

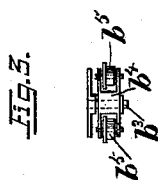
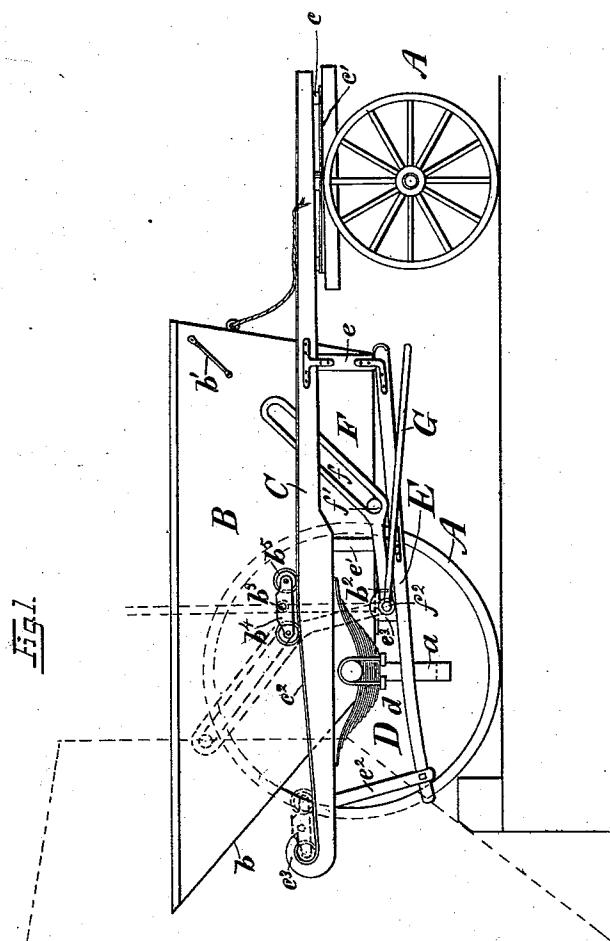
(No Model.)

2 Sheets—Sheet 1.

M. L. SENDERLING.
DUMPING WAGON.

No. 531,138.

Patented Dec. 18, 1894.



Witnesses;
L. N. Legendre
O. Sundgren

Inventor
Martin L. Spendling
by Attorneys
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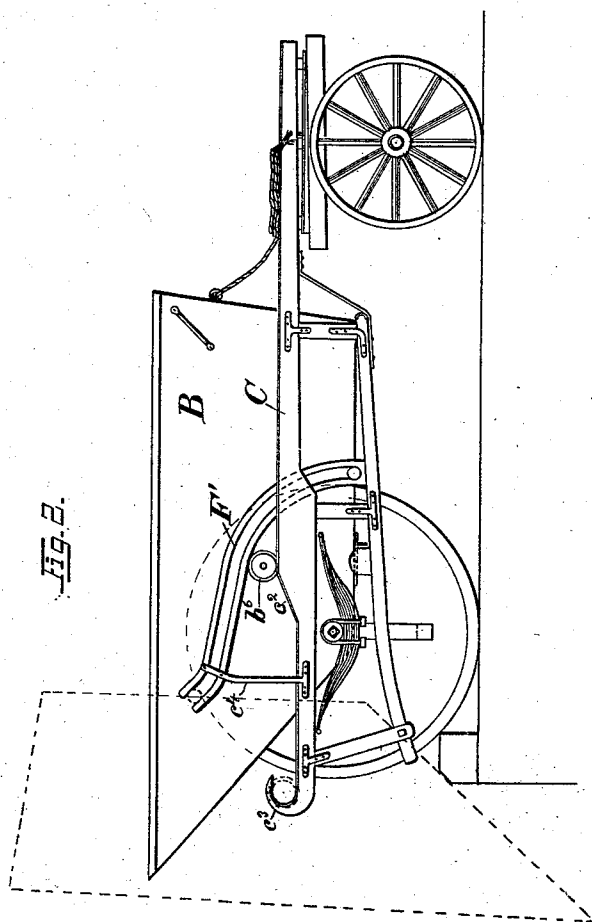
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UNITED STATES PATENT OFFICE.

MARTIN L. SENDERLING, OF JERSEY CITY, NEW JERSEY.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 531,138, dated December 18, 1894.

Application filed January 24, 1891. Serial No. 378,925. (No model.)

To all whom it may concern:

Be it known that I, MARTIN L. SENDERLING, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Dumping-Wagons, of which the following is a specification.

My invention relates to an improvement in dumping wagons in which the body of the wagon is supported normally at a point below the centers of the supporting wheels, and has a movement rearwardly when tilted, its point of support changing during its tilting movement, from its normal position to a point near the center of gravity of the load.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view in side elevation partly in section showing the body in its normal position in full lines, and in its tilted position in dotted lines. Fig. 2 is a view in side elevation showing a somewhat modified form and Fig. 3 is a view in detail representing a top plan of the truck which forms the support for the body during its tilting movement.

A represents one of the rear supporting wheels, the corresponding one being removed to more clearly indicate the structure of the body and its connections. The axle on the ends of which the wheels A are mounted, is cranked downwardly as shown at *a* so as to admit of the body B of the wagon being set below the connections of the axle with the supporting wheels. The body B in the form here presented is intended to dump its load without removal of an end board, and for this purpose its rear end is slanted, as shown at *b*.

A pair of side bars C are supported forwardly of their rear ends upon springs D of suitable tension, the springs D being clipped to the axle in proximity to the hubs of the wheels, between the wheels and the crank portion, as shown at *d*. The front ends of the side bars C are firmly framed together and supported by means of suitable head blocks *c* upon a fifth wheel *c'* the latter being supported upon the axle of a pair of front wheels A'.

Depending standards *e e'* and *e''* are fixed at their upper ends to the side bars C, one set to each bar, and are connected at their lower ends by bars E one upon each side for each set of standards and the bars E are united by

cross pieces or girders at their front and rear ends in any well known or approved manner, and intermediate between their ends they are united by a beam *e³* which serves to normally support the body B and its load. The supporting beam *e³* preferably rests at its ends upon the bars E and the bars E are preferably inclined downwardly from their front to their rear ends as shown.

The space between the bars C is left free for the rearward movement of the body B during the operation of dumping.

When in normal position the body B rests with its front end upon the front of the frame depending from the side bars and its center portion upon the cross beam *e³*, the intention being that its load shall be so disposed that substantially the entire weight of body and load shall be taken by the cross beam *e³*, with just enough tendency to tilt forwardly to hold the forward end down. To guard against the unintentional backward tilting of the body, provision is made for locking its forward end down. Such means may consist of simply a rope, or any well known or suitable catch may be employed. The body is also conveniently provided with a handle *b'*, at its front end, for convenience in manipulating it and at a point in front of and in close proximity to the cross beam *e³* the said body is provided with a depending flange or shoulder *b²*, fixed to its bottom and extending along down the front of the beam *e³* to prevent any unintentional rearward shifting of the body with its load and to steady it against lateral swing.

The body B is provided upon each side and as near as may be to the center of gravity of the load which it is intended to carry, with trunnions *b³* upon which a roller or set of rollers is mounted for the purpose of supporting the weight of the load when the body is tilted. In Fig. 1 I have shown the trunnion *b³* as loosely mounted in a carriage *b⁴* provided with a set of two flanged rollers or bearing wheels *b⁵*, while in Fig. 2 I have represented the said trunnion as provided with a single flanged bearing wheel *b⁶*. The upper faces of the side bars C are provided with tracks *c²*, on which the rollers *b⁵* and *b⁶* are intended to rest and travel. The position of the trunnions *b³* with respect to the support *e³* is such, however, that when the body is in its normal po-

sition as shown in full lines, the load will be carried entirely by the support e^3 or the trunnions b^3 and the wheels carried thereby, will be so near the bearing point that as soon as the body has been tilted a short distance, the load will be taken upon the trunnions and their wheels, and hence upon the side bars C, and the cross beam e^3 will be relieved.

For the purpose of forcing the body with its load rearwardly during its tilting movement and utilizing as far as may be, the tendency to tilt, to force the body rearwardly, I provide upon each side an inclined track connected at one end to the stationary frame, and adapted to receive a guide stud or roller fixed to the body.

In the form shown in Fig. 1, the track is represented by F and is pivotally secured at one end to the end of the supporting beam e^3 . It is provided with an elongated slot f in which a guide stud or roller f^1 fixed to the body, is adapted to travel. At the point where the track F is pivotally secured to the support e^3 , it is provided with a hub f^2 adapted to receive the end of an operating lever which may be fixed thereto against rotation either by a set screw, or the hub might be squared and the end of the lever provided with a corresponding socket, or other well known structure might be adopted. The operating lever G extends forwardly within convenient reach of a person at the front of the wagon, and when lifted will tend to swing the track F upwardly and over to the rear, thereby lifting the front end of the body of the wagon and throwing it into the final tilted adjustment shown in dotted lines. As soon as the body has been tilted sufficiently to bring its load upon the wheels b^5 supported upon the track c^2 , the tendency to further tilt will at the same time cause the body to travel rearwardly along the track c^2 to the rear end where a suitable stop c^3 is provided. To assist such movement the track c^2 is inclined downwardly as it extends rearwardly from the normal position of the wheels b^5 . The body may be returned to its normal position after the load has been discharged by grasping the end of the lever G and drawing it over toward the front and downwardly.

In the form shown in Fig. 2 the track F' instead of being pivotally secured to the fixed frame, is fixed thereto at one end and extends upwardly in curved form and thence rearwardly, and its rear end is fixed to the side bar C by means of a suitable standard c^4 .

Instead of a pair of truck wheels as shown in Fig. 1, the trunnion as before stated, is provided with a single wheel b^6 and the track c^2 instead of being inclined gradually from the position of the wheel b^6 to its rear end, has first a steep incline and then a level portion. In this structure the front of the wagon must be lifted by hand or by suitable purchase to bring the load on to the wheel b^6 instead of by swinging the track F to produce the tilt. It will however, be observed that in the

structure shown in Fig. 1, the load may also be lifted by hand or other suitable purchase instead of by the swinging of the track F, if so desired.

By the above structure and arrangement of parts I am enabled to support a load upon its journey at a low down point, and am enabled to dump it with very little exertion at a point low down and well to the rear, in a manner particularly well adapted for discharging a load over a dock log for example, into a scow, or into a funnel or hole in the side-walk.

What I claim is—

1. A dumping wagon comprising a suitable supporting frame, a body having a tilting movement and a rearwardly traveling movement, and a track independent of the body support with which the body has a movable connection throughout its tilting and rearwardly traveling movement, the said track being secured at one end to the supporting frame, substantially as set forth.

2. A dumping wagon comprising side bars between which the body is located, a supporting frame depending from the side bars, the body having normally a bearing upon the depending supporting frame and being provided with a second bearing which is adapted to engage the side bars and form a support for the body when the body is tilted, the said body having a traveling movement bodily between the side bars and a tilting movement, and a guide track secured at one end to the frame and having a loose connection with the body, substantially as set forth.

3. A dumping wagon comprising side bars having downwardly inclined tracks leading toward their rear ends, a frame depending from the side bars, a body having a normal support in the depending frame and having an auxiliary support upon the tracks, the said body being free to tilt and move rearwardly between the side bars and a guide track with which the body has a movable connection, the said track being secured at one end to the supporting frame, substantially as set forth.

4. In a dumping wagon, the combination with supporting wheels and a crank axle, of a pair of side bars supported upon the axle, a depending frame fixed to the side bars, a body supported normally upon the depending frame within the crank portion of the axle and having an auxiliary support upon the side bars, the said body being free to tilt and move rearwardly between the side bars and a swinging guide track pivotally secured to the depending frame and having a movable connection with the body, substantially as set forth.

5. In a dumping wagon, the combination with the supporting frame and the body having a tilting and rearwardly traveling movement in the frame, of a guide track independent of the body support pivotally secured at one end to the supporting frame and having a movable connection with the body throughout its tilting and rearwardly traveling move-

ment, and an operating lever engaged with the swinging guide track for tilting the body, substantially as set forth.

6. The combination with the supporting
5 frame consisting of a pair of side bars provided with tracks and a frame depending from the side bars, of a body supported normally upon the depending frame, the said body being provided at its sides with trucks in proximity to the tracks on the side bars, the said
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body being free to tilt and travel rearwardly, the relation between the bearing of the body on the depending frame and its truck bearings on the side being such that when the body is tilted it will bear upon the trucks on the tracks, substantially as set forth. 15

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Witnesses:

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