(No Model.)

# J. GRANT.

## DUMPING WAGON.

No. 590,976. Patented Oct. 5, 1897.

Fig. 1.

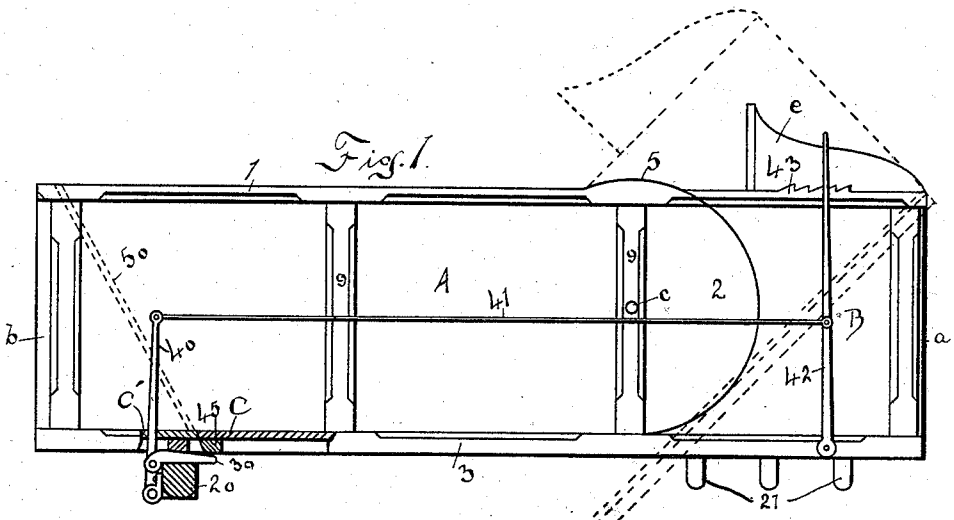



Fig. 2.

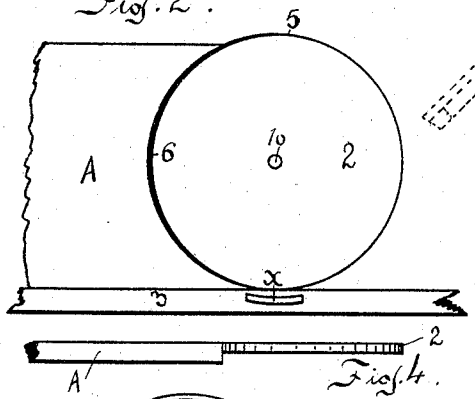



Fig. 3.

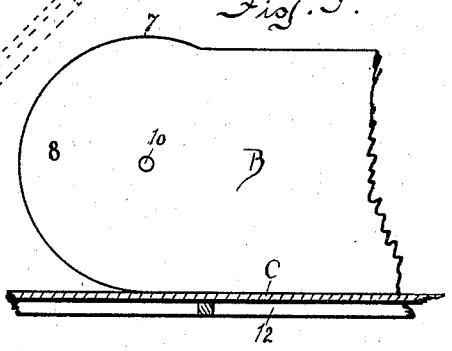



Fig. 4.

Fig. 5.

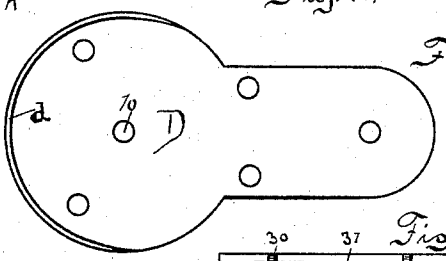



Fig. 6.

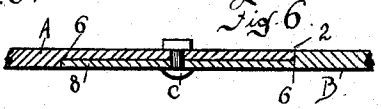
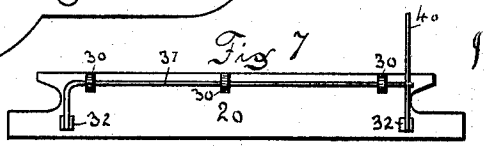



Fig. 7.

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# UNITED STATES PATENT OFFICE.

JOHN GRANT, OF OMAHA, NEBRASKA.

## DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 590,976, dated October 5, 1897.

Application filed December 26, 1896. Serial No. 617,138. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GRANT, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain useful Improvements in Dumping-Wagons; and I do hereby declare that the following is 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, which form a part of this specification.

This invention has relation to a novel improvement in dumping-wagons, the object of my invention being to provide a wagon which when loaded shall be self-dumping, but which after unloading is self-righting.

The wagon is, further, simple of construction, readily operated, and so constructed that the joints of the moving parts are not adapted to be clogged by a portion of the load working into the same, as will be described more fully hereinafter.

In the accompanying drawings, Figure 1 shows a side elevation of a wagon-box embodying my invention. Fig. 2 shows a broken detached view of the stationary portion of the wagon-box. Fig. 3 shows a detached broken view of the movable portion of the wagon-box. Fig. 4 shows a top view of one of the side portions. Fig. 5 shows a front view of one of the bearing-plates used in conjunction with my invention. Fig. 6 shows a top sectional view of the movable front and stationary rear sections as united, while Fig. 7 shows a detached view of the rear bolster provided with three supporting-bolts.

My invention comprises, essentially, a wagon-box embodying the two-part side panels A B of a suitable construction and size, a front panel *a*, and the usual tailpiece *b*. The side panels A B are peculiarly constructed, and comprise the major section A, working in conjunction with a similar section B, the first section terminating in a rounded portion 2, which above slightly projects beyond the upper edge of these side panels A, which may be reinforced by the upper strips 1, and below be secured to the sills 3, so that a small crescent-shaped projection 5 extends beyond the upper edge of the wagon-box. This section 2 is of a thickness approximating half the thickness of the panel A, as is shown in Fig. 4, where, however, the panel upon the side opposite to the one shown in Fig. 1 is represented. These panels are, however, identical in construction and operation.

The curve or circle defining the ends of the panels A is continued, so as to form a seating or pocket 6, as is shown in Fig. 2, so that the panel B, which is provided with a circular termination 8 and projecting by means of the portion 7 beyond the top of the panel, will nicely work into the section 6, as is shown, for instance, in Fig. 6, where a front section B and a rear section A are shown as united by means of a bolt *c*, the front section B being provided with a similar semicircular removed portion 6, within which the forward circular portion 2 finds a seating, as is shown in Fig. 6.

To provide a more lasting union or joint of these two circular working side panels A and B, a casting D (shown in Fig. 5) may be employed, which is provided with a flange *d*, adapted to work, one over each of the circular portions 2 and 8, and provided with a central opening 10, adapted to receive the bolt *c*, the panels also being each provided with an opening 10, adapted to accommodate the bolt *c*. In other words, the round ends 2 and 8 of the sides A and B are simply shod by means of these castings D, so that the life of these side panels at the wearing-points is increased. The castings are not absolutely necessary, as they simply aid in increasing the life, as has been stated, of these working panels.

In the construction of the two side panels A and B the forward moving panel B is made much shorter than the rear panel A, so that the bottom, which is connected to the movable forward section, will always readily tilt when provided with a load, as the pivot-point C is nearer the forward end of the panel B than the rearward end of the panel A.

The operating-lever 42 is slightly curved over the edge of the wagon, so as to engage the rack 43. When disengaged, the lever 42

is of course thrown outward to permit the upward escape of the front panel, the lever 42 feeding backward and in no way interfering with the movement of the forward panels.

The panels A A are secured to and form part of the sills 3, being strengthened by means of the uprights 9 9. The forward panels B B, however, which are in front, strengthened by the front panel *a*, are free of the sills 3 3, being secured to the bottom C, which bottom is also strengthened by means of the bars 12, as is shown in Fig. 3. This bottom C, it should be remembered, extends to a point in front of the rear bolster 20, as is shown in Fig. 1, so that the wagon-box is provided with a simple permanent fixed bottom section C'. In its horizontal closed position the forward end of the wagon-bottom rests upon the bolsters 21, and while the rear portion of the bottom is much larger in area than the forward portion this bottom, however, is always kept in a horizontal position by virtue of the front and side sections being secured thereto. When a load, however, is in the wagon, so much more weight is on the rear portion than on the forward portion of the bottom that as soon as the retaining mechanism used to hold this bottom in a horizontal position is removed it drops in dumping the load.

To lock the bottom in a horizontal position, I use a number of bolts 30, which work through suitable openings within the rear bolster and which are connected to a transverse bar 31, which bar is pivoted to the ears 32 and is provided with the lever 40, to which is secured the rod 41, and in turn shackled to an operating-lever 42, as is shown in Fig. 1, which above works within a suitable rack 43. By simply actuating the main operating-lever 42 the bolts 30 are carried below the rear supporting-strip 45, secured to and forming part of the bottom C. This swinging bottom, it should be remembered, is securely fixed to the sides B, which are pivotally secured to the sides A, and are supported, first, by the bolts *c*, and, secondly, by virtue of the connections formed by the circular ends 2 and 8, fitting within the seatings 6 6. If desired, the rear bottom portion C' may be covered by a sloping secondary scale-board, (marked 50 and shown in dotted lines in Fig. 1,) which terminates at a point in front of the bottom C, so that the full load is instantly dumped. The seat *e* is also secured to the front panels B and helps in keeping the bottom in a horizontal position. By this arrangement it will be seen that I provide a wagon-box comprising two divided side panels forming upon the inside an unbroken surface, the forward panels preferably being of a length shorter than the rear panels, these shorter front panels further being united and strengthened by means of the front panel *a*, these two sections being united and operating in the form of a hinge, a bottom secured to the forward shorter panels and adapted to swing therewith, while the rear panels are fixed and are strengthened and united by means of the rear panel *b*. In having the side panels A and B united to work in the form of a hinge an unobstructed and unbroken inner surface is presented by means of these two panels A and B, which makes a wagon of this construction of great utility in the transportation of sand, hot asphalt, and other materials which would be likely to cling to the sides were obstructions frequent.

While the wagon is loaded the bottom is further given ample support in working upon the front bolster 21 and practically working upon the rear bolster 20, in that the projecting bolts 30 fully support this bottom at the point where the support would be mostly needed, so that the pivoted bolt *c* and the curved ends of the panels A and B have but little weight to support, excepting during the instant the load is being dumped, the wagon-bottom C being of such a length that it strikes the bottom before the front panel B could be turned far enough to injure the workings of these two side panels, which work in the shape of a hinge and are permitted a movement but within a limited space, the curved portions 5 and 7 representing the distance the front panel is permitted to travel. It is of course understood that these side panels A B could be made of metal, though I prefer making them of wood and uniting them substantially in the manner shown and set forth.

Now, having thus described my said invention, what I claim as new, and desire to secure by United States Letters Patent, is—

1. In a wagon-box, the combination of two side panels, each of said side panels comprising two sections embodying a fixed section and a movable section, one of said sections being provided with a semicircular seating, the remaining section being provided with a semicircular extension working into said semicircular seating in such a manner as to form a panel offering an unbroken inner surface, and a bottom secured to said movable panel-section, as and for the purpose set forth.

2. In a wagon-box the combination of two side panels, each of said side panels comprising two sections, each section being provided with a semicircular seating and a semicircular projection, the seating of one panel-section being adapted to receive the projection of the remaining panel-section, said panel-sections when united forming an unobstructed inner surface, as and for the purpose set forth.

3. In a wagon-box, the combination of two side panels, each of said side panels comprising two sections, said sections being pivotally united in such a manner as to offer an unobstructed inner surface, one of said panel-sections being fixed, the remaining panel-section being movable, a bottom secured to

the movable panel-section, and means to lock said movable section, as and for the purpose set forth.

4. In a wagon-box, the combination of two side panels, each of said side panels comprising two sections, said sections being pivotally united in such a manner as to offer an unobstructed inner surface, one of said panel-sections being fixed, the remaining panel-section being movable, and a bottom secured to the movable panel-section, as and for the purpose set forth.

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

JOHN GRANT.

Witnesses:
GEO. W. SUES,
ANE M. ELLIJER.