

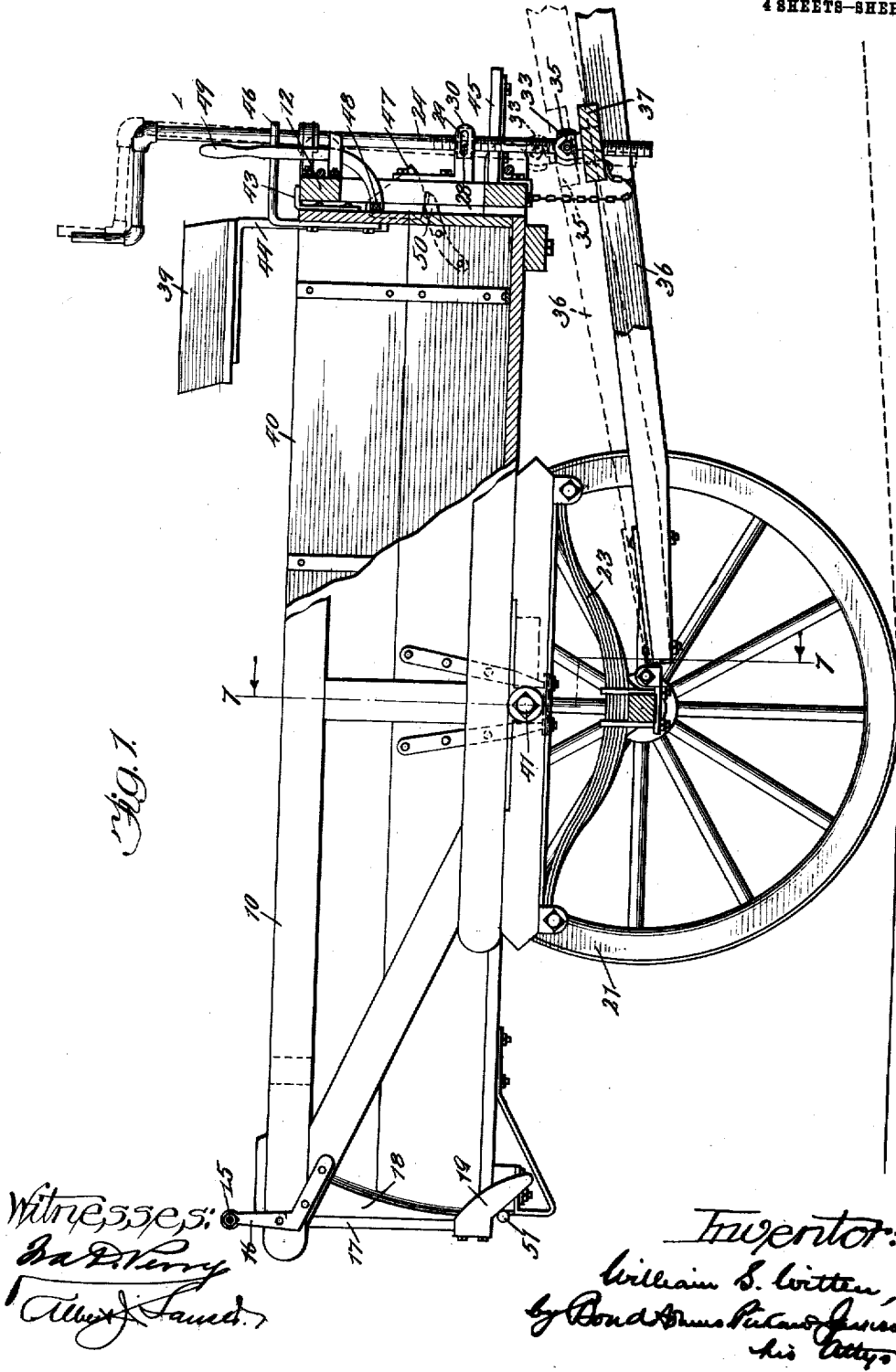
W. S. WITTEN.  
DUMP CART.

APPLICATION FILED SEPT. 24, 1909.

1,014,734.

Patented Jan. 16, 1912.

4 SHEETS-SHEET 1.



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4 SHEETS—SHEET 2.

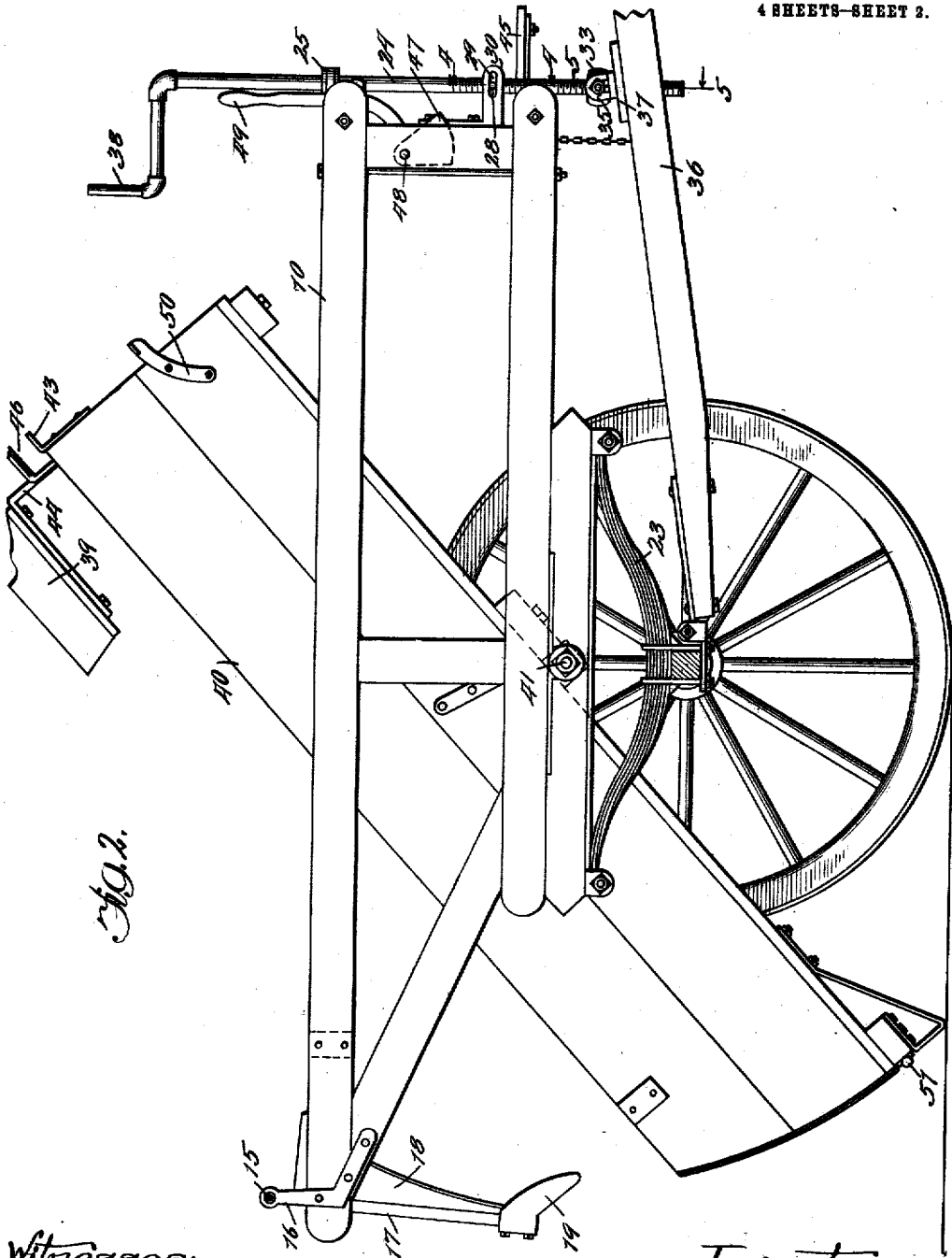


Fig. 2.

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Inventor:  
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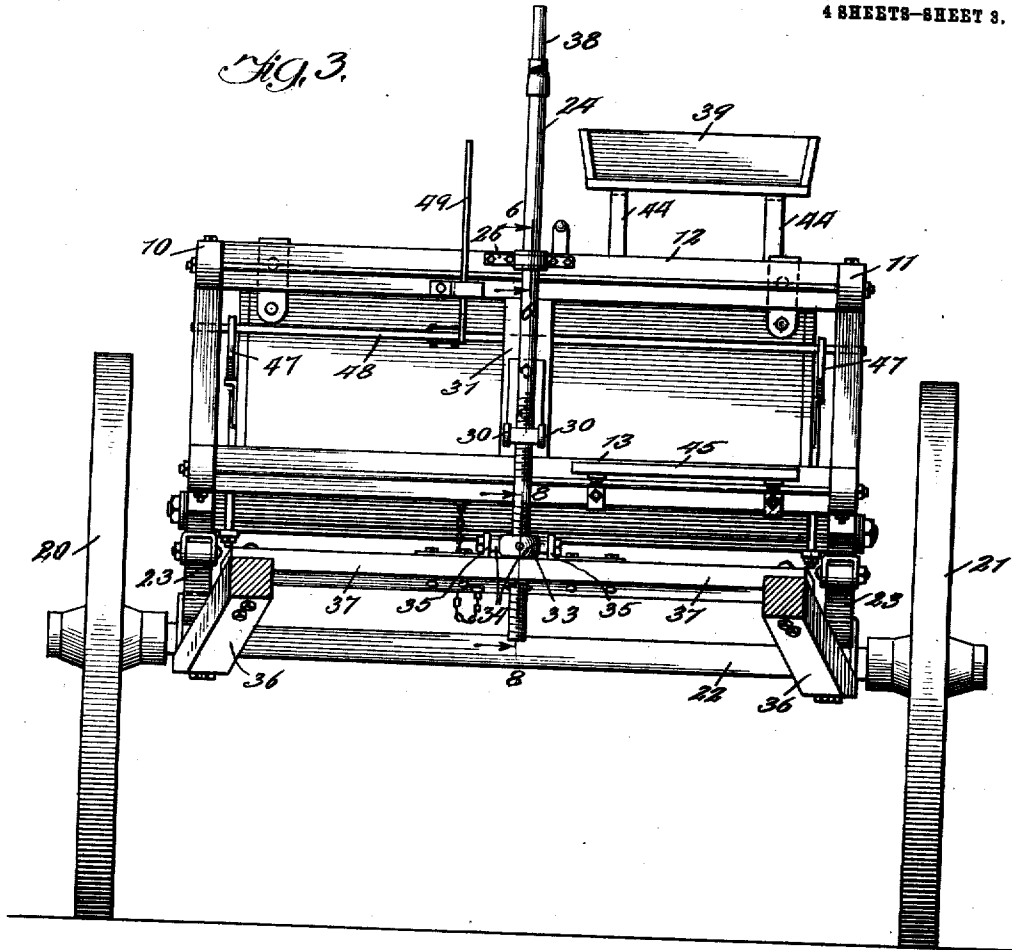
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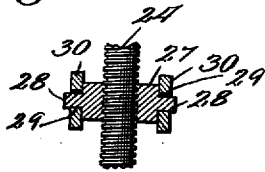
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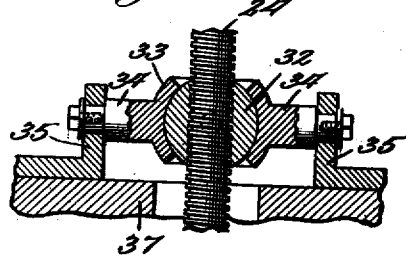
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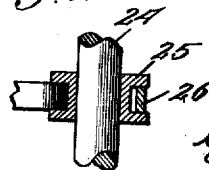
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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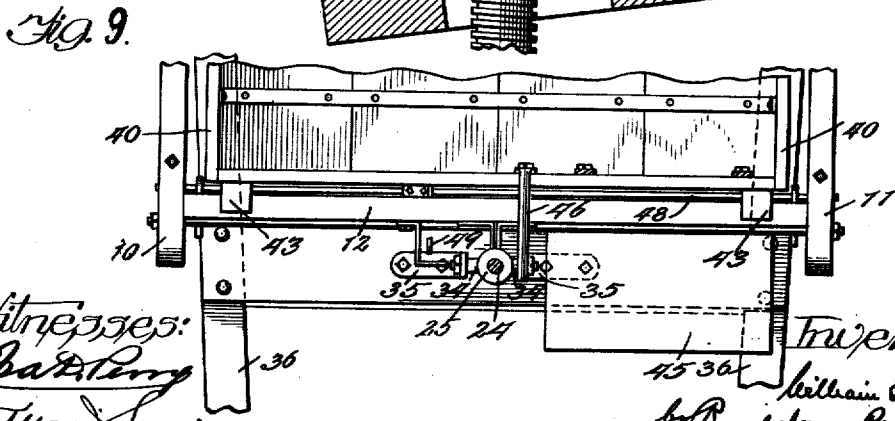
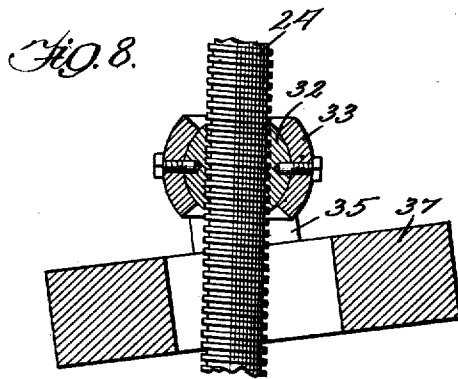
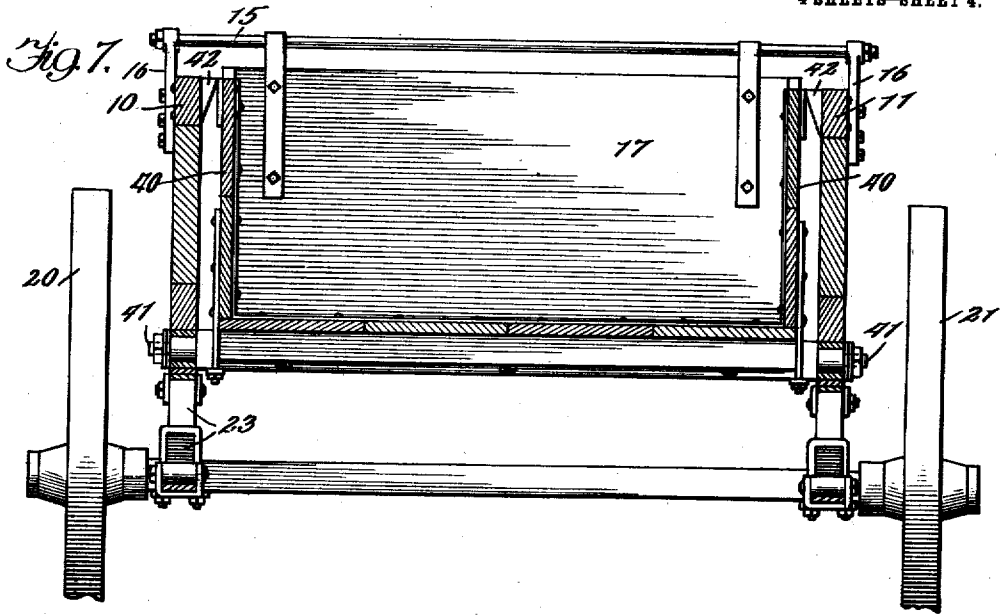
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4 SHEETS—SHEET 4.



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# UNITED STATES PATENT OFFICE.

WILLIAM S. WITTEN, OF CHICAGO, ILLINOIS.

## DUMP-CART.

1,014,734.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed September 24, 1909. Serial No. 519,361.

*To all whom it may concern:*

Be it known that I, WILLIAM S. WITTEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dump-Carts, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to dump-carts, and has particularly to do with carts in which provision is made for dumping the load at the rear by tilting the box or bed.

It has for its object to provide a new and improved cart which will be strong and substantial in construction and which will be well adapted for carrying a load on hilly roads or over inclined roadways, such, for example, as are found at stockyards and similar places. To the latter end, my invention provides means by which the box or bed may be balanced or held in a substantially horizontal position regardless of variations in the grade of the roadway. I accomplish this object as illustrated in the accompanying drawings and as hereinafter described.

What I regard as new is set forth in the claims.

In the accompanying drawings,—Figure 1 is a side view of my improved cart, one wheel being removed and certain parts being in section or broken away; Fig. 2 is a side view with one wheel removed, showing the bed in dumping position; Fig. 3 is a front view; Fig. 4 is a vertical section on line 4—4 of Fig. 2; Fig. 5 is a vertical section on line 5—5 of Fig. 2; Fig. 6 is a vertical section on line 6—6 of Fig. 3; Fig. 7 is a vertical cross-section on line 7—7 of Fig. 1; Fig. 8 is an enlarged detail, being a vertical section on line 8—8 of Fig. 3; and Fig. 9 is a partial plan view of the front part of the frame and bed.

The mounting of the bed or box of my improved cart is in some respects similar to that of the cart shown and described in my application Ser. No. 483,498, filed March 15, 1909, there being a bed or box which is within a frame supported on wheels, the frame surrounding the bed when the latter is in normal or horizontal position. The frame is provided with locking devices for locking the front end of the bed down in operative position and is also provided with a swinging end-gate for the rear end of the

box, which is automatically moved into operative position by the movement of the box into its normal or horizontal position, and is tightly locked and held thereagainst.

The principal feature of my present invention consists in providing means by which the angular relation of the shafts or pole—if a pole be used—may be varied with relation to the frame by moving the front end of the frame toward or from the same, thus making it possible to preserve the horizontal position of the frame and box in going up or down inclined roadways. This adjustment may be made by the driver from his seat.

Other improvements will be more fully hereinafter pointed out.

Referring to the drawings,—10—11 indicate the side-members of the frame, which are connected at the front by cross-pieces 12—13. Said side-members are connected at the rear by a cross-shaft 15 mounted in brackets 16 secured to the rear end portions of the side members of the frame, said shaft carrying the end-gate 17, which is pivotally suspended from said cross-shaft, as best shown in Fig. 2.

18 indicates the side-members of the end-gate, which are curved to conform to the curvature of the sides of the box and are in alinement therewith so that they form continuations of the sides of the box, as described in my former application above referred to.

19 indicates inclined locking-plates carried at the ends of the end-gate for automatically moving the end-gate into operative position when the wagon box is moved into its normal position, as also described in my said application.

20—21 indicate supporting wheels, which are mounted on the ends of an axle 22 in the usual way, the frame being supported upon said axle 22 by springs 23, as shown in Fig. 2.

24 indicates a vertical rod or shaft screw-threaded at its lower end, as shown in Fig. 2,—said shaft being mounted in suitable bearings at the front end of the frame, as will now be described.

25 indicates a sleeve, in which the upper portion of the shaft 24 fits loosely, said sleeve being externally grooved and being held in place by a clip 26 secured to the upper cross-bar 12, as shown in Fig. 3.

27 indicates an internally screw-threaded sleeve, which is fitted intermediately upon the screw-threaded portion of the shaft 24 and is provided with trunnions 28 which fit in slots 29 in brackets 30 secured to a vertical bar 31 provided at the front of the frame, as shown in Figs. 2 and 3. It will be apparent that by this construction a limited forward and backward movement of the shaft 24 and also a limited rocking movement of the sleeve 27 are permitted,—provision for these movements being necessary to permit the adjustment of the frame with relation to the shafts, as hereinafter described.

32 indicates a globular internally screw-threaded sleeve, which is fitted upon the lower end of the screw-threaded portion of the shaft 24 and is carried in a spherical socket in a sleeve 33. Said sleeve 33 is provided with trunnions 34 by which it is secured between brackets 35. A cross-bar 37 is provided, upon which the brackets 35 are centrally mounted, said cross-bar being secured to the shaft 36 intermediately thereof preferably slightly in advance of the box, as best shown in Figs. 3 and 5. I thus provide a rocking connection between the lower end of the shaft 24 and the shafts of the cart. It will be apparent that by rotating the shaft 24, which is provided at its upper end with a crank 38 for that purpose, the angular relation of the shafts and the frame of the cart may be varied,—the front end of the cart being moved upward or downward, depending on the direction of rotation of the shaft.

In Fig. 1 I have illustrated in dotted lines the position that the parts would occupy if the cart were driven up an incline, indicated by the dotted lines at the bottom of the figure, from which it will be seen that the box may be maintained in its horizontal position notwithstanding the movement of the cart upon the incline. By this means also the driver is enabled to balance the load at all times so as to take the weight of the load off the horse's back. To illustrate, in loading the cart it may sometimes occur that one end of the box is filled with heavier material than the other end, and consequently the box and frame would in such case have a tendency to press down more heavily or pull up upon the horse. By adjusting the angular position of the bed, and incidentally the frame, with relation to the shafts, this may be regulated so that the load is balanced and the horse relieved of the effect of any preponderance of the load in either end of the box. Furthermore, by providing the pivotal or rocking connection between the shafts and the screw-threaded shaft 24, the shafts automatically adjust themselves to the swinging movement of the horse in walking, independently of the

frame, thus making it much easier on the horse than if a rigid connection were employed. The shaft 24 is placed at one side of the operator's seat shown at 39 in Fig. 3, so that it may be conveniently rotated by him at any time and the desired adjustment of the position of the frame and box made.

40 indicates the box, which is open at its rear end,—the sides of the box being curved to conform to the curvature of the sides of the end-gate, as shown in Figs. 1 and 2. The box is mounted upon pivots 41 suitably journaled in the sides of the frame, as shown in Fig. 2, so that it may be tilted in dumping. When the box is in operative position, it lies within the frame, the sides being braced at the rear by wedges 42 carried on the inner faces of the rear end portions of the sides of the frame, as shown in Fig. 7.

43 indicates stops carried by the front of the box, which stops overlie the upper cross-bar 12, as shown in Fig. 1, and act to limit the downward movement of the front portion of the box, as shown. The seat 39 is carried by brackets 44 secured to the front of the box, as best shown in Fig. 1, so that when the box is tilted in dumping the seat is carried up with it.

45 indicates a platform or foot-rest provided at the front of the frame and secured thereto in any suitable way. Said platform furnishes standing room for the driver when dumping the load in addition to serving the ordinary purpose of a foot-rest.

46 indicates a hand-rod secured to the front of the box and projecting forward therefrom, as shown in Figs. 1 and 9. The purpose of the rod 46 is to provide a handle by which the driver may draw the box down into operative position after it has been dumped.

47 indicates cam locking blocks, which are mounted upon the ends of a rock-shaft 48 carried by the frame at the front, as shown in Figs. 1 and 3, and provided with an operating lever 49. Said cam blocks are adapted to engage brackets 50, which are secured to the sides of the box and project forward therefrom, as shown in Figs. 1 and 2,—the arrangement being such that said cam blocks swing by gravity over the brackets 50 when the box is moved into its operative position, thereby locking the box in such position. The box may be unlocked so that it may be moved out of operative position by moving back the upper end of the hand-lever 49.

51 indicates pins carried at the rear of the box and projecting laterally in position to engage the plates 19 when the box is moved into its normal position, thereby carrying the lower portion of the end-gate over toward the box and firmly holding the sides of the end-gate in contact with the

sides of the box. This construction is described in my former application above referred to.

From the foregoing description it will be seen that when the cart is in use the frame and box are firmly secured together and also the end-gate locked, but the box may be instantly released by simply actuating the lever 49. In transporting the load the bed and frame are maintained in a balanced or level position by rotating the shaft 24 in the appropriate direction from time to time as may be necessary. This is especially advantageous in connection with the carts used at stockyards and similar places where the loads to be transported are frequently in a fluid or semi-fluid condition and are liable to be spilled to a greater, or less extent if the bed tilts, and it is also of great importance for the purpose of relieving the draft animal of the weight of the load, or of the lifting effect of the preponderance of the weight in the rear of the cart, as hereinbefore explained. When the load is to be discharged, the operator stands on the platform 45 and releases the front end of the bed from the locking devices. By then lifting slightly on the rod 46, the bed may readily be tilted to discharge the load,—the end-gate being automatically released as soon as the bed begins to tilt so that it may swing away from the bed so as not to interfere with the discharge of its contents.

While I have shown my improved cart as provided with a pair of shafts for the draft animal it will be understood that a pole, or equivalent device, may be used, and the term "shafts" as used in the claims should be construed accordingly.

That which I claim as my invention, and desire to secure by Letters Patent, is,—

1. A dump-cart, comprising an axle and wheels, a stationary frame mounted upon said axle, draft-devices connected with the axle, means adjustably connecting the draft-devices with the frame for varying the angular relation thereof, and a dumping bed mounted upon the frame.

2. A dump-cart, comprising an axle and wheels, a stationary frame supported upon the axle, shafts connected with the axle and adjustably connected with the frame for varying the angular relation of the frame and shafts, and a tilting bed supported by said frame.

3. A dump-cart, comprising an axle and wheels, a stationary frame supported upon the axle, shafts connected with the axle and

adjustably connected with the frame for varying the angular relation of the frame and shafts, and a tilting bed supported by said frame, said frame having side members which form a lateral support for the bed when it is in operative position.

4. A dump-cart, comprising an axle and wheels, a stationary frame supported upon the axle, shafts connected with the axle and adjustably connected with the frame for varying the angular relation of the frame and shafts, and a bed pivotally connected with the frame.

5. A two-wheeled dump-cart, comprising an axle and wheels, a stationary frame mounted upon and supported by the axle, a dumping bed pivotally mounted upon the frame and supported at its forward end when in operative position by said frame, and draft devices connected with the axle and with the forward portion of the frame.

6. A two-wheeled dump-cart, comprising an axle and wheels, a stationary frame mounted upon and supported by the axle, a dumping bed pivotally mounted upon the frame and supported at its forward end when in operative position by said frame, and draft devices connected with the axle and adjustably connected with the forward portion of the frame whereby the angular relation thereof with the frame may be varied.

7. A two-wheeled dump-cart, comprising an axle and wheels, a stationary frame mounted upon and supported by the axle, a dumping bed pivotally mounted upon the frame and supported at its forward end when in operative position by said frame, draft-devices connected with the axle, and a screw-threaded shaft carried by the frame and engaging a threaded socket carried by the draft-devices for varying the angular relation of the frame and the draft-devices.

8. A two-wheeled dump-cart, comprising an axle and wheels, a stationary frame mounted upon and supported by the axle, a dumping bed pivotally mounted upon the frame and supported at its forward end when in operative position by said frame, draft-devices connected with the axle, a screw-threaded shaft carried by the frame and fitting in a globular sleeve, and a spherical bearing for said sleeve carried by the draft-devices.

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