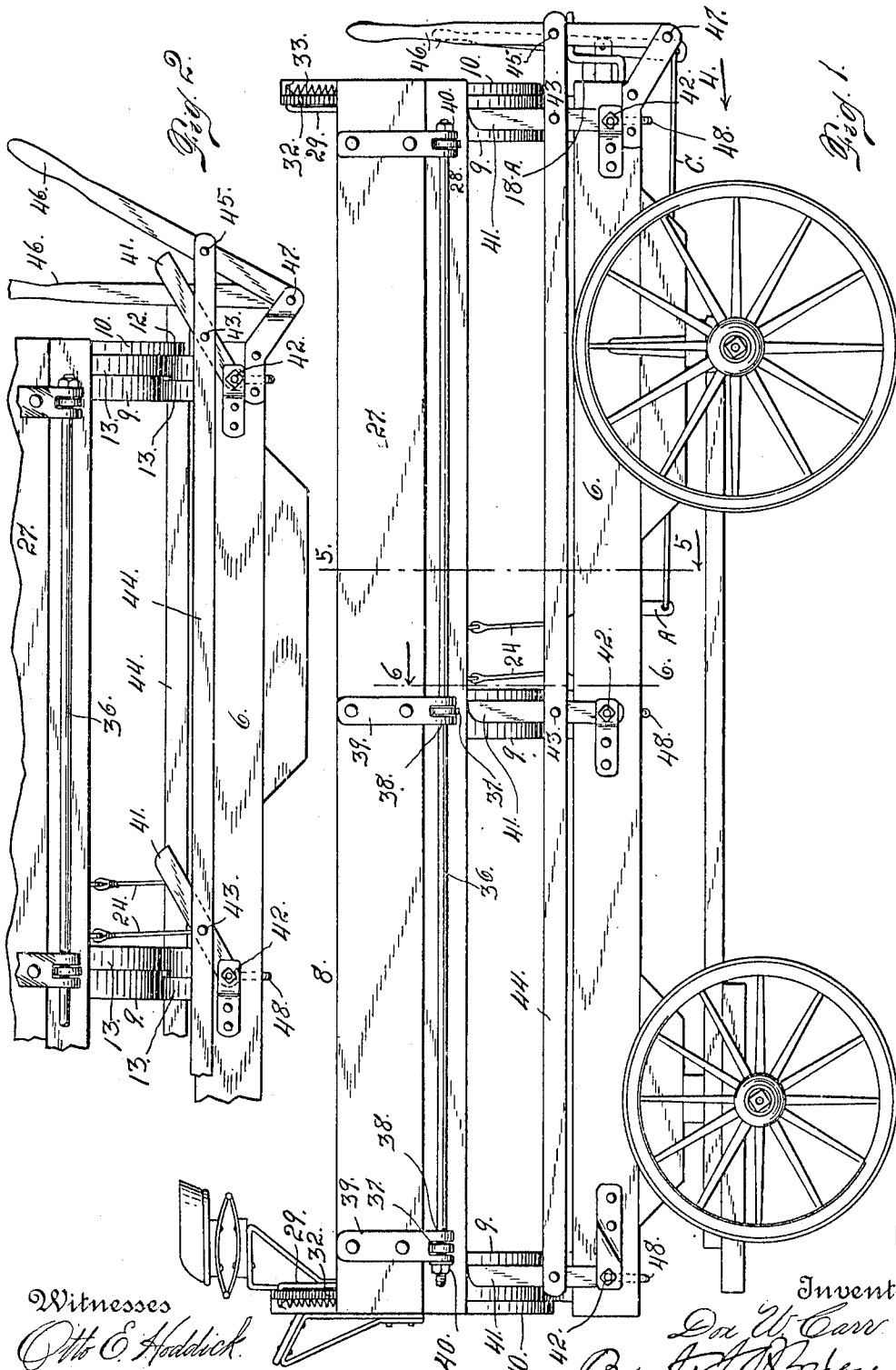


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DUMP BED FOR VEHICLES.
APPLICATION FILED JAN. 31, 1908.

949,313.

Patented Feb. 15, 1910.

3 SHEETS—SHEET 1.



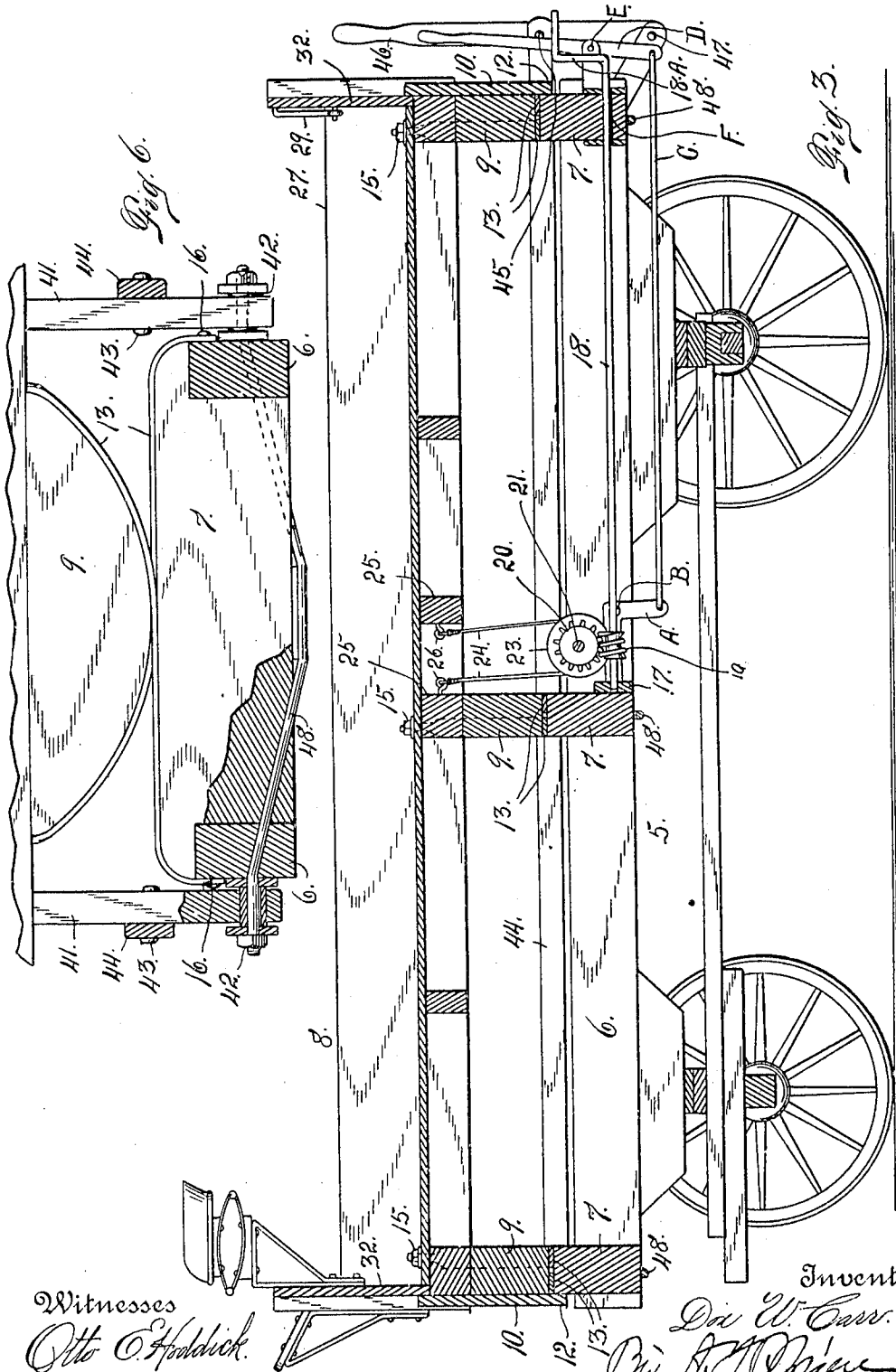
Witnesses
Otto E. Huddick.
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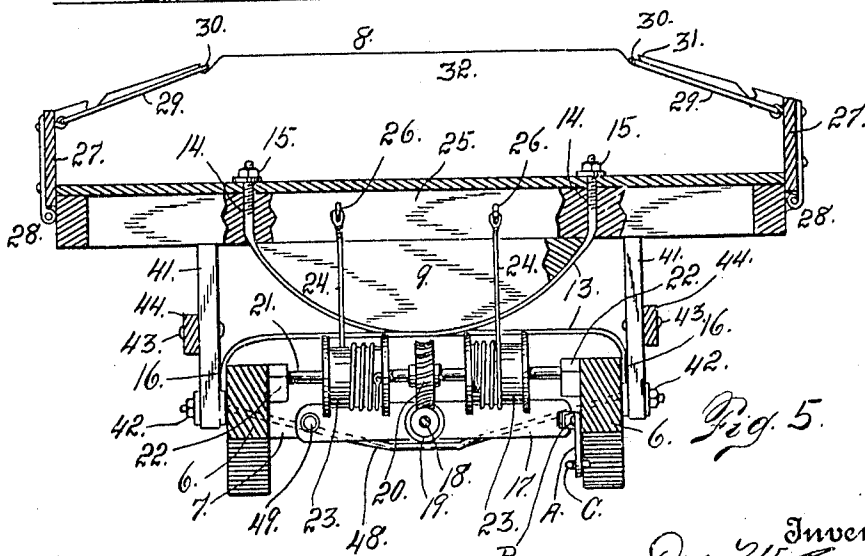
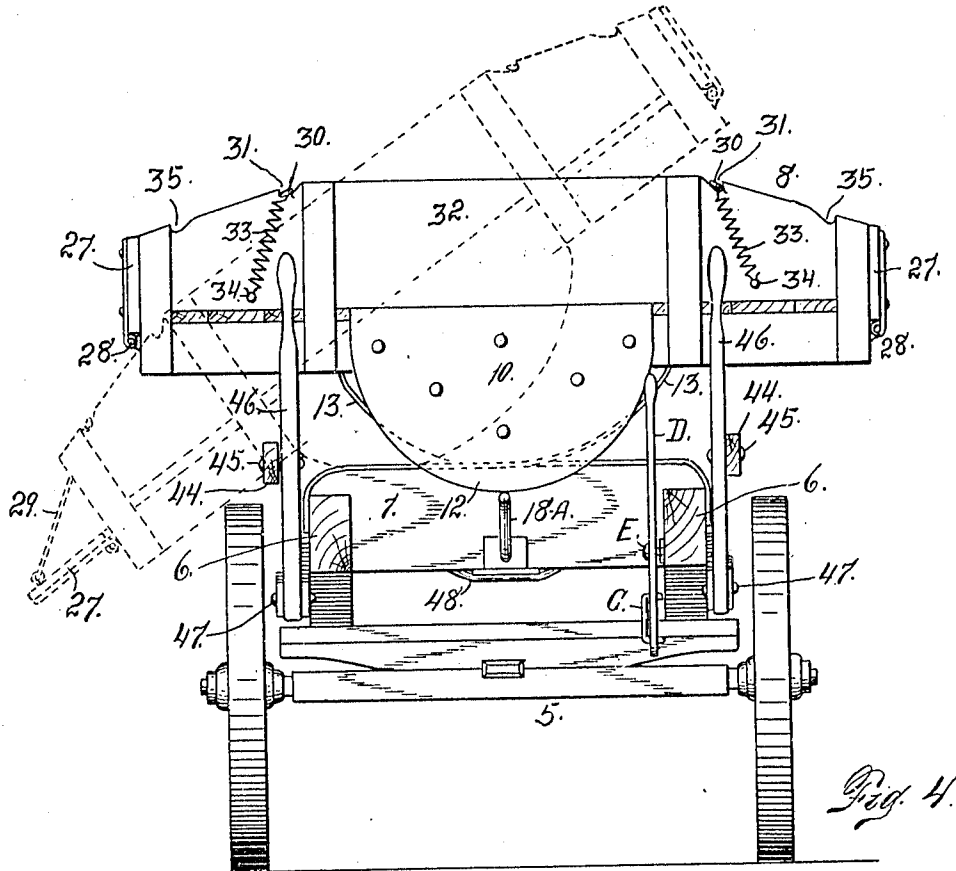
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UNITED STATES PATENT OFFICE.

DOX W. CARR, OF SEVERANCE, COLORADO, ASSIGNOR TO THE GREELEY MANUFACTURING COMPANY, OF GREELEY, COLORADO.

DUMP-BED FOR VEHICLES.

949,313.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, DOX W. CARR, a citizen of the United States, residing at Severance, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Dump-Beds for Vehicles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in dumping beds for vehicle bodies, being more especially intended for use in dumping sugar beets. It is evident, however, that it may be employed in dumping or handling vegetables or other material of any kind.

My improved dump bed is mounted to rock on the lower frame work of a vehicle body and is operated by a longitudinally disposed shaft provided with a worm which engages a worm wheel mounted on an axle which is provided with two drums located on opposite sides of the axis of the worm shaft and consequently on opposite sides of the longitudinal center of the bed, since the worm shaft is disposed directly underneath the bed and centrally arranged with reference thereto. To these drums are attached cables whose opposite extremities are connected with the bed on opposite sides of its longitudinal center, the cables being so arranged that as the worm wheel is operated, and the drums rotated, one cable will be winding on its drum while the other cable is unwinding from its drum. This allows the cable on one side to lengthen while the other cable is shortened, thus causing the bed to dump on the side of its longitudinal axis corresponding with the shortening cable. The dump bed is arranged to dump with equal facility from either side. Hence by rotating the worm shaft in one direction, the bed will dump on one side, while by reversing the worm shaft, the bed will dump in the opposite direction.

The dump bed is provided underneath with rockers which rest upon transverse beams with which the lower frame work of the body is provided. These rockers are

connected with the transverse beams by flexible metal straps. One of these straps is attached at one extremity to one end of the transverse beam, its opposite extremity being attached to the bed adjacent the opposite end of the rocker, while the other strap is attached to the opposite extremity of the transverse beam, its other end being attached to the bed adjacent the end of the rocker remote from the point of attachment of the first named strap.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a side elevation of a vehicle equipped with my improved dump bed. Fig. 2 is a fragmentary elevation of the body of the bed showing the side supports in a different position. Fig. 3 is a longitudinal section taken through a vehicle equipped with my improved dumping bed. Fig. 4 is an end elevation looking toward the left in Fig. 1. Fig. 5 is a cross section taken through the dumping body on the line 5—5 Fig. 1 viewed in the direction of the arrow. Fig. 6 is a section taken on the line 6—6 Fig. 1.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate what I will term the stationary frame work of the vehicle body, the same including side longitudinal beams 6, connected by transverse beams 7, the latter as shown in the drawing being three in number.

The dump bed 8, is provided on its lower surface, with three rockers 9, the same being located at the opposite ends of the bed and midway between its ends respectively, the rockers corresponding in position with the transverse beams 7. To the end rockers are attached exteriorly located plates 10, whose lower edges project below the end beams 7 as shown at 12, whereby the bed is prevented from shifting longitudinally on the stationary frame.

Connected with the bed at the opposite extremities of each rocker are two metal straps 13. As shown in the drawing the extremities of these straps which are secured to the bed, are threaded as shown at 14 and pass

upwardly through the bottom of the bed being secured by nuts 15. Each strap extends underneath the rocker, its opposite extremity being secured to the stationary frame work as shown at 16. These straps are perfectly loose except at their extremities. When the bed is in the upright position, the straps may be said to cross each other at the center of the rocker. As the bed tips in either direction, one metal strap increases its engagement with the rocker while the other metal strap leaves the rocker in proportion to the tipping of the bed. These straps connect the rockers with the beams 7, and at the same time aid in preventing the longitudinal shifting of the bed upon the stationary frame.

Journalled in the rear transverse beam 7 at one extremity and in a movable bar 17 at its other extremity, is a shaft 18 having a worm 19 adapted to engage a worm wheel 20, the said wheel being fast on a transverse shaft 21, journalled in boxes 22 secured to the side beams 6. Upon this shaft are also mounted two drums 23 to each of which is attached one extremity of a cable 24, the opposite extremities of the cables being attached as shown at 26 to transverse beams 25 secured to the bottom of the dump bed. These cables are connected with their respective drums in such a manner that as the shaft is rotated, one cable winds upon its drum, while the other cable unwinds therefrom. The extremities of these cables are attached to the beams 25 of the bed on opposite sides of the longitudinal center of the latter. Hence as the drums are rotated, one cable will shorten and the other will lengthen with reference to its distance between the bed and its drum. This results in tilting the dump bed toward the side of the shortening cable. It will be understood that as the worm shaft is rotated, the worm wheel together with the shaft 21 and the drums will be actuated, to impart the dumping movement to the bed, in the one direction or the other according to the direction of the worm shaft's rotation.

The bar 17 (see Fig. 5) is pivotally connected with the central cross beam 7 at one extremity as shown at 49 while the other extremity is connected with one arm of a bell crank lever A which is fulcrumed on the frame work as shown at B. To the other arm of this lever is attached a rod C. To the extremity of the rod C remote from the lever is connected an operating lever D fulcrumed at E. When it is desired to disengage the worm from the worm wheel, the lever D is moved rearwardly, thus throwing the forward arm of the bell crank lever and the adjacent extremity of the bar 17 downwardly and carrying the corresponding extremity of the shaft 18 and the worm 19 therewith this movement being

sufficient to disengage the worm from the worm wheel. In order to permit this movement of the shaft 18, the opening in the rear transverse beam 7 through which the shaft passes is somewhat enlarged as shown at F. 70

The dump bed is provided as shown in the drawing with sides 27 hinged at their lower edges as shown at 28. These sides are normally held in the upright position by means of rods 29 having hook-shaped extremities 30 which engage recesses 31 formed in the upper edges of the ends 32 of the bed. Attached to the hook of each rod 29, is a coil spring 33 whose opposite extremity is attached to the end of the bed as shown at 34. 75 When the sides 27 are in the upright position, the spring is under tension. When it is desired to allow the hinged sides to fall downwardly, the hook 30 is disengaged from the recess 31 and the hook slides downwardly upon the inclined edge of the end of the bed, until it engages a lower recess 35 which prevents the side from moving farther downwardly and maintains it in position to form a sort of chute (see dotted lines 90 at the left of Fig. 4).

As shown in the drawing the hinge 28 for the sides 27, is composed of a rod 36 passing through lugs 37 attached to the bed below the hinged side; and eyes 38 formed at the lower extremities of metal straps 39 secured to the sides 27. This rod as shown in the drawing is threaded at its opposite extremities and held in place by nuts 40. It is evident that any suitable manner of hinging the sides of the bed may be employed. In fact it is common to hinge the sides of dump beds. 100

Pivotally mounted exteriorly on each of the side beams 6 of the stationary frame as shown at 42 are bars 41 which when in the vertical position, engage the bottom of the dump bed on opposite sides, and support the latter in a stable position. The pivots 42 on opposite sides, are formed by the extremities of truss rods 48, which pass through the side beams 6 and the transverse beams 7, the said rods emerging at the bottom of the last named beams at the center. These rods give great additional security to the frame work. 115 The arms on each side of the bed are pivotally connected as shown at 43 with a rod or bar 44 whose rear extremity is pivotally connected as shown at 45 with an operating lever 46, fulcrumed at its lower extremity as shown at 47. When this lever is in the position shown in Fig. 1, the arms 41 are in the upright position and engage the dumping bed. When it is desired to release the bed on either side, to allow it to dump in that direction, the lever 46 is shifted to throw the supporting arm 41 to the inclined position as shown in Fig. 2. 125

From the foregoing description the use and operation of my improved dump bed 130

will be readily understood. Assuming that the mechanism is in the position shown in Fig. 1, and it is desired to dump the bed, the lever 46 is first operated to disengage the supporting arms 41 from the bed on the side toward which the load is to be dumped. As soon as this is done, the operator rotates the worm shaft by the use of a crank 18^A formed on one extremity thereof. This shaft is rotated to cause the shaft 21 together with the drums 23 to rotate. As this occurs, the cable 24 on the side toward which the load is to be dumped, shortens and that on the opposite side lengthens, thus imparting a positive dumping movement to the bed. When the bed has reached a suitable inclination (see Fig. 4), the load will slide therefrom over the hinged door 27 which acts as a chute as heretofore explained. Before commencing the tilting operation, the hinged side 27 of the bed on the dumping side, should be released and caused to fall to the position shown by dotted lines in Fig. 4.

Having thus described my invention, what I claim is:

1. A vehicle body, comprising a stationary frame, a dumping bed provided with rockers engaging said frame, cables connected with the bed on opposite sides of its longitudinal center, drums with which the extremities of the cables are connected, and upon which they are caused to wind in opposite directions, a worm wheel on the drum shaft, an operating shaft provided with a worm engaging the worm wheel, and means for disconnecting the worm shaft from the worm wheel to allow the dumping bed to be operated independently of the worm gear the said means, comprising a movable part in which one extremity of the worm shaft is journaled, a hand lever and an operative connection between the said lever and the movable part, substantially as described.

2. The combination with a stationary frame, of a dump bed whose bottom is provided with rockers engaging the said frame, cables connected with the bottom of the bed on opposite sides of its longitudinal center, drums upon which the cables are oppositely wound, a shaft upon which the drums are fast, a worm wheel on said shaft, a shaft having a worm engaging the worm wheel, and means for regulating the worm shaft whereby its worm may be thrown into or out of engagement with the worm wheel at will, said means, comprising a movable part in which one extremity of the worm shaft is journaled, a hand lever and an operative

connection between the said lever and the movable part.

3. The combination with a stationary frame, of a dump bed mounted to rock transversely on said frame, cables connected with the bed on opposite sides of its longitudinal center, means for operating the cables comprising drums upon which they are oppositely wound, a worm wheel mounted on the drum shaft, a worm shaft whose worm is adapted to engage the worm wheel, and means for actuating the worm shaft to disconnect the worm from the worm wheel comprising a movable part in which one extremity of the worm shaft is journaled, a bell crank lever connected with said part and means for actuating the lever, substantially as described.

4. The combination with a stationary frame, of a dump bed mounted to rock on the frame, cables connected with the bed on opposite sides of its longitudinal center, drums with which the cables are connected, and upon which they are arranged to wind in opposite directions, a worm wheel mounted on the axle of the drums, an operating worm shaft whose worm is adapted to engage the worm wheel, a movable part in which one extremity of the worm shaft is journaled, a bell crank lever connected with said part and means for actuating the lever.

5. The combination with a stationary frame, of a dump bed mounted to rock on the frame, cables connected with the bed on opposite sides of its longitudinal center, drums with which the cables are connected and upon which they are arranged to wind in opposite directions, a worm wheel mounted on the axle of the drums, an operating worm shaft whose worm is adapted to engage the worm wheel, a movable part in which one extremity of the worm shaft is journaled, and means for adjusting said movable part, whereby the worm may be thrown into or out of engagement with the worm wheel, comprising a bell crank lever, a hand lever and a rod connecting the two levers, the bell crank lever having one arm connected with the said movable part in which one extremity of the worm shaft is journaled, substantially as described.

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

DOX W. CARR.

Witnesses:

HERMAN BECKER,
WM. GLEASON.