or aid from the means for sliding it, and after it has been dumped, to positively return it to its horizontal position and sliding it over to its normal position.

It has for a further object to provide means for locking the body of the vehicle in its normal horizontal position, adapted to be automatically unlocked, by the body operating means in its movement before beginning to slide the body of the vehicle.

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

In the drawings, Figure 1 is a side view of a vehicle, showing my body operating and locking means applied. Fig. 2, a similar view, showing the body dumped and the consequent position assumed by my body operating and locking means. Fig. 3, is a fragmentary detail view of my body operating and locking means removed from the vehicle.

Like reference characters designate corresponding parts in the figures of the drawings illustrating my invention.

Referring to the drawings, 1 designates the body of the vehicle which is provided, at its ends with downwardly extending portion 2, engaging and slidable on upwardly extending portion or rests 3, at the end of the under frame 4, when the body is in its horizontal position. Also at its ends the body of the vehicle is provided with downwardly extending frames 5 on which are pivotally mounted gravity arms or hooks 6 having cam noses 7 adapted, when the body of the vehicle is in its normal horizontal position,

to engage the I-beam 8 forming the center sill of the under-frame and lock said body and when the body of the vehicle is slid horizontally previous to being dumped, to be disengaged from the I-beam, by the means to be described, and unlock the body.

Motive fluid cylinders 9 are secured by brackets 10 to the ends of one of the channel-irons 11 which form the side sills of the under frame and said cylinders are provided at one end with an inlet 12 for the motive fluid and an outlet 13 therefor and at the other end with an inlet 14 for the motive fluid and an outlet 15 therefor, whereby the pistons 16 of the cylinders are adapted to be reciprocated.

The outer ends of the piston rods 17 are provided with cross heads 18 to which the inner ends of plates 19, forming links, are pivoted by pins 20, the other ends of said plates being pivoted by pins 21 between the forked ends of U-shaped arms 22 secured on a shaft 23 journaled on the channel iron 24 which with the I-beam 8 forms the center sill of the under frame.

On the ends of the shaft 23 are secured U-shaped arms 25, the ends of which embrace and are loosely pivoted to the lower ends of arms 26, by pins 27 engaging and slidable in elongated slots 28 therein, the upper ends of said arms 26 being pivoted to the frames 5 by pins 29, thereby providing for a slight degree of independent movement of the arms 25, before they transmit movement to the body of the vehicle, for the purpose of bringing the cross pieces 30, connecting said arms, into engagement with the cam noses of the gravity arms 6 and raising said arms out of engagement with the I-beam 8 to unlock the body.

From the above description considered in connection with the drawings, it will be apparent that upon motive fluid, preferably air, being admitted into the inlets 12 of the cylinders, the pistons and their rods will be forced to the left and through their connection with the arms 22 will turn the shaft 23, and thereby the arms 25, first simultaneously sliding the pins 27 to the left in the slots of the arms 26 and moving the cross pieces 30 under the noses of the gravity arms 6 and raising said arms out of engagement with the I-beam 8 of the under frame which unlocks the body, and then positively moving the body to the end of its longitudinal movement, whereupon the momentum imparted

to the body will cause it to dump and in doing so slide the arms 26 to the left on the pins 27, and that upon motive fluid being admitted into the inlets 14 of the cylinders, the 5 pistons and their rods will be forced to the right, and through their connection with the arms 22 will turn the shaft 23 and thereby the arms 25 positively moving the body of the car back to its normal position and 10 causing the cam noses of the gravity arms 6 to ride upon the I-beam 8 and the hooked ends to engage the I-beam and lock the body.

I do not wish to be understood as limiting 15 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 20 I claim as new and desire to secure by Letters Patent, is—

1. In a vehicle, a supporting frame, a dumping body thereon, means adapted to 25 automatically lock the body in normal position and means adapted to unlock the body previous to imparting movement thereto, positively move it horizontally and allow it to dump of its own momentum and then positively return it to normal position, substantially as described. 30

2. In a vehicle, a supporting frame, a dumping body thereon, a gravity hook adapted to automatically lock the body in 35 normal position and means adapted to engage said hook and unlock the body previous to imparting movement thereto, positively move it horizontally and allow it to dump of its own momentum and then positively return it to normal position, substantially as described. 40

3. In a vehicle, a supporting frame, a dumping body thereon, a gravity hook adapted to automatically lock the body in 45 normal position and having a cam nose and means adapted to engage the nose of said

hook and unlock the body previous to imparting movement thereto, positively move it horizontally and allow it to dump of its own momentum and then positively return it to normal position, substantially as described. 50

4. In a vehicle, a supporting frame, a dumping body thereon, means adapted to automatically lock said body in normal position, fluid actuated pistons and means actuated by said pistons adapted to unlock the 55 body previous to imparting movement thereto, positively move it horizontally and allow it to dump of its own momentum and then positively return it to normal position, substantially as described. 60

5. In a vehicle, a supporting frame, a dumping body thereon, a gravity hook adapted to automatically lock the body in 65 normal position, fluid actuated pistons and means actuated by said pistons, adapted to unlock the body previous to imparting movement thereto, positively move it horizontally and allow it to dump of its own momentum and then positively return it to 70 normal position, substantially as described.

6. In a vehicle, a supporting frame, a dumping body thereon, a gravity hook adapted to automatically lock the body in 75 normal position and having a cam nose, fluid actuated pistons and means actuated by said pistons, adapted to engage the nose of said hook and unlock the body previous to imparting movement thereto; positively move it horizontally and allow it to dump of 80 its own momentum and then positively return it to normal position, substantially as described.

Signed at New York city, in the county of New York, and State of New York, this twelfth 85 day of March, A. D. 1907.

JOHN W. KING.

Witnesses:

A. R. APPLEMAN,

A. B. BLACKWOOD.