

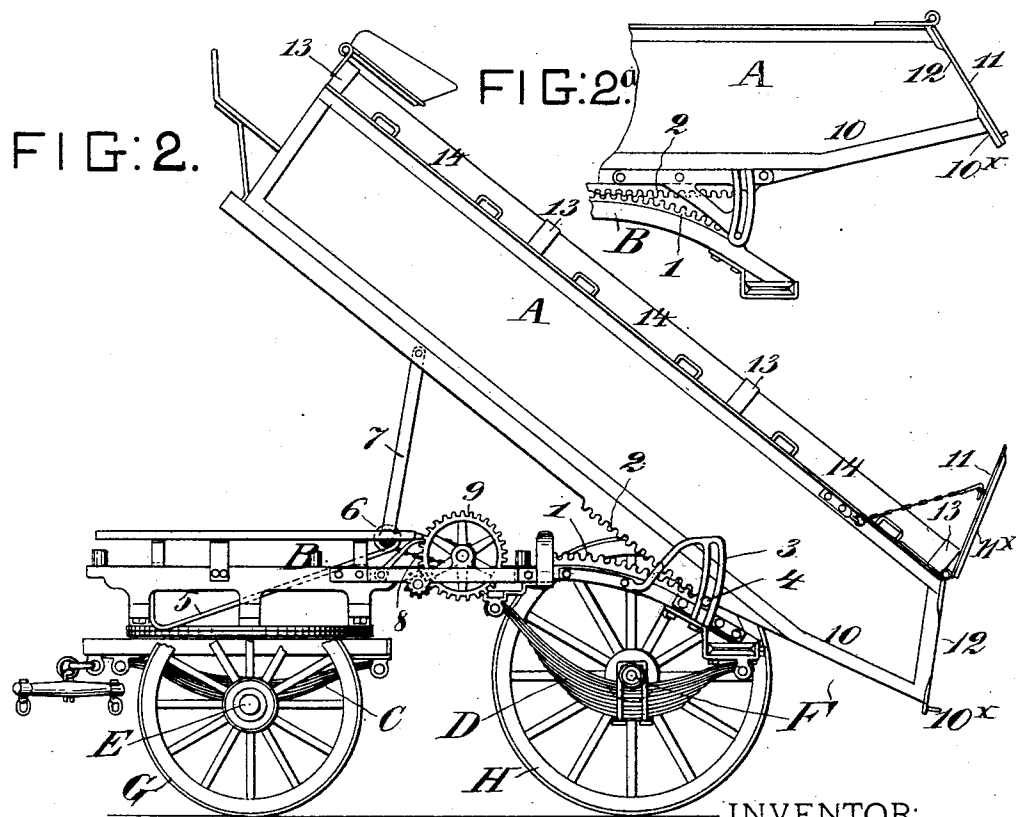
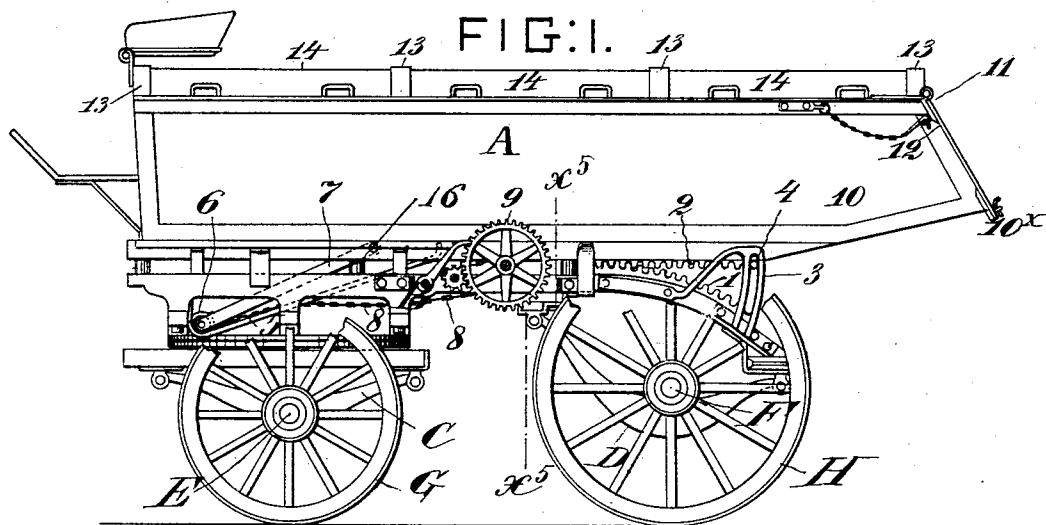
(No Model.)

2 Sheets—Sheet 1.

W. O. SHADBOLT.
DUMPING WAGON.

No. 587,866.

Patented Aug. 10, 1897.



INVENTOR:

WITNESSES:

J. H. Homan
Peter A. Ross.

William Oscar Shadbolt

By *Henry Connel*
Attorney.

(No Model.)

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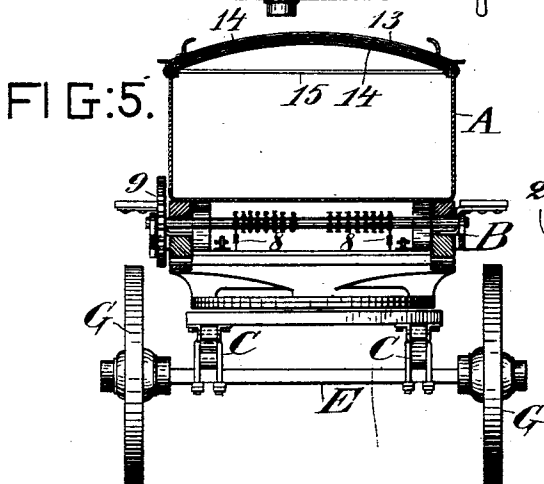
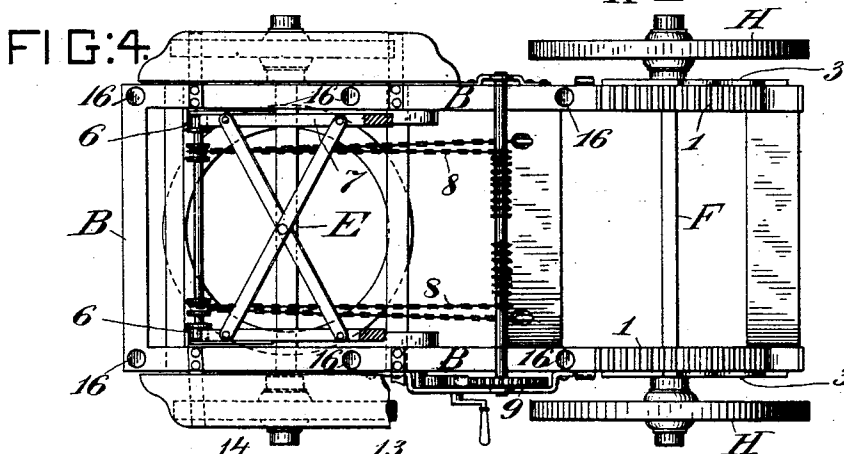
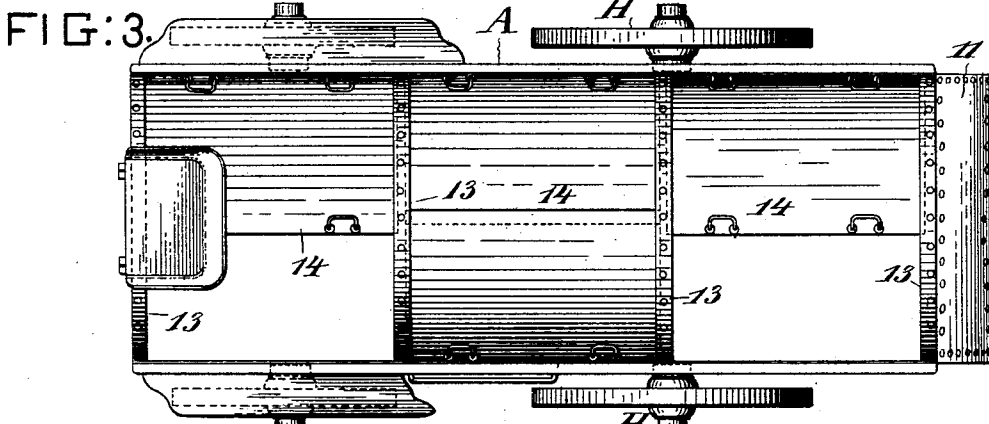
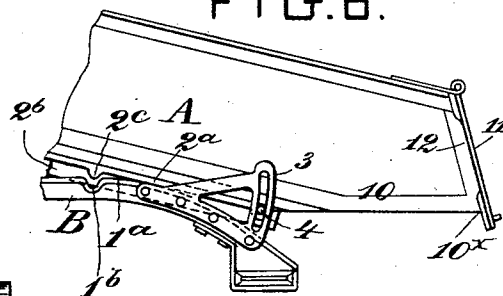


FIG:6.



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Henry Bennett
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM OSCAR SHADBOLT, OF BROOKLYN, NEW YORK.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 587,866, dated August 10, 1897.

Application filed September 24, 1896. Serial No. 606,810. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM OSCAR SHADBOLT, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Dumping-Wagons, of which the following is a specification.

My invention relates to wagons adapted for rear dumping on a rolling fulcrum; and the object of the invention is to improve the dumping facilities, all as will be fully described.

In the accompanying drawings my improvements are illustrated as embodied in a wagon having a body adapted for garbage and mounted on springs, but this is not essential to the invention.

In the drawings, Figure 1 is a side elevation of the wagon, showing the body down on the frame in its normal position; and Fig. 2 is a similar view showing the body tilted for dumping. In each of these general views the near hind wheel has been broken away the better to illustrate the rolling fulcrum and other dumping devices. Fig. 2^a illustrates a modified arrangement of the slotted guide for steadying the body in dumping. Fig. 3 is a plan view of the wagon, and Fig. 4 is also a plan of the same as it appears when the body is omitted. This view shows the main supporting-frame in plan. Fig. 5 is a transverse vertical section on the line x^5 in Fig. 1. Fig. 6 is a fragmentary view of the rolling fulcrum, illustrating a modified form thereof.

A represents as a whole the wagon-body, and B represents as a whole the stout frame on which the body is supported. This frame is, as here shown, supported on springs C and D, which are mounted, respectively, on the front axle E and hind axle F.

G are the front wheels, and H the hind wheels.

The specific construction of the dumping devices and facilities containing my improvements will now be described.

The rear portion of the side-bars of the frame B are curved downward and provided each with a curved rack 1, and on the body at each side is a corresponding straight rack 2, the racks on the body being at all times in gear at some one point with the respective racks on the frame. It will be noted that when the

body rests in its normal position on the frame, as in Fig. 1, the respective racks will be in gear at their front ends, and that when the body is being tilted in dumping the curved racks on the frame form a rolling fulcrum for the body, the elevation of the front end of the body causing the respective racks on the body to roll over and keep in gear with those on the frame. When the body is fully dumped, as in Fig. 2, the respective racks on the body and frame will be in gear only at their rear ends.

The intergearing teeth of the straight and curved racks serve to prevent the heavy body A from slipping down the inclined surfaces of the side-bars of the frame, and in order to steady the body on its supporting-frame from the beginning to the end of the dumping operation and to guard against accident from the teeth of the racks on the body slipping out of those of the racks on the frame a slotted guide 3 is fixed on the frame B, one at each side, the slots in which are engaged by stout studs 4 on the body. The slot in the guide 3 is curved so as to coincide with the path followed by the stud 4 when the body is tilted or rocked in dumping. The guides 3 are represented in Figs. 1 and 2 as stationary on the frame B and the studs 4 as on the body and therefore movable along the slots of the guides in dumping, and this is the preferred construction; but the guides may be on the body A and the studs on the frame. This reversal of the construction is illustrated in Fig. 2^a. The operation is the same in both cases. The toothed racks 1 and 2 may be dispensed with, as shown in the modified construction, Fig. 6, where the rolling fulcrum is composed of a plain, curved, or convex plate 1^a, on which rolls a plain plate 2^a on the body. In this case the guide 3 and studs 4 are relied on alone to sustain the body against slipping in dumping. The plates 2^a will have by preference each a pendent flange 2^b to prevent the body from slipping laterally in dumping, and they may each have a tooth or projection 2^c to engage a corresponding recess 1^b in the plate 1^a when the body is in its normal position and thus aid in preventing it from slipping longitudinally.

The center of gravity of the load is about the point x^5 , Fig. 1, so that the weight is fairly

and properly distributed between the two axles.

The mechanism herein shown for tilting the body in dumping will now be described.

5 On the frame B under the front end of the body are fixed tracks 5, which will be by preference inclined, their rear ends being elevated, and on these tracks are mounted
10 flanged wheels 6, rotatively mounted on the lower end of a lifting-frame 7, the upper end of said frame being hinged to the body A. The frame 7 lies somewhat flat under the body when the latter is down on the frame B, as in Fig. 1, the wheels 6 being then at the front
15 ends of the tracks, but the lower end of the lifting-frame is coupled by a chain or chains 8 to a winch 9 on the frame, whereby when the winch is rotated to wind up the chain on its barrel the wheels 6 are drawn along the
20 tracks 5 toward the winch, thus causing the lifting-frame 7 to gradually assume an erect position under the body and elevate the front end of the latter to the position seen in Fig. 2. As here shown, the winch consists of a
25 barrel rotatively mounted in the frame B and having a spur gear-wheel on its outer end. This wheel gears with a pinion on a driving-shaft adapted to receive a removable crank. To sustain the body A in its tilted position,
30 a hinged pawl or dog engages the teeth of the spur-wheel. There may also be a brake, to be applied by hand to the crank-shaft, so as to ease the body down to its normal position after dumping. As here shown, the chains
35 8 are fixed to the frame B at one end, passed around sheaves on the frame 7, and thence back to the barrel of the winch, but this is not essential to my invention. This winch mechanism has not been more particularly
40 described as it is not in itself new, and other known devices for elevating the front end of the body may be employed in lieu of that herein shown.

The body of the wagon herein shown is, as
45 stated, adapted for receiving garbage, but as it forms no essential part of the invention, except in so far that the wagon will have some form of body, it will only be necessary to briefly describe it. The bottom of the
50 body has at its tail end 10 an upward slope to the lip 10^x, and the rear end 12 of the body is sloped rearwardly and has a hinged tail-gate 11, provided with packing 11^x. The top or roof of the body is convex and has sliding
55 cover-plates 14, mounted in keeper-grooves in the arch-frames 13. Tie-rods 15 form lateral braces at each frame 13.

To cushion the body, I prefer to employ
60 springs 16, which may be of rubber, between the frame B and the body, and these will be of the more importance in wagons where no springs C and D are employed between the frame B and the axles.

Having thus described my invention, I
65 claim—

1. A dumping-wagon comprising two parts,

a tilting body and a supporting-frame, the latter being curved downward at its rear end to form a rolling fulcrum for the body in dumping, a lifting device for elevating the
70 front end of the body, and a device for steadying the body in dumping and for limiting its movement, said device comprising a guide with a curved slot situated at the rear end of the rolling fulcrum, and a stud engaging
75 said curved slot, one of said parts being secured rigidly to the body and the other to the frame, the curve of the guide-slot conforming to the path of the stud during the dumping movement, substantially as set forth. 80

2. A dumping-wagon comprising two parts, a tilting body and a supporting-frame, the latter being curved downward at its rear end to form a rolling fulcrum for the body in
85 dumping, and the former straight, intermeshing racks on the respective parts, a lifting device for elevating the front end of the body and devices for steadying the body in dump-
90 ing, each of said devices comprising a guide with a curved slot situated at the rear end of the rolling fulcrum, and a stud engaging said slot, one part of said device being fixed to the body and the other to the supporting-frame, substantially as set forth.

3. A dumping-wagon comprising two parts, 95 a tilting body and a supporting-frame, said body and frame being provided with a rack at its hinder or rear end, the racks intermeshing and one of them being curved, a lifting mechanism for elevating the front end of
100 the body in dumping, and steadying devices for the body in dumping, each of said devices consisting of a curved guide on one part of the wagon at the rear end of said racks and a stud on the other part of the wagon and en-
105 gaging said guide, substantially as set forth.

4. A dumping-wagon, comprising a tilting body, a supporting-frame provided at its
110 hinder end with downwardly-curved racks to form a rolling fulcrum for the body, said body having racks which rest on and gear with the respective racks on the supporting-frame, and said body being so supported on said frame during tilting, that its center of gravity shall
115 always be forward of the fulcrum, whereby the inclination of the body may be limited or adjusted as desired for varying conditions, a lifting device engaging said body forward of
120 its center of gravity for elevating the front end of said body, and the upright, slotted guides 3, on the frame at the rear ends of the respective curved racks, and the studs 4 on the body, and engaging the curved slots in the respective guides, substantially as de-
125 scribed.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM OSCAR SHADBOLT.

Witnesses:

PETER A. ROSS,
HENRY CONNETT.