

(No Model.)

2 Sheets—Sheet 1.

W. McMAHON.
DUMPING CAR.

No. 530,198.

Patented Dec. 4, 1894.

Fig. I.

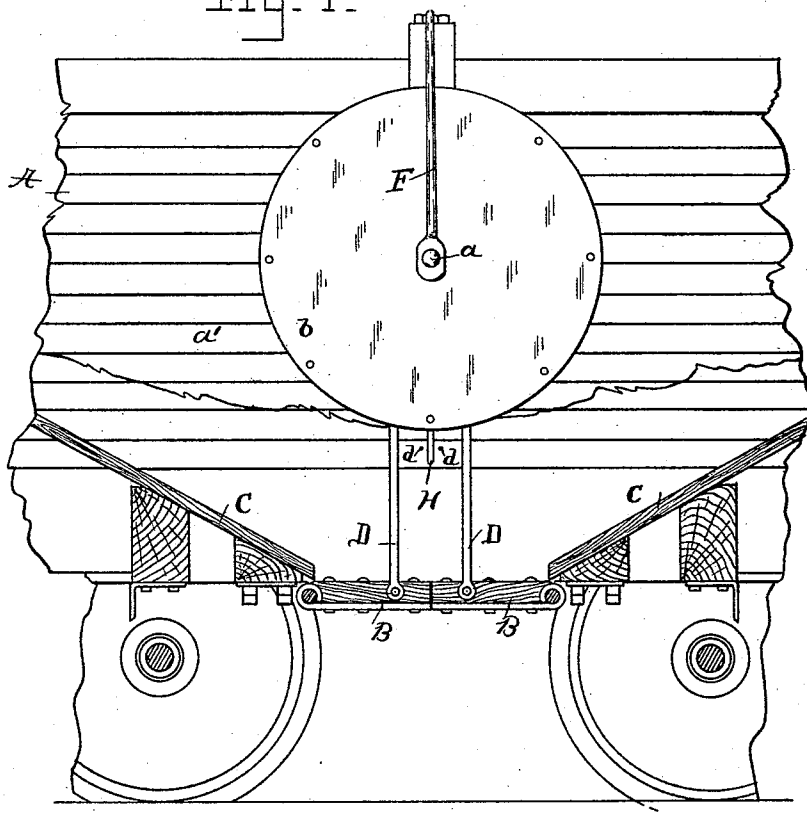
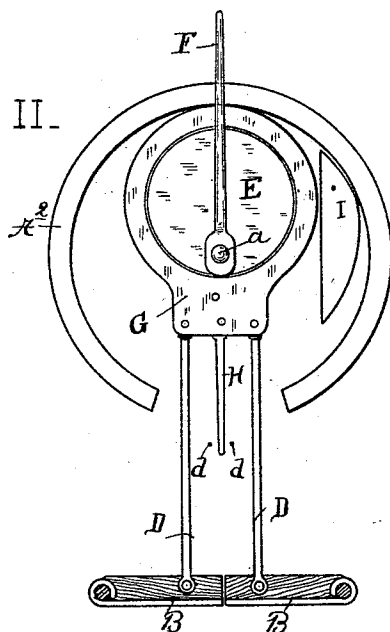


Fig. II.



Witnesses

Silke Hanna
L. Hoolsey.

Inventor

William McMahon
per Knight Bros
attys

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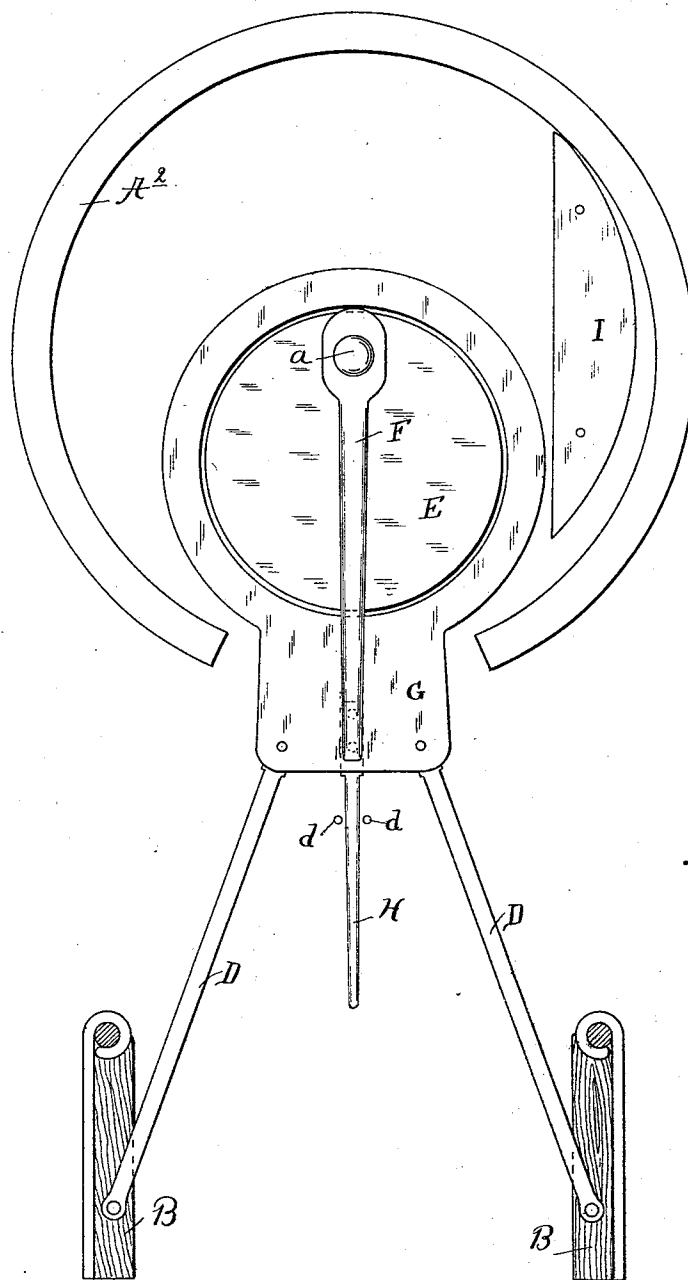


Fig. III.

Witnesses

Lillie Hanna
L. Hoolsey

Inventor

William McMahon
per Hughes
attys

UNITED STATES PATENT OFFICE.

WILLIAM McMAHON, OF RAHWAY, NEW JERSEY.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 530,198, dated December 4, 1894.

Application filed February 10, 1893. Serial No. 461,845. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM McMAHON, a citizen of the United States, residing at Rahway, county of Union, State of New Jersey, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification.

My invention relates to improvements in dumping the load from cars and vehicles, and it has for its object to provide improved means for raising and lowering the gates or swinging bottom of the car or vehicle and for securely holding the gates in the load-sustaining position.

The invention consists in the novel details of improvement and the combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Referring to the accompanying drawings which form a part of this specification:— Figure I is a partly sectional side elevation of a portion of a car having my improvements applied. Fig. II is a detail side view of my improvements showing the gates in the raised position and Fig. III is a view similar to Fig. II, enlarged, showing the gates in the lowered position.

In the drawings, the letter A indicates a suitable car or vehicle adapted to contain a load in bulk to be dumped through gates or doors B pivotally carried at the lower part of the car.

I preferably use a car or vehicle having a fixed hopper or inclines C leading toward the gates B the said gates being hinged at the terminals of the inclines. To the gates B are pivotally connected upright rods D that are adapted to be raised or lowered to close and open the gates B. I operate the rods by means of an eccentric E suitably hung on the sides of the car or vehicle A. This eccentric is preferably disk shaped as shown. I preferably use a set of rods D and an eccentric E with each set on opposite sides of the car said eccentrics being preferably placed on the outer side of the upright walls of said car. By this means the eccentrics and rods D are kept from engagement with the load and are thereby left free to operate. The eccentrics E may be turned by means of levers F connected with the pivots *a* of said eccentrics. The rods D are pivotally connected with a

strap or head G that receives the eccentric E as shown. The eccentrics E and straps G are preferably located between the side wall *a'* of the car or vehicle and a plate or cover *b* carried thereby. A rim or projection *A*² carried by the side wall *a'* of the car or vehicle, A may receive and hold the cover or plate *b* whereby a casing or chamber is formed to contain said eccentric and strap. The lever F is shown located outside of the plate or cover *b*.

To assist in guiding the strap G in its vertical motions, I secure thereto a rod H that passes between suitable pins or an otherwise arranged guide *d* which guide acts to steady the strap G in its travels. By this means the movements of the rods D are balanced and the eccentric device not only operates the gates but through this medium equalizes their downward thrust so that both gates will begin moving downward at the same moment, will move at the same speed and cover precisely the same distance. An approximately simultaneousness of movement in the two gates is absolutely essential to provide an easily operable car under all conditions.

I is an abutment placed at one side of the strap or head G and arranged to limit its lateral motion in one direction so as to insure that the eccentric cannot be thrown too far to one side during the operation of raising or lowering the gates or doors B. This abutment I acts to indicate to the operator when the eccentric has been moved the proper distance. Any suitable means may be used for locking the levers F in either position, if desired.

The gates or doors B are operated as follows:—Suppose they are closed as in Fig. I and it is desired to open them. The levers F (one or both) will be moved to one side whereupon the eccentric E will depress the strap G and rods D thereupon swinging the gates B down fully open as indicated in Fig. III. A reverse motion of the lever F will cause the eccentric E to lift the strap G and with it the rods D and gates or doors B. As the rods D are pivoted at both ends, free motion is given them without straining the strap G.

It will be understood that the eccentric E is so placed that when the gates B are closed,

the weight upon them will have no tendency to turn the eccentric as said weight will press the eccentric firmly upon its pivot, the next turn of the eccentric E when the gates are closed being in a direct vertical line with its pivot. The gates B will then have no tendency to open spontaneously should the lever F not be held.

My improvements will be found simple in construction, not liable to get out of order and effective in use.

As soon as the eccentric has been turned slightly to one side from the position shown in Fig. II, the weight of the load upon the gates will tend to automatically turn said eccentric and carry the parts into the position shown in Fig. III whereby simplicity of operation is attained.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a dumping car, the combination of the horizontal gates, hinged at the terminals of the fixed hopper and having their meeting and separating edges located centrally as regards the car body, eccentrics affixed to the sides of the car and connected by a shaft extending through the body of the car and arranged to support and lock the gates in their horizontal and closed position by means of rigid connecting rods, with said rods, all the parts being so arranged that upon the turning of the eccentrics the gates will be simultaneously thrust down and open, as shown and described.

2. In a dumping car, the combination of the gates hinged to the bottom of the car and opening in opposite directions, with a disk eccentric E for operating the same, and rigid connections extending between said eccentric and each of said gates, substantially as set forth.

3. In a dumping car, the combination of the pivoted gates or bottom, the eccentric hung on the car body, and rigid connections be-

tween said gates and eccentric, all the parts being so arranged as that the gates will be locked in their closed position when the eccentric is on its dead center, as set forth.

4. In a dumping-car, the combination of the pivoted gates or bottom, with an eccentric, a strap or collar connected therewith to be operated thereby, and rods extending from said strap to said gates, substantially as set forth.

5. In a dumping car, the combination of the pivoted gates or bottom, with a disk eccentric having its longest portions in line with its pivot when in the normal position, and connections between said gates and eccentric, whereby the gates will be automatically locked when the eccentric is in its normal position.

6. In a dumping car, the combination of the pivoted gates or bottom, with an eccentric, a strap or collar connected therewith, rods connecting said gates and collar and an abutment located in proximity to said collar to limit the motion of the latter in one direction, substantially as set forth.

7. In a dumping car, the combination of the pivoted gates or bottom, with an eccentric, a strap or collar therefor, rods connecting said gates and collar and a guide connected with said collar for regulating its movement, substantially as set forth.

8. In a dumping car, the combination of the pivoted gates or bottom, an eccentric, a collar therefor, rods connecting said gates and collar, a rod or arm H, projecting from said strap, and guide to receive said rod, substantially as set forth.

9. In a dumping car, the combination of the pivoted gates or bottom, with an eccentric, rods connecting said gates and eccentric and means for guiding the rods and regulating their movement, substantially as set forth.

WILLIAM MCMAHON.

Witnesses:

L. WOOLSEY,
C. PRIOR.