

C. M. HAESKE.
DUMP WAGON.
APPLICATION FILED OCT. 13, 1908.

943,743.

Patented Dec. 21, 1909.

3 SHEETS—SHEET 1.

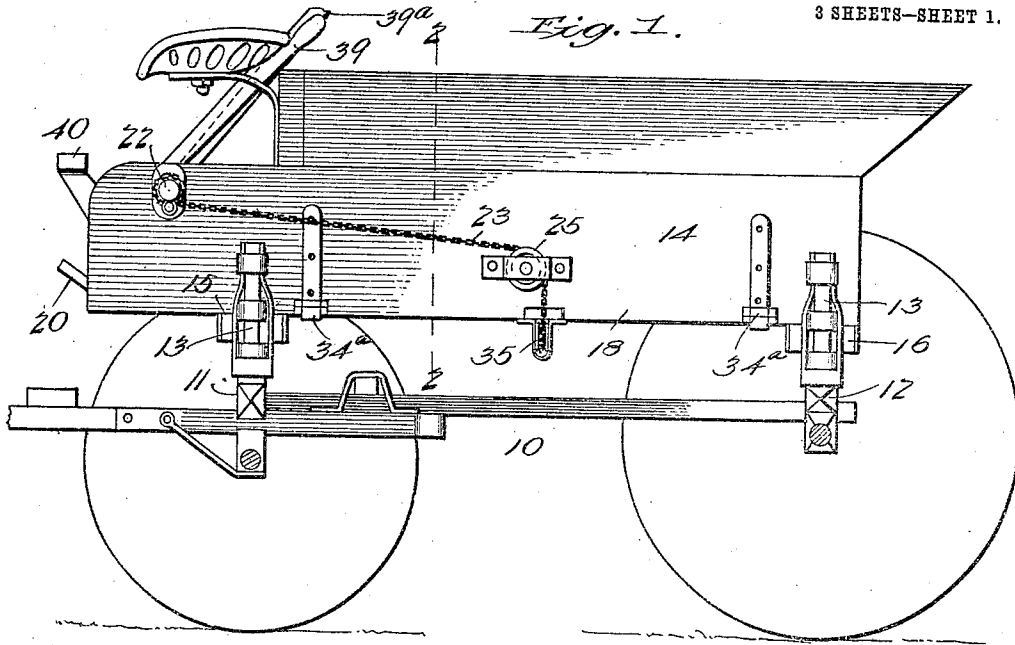
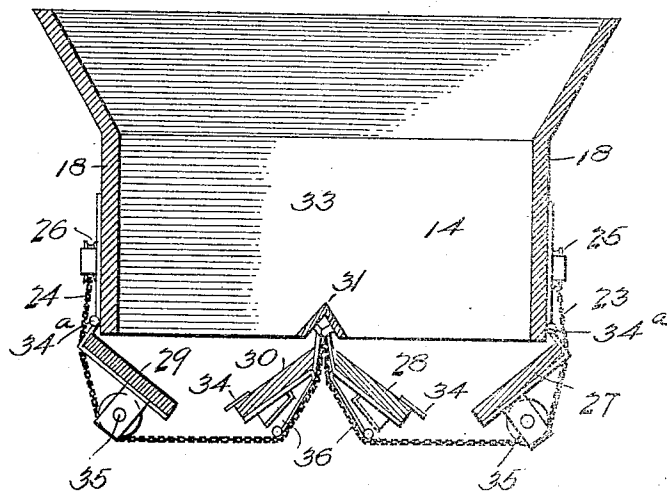


Fig. 2.



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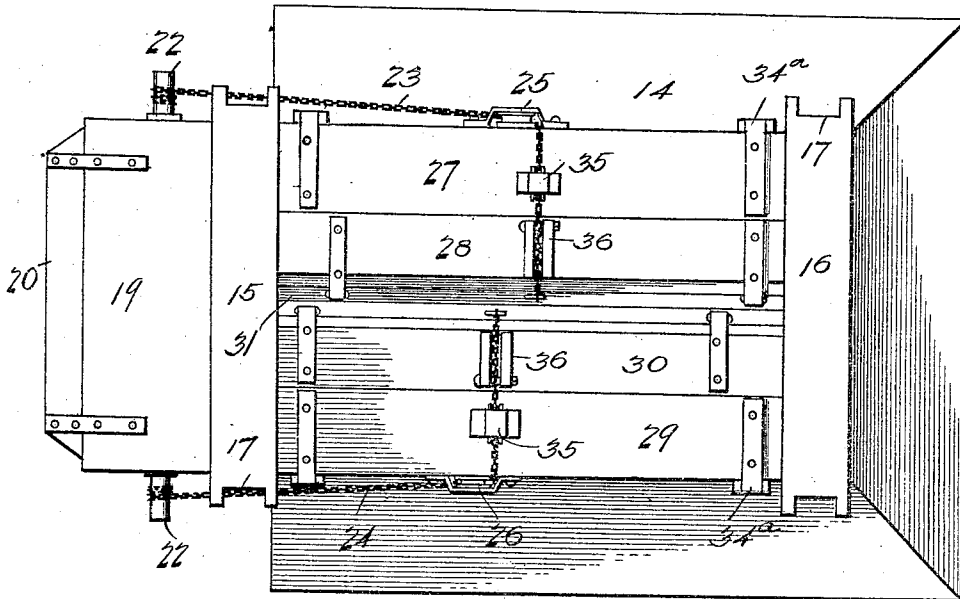


Fig. 3.

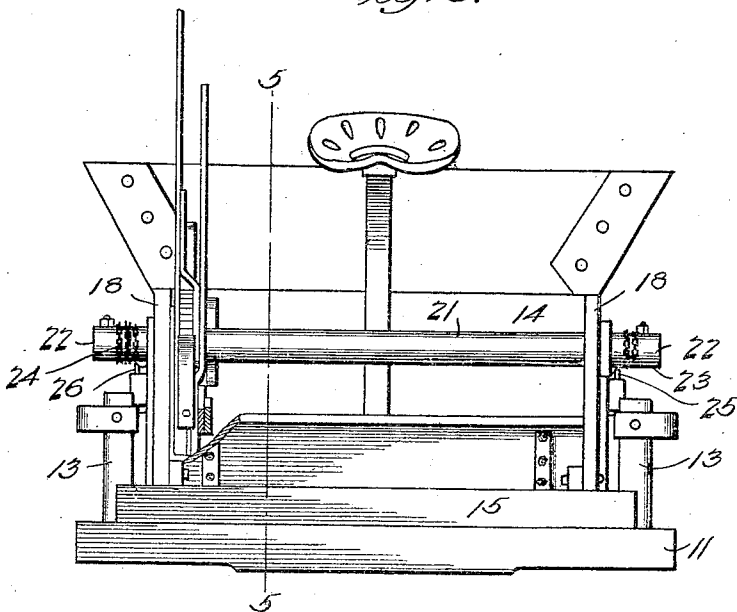


Fig. 4.

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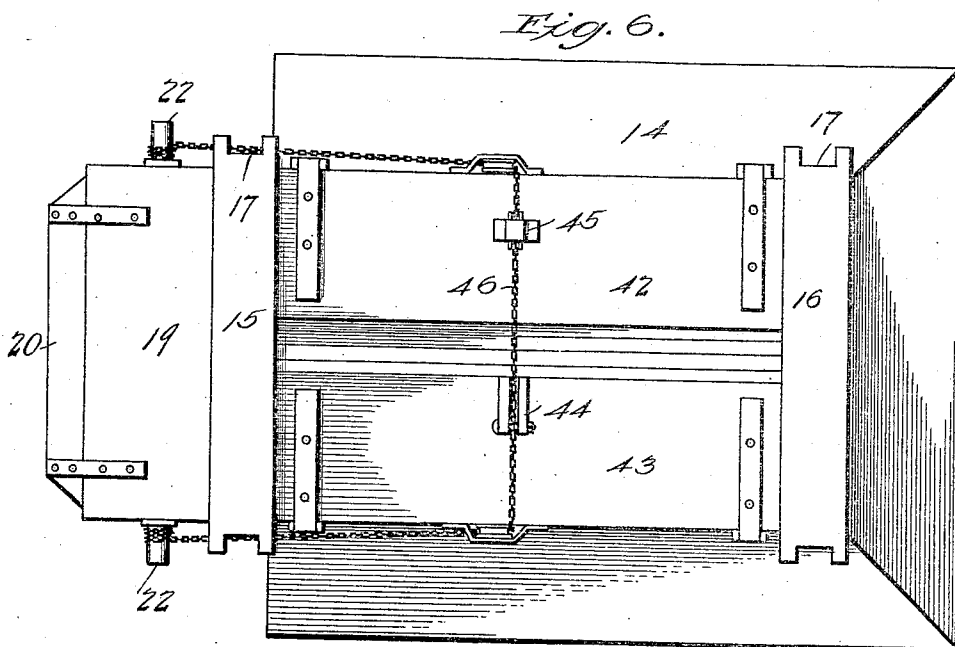
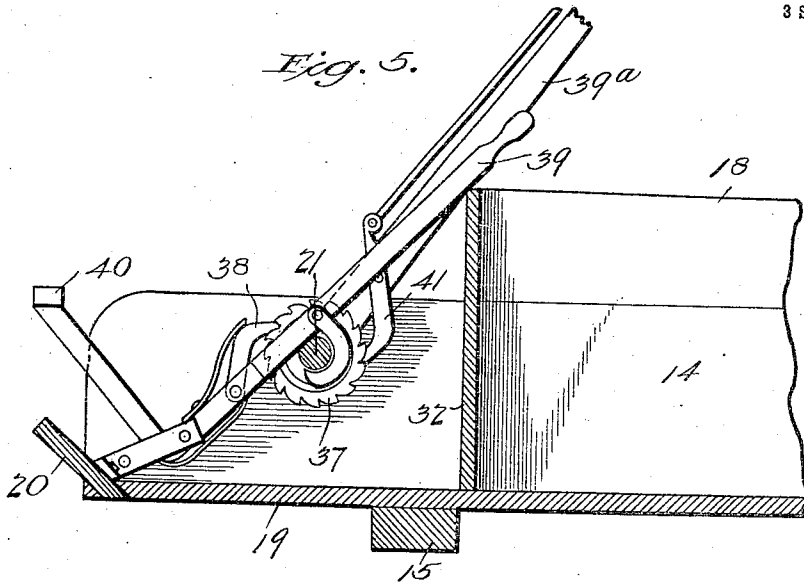
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UNITED STATES PATENT OFFICE.

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DUMP-WAGON.

943,743.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed October 13, 1908. Serial No. 457,548.

To all whom it may concern:

Be it known that I, CHARLES M. HAESKE, citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Dump-Wagons, of which the following is a specification.

This invention relates to dumping wagons, and has specially in view a box or body therefor which may be readily attached to any of the usual wagon running gears, and in which all of the dumping mechanism is carried by the body or box proper.

With the above and other objects in view, the invention contemplates in its general organization a body or box which is mounted on raised sills which are adapted for engagement with the usual stakes carried by the running gear, said sills being of such height that the body or box and its dumping sections will be raised above the said running gear, the said dumping sections being hinged to said body and having a chain or cable connection with a winding drum with which co-operates controlling levers whereby the load may be discharged by gravity, and also being provided with means whereby the hinged sections may be returned to their closed position by the operator without leaving the driver's seat.

In carrying out the objects of the invention generally stated above, it will of course be obvious that changes in details and structural arrangements may be resorted to, but certain preferred and practical embodiments of the invention are shown in the accompanying drawings, in which—

Figure 1 is a side elevation of an ordinary farm wagon gear showing the invention applied thereto, the wheels of the said running gear being removed. Fig. 2 is a transverse sectional view of the same taken on the line 2—2, the bottom sections of the body or box being shown in their load discharging position. Fig. 3 is a bottom plan view of the box or body, the same being removed from the running gear. Fig. 4 is a front view of the wagon body or box showing the winding drum and controlling levers therefor. Fig. 5 is a sectional view taken on the line 5—5 Fig. 4. Fig. 6 is a view similar to Fig. 3 but showing a modified arrangement

of bottom sections and controlling chain or cable.

Like characters of reference designate corresponding parts.

Referring to the accompanying drawings, 10 designates a farm wagon running gear the front and rear bolsters 11—12 of which are provided with the usual body stakes 13.

The body proper 14 of the dumping wagon is supported upon front and rear sills 15—16, respectively which are made from thick, heavy timber and have their ends notched as indicated at 17 to receive the wagon stakes 13 when the said sills are resting on the bolsters of the running gear. The said body 14 is formed of the side boards 18 which extend beyond the front portion of the running gear and at their forward portion they form the support for the foot boards 19 and the dash board 20, and also form side bearings for the winding drum 21, the projected ends 22—22 of which have attached thereto the cables or chains 23—24 which pass over the pulleys 25—26 arranged horizontally on the exterior of said side boards and thence depend vertically over the hinged bottom sections 27—28 and 29—30 of the said body and have their ends connected to a middle bar 31 which extends longitudinally of the wagon body and which is supported by the front and rear ends 32—33 of the wagon body. The said bottom sections 27—28 and 29—30 are arranged in pairs the outer ones 27 and 29 having a hinge connection 34^a with the side boards, and the inner ones 28—30 having a hinge connection with the middle bar 31. The hinged bottom sections 28—30 have their edges which contact with the sections 27—29 provided with cleats 34 which are preferably formed of thin sheet metal and serve to make the joint between said sections sand-proof. And in order to subserve this purpose it is necessary to have the sections which carry said cleats assume their closed position slightly ahead of the other sections. This is accomplished by providing the outer sections 27—29 with a sheave or pulley over which the chains or cables 23—24 pass, and the inner sections 28—30 with an angular leaf spring 36 over which the chain or cable drags, as will be more fully described later. It will thus be seen that the leaf-

spring 36 is engaged by the chain in closing before the pulley 35, or, in other words, the spring 36 holds the section 28 farther away from the chain than the section 27 is held, the angle of the one section relative to the other and to the chain serving to insure that the section 28 will be closed in advance of the section 27.

The winding drum 21 has fast thereon a gear wheel 37 which is normally held against rotation by means of a pawl 38 carried by the lower portion of a hand lever 39 having a pivotal mounting on the side board of the wagon body. The lower portion of said hand lever 39 is upturned to form a foot lever 40, so that said lever may be operated by foot or hand. The said pawl 38 is arranged to engage with the front portion of the gear wheel 37 and when released therefrom, the winding drum is free to rotate to unwind the chains or cables therefrom. A hand lever 39^a carries another pawl 41 which engages with the rear of said wheel 37 and which subserves the function of rotating the said wheel to cause the winding drum to wind the cables or chains upon its outer ends. Said pawl 41 is controlled in a well known manner by means of a pivoted finger (not shown) carried by lever 39^a and connected to the pawl by a suitable rod.

In Fig. 6 of the accompanying drawings a modification of the structure just described is proposed, the same consisting in forming the bottom of the body of but two sections, 42—43, the section 43 being provided with the chain or cable supporting angular leaf spring 44 and the section 42 being provided with a chain or cable pulley 45. In this form of the invention but one cable or chain 46 is used, the ends of the same being wound on the projected ends of the winding drum and the loop portion thereof passing over the two hinged bottom sections.

From the foregoing description it will be understood that through the described form of wagon body, the same is readily capable of being placed upon any of the usual farm or other wagon gears, the only necessary feature of such gear being required is the usual wagon body engaging stakes. And it will also be understood that the arrangement of the lifting chains or cable is such that the same hang practically suspended in a loop secured at one end to the center bar 31, the other end depending from the edge of the wagon body. Thus, when a sufficient amount of the chain is slackened, the loop will drop so that the sections 27—28, 29 and 30, will hang vertically, with their free edges unsupported by the chains or cables. Upon winding the chains or cables up, however, the section 27 will be supported on the chain through the medium of pulley 35, and section 28 will be supported on the chain or

cable through spring 36. Said spring, however, is set at such an angle as to hold section 28 farther away from the chain or cable than section 27. When the chain is tightened both sections will be lifted with equal force and velocity, the section 28, however, being seated prior to section 27 by reason of its being held higher by its spring. Further tension on the chain will compress the spring while the section 27 is being moved up against cleat 34, thus tightly closing the bottom. And it will also be understood that through the described winding drum controlling levers and pawls, it is possible for the operator to control the opening movements of the bottom sections either by hand or foot, and further that the opening may be either partial or complete as desired.

The operation of the invention is as follows, assuming that the body is loaded and it is desired to deposit, or dump, the load:— Either the hand lever 39 or the foot lever 40 is thrown forwardly, carrying with it the pawl 38, whereupon the winding drum is free to rotate, which releases the bottom sections from all restraint and the same swing to their open position and dump the load. To return the sections to their closed position, the hand lever 39^a is rocked forwardly and rearwardly which causes its pawl to engage with and rotate the winding drum to cause the chains or cables to wind upon the ends thereof and thereby raise the sections to their closed position—the winding drum being prevented from rotating in the opposite direction by the pawl 38.

In the preferred embodiment of the invention the middle bar 31 is shown as formed from an inverted V-shaped bar, but it will of course be obvious that other types of bar may be used, the present one being suggested owing to the fact that its inclined sides serve to divide the load.

Claims:—

1. A dumping body for wagons provided with hinged bottom sections, closing means for all of said sections, means carried by one of each pair of sections for covering the joint between them, means for causing the last-named sections to assume their closed position slightly in advance of the other sections, the same comprising an angular leafspring on the first-closing sections over which the closing means passes.

2. A dumping body for wagons provided with hinged bottom sections, closing means for all of said sections, means carried by one of each pair of sections for covering the joint between them, means for causing the last-named sections to assume their closed position slightly in advance of the other sections, the same comprising an angular leafspring on the first-closing sections over which the closing means passes, a winding drum for said closing means, means for con-

trolling the movement thereof in one direction, and independent auxiliary means for controlling its movement in the other direction.

5 3. A dumping body for wagons provided with hinged bottom sections, means carried by one of each pair of sections for covering the joint between them, means for causing the last-named sections to assume their
10 closed position slightly in advance of the other sections, the same comprising an angular leafspring on the first-closing sections over which the closing means passes, said spring serving to hold the closing means at
15 a greater angle with relation to the first-closing section than to the last-closing section.

4. A dumping wagon comprising a body provided with complemental bottom sections constructed to open by gravity, means
20 for closing said sections, and means carried by one section arranged to be engaged by the closing means in advance of the engagement of the latter with the complemental
25 section.

5. A dumping wagon comprising a body provided with complemental bottom sections constructed to open by gravity, means for closing said sections, and a depending member carried by one section and arranged to
30 be engaged by the closing means in advance of the engagement of the latter with the complemental section.

6. A dumping wagon comprising a body
35 provided with complemental bottom sections constructed to open by gravity, means for closing said sections, and a depending resilient member carried by one section and arranged to be engaged by the closing means
40 in advance of the engagement of the latter with the complemental section.

7. A dumping wagon comprising a body provided with complemental bottom sections constructed to open by gravity, a chain or cable looped beneath said sections, means
45 for operating said chain or cable, and means carried by one of said sections for engaging said chain in advance of the engagement of the latter with the complemental section.

8. A dumping wagon comprising a body
50 provided with complemental bottom sections constructed to open by gravity, a chain or cable looped beneath said sections, means for operating said chain or cable, and a depending member carried by one section
55 and arranged to engage said chain in advance of the engagement of the latter with the complemental section.

9. A dumping wagon body provided with forwardly extending side boards, and having
60 bottom sections arranged in pairs one member of each pair of sections having a hinged connection with the said side boards, a middle bar carried by said body and to which the other members of the pairs of
65 sections are hinged, cables or chains for holding said sections in a closed position, a winding drum mounted in the forwardly extending portion of said side boards and to which said cables or chains are connected,
70 levers for controlling the movements of said winding drum, and a spring carried by one member of each pair of sections and adapted to engage said chain or cable in advance of the engagement of the latter with its com-
75 plemental section.

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

CHARLES M. HAESKE.

Witnesses:

S. E. BABCOCK,
E. H. LYNCH.