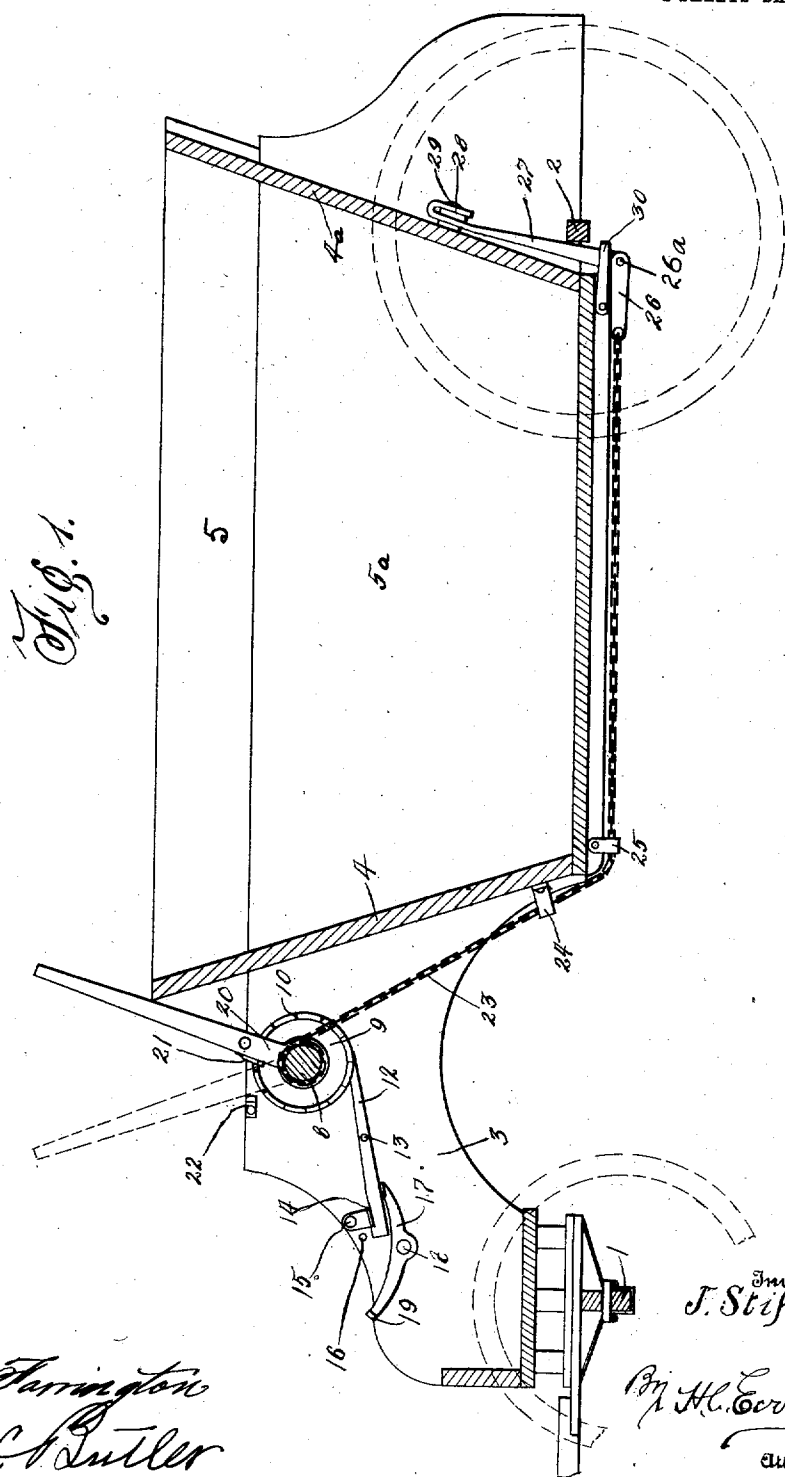


972,941.

J. STIFTER.
DUMP WAGON.
APPLICATION FILED APR. 29, 1909.

Patented Oct. 18, 1910.

2 SHEETS-SHEET 1.



Witnesses
R. F. Harrington
R. H. Butler

Inventor
J. Stifter.

By H. C. Everett
Attorneys

J. STIFTER.

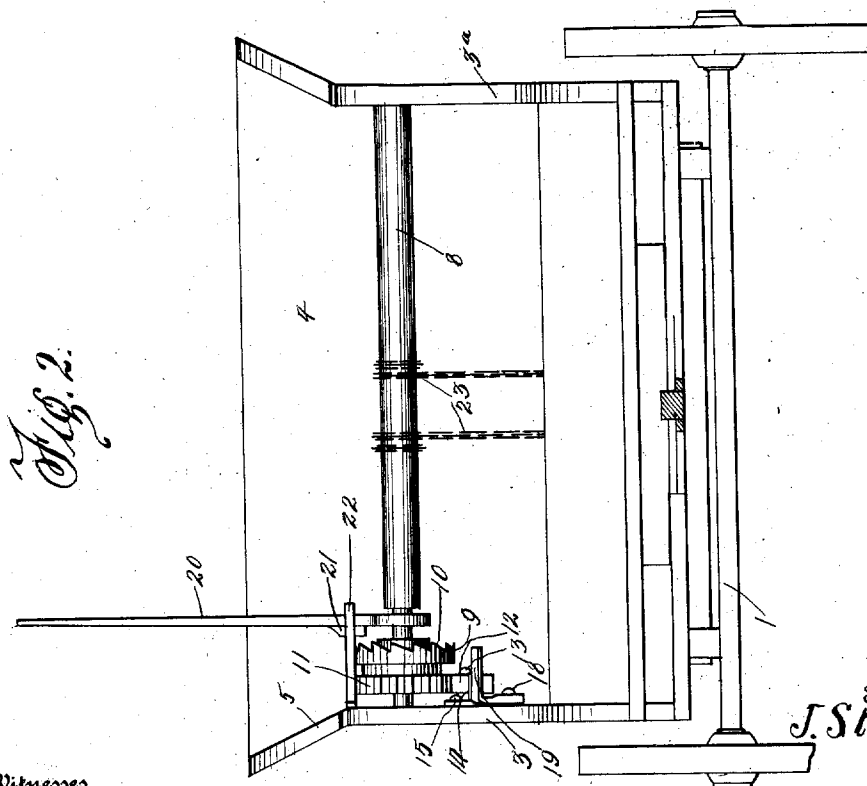
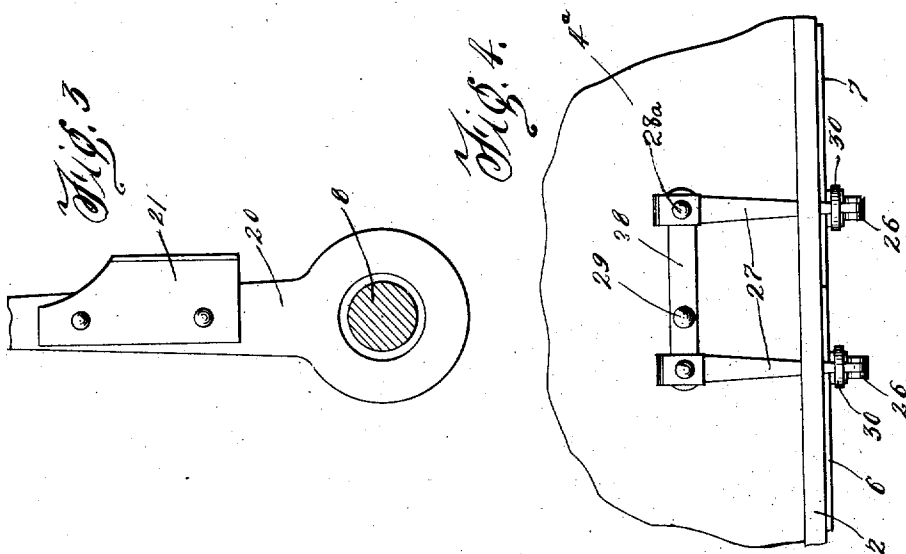
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Witnesses
Prof. Harrington
R. H. Butler

Inventor
J. Stifter.
 By *H. C. Evert & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH STIFTER, OF PITTSBURG, PENNSYLVANIA.

DUMP-WAGON.

972,941.

Specification of Letters Patent.

Patented Oct. 18, 1910.

Application filed April 29, 1909. Serial No. 492,972.

To all whom it may concern:

Be it known that I, JOSEPH STIFTER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Dump-Wagons, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to dump wagons, and more particularly to that type of vehicle having hinged doors or gates for discharging dumpable material, the doors or gates being released by the driver of the vehicle and replaced to their normal position in order that the vehicle can receive another load.

The invention aims to obviate the necessity of using a spring-pressed or gravity pawl in connection with a ratchet mechanism for elevating doors or gates that have been opened, by providing an operating lever with a fixed lock or projection that can be moved into and out of engagement with a ratchet wheel for rotating a shaft.

The invention further aims to provide a door operating mechanism that can be easily controlled to cause one door of a dump wagon to be closed in advance of the associate door, thereby preventing the doors from binding during the closing movement.

The invention will be hereinafter considered in detail and then pointed out in the appended claims, and reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed without departing from the spirit of the invention which falls within the scope of the claims hereunto appended.

In the drawings:—Figure 1 is a longitudinal sectional view of a portion of the dump wagon constructed in accordance with my invention, Fig. 2 is a front elevation of a portion of the same, Fig. 3 is an enlarged elevation of a portion of the operating lever of the dump wagon, and Fig. 4 is an end view of a portion of the dump wagon.

Referring to the drawings in detail 1 designates the forward truck and 2 the rear truck of a vehicle. The body of the vehicle comprises side walls 3 and 3^a which extend vertically, a transversely-extending inclined front wall 4 and a transversely-extending

inclined rear wall 4^a. The walls 4 and 4^a project above the top edge of the side walls 3 and 3^a. Mounted upon the top edge of the side walls 3 and 3^a are inclined side pieces 5. The side pieces 5 in connection with that portion of the side walls between the end walls and further in connection with the walls 4 and 4^a provide what may be termed a hopper 5^a. The hopper 5^a is open at its top and closed at its bottom through the medium of the gates 6 and 7 whereby the discharge of material from the hopper 5^a is controlled. The doors or gates 6 and 7 are hinged to the bottom of the side walls 3 and 3^a. The foregoing construction is well known in an ordinary dump wagon, no claim is made thereto, the invention, however, resides in the mechanism for controlling the opening and closing of the doors or gates 6 and 7.

Journalled in the side walls 3 and 3^a forwardly of the hopper 5^a is a shaft 8 provided with a disk 9 having one face thereof formed with circumferentially arranged ratchet teeth 10. Connected to the ratchet disk 9 is a toothed wheel 11 which is mounted upon the shaft 8 and which is adapted to be engaged by an arm 12 pivotally connected as at 13 to the forward portion of the inner face of the side wall 3. That end of the arm 12 which does not engage with the toothed wheel 11 is provided with a shoulder or notch as at 14 and adapted to engage in the notch 14 is a pivoted latch 15 carried by the wall 3 and which is provided to maintain the arm 12 in engagement with the toothed wheel 11 when said latch 15 engages in the notch 14. The latch 15 can be swung out of engagement with the arm 12, but its movement in one direction is limited by a laterally extending pin 16 which projects from the inner face of the wall 3. Pivotaly connected as at 18 to the inner face of the wall 3 at the forward end thereof is a lever 17 for engaging the arm 12 to swing said arm out of engagement with the toothed wheel 11 when the latch 15 is shifted to engagement with the pin 16. The lever 17 is provided with a foot tread 19, whereby the driver of the vehicle can conveniently move the lever 17 to shift the arm 12 and release the shaft 8. Loosely mounted upon the shaft 8 adjacent to the disk 9 is an operating lever 20 which is provided with a fixed lug or projection 21 adapted to engage the ratchet teeth 10 of

the disk 9. The rearward movement of the lever 20 is limited by the top edge of the wall 4, while the forward movement of said lever is limited by the laterally-extending arm or bracket 22 carried by the wall 3. Adapted to wind upon and unwind from the shaft 8 is a pair of cables or chains 23 which extend through the guide brackets 24 and 25, the former being carried by the wall 4 near the bottom thereof and the latter carried by the confronting edges of the doors 6 and 7. The chains or cables 23 extend rearwardly and are attached to the links 26 which are pivotally connected as at 26^a to the depending hangers 27. Pivotally connected as at 29 to the outer face of the wall 4^a is a cross head 28 to each end of which is pivotally connected as at 28^a a hanger 27. The hangers 27 extend through stirrups 30 fixed to the rear edges of the doors or gates 6 and 7. The pivot 29 of the cross head 28 is arranged at one side of the center of the cross head and owing to the fact that the cross head 28 is fulcrumed off center, there is a difference in leverage of the two arms of the cross head, and it is this difference in the leverage that causes the door 6 to close in advance of the door 7. As the door 7 is connected to the long arm of the cross head, the weight of the door 7 will have a greater leverage than the weight of the door 6. Consequently when the chains 23 are wound upon the shaft 8, the door 6 will be raised slightly in advance of the door 7, thus preventing the edge of the door 7 from interfering with the closing movement of the door 6.

From the foregoing construction and arrangement of parts it is evident that if the doors should be closed and the shaft 8 released owing to the shifting of the arm 12 out of engagement with the toothed wheel 11 the weight of the load will cause the doors to open. To close the doors it is only necessary for the driver or operator to oscillate the lever 20 after shifting the same laterally upon the shaft so that the projection will engage in the teeth 10 of the disk 9, the weighted or elongated portion of the arm 12 maintaining said arm in engagement with the toothed wheel 11 which will prevent the doors from receding while a fresh grip is being obtained upon the teeth 10 by the lug or projection 21 of the lever 20.

Having now described my invention what I claim as new, is:—

In a dump wagon, a regulating mechanism for the closing movement of the doors or gates of the wagon, said mechanism consisting of an eccentrically mounted cross head, a pair of hangers pivoted to the ends of the cross head, rearwardly projecting straps carried by the doors or gates and through which extend said hangers, and right angularly disposed links pivotally attached to the lower ends of the hangers for connecting them to the elevating cables for the doors or gates.

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

JOSEPH STIFTER.

Witnesses:

K. H. BUTLER,
A. J. TRIGG.