

W. S. WITTEN.
DUMP WAGON.

APPLICATION FILED MAR. 22, 1909.

1,043,990.

Patented Nov. 12, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

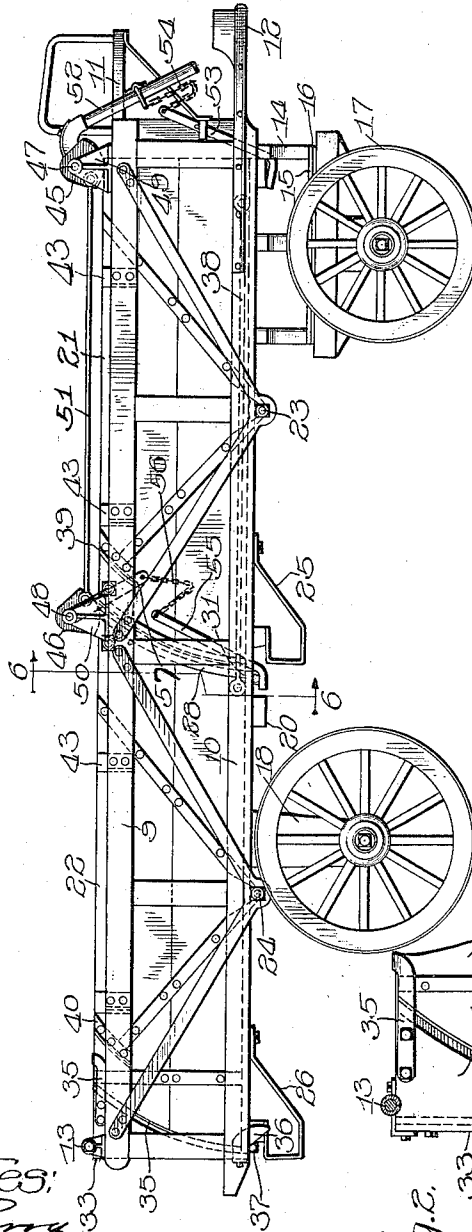


Fig. 4.

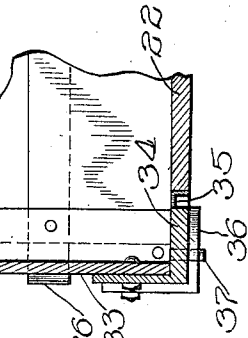
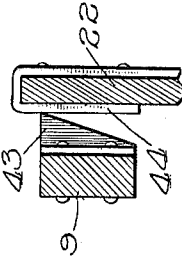


Fig. 3.

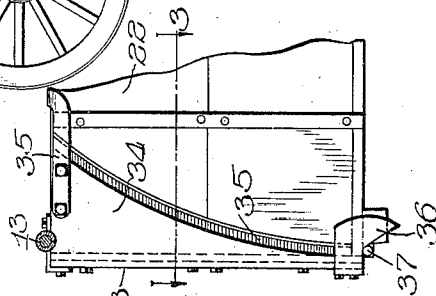


Fig. 2.

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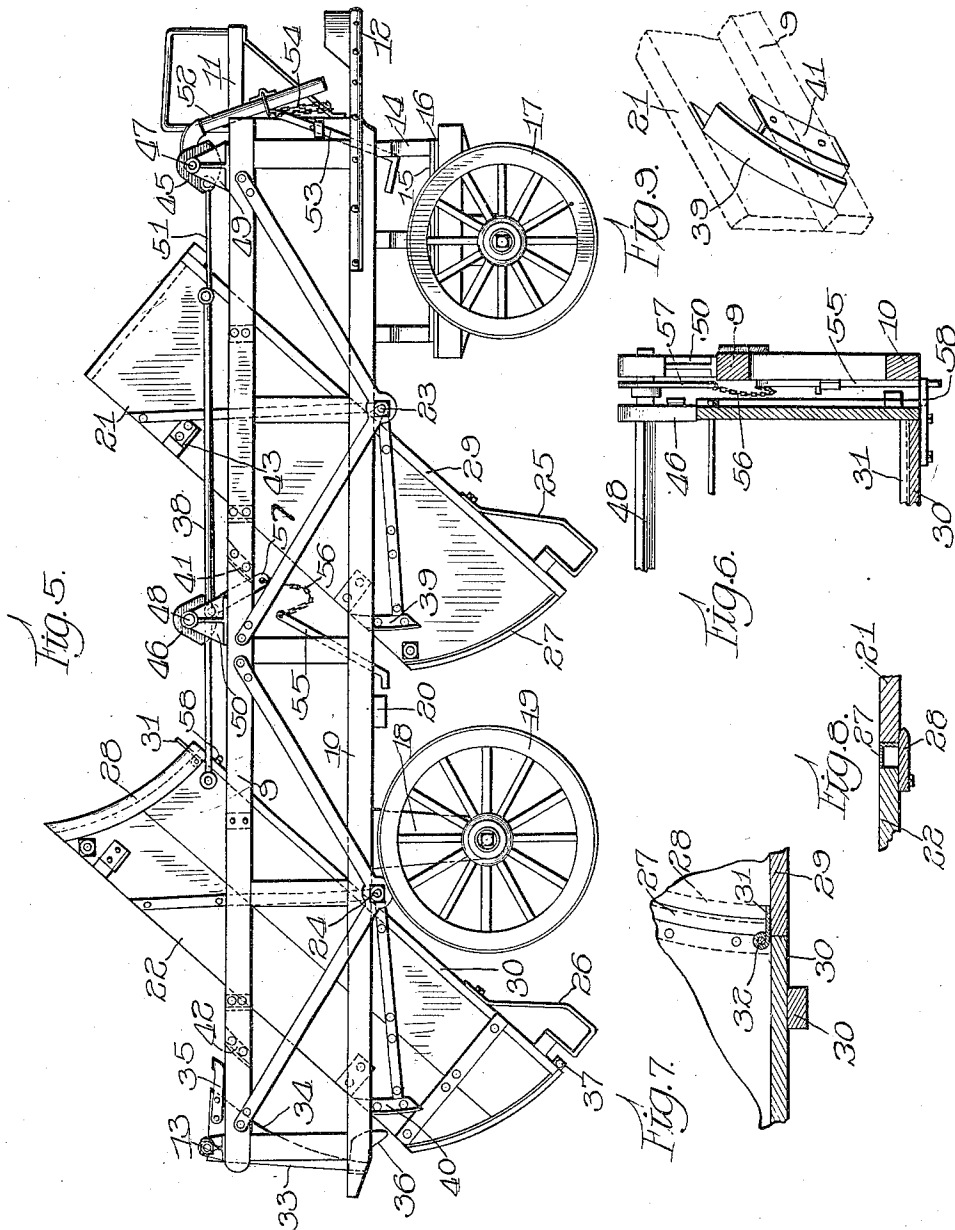
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

WILLIAM S. WITTEN, OF CHICAGO, ILLINOIS.

DUMP-WAGON.

1,043,990.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed March 22, 1909. Serial No. 485,005.

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-Wagons, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to dump-wagons, and has for its object to provide an improved dump-wagon in which the bed is supported laterally by a stationary frame, thereby making it practicable to employ a bed composed of a plurality of dumping sections which, however, coact when in operative position to form a single continuous bed. I accomplish this object as illustrated in the 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 elevation of my improved dumping wagon; Fig. 2 is an enlarged detail, being a side elevation of the rear portion of the bed, showing the end-gate; Fig. 3 is a horizontal section on line 3—3 of Fig. 2; Fig. 4 is an enlarged detail, being a partial vertical cross-section showing one of the wedges for bracing the sides of the bed; Fig. 5 is a side elevation of the wagon showing the sections of the bed in dumping position; Fig. 6 is a partial vertical section on line 6—6 of Fig. 1; Fig. 7 is an enlarged detail, being a partial longitudinal section of the bottoms of the front and rear sections of the bed; Fig. 8 is a partial longitudinal section of abutting ends of adjacent sections of the bed; and Fig. 9 is a perspective view, showing the devices for supporting the rear ends of the wagon bed sections upon the frame when they are in operative position.

Before proceeding to a detailed description of my invention as illustrated in the accompanying drawings, it may be said that my improved dump-wagon comprises suitable running gear on which is mounted a stationary frame which extends around the bed on all four sides so as to provide a lateral support for the sides of the bed when in operative position. The bed is pivotally mounted upon the frame so as to be adapted to be tilted to discharge its load and, in the construction illustrated, is composed of a plurality of sections the sides of which aline

when the bed is in operative position, forming a continuous bed from one end of the wagon to the other. The end-gate is also supported by the frame in position to fit against the discharge end of the bed or box and is arranged to swing so as to carry its lower edge away from the bed when the latter is tilted in dumping. The end-gate is also provided with extensions at its sides which register with the sides of the bed and form extensions thereof when the end-gate is in operative position,—said extensions being also supported laterally by the frame. The sides of the box or bed are also braced by the frame by means of additional bracing means, thereby preventing the box from bulging laterally under the weight of the load.

Referring to the drawings for a more particular description of my invention therein illustrated, 9—10 indicate the upper and lower rails, respectively, of the side frames, which are connected by uprights and braced together in any suitable way. The side frames are connected at their ends in any suitable manner.

11 indicates the driver's seat, which is suitably placed at the front end of the frame, and 12 indicates the usual footrest.

13 indicates a rod, which extends across the frame at the rear, being mounted on the upper rails 9 of the side frames, as shown in Fig. 5. At its front end the wagon frame is mounted upon bolsters 14 carried by the upper member 15 of a fifth wheel, the lower member 16 thereof being mounted on the front wheels 17.

18 indicates a bolster which supports the rear portion of the frame upon the rear wheels 19. 20 indicates a cross-bar secured to the lower rails 10 of the frame in position to support the front portion of the rear section of the bed.

21 indicates the front section of the bed, and 22 the rear section thereof, two sections only being shown in the illustration. The front section 21 is mounted upon a transversely-disposed pivot 23 arranged at or near its longitudinal center, and in like manner the rear section 22 of the bed is mounted upon a pivot 24.

25—26 indicate bumpers secured to the bottoms of the sections of the bed, respectively, near their rear ends, to support them when dumped.

As best shown in Fig. 5, the rear edges

of the sides of the front section 21 of the bed are curved, as shown, the curvature being substantially on the arc of a circle of which the pivot 23 is the center, and such rear edges are faced with a metal plate preferably made in the form of an angle-iron 27, as shown in Figs. 5 and 8. In like manner the front edges of the sides of the rear section 22 are curved to conform to the curvature of the rear edges of the sides of the front section 21 and are provided with forwardly-projecting side plates 28 which overlap the rear edges of the front section 21, as shown in Fig. 8, when the sections of the bed are in operative position. The edges of the angle-irons 27 bear closely against the front edges of the sides of the rear section 22 so as to make a tight or close contact therewith, thereby making the sides of the bed, considered as a whole, practically continuous. The meeting ends of the bottoms of the bed sections also fit closely together, as shown in Fig. 7,—29 indicating the bottom of the front section and 30 the bottom of the rear section. The latter carries a hinged-plate 31 which overlaps the rear edge of the bottom 29, as shown in Fig. 7, so that the escape of dirt at that point also is prevented. The plate 31 is adapted to swing upward when necessary, turning upon its hinge or pivot 32. It will thus be seen that when the two sections of the bed are brought together the plate 31 automatically swings over the rear edge of the bottom 29 of the front section.

33 indicates the end-gate, which is pivotally connected at its upper edge with the rod 13 so that it hangs suspended therefrom. The end-gate is provided at its side edges with forward extensions 34 which coact with angle-irons 35 carried at the rear side edges of the rear section 22, as shown in Figs. 2 and 3.

35 indicates arms carried by the extensions 34 of the end-gate and projecting forward therefrom over the sides of the rear section 22 in such position that when the rear section is swung into operative position it presses upward on the arms 35 and swings the lower edge of the end-gate tightly into contact with the rear side edges of the section 22.

36 indicates inclined plates projecting forward from the lower side edges of the end-gate into position to be engaged by laterally-projecting pins 37 carried at the lower rear corners of the rear section 22, as shown in Figs. 1 and 5. Said pins operate to throw the plates 36 forward and assist in holding the end-gate tightly in contact with the rear portion of the section 22. The rear edges of the sides of the section 22 are also curved substantially in the arc of a circle of which the pivot 24 is the center, and the extensions 34 of the end-gate are similarly curved so that a tight closure is made between said

parts when the rear section is in operative position.

38 indicates connecting-rods, one of which is preferably provided at each side of the wagon to connect the lower forward portion of the front section 21 with the lower forward portion of the rear section 22, as best shown in Fig. 5. By this construction the two sections operate in unison either when tilted for dumping or when restored to their normal or operative position. Thus, when the bed sections are in dumping position, as shown in Fig. 5, they may be restored to normal position by simply pulling down on the front end of the front section 21. For supporting the rear portions of the bed sections when in operative position and applying the weight of the load in the rear portions thereof to the frame, said sections are provided at the rear with curved plates 39—40, respectively, which are adapted to overlie laterally-projecting plates 41—42 carried by the upper rails 9 of the side frames and projecting inwardly therefrom, as best shown in Fig. 9. The sides of the sections of the frames are also braced by wedge plates 43 which are secured to the sides of the bed sections, preferably near their forward ends, and bear against plates 44 carried by the upper rails 9 of the side frames, as best shown in Fig. 4.

45—46 indicate locking blocks mounted, respectively, on pivots 47—48 carried in brackets 49—50 rising from the side rails 9 in the manner shown in Figs. 1 and 5. Said blocks are adapted to swing over the side edges of the front and rear sections of the bed at the front ends thereof to lock them down firmly in operative position. The lower edges of the blocks 45—46 are cam shaped so as to secure a wedging effect. The locking blocks 45—46 are connected by a connecting-rod 51 so that they may be operated in unison. 52 indicates a locking lever connected with the pivot 47 of the front locking blocks 45. Said lever is placed convenient to the driver's seat and the arrangement is such that when said lever is lifted the locking blocks 45—46 swing forward and away from the bed sections, thereby releasing them and permitting them to tilt for dumping purposes.

53 indicates a hook, which projects under the front end of the forward section 21 of the bed and is connected with the lever 52 by a flexible connection 54, the arrangement being such that when said lever is operated to release the sections of the bed the hook 53 lifts the front section 21 and facilitates its tilting. In like manner a hook 55 is provided in position to engage the front end of the rear section 22 and is connected by a chain, or other flexible connection, 56, with a lever 57 which projects downward and forward from the pivot 48

with which it is connected. The hook 55 acts similarly to the hook 53 and serves to lift the front end of the rear section 22 for dumping purposes. Said hook engages a laterally-projecting pin 58 secured to the bottom of the rear section, as shown in Fig. 6.

By thus providing a stationary frame which supports the sides of the box or bed against outward pressure, I secure a very substantial and efficient construction and one which makes practicable the employment of a plurality of bed sections, since the strength of each bed section is not dependent upon its inherent rigidity but is supplemented by the supporting frame which keeps the sides of the bed always in proper alinement and insures the proper operation of the members of the wagon. By multiplying the number of sections of the bed the clearance required to permit the necessary tilting of the bed sections in dumping is reduced and consequently the bed may be set quite low without interfering with its effective operation.

The construction herein described may be employed in connection with other vehicles than carts or wagons, such, for example, as railway cars and analogous appliances.

So far as I am aware, I am the first in the art to provide a dump-wagon or other vehicle having one or more dumping bed sections with a stationary frame which supports the upper margins of said bed sections laterally when in operative position, and also to provide such a dump-wagon with an end-gate having lateral projections which register with the sides of the bed or box and are supported laterally by said frame. These features are, therefore,

claimed broadly. I wish it to be understood, further, that the term "end" as applied to the end-gate and the box sections is used in a generic sense and is not intended to limit my improvements to a wagon, or other vehicle, in which the dumping is at the rear thereof, as many of my improvements may also be applied to vehicles in which the bed or box is arranged to dump laterally.

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

1. A dumping vehicle, comprising suitable running gear, a tilting box, side frames carried by the running gear, means connecting the end portions of said side frames, forming a stationary frame which extends around the sides and ends of the box plates carried by the sides of the box near the rear end thereof, and means carried by the side frames and adapted to underlie and support said plates when the box is in operative position.

2. A dumping vehicle, comprising suitable running gear, a tilting box, side frames carried by the running gear, means connecting the end portions of said side frames, forming a stationary frame which extends around the sides and ends of the box, curved plates carried by the sides of the box near the rear end thereof, and curved plates carried by the side frames and adapted to underlie and support the plates carried by the box when the box is in operative position.

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